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HYPRO4ST

WP3 Design And Development of the HyPro4ST Online training Course and Practical Guide

D3.1 HyPro4ST Training Course



Univerza v Ljubljani



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Glossary	
C&D	Communication and Dissemination
CBE	Consultative Body of Experts
CD&E	Communication, Dissemination and Exploitation
CDP	Communication and Dissemination Plan
D	Deliverable
DT	Design Thinking
EACEA	European Education and Culture Executive Agency
ECTS	European Credit Transfer and Accumulation System
EDC	European Digital Credentials
EC	European Commission
EL	Greece / Greek
EN	English
EQAVET	European Quality Assurance Reference Framework for Vocational Education and Training
ESCO	European Skills, Competences, Qualifications and Occupations
EQF	European Qualifications Framework
EU	European Union
FGs	Focus Groups
GA	Grant Agreement
GDPR	General Data Protection Regulation
GPM	Green Project Management



HE	Higher Education
HEI	Higher Education Institutions
HR	Croatia / Croatian
HU	Hungary / Hungarian
ICT	Information and communications technology
IT	Italy / Italian
KPIs	Key Performance Indicators
L&D	Learning and Development
LP	Lead Partner
M	Month
MS	Milestone
N.S.	Not Specified
OER	Open Educational Resources
PC	Project Coordinator
PM	Project Management
PT	Portugal / Portuguese
PU	Public
QAC	Quality Assurance Committee
R	Report
SDG	Sustainable Development Goals
SI	Slovenia/Slovenian
SMEs	Small and medium-sized enterprises



TBU	To be updated
VET	Vocational Education and Training
VLH	Virtual Learning Hub
VOOC	Vocational Open Online Course
WBL	Work-based Learning
WP	Work Package



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Introduction

In response to the growing demand for skilled project managers in the tourism sector, HyPro4ST presents a groundbreaking Vocational Open Online Course (VOOC) titled "Sustainable Hybrid Project Management for the Tourism Sector." This course is designed to cater to both existing and prospective project managers within the tourism industry, as well as students aspiring to excel in this field.

HyPro4ST VOOC offers a comprehensive learning experience, encompassing a range of resources tailored to meet the diverse needs of learners. From handbooks and course catalogues to interactive training materials, additional learning resources, and engaging activities, participants will delve into the intricacies of sustainable project management specific to the tourism domain.

Moreover, HyPro4ST places a strong emphasis on assessment and certification. Through a series of rigorous evaluations and examinations, learners will not only validate their acquired skills but also earn recognition for their qualifications. The certification process, rooted in the European Credit System for Vocational Education and Training (ECVET) and microcredential approaches, ensures the attainment of industry-recognized credentials.

Accessible across multiple languages including English, Greek, Hungarian, Croatian, Portuguese, Italian, and Slovenian, HyPro4ST aims to reach a global audience, fostering knowledge exchange and professional development in the realm of sustainable hybrid project management within the tourism sector.

UAVR will spearhead this endeavor in partnership with FTHM, IPTPO, and PI4SD, guaranteeing the creation of top-tier course content. The collaborative effort involves UL, IPTPO, FTHM, Olympic Training, SUSTAINABLE CITY, PI4SD, UAVR, and Minerva 90 in contributing to this developmental initiative. While all partners will offer their insights, TUVA will not participate in providing feedback. The content development will adhere closely to the curriculum delineated in T3.2.



Progress and Meetings Report

At the onset of this task, we commenced by orchestrating time allocation through coordination meetings for Task T3.3:

1) Collaborative Content Structure and Creation (11th January 2024):

During the meeting held on January 11, the focus was on establishing effective collaboration between partners designated as leaders and supporters in the content development process. It was clarified that supporting partners' responsibilities include creating quizzes aimed at facilitating certification and additional learning opportunities. Moreover, an emphasis was placed on the creation of original content, especially in multimedia formats like videos, images, graphics, and audio. It was agreed that all materials should be initially available in English to facilitate translation by other partners. Additionally, it was decided that any downloadable content should be in PDF format for ease of access.

2) Material Review and Video Strategy Planning (31st January 2024):

The subsequent meeting on January 31 entailed a review of the current state of the material and addressing any questions or concerns that arose during the process. It was confirmed that the next meeting would occur on February 15, although the final version of the content might not be completed by then. Discussions revolved around the production of introductory videos, with the decision to be deferred to the next meeting. Partners were reminded to carefully consider the format of the material being developed, considering the necessity for translations in multiple languages.

3) Progress Update and Template Adoption (15th February 2024):

At the meeting held on February 15, an update was provided on the progress of material development and any unresolved questions were addressed. A deadline of February 25 was set for partners to upload the final versions of their modules to Basecamp, allowing time for peer review, content standardization, and the creation of additional materials. It was agreed to utilize Dimitra's templates as the foundational structure for content creation, with partners encouraged to offer suggestions for improvement. The incorporation of the project's color scheme was suggested for visual consistency across materials. Partners were also reminded to exercise caution when selecting articles and videos, considering potential translation difficulties. Additionally, the mandatory use of the LUMI platform for Moodle integration was reaffirmed.

4) Content Review Timeline and Harmonization Consideration (28th February 2024):

During the meeting on February 29, a review of the current state of the material and any raised questions took place. Discussions centered around establishing a timeline for uploading work



to Basecamp, with a suggested one-week deadline for initial peer review. Consideration was given to the format of feedback and the need for harmonization across modules. It was proposed to use Word or PowerPoint for comments, to consolidate all content into a single Word document for comprehensive review. The overarching goal remained to have all content finalized with peer review completed by the end of March, with appropriate deadlines set for project milestones.

5) Content Review Timeline and Harmonization Consideration (19th March 2024):

During the meeting, our main goal was to assess the progress of the material and the status of the peer review process. Unfortunately, there were some unforeseen delays that we need to address. Additionally, we had an in-depth discussion about the importance of having clear and descriptive titles and captions for the figures within the modules, as well as the significance of crafting concise introductory and concluding texts. We also emphasized the need for the supporting partners to prepare final questions and provide constructive feedback during the peer review process of the additional content.

6) Progress Evaluation and Key Discussions (26th March 2024):

The meeting held on March 26th was primarily centered around assessing the current status of our project materials. Two key components emerged as focal points of discussion during the session. Firstly, there was deliberation regarding the "read lab" document, which encompasses solutions and editable figures intended to streamline the translation process effectively. Moreover, considerable attention was directed towards the significance of the "derivable" document, serving as a platform for the public dissemination of our project's findings and insights. An important outcome of the meeting was the agreement on the responsibilities of supporting partners, who are mandated to furnish a comprehensive Word document containing 15 questions relevant to the module. These questions aim to stimulate engagement and deepen understanding among stakeholders. In conclusion, the meeting underscored the critical importance of these materials in advancing our project objectives, while also clarifying the role of supporting partners in achieving our collective goals.



Elaboration of the content and the materials of the HyPro4ST training course

The development of the content and materials for the HyPro4ST training course is a pivotal aspect aimed at fulfilling the objectives set forth by the project. The HyPro4ST Vocational Open Online Course (VOOC) titled "Sustainable Hybrid Project Management for the Tourism Sector" is designed to cater to the evolving needs of existing and prospective project managers within the tourism industry across Europe. The curriculum, outlined in T3.2, serves as the foundation for crafting a brand-new qualification tailored to address the demand for hybrid, green, and digitalized project managers with an entrepreneurial mindset.

The primary objective of the course is to equip learners with the necessary skills and knowledge to navigate the complexities of sustainable project management in the tourism sector. By fostering a blend of project management, green practices, digital technologies, creativity, entrepreneurship, and resilience, the course aims to contribute towards the transformation of the tourism industry into a sustainable and resilient sector.

Leading this endeavor, UAVR collaborates closely with FTHM, IPTPO, and PI4SD to ensure the development of high-quality course content. By leveraging expertise and resources from these partners, the course content is meticulously crafted to meet the diverse needs of learners and to stimulate their professional growth. Through this collaborative effort, the course endeavors to promote sustainability and the integration of ICT technologies within the tourism sector, thereby preparing learners to thrive in an ever-evolving industry landscape.

Based on the curriculum, the course was structured into six modules:

Figure 1: *Modules of the training course*





Each module was assigned to specific partners as follows:

Figure 2: Allocation of the modules to the partners

3.3. Course materials:

8 assigned partners

Proposal made in line with expertise of partners:

Module No.	1	2	3	4	5	6
Partner	Lead: UAVR supporting: IPTPO	Lead: FTHM&PI4SD supporting: IPTPO	Lead: UL supporting: Minerva	Lead: SCN Supporting: Minerva	Lead: OTC Supporting: Minerva	Lead: PI4SD&FTHM supporting: IPTPO

Lead: creation of learning materials

Supporting: assessment activities and preparation of additional reading materials

Throughout the meetings regarding this task, partners were designated for the peer review process as follows:

Table 1: Allocation of the partners for the peer review

Module	1	2	3	4	5	6
Partner	Lead: UAVR Supporting: IPTPO	Lead: FTHM&PI4SD Supporting: IPTPO	Lead: UL Supporting: Minerva 90	Lead: SCN Supporting: Minerva 90	Lead: OTC Supporting: Minerva 90	Lead: PI4SD&FTHM Supporting: IPTPO
Peer Review	SCN Minerva 90	UL Minerva 90	UAVR IPTPO	FTHM IPTPO	PI4SD IPTPO	OTC Minerva 90



Content and Material of the HyPro4ST training course

This chapter is organized and divided by modules.





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Module 1: Sustainability and the Tourism Sector

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Module 1: Sustainability and the tourism sector

Introductory video

Welcome to Module 1 of the Hybrid Project Managers Course in the Tourism Sector. In this introductory module, we delve into the crucial intersection of sustainability and the tourism industry. As stewards of both natural and cultural resources, project managers in tourism play a pivotal role in shaping sustainable practices and fostering responsible development. Through a series of lessons and activities, this module aims to equip you with the knowledge and tools necessary to navigate the complex landscape of sustainability within the tourism sector.



Lesson 1: Sustainability: knowledge is key

Unit 1 Introduction

In this unit, we will define the concepts of sustainability, present its evolution, and identify best practices.

The goal is to understand the importance of sustainability in various fields, analyze its development over time, and highlight examples of successful practices.

By the end of this unit, participants should be able to apply the principles of sustainability in different contexts and recognize its relevance for a more balanced and responsible future.

Unit 2 Multiple Choice Question

Lumi File: Project Management in the Sustainable Tourism Industry (The following text is embedded in the Lumi File.)

How would you describe the significance of sustainability in today's world?

Promoting technological advancements.

It is only important in specific industries.

It is crucial for a balanced and responsible future.

It has no relevance.

Unit 3 Theoretical Chapter: Sustainability, from the beginning

Introduction

The notion of sustainable development emerged in response to the growing awareness of the damage inflicted upon the environment by scientific and technological progress.

Over the time, this term has evolved, also due to different contexts.

Late 1960s- Early 1970s

The melting pot of different ideas about progress, sustainability, growth and development which had developed over many years started pointing in a new direction, that of sustainable development.

Scientific and technological progress was causing terrible damage to the natural environment.

During unprecedented industrial and commercial expansion after World War II, people became aware of the threats that rapid population growth, pollution and resource depletion posed to the environment and their own survival as humans (Pisani, 2006).

The Earth Day was celebrated for the first time in 1970.

The Green Movement took off, the first environmental non-governmental organizations (ENGOS), Greenpeace and Friends of the Earth were established, environmental groups became more outspoken, ecologism became an ideology of some importance and green political parties started making an impact (Pisani, 2006).

By the 1970s the existing notions of 'progress', 'growth' and 'development' were being challenged and a paradigm shift to a new notion of development was needed.

Figure 1.1: *Traditional vs Human Development Approach in progress in America*



Note. From About Human Development. Measure of America: A Program of the Social Science Research Council by America (MoA), M., n.d. (<https://measureofamerica.org/human-development/>)

1980s

In the 1980's, in face of the deterioration of environment and natural resources and its consequences for economic and social development, the 'Brundtland Report', launched the most cited definition of sustainable development as *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs"* (WCED, 1987, p. 43).

Nonetheless, sustainable development does not focus exclusively on environmental issues.

The United Nations' 2005 World Summit acknowledges that the concept encompasses three *"interdependent and mutually reinforcing pillars"*: economic development, social development, and environmental protection (UN, 2005).

Traditional Vs Current Approach

Figure 1.2: *Traditional versus Current approach to sustainable development*

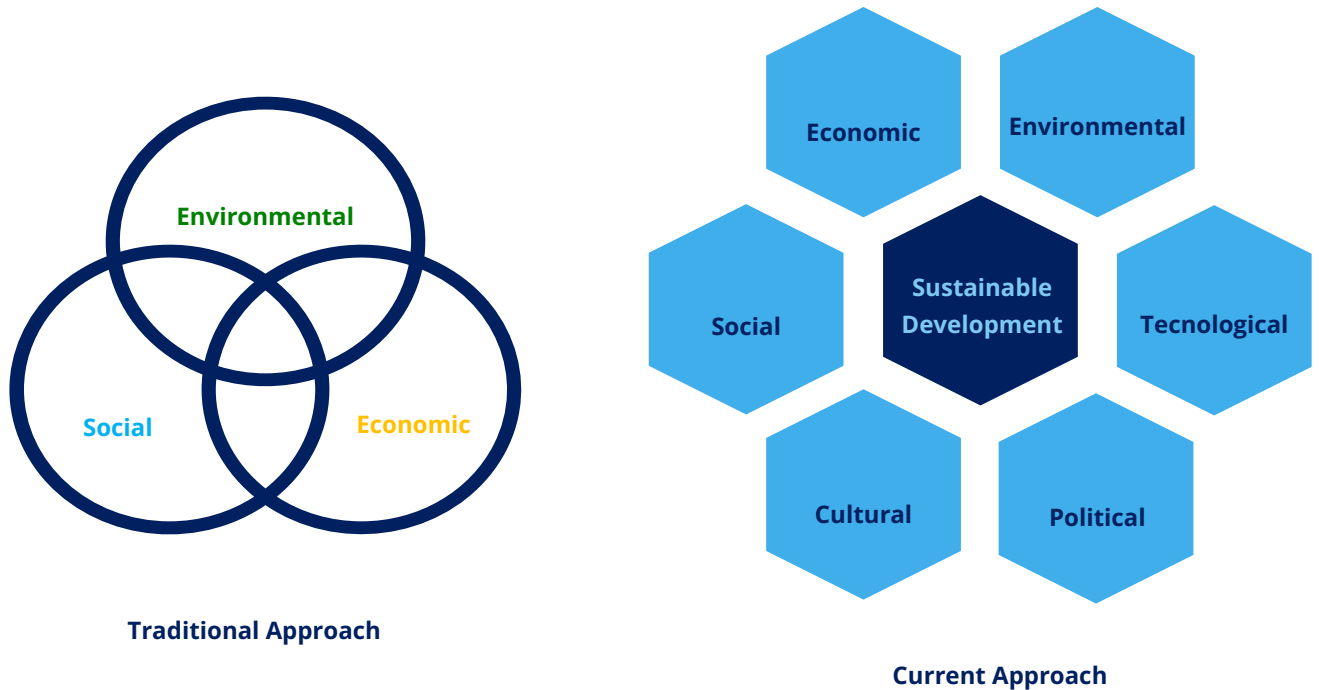
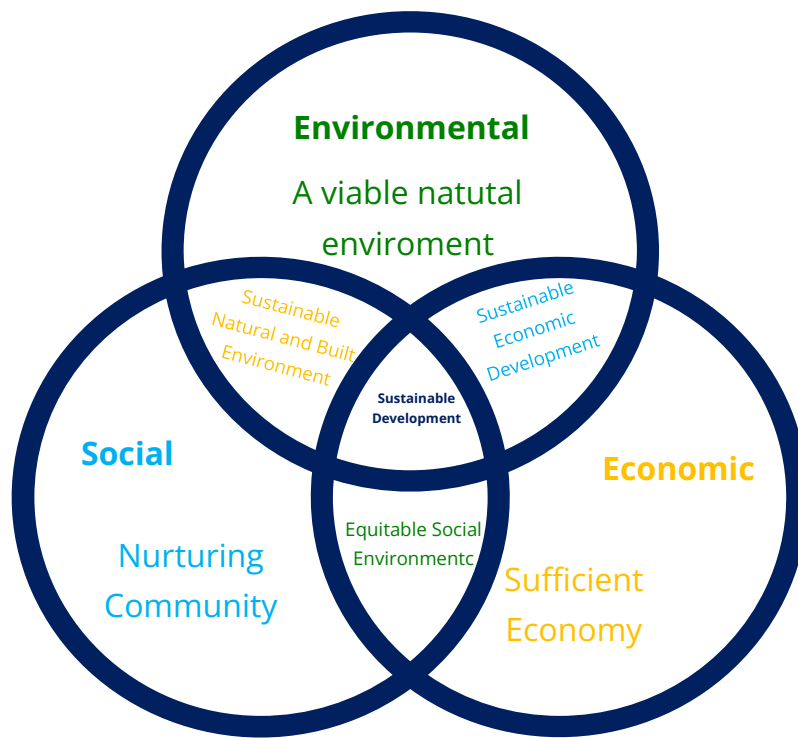


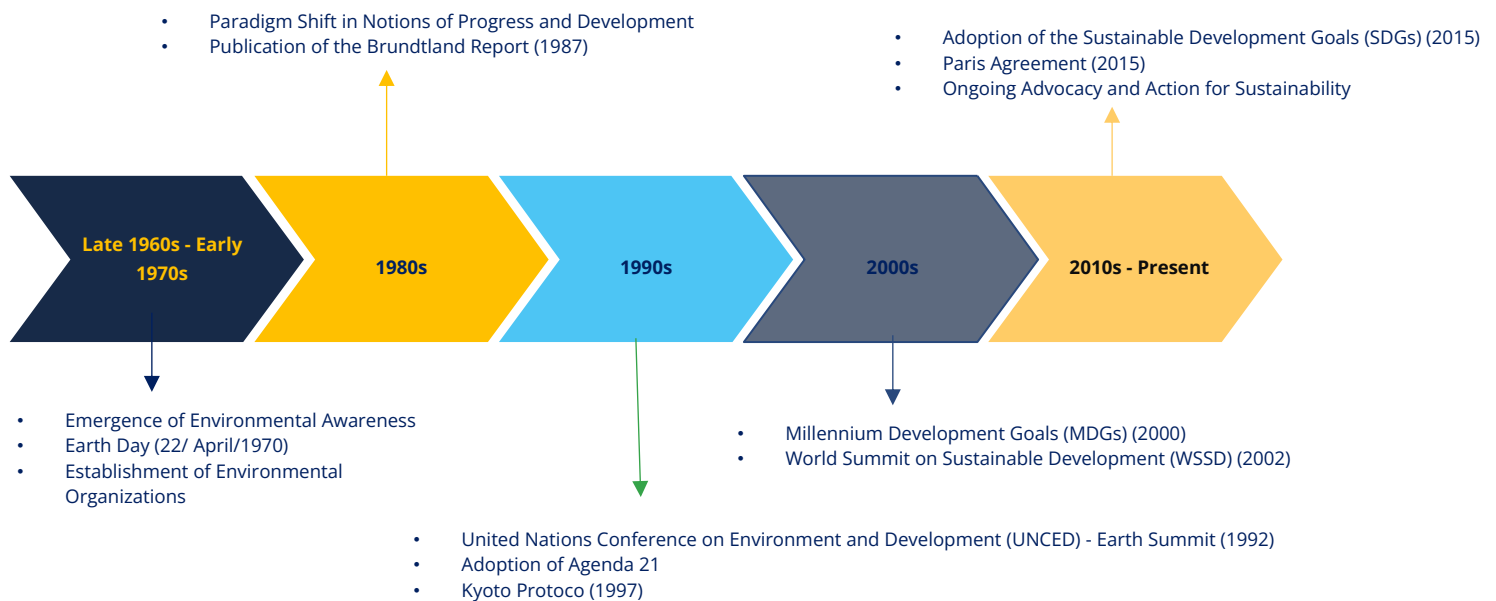
Figure 1.3: Sustainable Development and its dimensions



Note. From Why does sustainability development have a multidimensional approach? by Quora. n.d. (<https://www.quora.com/Why-does-sustainability-development-have-a-multidimensional-approach>)

Evolution of Sustainable Development

Figure 1.4: Timeline of the evolution of sustainable development



Unit 4 Activity: Fill in the Blanks

Lumi file: Unit 4 Activity Fill in the Blanks (The following text is embedded in the Lumi File.)

Fill in the missing words.

In the 1980s, the landmark *____* emerged as a pivotal document, providing a seminal definition of sustainable development as the imperative to meet *____* needs without imperilling the prospects of *____* generations. This foundational concept laid the groundwork for global discussions and actions aimed at achieving a harmonious balance between human well-being and environmental preservation.

Fast forward to the *____* UN World Summit, where the multifaceted nature of sustainable development was underscored and delineated into three interconnected pillars: *____*, *____*, and *____*. This holistic framework recognizes that true sustainability transcends mere environmental concerns, encompassing economic prosperity, social equity, and ecological integrity. By addressing the *____* among these pillars, sustainable development endeavours to forge a path towards a resilient, equitable, and flourishing future for all inhabitants of our planet.

Unit 5 Theoretical Chapter: Sustainability in the tourism sector: from A to Z

Introduction

This unit aims to provide a comprehensive understanding of the concept of sustainability in the context of the tourism sector.

We will delve into the three pillars of sustainability, explore how they intersect with tourism, discuss the impacts of tourism on these pillars and highlight the importance of sustainable practices in mitigating these impacts.

Importance of the topic in the current global context

Sustainability in the tourism sector is of paramount importance. As one of the world's largest economic sectors, tourism has significant impacts on the environment and local communities.

With the increasing awareness of climate change and its impacts, there is a growing need for the tourism industry to adopt sustainable practices.

Moreover, the COVID-19 pandemic has highlighted the vulnerability of the tourism sector and the need for resilience, which can be enhanced through sustainable practices.



Therefore, understanding and implementing sustainability in the tourism sector is crucial for its long-term viability and for the well-being of our planet and its inhabitants.

Understanding sustainability in tourism

"Sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems." - **World Tourism Organization**

Figure 1.5: Sustainable Development intermediaries



Note. From IS THE CONCEPT OF SUSTAINABLE TOURISM SUSTAINABLE? By Cernat L. and Gourdon L. n.d. (https://unctad.org/system/files/official-document/ditctncd20065_en.pdf)

Tourism as a toll for sustainable development:

- 1) Satisfying the needs and desires of:
 - Demand (visitors)
 - Supply (public entities and private companies)

-Local community

2) Protecting the tourism resource base (natural and cultural)

Dimensions of Sustainable Development:

-Economic

-Social

-Political

-Cultural

-Tecnological

-Environmental

Negative impacts of tourism

- **Economic leakage:** When the majority of the money spent by tourists leaves the destination country.
- **Damage to the natural environment:** Pollution, habitat destruction, and stress on local resources.
- **Overcrowding:** When too many tourists visit a destination, leading to strain on infrastructure and resources.
- Tourism accounts for 8% of global greenhouse **gas emissions**.

Importance of sustainable tourism

- Sustain the cultural characteristics of the receiving community;
- Contribute to improving the quality of life of residents;
- Stimulate employment of local residents in the economic activities that make up the tourism industry;
- Sustain, enhance and conserve the landscape and habitats, considering the carrying capacity;
- Stimulate a balance between tourism growth and environmental conservation;
- Minimize negative environmental and socio-cultural impacts;
- Optimize visitor and resident satisfaction;
- Maximize long-term growth for the destination;
- Sustain the tourism industry.



Role of stakeholders in sustainable tourism

- 1) **Identification of key stakeholders in sustainable tourism:** These can include local communities, tourists, tourism businesses, governments, and non-governmental organizations.
- 2) **Discussion of the roles and responsibilities of these stakeholders:** For example, local communities can participate in decision-making processes, tourists can make sustainable choices, tourism businesses can adopt sustainable practices, governments can implement policies that promote sustainable tourism, and non-governmental organizations can advocate for sustainable tourism.

Emerging trends in sustainable tourism

- 1) **Community-based tourism:** This is a form of tourism where the local community has substantial control over, and involvement in, its development and management, and a major proportion of the benefits remain within the community.
- 2) **Slow tourism:** This trend encourages travelers to slow down and spend more time in each destination, allowing them to have a deeper connection with the local culture, cuisine, and environment.
- 3) **Sustainable food and gastronomy:** This trend focuses on promoting local cuisines and reducing food waste, which can help support local economies and reduce the environmental impact of tourism.
- 4) **Circular economy tourism:** This trend involves minimizing waste and making the most of resources. It aims to ensure sustainable consumption and production patterns.
- 5) **Reducing single-use plastics:** Many tourism businesses are working to reduce their use of single-use plastics, which can have a significant impact on the environment.

Unit 6 Activity: True or False

Please read the following statements and let me know if they are true or false. (The following text is embedded in the Lumi File.)

- Sustainable tourism development aims to meet the needs of present tourists and host regions while neglecting opportunities for the future.
- Economic leakage occurs when the majority of the money spent by tourists stays within the destination country.
- Sustainable tourism practices aim to maximize negative environmental and socio-cultural impacts.

- The role of stakeholders in sustainable tourism includes local communities, tourists, tourism businesses, governments, and non-governmental organizations.
- Slow tourism encourages travellers to rush through destinations without taking the time to immerse themselves in local culture.
- Circular economy tourism aims to maximize waste and consumption patterns.

Unit 7 Theoretical Chapter: Trends in sustainability

Introduction

In recent years, the term "sustainability" has gained notoriety and significance worldwide, which has led to significant changes both in the daily lives of individuals and in society and organizations.

This has resulted in significant changes in the daily lives of individuals, as well as in society and organizations.

Trends in sustainability have emerged in an attempt to meet to the constantly evolving needs of both individuals and groups.

Trends in Sustainability

- 1) Circular Economy
- 2) Renewable Energy
- 3) Sustainable Fashion
- 4) Carbon Neutrality and Net-Zero Goals
- 5) Sustainable Transportation
- 6) Sustainable Agriculture
- 7) Environmental, social, and corporate governance (ESG)
- 8) Green Building

Circular Economy

The Circular Economy is a model of production and consumption that is based on principles of sustainability and advocates reduction, reuse, recovery and recycling of materials and energy.

Figure 1.6: *Circular Economy Model*

The circular economy model:
less raw material, less waste, fewer emissions



Source: European Parliament Research Service



Note. From Circular economy: definition, importance and benefits by European Parliament. 2023. (<https://www.europarl.europa.eu/topics/en/article/20151201STO05603/circular-economy-definition-importance-and-benefits>)

Advantages of Circular Economy

- Resource Efficiency
- Reduced Waste
- Cost Savings
- Innovation and Job Creation
- Resilience to Supply Chain Disruptions
- Climate Change Mitigation
- Social Benefits
- Enhanced Brand Reputation

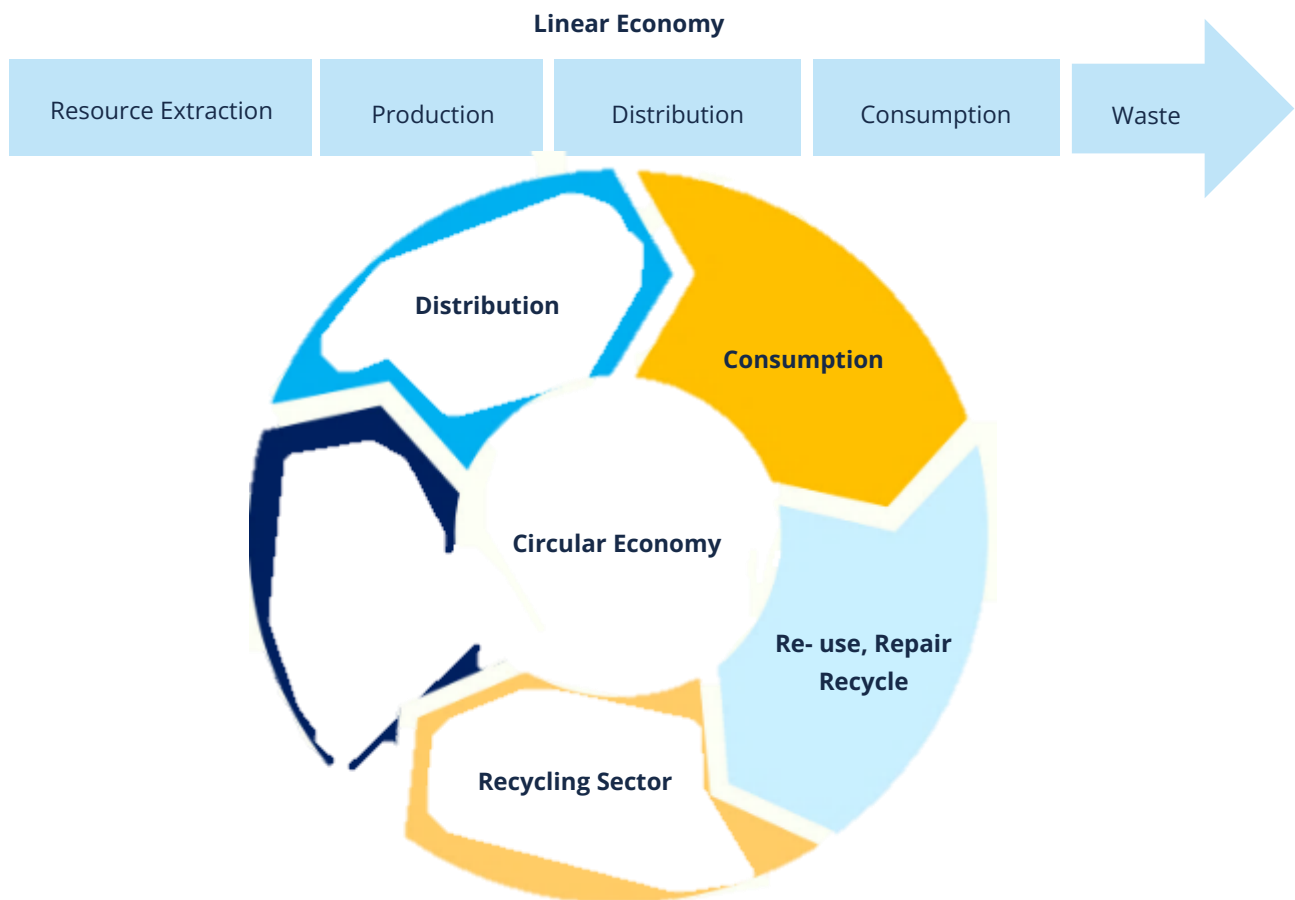


What is the EU doing to transition to a circular economy?

- 1) **Circular Economy Action Plan (March 2020):** aims to promote sustainable product design, and reduce waste.
- 2) **Parliament Resolution (February 2021):** measures to achieve a carbon-neutral, environmentally sustainable, toxic-free, and fully circular economy by 2050 (tighter recycling rules, binding targets for materials use, and consumption targets by 2030).
- 3) **First Package of Measures (March 2022):** initiatives that promote sustainable products, empower consumers for the green transition, review construction product regulations, and develop a strategy on sustainable textiles.
- 4) **EU-wide Rules on Packaging (November 2022):** new EU-wide rules on packaging with the aim of reducing packaging waste and improving packaging design (clear labeling to promote reuse and recycling, transition to bio-based, biodegradable, and compostable plastics).

Linear Vs Circular Economy

Figure 1.7: *Linear Versus Circular Economy Model*



Note. From The Maker Movement and the Disruption of the Producer-Consumer Relation by Unterfrauner E., Voigt C., Schrammel M., Menichinelli M. 2017. (https://www.researchgate.net/figure/Linear-versus-circular-economy-1_fig3_321159219)

Linear Economy

In a linear economy, resources are used to create products that are eventually disposed of after their use. This is often referred to as the "take-make-dispose" model.

In this system, raw materials are extracted, processed into goods, and then disposed of as waste. It's a one-way flow from extraction to disposal, with limited consideration for the finite nature of resources and the environmental impact of waste generation.

The focus is primarily on maximizing production and consumption, without much emphasis on resource efficiency or sustainability.

Circular Economy

A circular economy is designed to emulate natural ecosystems where resources are reused and regenerated.

This is achieved through strategies such as recycling, remanufacturing, refurbishment, and sharing platforms. Rather than following a linear path from extraction to disposal, the circular economy aims to close the loop by reintroducing materials back into the production cycle.

The focus is on designing products and systems for longevity, durability, and recyclability, thus reducing the overall environmental impact and promoting sustainable resource management.

Renewable Energy

Renewable energies are sources of energy that come from natural resources that are naturally renewed over time, despite their use and consumption.

- **Solar Energy:** obtained by capturing sunlight (photovoltaic solar panels or solar thermal panels) which can be used for electricity or heating.
- **Wind Energy:** obtained by turning wind energy into electricity (wind turbines).
- **Hydropower:** energy from moving water into electricity (dams).
- **Geothermal energy:** obtained from the Earth's internal heat (drilling wells to access hot water or steam) that can be used for electricity or heating.
- **Tidal Energy:** energy captured from the oceans, such as wave energy, tidal energy, ocean currents and ocean thermal energy, (technologies such as tidal turbines, current turbines and wave energy converters).
- **Hydrogen Energy:** refers to the energy derived from the combination of hydrogen and oxygen, releasing thermal energy, subsequently converted into electricity.
- **Biomass:** obtained from organic matter (agricultural waste, wood, food waste and biofuels), which can be burned to produce heat or converted into biogas/liquid biofuels.

Sustainable Fashion

The concept of sustainable fashion involves the preservation of the environment throughout every stage of production, ranging from the extraction of raw materials and resources to the distribution of the final product.

Benefits:

- Waste Reduction
- Natural Resources Economy
- Biodiversity Conservation
- Less waste accumulation
- More ethics in the supply chain
- Encouraging innovation and promoting entrepreneurship

Examples:

- Vegan Fashion
- Slow Fashion
- Eco-fashion

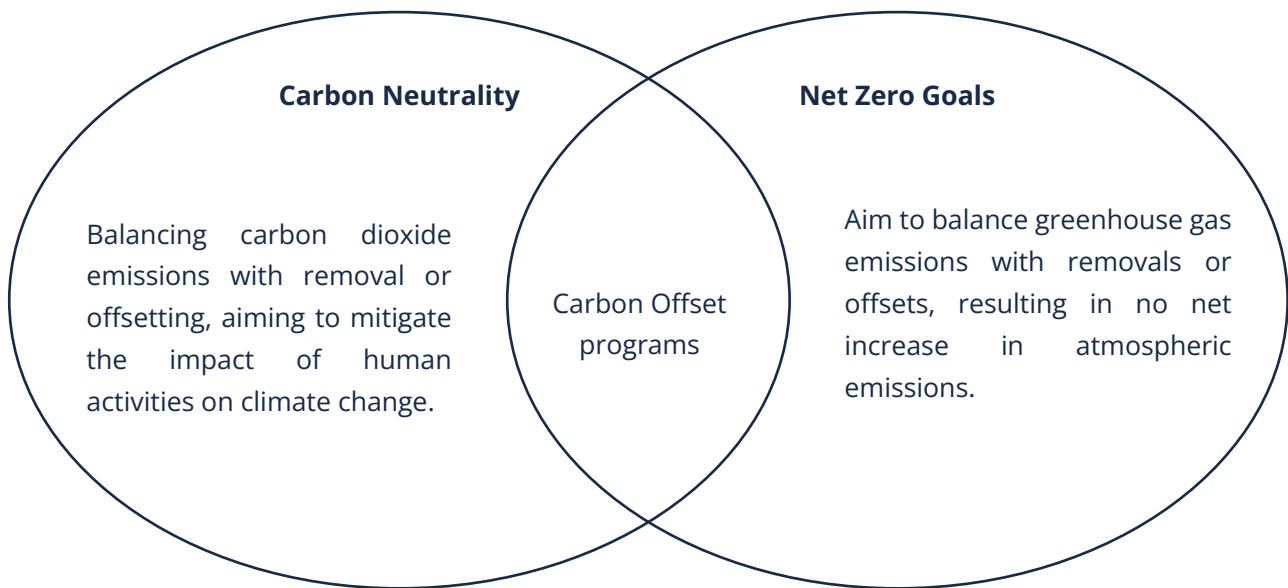
Carbon Neutrality and Net-Zero Goals

Carbon Neutrality

It implies having a balance between emitting carbon into the atmosphere and absorbing it from it.

Net-Zero goals

It involves cutting greenhouse gas emissions as much as possible in order to achieve values close to zero.

Figure 1. 8: Carbon Neutrality and Net Zero Goals diagram

Note. From Carbon Neutrality vs. Net Zero (What's the Difference?) by Jennifer L. 2023. (<https://carboncredits.com/carbon-neutrality-vs-net-zero/>)

Carbon Offset Programs

Carbon offsets are certificates tied to initiatives that reduce carbon dioxide (CO₂) levels in the atmosphere, purchasable to support climate change mitigation rather than directly lowering personal emissions.

These certificates fund projects like renewable energy adoption, afforestation efforts, or sustainable agriculture, aiding in the global reduction of emissions.

They provide individuals and organizations with a means to counterbalance their carbon footprint and contribute to environmental conservation.

Sustainable Transportation

Sustainable transportation encompasses modes of transport that prioritize low and zero emissions, energy efficiency, and affordability. This includes electric vehicles, alternative-fuel vehicles, and the use of domestic fuels.

Examples:

- Bus lanes
- Electric vehicles
- Bicycles
- Car sharing

- Carpooling
- Cycle hire stations
- Natural gas
- Pedestrian bridges
- Trains
- Walking

Benefits of Sustainable Transportation

- Emits less pollution
- Saves money
- Decreases congestion
- Promotes health
- Emissions control
- Creates jobs
- Cost savings
- Improved air quality
- Improved Health
- Employers and sustainable transportation
- Sustainable transportation creates jobs
- Job creation
- Noise reduction
- Provides safer transportation
- Reduced fuel expenses
- Contributes to sustainable economy
- Easy access to electric vehicles
- Reduced traffic congestion
- Reduces environmental footprint
- Reducing trips

Sustainable Agriculture

Sustainable agriculture is an approach to agriculture that aims to safeguard the environment, enhance natural resources, and make optimal use of non-renewable resources. It ensures the satisfaction of society's present food and textile requirements while preserving the capacity of future generations to meet their needs.

Types of Sustainable Agriculture

- Agroforestry
- Permaculture
- Aquaponics & Hydroponics
- Organic farming
- Crop rotation
- Applying integrated pest management methods
- Polyculture farming
- Biodynamic farming
- Precision farming
- Urban agriculture
- Natural pest predators
- Renewable energy resources
- Tillage management
- Water management
- Conservation agriculture
- Integrating crops and livestock
- Regenerative agriculture
- Ecological farming

Environmental, social, and corporate governance (ESG)

ESG or Environmental, Social, and Corporate Governance, refers to criteria used to assess a company's performance in sustainability and ethical practices, and its impact in three key areas: environmental sustainability, social responsibility, and corporate governance practices.

It evaluates factors such as environmental impact, social responsibility, and corporate governance, aiding investors in making socially responsible investment decisions.

ESG Pillars

Figure 1. 9: ESG pillars

Green Building

Green building, also known as sustainable building or green construction, refers to the design, construction, and operation of buildings in an environmentally responsible and resource-efficient manner.

Green buildings are designed to minimize their environmental impact throughout their entire lifecycle, from construction and operation to demolition or deconstruction.

Characteristics of Green Buildings

- **Energy Efficiency:** Green buildings are designed to reduce energy consumption by incorporating features such as efficient insulation, high-performance windows, energy-efficient lighting, and heating, ventilation, and air conditioning (HVAC) systems.
- **Water Efficiency:** Green buildings incorporate water-saving features such as low-flow fixtures, rainwater harvesting systems, and graywater recycling to minimize water usage and promote water conservation.
- **Waste Reduction:** Green buildings minimize construction and operational waste by implementing strategies such as recycling and salvaging materials, reducing packaging waste, and implementing construction waste management plans.
- **Site Selection and Land Use:** Green buildings are located on sites that minimize environmental impact, promote biodiversity, and optimize access to public transportation, amenities, and green spaces.

- **Indoor Environmental Quality:** Green buildings prioritize occupant health and comfort by promoting good indoor air quality, natural ventilation, adequate daylighting, and thermal comfort.
- **Sustainable Operations and Maintenance:** Green buildings are designed for long-term sustainability and ease of maintenance, with features such as energy and water monitoring systems, green cleaning practices, and ongoing performance optimization.
- **Materials Selection:** Green buildings use environmentally preferable materials, such as recycled content, sustainably sourced wood, and non-toxic or low-emission materials, to reduce the environmental impact of construction and promote indoor air quality.

Other Trends in Sustainability

- 1) More Recycling
- 2) Reduction of Food Waste
- 3) Reuse and Purchasing Second-hand Products
- 4) More Sustainable Materials
- 5) Increased Brand Responsibility & Transparency
- 6) Even Greater, Climate-Positive Technology
- 7) More People Working from Home
- 8) More Demand for Plant-based and 'Alternative' Foods
- 9) Sustainable smart cities are the future

Unit 8 Theoretical Chapter: Is doughnuts economics circular?

Introduction

Doughnut economics and the circular economy have emerged as innovative paradigms, challenging traditional approaches to economic development.

While both concepts aim to promote a sustainable and equitable model, their approaches and emphases vary significantly.

We're going to explore the convergences and divergences between these two models, highlighting their distinctive characteristics and examining their potential to shape a more resilient and just economy.

Doughnuts Economics

Figure 1.10: *Doughnuts Economics*



Note. From About Doughnut Economics by Doughnuts Economics Action Lab. n.d. (<https://doughnuteconomics.org/about-doughnut-economics#introduction/>)

Doughnut economics is an economic model proposed by economist Kate Raworth. It seeks to redefine the objectives of the economy, moving beyond GDP growth as the primary measure of economic success.

The model proposes that a healthy economy should operate within a "doughnut" - a safe space between social and ecological boundaries.

This means meeting the basic needs of all individuals within the limits of the planet, without overshooting environmental boundaries that could result in irreversible damage to the environment.

Doughnuts Economics Vs Circular Economy

As we face the urgent need for sustainable development, innovative economic paradigms such as the Doughnut Economy and the Circular Economy have gained prominence for their potential to address pressing environmental and social challenges.

While both frameworks share overarching goals of sustainability and equity, they diverge in their approaches and emphases, leading to three distinct divisions of differences.

We will outline these divisions, providing a comprehensive overview of how the Doughnut Economy and the Circular Economy differ in their main focus, approach to economic growth and scope of application.

By examining these divisions, we can gain a deeper insight into the nuances of each concept and their implications for shaping a more resilient and inclusive global economy.

1) Primary Focus:

boundaries to avoid environmental degradation. It emphasizes the interconnectedness of social and ecological systems and aims to achieve a balance that promotes human well-being without exceeding the Earth's ecological limits.

The circular economy focuses primarily on redesigning production and consumption systems to minimize waste and maximize resource efficiency. It emphasizes the importance of closing material loops through practices like recycling, remanufacturing, and reuse to create a regenerative system where resources are continuously cycled rather than being disposed of after single use.

2) Approach to Economic Growth:

Doughnut economics challenges the traditional notion of economic growth as the ultimate measure of progress and prosperity. Instead, it advocates for a shift towards qualitative development that prioritizes well-being, equity, and sustainability over perpetual GDP growth. It emphasizes the importance of redefining success in economic terms and pursuing growth that respects planetary boundaries.

In the circular economy, the approach to economic growth is characterized by decoupling economic activity from resource consumption and environmental degradation. It promotes a transition towards a circular model where economic growth is achieved through innovative business models, product design, and resource management strategies that prioritize resource efficiency, waste reduction, and ecosystem regeneration.

3) Scope of Application:

Doughnut economics takes a holistic approach to address the interconnected challenges of social justice, environmental sustainability, and economic prosperity. It recognizes that issues such as poverty, inequality, and environmental degradation are deeply intertwined and advocates for systemic changes that address these interdependencies to create more inclusive and resilient societies.

The circular economy primarily focuses on redesigning industrial and consumption systems to create closed-loop material flows. While its principles have broad implications for sustainability and resource management, its primary application lies within sectors such as manufacturing, construction, and waste management, where significant opportunities exist to reduce resource consumption and waste generation.

Doughnuts Economics and Circular Economy

Given pressing global challenges such as climate change, resource depletion and social inequality, innovative economic models have become beacons of hope for a more sustainable and equitable future.

Two such models, the doughnut economy, and the circular economy, have attracted significant attention for their potential to reshape traditional economic paradigms.

Although these concepts approach sustainability from different angles, they are complementary in their common goal of creating a more resilient and equitable economy.

We will explore the synergies between the doughnut economy and the circular economy, highlighting their respective principles, applications and potential impacts on global economic systems.

- **Comprehensive Vision:** While doughnut economics addresses social, environmental, and economic issues holistically, the circular economy primarily focuses on resource and waste management. Together, these approaches cover a wide range of challenges, from poverty and inequality to resource scarcity and climate change.
- **Sustainable Goals:** Both concepts share the common goal of promoting sustainability but approach it in different ways. While doughnut economics emphasizes operating within ecological boundaries to ensure human well-being, the circular economy focuses on resource efficiency to reduce environmental impact.
- **Integrated Solutions:** By combining the principles of doughnut economics with those of the circular economy, it's possible to develop more integrated and effective solutions for economic, social, and environmental challenges. For example, promoting gender equality and access to education and health (doughnut economics principles) can help create a more equitable foundation for transitioning to a circular economy.
- **Innovation and Collaboration:** The intersection of these two concepts promotes innovation and collaboration across various sectors of society, including governments, businesses, non-governmental organizations, and local communities. Together, these approaches can inspire new business models, public policies, and consumption practices that drive the transition towards a more sustainable and equitable future.

Unit 9 Multiple Choice Quiz

Lumi File: Unit 9 Multiple Choice Quiz_ (The following text is embedded in the Lumi File.)

1) What is doughnut economics?

An economic model focused on maximizing GDP growth.

An economic model that emphasizes meeting the needs of all individuals within planetary boundaries.

An economic model that prioritizes resource extraction and consumption.

An economic model that disregards social and environmental concerns.

2) What is the primary focus of the circular economy?

Maximizing waste production.

Reducing resource efficiency.

Minimizing waste and maximizing resource efficiency through recycling and reuse.

Ignoring environmental sustainability.

3) How does doughnut economics differ from the circular economy?

Doughnut economics focuses solely on environmental issues, while the circular economy focuses on social and economic issues.

Doughnut economics emphasizes resource efficiency, while the circular economy emphasizes meeting human needs.

Doughnut economics prioritizes well-being within ecological limits, while the circular economy focuses on closing material loops.

Doughnut economics advocates for unlimited economic growth, while the circular economy promotes a steady-state economy.

4) How are doughnut economics and the circular economy complementary?

They have opposing goals and principles.

They both prioritize maximizing waste production.

They focus exclusively on economic issues, ignoring social and environmental concerns.

They address different aspects of sustainability and offer integrated solutions to global challenges.

5) Which of the following statements about the differences between doughnut economics and the circular economy is true?

Doughnut economics aims to meet human needs within environmental limits, while the circular economy aims to close resource loops.

Doughnut economics prioritizes unlimited economic growth, while the circular economy emphasizes sustainability.

Doughnut economics focuses mainly on resource management, while the circular economy addresses social and environmental issues.

Doughnut economics ignores social concerns, while the circular economy prioritizes income equality.

6) How do doughnut economics and the circular economy collaborate to foster innovation?

By promoting outdated industrial practices.

By encouraging the development of circular business models and sustainable technologies.

By stifling creativity and entrepreneurship.

By discouraging sustainable business practices.

Lesson 2: Sustainability: how to materialize the 17 SDG's

Unit 1 Introduction

This lesson is about Sustainability and the 17 Sustainable Development Goals (SDGs). We'll understand the dynamics of sustainability and take actionable steps to realize these goals. We'll explore each SDG's significance and connections to the broader sustainability framework and practical strategies to materialize these goals. Achieving the SDGs requires collaboration and collective action.

Unit 2 Multiple Choice Question

Lumi File: _Unit 2 Multiple Choice Question_ (The following text is embedded in the Lumi File.)

What is the overarching objective of the Sustainable Development Goals (SDGs)?

To promote economic growth.

To address global challenges and achieve a better and more sustainable future for all.

To enforce regulations on environmental protection.

To reduce population growth.

Unit 3 Theoretical Chapter: Understanding 2030 Agenda.

Introduction

The notion of sustainable development emerged in response to the growing awareness of the damage inflicted upon the environment by scientific and technological progress.

Millennium Development Goals

In September 2000, building on a decade of major UN conferences and summits, world leaders adopted the UN Millennium Declaration.

The Declaration committed nations to a new global partnership to reduce extreme poverty and set out eight goals and targets - with a deadline of 2015 - that have become known as the Millennium Development Goals (MDGs).

Figure 1.11: *Millennium Development Goals*



Note. From 2013: MDG Acceleration and Beyond 2015. by United Nations. n.d. (<https://doughnuteconomics.org/about-doughnut-economics#introduction/>)

Figure 1. 12: Millennium Development Goals



Note. From 2013: MDG Acceleration and Beyond 2015. by United Nations. n.d. (<https://doughnuteconomics.org/about-doughnut-economics#introduction/>)

The final MDG report concluded that the efforts made over these 15 years have resulted in the most successful anti-poverty movement in history:

- Since 1990, the **number of people living in extreme poverty has more than halved**.
- The **proportion of undernourished people in developing regions has fallen by about half**.
- The **primary school enrolment rate in the developing regions has reached 91 per cent**, and many more girls are now in school compared to 15 years ago.
- **Remarkable results** have been achieved **in the fight against HIV/AIDS, malaria and tuberculosis**.
- The **under-five mortality rate has more than halved**, and **maternal mortality has fallen** by 45 per cent worldwide.
- The target of halving the proportion of people without access to safe drinking water sources has also been achieved.

However...

- Poverty and vulnerable people still exist.
- Gender inequalities persist.
- Climate change and environmental degradation continue, and poor people suffer the most.
- There are large gaps between the poorest and richest and between rural and urban areas.
- Conflict remains the greatest threat to human development.
- Millions of people still live in poverty, hungry and without access to basic services.

Sustainable Development Goals

In 2015 the UN launched the 2030 Agenda for Sustainable Development, adopted by world leaders.

The new Agenda calls on countries to make efforts to achieve 17 Sustainable Development Goals (SDGs) over the next 15 years.

The Sustainable Development Goals will guide policy and funding for the next 15 years, starting with a historic pledge on 25 September 2015 to end poverty Around the world. Permanently.

"The seventeen Sustainable Development Goals are our shared vision of humanity and a social contract between the world's leaders and the people," said UN Secretary-General Ban Ki-moon.
"They are a to-do list for people and planet, and a blueprint for success."

Figure 1. 13: Sustainable Development Goals



Note. From Communications materials by United Nations. n.d.
(<https://www.un.org/sustainabledevelopment/news/communications-material/>)

Unit 4 Activity: True or False

Please read the following statements and let me know if they are true or false. (The following text is embedded in the Lumi File.)

- The Millennium Development Goals (MDGs) set out eight goals and targets with a deadline of 2020.
- The final MDG report concluded that poverty reduction efforts made over 15 years resulted in the most successful anti-poverty movement in history.
- The MDGs and the SDGs share the same goals and targets, but with different deadlines.
- The Sustainable Development Goals (SDGs) completely replaced the Millennium Development Goals (MDGs).
- The primary objective of the 2030 Agenda is to end poverty in all its forms, everywhere.
- The SDGs represent a shared vision of humanity and a social contract between the world's leaders and the people.

Unit 5 Theoretical Chapter: 17 SDGs Must know

Introduction

The 17 Sustainable Development Goals (SDGs) form a global initiative established by the United Nations to address key challenges by 2030. Ranging from poverty eradication to climate action, these goals serve as a blueprint for a more sustainable future. They call for collective action from governments, organizations, businesses, and individuals worldwide. Understanding and

implementing the SDGs is crucial for fostering global cooperation and achieving meaningful progress towards a better world for all. Embracing these goals empowers us to build a more equitable, resilient, and environmentally conscious society.

Sustainable Development Goals (SDGs)

- 1) No Poverty:** Eradicate poverty in all its forms, worldwide.
- 2) Zero Hunger:** End hunger, ensure food security and improve nutrition and promote sustainable agriculture.
- 3) Good Health and Well-being:** Ensuring healthy living and promoting well-being at all ages.
- 4) Quality Education:** Ensure inclusive, quality education for all and promote lifelong learning
- 5) Gender Equality:** Achieve gender equality and empower all women and girls.
- 6) Clean Water and Sanitation:** Ensure access to water and sanitation for all.
- 7) Affordable and Clean Energy:** Ensure access to affordable, reliable, sustainable and modern energy for all.
- 8) Decent Work and Economic Growth:** Promote inclusive and sustainable economic growth, employment and decent work for all.
- 9) Industry, Innovation and Infrastructure:** Building resilient infrastructure, promoting sustainable industrialization and innovation.
- 10) Reduced Inequalities:** Reducing inequalities within and between countries.
- 11) Sustainable Cities and Communities:** Making cities inclusive, safe, resilient and sustainable.
- 12) Responsible Consumption and Production:** Ensure sustainable consumption and production patterns.
- 13) Climate Action:** Implement urgent measures to combat climate change and its impacts.
- 14) Life Below Water:** Conservation and sustainable use of the oceans, seas and marine resources.
- 15) Life on Land:** Sustainable forest management, combating desertification, halting and reversing land degradation, halting biodiversity loss.
- 16) Peace, Justice and Strong Institutions:** Promote just, peaceful and inclusive societies.
- 17) Partnerships for the Goals:** Revitalising the global partnership for sustainable development.

Unit 6 Essay

Lumi File: Essay (The following text is embedded in the Lumi File.)

→ Please select one of the questions provided below and proceed to respond to it accordingly.

- 1) How effectively are governments around the world aligning their policies and strategies with the targets outlined in the 2030 Agenda for Sustainable Development?
- 2) What notable progress has been made towards achieving the Sustainable Development Goals (SDGs), and what are the primary challenges hindering further advancement?
- 3) Are there any particular regions or countries that have emerged as leaders in implementing innovative approaches towards fulfilling the commitments of the 2030 Agenda?
- 4) How are international partnerships and collaborations contributing to the global effort to meet the targets outlined in the SDGs by 2030?
- 5) In what ways are non-governmental organizations (NGOs) and civil society actively engaging in holding governments accountable and driving progress towards the goals of the 2030 Agenda?

Unit 7 Theoretical Chapter: Sustainability: individual and collective roles

Introduction

Sustainability is a concept that advocates meeting the needs of the present without compromising that activity in the future. In order to achieve "sustainability" we have to act and behave as a whole, as a society, but we also have to adapt our behavior as individuals.

Individual Roles

- **Reduce, Reuse, Recycle (3Rs):** Individuals can reduce their consumption of resources by practicing the 3Rs - reducing waste, reusing items, and recycling materials whenever possible.
- **Conscious Consumption:** Making informed choices about the products they buy, favoring sustainable and eco-friendly options, considering factors like material sourcing, manufacturing processes, and packaging.
- **Energy Efficiency:** Conserving energy by turning off lights and appliances when not in use, using energy-efficient appliances and light bulbs, and considering renewable energy sources like solar or wind power.

- **Transportation:** Opting for eco-friendly transportation options such as walking, cycling, carpooling, or using public transportation whenever feasible, reducing reliance on fossil fuels and minimizing carbon emissions.
- **Water Conservation:** Being mindful of water usage, fixing leaks, installing water-saving fixtures, and practicing water-efficient habits such as shorter showers and turning off taps when not in use.
- **Sustainable Diet:** Choosing foods with lower environmental impacts, such as locally sourced, organic, and plant-based options, reducing meat consumption, and supporting sustainable agriculture practices.
- **Education and Advocacy:** Staying informed about environmental issues, sharing knowledge with others, and advocating for sustainable policies and practices at the community and governmental levels.

Collective Roles

- **Policy and Regulation:** Governments and institutions can enact and enforce regulations and policies that promote sustainability, such as emissions standards, waste management regulations, and incentives for renewable energy adoption.
- **Corporate Responsibility:** Businesses can adopt sustainable practices across their operations, from supply chain management and product design to energy use and waste reduction. Corporate social responsibility initiatives can also play a significant role in promoting sustainability.
- **Infrastructure Development:** Investing in sustainable infrastructure, such as public transportation systems, renewable energy projects, green buildings, and water management systems, can contribute to long-term environmental sustainability.
- **Community Engagement:** Building strong communities that prioritize sustainability through education, public awareness campaigns, and grassroots initiatives can create a supportive environment for sustainable living.
- **Research and Innovation:** Investing in research and development of sustainable technologies, materials, and solutions can drive progress towards a more sustainable future, addressing challenges such as climate change, resource depletion, and pollution.
- **International Cooperation:** Addressing global sustainability challenges requires collaboration and cooperation among nations, organizations, and individuals worldwide, through agreements, treaties, and initiatives aimed at collective action.

What can we do?

- Think twice before shopping.

- Ditch plastic and switch to reuse.
- Take extinction off your plate.
- Boycott products that endanger wildlife.
- Fight for the right to choose when and if to start a family.
- Ditch fast fashion and animal-based textiles.
- Be water wise.
- Drive less, drive green.
- Green your home.
- Simplify the holidays.
- Choose organic.
- Take action. Use your voice.

Empowering Citizens for Sustainable Change- Achieving the 2030 Agenda

- **Citizen Engagement:** Encouraging citizens to advocate for change and actively holding leaders accountable.
- **Interconnection of Goals:** Recognizing the interdependence and universality of the Sustainable Development Goals (SDGs), promoting collective action.
- **Turning Goals into Reality:** Committing to take the SDGs seriously and collaborating to implement them through joint efforts.
- **Collective Commitment:** Reinforcing the commitment to implementing the 2030 Agenda, ensuring shared benefits and inclusion for all.
- **UN Support:** Strategically supporting countries in implementing the SDGs, demonstrating ongoing commitment to the success of the Agenda.

Unit 8 Case Study

Lumi File: Case Study (The following text is embedded in the Lumi File.)

- Read the text about sustainable practices and comment on the importance of adopting such measures to preserve the environment and ensure a more sustainable future for the next generations.

Sustainable practices are essential for preserving our planet and ensuring a better future for generations to come. Some of these practices include utilizing renewable energy sources such

as wind turbines, solar panels, and hydroelectric power stations. Community gardens also play a vital role, allowing local communities to engage in sustainable agriculture or gardening. Recycling activities help reduce waste and conserve resources by repurposing materials like plastic, paper, or glass. Public transportation options like buses, bicycles, and electric cars promote eco-friendly modes of travel, reducing carbon emissions. Efficient energy use is another crucial aspect, involving energy-efficient buildings, appliances, and LED lighting. Environmental conservation efforts encompass activities such as tree planting, beach cleanup, and wildlife conservation. Water conservation practices emphasize responsible water use and conservation efforts. Able architecture showcases green buildings with features like green roofs and natural ventilation, reducing environmental impact. Local markets and businesses offer sustainable and locally sourced products, supporting the community and reducing carbon footprints. Ethical fashion choices prioritize sustainability and ethical production methods, encouraging conscious consumer decisions. Finally, culinary practices that embrace sustainable and locally sourced food help support local farmers and reduce food miles, contributing to a more sustainable food system.

Unit 9 Theoretical Chapter: Sustainability with no boxes

Introduction

Considering the constant evolution of the world, integrating sustainability into our daily lives is becoming imperative. As we face increasingly complex challenges, it is crucial to adopt solutions and measures marked by innovation and creativity.

We cannot hope to solve today's problems with old-fashioned approaches that are not aligned with the current context. Therefore, the need to adopt innovative and creative measures becomes even more pressing.

Creativity and Innovation

Often arises unexpectedly, such as during routine activities.

And has the power to transform industries, address global challenges, and create a more sustainable future for all.

The United Nations acknowledges the pivotal role of creativity and innovation in achieving sustainable development goals.

Individuals worldwide are finding innovative ways to integrate sustainability into business models and contribute to positive change.



Sustainable development demands innovative leaders who can address complex global challenges through novel and human-centered approaches.

The Power of Design Thinking

Design Thinking offers a systematic and human-centered approach to problem-solving, adding significant value to leaders grappling with the challenges of the 2030 Agenda.

It catalyzes conversation for change, reframes problems, fosters collaborative creativity, and provides a solution-based approach to complex challenges.

Design Thinking offers an innovative approach to addressing the interconnected and complex challenges of the 2030 Agenda.

By breaking down silos, fostering collaboration, and embracing a new way of working, leaders can advance sustainable development goals and promote the behaviors outlined in the UN Leadership Framework.

Stages of Design Thinking

- 1) **Empathize:** Gain a deep understanding of the problem by empathizing with users and their needs, setting aside assumptions to gain valuable insights.
- 2) **Define:** Synthesize observations to define core problems, creating problem statements to guide ideation and solution development.
- 3) **Idea:** Generate creative ideas by thinking outside the box, exploring alternative perspectives, and employing various ideation techniques.
- 4) **Prototype:** Experiment and iterate to identify the best solutions, embracing a mindset of learning from failure and seeking feedback to refine prototypes.
- 5) **Test:** Gather feedback from stakeholders to refine and improve prototypes, ensuring solutions effectively address identified problems.

Unit 10 Essay

Lumi File: Essay (The following text is embedded in the Lumi File.)

- Please select one of the questions provided below and proceed to respond to it accordingly.

1) How can innovative approaches foster sustainable development goals outlined in the 2030 agenda?

2) What role does creativity play in addressing complex global challenges outlined in the 2030 agenda

- 3) How can innovative technologies contribute to achieving the targets set in the 2030 agenda?
- 4) In what ways can creative thinking facilitate inclusive and equitable implementation of the 2030 agenda across diverse communities?
- 5) How do collaborative efforts between public and private sectors harness innovation to accelerate progress towards the objectives of the 2030 agenda?

Unit 11 Theoretical Chapter: Sustainability: call to action

Introduction

By implementing the SDGs, organizations and companies are taking significant steps towards sustainability. It's a proactive approach that demonstrates a commitment to making a positive impact on the world.

The tourism sector is no exception.

How to implement the SDGS in tourism? - Important Considerations

- 1) Understand the SDGs:** Familiarize yourself with the 17 SDGs and their associated targets and indicators. This understanding will help you identify areas where tourism can contribute positively.
- 2) Promote Responsible Tourism:** Encourage tourism businesses and destinations to adopt responsible and sustainable practices. This includes minimizing environmental impacts, respecting local cultures, supporting local economies, and promoting social inclusion.
- 3) Partnerships and Collaboration:** Foster partnerships between governments, businesses, NGOs, and local communities to work towards common sustainability goals. Collaboration is essential for implementing large-scale changes in the tourism sector.
- 4) Education and Awareness:** Raise awareness among tourists, travel operators, and local communities about the importance of sustainable tourism practices and the SDGs. Education can empower stakeholders to make informed decisions that benefit both people and the planet.

How to implement the SDGS in tourism?

- **Poverty Alleviation (SDG 1):** Promote tourism initiatives that create employment opportunities, particularly for marginalized communities, and contribute to poverty reduction through economic empowerment.

- **Zero Hunger (SDG 2):** Support local food systems and promote access to nutritious food for tourists and local communities. Encourage the use of local produce in hotels and restaurants to support small-scale farmers.
- **Good Health and Well-being (SDG 3):** Ensure that tourism activities prioritize the health and safety of tourists and local communities. Provide access to healthcare services for both tourists and residents in tourism destinations.
- **Quality Education (SDG 4):** Support educational initiatives that promote sustainable tourism practices and cultural exchange. Encourage tourists to engage with local communities in meaningful ways that foster mutual learning.
- **Gender Equality (SDG 5):** Promote gender equality within the tourism sector by empowering women through entrepreneurship, leadership roles, and equal employment opportunities.
- **Clean Water and Sanitation (SDG 6):** Ensure access to clean water and sanitation facilities for tourists and local residents. Encourage water conservation measures in tourism operations.
- **Affordable and Clean Energy (SDG 7):** Promote the use of renewable energy sources in tourism facilities and transportation to reduce carbon emissions and dependency on fossil fuels.
- **Decent Work and Economic Growth (SDG 8):** Create decent job opportunities in the tourism sector while ensuring fair wages, safe working conditions, and opportunities for skill development and career advancement.
- **Industry, Innovation, and Infrastructure (SDG 9):** Invest in sustainable tourism infrastructure and support innovation in tourism products and services that minimize environmental impacts and enhance visitor experiences.
- **Affordable and Clean Energy (SDG 7):** Promote the use of renewable energy sources in tourism facilities and transportation to reduce carbon emissions and dependency on fossil fuels.
- **Decent Work and Economic Growth (SDG 8):** Create decent job opportunities in the tourism sector while ensuring fair wages, safe working conditions, and opportunities for skill development and career advancement.
- **Industry, Innovation, and Infrastructure (SDG 9):** Invest in sustainable tourism infrastructure and support innovation in tourism products and services that minimize environmental impacts and enhance visitor experiences.

- **Climate Action (SDG 13):** Mitigate the carbon footprint of tourism activities by promoting low-carbon transportation options, supporting reforestation and conservation projects, and advocating for climate-friendly policies within the tourism industry.
- **Life Below Water (SDG 14):** Protect marine ecosystems and biodiversity by promoting responsible diving, snorkeling, and marine tourism activities that minimize negative impacts on underwater habitats.
- **Life on Land (SDG 15):** Support conservation efforts and responsible wildlife tourism practices that preserve terrestrial ecosystems, protect endangered species, and minimize habitat destruction.
- **Peace, Justice, and Strong Institutions (SDG 16):** Promote peaceful and inclusive societies by respecting local laws, customs, and human rights in tourism destinations and supporting initiatives that promote social justice and community empowerment.
- **Partnerships for the Goals (SDG 17):** Strengthen partnerships between governments, businesses, civil society organizations, and local communities to achieve sustainable tourism development and maximize the positive impacts of tourism on the SDGs.

Unit 12 Activity Drag the Words

Lumi File: Unit 12 Activity Drag the Words (The following text is embedded in the Lumi File.)

- Please rearrange the given words and put them in the appropriate blanks to complete the sentences.

Implementing the *____)* in the *____ * is key to promoting responsible and sustainable practices that benefit both local communities and the environment.

This involves adopting policies and practices that address issues such as poverty, hunger, gender equality, *____*, health, *____ *, sustainable infrastructure, *____ *, *____*, conservation of marine and terrestrial life, among others. By promoting partnerships, awareness and education, and by encouraging responsible and inclusive tourism, we can transform the tourism sector into an engine of sustainable development, contributing to a fairer, more equitable and healthier world for all.

Lesson 3: European policies in sustainability

Unit 1 Introduction

In this lesson, we delve into European policies in sustainability, focusing on the measures and strategies implemented by the European Union to address environmental concerns and foster sustainable development. We begin by examining the overarching goals outlined by the EU, such as the European Green Deal and the European Strategy for Sustainable Growth. These initiatives serve as frameworks for various actions aimed at achieving environmental sustainability across different sectors. We then analyse specific areas of focus, including the transition to clean energy sources, the promotion of sustainable transportation methods, the advancement of circular economy principles, and the conservation of biodiversity. Throughout the lesson, we aim to understand the significance of these policies in the global context and their impact on the economy, society, and the environment. Moreover, we critically evaluate the progress made thus far and identify areas that require further attention and intervention. Additionally, we reflect on the role of both citizens and businesses in driving the implementation and adoption of sustainable practices within Europe.

Unit 2 Multiple choice question

Lumi File: Multiple Choice Question_ (The following text is embedded in the Lumi File.)

European policies in sustainability primarily focus on:

Economic growth.

Addressing environmental concerns and fostering sustainable development.

Social welfare programs.

Political stability

Unit 3 Theoretical Chapter: Knowing the European Union Policies

Introduction

The policies established by the European Union are fundamental to our shared values and principles. They guarantee that our collective policies are implemented and sustained. The European Union (EU) has demonstrated a strong commitment to sustainability by integrating environmental, social, and economic considerations into its policy framework. Sustainability is



a core principle guiding EU decision-making, which aims to ensure the well-being of current and future generations while preserving the planet's resources.

European Union Policies

- Economic and Market Policies
- Social and Welfare Policies
- Environmental and Sustainability Policies
- External and Security Policies
- Research and Innovation Policies
- Digital and Technological Policies
- Other Policies and Areas of Interest

European Policies in Sustainability

- European Green Deal
- Climate Action
- Circular Economy (To know more about this topic go to M1L1U7)
- Biodiversity and Nature Conservation
- Sustainable Agriculture
- Sustainable Finance
- Social Dimension of Sustainability
- International Cooperation

European Green Deal

In 2019, the Commission presented this plan that aims to transform Europe climate-neutral by 2050.

Objectives:

- A Zero pollution Europe;
- Transition to a Circular Economy;
- Farm to Fork;
- Towards a green CAP;
- Take everyone along;
- Financing the transition;
- Clean, Reliable and Affordable energy;

- Achieving Carbon Neutrality;
- Sustainable Transport;
- Preserving Europe's natural capital.

Climate Action

Climate action is a fundamental pillar of the European Union's sustainability agenda, supported by ambitious goals and comprehensive policies aimed at reducing climate change and building resilience.

The EU is at the forefront of global efforts to address this challenge and has committed to reducing greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels. This is part of the EU's overall objective to achieve climate neutrality by 2050.

To achieve this goal, the EU relies on the world's largest carbon market, the EU Emissions Trading System (EU ETS).

EU Emissions Trading System (EU ETS): The world's first major carbon market, which was created in 2005, remains the largest one and aims to combat climate change by cost-effectively reducing greenhouse gas emissions. It uses a "cap and trade system" to achieve this goal.

Biodiversity and Nature Conservation

Recognizing the intrinsic value of biodiversity and its crucial role in supporting ecosystem services, the EU has adopted a comprehensive approach to biodiversity conservation.

EU Biodiversity Strategy for 2030

Through a combination of regulatory frameworks, conservation initiatives, and sustainable land management practices, the EU strives to promote biodiversity conservation across diverse habitats, from forests and wetlands to marine and coastal ecosystems.

By conserving biodiversity and restoring degraded ecosystems, the EU seeks to ensure the resilience of natural systems, safeguard habitats for wildlife, and enhance the well-being of present and future generations in Europe and beyond.

Objectives:

- 1) **Biodiversity Recovery by 2030:** The European Union aims to rejuvenate the continent's biodiversity by 2030, which will have positive impacts on the environment, people, and the climate.
- 2) **Building Societal Resilience:** In the wake of COVID-19, the strategy seeks to boost societal resilience against future threats, including climate change impacts, forest fires,

food insecurity, and disease outbreaks. It aims to achieve this by safeguarding wildlife and cracking down on illegal wildlife trade.

Actions:

- 1) **Expanding Protected Areas:** Widen protected areas network, prioritize Natura 2000 expansion, and strictly conserve regions with exceptional biodiversity and climate significance.
- 2) **EU Nature Restoration Plan:** The EU nature restoration plan aims to restore degraded ecosystems with high carbon sequestration potential and susceptibility to natural disasters, contributing to biodiversity recovery and climate resilience.
- 3) **Facilitating Transformative Change:** New measures aim to fund biodiversity, improve governance, enhance knowledge, integrate nature into decision-making, and shift towards sustainability.
- 4) **Addressing the Global Biodiversity Crisis:** The EU leads by example in addressing the global biodiversity crisis by advocating for an ambitious global biodiversity framework under the Convention on Biological Diversity.

Sustainable Agriculture

Sustainable agriculture is an approach to agriculture that aims to safeguard the environment, enhance natural resources, and make optimal use of non-renewable resources. It ensures the satisfaction of society's present food and textile requirements while preserving the capacity of future generations to meet their needs.

Types of Sustainable Agriculture

- Agroforestry
- Permaculture
- Aquaponics & Hydroponics
- Organic farming
- Crop rotation
- Applying integrated pest management methods
- Polyculture farming
- Biodynamic farming
- Precision farming
- Urban agriculture
- Natural pest predators
- Renewable energy resources
- Tillage management

- Water management
- Conservation agriculture
- Integrating crops and livestock
- Regenerative agriculture
- Ecological farming

Sustainable Finance

Sustainable finance is a pivotal component of the European Union's efforts to advance sustainability goals and transition towards a greener, more resilient economy.

It encompasses financial activities and investments that integrate environmental, social, and governance (ESG) criteria, aiming to generate positive societal and environmental outcomes alongside financial returns.

In the EU, sustainable finance is guided by the EU Sustainable Finance Action Plan.

EU Sustainable Finance Action Plan: It promotes sustainable finance and integrates ESG considerations into the financial sector. Its goal is to mobilize private capital towards sustainable investments and support the transition to a low-carbon, resource-efficient economy.

EU Sustainable Finance Action Plan- Key components of the Action Plan include:

- **EU Taxonomy:** The EU Taxonomy categorizes sustainable economic activities and sets criteria for evaluating their impact on mitigating climate change, adapting to its effects, and conserving biodiversity.
- **Sustainable Finance Disclosure Regulation (SFDR):** SFDR requires financial firms to disclose how they integrate sustainability risks in investment decision making, promoting transparency and enabling ESG-informed decisions.
- **EU Green Bond Standard:** The EU Green Bond Standard sets criteria for issuing sustainable bonds, ensuring transparency and credibility in the market.
- **Climate Benchmarks and Benchmarks' ESG Disclosures:** The EU is developing climate and ESG benchmarks to help investors align their strategies with climate goals and sustainability. These benchmarks provide transparent indicators for measuring carbon footprint and sustainability of investments.
- **EU Sustainable Finance Strategy:** The EU Sustainable Finance Strategy aims to promote sustainable finance through initiatives such as sustainable investment practices, green finance, and corporate sustainability reporting.

Social Dimension of Sustainability- Key components of the Social Dimension of Sustainability include:

- **Social Inclusion and Equity:** Social sustainability aims to address inequalities and disparities in access to resources, opportunities, and services, including education, healthcare, housing, and employment. It emphasizes the importance of promoting social inclusion and reducing poverty and social exclusion to ensure that everyone can fully participate in society and benefit from economic growth.
- **Labor Rights and Decent Work:** Social sustainability entails promoting fair labor practices, decent working conditions, and labor rights for all workers, including fair wages, safe working environments, and protection against discrimination and exploitation. It also involves supporting initiatives to empower workers, enhance job security, and promote work-life balance.
- **Health and Well-being:** Ensuring access to quality healthcare, mental health services, and social support systems is central to social sustainability. It involves addressing health inequalities, promoting healthy lifestyles, and creating environments that support physical and mental well-being for individuals and communities.
- **Social Cohesion and Community Engagement:** Social sustainability fosters strong, resilient communities built on principles of trust, cooperation, and mutual support. It encourages community engagement, civic participation, and dialogue to address common challenges, promote social cohesion, and build solidarity across diverse groups.
- **Education and Lifelong Learning:** Investing in education and lifelong learning opportunities is essential for fostering human capital development, empowering individuals, and promoting social mobility. Social sustainability promotes access to quality education at all levels, including early childhood education, vocational training, and adult education, to ensure that everyone has the skills and knowledge needed to thrive in a rapidly changing world.
- **Cultural Diversity and Heritage:** Recognizing the importance of cultural diversity and heritage, social sustainability promotes respect for cultural identities, traditions, and heritage assets. It seeks to safeguard cultural heritage, promote intercultural dialogue, and celebrate diversity as a source of strength and resilience within societies.

International Cooperation

In a world where environmental issues transcend national boundaries, the EU actively engages with countries, international organizations, and forums to promote collective action and shared solutions. With a focus on sustainability, climate change, and biodiversity conservation, the EU collaborates on various fronts.

This includes leading efforts in international climate negotiations, pushing for ambitious emission reduction targets and spearheading initiatives such as the Paris Agreement.

The EU also works closely with global partners to conserve biodiversity, combat deforestation and promote sustainable land management through conventions such as the Convention on Biological Diversity (CBD).

The EU is also committed to supporting sustainable development around the world, promoting poverty eradication, the protection of human rights and capacity building in developing countries.

Through financial assistance and technical support programs, such as the European Development Fund (EDF), the EU contributes to global efforts to achieve the Sustainable Development Goals (SDGs).

Unit 4 Activity Cross Words

Lumi File: Unit 4 Cross Words (The following text is embedded in the Lumi File.)

Clues:

- 1) EU policy aiming for the free movement of goods, services, capital, and people.
- 2) EU policy supporting farmers, food security, and rural development.
- 3) EU policy aiming to combat anti-competitive behaviour and promote fair competition.
- 4) EU policy addressing environmental issues such as climate change and air quality.
- 5) EU policy coordinating diplomatic efforts, crisis management, and defence cooperation.
- 6) EU policy promoting social inclusion, worker rights, and living standards.
- 7) EU policy addressing migration flows, refugee protection, and asylum processing.
- 8) EU policy investing in research, innovation, and technological development.
- 9) EU policy regulating the digital economy, data protection, and cybersecurity.
- 10) EU policy negotiating trade agreements and promoting global trade.

Unit 5 Theoretical Chapter: The European green deal

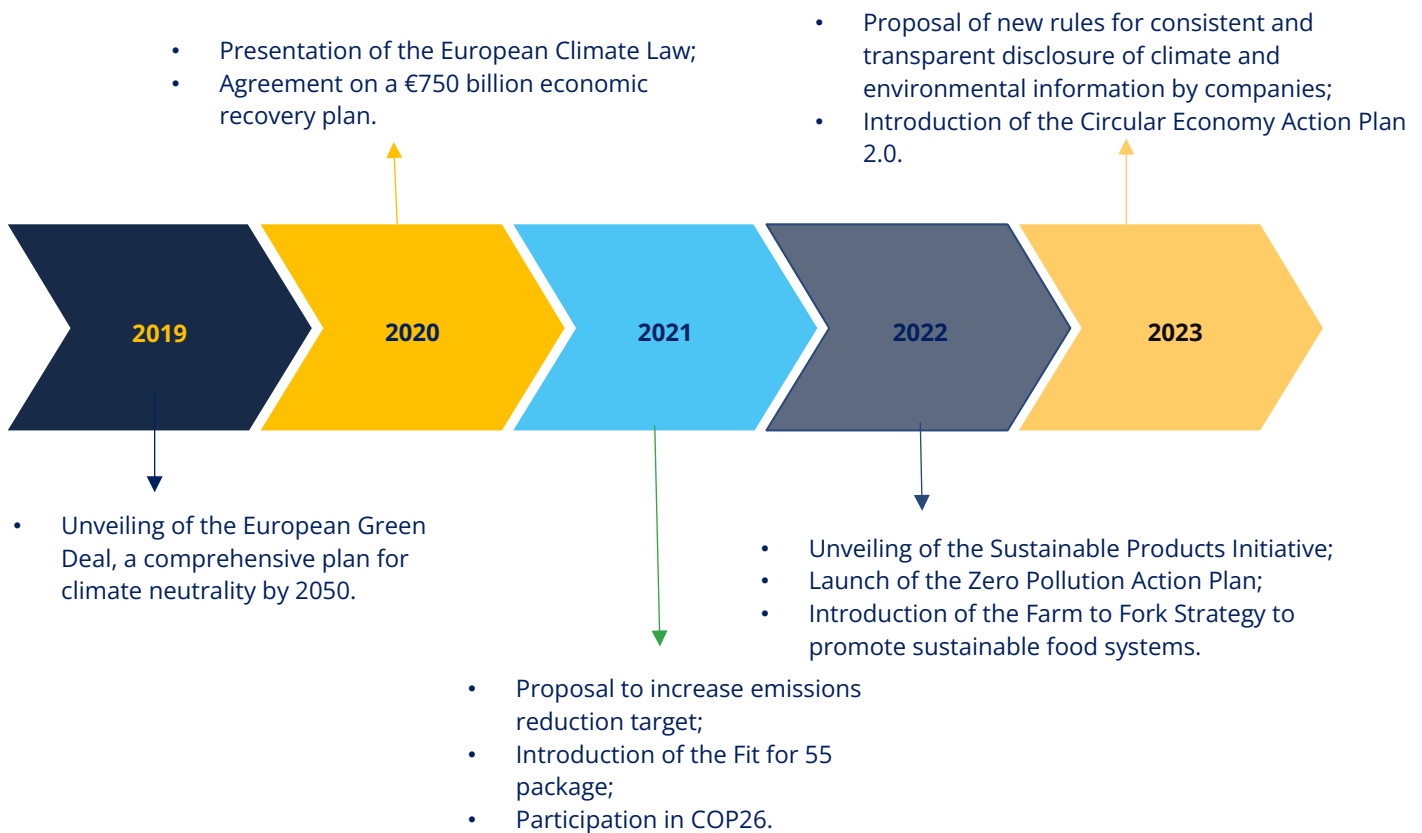
Introduction

The European Green Deal is a package of measures presented by the European Commission in 2019 that aimed at achieving greenhouse gas emissions neutrality by 2050.

These are policies that advocate development and social growth, but above all, sustainable development.

Timeline

Figure 1. 14: *Timeline of the European Green Deal*



The European Union Actions

The European Union (EU) has made significant strides towards creating a greener and more sustainable Europe.

With some of the highest environmental standards globally, the EU and its member states have set clear objectives guiding European environmental policy until 2020 and beyond, aiming to achieve a vision for 2050.

Through dedicated research programs, legislation, and funding, the EU aims to protect, conserve, and enhance its natural capital, transition to a resource-efficient, green, and competitive low-carbon economy, and safeguard citizens from environment-related pressures and risks to health and wellbeing.

The European Green Deal

The European Green Deal is a package of measures presented by the European Commission in 2019 that aimed at achieving greenhouse gas emissions neutrality by 2050, such as:

- Transforming our economy and societies
- Making transport sustainable for all
- Leading the green industrial revolution
- Cleaning our energy system
- Renovating buildings for greener lifestyles
- Working with nature to protect our planet and health
- Boosting global climate action

Transforming our economy and societies

The transformation of the economy and societies lies at the heart of the European Green Deal, aiming to shift towards sustainable and circular models of production and consumption.

This initiative seeks to redefine economic growth by prioritizing environmental sustainability, resource efficiency, and social equity.

By promoting sustainable practices across various sectors, such as agriculture, manufacturing, and services, the European Green Deal aims to foster a resilient and inclusive economy that prioritizes environmental protection and social well-being.

Making transport sustainable for all

Ensuring sustainable transportation is crucial for reducing greenhouse gas emissions and improving air quality in urban areas.

By promoting cleaner and more efficient modes of transport, such as electric vehicles and public transit, the European Green Deal aims to mitigate the environmental impact of transportation while ensuring accessibility for all citizens.

This initiative not only contributes to reducing emissions but also enhances mobility, reduces congestion, and promotes healthier and more livable cities.

Leading the green industrial revolution

The green industrial revolution focuses on driving innovation, research, and investment in green technologies and industries to achieve economic growth while reducing environmental degradation.

By supporting the transition to low-carbon and resource-efficient production methods, the European Green Deal aims to create green jobs, strengthen competitiveness, and position the EU as a global leader in sustainable development.

This initiative recognizes the potential of green industries to drive economic prosperity while addressing pressing environmental challenges.

Cleaning our energy system

Transitioning to a clean and sustainable energy system is essential for combating climate change and reducing dependence on fossil fuels.

By increasing the share of renewable energy sources and promoting energy efficiency measures, the European Green Deal aims to decarbonize the energy sector and achieve climate neutrality by 2050.

This initiative not only reduces greenhouse gas emissions but also enhances energy security, stimulates innovation, and creates new opportunities for investment and job creation in the renewable energy sector.

Renovating buildings for greener lifestyles

Improving the energy efficiency and sustainability of buildings is crucial for reducing energy consumption and greenhouse gas emissions in the built environment.

By promoting renovation and retrofitting projects, the European Green Deal aims to upgrade existing buildings to higher energy performance standards, reduce energy bills for occupants, and improve indoor comfort and air quality.

This initiative not only contributes to mitigating climate change but also stimulates economic activity in the construction sector and enhances the quality of life for residents.

Working with nature to protect our planet and health

The European Green Deal emphasizes the preservation and restoration of ecosystems, biodiversity, and natural resources through nature-based solutions.

By promoting practices such as reforestation, sustainable land management, and conservation efforts, this initiative aims to mitigate climate change, enhance resilience to environmental risks, and protect biodiversity.

Furthermore, investing in nature-based solutions not only contributes to environmental sustainability but also supports human health and well-being by improving air and water quality, enhancing ecosystem services, and promoting recreational opportunities in natural areas.

Boosting global climate action

The European Green Deal seeks to strengthen cooperation and collaboration with other countries and international organizations to accelerate global efforts to mitigate greenhouse gas emissions and adapt to climate change impacts.

By providing financial and technical support to developing countries, fostering knowledge-sharing and technology transfer, and advocating for ambitious climate action on the global stage, this initiative aims to build momentum for collective action and ensure a coordinated and effective response to the climate crisis.

"Fit for 55"

"Fit for 55" refers to a package of legislative measures proposed by the European Union (EU) to meet its more ambitious climate and environmental goals.

The name "Fit for 55" stems from the target of reducing the EU's greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.

The goal of "Fit for 55" is to ensure that the EU is "fit" to achieve its more ambitious climate and environmental targets by providing a robust regulatory framework and effective policies to guide the transition to a greener and climate-resilient economy.

The proposed package aims to establish a cohesive and equitable framework for achieving the EU's climate goals, which includes:

- Ensuring a transition that is just and socially equitable.
- Upholding and enhancing innovation and competitiveness within EU industries while ensuring fair competition with economic operators from third countries.
- Reinforcing the EU's leadership role in global efforts to combat climate change.

Unit 6 Activity Drag the Words

Lumi File: _Unit 12 Activity Drag the Words_ (The following text is embedded in the Lumi File.)

- Please rearrange the given words and put them in the appropriate blanks to complete the sentences.

The *____* is an ambitious initiative by the European Union aimed at promoting the transition to a more *____* and *____* economy. This agreement sets clear goals and concrete measures to address the *____* and climate challenges we currently face while driving *____* growth and job creation.

One of the main objectives of the European Green Deal is to reduce carbon emissions and achieve climate neutrality by *____*. This will be achieved through a series of policies and investments aimed at promoting clean energy, energy efficiency, and sustainable transportation. Additionally, the agreement aims to protect and restore biodiversity, preserve natural resources, and promote more sustainable agriculture.

To achieve these goals, the European Union has committed to investing billions of euros in green infrastructure projects, research and innovation, as well as training and retraining programs. Furthermore, it will be essential to promote international cooperation and encourage the adoption of sustainable practices worldwide.

The European Green Deal represents a unique opportunity to build a greener, fairer, and more prosperous economy for future generations. However, its success will depend on the commitment and collaboration of all member states, the private sector, and civil society. Together, we can turn challenges into *____* and build a more *____* future for all.

Unit 7 Case Study

Lumi File: Unit 7 Case Study (The following text is embedded in the Lumi File.)

- Please read the following text: <https://www.ifri.org/en/publications/etudes-de-lifri/how-can-green-deal-adapt-brutal-world> and provide commentary in response to the question posed in the headline of the article: "How Can the Green Deal Adapt to a Brutal World?".

Lesson 4: European and International standards in sustainability

Unit 1 Introduction

We will explore European and international sustainability standards, frameworks, guidelines, and benchmarks that promote eco-friendly practices globally. The learning objectives of this lesson encompass understanding the significance and scope of European and international sustainability standards, analysing the principles and criteria embedded within these standards, evaluating their impact on various sectors and industries, and synthesizing strategies for implementing and adhering to these standards in diverse contexts. Additionally, students will explore the role of certification processes, regulatory bodies, and collaborative initiatives in driving sustainable development efforts worldwide. By exploring sustainability goals at regional and global levels, learners will gain insights into their complexities and opportunities.

Unit 2 Multiple Choice Question

Lumi File: Unit 2 Multiple Choice Question (The following text is embedded in the Lumi File.)

How do regulatory bodies contribute to the enforcement of sustainability standards?

By relaxing standards to accommodate harmful practices.

By establishing guidelines for sustainable practices and monitoring compliance.

By ignoring sustainability concerns.

By promoting exploitation of natural resources.

Unit 3 Theoretical Chapter: The European Tourism Indicators System (ETIS)

Introduction

The European Tourism Indicators System (ETIS) is a framework developed to monitor and assess the performance of tourism in Europe. This tool is essential for understanding and analyzing the sustainability, competitiveness, and socio-economic impact of the tourism sector across the European region. Through a comprehensive and standardized approach, ETIS provides a framework for collecting relevant and comparable data, enabling policymakers, tourism professionals, and researchers to monitor trends, identify areas for improvement, and make informed decisions to promote sustainable tourism development in Europe. In this introduction, we will explore the key components and objectives of the European Tourism Indicators System, highlighting its importance in the context of the European tourism landscape.

European Tourism Indicators System (ETIS)

The European Tourism Indicators System (ETIS) is a voluntary tool developed by the European Commission to assist tourism destinations in monitoring and measuring their sustainability performance.

It emphasizes a locally owned and led process for data collection and analysis, allowing destinations to assess the impact of tourism on their economic, social, cultural, and environmental well-being.

It is important to note that ETIS is not a certification scheme or a ranking system.

The aim is to enable destinations to monitor their progress over time, compare themselves to best practices, and communicate their sustainability efforts to stakeholders, such as residents, tourists, and investors.

ETIS is a system of indicators suitable for all tourist destinations, encouraging them to adopt a more intelligent approach to tourism planning. It is:

- A **management tool**, supporting destinations that want to take a sustainable approach to destination management
- A **monitoring system**, easy to use for collecting data and detailed information and to let destinations monitor their performance from one year to another
- An **information tool** (not a certification scheme), useful for policymakers, tourism enterprises and other stakeholders.

ETIS is a toolkit that provides 27 core indicators and 40 optional indicators across various dimensions of sustainability, subdivided into four categories:

- **Destination management;**
- **Social and cultural impact;**
- **Economic value;**
- **Environmental impact.**

Destinations can choose the indicators most relevant to their specific context and collect data through various methods such as surveys, administrative records, and stakeholder consultations. By analyzing the collected data, destinations can gain insights into their strengths and weaknesses, identify areas for improvement, and set strategic goals to enhance their sustainability performance.

THE ETIS TOOLKIT- Dimensions, criteria and indicators

Table 1. 1: *ETIS TOOLKIT- Dimensions, criteria and indicators divided in sections: A, B, C and D*

Section	Criteria	Indicator Reference #	Indicator
A. Destination management	A.1 Sustainable Tourism Management in Tourism Enterprises	A.1.1	Percentage of tourism enterprises/establishments in the destination using a voluntary certification/labelling for environmental/quality/sustainability and/or Corporate Social Responsibility measures
		A.2.1	Percentage of tourists and same day visitors that are satisfied with their overall experience in the destination
	A.2 Customer Satisfaction	A.2.2	Percentage of repeat/return visitors (within 5 years)
B. Economic Value	B.1 Tourism Flow (volume & value) at the Destination	B.1.1	Number of tourist nights per month
		B.1.2	Number of same day visitors per month
		B.1.3	Relative contribution of tourism to the destination's economy (% GDP)

		B.1.4	Daily spending per overnight tourist
		B.1.5	Daily spending per same day visitor
	B.2 Tourism Enterprise(s) Performance	B.2.1	Average length of stay of tourists (nights)
		B.2.2	Occupancy rate in commercial accommodation establishments per month and average for the year
	B.3 Quantity and Quality of Employment	B.3.1	Direct tourism employment as percentage of total employment in the destination
		B.3.2	Percentage of jobs in tourism that are seasonal
	B.4 Tourism Supply Chain	B.4.1	Percentage of locally produced food, drink, goods and services sourced by the destinations' tourism enterprises

C. Social and Cultural Impact	C.1 Community/Social Impact	C.1.1	Number of tourists per 100 residents
		C.1.2	Percentage of residents who are satisfied with tourism in the destination (per month/season)
		C.1.3	Number of beds available in commercial accommodation establishment per 100 residents
		C.1.4	Number of second homes per 100 homes
	C.2 Health and Safety	C.2.1	Percentage of tourists who register a complaint with the police
	C.3 Gender Equality	C.3.1	Percentage of men and women employed in the tourism sector
		C.3.2	Percentage of tourism enterprises where the general manager position is held by a woman
	C.4 Inclusion/Accessibility	C.4.1	Percentage of rooms in commercial accommodation establishments accessible for people with disabilities
		C.4.2	Percentage of commercial accommodation establishments participating in recognised accessibility information schemes



		C.4.3	Percentage of public transport that is accessible to people with disabilities and with specific access requirements
		C.4.4	Percentage of tourist attractions that are accessible to people with disabilities and/or participating in recognised accessibility information schemes
	C.5 Protecting and Enhancing Cultural Heritage, Local Identity and cultural Assets	C.5.1	Percentage of residents that are satisfied with the impacts of tourism on destination's identity
		C.5.2	Percentage of the destination's events that are focused on traditional/local culture and heritage

D. Environmental Impact	D.1 Reducing Transport Impact	D.1.1	Percentage of tourists and same day visitors using different modes of transport to arrive at the destination
		D.1.2	Percentage of tourists and same day visitors using local/soft mobility/public transport services to get around the destination
		D.1.3	Average travel (km) by tourists and same day visitors from home to the destination
		D.1.4	Average carbon footprint of tourists and same day visitors travelling from home to the destination
	D.2 Climate Change	D.2.1	Percentage of tourism enterprises involved in climate change mitigation schemes—such as: CO ₂ offset, low energy systems, etc.—and “adaptation” responses and actions
		D.2.2	Percentage of tourism accommodation and attraction infrastructure located in “vulnerable zones”
	D.3 Solid Waste Management	D.3.1	Waste production per tourist night compared to general population waste production per person (kilos)
		D.3.2	Percentage of tourism enterprises separating different types of waste
		D.3.3	Percentage of total waste recycled per tourist compared to total waste recycled per resident per year



D. Environmental Impact	D.4 Sewage Treatment	D.4.1	Percentage of sewage from the destination treated at least at secondary level prior to discharge
	D.5 Water Management	D.5.1	Water consumption per tourist night compared to general population water consumption per resident night
		D.5.2	Percentage of tourism enterprises taking actions to reduce water consumption
		D.5.3	Percentage of tourism enterprises using recycled water
	D.6 Energy Usage	D.6.1	Energy consumption per tourist night compared to general population energy consumption per resident night
		D.6.2	Percentage of tourism enterprises that take actions to reduce energy consumption
		D.6.3	Percentage of annual amount of energy consumed from renewable sources (Mwh) compared to overall energy consumption at destination level per year
	D.7 Landscape and Biodiversity Management	D.7.1	Percentage of local enterprises in the tourism sector actively supporting protection, conservation, and management of local biodiversity and landscapes.

Note. From European Tourism Indicator System TOOLKIT by European Commission. n.d. (<https://ec.europa.eu/docsroom/documents/205/attachments/1/translations/en/renditions/native/>)

Unit 4 Activity Cross Words

Lumi File: Unit 4 Cross Words (The following text is embedded in the Lumi File.)

Clues:

- 1) Prevent the depletion of natural or physical resources, so that they will remain available for the long term.
- 2) Set of tools.
- 3) Observe the progress or quality of something over a period of time.
- 4) Something that indicates the state or level of something.
- 5) Effect or influence



Unit 5 Theoretical Chapter: Operationalizing ETIS

Introduction

Operationalizing ETIS (Ethical, Transparent, and Inclusive Systems) is crucial in contemporary data-driven landscapes. ETIS emphasizes ethics, transparency, and inclusivity in technology design and deployment. This introduction highlights the significance of integrating ETIS principles into organizational practices and technological innovations.

Operationalizing ETIS

1) Raise awareness

When destinations decide to measure its sustainability using the ETIS, they should communicate the decision to as many stakeholders as possible using all methods at their disposal. This will:

- increase participation
- raise awareness of the destination's commitment to sustainable tourism
- increase support for actions that might need to be undertaken based on the indicator results.

Social media can be useful and cost-effective for communicating quickly and simply, as well as encourages useful discussions.

2) Create a destination profile

Defining the boundaries of the destination and providing stakeholders with a general overview is crucial in data collection. The ETIS tool provided to facilitate this is the destination profile form, which is the key starting point for implementation. This form is a useful resource for destination management. It is simple to complete. The statement helps to establish the location and provides a helpful point of reference for stakeholders, including information on the geography, tourism facilities, transportation links, and visitor statistics.

3) Form a Stakeholder Working Group (SWG)

The SWG is a collection of organisations and individuals in the destination with an involvement and interest in the tourism industry, hosted by the local destination coordinator and/or the national or regional tourism organisation. To collect meaningful and representative data, it should include the private sector, destination management organization or tourism authority, community groups, utility providers, local authority departments responsible for employment, economic growth, planning, protected areas and the environment. Local destination coordinators should encourage representatives from

these and other relevant sectors to get involved by emphasising the benefits of participation to both the individual and the organisation they represent. The SWG should include 15-20 people.

4) Establish roles and responsibilities

At the 1st SWG meeting, it is important to agree on the clear responsibilities of SWG members' roles and interests, as well as for the data collection. This will aid in prioritising data collection for core indicators and foster a sense of ownership and commitment to the process. It is the role of the local destination coordinator to steer stakeholders towards an agreement on setting targets, taking action and planning how to achieve these aims, as appropriate. It is important to clearly define which member of the SWG will be responsible for which target and obtain their agreement to this.

5) Collect and record data

Destinations can select the most relevant indicators they wish to adopt and monitor to meet the needs of the destination. Most indicator data should be readily available from each SWG member's sector, employment role and interest or be accessible through other authorities, e.g. at a national level. Data collection should simply be a process of bringing the various data sources together in one place to build a detailed picture of the destination's tourism industry. Detailed explanations of how to collect the data necessary for each indicator is provided in the ETIS datasheets available on the European Commission's website. Data do not have to be collected for every indicator every year. The SWG will need to agree on the suitable data collection cycles. The most important thing is to start collecting data, even if only for a few indicators.

6) Analyse results

Once data collection is completed, a meeting of the SWG should be promoted to start analysing the results from the destination datasheet. The group can then review and analyse the results, decide on some realistic benchmarks or targets and agree on a plan on how to achieve these. The SWG will determine the priorities for the destination and agree to take action upon them. When the issues have been prioritised, those requiring most urgent attention can be compiled into an action plan.

7) Enable ongoing development and continuous improvement

Defining a strategy, maintaining the use of the European Tourism Indicator System and communicating results. Once the SWG has an action plan in place to tackle immediate priorities, a strategy for longer-term (at least 3 year) improvement can be developed. It is important that the indicators and the data are regularly reviewed and that additional supplementary indicators are included when possible, as appropriate to the destination.

Broadening the range of indicators measured will help build a more complete picture of the destination. It will also allow for improvements of a larger scope of performance. Another issue to consider is whether funding could be obtained to support the long-term use of the ETIS and cover the cost of improvements, data collection and other work undertaken by the SWG. In time, the data collected should help tell a story about the destination that can be integrated into marketing and communication plans, as well as informing long-term strategy and policy.

Unit 6 Case Study

Lumi File: Unit 7 Case Study (The following text is embedded in the Lumi File.)

Slovenia Green turns sustainable tourism into a national success model

With its emerald rivers, scenic landscapes and well-preserved heritage sites, Slovenia is considered one of Europe's green gems for a good reason. But while sustainability is an essential part of national legislation and recently lifted the country to fifth place on the Environmental Performance Index, practitioners of the country's important tourism industry found themselves lacking specific tools and knowledge to implement green policies in tourism development. In cooperation with the sustainable tourism factory GoodPlace, the Slovenian Tourism Board is implementing the ambitious Slovenia Green programme to improve the competitiveness of local destinations.

Under the green scheme, the tourism board has been implementing the European Tourism Indicator System (ETIS) since 2015 and uses the criteria of the Global Sustainable Tourism Council (GSTC) to set up a holistic certification scheme that takes into account Slovenia's national characteristics on the level of destinations and tourism providers. GoodPlace provides education and networking services and invited tourism coordinators to take part in a targeted training programme. Jana Apih is the Managing Director of GoodPlace: "We wanted to use the ETIS indicators not just as an evaluation tool, so we broadened the formula using the Global Sustainable Tourism Review tool and introduced scores that tourism coordinators could apply at their destination to obtain the Slovenia Green certification. The scheme is quite complex, but in the first edition of our training in June 2015, we had 15 destination coordinators motivated and ready to enter the race for the greenest destination – with success! So far, 7 destinations and 6 hotels have been awarded Slovenia Green certificates."

Each destination that wants to receive the Slovenia Green label is required to sign a green development policy as a sign of official commitment and carry out a 7-step process including raising awareness, creating a destination profile, and collecting statistical data. Once certified, destination coordinators have to submit annual progress reports and enter a re-evaluation phase every two to three years. According to the level of sustainability that can be proven, destinations can rise up from bronze to platinum in their certification. Hotels are encouraged

to obtain an internationally recognised green certification such as Green Globe, Travelife, or the EU Ecolabel, before they qualify for the Slovenia Green certificate.

But for Jana and her team the current mind set is not yet sufficient. “We need suppliers and destination managers to think very hard about the sustainable tourism products they want to develop and promote. Each destination has to find a unique and authentic local story behind its green product to offer a distinct experience to its visitors. The lion share of our work will lie in helping destinations find exactly that”, Jana sums up the future direction of Slovenia Green.

GoodPlace also makes its own contributing to the development and promotion of destination Slovenia: it has created the travel agency VisitGoodPlace in 2015, which specialises in cycling tours for tourists that want to combine active holidays with the discovery of local values and cultural heritage.

Source: <https://ec.europa.eu/docsroom/documents/15851/attachments/6/translations>

After carefully reading the text, please answer the following questions:

- 1) What specific initiative is the Slovenian Tourism Board implementing in cooperation with GoodPlace to enhance the competitiveness of local destinations?
- 2) How does GoodPlace support tourism coordinators in achieving Slovenia Green certification for destinations?
- 3) What are the key steps that destinations need to take in order to receive the Slovenia Green label?
- 4) Why are hotels encouraged to obtain internationally recognized green certifications before qualifying for the Slovenia Green certificate?
- 5) According to Jana Apih, what is the main focus for suppliers and destination managers to develop successful sustainable tourism products under the Slovenia Green scheme?

Unit 7 Theoretical Chapter: GSTC- Global Sustainable Tourism Council

Introduction

The Global Sustainable Tourism Council (GSTC) is an international organization focused on promoting sustainable tourism practices globally through standards and certification programs. Established in 2008, it collaborates with governments, businesses, and communities to minimize negative impacts on the environment, preserve cultural heritage, and maximize socio-economic benefits for local communities.

What is the GSTC – Global Sustainable Tourism Council?

The Global Sustainable Tourism Council (GSTC) is a leading organization dedicated to promoting sustainable practices in the travel and tourism industry.

Established in 2010, it functions as a non-profit and independent body with a focus on setting global standards for sustainable tourism.

Figure 1. 15: Global Sustainable Tourism Council Logo



Note. From *Global Sustainable Tourism Council* by *Global Sustainable Tourism Council*. n.d. (<https://www.gstcouncil.org/>)

The GSTC plays a multifaceted role in the tourism sector:

- **Establishing and managing:** They develop and manage the **GSTC Criteria**, a comprehensive framework outlining the **best practices** for managing destinations and businesses sustainably. **Accreditation and recognition:** The GSTC accredits certification bodies that independently assess destinations and businesses against the established criteria. This accreditation ensures the **credibility and reliability** of various sustainability certifications in the tourism industry.
- **Knowledge sharing and capacity building:** They actively engage in **education and awareness-raising initiatives**, providing resources and training programs to various stakeholders in the tourism sector. This empowers destinations and businesses to implement sustainable practices effectively.
- By setting standards, facilitating accreditation, and promoting knowledge sharing, the GSTC plays a crucial role in driving **sustainable tourism development** worldwide. Their efforts contribute to building a more **responsible and ethical** tourism industry that benefits both local communities and the environment.

The GSTC criteria overview

The GSTC Criteria serve as the global standards for sustainability in travel and tourism. The Criteria are used for education and awareness-raising, policy-making for businesses and government agencies and other organization types, measurement and evaluation, and as a basis for certification.

These criteria encompass four key pillars:

- **Sustainable management:** Effective governance, responsible marketing, and destination planning.

- **Socioeconomic impacts:** Respecting labor rights, supporting local communities, and ensuring fair distribution of benefits.
- **Cultural impacts:** Protecting cultural heritage, fostering understanding, and promoting cultural diversity.
- **Environmental impacts:** Minimizing resource consumption, managing waste responsibly, and protecting biodiversity.

The Criteria are the minimum, not the maximum, which businesses, governments, and destinations should achieve to approach social, environmental, cultural, and economic sustainability.

Since tourism destinations each have their own culture, environment, customs, and laws, the Criteria are designed to be adapted to local conditions and supplemented by additional criteria for the specific location and activity.

There are two sets of GSTC Criteria: one aiming at tourism industry (hotels and tour operators) and another directed at tourism destinations.

What is the relationship between the GSTC Criteria and the Sustainable Development Goals?

There is a strong relationship between the GSTC Criteria and the Sustainable Development Goals (SDGs). By up taking the GSTC Criteria, people are helping to meet the UN SDGs.

Economic, environmental, and societal dimensions are all addressed by the GSTC Criteria.

Destinations and organizations looking to contribute to the SDGs will find that the GSTC Criteria and other GSTC-Recognized Standards provide effective tools to help them rise to the challenge.

Corresponding SDG to each criterion of the GSTC Destination Criteria

The GSTC Destination Criteria v2.0 and the GSTC Industry Criteria for Hotels and Tour Operators, include performance indicators designed to provide guidance in measuring compliance with the Criteria.

Application of the Criteria will help destinations and organizations contribute towards the 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals.

Against each of the Criteria, one or more of the 17 SDGs is identified, to which it most closely relates.

Unit 8 Activity: Fill in the Blanks

Lumi file: Activity Fill in the Blanks (The following text is embedded in the Lumi File.)

Fill in the missing words.

The Global Sustainable Tourism Council (GSTC) is a leading organization dedicated to promoting sustainable practices in the *____* and *____* industry.

The GSTC develops and manages the GSTC Criteria, a comprehensive framework outlining the best practices for managing *____* and *____* sustainably.

The GSTC accredits *____* bodies that independently assess destinations and businesses against the established criteria to ensure the credibility and reliability of various sustainability certifications in the *____* industry.

The GSTC Criteria serve as the global standards for sustainability in travel and tourism and are used for *____*, policy-making, measurement and evaluation, and as a basis for certification.

The four key pillars of the GSTC Criteria encompass sustainable management, socioeconomic impacts, cultural impacts, and *____* impacts.

The GSTC Criteria are divided into two sets: one for the tourism industry (hotels and tour operators) and another for *____*.

Unit 9 Theoretical Chapter: Promoting sustainability in tourism industry

Introduction

The Global Sustainable Tourism Council (GSTC) Criteria were created to provide a common understanding throughout the world of “sustainable tourism” and are the minimum that any tourism business should aspire to reach. They are organized around four main themes: effective sustainability planning, maximizing social and economic benefits for the local community, enhancing cultural heritage, and reducing negative impacts to the environment. They have applicability to the entire tourism industry.

Some of the uses of the industry criteria include the following:

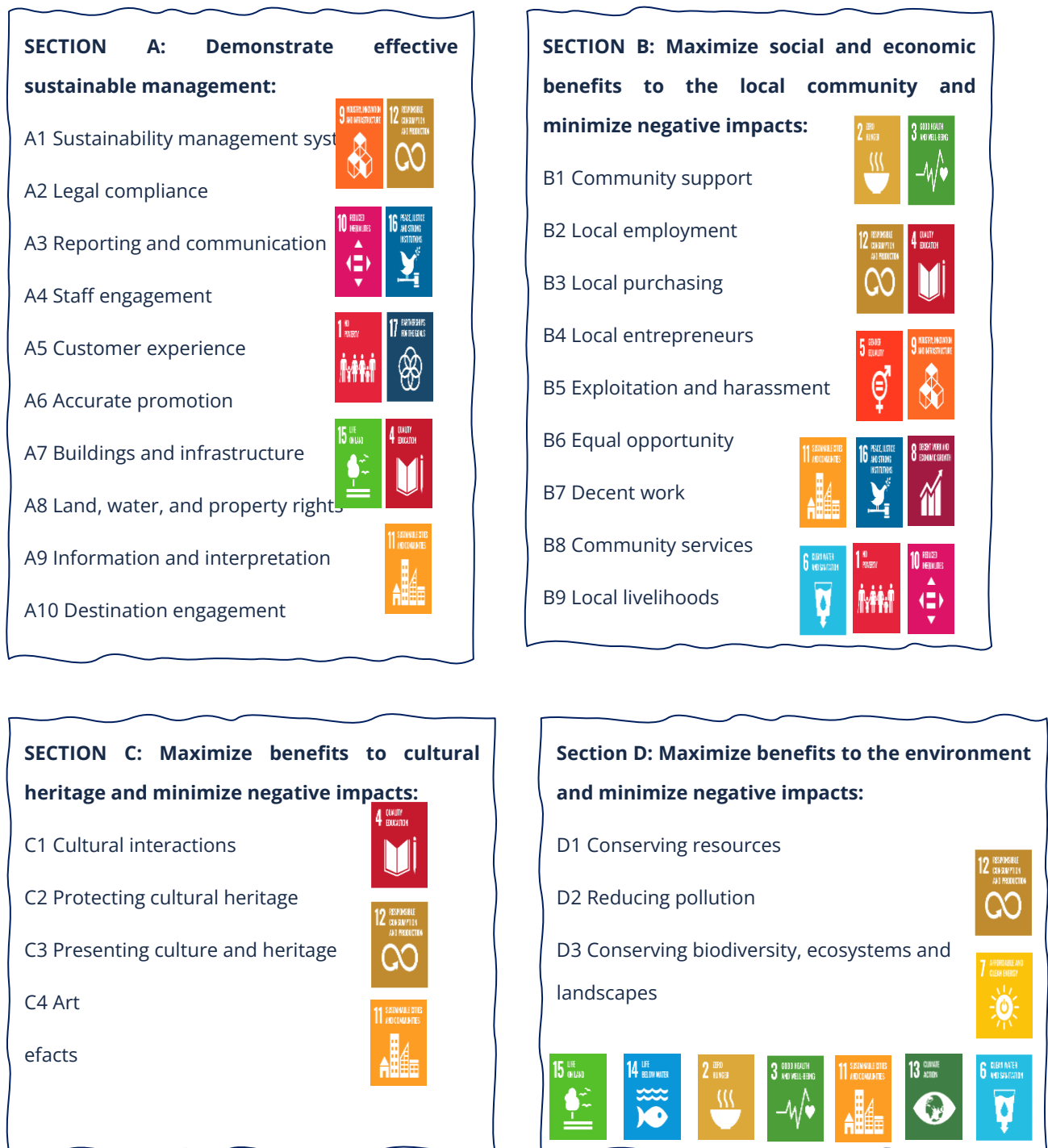
- Serve as the basis for certification for sustainability;
- Serve as basic guidelines for businesses of all sizes to become more sustainable, and help businesses choose sustainable tourism programs that fulfill these global criteria;
- Provide greater market access in the growing market for sustainable products, serving as guidance both for travelers and for travel agencies in choosing suppliers and sustainable tourism programs;
- Help consumers identify sound sustainable tourism programs and businesses;

- Serve as a common denominator for information media to recognize sustainable tourism providers;
- Help certification and other voluntary programs ensure that their standards meet a broadly accepted baseline;
- Offer governmental, non-governmental, and private sector programs a starting point for developing sustainable tourism requirements;
- Serve as basic guidelines for education and training bodies, such as hotel schools and universities;
- Demonstrate leadership that inspires others to act.

GSTC Industry Criteria (Hotels and Tour Operators):

The Criteria indicate what should be done, not how to do it or whether the goal has been achieved. This role is fulfilled by performance indicators, associated educational materials, and access to tools for implementation, all of which are an indispensable complement to the GSTC Criteria.

Figure 1. 16: GSTC Industry Criteria (Hotels and Tour Operators)



Note. From *GSTC Industry Criteria for Hotels & Tour Operators* by *Global Sustainable Tourism Council*. n.d. (<https://www.gstccouncil.org/gstc-criteria/gstc-industry-criteria/>)

Sustainability Management System (SMS) for Hotels:

In good practice, an SMS is a cost-effective and organized approach to manage different aspects related to the sustainability performance of a hotel, which address expectations from its guests, employees, and local communities. As a base, the following areas will likely need to be managed in a hotel and should be examined:

Table 1. 2: *Sustainability Management System (SMS) for Hotels: Categorys and Aspects*

Category	Topics/Aspects
Social	Health and safety Equal opportunity Anti-harassment and anti-exploitation Decent work Employee payment Employee satisfaction and feedback Staff training and career advancement Accessibility Community support (both in-kind and cash) Impact on local communities Destination engagement (e.g. partnership with local communities, NGOs and other organizations)
Environmental	Climate change risks Environmental purchasing Efficient building and infrastructure Energy conservation Water conservation Greenhouse gases emissions Cleaner transportation



	Wastewater Solid waste Harmful substances (e.g. pesticides, paints, cleaning materials) Biodiversity conservation and preservation Invasive species avoidance Wildlife interaction, harvesting and trade Animal welfare Pollution monitoring and minimization
Cultural	Tourist visits to cultural sites and indigenous communities Protecting cultural heritage Presenting cultural heritage Use of artefacts
Economic	Land, water and property rights Local employment Local purchasing Support to local entrepreneurs
Quality	Legal compliance Customer satisfaction Visitor safety Regular sustainability performance reporting and communication Accurate promotion

Note. HOTEL SUSTAINABILITY MANAGEMENT SYSTEM by *Global Sustainable Tourism Council*. 2021. (<https://www.gstcouncil.org/wp-content/uploads/GSTC-SMS-Guidance-Prepared-by-Greenview-Mar2021.pdf>)

Unit 10 Activity: True or False

Please read the following statements and let me know if they are true or false. (The following text is embedded in the Lumi File.)

- The Global Sustainable Tourism Council (GSTC) Criteria were created to provide a common understanding throughout the world of “sustainable tourism” and are the minimum that any tourism business should aspire to reach.
- The GSTC Criteria are organized around three main themes: effective sustainability planning, maximizing social and economic benefits for the local community, and enhancing cultural heritage.
- The GSTC Industry Criteria are applicable only to large-scale tourism businesses.
- One of the uses of the industry criteria is to serve as the basis for certification for sustainability.
- The industry criteria do not assist consumers in identifying sound sustainable tourism programs and businesses.
- The GSTC Industry Criteria do not offer governmental, non-governmental, and private sector programs a starting point for developing sustainable tourism requirements.
- The Criteria indicate how sustainability goals should be achieved, not just what should be done.
- Sustainability Management System (SMS) for Hotels is an optional approach to managing sustainability performance and is not considered good practice.
- The SMS for Hotels primarily addresses the expectations of shareholders and investors.
- Education and training bodies, such as hotel schools and universities, are not included in the stakeholders who benefit from the GSTC Industry Criteria.

Unit 11 Theoretical Chapter Promoting Sustainability in Destinations

Introduction

The GSTC Destination Criteria (GSTC-D) have been developed based on decades of prior work and experience in sustainable tourism worldwide. They incorporate certification standards, indicators, and best practices from different cultural and geopolitical contexts. Before finalization, indicators were carefully selected and field-tested globally to ensure their relevance and applicability across various types of destinations. The criteria development process strictly adhered to ISO codes of conduct and the standards-setting code of the ISEAL Alliance, ensuring their integrity and credibility.

Some of the uses of the destination criteria include the following:

- Serve as basic guidelines for destinations that wish to become more sustainable;
- Help consumers identify sound sustainable tourism destinations;
- Serve as a common denominator for information media to recognize destinations and inform the public regarding their sustainability;

- Help certification and other voluntary destination level programs ensure that their standards meet a broadly-accepted baseline;
- Offer governmental, non-governmental, and private sector programs a starting point for developing sustainable tourism requirements;
- Serve as basic guidelines for education and training bodies, such as hotel schools and universities.

GSTC Destination Criteria

Figure 1. 17: *GSTC Destination Criteria: Section A*



SECTION B: Socio-economic sustainability:

B(a) Delivering local economic benefits

1. B1 Measuring the economic contribution of tourism
2. B2 Decent work and career opportunities
3. B3 Supporting local entrepreneurs and fair trade

B(b) Social wellbeing and impacts

1. B4 Support for community
2. B5 Preventing exploitation and discrimination
3. B6 Property and user rights
4. B7 Safety and security
5. B8 Access for all



SECTION C: Cultural sustainability:

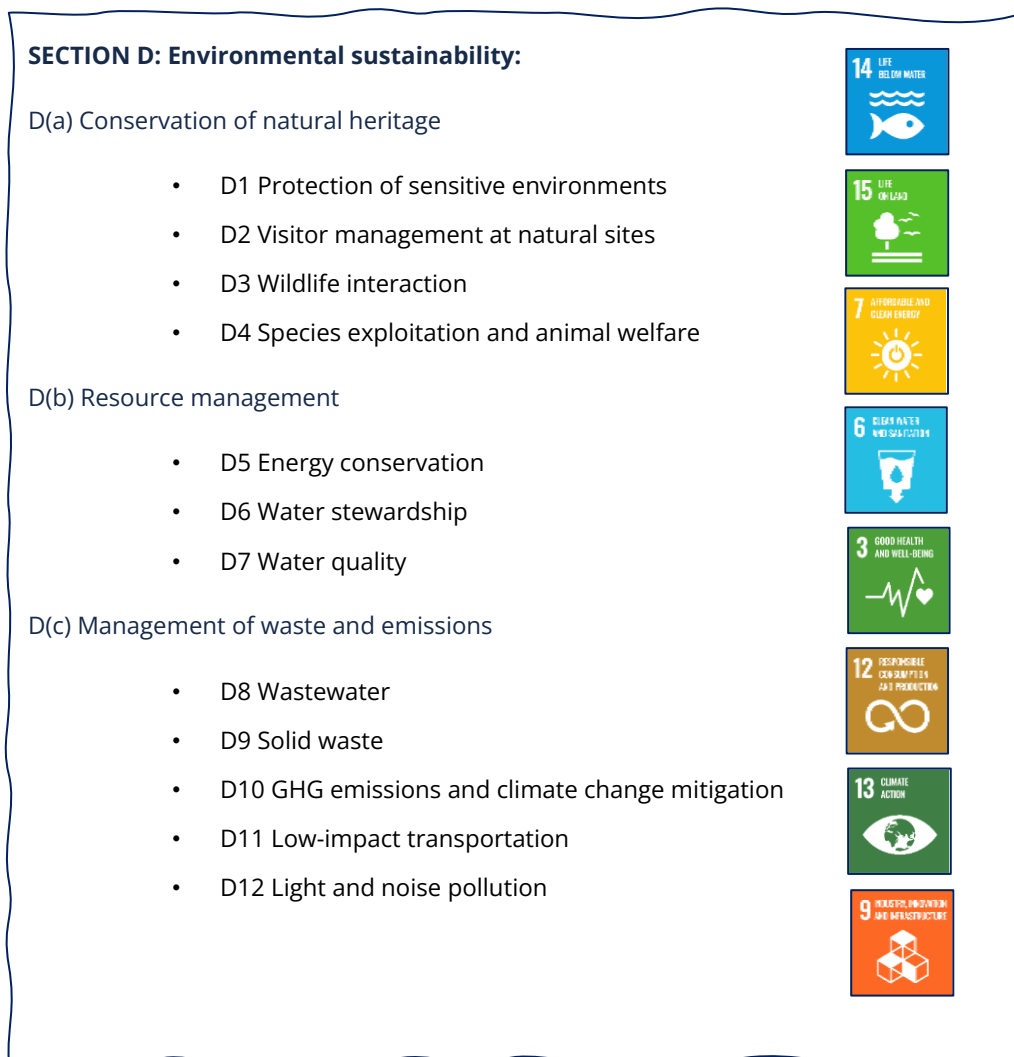
C(a) Protecting cultural heritage

1. C1 Protection of cultural aspects
2. C2 Cultural artefacts
3. C3 Intangible heritage
4. C4 Traditional access
5. C5 Intellectual property

C(b) Visiting cultural sites

1. C6 Visitor management at cultural sites
2. C7 Site interpretation





Note. GSTC Destination Criteria by *Global Sustainable Tourism Council*. n.d. (<https://www.gstcouncil.org/gstc-criteria/gstc-destination-criteria/>)

Unit 12 Essay

Lumi File: Essay (The following text is embedded in the Lumi File.)

- Please select two of the questions provided below and proceed to respond to them accordingly.
- 1) What is the basis for the development of the GSTC Destination Criteria (GSTC-D)?
 - 2) How were the indicators and standards for the GSTC-D selected?
 - 3) What global standards were adhered to during the criteria development process?

- 4) How were the GSTC-D field-tested to ensure their relevance and applicability?
- 5) What are some of the uses of the destination criteria mentioned in the theoretical chapter?
- 6) How do the GSTC-D serve consumers in identifying sustainable tourism destinations?
- 7) In what ways do the GSTC-D assist information media in recognizing destinations and informing the public about their sustainability?
- 8) How do the GSTC-D support certification and other voluntary destination-level programs?
- 9) What role do the GSTC-D play in governmental, non-governmental, and private sector programs related to sustainable tourism?
- 10) How do education and training bodies utilize the GSTC-D as mentioned in the theoretical chapter?

Module 1 Closing Video

As we wrap up Module 1, we've gained a deeper understanding of sustainability's crucial role in tourism and the responsibilities it places on project managers. With this groundwork laid, we're ready to tackle Module 2: "The Sustainable Hybrid Project Management for Sustainable Tourism." Here, we'll explore tailored strategies for sustainable project management in the tourism industry. Through teamwork and hands-on learning, we'll work towards our goal of fostering a more sustainable future for tourism. Let's embrace the challenges and opportunities that Module 2 brings as we move forward together.

Module 1 Assessment Exams

Welcome to Module 1 examinations intended to assess your understanding and proficiency of the material covered in this module. Prior to commencing, please ensure to thoroughly review the following instructions.

Responding to Questions: The examination comprises two question formats:

- Multiple Choice: Each multiple-choice question is accompanied by four potential answers. Carefully read each question and select the answer that is deemed correct or most accurately addresses the question.
- True or False: When encountering true or false inquiries, carefully consider each statement. Determine its accuracy based on your familiarity with the subject matter and indicate your choice accordingly.

1. In the 1980s, the landmark Brundtland Report emerged as a pivotal document, providing a seminal definition of sustainable development as the imperative to meet current needs without imperilling the prospects of future generations.

True

False

2. By not addressing the interdependencies among these pillars, sustainable development endeavours to forge a path towards a resilient, equitable, and flourishing future for all inhabitants of our planet.

True

False

3. Sustainable tourism development aims to meet the needs of present tourists and host regions while neglecting opportunities for the future.

True

False

4. Circular economy tourism aims to maximize waste and consumption patterns.

True

False

5. What is the overarching objective of the Sustainable Development Goals (SDGs)?

To enforce regulations on environmental protection

To address global challenges and achieve a better and more sustainable future for all

To reduce population growth

To promote economic growth

6. The Sustainable Development Goals (SDGs) completely replaced the Millennium Development Goals (MDGs).

True

False

7. What is the European Green Deal primarily focused on?

Strategy and actions

Initiatives and legislation

Both of the other options

8. Which international agreement does the European Green Deal align with in terms of its climate goals?

Paris Agreement

Kyoto Protocol

Montreal Protocol

9. What role does the European Green Deal play in Europe's biodiversity strategy?

It aims to restore degraded ecosystems and halt biodiversity loss

It aims to reduce protected areas by 2030

It promotes unsustainable agricultural practices

10. European policies in sustainability primarily focus on:

Social welfare programs

Political stability

Addressing environmental concerns and fostering sustainable development

11. What is doughnut economics?

An economic model that prioritizes resource extraction and consumption.

An economic model that emphasizes meeting the needs of all individuals within planetary boundaries.

An economic model focused on maximizing GDP growth.

An economic model that disregards social and environmental concerns.

12. What is the primary focus of the circular economy?

Minimizing waste and maximizing resource efficiency through recycling and reuse.

Maximizing waste production.

Reducing resource efficiency.

Ignoring environmental sustainability.

13. How does doughnut economics differ from the circular economy?

Doughnut economics advocates for unlimited economic growth, while the circular economy promotes a steady-state economy.

Doughnut economics prioritizes well-being within ecological limits, while the circular economy focuses on closing material loops.

Doughnut economics emphasizes resource efficiency, while the circular economy emphasizes meeting human needs.

Doughnut economics focuses solely on environmental issues, while the circular economy focuses on social and economic issues.

14. How do doughnut economics and the circular economy collaborate to foster innovation?

By stifling creativity and entrepreneurship.

By promoting outdated industrial practices.

By discouraging sustainable business practices.

By encouraging the development of circular business models and sustainable technologies.

15. How do regulatory bodies contribute to the enforcement of sustainability standards?

By establishing guidelines for sustainable practices and monitoring compliance

By promoting exploitation of natural resources

By relaxing standards to accommodate harmful practices

By ignoring sustainability concerns

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Module 2: Hybrid Project Management for the Sustainable Tourism

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Module 2: Hybrid Project Management for the Sustainable Tourism

Introductory Video

Welcome to the module “Hybrid Project Management for the Sustainable Tourism” designed for tourism professionals aiming to become pioneers of sustainable hybrid project management.

Bridging the gap between traditional and agile project management, this module caters specifically to the unique demands of sustainable tourism. Our goal? To prepare you to adeptly navigate the complexities of hybrid sustainable projects.

Through this journey, you will gain critical knowledge, skills, and competencies to not only achieve your project objectives but to also make a positive impact on both environmental and socio-cultural landscapes.

Dive deep into the essence of project management, exploring both process-driven and principle-centered perspectives. Discover the intricacies of traditional, agile, hybrid, and, most importantly, sustainable approaches within the realm of project management.

By the end of this module, you'll be equipped to initiate, plan, execute, monitor and control and close hybrid projects with confidence, integrating sustainability into every phase of your project lifecycle.

Embrace the responsibility and autonomy required to lead with a hybrid sustainable project management mindset, confidently selecting and applying the most effective project management approaches for the sustainable development of tourism.

Join us in shaping the future of tourism, where sustainability and hybrid project management excellence converge.

Are you ready to be at the forefront of sustainable tourism development?

Lesson 1: Project Management in the Sustainable Tourism Industry

Unit 1 Introduction

In the context of the sustainable tourism industry, project management stands as a linchpin for success, particularly in navigating the complexities of the evolving project economy. Understanding the basics of project management is essential for orchestrating sustainable initiatives within this dynamic sector. The project environment, characterized by diverse stakeholders, limited resources, and shifting regulatory landscapes, underscores the need for adept project management to effectively balance competing interests and drive progress towards sustainable outcomes. Recognizing why projects fail highlights the critical role of proficient project management in mitigating risks and fostering resilience. Moreover, delineating the differences between project, product, and event management elucidates the distinct approaches required for each endeavor, with project management focusing on temporary endeavors to achieve specific goals within predefined constraints, a vital distinction in steering sustainable tourism initiatives towards long-term viability and positive environmental and socio-economic impacts.

Unit 2 Multiple Choice Question

Lumi File: L2M1_Unit 2_Project Management in the Sustainable Tourism Industry (The following text is embedded in the Lumi File.)

What fundamental aspect highlights the indispensable role of proficient project management in fostering sustainability within the dynamic landscape of the tourism industry?

- Mastery of niche event planning techniques
- Strategic adaptation to the multifaceted dynamics of the evolving project economy
- Efficient management of stakeholder conflicts in the absence of predefined strategies
- Neglect of regulatory fluctuations due to overemphasis on operational intricacies

Unit 3 Theoretical Chapter: The Project Economy

Introduction

In recent years, the global economy has witnessed a significant transformation, marked by a shift towards what is often termed the "Project Economy." This paradigm, characterized by the pervasive influence of projects in shaping organizations and society, presents both opportunities and challenges for project leaders and practitioners of the tourism sector and



not only. This chapter aims to define the concept of the Project Economy, explore the global trends driving its emergence, and examines the phenomenon of "projectification" and its implications for organizations and society at large.

Defining “Project Economy”

We are living in the VUCA World characterized by volatility, uncertainty, complexity, and ambiguity. At this time of extraordinary change, driven by the 4th Industrial Revolution, the human activities that have now brought Earth outside of the Holocene’s window of environmental variability, giving rise to the proposed Anthropocene epoch, with six of our nine planetary boundaries having now been crossed and other trends that disrupt our everyday lives, professionals from across business, government, associations, and nonprofit organizations know that success depends on big, bold ideas ([Richardson et al., 2023](#)). And these big, bold ideas must be delivered with big, bold projects—or risk being left behind, especially when it concerns transforming our societies into more sustainable ones ([PMI, Pulse of the Profession 2020](#)).

Figure 2.1

Earth outside of the Holocene’s window



Note. From *Climate change global warming* [Photograph], by TheDigitalArtist, n.d., Pixabay. (<https://pixabay.com/illustrations/climate-change-global-warming-2254711/>). CC BY 2.0.

Within this context, projects, rather than operations, are driving short-term survival and long-term value creation today and tomorrow, as they are progressively becoming drivers of both immediate performance and enduring value generation.

Projects influence all facets of modern society and business. They have become the primary drivers of economic activity, innovation, and value creation. Organizations increasingly rely on

projects to implement strategic initiatives, develop new products and services, adapt to market changes, and address complex challenges. Moreover, societal endeavors, from infrastructure development to sustainability initiatives, are largely undertaken through projects. The prevalence of project-based work arrangements, the rise of knowledge-intensive industries, and the gig economy further underscore the project-centric nature of our economy. In essence, projects have become the fundamental units of change and progress, shaping the way we work, live, and interact in the contemporary world.

And this new project-based era is called **"The Project Economy"**.



According to the [Project Management Institute \(2021\)](#), **the Project Economy is one in which people have the skills and capabilities they need to turn ideas into reality. It is where organizations deliver value to stakeholders through successful completion of projects, delivery of products, and alignment to value streams. And all of these initiatives deliver financial and societal value.**

It is estimated that the value of project-oriented economic activity worldwide would grow from \$12 trillion in 2017 to \$20 trillion in 2027, with the potential to create 88 million project management-oriented roles ([PM Network, 2017](#)). This PMI's 2017-2027 report projected a 33% growth in the project management-oriented labor force across seven project-oriented sectors, translating to nearly 22 million new jobs ([PMI, 2017](#)). And those estimates were made before nations started spending trillions on pandemic-recovery projects and intensive sustainability-oriented ones.

Global Business Trends Driving the Project Economy

It is evident that the speed of transformation cannot be slowed down, nor can the world be made less complex. The global business trends that drive the Project Economy and have huge implications on how projects will be executed and by whom, where explored by the Project Management Institute in its [2020 Signposts Report](#), resulting in six (6) distinctive insights:

Table 2.1

Global Business Trends Insights that drive the Project Economy

Insight 1
The emergence of a new generation of talent in Africa and many developing regions signals readiness to tackle a fresh wave of projects.

Insight 2
Climate change stands as one of civilization's greatest existential threats, yet project professionals possess the potential to avert reaching a critical point of no return.
Insight 3
As artificial intelligence becomes increasingly integrated into mainstream operations, it presents both daunting challenges and substantial opportunities for project leaders equipped with a balanced proficiency in both people and technological skills.
Insight 4
The rise of protectionism has prompted a reassessment of globalization's once unquestionable momentum. Nevertheless, many project teams continue cross-border operations as usual, albeit with adjustments.
Insight 5
Bridging the substantial gap between global infrastructure needs and investment requires project leaders to leverage data-driven innovation alongside traditional interpersonal abilities.
Insight 6
Safeguarding information demands a collaborative effort supported by a comprehensive cybersecurity culture spanning various disciplines and extending throughout the entire enterprise.

Since 2020, the world has encountered a wave of disruption akin to a tsunami. The pandemic upheaved established norms, hastening the adoption of novel work methodologies and value delivery mechanisms. This acceleration significantly amplified the scope and speed of digitalization, profoundly affecting talent dynamics and necessitating a robust emphasis on upskilling and reskilling efforts. Furthermore, it compelled organizations to swiftly reassess their future trajectories, prompting a rapid evolution in the methods employed to design, plan, and execute projects aimed at delivering tangible value and showcasing exemplary project performance.

Projectification and the Gymnastic Organisation



Having in mind the future of the Project Economy and taking into consideration the undeniable truth that a big percentage of projects fails, it's apparent that organisations have to really rethink the way work is done in their businesses. The former President & CEO of PMI, Sunil Prashara stated that *"We're seeing the world at the business level becoming projectified. A significant component of this are project teams that move between functional areas without the traditional boundaries of finance, human resources and the legal department."*



The term "projectification" refers to the increasing prevalence of work being organized and carried out in the form of projects, rather than through traditional, routine operations.

This phenomenon represents a fundamental shift in organizational and governance structures, where nonroutine tasks are defined and executed as distinct projects with specific targets, durations, and participants. As a result, work is being conducted in a series of often multi-team projects, necessitating temporary and constantly shifting organizational structures to accommodate this new mode of work. Projectification represents a significant and pervasive trend in modern work organization, reflecting the increasing importance of project-oriented skills and approaches across various domains and industries and the increasing need for more qualified project leaders (Jacobsson and Jalocha, 2021; Wilkinson, nd; Moreno et al., 2023).

In order to meet the pressing needs of the Project Economy, a new type of organisation is needed and is called the **"Gymnastic Organisation"**.



The Gymnastic Organisation is focused on outcomes rather than process, with a clear sense of how to balance structure and governance with the need to flex and pivot on demand. This type of organisation not only reacts and embraces change, but it empowers its people to make change happen (PMI, 2021).

The Gymnastic organisations are resilient, flexible and future-focused, qualities that for sure the tourism industry is of much need in order to become sustainable and to innovate. Innovation starts with a vision of what might be, but real innovation can be achieved only through projects. The organizations that develop systems, products and services and customer experiences that change the game will shape the future of the Project Economy in tourism sector.

In the Project Economy, we are all Project Leaders

- Antonio Nieto-Rodriguez -

Unit 4 Activity: Fill in the Blanks

Lumi file: M2L1_Unit 4_Activity Fill in the Blanks (The following text is embedded in the Lumi File.)

Fill in the missing words.

In the Anthropocene epoch, rather than are driving short-term survival and long-term value creation today and tomorrow, as they are progressively becoming drivers of both immediate performance and enduring value generation.

The is one in which people have the and they need to turn into reality. It is where organizations deliver value to through successful completion of, delivery of products, and alignment to value streams. And all of these initiatives deliver and value.

..... refers to the increasing prevalence of work being organized and carried out in the form of, rather than through traditional, routine, It represents a significant and pervasive trend in modern work organization, reflecting the increasing importance of *project-oriented* *skills* and approaches across various domains and industries and the increasing need for more qualified *project* *leaders*.

The Gymnastic organisations are *resilient*, *flexible* and *future-focused*, qualities that for sure the tourism industry is of much need in order to become sustainable and to innovate.

Unit 5 Theoretical Chapter: The Importance of Project Management for the Sustainable Tourism Industry

Introduction

The tourism sector, encompassing a diverse range of industries and activities, plays a pivotal role in the global economy, generating significant revenue and fostering cultural exchange. To

effectively navigate the dynamic and ever-evolving tourism landscape, project management (PM) emerges as a crucial tool for organizations across various tourism sub-sectors, including hospitality, tour operators, transportation providers, and destination management organizations, for ensuring the success and sustainability of their initiatives across these diverse segments. This chapter explores the importance of project management in the tourism sector and examines its linkages to the Sustainable Development Goals (SDGs), emphasizing the role of project management in promoting sustainable tourism practices and fostering socio-economic development.

Project Management in the Tourism Sector

Project Management (PM) has been instrumental in fueling the remarkable growth of the tourism industry over the past seven decades. Today, tourism stands as one of the most dynamic sectors globally, boasting nearly 1.5 billion international tourist arrivals and providing livelihoods for 330 million individuals worldwide, constituting 10% of all employment. Moreover, in 2019, tourism contributed a staggering 10.3% to the global Gross Domestic Product (GDP). Despite facing transient setbacks due to the Covid-19 pandemic, tourism remains poised to yield substantial economic returns for nations worldwide. To sustain this momentum, both public and private sectors must invest in strategic projects aimed at captivating tourists and fulfilling their quest for diverse and novel experiences. Projects within the tourism domain predominantly revolve around the development of new accommodations, refurbishment of existing facilities, establishment of nautical marinas and recreational amenities, and the orchestration of diverse operational processes and events. These projects not only augment the value proposition of the tourism industry but also confer a competitive edge to businesses and destinations, thereby underpinning their enduring success (Perik, 2022).

Figure 2.2

The project economy in the tourism sector



Note. From *Aerial photography of park with airplane* [Photograph], by The Lazy Artist Gallery, n.d. Pexels. (<https://www.pexels.com/photo/aerial-photography-of-park-with-airplane-1302991/>). CC BY 2.0.

As the tourism industry continues to expand, the effective management of its projects becomes increasingly important. Additionally, tourism projects have a higher complexity in comparison with any other type of projects, as they are related to (Burukina, 2019):

- ✓ Managing the process of developing tourism products
- ✓ Managing their implementation in the context of developing the system of required services, compulsory for the project implementation.

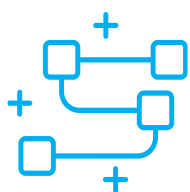
Within this context, Project Management (PM) offers a structured approach to planning, executing, and monitoring projects, ensuring that the following goals are achieved (Burukina, 2019; Rivero-Sánchez, 2019).

Figure 2.3

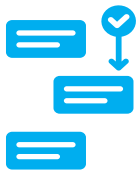
The purpose of using Project Management



Organisations achieve their strategic goals: Tourism organizations often have complex and ambitious goals, such as increasing visitor numbers, improving visitor satisfaction, or expanding into new markets. PM provides a framework for setting clear objectives, developing a detailed plan of action, and tracking progress towards achieving those goals.



Organisations deliver their projects on time, on budget, and to the required quality standards, meeting stakeholders' requirements: In the fast-paced and competitive tourism sector, it is essential to deliver projects within the constraints of time and resources. PM helps organizations avoid delays, cost overruns, and poor-quality outcomes, while fulfil stakeholders' needs and demands.



Organisations are able to prioritize tasks: Project management enables organizations to prioritize tasks, focusing on the most important and strategic initiatives, which helps to allocate resources effectively and efficiently.



Organizations manage risks and uncertainties: The tourism sector is subject to a variety of risks, such as changes in market conditions, political instability, and natural disasters. PM helps organizations identify potential risks, develop mitigation strategies, and respond to unforeseen challenges.



Organisations can implement fast decision-making: Project management facilitates fast decision-making by providing a transparent system of staff motivation and rapid detection of risks, allowing organizations to respond quickly to changes and challenges.



Organizations collaborate and communicate effectively: Tourism projects often involve multiple stakeholders, including internal teams, external partners, and clients. PM promotes effective communication and collaboration among all parties, ensuring that everyone is on the same page and working towards the same goals.



Organizations build a culture of innovation and continuous improvement: The tourism sector is constantly evolving, and organizations need to be able to adapt and innovate to stay ahead of the competition. PM provides a framework for identifying new opportunities, developing innovative solutions, and implementing continuous improvement initiatives.

As the tourism sector comprises numerous stakeholders, each contributing to the overall tourism experience, makes the utilisation of Project Management more important than ever. Hospitality establishments, including hotels, resorts, and restaurants, rely on efficient project management to deliver quality services, manage guest expectations, and maintain operational excellence (Papatheodorou & Rosselló, 2019). Similarly, tour operators play a pivotal role in designing and executing tourism packages, requiring effective project management to

coordinate transportation, accommodations, and activities for travelers (Riley & Love, 2000). Other sub-sectors such as attractions management, destination marketing organizations, and event planners also depend on project management principles to enhance visitor experiences and drive tourism revenue (Hall, 2020).

The Role of Project Management in Advancing Sustainable Tourism

Project management serves as a catalyst for advancing sustainable tourism development by integrating environmental, social, and economic considerations into tourism initiatives. Through effective project planning, implementation, and evaluation, tourism stakeholders can minimize negative impacts on natural resources, preserve cultural heritage, and enhance socio-economic benefits for host communities (Hall, 2020). Project managers play a crucial role in stakeholder engagement, risk assessment, and resource allocation, ensuring that tourism projects align with the United Nations Sustainable Development Goals (SDGs) and contribute to long-term prosperity (Fennell, 2015).

The Sustainable Development Goals (SDGs) provide a framework for addressing global challenges and promoting sustainable development across various sectors, including tourism. Tourism is referenced directly in three of the SDGs, goals 8, 12 and 14 on inclusive and sustainable economic growth, sustainable consumption and production (SCP) and the sustainable use of oceans and marine resources, respectively but actually touches upon and directly impacts on all the other SDGs.

Figure 2.4

Sustainable Development Goals associated with tourism



Note. From *Sustainable Development Goals* [Photograph], by UN.org, n.d., UN. (<https://sdgs.un.org/goals>). CC BY 2.0.

Project management in the tourism sector is closely aligned with several SDGs, particularly those related to environmental conservation, poverty alleviation, and cultural preservation (UNWTO, 2019). For instance, projects focused on eco-tourism development, biodiversity conservation, and community-based tourism initiatives contribute to SDG 15 (Life on Land) and SDG 8 (Decent Work and Economic Growth) by promoting responsible tourism practices and creating livelihood opportunities for local communities (UNWTO, 2017). Similarly, projects aimed at improving tourism infrastructure and accessibility support SDG 9 (Industry, Innovation, and Infrastructure) and SDG 11 (Sustainable Cities and Communities) by enhancing connectivity, promoting inclusive tourism, and fostering economic growth in rural and urban areas (UNWTO, 2020).

By adopting a holistic approach to project management, tourism practitioners can create value for both present and future generations while safeguarding the planet's natural and cultural assets.

Unit 6 Case Study Activity: The Bookatrekking story

Read the following case study and answer to the reflective questions that follow.

Lumi File: M2.1_Unit 6 Case Study Activity: The Bookatrekking story (The following text is embedded in the Lumi File.)

The Company

<https://bookatrekking.com/>

Key Features

Bookatrekking.com is a company that provides people with the opportunity of finding the trekkings that will make their life unforgettable. Interested persons can find local trekking companies, enjoy local prices, but pay safely and easily through their website, while getting the lowest prices.

The Challenges

During its early years, Bookatrekking encountered numerous challenges typical of travel agencies, including coordinating trips, managing a dynamic team of guides, ensuring customer satisfaction, and navigating the constantly evolving landscape of the travel industry.

The solution: Embracing Project Management

Despite their undeniable passion for adventure, the company recognized the imperative need for structured management. To address this, Bookatrekking embraced the principles of project

management, implementing tools such as Basecamp and Trello. Trello was utilized for implementing strategic goals, while Basecamp was employed for managing local tasks.

Streamlining operations

A pivotal initial measure involved streamlining their operations, as they acknowledged the paramount importance of time in the realm of adventure. By leveraging Basecamp, they optimized tour planning, booking processes, and communication, thereby enhancing internal team coordination and ensuring prompt responses and seamless experiences for customers.

Team empowerment

Utilizing Basecamp, Bookatrekking empowered both their guides and staff. Detailed workflows and standardized procedures offered clarity, minimized errors, and facilitated quicker decision-making. The team, previously grappling with chaos, transformed into a well-coordinated and efficient unit.

Data-driven decisions

Data served as their guiding compass. Leveraging Trello, Bookatrekking conducted thorough analyses of customer feedback, booking trends, and market insights. This enabled them to make informed decisions, customize their tour offerings to align with customer preferences, and adeptly adapt to the ever-evolving travel landscape.

Lumi File: M2L2_Unit 6 Case Study Activity: The Bookatrekking story - Reflective Questions/Answers (The following text is embedded in the Lumi File.)

Answer to the following reflective questions:

1. What project management tools did Bookatrekking adopt, and how did these tools contribute to their success? How did Basecamp and Trello help streamline operations, empower their team, and facilitate data-driven decision-making?
2. Discuss the significance of streamlining operations in the context of adventure tourism. How did Bookatrekking optimize their tour planning, booking processes, and communication to enhance customer experiences and internal team coordination?
3. How did Bookatrekking empower their guides and staff through the implementation of project management tools? What role did detailed workflows, standardized procedures, and clear communication play in transforming the team into a well-coordinated and efficient unit?
4. Explore the importance of data-driven decision-making in the tourism industry. How did Bookatrekking leverage customer feedback, booking trends, and market insights to tailor their tour offerings, meet customer expectations, and adapt to changes in the travel landscape?



5. Reflect on the broader implications of Bookatrekking's success story for other tourism companies. What lessons can be learned from their experience with project management implementation, and how can these lessons be applied to improve project outcomes and organizational performance in the tourism sector?

This case study was adopted by the GoSkills blog post [Project Management for Travel Agencies: The Ultimate Guide](#).

Unit 7 Theoretical Chapter: The Basics of Project Management - ppt format

Introduction

Project management serves as a fundamental framework for organizing, planning, executing, and closing projects efficiently and effectively. Understanding the foundational concepts and terminologies is crucial for tourism professionals aspiring to excel in project management roles. This chapter aims to provide the basics of project management by defining key terms such as project, program, portfolio, project management, differentiating project management processes from operations, and elucidating the project life cycle.

Why Defining Key Terms?

Defining key terms is essential for establishing a solid foundation for understanding fundamental concepts and facilitate communication among project stakeholders.

This **clarity** enables organizations to **manage scope** effectively, **allocate resources** strategically, **prioritize initiatives** based on strategic objectives, **mitigate risks** comprehensively, and **foster career development** in the field of project management.

By mastering project management terminology, tourism professionals enhance their **credibility** and effectiveness as **project managers** or **team members**, contributing to **successful project execution** and **organizational success**.

Defining Project, Program & Portfolio



Figure 2.5

Definitions of project, program and portfolio

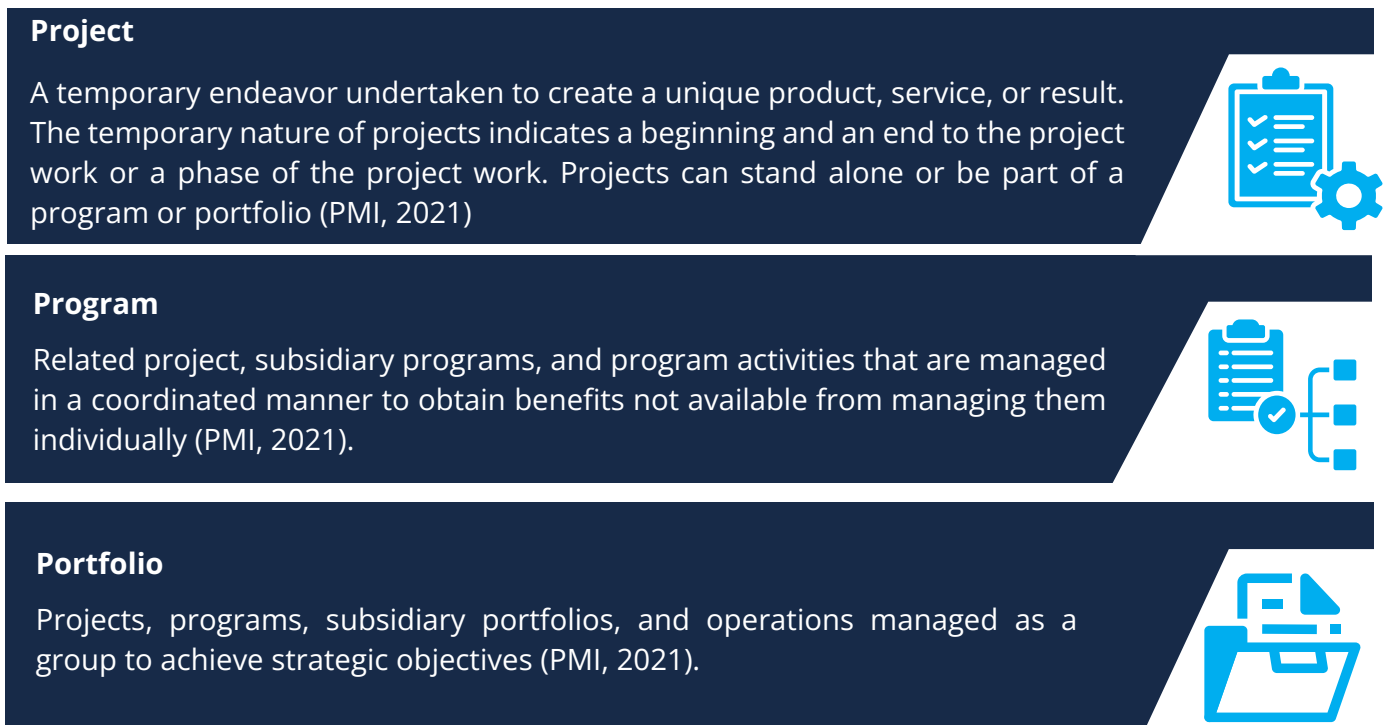
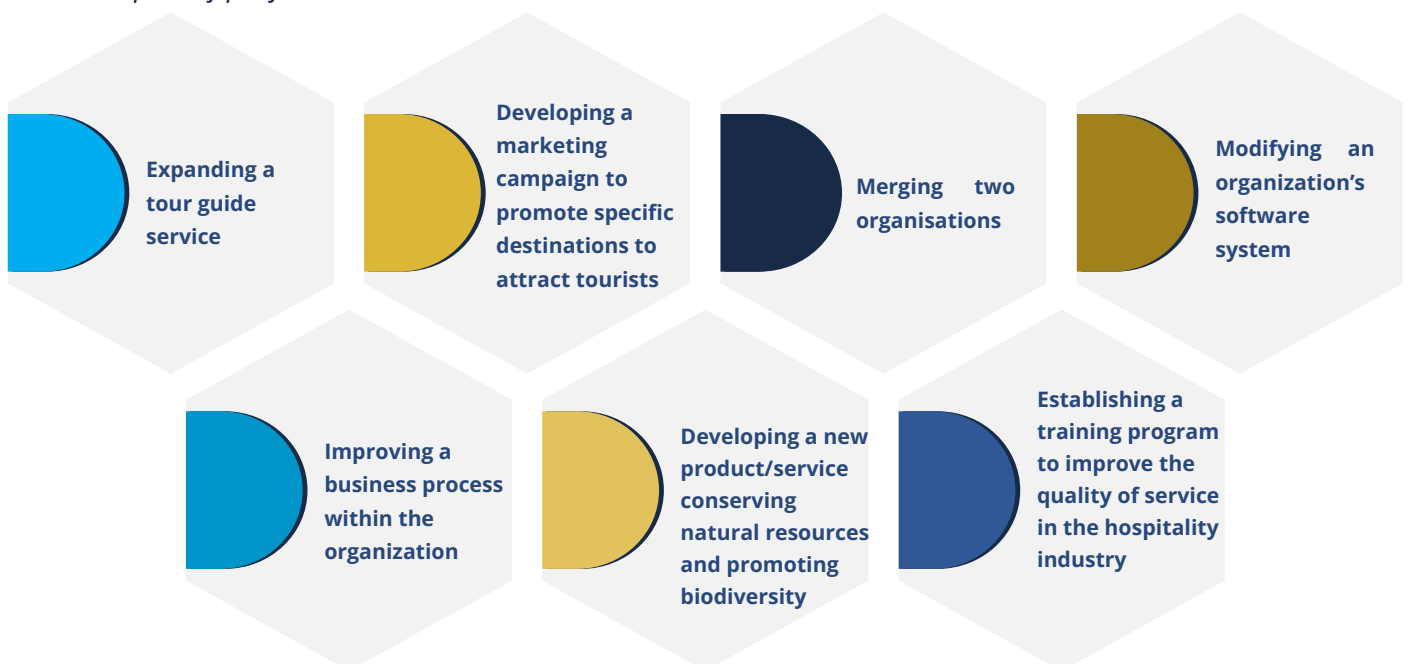


Figure 2.6

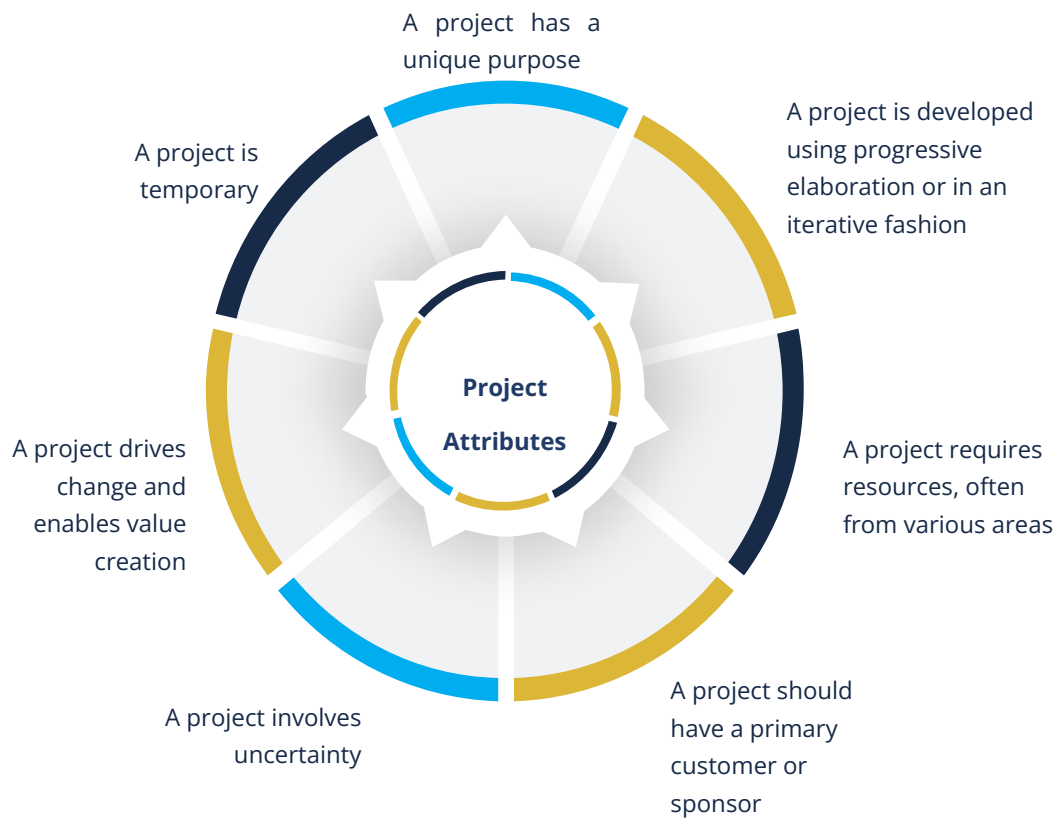
Examples of projects



Project Attributes

Figure 2.7

Project attributes



Defining Project Management

Project Management is the **application** of **knowledge, skills, tools,** and **techniques** to **project activities** to **meet project requirements** (PMI, 2021)

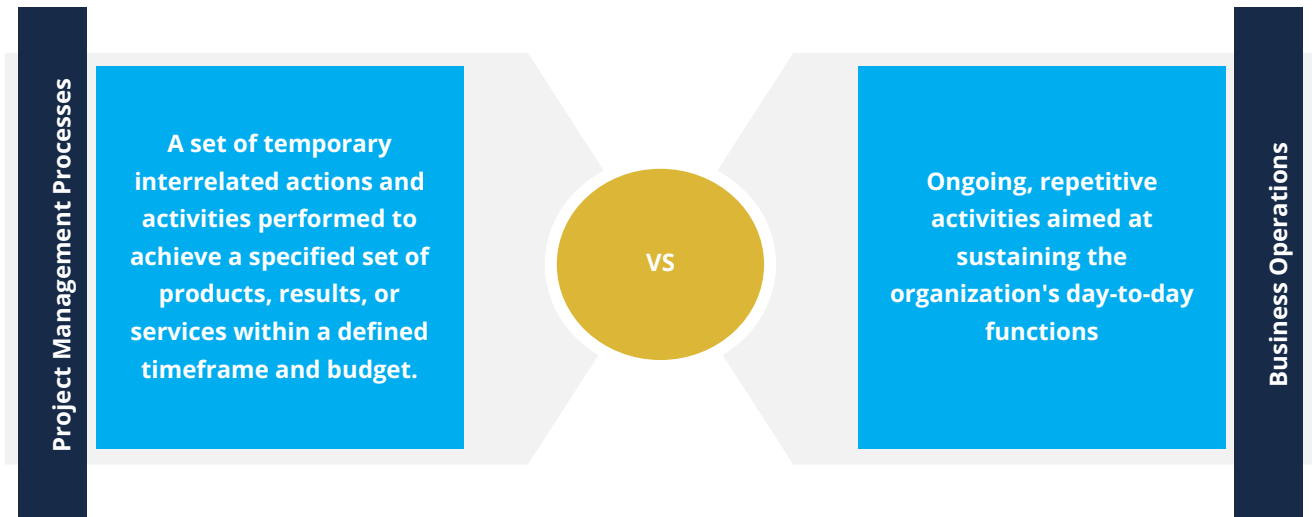
Project management refers to guiding the project work to deliver the intended outcomes.

Project teams can achieve the outcomes using a broad range of approaches (e.g. predictive, hybrid, and adaptive).

What is the difference between Project Management Processes and Business Operations? (PMI, 2021)

Figure 2.8

The difference between Project Management processes and business operations



And who is responsible for managing and executing a project?

The Project Manager

The person assigned by the performing organisation to **lead the project team** that is responsible for **achieving the project objectives** (PMI, 2021).

Project managers perform a variety of functions, such as facilitating the project team work to achieve the outcomes and managing the processes to deliver outcomes.

The Project Team

A set of **individuals** performing the **work** of the **project** to **achieve its objectives** (PMI, 2021).

Who may affect or be affected by the project?

The Stakeholders

Stakeholders are individuals, groups, or organisations that may **affect, be affected by, or perceive themselves to be affected** by a decision, activity, or outcome of a project (PMI, 2021).

Internal stakeholders

These stakeholders are coming from within the organisation: team members, managers, executives, and so on (PMI, 2021).

External stakeholders

They are outside the organisation: customers, users, suppliers, and investors (PMI, 2021).

The job of the project manager is to **keep all stakeholders informed, involved, and on-board** throughout the project's progression.

Stakeholders' **satisfaction** is one of the key metrics of a successful project.

What is the Project Management life cycle?

A **project management life cycle** is a framework comprising a set of **distinct high-level stages** required to **transform an idea of concept into reality** in an **orderly** and **efficient manner**.

The Importance of Project Life Cycle

Figure 2.9

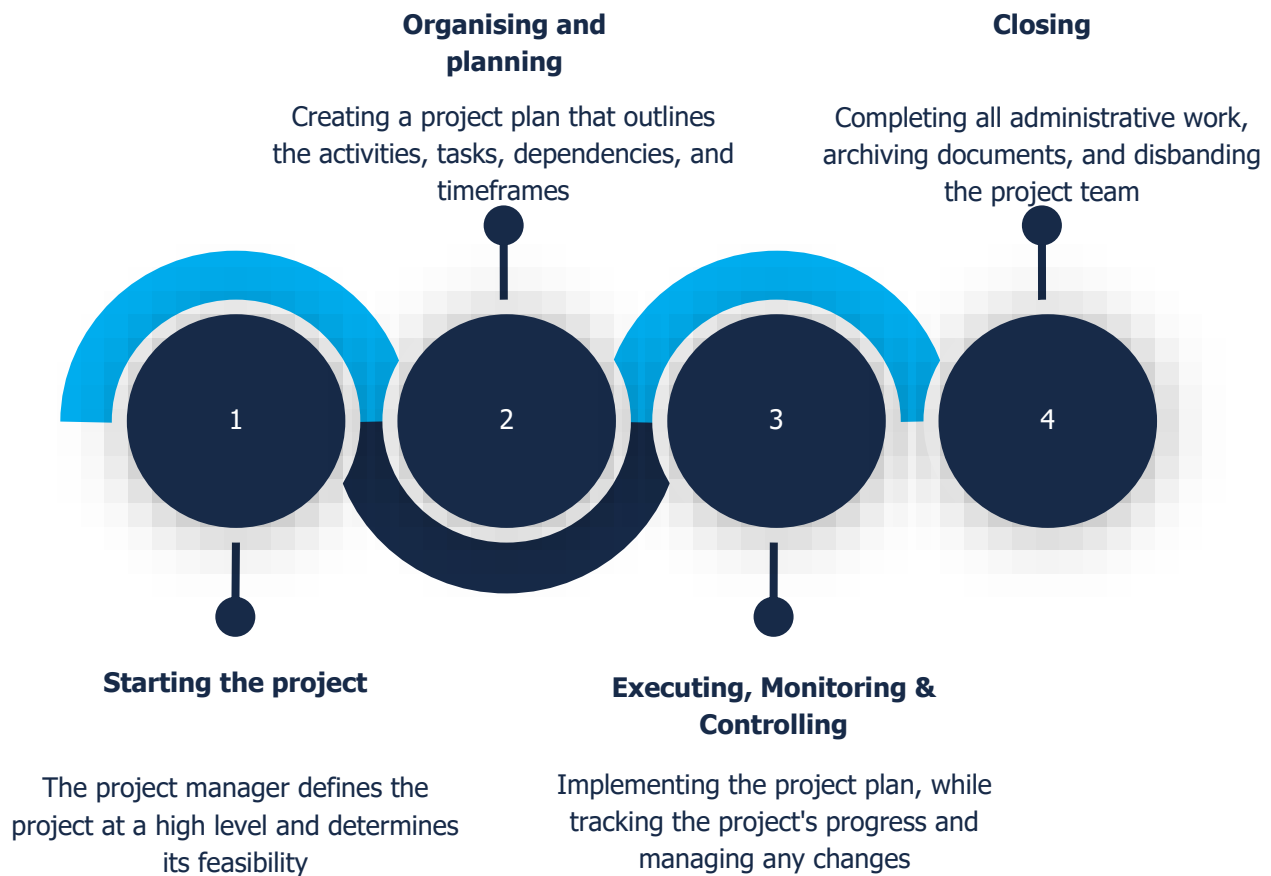
The importance of project life cycle



The Generic Project Life Cycle

Figure 2.10

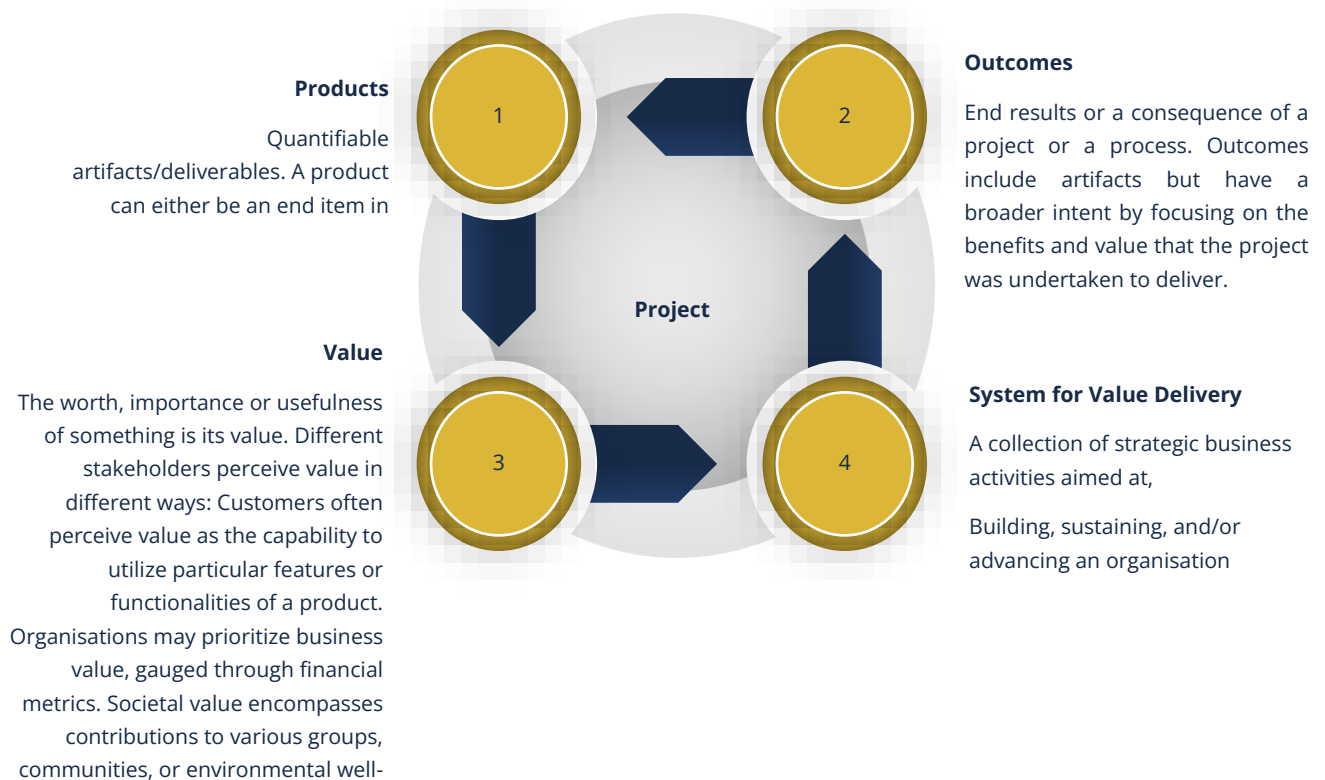
The generic project life cycle



And what do projects produce?

Figure 2.11

The value of projects



Unit 8 Activity: Drag the Words

Lumi File: M2L1_Unit 8 Activity Drag the Words (The following text is embedded in the Lumi File.)

A is a temporary endeavor undertaken to create a unique product, service, or result. The temporary nature of projects indicates a beginning and an end to the project work or a phase of the project work. Projects can stand alone or be part of a program or portfolio.

A is related project, subsidiary programs, and program activities that are managed in a coordinated manner to obtain benefits not available from managing them individually.

A is projects, programs, subsidiary portfolios, and operations managed as a group to achieve strategic objectives.

A is the person assigned by the performing organisation to lead the project team that is responsible for achieving the project objectives.

A is a framework comprising a set of distinct high-level stages required to transform an idea of concept into reality in an orderly and efficient manner.

..... are ongoing, repetitive activities aimed at sustaining the organization's day-to-day functions.

..... is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements.

Projects produce, ..., ..., and/or a for delivery.

Unit 9 Theoretical Chapter: The Difference between Project, Product and Event Management

Introduction

Project management, product management, and event management are distinct disciplines that play crucial roles in various industries (Kerzner, 2017). While they share some similarities, each discipline has its unique characteristics and objectives. This chapter aims to define product and event management and explore how they differ from project management.

Defining Product Management

The terms "Product Management" and "Project Management" are frequently interchanged, causing confusion among professionals and businesses. Although these disciplines have overlapping aspects, they fundamentally differ in their goals, areas of emphasis, and necessary skill sets.

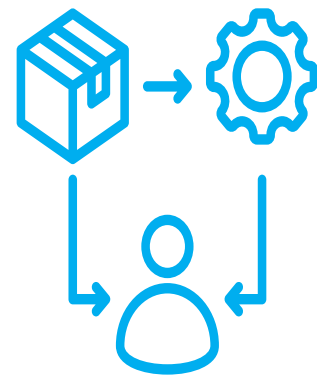
A product is an artifact that is produced, is quantifiable, and can be either an end item itself or a component item.



Product Management involves the integration of people, data, processes, and business systems to create, maintain, and develop a product or service throughout its life cycle. The product life cycle is a series of phases that represents the evolution of a product, from introduction through growth, maturity, and to retirement (PMI, 2021). It encompasses activities such as market research, product design, pricing, distribution, and ongoing product enhancements.

Product Management may initiate programs or projects at any point in the product life cycle to create or enhance specific components, functions, or capabilities. The initial product may begin as a deliverable of a project. Throughout its life cycle, a new project may add or improve specific components, attributes, or capabilities that create additional value for customers and the sponsoring organisation. In some instances, a program can encompass the full life cycle of a product or service to manage the benefits and create value for the organisation more directly (PMI, 2021).

Product managers are responsible for aligning the product strategy with market demands, customer needs, and organisational goals. They undertake tasks such as pinpointing customer challenges and market potential, crafting a product roadmap, and steering the product life cycle. They collaborate closely with cross-functional teams (engineering, marketing, sales, and customer support) to ensure the successful delivery of products that meet market demand and customers' expectations while remain competitive and achieve business growth (Wrike, n.d.).



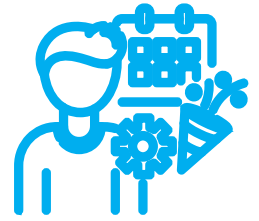
Defining Event Management



Event management is the process of planning, coordinating and hosting/executing a variety of public and private events for social or business purposes (Shone & Parry, 2016). They may be large-scale or small-scale events and can include business conventions, training seminars, industry conferences, trade shows, ceremonies, parties, concerts, festivals and press conferences. Event managers must follow the clients' instructions and work within a specified budget and predetermined schedule. To set up the events, they must collaborate with various vendors (Indeed, 2023).

Event management and event planning are not the same thing, while many professionals use these two terms interchangeably. Event planning has to do with coming up with event concepts and outlining what activities should be implemented during the events. Event management is more close to the principles of project management, as it is focused on organising and implementing a planned event.

Event managers deal with all the aspects of event planning, including venue selection, budgeting, logistics, marketing, and attendees' management. They work closely with event stakeholders to create memorable experiences for participants. Successful event management requires attention to detail, effective communication, and the ability to troubleshoot issues in real-time, ensuring the successful implementation of the events.



How Project Management Differs

While product and event management share similarities with project management, there are fundamental differences that distinguish them:

- ≠ Projects are temporary endeavors with defined start and end dates, whereas products and events may have ongoing lifecycles. Project management is focused on achieving specific objectives within a finite timeframe, whereas product management involves ongoing iterations and continuous improvement. As project management, event management is a temporary endeavour, focused on the planning and execution of a specific event, rather than the ongoing management of a product or service (GeekforGeeks, 2023). Furthermore, project management typically involves unique deliverables or outcomes, whereas products and events may be replicated or iterated upon over time. Projects are often undertaken to create something new, solve a problem, or achieve a specific goal, whereas products and events may be part of ongoing organisational activities or strategic initiatives.
- ≠ Project management typically involves a broader set of responsibilities compared to event management. Project managers are responsible for the overall success of a project, including planning, execution, monitoring, and control, while product managers focus on the success of a specific product or product line. Event managers, on the other hand, have less extensive responsibilities compared to project managers, as they are primarily focused on the successful execution of a single event (GeekforGeeks, 2023).

Project, Product and Event Management in the Sustainable Tourism Sector

In the context of the sustainable tourism sector, while project management, product management, and event management share some common principles of planning, execution, and control, their application requires specific considerations for environmental conservation, social equity, and economic viability.

Within the sustainable tourism sector, **product management** involves developing sustainable tourism products that minimize negative impacts on the environment and local communities while maximizing positive impacts such as job creation and cultural heritage preservation (UNWTO, n.d). Sustainable **event management** involves using tools, processes, and

procedures to make events greener, such as offering free shuttle services and bike parking to reduce the number of cars on the road or serving food in biodegradable containers that won't end up in landfills (Jones, 2017).

Figure 2.12

Events in tourism sector



Note. From *People Crowd* [Photograph], by StockSnap, Pixabay.

(<https://pixabay.com/photos/people-crowd-audience-party-colors-2608316/>). CC BY 2.0.

Sustainable tourism projects often involve multiple stakeholders with diverse interests and objectives, requiring project managers to navigate complex relationships and ensure alignment with sustainability goals (Hall, 2019). Project management in sustainable tourism emphasizes stakeholder engagement, community consultation, and sustainability reporting to address social, economic, and environmental concerns. Furthermore, these projects may have long-term impacts on local communities, ecosystems, and cultural heritage sites, necessitating thorough environmental and social impact assessments (Hall & Lew, 2018).

Unit 10 Activity: Examples of Project, Product and Event Management in the Sustainable Tourism Industry

Lumi File: M2L1_Unit 10 Activity Examples of Project, Product and Event Management in the Sustainable Tourism Industry (The following text is embedded in the Lumi File.)

Sort the sentences/paragraphs into the correct order so as in the end to have a list of three examples of Product, Project and Event Management of sustainable tourism initiatives, with their descriptions and tasks to be performed for their materialisation. Start with the Product Management example, continue with the Project Management and finalise this activity with the Event Management example.

Tasks: Selecting a venue with eco-friendly facilities, coordinating with local artisans, musicians, and food vendors to showcase sustainable products and practices, designing educational workshops and interactive activities on topics like wildlife conservation, renewable energy, and sustainable agriculture. Additionally, implementing sustainable event practices such as waste reduction, composting, and using biodegradable materials for signage and decorations.

Description: Planning and executing a sustainable tourism festival aimed at promoting responsible travel practices, celebrating local culture, and raising awareness about environmental conservation.

Description: Designing and marketing a tour package focused on environmentally sustainable practices, such as low-impact transportation, eco-lodges, and wildlife conservation activities.

Description: Leading a project to establish a marine protected area aimed at conserving coral reefs, marine biodiversity, and supporting sustainable fishing practices.

Tasks: Conducting market research to identify target demographics interested in eco-tourism, collaborating with local businesses and conservation organisations to create the tour itinerary, and implementing sustainable practices throughout the tour operation.

Tasks: Coordinating with government agencies, NGOs, and local communities to conduct feasibility studies, develop management plans, secure funding, and implement conservation measures. This involves tasks such as stakeholder engagement, environmental impact assessments, and monitoring and evaluation of conservation efforts.

Product Management: Developing an Eco-Friendly Tour Package

Project Management: Establishing a Marine Protected Area

Event Management: organising a Sustainable Tourism Festival

Unit 11 Theoretical Chapter: The Project Environment

Introduction

Projects operate within dynamic environments that encompass both internal and external factors, exerting significant influence on their outcomes. The project environment, comprising internal organisational elements and external contextual factors, plays a crucial role in shaping project success. This unit explores how these environments impact projects and provides insights into managing these influences effectively.

Internal Project Environment

Internal factors within an organisation may originate from the organisation itself, its portfolio, programs, other projects, or a blend of these sources. These factors encompass outputs, practices, and internal knowledge, which refer to the lessons learned from past projects. Examples of these factors include, but are not limited to (PMI, 2017):

Lumi File: M2L1_Unit 11 Theoretical Chapter The Project Environment-I (The following text is embedded in the Lumi File.)

Figure 2.13

Internal project environment



Note. From *Woman in Yellow Top Walking Down Stairs in a Office Room* [Photograph], by Proxyclick Visitor Management System, 2019, Pexels.

(<https://www.pexels.com/photo/photo-of-woman-in-yellow-top-walking-down-stairs-in-a-office-room-2451567/>). CCO.

- Process assets encompass various tools, methodologies, approaches, templates, frameworks, patterns, or resources provided by the Project Management Office (PMO).

- Data assets comprise databases, document libraries, metrics, and artifacts gleaned from prior projects, serving as valuable repositories of information.
- Knowledge assets encompass the tacit knowledge held by project team members, subject matter experts, and other personnel, fostering a culture of continuous learning and expertise sharing.
- Organisational culture, structure, and governance encapsulate the vision, mission, values, beliefs, and norms of an organisation, alongside leadership styles, hierarchy, ethics, and codes of conduct.
- Governance documentation includes policies and processes that guide project decision-making and oversight.
- Information technology software, such as scheduling software, configuration management systems, and collaboration tools, facilitates project management and communication.
- Security and safety measures encompass procedures for facility access, data protection, confidentiality, and safeguarding proprietary information.
- Geographic distribution of facilities and resources considers work locations, virtual teams, and shared systems, impacting project coordination and collaboration.
- Infrastructure includes existing facilities, equipment, organisational channels, and information technology hardware, supporting project operations.
- Resource availability encompasses contracting and purchasing constraints, approved providers, subcontractors, and collaboration agreements, ensuring adequate support for project activities.
- Employee capability encompasses general and specialized expertise, skills, competencies, techniques, and knowledge, vital for project execution and success.

External Project Environment

The external environment of a project refers to the factors that exist outside of the organisation, such as:

Lumi File: M2L1_Unit 11 Theoretical Chapter The Project Environment-II (The following text is embedded in the Lumi File.)

- Market conditions encompass factors such as competitors, market share, brand recognition, technology trends, and trademarks.
- Commercial databases contain standardized cost estimating data and industry risk study information.
- Industry standards relate to products, production, environment, quality, and workmanship.

- Social and cultural influences and issues comprise the political climate, regional customs and traditions, public holidays and events, codes of conduct, ethics, and perceptions.
- The regulatory environment encompasses national and regional laws and regulations related to security, data protection, business conduct, employment, licensing, and procurement.
- Academic research encompasses industry studies, publications, and benchmarking results.
- Financial considerations include currency exchange rates, interest rates, inflation, taxes, and tariffs.
- The physical environment pertains to working conditions and weather.

Figure 2.14

External project environment



Note. From *Man Walking on Sidewalk Near People Standing and Sitting Beside Curtain-wall Building* [Photograph], by Negative Space, Pexels.

(<https://www.pexels.com/photo/man-walking-on-sidewalk-near-people-standing-and-sitting-beside-curtain-wall-building-34092/>). CCO.

The external environmental factors are not under the direct control of the organisation, but they may negatively impact the project's success. The external environment can be further divided into microenvironment and macroenvironment, which include factors such as consumers, suppliers, competitors, and the public eye. It is important to consider these external factors during project planning (PMI, 2021; Plaky, 2022).

Unit 12 Theoretical Chapter: Why Projects Fail

Introduction

Project failure remains a significant challenge in the realm of project management, despite advancements in methodologies and practices. According to the Pulse of the Profession Report “Beyond Agility” provided by PMI (2021), the surveyed professionals indicated that 12% of projects within their organisations were classified as failures in the previous year. Understanding the reasons behind project failures is essential for mitigating risks and ensuring project success. This chapter discusses the various factors that contribute to project failure, and what project managers can do to avoid it.

Figure 2.15

Project failure



Note. From *Virtual Conference project failure team tablet* [Photograph], by Golubovy, Canva.

(<https://www.canva.com/photos/MAEcFhMiEeE-virtual-conference-project-failure-team-tablet/>). ProContent License

What is Project Failure

Why do you think projects fail?

Lumi File: M2L1_Unit 12 Theoretical Chapter: Why Projects Fail Multiple Choice Question (The following text is embedded in the Lumi File.)

Project failure can be attributed to the following factors:

- The project fails to meet its intended objectives.
- The desired deliverable is not achieved.
- Work is not completed within the specified timeframe.

However, it is important to mention that failure is subjective, as in many cases, projects labelled as "failed" still have valuable outcomes, even if they fall short of meeting deadlines or deliverables.

The frequency of project failures is a topic of debate within the project management community. There are some reports indicating that projects fail approximately 50% of the time, while discussion taking place in [The Project Management Institute's Project Management Central forum](#), suggest that the failure rate falls within the range of 65% to 75%. Mark Warner, a participant on the forum and a Project Manager at AURA, further expands on this perspective:



"I've looked at this in detail before. It's really hard to get to a bottom-line number, but from data from PMI, Standish, Wrike, et al, approximately 75% of projects fail to meet at least one of their stated baseline objectives. This includes failure to meet full scope of deliverables, failure to meet all quality requirements, failure to make schedule, and/or failure to stay within budget. Complicating matters is differences between industries, agile-vs.-waterfall projects, etc. But in general, yes, only one in four projects can be considered 100% successful. (Oh, and then there's also subjective "failures," to add to the mix, such as unhappy stakeholders.)"

Organisations that have not established project management delivery systems are faced with a higher risk of missing deadlines and exceeding budgets. Unfortunately, many professionals working in these organisations don't prioritise project management, with some openly stated that they undervalue its importance.

The Principles of Successful Projects

Project troubles typically fall into two categories: **project-level issues** and **organisational-level issues**. One key distinction between the two lies in the extent of control wielded by the project manager. With project-level issues, the project manager possesses significant influence and can often preempt or address them as they arise. Conversely, organisational-level issues are beyond direct resolution by the project manager. However, they can still exert influence by posing pertinent questions, anticipating associated risks, allocating additional resources, and devising contingency plans to mitigate their impact on the project (Horine, 2014).

But it's more effective for project managers and other professionals, to know the principles of successful projects and focus on them, instead of discussing failures. According to the Harvard Business Review Project Management Handbook (Nieto-Rodriguez, 2021), there are 12 principles that are the foundations of successful project delivery:

Table 2.2



Principles of successful project delivery

1	Projects need a clear rationale, business case, and connection to a higher purpose before they are launched.
2	An active, ongoing, and fully engaged executive sponsor is critical to project success.
3	Projects change the status quo. Resistance should be expected and addressed from the early stages.
4	Effective project managers have to be true leaders. They must understand the technical aspects of the project while they lead and empower the team members to perform at their best.
5	People matter more than processes. Projects will always need motivated people to execute them.
6	Project failure is not always bad. Often, failure is an opportunity to learn, mature, and refocus on other more relevant projects.
7	Uncertainty is inherent in projects. Project management also means risk management.
8	Changes to initial project plans and requirements will most likely occur. Agility is essential.
9	Project-driven organisations work across silos, allowing greater flexibility and faster response time to competition and changing market conditions than do traditional hierarchical organisations.
10	Organisations need to prioritize projects to increase the success rate of project execution.
11	Project performance indicators should focus on outcomes (benefits, value creation, impact, opportunities, and risks) instead of inputs (costs, time, material, and scope).
12	Projects cannot go on forever; they have to be closed, even if sometimes not all tasks are fully completed.



Unit 13 Activity: Why these projects failed?

Lumi File: M2L1_Unit 13_Activity Why these projects failed? (The following text is embedded in the Lumi File.)

Case Study: Sustainable Eco-Tourism Lodge Development

A sustainable eco-tourism lodge development project was launched in a remote forested area, aiming to create a nature-focused retreat that promotes environmental conservation and community engagement. Despite initial enthusiasm and investment, the project encountered several challenges during implementation. Delays in construction, difficulties in sourcing sustainable building materials, and conflicts with local indigenous communities over land rights were among the key issues faced. Additionally, there was a lack of consensus among project stakeholders regarding the lodge's target market, amenities, and pricing strategy. These challenges led to uncertainty and confusion throughout the project, ultimately impacting its progress and outcomes.

What was the contributing factor to the lack of progress in the project?

- a) Insufficient funding
- b) Unclear project objectives
- c) Conflicting visions regarding the lodge's design and amenities
- d) Disputes with environmental activists over conservation measures

Case Study: Community-Based Tourism Initiative

A community-based tourism initiative was launched in a rural village to promote sustainable tourism and economic empowerment. The project initially aimed to develop homestay accommodations, cultural experiences, and guided tours led by local residents. However, as the project progressed, additional features were introduced, including a community marketplace, craft workshops, and eco-trails. While these enhancements were intended to enrich the visitor experience and generate additional revenue for the community, they resulted in unforeseen challenges. Despite the project's positive impact on local livelihoods and cultural preservation, the expansion beyond the initial scope led to resource constraints and logistical complexities.

What was a challenge faced by the community-based tourism initiative?

- a) Limited marketing efforts
- b) Inadequate training for local guides
- c) Scope creep in project development



d) Insufficient government support

Case Study: Green Tourism Destination Development

A green tourism destination development project was launched in a rural area to promote sustainable tourism practices and preserve natural landscapes. The project aimed to establish hiking trails, wildlife observation points, and eco-friendly accommodations to attract nature enthusiasts and promote environmental conservation. However, as the project progressed, stakeholders encountered challenges in effectively coordinating activities and aligning objectives due to inadequate sharing of project updates, insufficient stakeholder consultations, and a lack of structured decision-making processes, leading to project failure.

What was a challenge faced by the green tourism destination development project?

- a) Limited funding for infrastructure development
- b) Poor communication within the project team and with stakeholders
- c) Inadequate support from local communities
- d) Lack of interest from tourists in sustainable travel options

Case Study: Coastal Conservation: Empowering Responsible Tourism

A sustainable tourism development initiative was launched in a coastal community to promote responsible tourism practices and preserve marine ecosystems. However, as the project progressed, stakeholders encountered challenges due to duplicative efforts by multiple individuals, leading to siloed meetings and errors in project tracking. Additionally, organisational structures lacked the necessary budget to support effective project management, resulting in the assignment of an individual as a project manager who didn't have been adequately trained for her role. Despite initial optimism, these issues caused inefficiencies and setbacks in project implementation.

What were the main challenges this project encountered?

- a) Insufficient expertise in sustainable tourism practices among project team members
- b) Regulatory hurdles delaying project implementation
- c) Inexperienced project manager
- d) Unclear project team roles and responsibilities

Lesson 2: Project Management Approaches

Unit 1 Introduction

Project management encompasses various approaches and principles important for successful project delivery. One newly established approach is the Hybrid Project Management development approach, which combines traditional and agile methodologies to create a flexible and adaptable framework for managing projects. Regardless of the project management methodology to be deployed, understanding the various project roles is apparent for achieving project success.

Unit 2 Multiple Choice Question

Lumi File: M2L2_Unit 2 Multiple Choice Question_Project Management Approaches (The following text is embedded in the Lumi File.)

Which aspect of project management emphasizes flexibility by blending elements from different methodologies to suit specific project needs?

- a) Principles of Project Management
- b) Functions Associated with Projects
- c) Project Roles
- d) Hybrid Project Management Development Approach

Unit 3 Theoretical Chapter: Project Management Development Approaches

Introduction

Project Management Development Approaches encompass a spectrum of methodologies and frameworks designed to guide project execution effectively. Within this spectrum, there exist three primary categories: predictive, hybrid and adaptive approaches. For every organisation, before initiating projects, it is important to consider which approach to use. This chapter aims to define and explore these project management development approaches, highlighting their characteristics, benefits, and applications in various project contexts.



A development approach is the means used to create and evolve the product, service, or result during the project life cycle (PMI, 2021). In other words, it is a set of practices, methods and processes used by project managers and project teams to plan, execute, control, monitor and close a project. It enables project managers to methodically and logically make decisions that propel their projects forward. It simplifies the process of determining the execution of tasks and the timing for deliverable handovers.

What is a Project Management Development Approach

Some approaches prioritize comprehending all requirements before designing a solution, followed by the creation of deliverables based on this design. Conversely, other approaches initiate with a basic deliverable and refine the solution iteratively based on feedback. These methods represent distinct approaches to producing project deliverables.

The two commonly used approaches are **predictive** and **adaptive**. A third approach, that has gained popularity due to its flexibility, adaptability, and the ability to tailor the methodology to best suit the unique needs of each project is the **hybrid** (Ostrowercha, 2023). These three approaches are commonly seen as representing a continuum, with the predictive approach at one extreme and the adaptive approach at the opposite end (PMI, 2021)

Figure 2.16

The spectrum of predictive and adaptive project management approaches



The predictive approach is also known as **“Waterfall”** or **“Traditional”**, while the three development approaches that are considered as adaptive are: **Iterative**, **Incremental** and **Agile**.

An integral aspect of development approaches is **cadence**.

Cadence refers to the rhythm of activities carried out throughout the project. (PMI, 2021).



Projects may involve a single delivery, such as constructing a house, or multiple deliveries, like providing several online courses rolled out at different intervals. Alternatively, projects may feature periodic deliveries, with multiple releases occurring at predetermined intervals, such as weekly or monthly. In some cases, projects may adopt a continuous delivery approach, as seen in popular cloud-based software such as Facebook or Instagram, where new features are swiftly, securely, and recurrently introduced (Schwalbe, 2021).

Unit 4 Multiple Choice Questions - Choosing the best project management development approach

Read the three case studies and choose the best project management development approach for each. Take your time to analyse each scenario before making your choice. Let's begin!

Lumi File: M2L2_Unit 4 Multiple Choice Question_ Choosing the best project management development approach (The following text is embedded in the Lumi File.)

Case Study: Digital Marketing Campaign for Cultural Heritage Site

A cultural heritage site seeks to attract more visitors through a digital marketing campaign. The project aims to create an interactive website, social media presence, and virtual tours to showcase the site's historical significance and cultural value. Which development approach prioritizes flexibility and responsiveness to changing requirements and would be most appropriate for this project?

- a) Predictive
- b) Adaptive
- c) Hybrid

Case Study: Sustainable Tourism Destination Master Plan

A coastal town seeks to develop a master plan for sustainable tourism destination development. The project aims to assess existing tourism infrastructure, natural resources, and community assets to identify opportunities for sustainable tourism growth. Which development approach involves comprehensive planning based on predefined requirements and would be best suited for this project?

- a) Predictive
- b) Adaptive
- c) Hybrid

Case Study: Eco-Friendly Transportation Initiative



A city government plans to implement an eco-friendly transportation initiative to reduce carbon emissions and promote sustainable mobility options. The project aims to introduce electric buses, bike-sharing programs, and pedestrian-friendly infrastructure to encourage residents to use alternative modes of transportation. The project stakeholders include city officials, transportation agencies, environmental organisations, and community members.

Which development approach would be most suitable for the eco-friendly transportation initiative project, considering its combination of well-defined requirements and dynamic elements?

- a) Predictive
- b) Adaptive
- c) Hybrid

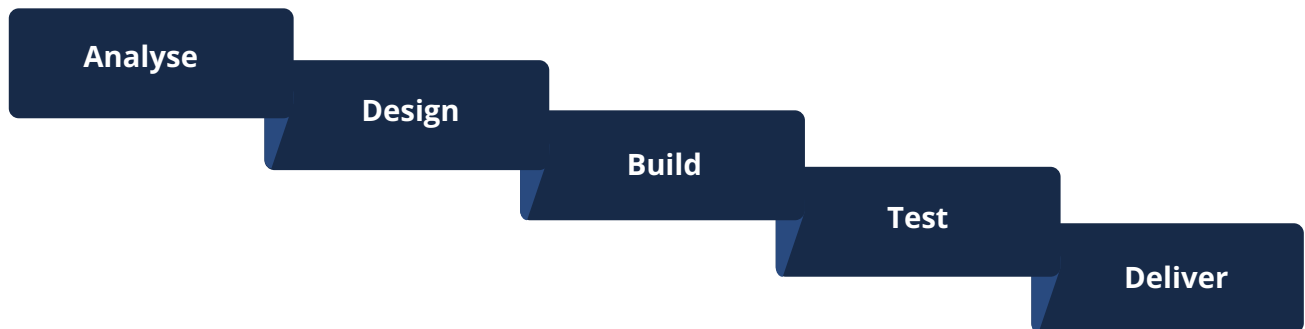
Unit 5 Theoretical Chapter: Exploring Predictive and Adaptive Development Approaches

The Predictive Project Management Development Approach

Predictive is the development approach in which the project scope, time, and cost are determined in the early phases of the life cycle (PMI, 2021). It entails meticulously crafting a comprehensive project plan in advance and rigorously adhering to it, while minimizing project change. This approach is particularly well-suited for projects that:

- Are characterized by clear goals and requirements that can be defined, collected and analyzed at the start of the project, enabling the project team to anticipate potential risks or obstacles effectively.
- Require a significant investment and have a high level of risk, and necessitate frequent reviews, change control mechanisms, and replanning between development phases.

This approach, widely referred as a **“waterfall”** or **“traditional”**, relies on a well-structured plan with clearly defined steps and processes that unfold linearly—usually structured around five project phases, which are the following (Ostrowercha, 2023).

Figure 2.17*Steps in waterfall project management approach*

Adapted from *Agile Practice Guide*, by Project Management Institute, 2017. Project Management Institute.

It starts with a well-established scope, gradually expanding into greater levels of detail. Then, the project management team sequences the work, estimates the duration and the cost and finally sets the three project baselines, against which progress is evaluated. The project management plan elaborated in the second phase guides the project execution and the project manager tries to stick to it, minimizing any possible change, while most of the time uses templates from previous, similar projects.

Types of projects that use a waterfall approach include:

- ✓ Construction;
- ✓ Defense projects such as building a new aircraft, ship, or tank;
- ✓ Medical devices; and
- ✓ Infrastructure including roads, bridges, or mass transit.

The Adaptive Project Management Development Approach

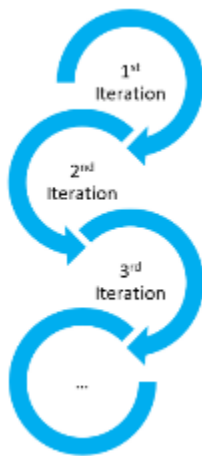
Adaptive is the development approach in which the requirements are subject to a high level of uncertainty and volatility and are likely to change throughout the project (PMI, 2021). It involves the practice of adjusting projects in response to evolving requirements and conditions as they unfold. This approach is well-suited for projects characterized by dynamic requirements or fluctuating environments, necessitating flexibility and adaptability from project teams.

This approach gained significant traction due to the increasing complexity and uncertainty present in modern project environments, allowing project teams to swiftly adapt to changing circumstances, passing through three essential stages which are: Speculate, Collaborate, and Learn.

The three development approaches that are considered as adaptive are: Iterative, Incremental and Agile.

Figure 2.18

Adaptive project management development approaches



Iterative

An adaptive development approach that focusses on an initial, simplified implementation then progressively elaborates adding to the feature set until the final deliverable is complete (PMI, 2021)

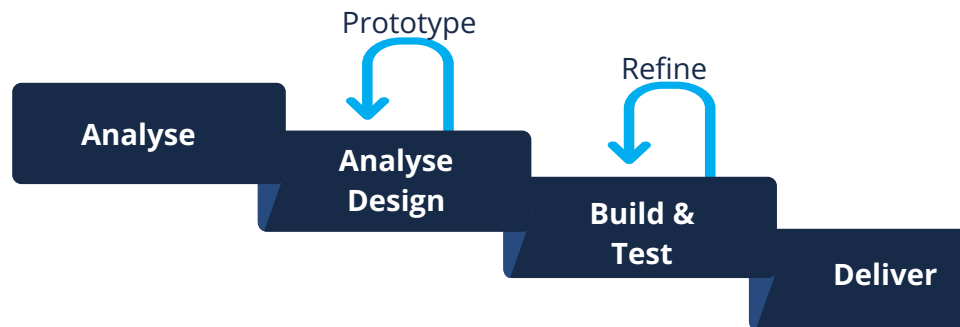
This approach is employed when there's a clear understanding of the desired outcome, but the optimal approach to achieve it is not yet defined. The project team engages in a series of iterations to gain clarity on the most effective method for delivering results. Iterations, also referred to as timeboxes or sprints, are short, predetermined time intervals during which the team conducts work (Dionisio, 2023).

The information gathered from each iteration informs subsequent iterations. The number of iterations is determined by the feedback received, and the decision makers decide when the final iteration will sufficiently meet the project objectives.

Types of projects that could use an iterative development approach include:

- ✓ New product development;
- ✓ Software development; and

- ✓ Marketing campaigns.



Adapted from *Agile Practice Guide*, by Project Management Institute, 2017. Project Management Institute.

Incremental

An adaptive development approach in which the deliverable is produced successively, adding functionality until the deliverable contains the necessary and sufficient capability to be considered complete (PMI, 2021).

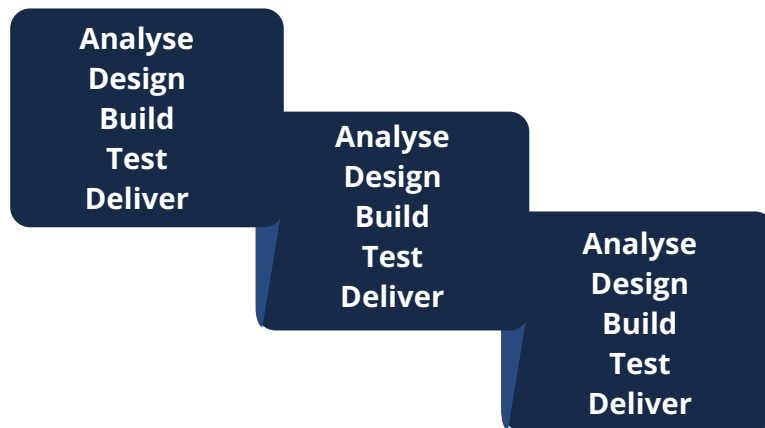


An incremental approach begins with an idea, from which a basic version is built and released. This first release is called “Minimum Viable Product – MVP” and contains the minimum necessary requirements for use, that can be adapted and improved in the future, especially after customers’ feedback. This feedback guides the development of the next increment for release. Depending on the product, the team may introduce new components or upgrade existing ones (Dionisio, 2023).

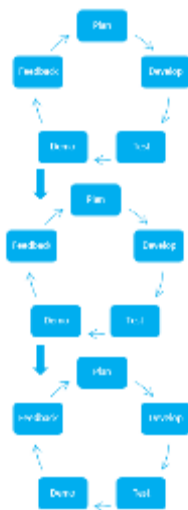
Types of projects that could use an incremental development approach include:

- ✓ Customer loyalty programs;
- ✓ Application development; and

✓ Online learning.



Agile



An adaptive way of delivering value by following the four values and 12 principles established in the Agile Manifesto (PMI, 2021).

Iterative and incremental approaches are commonly employed in Agile method, but the iterations (timeboxes or sprints) are typically brief, one to two weeks, culminating in a demonstration of the product to key stakeholders, based on which the product evolves in the next iteration. Agile is iterative because it plans for the work of one iteration to be improved upon in subsequent iterations. It is incremental because completed work is delivered throughout the project (Agrawal, 2019; Dionisio, 2023).

The project team actively participates in planning each iteration, determining the achievable scope based on a prioritized backlog, estimating workload, and collaborating throughout the iteration to develop the scope.

Unit 6 Activity: Incremental or Iterative?

Lumi File: M2L2_Unit 6 Activity Drag and Drop Incremental_Iterative (The following text is embedded in the Lumi File.)

Observe the two images representing the incremental and iterative project management development approaches and determine which represents each approach.

Unit 7 Theoretical Chapter: The Hybrid Project Management Development Approach

Introduction

In response to the evolving demands of modern project management, the hybrid project management approach has emerged as a dynamic solution that blends the structured processes of traditional methodologies with the flexibility of the adaptive approaches. This chapter aims to explore the theoretical foundations of hybrid project management, outlining its definition, advantages, and challenges.

Defining Hybrid Project Management Development Approach

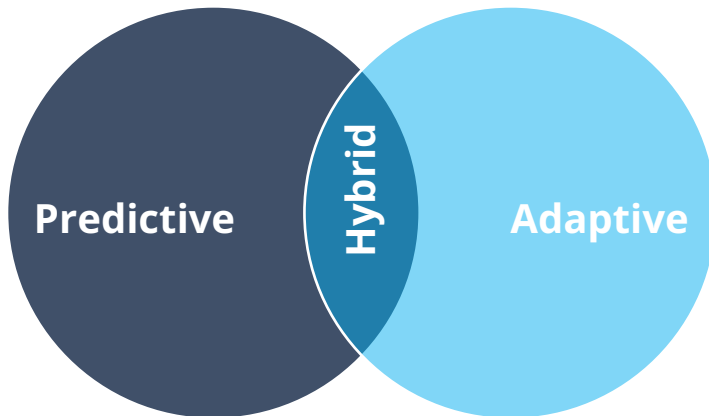
In today's dynamic and complex business environment, traditional project management methodologies often struggle to adapt to the rapidly changing requirements and uncertainties inherent in many projects. As a response to this challenge, the **Hybrid Project Management development approach** has emerged as a flexible and adaptive framework that combines elements from different project management methodologies to suit the specific needs of each project.



Hybrid Project Management is a blend of predictive and adaptive approaches to delivering value, determined by product, project, and organisational variables (Dionisio, 2023).

According to the PMBOK Guide 7th edition (PMI, 2021), a hybrid approach is a combination of two or more agile and nonagile elements, having a nonagile end result.

Disciplined Agile (PMI, 2022) describes Hybrid Project Management as follows: a spectrum where predictive anchors one end and agile on the other. The range between these poles represents the hybrid approach, a blend of elements from both.

Figure 2.19*The hybrid project management approach*

Hybrid project management, combines the structured waterfall methods with the flexibility and adaptability of agile principles or other methodologies, allowing project managers to customize their development approach according to the specific project characteristics, team dynamics, and stakeholder expectations. It frequently employs either iterative or incremental development methodologies, in combination with the predictive ones. An iterative approach proves valuable for refining requirements and exploring different options. It may yield satisfactory functionality before the final iteration. Conversely, an incremental approach involves delivering increments of functionality over successive iterations within defined time frames (timeboxes). The deliverable is considered complete only after the final iteration (PMI, 2021).

In practice, some projects producing several different outputs, might use the waterfall approach for some deliverables and the iterative, incremental or agile approaches for others. For example, the design of an eco-resort, utilising smart technology, could be done by deploying an agile approach, and the construction could use a more predictive approach. Or the creation of environmentally friendly bike to be offered to the guests of the above-mentioned eco-tourism resort, could use an iterative approach in the beginning of the project, as users' feedback is needed to ensure the bike meets their needs, and then, when preparing for manufacturing and distribution, the predictive approach could be deployed, as up-front planning is essential and the requirements are specific.

The following project life cycles could be deployed by projects managers in order to apply the hybrid project management development approach:

Figure 2.20

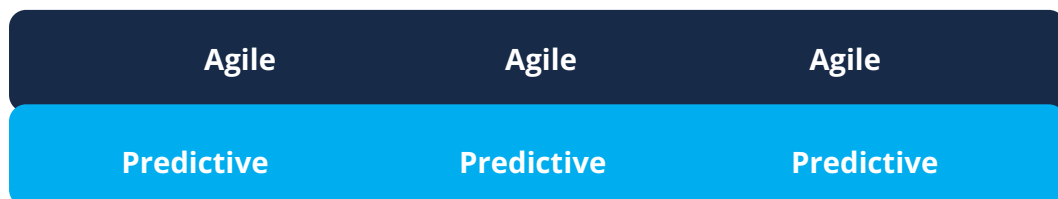
Agile development followed by a predictive launch



Adapted from *Agile Practice Guide*, by Project Management Institute, 2017. Project Management Institute.

Figure 2.21

Agile and predictive approaches used in combination and at the same time



Adapted from *Agile Practice Guide*, by Project Management Institute, 2017. Project Management Institute.

Figure 2.22

Predictive approach with agile components



Adapted from *Agile Practice Guide*, by Project Management Institute, 2017. Project Management Institute.

Figure 2.23

Agile approach with predictive components



Adapted from *Agile Practice Guide*, by Project Management Institute, 2017. Project Management Institute.

Hybrid Project Management in the Sustainable Tourism Sector

Hybrid project management holds relevance for the sustainable tourism sector due to its adaptable nature, which aligns well with the multifaceted challenges inherent in sustainable tourism projects. The sector often involves diverse stakeholders, including environmental conservationists, local communities, government bodies, and private sector entities, each with unique requirements and priorities. Hybrid project management allows for the integration of structured, predictive elements from traditional methodologies with the collaborative, adaptive practices of Agile approaches. This enables project managers to navigate complexities such as environmental conservation, socio-cultural preservation, and economic sustainability effectively. By tailoring project management processes to suit the specific needs of sustainable tourism initiatives, hybrid approaches facilitate stakeholder engagement, resource optimization, risk management, and continuous improvement, thereby enhancing the likelihood of successful project outcomes and long-term sustainability.

Pros and Cons of Hybrid Project Management Development Approach

Hybrid approaches are gaining popularity among project managers, as organisations implement increasingly complex projects in an uncertain business landscape, and due to the fact that deploying one single methodology has its limitations (Edbrick, 2023; TeamGantt, 2023).

A 2021 research report dealing with three project management approaches - traditional, agile, and hybrid - including 477 cross-industry projects, indicated that 52% of projects could be categorized as hybrid. This report's results suggest hybrid as the leading project management approach, as when used, stakeholder success was significantly increased, over traditional or agile approaches, while achieving the same budget, times, scope, and quality outcomes, (Gemino et al., 2020).

But as every methodology, Hybrid Project Management development approach has its advantages and limitations, that should be taken into consideration by the project managers, while deciding how to mix and match the various project management approaches and integrate them into their projects (Edbric, 2023; Freshworks, 2023; TeamGantt. 2023):



Table 2.3*Pros and Cons of Hybrid Project Management Development Approach*

Pros of Hybrid Project Management	Cons of Hybrid Project Management
• Flexibility: Hybrid project management offers flexibility by combining elements of different methodologies, allowing project managers to tailor approaches based on project characteristics, team dynamics, and stakeholder expectations. This adaptability is particularly valuable in dynamic and uncertain environments. • Customization: Project managers can select and integrate the most suitable practices from various methodologies, creating a customized approach that maximises efficiency and effectiveness for each project. • Risk Mitigation: By leveraging both predictive and adaptive elements, hybrid approaches help mitigate project risks more effectively. Traditional methods provide a structured framework for planning and control, while agile practices facilitate rapid feedback and course correction. • Better Cooperation and Communication: Hybrid project management encourages close teamwork between product managers, developers, quality assurance specialists, and designers, allowing the team to respond to customer feedback and changing market conditions.	• Challenges in Mixing Methodologies: Project managers need to find the right mix of both methodologies, considering factors such as the industry, project nature, and team type. • Increased Complexity: The hybrid approach can be more complex than using a single methodology, as it requires project managers to balance the strengths and weaknesses of both methodologies. • Communication and Coordination: The hybrid approach requires close collaboration between teams, which can be challenging, especially when teams are remote or have different work styles. • Team Adaptation: Transitioning to a hybrid approach may require team members to adapt to different working styles and methodologies, potentially leading to resistance or confusion within the team. Effective change management strategies are essential to address this issue. • Risks Integration: Integrating disparate elements from various methodologies can introduce integration risks and compatibility issues, leading to inconsistencies or inefficiencies within the



• Improved Stakeholder Engagement: Hybrid project management encourages active stakeholder involvement throughout the project lifecycle, fostering transparency, collaboration, and responsiveness. This leads to better alignment of project outcomes with stakeholder expectations. • More Effective Project Execution: The hybrid approach enables project managers to address unforeseen challenges (variables) via adaptive approaches (iterative, incremental, agile) while still delivering end results via predictive (waterfall) methodologies. • Resource Management: Hybrid project management offers a structured framework that integrates elements from traditional methodologies. This framework facilitates the initial definition and allocation of resources, enabling teams to effectively manage resources throughout the project lifecycle. • Faster Time-to-Market: The hybrid approach helps teams develop their product within the specified timeframe and introduce them to market on time.	project management process. Careful planning and coordination are necessary to mitigate these risks • Resource Constraints: Implementing a hybrid project management approach may require additional resources, such as training, tools, and support systems, to effectively blend different methodologies and support project teams. Organisations must invest in adequate resources to facilitate successful adoption.

Unit 8 Activity: Using the Development Approach Evaluation Tool

In order the proper project management development approach for a project to be selected, a thorough understanding of different approaches, such as waterfall, iterative, incremental, and Agile, is needed, as well as a comprehensive grasp of the deliverable(s) and the performing organisation. Although there is no one-size-fits-all solution for determining the ideal approach



for each output, there are guidelines that can support the evaluation process in order the best approach to be selected. This activity will help you understand how variables related to the product, project, and the performing organisation can impact the selection of a development approach and will provide you with the appropriate tools for you to be able to choose the most relevant to your project, project management approach.

The variables that can affect the selection of a project management development approach can be categorised as follows (Dionisio, 2023):

➤ **Product variables:**

- Innovation: Innovation takes into consideration the degree to which the technology and methods you will use on the project are new and untested versus known and standardized. Using methods and processes you are familiar with is conducive to waterfall approaches. Cutting-edge technology or experimental processes work better with adaptive approaches.
- Scope stability: How likely is it that your customer will change their preferences, make new demands or request changes? If the answer is “yes”, then you need to consider some adaptive methods. If you're tackling a project with a fixed scope that isn't prone to change, a waterfall methodology is appropriate. You may be dealing with a project where certain deliverables remain constant while others may change. In such cases, the versatility of a hybrid approach proves beneficial. Alternatively, you can use adaptive methods until the scope of the project is established. After that, moving to a more structured waterfall method is a viable option.
- Requirements certainty: Requirements certainty is related to scope stability, but it is a bit different. The scope is what you are delivering, the requirements are the capabilities that must be present and conditions that must be met to achieve the project objectives. Some projects have very clear requirements from the beginning, while others don't. The project team may expect some new requirements to be added during the project execution or some initially identified to evolve. When you want to test different requirements, start by using an adaptive method, while as they become more certain, you can transition to the predictive approach.
- Ease of change: Change is a must in project, but not all projects are well suited for changes. If some of your project deliverables are easy to change then consider using the adaptive approach for them, and for those that are not easy to change, deploy the waterfall approach.



- Risk: Risk is an uncertain event or condition that can have an impact on a project. An adaptive development approach is one way of responding to risks associated with product acceptance or new technologies, as it allows the team to experiment and develop prototypes and then further develop the product based on the results and feedback. For projects that involve safety risks or where you can't fix something once it's finished, a waterfall approach is best. So, a hybrid project has a variety of options for managing risk.
- Criticality: Criticality has to do with how important a component, deliverable, or project is. If a project deliverable has a high degree of criticality, such as the power of a resort, that means that you have to follow a predictive approach. In a hybrid project, some deliverables may be critical, while others are not. In this case, you have to determine from the beginning, which deliverables need to be extensively designed, tested and documented.
- Safety: When safety issues are involved in a project, then you have to use a waterfall approach and follow the same procedures mentioned regarding the deliverables of high criticality. In a hybrid project, usually, not all the deliverables have safety issues. For those that don't have safety impacts, you can use an adaptive method.
- Regulatory: Numerous projects are undertaken to achieve or maintain compliance, and these projects typically utilise a waterfall approach. However, in cases where that you don't have to demonstrate compliance or deal with authorities, both waterfall and adaptive approaches are valid.

➤ **Project variables:**

- Stakeholders: Projects involve various stakeholders. Some of them are well known to the project team (project manager, sponsor etc.), but some others are totally unknown and it's probable that the project team will never meet them. In an hybrid project, while deploying the adaptive approach, it is essential to be in close cooperation with key stakeholders, as they affect in a straight forward way the project results. For those deliverables that are produced by deploying the waterfall approach, a monthly status report should be sufficient.
- Delivery options: If your project has one main deliverable at its end, then you should consider of using a predictive approach, while projects with multiple deliveries, such as a website, work well with incremental approaches. Projects where you can work on several different deliverables but bring them together before release work well with an iterative approach.

- Funding availability: Many projects involved in new product development, particularly those focused on digital products, often start with a small budget. As the product gains market share and becomes profitable, additional features and functionalities are incorporated. This model is commonly associated with agile or iterative project approaches, as it entails minimal initial investment, and if the product fails to perform, the project can be terminated with minimal loss. But, if the product performs well, then a waterfall approach could be more appropriate, so as to reach the final deliverable. Conversely, multiyear projects with large budgets must consider funding availability, and especially when they have one large deliverable in the end, a predictive approach is often selected.

➤ **Organisational variables**

- Structure; Organisational structures vary widely, ranging from hierarchical to matrix to flat. Waterfall projects tend to perform better in hierarchical and matrix organisational structures, in comparison to Agile projects, except for those cases that specific functions, such as IT, utilise Agile methods. Adaptive project management practices excel in organisations with flat structure and self-organised teams, as they embrace change easily and work in a more flexible way. Mixing and matching predictive and adaptive processes in strict hierarchical structures, is also an option for implementing hybrid projects.
- Culture: The organisational culture significantly influences the selection the project management approach, as adaptive methods are well-suited for teams, that its members that trust each other, while predictive methods are more suitable for bureaucratic and conservative cultures. But introducing few techniques from different approaches is always an option.
- Project team: The composition and geographical distribution of project team members play a significant role in determining the development approach. Agile methodologies are more appropriate for small teams (5-10 people), that are collocated, while predictive ones are appropriate for large teams. If a large team wants to use adaptive approaches, then there are some “Agile at Scale” methodologies that can be deployed, or use some agile tools/techniques (daily stand-ups), that can support project implementation. When you have to manage a large project with multiple deliverables, it is suggested to use for the overall project management a waterfall framework, while some team members deploy adaptive processes and others predictive practices.
- Experience and commitment: Teams and organisations that have extensive experience and dedication to a specific project management method may found

it challenging to switch to another approach. Even if one team is experienced in a specific approach, but the organisational culture doesn't aligns with its principles, then they should considered the hybrid approach. When a new approach/framework is introduced, it's essential to follow a step-by-step procedure, in order the team and the organisation to have time to get used to it.

Step 1: Read the following case study: “Zero Waste Challenge: Amity Tours”.

Tackling Waste as a Tangible Short-Term Goal

Amity Tours, an experienced active travel provider operating unique adventure, sport and special interest tours in Chile and Argentina, had an ambitious aim: to transform into the “most sustainable tour operator” in the region.

At the leadership level, the company's board of directors decided that a path to reaching such an ambitious long-term goal is to start with a concrete and tangible short-term objective. And waste reduction was identified as a priority.

This was well aligned with what the staff members saw as a priority as well. Although the company was expecting its best season yet in 2019, there was a growing concern within the team that tour experiences needed to be improved - for the guests and for the environment.

Many of the staff members wanted to make the meals and activities more sustainable - and to do so before the busy high season started. Waste, and specifically, waste produced from tour activities, has also been one of the key areas that Amity Tours team members have long been concerned about.

And so, with both management and staff on board, Amity Tours embarked on a Zero Waste Challenge. Some of the staff had already been practicing a Zero Waste Lifestyle in their private lives, so the company had access to practical knowledge and inspiration from within its own team.

Finding No-Waste Alternatives through Partnerships

What does it take to achieve Zero Waste operations? Lots of small steps!

As a first step in its Zero Waste journey, Amity Tours started a plan, defining all the steps required to reach the final goal. Some of the initial steps included:

- Checking the shopping list for each trip and crossing off any unnecessary items.
- Checking each item, its origin and waste production.
- Researching local alternatives.

Changing consumption habits alone is not enough to avoid all waste production. As such, Amity Tours' Zero Waste efforts have relied also on working with the producers and suppliers to improve the packings and ingredients and to reduce components that will become waste. For example, local beer in reusable growlers instead of individual beer bottles; local syrups instead of soft drinks; refillable sparkling water instead of individual PET-bottles; vegetables from an organic vegetable farm; and dried fruits in bulk instead of small amounts with plastic packaging. Implementing these local no-waste alternatives has required investment (around USD 3,000) in new equipment such as reusable dishes and a dishwasher, a cooler, boxes for storing dried fruits in bulk, and containers for recyclable materials.

Forging new partnerships has also been an important part of the journey. For example:

- Buying from a local entrepreneur (a mother with cooking skills) who started producing homemade cereal bars, which is a very important item for active tours.
- Working with a local recycling station for collecting and processing all the recyclable materials.
- Feeding organic waste to chickens, and having the rest processed by a local organisation that turns food waste into compost, which is then returned to the company for its greenhouse garden.
- Some table scraps and leftovers can be fed to chickens. The rest is composted, and returns to nourish plants in the greenhouse garden.

Empowering Suppliers

It took about 5 months to get the company's new waste management process up and running. Once the in-house practices have been updated, the next key step was to engage others across the supply chain - hotels, restaurants, local communities and other businesses involved in Amity Tours' activities.

The Amity Tours team took a proactive, constructive and cooperative approach - visiting each supplier to explain the Zero Waste Challenge, inviting them to join the efforts, and working on finding suitable solutions together, for example, a local ice cream shop has replaced plastic cups with recyclable wooden sticks, and some of the accommodation providers used by Amity Tours have also found local recycling partners to help reduce their waste.

Staff and Customer Engagement

From the Amity Tours team, Angela Bless (Sales Manager) has been the champion of the Zero Waste efforts. In addition, the whole office team, and field staff including guides and drivers are involved in the Challenge and invited to find and suggest ideas and solutions that support the goal.

Getting feedback from staff members is really important, and there have been many great ideas that came from them, and some even also from guests.

To make sure that the field staff are able to put the new Zero Waste policy into practice, the company organised staff training before the high season started. The new products used for the picnic and snack tables were introduced, and everyone got to try everything themselves. The staff were also introduced to the new recycling system, to ensure the right steps for sorting and collecting materials are followed.

In addition to explaining WHAT to do and HOW, it's also been very important to help the staff understand WHY the company is committing to zero waste - to protect the environment for future generations. This has helped make the Zero Waste Challenge an initiative for and by the whole team of Amity Tours. As a result, many of the team members are implementing sustainable solutions in their daily lives, creating ripple effects of positive change.

Of course, it's also important to engage and educate the guests on the why, what and how. The Zero Waste mission is presented during the welcoming and briefing talk on Day 1 of each tour group, and all guests are encouraged to be part of the zero waste journey, with reminders throughout the tour.

Sharing Lessons Learned

As a small family company, Amity Tours did not have resources to create a dedicated sustainability manager position. While the whole-team approach has worked well in driving the Zero Waste efforts, finding time to allocate to sustainability initiatives remains a major challenge.

The pandemic has also added to this challenge, as the company was forced to reduce its staff and needed to focus on immediate needs. In such a condition, where everyone was struggling to keep the business alive, motivating other partners and suppliers to join, let alone engaging internal stakeholders, was extremely difficult.

In terms of waste management, the pandemic also brought new hurdles, such as the health and safety requirements involving single-use plastic items. So, the work of finding and testing sustainable alternatives (while ensuring safety) continues. In addressing such challenges, it's also local collaboration that enables solutions - for example, working with Fundación Basura ("*Waste Foundation*") and a network of entrepreneurs to identify and create local solutions.

Since the ultimate goal of the Zero Waste Challenge is to spread the zero-waste concept widely, sharing knowledge is also an important part of the journey. Amity Tours' experience and lessons learned are shared with other tour operators and industry stakeholders through resources such as this course led by Fundación Basura.

The Big Picture

Importantly, all the small steps that have been taken and all the ongoing improvements and adjustments being made to reduce and better manage waste are one part of the bigger challenge of becoming a more sustainable business, and supporting the whole industry to become more sustainable.

As part of its local and regional efforts to advocate for a more responsible adventure travel sector, Amity Tours is a proud member of the Fundación Basura Chile since 2021. The company has also been part of international efforts promoting sustainability, such as Tourism Declares a Climate Emergency, and is actively working on supporting climate actions, for instance, supporting a local reforestation project.

This case study was adopted by the Trainingaid website: [Zero Waste Challenge: Amity Tours Case Study](#).

Step 2: Assess the project against the three variables – Product, Project, Organisation

Now that you have read the case study, take again a quick look to the three variables' categories – Product, Project, Organisation – influencing the project management development approach to be selected for this case study. Then, in order to decide which project management approach is the optimal for the project of the case study, assign a rating to it for each factor on a scale of 1 to 5. The rating scales provided below are structured such that a rating of "1" corresponds more closely to a waterfall (predictive) approach, while a rating of "5" aligns better with an adaptive (iterative, incremental, agile) approach (Dionisio, 2023).

Product Variables

Innovation

1	3	5
Stable technology	Newer technology	Technology doesn't exist yet

Scope Stability

1	3	5
Stable scope	Some requirements known	Unknown requirements

Ease of change

1	3	5
Change puts project at risk	Change requires rework	Easy to change

Risk

1	3	5
Significant product risks	Some product and/or market risks	Significant market risks

Criticality

1	3	5
Mission or business critical	Somewhat critical	Important but not critical

Safety

1	3	5
Potential major safety issues	Low safety issues	No safety issues

Regulatory

1	3	5
Highly regulated product	Some regulations	No regulations

Project Variables**Stakeholders**

1	3	5
Low stakeholder engagement	Some stakeholder engagement	Stakeholders consistently available

Delivery options

1	3	5
One delivery	Multiple deliveries	Ongoing deliverables
Funding availability		
1	3	5
Stable funding	Partial funding available	Inconsistent or insufficient funds
Organisational Variables		
Structure		
1	3	5
Hierarchical	Matrixed	Flat
Culture		
1	3	5
Bureaucratic and controlling	Emphasis on managing rather than controlling	Self-organising and high trust
Project Team		
1	3	5
Large and/or virtual team	Midsized team mostly on-site	Small, colocated team
Experience and commitment		
1	3	5
Experience and commitment to waterfall	Balanced experience and commitment	Experience and commitment to agile

Step 3: Choose the best project management development approach



What project management development approach better match the project Amity Tours undertook?

Why?

Unit 9 Theoretical Chapter: Project Roles Driving Project Success - ppt format

Introduction

Project roles in hybrid project management play a crucial part in the successful execution of projects that integrate both traditional and adaptive methodologies. This chapter will explore the key project roles in hybrid project management, the responsibilities associated with each role, and the impact of these roles on project outcomes.

Defining Project Success

A project is considered successful if it meets the following criteria (PMI, 2021):

- ✓ It delivers the expected business value
- ✓ It meets stakeholder expectations
- ✓ It is completed within the constraints of scope, time, cost, quality, resources, and risk.

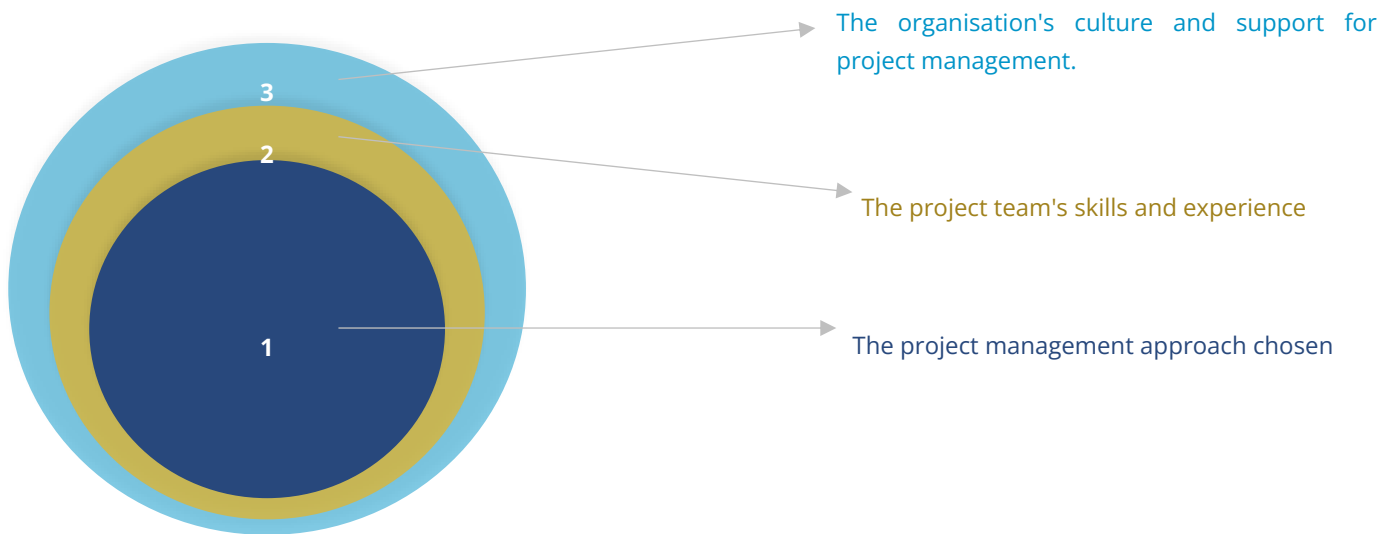
This definition of success emphasises a holistic approach to project success that considers not only traditional constraints but also broader business outcomes, stakeholder satisfaction, and continuous improvement efforts.

Project Success

The success of a project is influenced, among other factors, by the following.

Figure 2.24

Factors affecting project success



To **ensure project success**, project managers must carefully consider these factors and choose the most appropriate project management approach and methodology for their project.

But projects cannot exist without the **people** that will design, implement, monitor, control and close them.

The involvement and actions of people ultimately, determine whether a project achieves successful completion or not.

Project Roles

Understanding the **distinct responsibilities** and **traits** associated with **key project roles**, especially when hybrid project management concerns, enables effective customisation of project staffing to suit the requirements of hybrid projects. The essential project roles for hybrid projects are the following:

Project Sponsor

A **project sponsor** is a person or group who provides resources and support for the project and is accountable for enabling success (PMI, 2021). Furthermore, project sponsor is the person who provides the direction and funding for the project (Schwalbe, 2021). He/she has responsibilities associated with initiating projects, up-front planning, monitoring progress, and supporting the project manager (Dionisio, 2023).

Project Manager

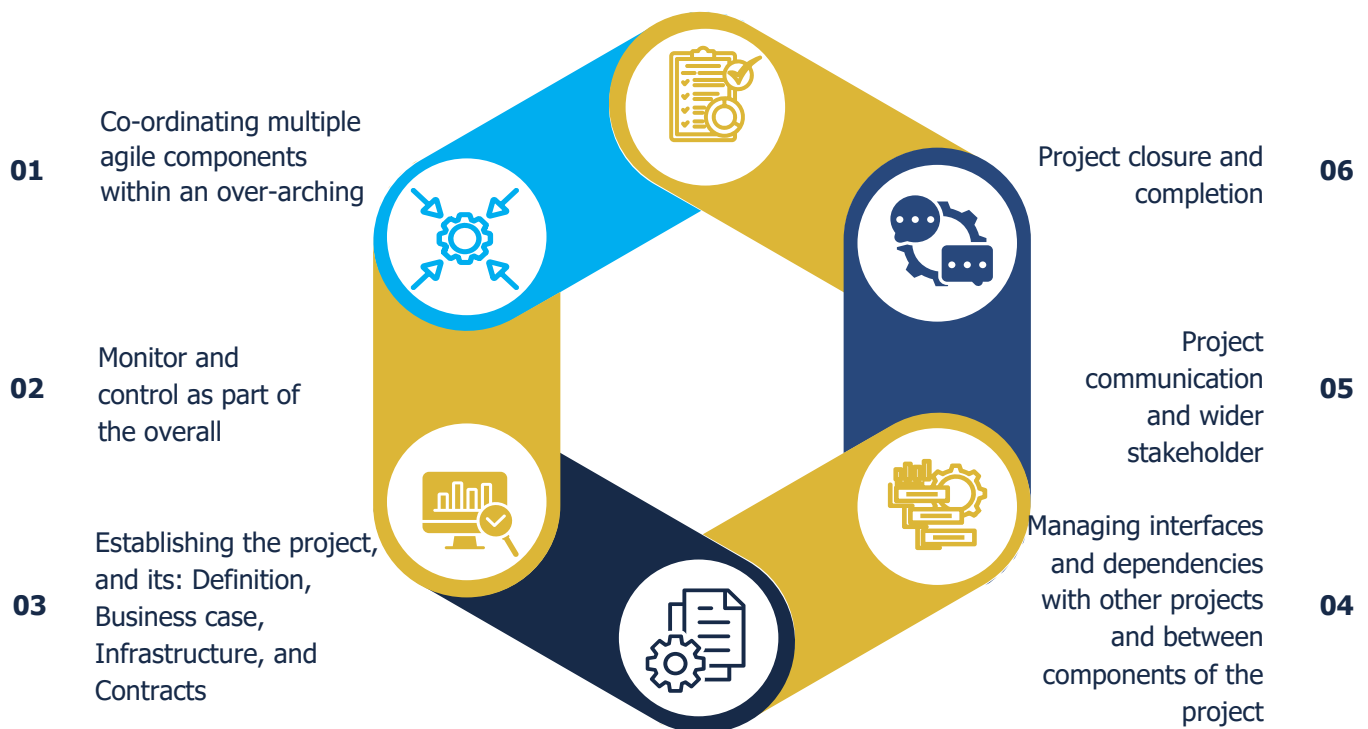
A **project manager** is the person assigned by the performing organisation to lead the team that is responsible for achieving the project objectives (PMI, 2021). Project managers work with

the project sponsors, the project team, and the other people involved in a project to define, communicate, and meet project goals (Schwalbe, 2021). He/she is accountable for the overall success of the project. This includes demonstrating leadership behaviors while working with people and demonstrating good management practices for achieving outcomes (Dionisio, 2023).

While a number of agile methodologies do not have the role of Project Manager, **in hybrid projects the role of project manager is a must** and includes (Clayton, 2020) the following.

Figure 2.25

The role of project manager in hybrid projects



Product Owner

Product owner is a person responsible for maximising the value of the product and accountable for the end product (PMI, 2021). He/she **prioritises wish list** called a **product backlog** (Schwalbe, 2021).

Product owners commonly operate within **product development**, particularly in the realm of digital and software projects but they may find themselves engaged in **projects**, using either **adaptive** or **predictive approaches**.

His/her main responsibilities concern the following (Dionisio, 2023).

Figure 2.26

The role of a product owner in projects



Scrum Master

A **scrum master** is the person who supports the team in maintaining alignment with Agile values and principles. A scrum master is used on projects that work with an **agile methodology** and in more specific **with "Scrum"**, which is a single-team process framework used to manage product development (more about Scrum in Lesson 3 of this module) (PMI, 2017). Their role is to **support the team in accomplishing the work and following Agile methods**. They are a facilitator for the team and support the work of the project (Dionisio, 2023).

Project Team

Project team is a set of individuals **performing the work of the project to achieve its objectives** (PMI, 2021). The team comprises **individuals responsible for carrying out the project tasks**.

In larger predictive projects, there might exist a specialised subset within the team known as the **project management team**. This subgroup typically consists of **team leads** or **other members** tasked with **overseeing specific aspects of the project**.

Team members contribute in various ways as follows (Dionisio, 2023).

Figure 2.27

Team members contribution in projects



Project Roles in Hybrid Projects

In a hybrid project setting, roles can be flexibly combined and adjusted to suit the specific requirements of the project.

For hybrid projects, it's less about the title and more about what makes sense for the project.

Unit 10 Activity Fill in the Blanks

Lumi File: M2L2_Unit 10 Activity Fill in the Blanks The following text is embedded in the Lumi File.)

..... are traditionally associated with projects from a project management standpoint. They may find themselves engaged in projects employing either or approaches and prioritise **tasks** according to their business significance and collaborate closely with their on a daily basis.

A is the person assigned by the performing organisation to lead the **team** that is responsible for achieving the He/she works with the project, the project, and the other people **involved** in a project to, and meet project

A is a person or group who provides and for the and is for enabling

A is the person who supports the in maintaining alignment with values and principles. He/she is a for the team and supports the work of the



Lesson 3: Project Management Frameworks and Methodologies

Unit 1 Introduction

It's crucial for a project manager to know the available project management frameworks and methodologies as they provide a diverse set of tools and techniques for managing projects effectively, allowing them to tailor their approach, according to the specific needs of each project. This is more important in hybrid projects, where project managers have to combine and integrate various predictive or adaptive methods, to achieve project success.

Unit 2 Multiple choice question

Lumi File: M2L3_Unit 2 Multiple Choice Question_Project Management Frameworks (The following text is embedded in the Lumi File.)

Which of the following statements is true regarding project management frameworks and methodologies?

- a) They are the same thing and can be used interchangeably.
- b) They provide a structured approach to managing projects, but do not offer any tools or techniques.
- c) They are only useful for traditional project management approaches.
- d) They provide a diverse set of tools and techniques for managing projects effectively and can be tailored to the specific needs and complexities of each project.

Unit 3 Theoretical Chapter: Traditional and Hybrid Project Management Frameworks - ppt format

Introduction

It is very important for project managers and other professionals to understand what exactly a project management framework or/and methodology is, so as to be able to select the most appropriate tools for designing, executing and controlling their projects. In this chapter we define the terms "framework" and "methodology" within the discipline of project management, and present some of the most commonly used.

Defining Project Management Frameworks and Methodologies

Within the project management community, there exists a **lack of consensus regarding the distinction between methodologies and frameworks.**

While definitions exist for each term, there is considerable disagreement when it comes to their practical application.

Additionally, professional project managers often use the terms "methodology" and "framework" interchangeably, further complicating the matter (ActiveCollab, n.d.).

In theory, the primary distinction between a methodology and a framework is as follows (ActiveCollab, n.d.; CourseHero, n.d.).

Table 2.4

Project Management framework and methodology definitions

Framework	Methodology
A Framework is a logical structure for classifying and organising complex information. It offers structured guidance and direction on a preferred approach without excessive detail or rigidity. It provides flexibility to adapt to changing conditions and can be customized for specific company needs while incorporating proven approaches.	A methodology is a documented approach for performing activities in a coherent, consistent, accountable, and repeatable manner. It represents a systematic approach to solving a particular problem, comprising a defined set of rules, methods, tests, activities, deliverables, and processes. Methodologies demonstrate a well-considered, defined, and repeatable approach to achieving objectives.

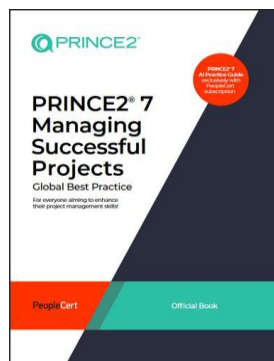
Project Management Frameworks and Methodologies

Figure 2.28

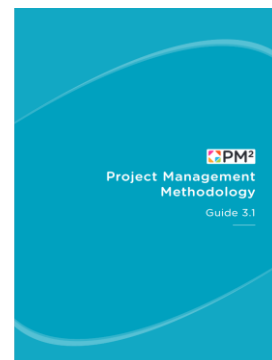
The three main project management methodologies and frameworks



**Project Management
Body of Knowledge
(PMBOK®)**



**PRojects IN Controlled
Environments
(PRINCE2)**



**PM² Methodology,
developed by the
European Commission**

PMBOK®

PMBOK® (PMI, 2021), an acronym for **Project Management Body of Knowledge**, represents a standardized set of principles and practices governed by the Project Management Institute (PMI), a leading organisation in the field of project management based in the USA. It is considered a framework rather than a methodology and is often characterized as descriptive, outlining project management methodologies, process inputs and outputs, and knowledge domains without prescribing specific application methods. It undergoes regular updates to incorporate advancements in best practices and is overseen by the PMI for regulatory compliance. **PMBOK®**, as an industry standard, explains Project Management concepts and steps at great lengths, focusing not only to the project manager, but to anyone involved in a project, with specific focus on team members and team roles (PMI, 2021; Roberts, 2023; Wrike, n.d.).

The **greatest strength** of PMBOK, while it is commonly linked with the waterfall methodology, which follows a sequential project stage approach, is that it also accommodates newer methodologies like Agile, so **it can be considered a framework that is well-suited for designing, planning, executing, controlling and monitoring and closing a hybrid project.**

Its latest edition, **PMBOK® Guide 7th edition**, does not endorse any specific methodology, as PMBOK® processes and principles **can be adapted to diverse project management contexts.**

In more specific, the *PMBOK® Guide 7th Edition*:

- Covers all development approaches (predictive, traditional, adaptive, agile, hybrid, etc.)
- Has an entire section on tailoring the approach and processes
- Features an expanded list of tools and techniques, including a "Models, Methods, and Artifacts" section
- Focuses on project outcomes in addition to deliverables
- Works with [PMIstandards+™](#) for additional guidance on applying the PMBOK® Guide in real-world scenarios

Project managers have the flexibility to select and tailor approaches according to the unique needs of their companies, teams, and projects, making PMBOK framework well-suited for use within Hybrid Project Management.

PRINCE2®

***PRINCE2®** (PRINCE2, n.d.), an acronym for **P**ROjects **I**N **C**ontrolled **E**nvironments, is a methodology for Project Management, developed by Axelos, a project management consortium and community in the UK. It is called prescriptive because it gives a complete idea about what is to be done in a project, by whom, and at what point of the project, but it's brief and lacks the detailed explanation of project management steps found in PMBOK®. However, it thoroughly elaborates on the roles and responsibilities of a project management team. PRINCE2® is comparatively simple and elemental, focused mainly on technical project management skills and on specific processes (Roberts, 2023; Wrike, n.d.).*

PM² Methodology

PM² is a Project Management Methodology (EU, 2023) developed by the **European Commission**. Its purpose is to enable Project Managers (PMs) to deliver solutions and benefits to their organisations by effectively managing the entire lifecycle of their project.

PM² has been created with the needs of European Union Institutions and projects in mind, however, **the best practices described in PM² are applicable to projects in any organisation.**

PM² is a **light and easy-to-implement methodology** which project teams can **tailor to their specific needs.**

PM2 Methodology, will be covered in Unit 11 of Module 2.

Unit 4 Activity True/False

Lumi File: M2L3_Unit 4 True/False_TPM Frameworks & Methodologies_ (The following text is embedded in the Lumi File.)

The PRINCE2 is a project management methodology, often characterized as descriptive, outlining project management methodologies, process inputs and outputs, and knowledge domains without prescribing specific application methods.

Unit 5 Theoretical Chapter: Project Management Process Groups, Knowledge Areas & Performance Domains

Introduction

In the **PMBOK Guide 6th edition (PMI, 2017)**, project management is structured through the integration of **process groups** and **knowledge areas**. While knowledge areas encompass all essential information and skills required by project managers, process groups outline the sequential steps necessary for project completion. But knowledge areas were replaced in the PMBOK Guide 7th edition by the so-called **performance domains**. This theoretical chapter defines these three concepts and elucidates their roles, interrelations, and significance in modern project management practices.

The Project Management Process Groups

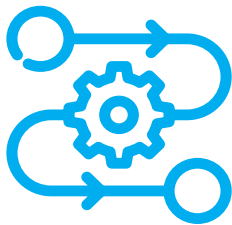
According to the PMBOK Guide 6th edition (PMI, 2017), Project Management Process Groups concerns a logical grouping of project management inputs, tools and techniques, and outputs. The **five (5) Project Management Process**, that **comprises 49 processes**, are as follows (Everitt, 2022; PMI, 2023).

Figure 2.29

The five project management processes



Initiating Process Group: The initiating process group encompasses activities aimed at defining a new project or a new phase within an existing project. Its primary objective is to secure authorization to commence the project or phase. The main outputs of this process group are the project charter document and the stakeholder register. The project charter is a document that is issued by the project initiator or sponsor and formally authorizes the existence of a project and provides the project manager with the authority to apply organisation resources to project activities. The stakeholder register provides a comprehensive list of project stakeholders, detailing their roles, interests, and communication preferences, including frequency and preferred format of communication.



Planning Process Group: The planning process group involves activities focused on determining the project's scope, refining objectives, and outlining the necessary actions to achieve the project's goals effectively. The main output of the planning stage is the project management plan. In more extensive projects, the project management plan may include sub-plans to provide detailed guidance on critical areas like project scheduling or quality management. In smaller projects, processes may be delineated within separate sections or expanded upon in an appendix. The project management plan is considered a "living document," continuously updated and revised throughout the project as changes occur.



Executing Process Group: The executing process group consists of activities aimed at carrying out the work outlined in the project management plan to fulfil the project requirements satisfactorily. The executing process group encompasses ten project management processes, primarily dedicated to overseeing project activities, fostering communication, implementing risk responses, and engaging stakeholders to ensure project progress. During this phase, the project manager plays a pivotal role in directing and overseeing project work, as well as managing project knowledge, including requirements documentation, meeting minutes, and lessons learned. Additionally, typical responsibilities include acquiring project resources, nurturing and leading the project team, and coordinating project communications.



Monitoring and Controlling Process Group: The monitoring and controlling process group encompasses activities required to monitor, assess, and regulate the project's progress and performance. It involves identifying areas where adjustments to the plan may be necessary and initiating corresponding changes. This process group consists of 12 processes, helping project managers to update the project management plan, adjust the team activities, and realign with the project objectives. Project management software is needed, especially in large projects to monitor and report progress.

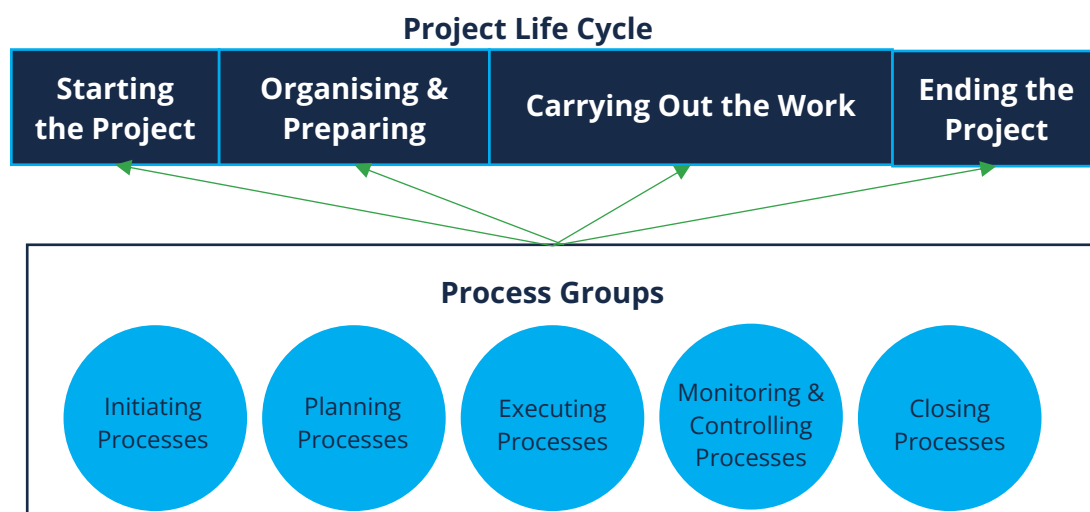


Closing Process Group: The closing process group involves activities conducted to formally conclude or close the project, phase, or contract. It marks the final stages of project completion and ensures all necessary closure activities are completed satisfactorily. Documentation should also be completed and stored.

The Process Groups are not the same thing as a project life cycle. A life cycle shows how the project moves from start to finish in different phases. **Within one phase you might go through all the Process Groups, or just some of them, so don't confuse the two.**

Figure 2.30

Project life cycle and process groups



Adapted from *Process Groups. A Practical Guide*, by Project Management Institute, 2023. Project Management Institute.

They are independent of the development approach (i.e. predictive, adaptive or hybrid), application area (e.g. marketing, information services, accounting etc.) and industry (tourism, construction, aerospace etc.) but are intended for practitioners who primarily follow a predictive (waterfall) or a hybrid approach (PMI, 2023).

The Project Management Knowledge Areas

Project management knowledge areas encompass the **essential competencies that project managers need to cultivate**. They align with the process groups and serve as standardized guidelines and terminology. They are structured to categorize processes sharing common knowledge characteristics. These **10 knowledge areas** are (PMI, 2017; Schwalbe, 2021):

Figure 2.31

Project management knowledge areas



While the PMBOK Guide 6th edition placed significant emphasis on the previously mentioned ten (10) knowledges areas, its updated version (PMBOK Guide 7th edition) replaced them with the **eight (8) performance domains**. But it's essential for project managers to be aware of them, as they provide a foundational understanding of key project management concepts and practices, covering critical aspects such as scope, schedule, cost, quality, risk, procurement, and stakeholder management.

The Project Management Performance Domains

According to the PMBOK Guide 7th Edition (PMI, 2021), **Project Performance Domains are a group of related activities that are critical for the effective delivery of project outcomes.**

Therefore, a performance domain constitutes a cohesive collection of actions undertaken to execute a project, achieve its objectives, and consequently, realize its value. These activities represent the core tasks and responsibilities that occupy our time throughout the project lifecycle. The eight (8) performance domains are included in the following table.

Table 2.5

The eight (8) project management performance domains.

1	The Stakeholder Performance Domain addresses activities and functions associated with stakeholders.	Effective stakeholder interaction contributes to successful project outcomes. Stakeholder engagement includes implementing strategies and actions to promote productive involvement of stakeholders in project decision making and implementation.
2	The Team Performance Domain addresses activities and functions associated with the people who are responsible for producing project deliverables that realize business outcomes.	The group of people working on the project to accomplish its goals is known as the project team. It is possible to create an atmosphere that will help the group develop into a high-performing unit. This entails promoting leadership qualities among all project team members, developing team dynamics, and assigning shared accountability for the results.
3	The Development Approach & Life Cycle Performance Domain addresses activities and functions associated with the development approach, cadence and life cycle phases of the project.	The project's deliverables dictate the most suitable development approach, whether it be predictive, adaptive, or a hybrid of both. Moreover, the deliverables and chosen development approach impact the frequency and timing of project deliveries. The development approach and delivery schedule, in turn, shape the project's life cycle and its various phases.

4	The Planning Performance Domain addresses activities and functions associated with the initial, ongoing, and evolving organisation and coordination necessary for delivering project deliverables and outcomes.	Planning organises, elaborates, and coordinates work throughout the project. Planning takes place up front and throughout the project. The amount, timing, and frequency varies depending on the product, development approach, environment, and stakeholders.
5	The Project Work Performance Domain addresses activities and functions associated with establishing project processes, managing physical resources, and fostering a learning environment.	Project work is associated with establishing the processes and performing the work to enable the project team to deliver the expected value and outcomes. Project work includes communication, engagement, managing physical resources, procurements and other work to keep project operations running smoothly.
6	The Delivery Performance Domain addresses activities and functions associated with delivering the scope and quality that the project was undertaken to achieve.	Projects support strategy execution and advancing business objectives. Project delivery focuses on meeting requirements, scope, and quality expectations to deliver the expected outputs that will drive intended outcomes. Projects provide business value by developing new products or services, solving problems, or fixing things that were defective or sub-optimal. Projects may use a delivery approach that supports releasing deliverables throughout the project life cycle, at specific points, or at the end of the project. Business value often continues to be captured long after the project has ended.

7	The Measurement Performance Domain addresses activities and functions associated with assessing project performance and taking appropriate actions to maintain acceptable performance.	Measurement involves assessing project performance and implementing appropriate responses to maintain optimal performance. The Measurement Performance Domain evaluates the degree to which the project deliveries and performance are meeting the intended outcomes. Having timely and accurate information about delivery and performance allows the team to learn and determine the appropriate action to take to address current or expected variances from the desired performance.
8	The Uncertainty Performance Domain addresses activities and functions associated with risk and uncertainty.	Projects exist in environments with varying degrees of uncertainty, and uncertainty presents threats and opportunities that project teams explore and assess and then decide how to handle. Uncertainty, in the broadest sense, is a state of not knowing or unpredictability. There are many nuances to uncertainty, such as: risk associated with not knowing future events, ambiguity associated with not being aware of current or future conditions, complexity associated with dynamic systems with unpredictable outcomes, and many others.

Unit 6 Activity Case Study

Read the following case study and answer the questions that follow.

As the sun rises over the majestic European Alps, you find yourself at the forefront of an inspiring endeavor - a sustainable tourism project aimed at preserving the natural beauty and cultural heritage of this iconic region. With its snow-capped peaks, pristine lakes, and charming villages, the European Alps have long been a magnet for tourists seeking adventure and relaxation. However, the influx of visitors has also brought environmental degradation, overcrowding, and disruption to local communities.

Determined to make a difference, you assemble a diverse team of experts - environmentalists, tourism professionals, and community leaders. Together, you embark on a mission to redefine



tourism in the European Alps, promoting sustainability, conservation, and responsible travel practices.

The project begins with the initiating process group, where you define the objectives of the project and identify key stakeholders. Collaborating with local authorities, environmental organisations, and tourism businesses, you draft the project charter document and stakeholder register, outlining project goals, scope, and communication preferences.

During the planning phase, you delve into the project's scope, refining objectives to align with sustainability goals and community needs. You develop a comprehensive project management plan, detailing actions, timelines, and resource allocation. Sub-plans for project scheduling, quality management, and stakeholder engagement provide guidance in critical areas.

With plans in place, the project execution starts. You oversee the implementation of eco-friendly initiatives, such as waste reduction programs, and sustainable transportation options. Engaging with stakeholders, you foster collaboration and address concerns, ensuring support for project activities.

As the project progresses, monitoring and controlling the performed activities becomes essential. Using project management tools, you track progress, assess performance, and implement changes as needed to stay on course.

Finally, as the project nears completion, formal closure activities are conducted, including final inspections, completion of documentation, and settlement of financial accounts. Project outcomes and lessons learned are documented for future reference, ensuring the legacy of the project lives on.

Lumi File: M2L3_Unit 6 Activity Multiple Choice Questions_ (The following text is embedded in the Lumi File.)

Why is it important to develop a project charter document and stakeholder register at the beginning of the project?

- A) To outline project objectives and timelines
- B) To secure authorization to commence the project
- C) To identify potential risks and mitigation strategies
- D) To conduct final inspections and closure activities

How can stakeholder engagement contribute to the success of the sustainable tourism project in the European Alps?

- A) By implementing sustainable practices
- B) By monitoring project progress

- C) By fostering collaboration and trust
- D) By managing project resources effectively

What are some potential risks that may arise during the execution of the project, and how can they be mitigated?

- A) Environmental challenges and community resistance
- B) Budget constraints and regulatory issues
- C) Stakeholder engagement and community outreach
- D) Financial planning and contingency reserves

What is the primary output of the planning phase of this project?

- A) Completion of final inspections
- B) Development of project charter document
- C) Creation of stakeholder register
- D) Project management plan

What is the main purpose of the monitoring and controlling activities you have to implement during project executions?

- A) To conduct final inspections and closure activities
- B) To secure authorization to commence the project
- C) To monitor project progress and performance
- D) To foster collaboration and trust among stakeholders

Why are the final closure activities important for concluding the project effectively?

- A) To secure authorization to commence the project
- B) To celebrate project achievements
- C) To verify project deliverables and document outcomes
- D) To identify potential risks and mitigation strategies

Unit 7 Theoretical Chapter: Agile Frameworks and Methods

Introduction

Agile frameworks and methodologies are terms that are used for a variety of approaches adopted in various industry, which deploy an adaptive way of delivering value through projects,

by following the four values and 12 principles established in the Agile Manifesto (PMI, 2021; PMI, 2017). These frameworks and methodologies increase organisational flexibility and adaptability, promote operational efficiency and improve product/service quality (PMI, 2017). This chapter presents the most widely adopted agile practices by professionals in multiple sectors – Lean, Kanban and Scrum – providing the opportunity to project managers and teams to tailor their hybrid project management approach.

Agile Frameworks and Methodologies

Lean

Lean is considered an agile methodology, but it can be more accurately described as an umbrella term, which encapsulates various agile approaches. Lean and Agile share similar goals, but their principles and practices are different, yet they are closely connected (Wrike, n.d.).

Lean originates from the principles of lean manufacturing, a concept that was developed by Toyota aiming at reducing waste and optimising efficiency, leading to increased profits and costs reduction. It based on five (5) principles which are (Womack & Jones, 2016):

1. Precisely specify value by product
2. Identify the Value Stream for each product
3. Make value flow without interruptions
4. Let the Customer pull value from the producer
5. Pursue perfection

These principles were the basis for one of the most popular agile frameworks, the **Lean Software Development**, which was formed upon the principles (PremierAgile, n.d.):

- Deliver fast
- Eliminate waste
- Have respect for people
- Create knowledge
- Build quality
- Optimisation
- Always defer commitment



Figure 2.32*Lean software development*

Note. From *KPI and task management* [Illustration], by Vectorjuice, n.d., Freepik

(https://www.freepik.com/free-vector/kpi-task-management-workflow-optimization_12085339.htm#query=lean%20methodology&position=2&from_view=search&track=ais&uuid=f99b8b6b-9344-4513-83e0-c543c6072238). CC BY 2.0.

Lean team structure is similar to the structure in other Agile methodologies, as they are quite small and their members are interchangeable. In recent years, the role of the project manager has gained popularity in projects implemented by deploying this methodology. The structure of Lean teams is also similar to the structure of teams of other Agile methodologies. They are usually quite small and their members are interchangeable.

Key benefits of Lean methodology include improved efficiency through minimising waste, shortened lead times and faster delivery, increased customer satisfaction, resource optimisation and continuous improvement. Some drawbacks of Lean are less adaptability to changing requirements and less emphasis on individual and team development/empowerment (Wrike, n.d.).

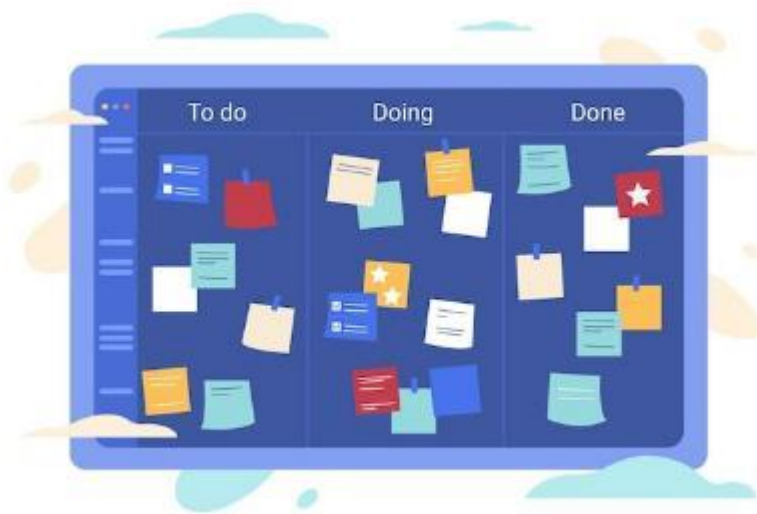
Kanban

Kanban, like Lean, has its roots in lean manufacturing at Toyota and is considered a visual and incremental Agile methodology, specifically used for knowledge work (PMI, 2017). It emphasises transparency into project statuses, efficiency, just-in-time delivery and limiting work in progress (WIP). This method helps teams to visualise their work, leading to identifying early in the project implementation bottlenecks and improving processes (Anderson, 2016; PMI, 2017). It allows

teams to pull work when they are available instead of work being pushed onto them, irrespective of their current workload. In our fast-paced world, it isn't possible to get everything done on time and methodologies like Kanban allows balancing the work demand (DeGrandis, 2017).

Figure 2.33

Kanban methodology



Note. From *Flat scrum task board* [Illustration], by Redgraystock, n.d., Freepik

(https://www.freepik.com/free-vector/flat-scrum-task-board-with-color-stick-paper-notes_26195122.htm#query=kanban&position=0&from_view=search&track=sph&uuid=31e00f22-5bb9-47ff-9061-abf256036267). CC BY 2.0.

Kanban's three (3) principles are (PremierAgile, n.d.):

- Visualising the work that is to be performed at any given time
- Creating boundaries concerning the amount of work that is to be performed or completed, so that the team does not over-commit additional work
- Boosting workflow when a specific task is about to be completed so that the next item can be added to the queue.

Key benefits of the Kanban methodology include user friendliness, easy customization, applicability in various industries and its collaborative nature, while it's less useful in large, complex projects, and it doesn't show timeframes, allowing for managing schedule effectively (Kanbanchi, n.d.).

Scrum

Scrum, developed in the early 1990 and founded on empiricism and lean thinking, is a lightweight framework that helps people, teams and organisations generate value through adaptive solutions for complex problems (Sutherland & Schwaber, 2020).

In a nutshell, Scrum having three main pillars – transparency, inspection and adaptation, requires a Scrum Master to foster an environment where (Sutherland & Schwaber, 2020):

1. A Product Owner orders the work for a complex problem into a Product Backlog.
2. The Scrum Team turns a selection of the work into an Increment of value during a Sprint.
3. The Scrum Team and its stakeholders inspect the results and adjust for the next Sprint.
4. Repeat

Figure 2.34

Scrum methodology



Note. From *Scrum method concept* [Illustration], by Storyset, n.d., Freepik

(https://www.freepik.com/free-vector/scrum-method-concept-illustration_33756690.htm#query=scrum&position=1&from_view=search&track=sph&uuid=0b1445be-6cfb-497a-a40b-d94773870a74). CC BY 2.0.

Scrum is built upon by the collective intelligence of the people using it. Rather than provide people with detailed instructions, the rules of Scrum guide their relationships and interactions. One critical Scrum Team characteristic that binds all of the elements together is trust. If trust is

not present on a Scrum Team, there will likely be tension and bottlenecks in the way of getting work done (Sutherland & Schwaber, 2020).

The fundamental unit of Scrum is a small team of people, a Scrum Team. The Scrum Team consists of one Scrum Master, one Product Owner, and Developers. Within a Scrum Team, there are no sub-teams or hierarchies. It is a cohesive unit of professionals focused on one objective at a time, the Product Goal. Scrum Teams are cross-functional, meaning the members have all the skills necessary to create value each Sprint. They are also self-managing, meaning they internally decide who does what, when, and how (Sutherland & Schwaber, 2020).

Unit 8 Activity Drag the Words

Lumi File: M2L3_Unit 8 Activity Drag the Words_ (The following text is embedded in the Lumi File.)

..... is considered a and Agile methodology, specifically used for knowledge work.

..... is considered an agile methodology, but it can be more accurately described as an umbrella term, which encapsulates various approaches.

..... founded on empiricism and thinking, is a lightweight framework that helps people, teams and organisations generate value through solutions for complex problems.

Unit 9 Theoretical Chapter: Common Agile Practices and Tools - ppt format

Introduction

In this chapter, we explore key Agile practices such as retrospectives, backlog management, daily standups, demonstrations/reviews, iteration planning, and execution practices. These practices promote continuous improvement, transparency, and collaboration within teams across various industries. Additionally, we delve into essential tools in Lean, Scrum, and Kanban frameworks that aid in visualizing workflows, managing tasks, and optimizing efficiency in project delivery.

Agile Practices

Retrospectives



Retrospectives are structured sessions conducted at the end of each iteration or project phase, designed to reflect on the team's performance and identify opportunities for improvement (Schwaber & Sutherland, 2020). Unlike traditional post-mortem analyses that occur after project completion, Agile retrospectives encourage immediate and continuous enhancements, making them relevant for industries ranging from manufacturing to marketing. They foster a culture of openness, learning, and adaptability, crucial for the dynamic environment of today's businesses (Derby & Larsen, 2006).

Backlog

The concept of a backlog, a prioritized list of tasks, features, or requirements, is central to Agile's iterative approach (Cohn, 2004). In non-software contexts, backlogs serve as a dynamic planning tool that aligns team efforts with strategic goals, whether it's launching a new product line, improving service delivery, or executing marketing campaigns. Effective backlog management ensures that teams remain focused on the most value-adding activities, enhancing efficiency and responsiveness across sectors (Leffingwell, 2011).

Daily Standups

Daily standups are brief, time-boxed meetings where team members synchronize their activities and discuss challenges (Schwaber & Sutherland, 2020). This practice, applicable in any team-based work environment, promotes transparency, fosters communication, and helps identify blockers early. In contexts like healthcare, education, or construction, daily standups can streamline operations, enhance team cohesion, and accelerate problem-solving (Kniberg & Skarin, 2015).

Demonstrations/Reviews

Demonstrations or reviews are sessions where the work completed in an iteration is showcased to stakeholders (Schwaber & Sutherland, 2020). This practice enables immediate feedback and ensures that the project outcomes align with stakeholder expectations. In industries such as product development, architecture, or event planning, demonstrations facilitate stakeholder engagement, enhance customer satisfaction, and drive iterative refinement of the final deliverable.

Planning for Iteration-based Agile

Iteration planning is the process of defining the work to be done in a specific time frame, with a focus on delivering incremental value (Cohn, 2004). Effective iteration planning requires a clear understanding of priorities and capacity, making it a critical practice for managing complex projects in any industry. It supports strategic alignment, optimizes resource allocation, and ensures that teams are focused on the most critical tasks first.

Execution Practices

Execution practices in Agile, including pair working, continuous integration, and test-driven development, emphasize efficiency, quality, and collaboration. While some practices are more specific to software development, the principles behind them—collaboration, continuous improvement, and quality focus—are universally applicable. For instance, continuous improvement processes in manufacturing or service industries mirror Agile’s emphasis on incremental enhancements and feedback loops (Hulshult & Krehbiel, 2019).

Key Tools per Framework

Figure 2.35

Key Tools in Lean (Steady, n.d.; Toptal, n.d.)

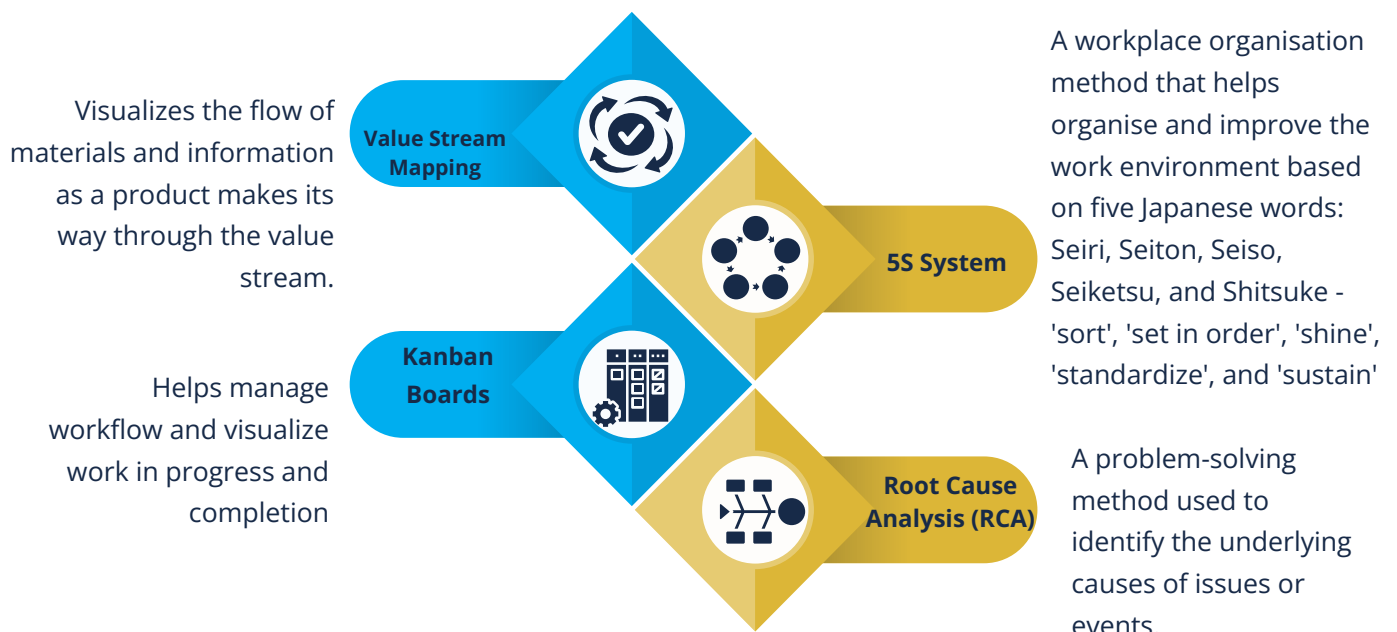


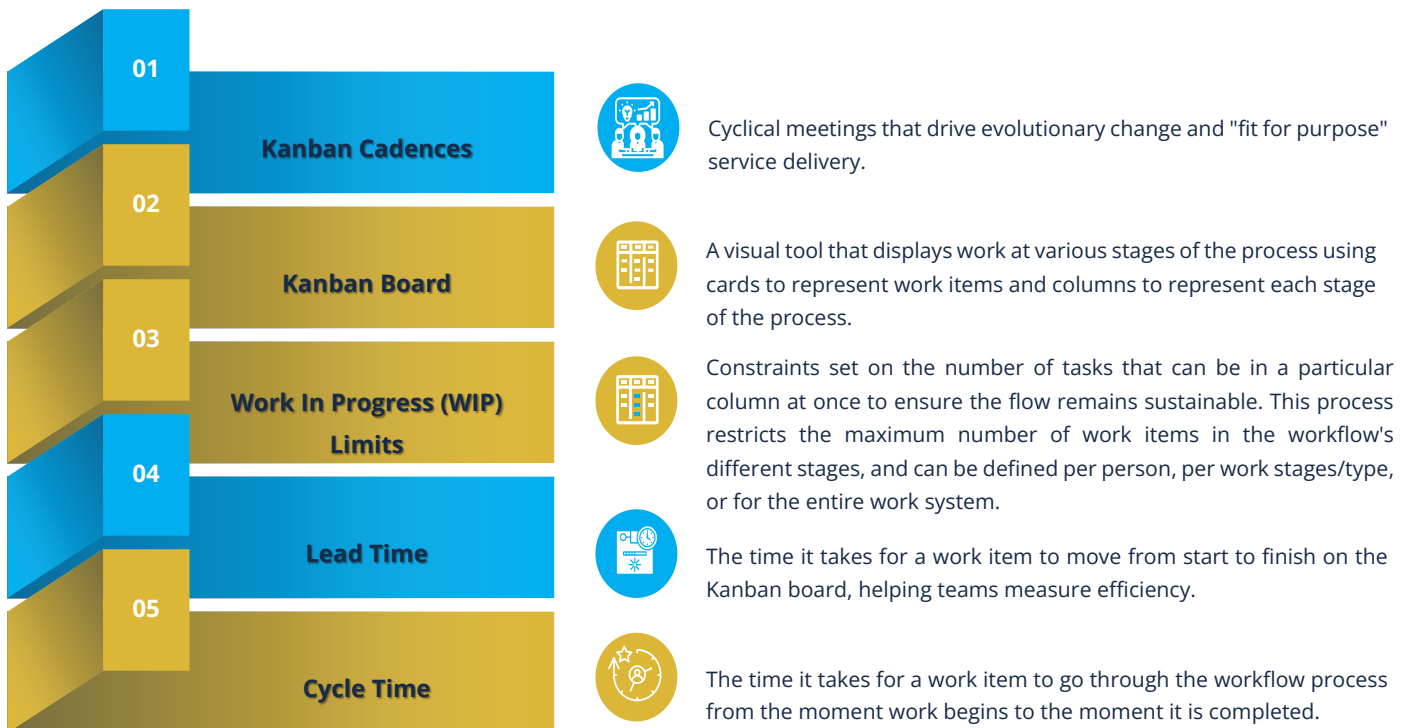
Figure 2.36

Key Tools and Events in Scrum (Schwaber, & Sutherland, 2020)



Figure 2.37

Key Tools in Kanban (Anderson, 2016)



Unit 10 Activity Case Study

Lumi File: [M2L3_Activity Case Studies QuestionsAnswers_](#) (The following text is embedded in the Lumi File.)

Read the two Case Studies and then write down what you think the outcome was for each case.

Case Study 1: Agile Transformation of a Travel Agency

Background: A medium-sized travel agency, facing the challenge of rapidly changing customer preferences and intense competition, decided to adopt Agile practices to enhance its responsiveness and innovate its service offerings.

Agile Framework Adopted: The agency chose to implement Scrum, focusing on iterative development of travel packages and personalized customer services.

Implementation:

- **Sprint Planning:** The agency organised its work into 2-week sprints, where each sprint aimed to develop or refine travel packages based on recent customer feedback and market research.

- Daily Standups: Cross-functional teams, including travel consultants, marketing professionals, and customer service representatives, held daily standup meetings to synchronize their efforts and address any impediments quickly.
- Sprint Reviews: At the end of each sprint, the team presented the newly developed or refined travel packages to a group of selected customers and stakeholders for feedback.

Case Study 2: Enhancing Customer Experience at a Tourist Attraction

Background: A popular tourist attraction sought to improve its overall visitor experience in response to feedback regarding long wait times and overcrowded facilities.

Agile Framework Adopted: Lean principles were applied to streamline operations and improve service delivery.

Implementation:

- Value Stream Mapping: The management team conducted value stream mapping exercises to identify waste in the visitor experience process, from ticket purchasing to exhibit navigation.
- Kanban Boards: To manage improvements, Kanban boards were used to visualize the flow of work and prioritize initiatives aimed at enhancing the visitor experience.
- Continuous Improvement: The attraction implemented a continuous feedback loop, using visitor surveys and real-time feedback mechanisms to gather insights and quickly iterate on service improvements.

Unit 11 Theoretical Chapter: The PM² Project Management Methodology

Introduction

PM² is a project management methodology developed and supported by the European Commission. The development of the PM² methodology begun in 2007 and the first version was released for the EU institutions in 2008. The first open access publication, the “PM² Guide—Open Edition” was published in November 2016 under an open source license, while in 2017, the EU Commission provided open access to PM² to everyone beyond the EU institutions such as Member States, Contractors and finally all EU citizens. In 2018 The PM² Alliance was conceived as a home for PM² Outside of the European Commission. The PM² Project Management Methodology has been translated into multiple languages and its Guide is freely available for downloading.

The PM2 Methodology

PM² is a Project Management Methodology developed by the European Commission. Its purpose is to enable Project Managers (PMs) to deliver solutions and benefits to their organisations by effectively managing the entire lifecycle of their project. PM² has been created with the needs of European Union Institutions and projects in mind, however, the best practices described in PM² are applicable to projects in any organisation.

PM² is a light and easy-to-implement methodology which project teams can tailor to their specific needs. It is fully supported by a comprehensive training programme (including workshops and coaching sessions), online documentation and an active Community of Practice (currently only available within the European Commission and to a number of affiliate European Institutions).

PM² incorporates elements from a wide range of globally accepted project management best practices, captured in standards and methodologies. Its development has also been influenced by operational experience on various projects both within European Union Institutions and external bodies.

The PM² Methodology provides:

- a project governance structure
- process guidelines
- artefact templates
- guidelines for using the artefacts
- a set of effective mindsets.

PM² improves the effectiveness of project management by:

- ✓ improving communication and the dissemination of information
- ✓ clarifying expectations as early as possible in the project lifecycle
- ✓ defining the project lifecycle (from Initiating to Closing)
- ✓ providing guidelines for project planning
- ✓ introducing monitor and control activities
- ✓ proposing management activities and outputs (plans, meetings, decisions)
- ✓ providing a link to agile practices.

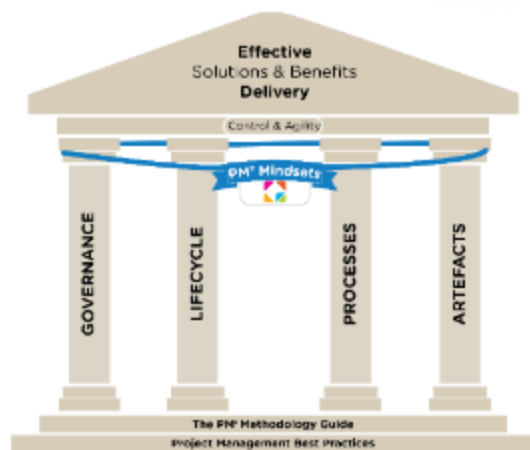
The House of PM²

The PM² Methodology is built on Project Management best practices and is supported by **four pillars**:

1. a project governance model (i.e. Roles & Responsibilities)
2. a project lifecycle (i.e. Project Phases)
3. a set of processes (i.e. project management activities)
4. a set of project Artefacts (i.e. documentation templates and guidelines)

Figure 2.38

The house of PM²



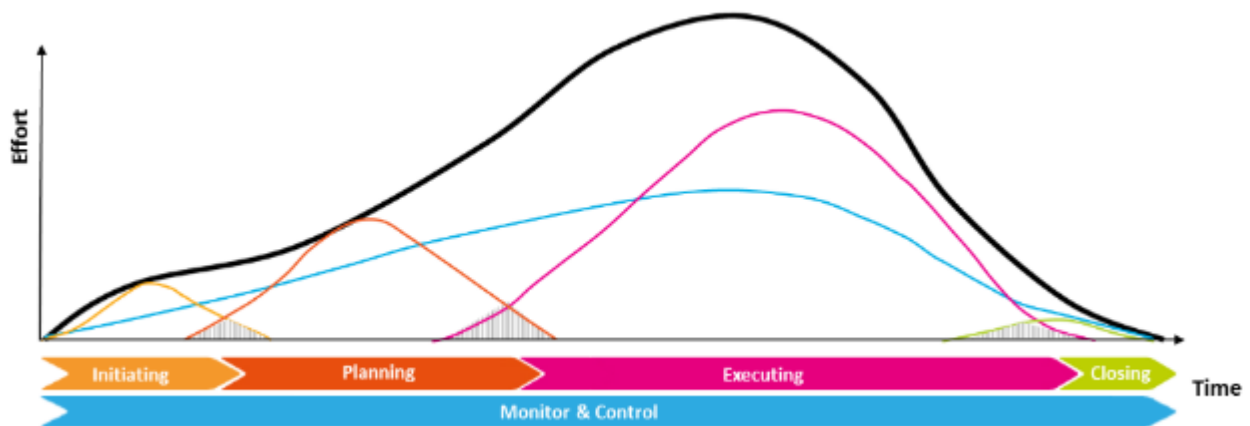
Note. From *The House of PM²* [Photograph], by European Commission, 2023, PM² Alliance.

(<https://www.pm2alliance.eu/publications/>). CC BY 4.0

The PM² Lifecycle

The PM² project lifecycle has four sequential and non-overlapping phases with a different type of activity predominant in each phase (i.e. initiating activities are predominant in the Initiating Phase, etc.). However, while phase-related activities peak in terms of effort during a specific phase, activities of this type can also be executed during neighbouring phase(s) (e.g. planning activities are also repeated in the Executing Phase).

A project moves on to the next phase when the goals of its current phase have been deemed achieved as the results of a formal (or less formal) phase-exit review.

Figure 2.39*PM² life cycle*

Note. From *The House of PM²* [Photograph], by European Commission, 2023, PM² Alliance.

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PM² Phase Drivers and Key Artefacts

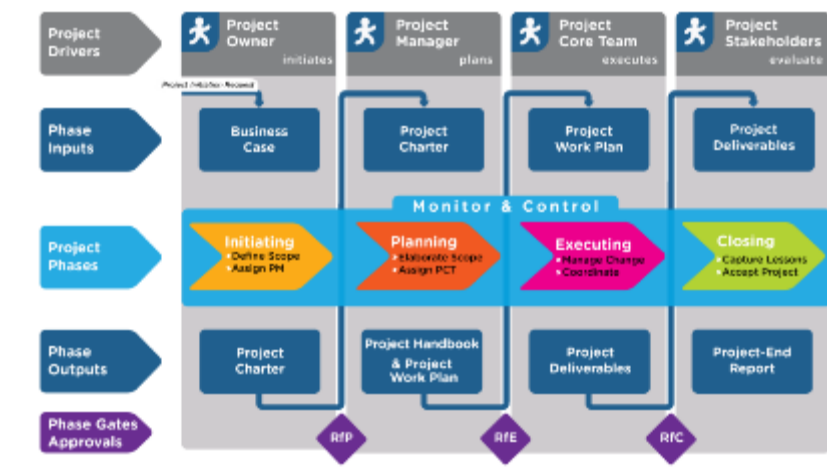
Projects depend on people to define, plan and execute them. These project drivers change from phase to phase in a PM² project.

During the Initiating Phase, the Project Owner (PO) is the main driver, initiating the project and being accountable for all documentation.

In the Planning Phase, the main driver is the Project Manager (PM), who is responsible for coordinating the delivery of all project plans.

The carrying out of the Project Work Plan and creation of the project deliverables in the Executing Phase is driven by the Project Core Team (PCT).

Finally, the Closing Phase is driven by the stakeholders who evaluate the project's overall performance.

Figure 2.40*PM² phase drivers and key artefacts*

Note. From *The House of PM²* [Photograph], by European Commission, 2023, PM² Alliance.
[\(https://www.pm2alliance.eu/publications/\)](https://www.pm2alliance.eu/publications/). CC BY 4.0

PM² Mindsets

The PM² processes, artefacts, tools and techniques help project teams make decisions on trade-offs between a project's time, cost, scope and quality dimensions.

The PM² Mindsets are the attitudes and behaviours that help project teams focus on what is crucial to achieving their project's goals. They help project teams navigate the complexities of managing projects in organisations and make the PM² Methodology both more effective and complete.

Thus, Project Managers (PMs) and project teams that practice PM²:

- ☒ Apply PM² best practices to manage their projects.
- ☒ Remain mindful that project management methodologies are there to serve projects and not the other way around.
- ☒ Maintain an outcomes orientation in relation to all projects and project management activities.
- ☒ Are committed to delivering project results with maximum value rather than just following plans.
- ☒ Foster a project culture of collaboration, clear communication and accountability.
- ☒ Assign project roles to the most appropriate people for the benefit of the project.

- ☑ Balance in the most productive way the often-conflicting project management “Ps” of product, purpose, process, plan, planet, people, pleasure/pain, participation, perception and politics.
- ☑ Invest in developing technical and behavioural competences to become better project contributors.
- ☑ Involve project stakeholders in the organisational change needed to maximise project benefits.
- ☑ Share knowledge, actively manage Lessons Learned, and contribute to the improvement of project management within their organisations.
- ☑ Draw inspiration from the PM² Guidelines on Ethics and Professional Virtues

Available Downloads

The Open PM² and PM² Alliance publications and templates are available for download freely:

- The Open PM² Project Management Methodology Guide of the European Commission
This guide sets out to provide an introduction to the PM² Project Management Methodology. It has been kept as lean as possible, while still providing enough information to allow for an effective understanding of the PM² Methodology as practitioners start to use it
- The Open PM² Project Management Methodology Artefacts Templates
This document includes all available PM² Artefact Templates along with useful guidelines on how to use them with maximum effectiveness.
- PM² Study Case
Download a set of PM² Artefacts that can be used as an example.

Available Certifications

The PM² Alliance Certification programme is **available to all** and has been designed to certify knowledge of the PM² methodology at various levels. The PM² Alliance is committed to bringing the benefits of this certification to all for the purpose of the advancement of the PM² Methodology for the public good.

Unit 12 Activity Sort the Paragraphs: Project Initiation Request

Lumi File: [M2L3_Unit 12_Activity Example Project Initiation Request](#) (The following text is embedded in the Lumi File.)

Adapted from Project Initiation Request, by PM2, 2022. European Commission.

Sort the paragraphs into the correct order so as in the end to have the content of a Project Initiation Request regarding the project entitled "Improvement of PM practice within Department ZZ". The paragraphs represent the different sections a Project Initiation Request should include, based on the PM² Methodology. Start with the paragraph referring to the "Business Need".

Success Criteria

This project is in-line with the Organisation's policy that encourages project improvement in all Departments.

Outcomes (high level)

Problem: ad-hoc approaches for managing several projects within the Department cause miscommunication, lack of stakeholder engagement, inefficiencies, duplication of work, and poor planning and control of project work within the Department as well as with contractors. This (often) leads to frustration, cost and schedule overruns, low quality of deliverables, increased risk of project failure, unsatisfied stakeholders/users and disputes with contractors.

Legal Basis

The outcomes that can be expected from this project are:

- Increased project productivity (do more with same amount of resources);
- Improved quality of project outputs (less non-conformities resulting from quality assurance);
- Increased successful projects within the Department, by improved monitoring, control and reporting on projects;
- Improved control of outsourcing activities and increased quality of contractors' deliverables.

Impact (high level)

Business need: there is a need to improve the quality of project outputs, the effectiveness and efficiency of project work and project management processes within Department ZZ, as well as between the Department and contractors. Additionally, Senior Management demands improved projects monitoring and reporting in order to make more informed and rational decisions on investments.

The location and archive of projects (central repository).

Assumptions (high level)

- Achieve 90% awareness of project management methodology within the Department (through training and awareness sessions).

- All new projects started applying the project management method and templates are tailored to the project size and type.

Organisational-wide adoption of a project management method based on best practices will significantly impact on:

- The Department processes, roles and interfaces with other Departments' processes;
- Organisation's Quality Management System roles, processes and artefacts;
- Contractors' procedures and outputs;
- Governance processes and artefacts;
- Communication documents (posters, leaflets, ...) related to project management;
- Buy-in from Department and the Organisation Senior Management (recognition of the need for a project management methodology).
- Sufficient coaching, support and training will be available within the Department or from other Departments or recruited, allowing for a smooth implementation.
- A Project Management Information System (PMIS) is currently NOT available or centrally supported.
- The project will receive appropriate resources (financial and Human Resources).

Constraints (high level)

- Limited availability of the Department staff and Senior Management.
- The methodology must be delivered until the end of the year (31st December 202X).
- Projects within the Department should not be substantially impacted on project schedule, in result of the new methodology.
- Extensive tailoring of the chosen project management methodology is only foreseen for exceptional situations.

Risks (high level)

- Resistance to change that will result on Project Managers not following the methodology.
- The chosen methodology does not satisfy 100% the Department's needs and therefore major tailoring is needed, impacting the delivery date.
- Delay of some projects within Department, during implementation.
- Lack of budget available caused by delays in yearly budget approval and unavailability of resources with the necessary skills. These will limit project progress.



Opportunity: there are several Project Management Methodologies available on the market for both public and private institutions.

Unit 13 Theoretical Chapter: Sustainable Project Management

Introduction

In today's rapidly changing world, the need for setting and achieving sustainability goals in all the aspects of an organisation is of paramount importance. Project Management is the profession of change and as projects are the drivers of positive change, they are at the center of this sustainable transformation. Integrating green practices in all project phases, regardless of the industry and the project management development approach and methodology/framework chosen, is the new normal. This chapter aims to define what Sustainable Project Management is, its principles and provide information on the sustainability resources that can be utilized by project managers and teams.

Defining Sustainable Project Management

GPM's recent study, Insights on Sustainable Project Management, found that among the over one thousand executives surveyed, 96% believe that projects and project management are integral to sustainable development. 100% of these same executives believe that project managers should understand how important sustainability is to their project. Furthermore, project managers all over the world state that 38% of the projects globally are being impacted by climate change (GPM, 2023).

According to the Association for Project Management (Murray-Webster et al., 2019) **sustainability in the project profession** is an approach to business that balances the environmental, social, economic aspects of project-based working to meet the current needs of stakeholders without compromising or overburdening future generations.

As the project management profession matures, it redefines what project success is. The **triple**



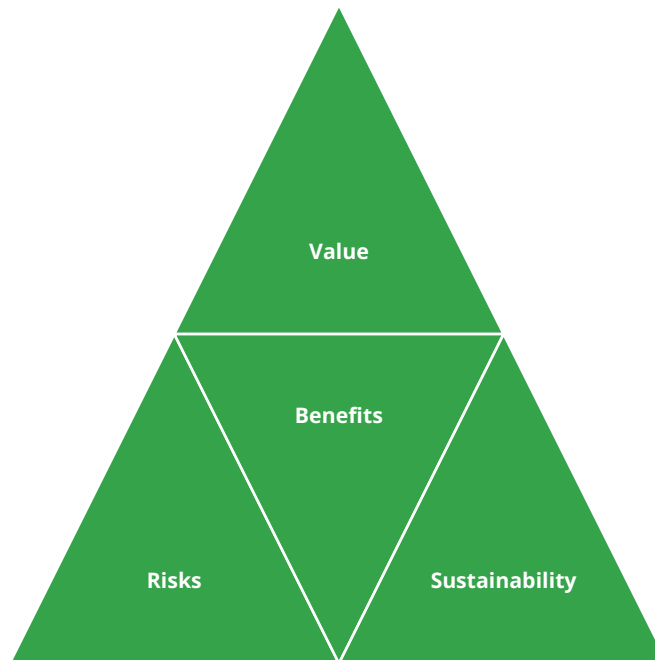
According to the Green Project Management Global (2023) Sustainable Project Management or Green Project Management® is the application of methods, tools, and techniques to achieve a stated objective while considering the project outcome's entire lifecycle to ensure a net positive environmental, social, and economic impact.

constraint in project management, that indicates that success of the project is impacted by its costs, time, and scope, all of which affect quality, cannot address anymore the need for value creation. Of course, they are important aspects of any project, but they are not enough in order

to measure project success. Projects should have a wider impact on the planet, the people and the processes, measuring their success also according to the **Benefits Triple Constraint** (GPM Global, 2023; Nieto-Rodriguez, 2021).

Figure 2.41

The benefits triple constraint



Adapted from the *Harvard Business Review Project Management Handbook (HBR Handbooks)*, 2021. Harvard Business Review Press.

- **Value delivered:** both tangible (financial return, etc.) and intangible (social impact, new capabilities, etc.)
- **Risks:** usually, the higher the risks, the higher the benefits, but also the higher chances of failure
- **Sustainability:** whether it will continue delivering benefits in the long term or is just a onetime thing

Sustainable Project Management Principles

According to the Green Project Management Global (2023), the six principles of the Sustainable Project Management are:

1. Commitment & Accountability - Recognise the essential rights of all to healthy, clean and safe environments, equal opportunity, fair remuneration, ethical procurement, and adherence to rule of law.

2. Ethics & Decision Making - Support organisational ethics, decision making with respect for universal principles through identification, mitigation, and the prevention of adverse short and long-term impacts on society and the environment.

3. Integrated & Transparent - Foster the interdependence of economic development, social integrity, and environmental protection in all aspects of governance, practice and reporting.

4. Principles & Values Based - Conserve and enhancing our natural resource base by improving the ways in which we develop and use technologies and resources.

5. Social & Ecological Equity - Assess human vulnerability in ecologically sensitive areas and centres of population through demographic dynamics.

6. Economic Prosperity - Adhere to fiscal strategies, objectives, and targets that balance the needs of stakeholders, including immediate needs and those of future generations

The Sustainable Projects and the Sustainable Project Manager

Sustainable projects are characterized by their commitment to the triple bottom line - People, Planet, Profit - ensuring a balanced focus on social equity, environmental stewardship, and economic viability. GPM Global (2023) extends this concept through its **P5 Standard**, adding Process and Product to the equation, emphasizing the importance of sustainable practices in all project processes and outcomes that maintain their value and utility over time. This holistic view ensures that sustainable projects create long-term benefits for all stakeholders without transferring problems from one area to another (GPM Global, 2023; Silvius, 2017).



A sustainable or green project manager is an individual who manages a project by employing a collection of diverse but integrated competencies to deliver on the objectives detailed in the business case. This is done by using and tailoring the appropriate methods, tools, and techniques for leading the project team, engaging stakeholders, and progressing the project while still safeguarding society, the environment, and human rights (GPM Global, 2023).

Sustainable project managers contribute to organisational goals while navigating complex cultures and dynamics to create benefits that support short- and long-term business strategies

while simultaneously addressing our planetary constraints. As such, sustainable project managers have an important role to play as advocates, advisors, ambassadors, and architects of a better world (GPM Global, 2023).

Sustainable Project Management Approaches

For the time being, there are not so many Sustainable Project Management approaches/frameworks, even if most of the available methodologies include some sustainability consideration. Two comprehensive sustainable project management approaches are: P5 standards and PRiSM by Green Project Management (GPM Global, n.d.).

GPM P5 Standard for Sustainability in Project Management

The **P5 Standard** transcends traditional project management by incorporating the triple bottom line of People, Planet, and Prosperity and further enriching it with Product and Process considerations. This holistic approach ensures that every aspect of a project's lifecycle is evaluated and optimised for sustainability.

By mapping its guidelines to the UN SDGs, the P5 Standard ensures that projects contribute to global efforts to tackle climate change, ethical behavior, social responsibility, and more. It empowers project managers to create shared value that addresses the pressing challenges of our time.

The P5 Standard is not just a set of principles; it's a practical toolkit. It provides actionable insights and methodologies for project teams to assess, measure, and improve their sustainability performance, making it an indispensable resource for any organisation committed to making a difference.

With the growing importance of Environmental, Social, and Governance (ESG) disclosures, the P5 Standard offers a structured approach to reporting on sustainability performance, making it easier for organisations to communicate their achievements and progress to stakeholders.

P5 brings internationally recognized standards, accords, and treatises to the forefront of project management. It has direct ties to, but is not limited to, the following:

- United Nations Universal Declaration of Human Rights
- International Covenant on Civil and Political Rights (ICCPR)
- International Covenant on Economic, Social, and Cultural Rights (ICESCR)
- Convention on the Elimination of all Forms of Discrimination against Women (CEDAW)
- ILO Declaration on Fundamental Principles and Rights at Work
- The 2030 Agenda for Sustainable Development



- UN Sustainable Development Goals (SDGs)
- Sustainable Accounting Standards Board (SASB) Standards
- SA8000:2014 Standard (Social Accountability International)
- Ten Principles of the United Nations Global Compact
- Global Reporting Initiative (GRI) Standards

Examples of how P5 Standard is used in practice:

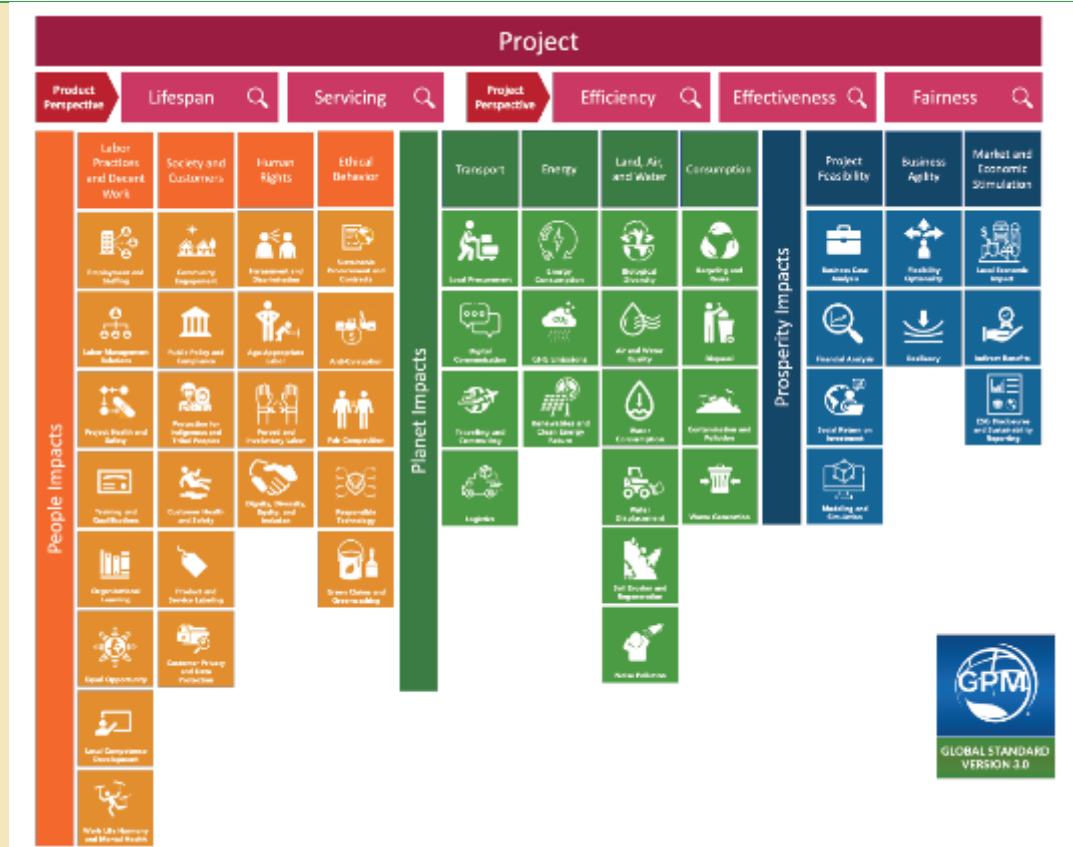
- A tour operation developing a new destination service can use the P5 Standard to assess the potential environmental and social impacts of the service, and to make design changes to reduce those impacts.
- A resort can use the P5 Standard to implement sustainable practices on a project concerning its transformation into an eco-resort, taking into consideration the potential impacts of the constructions on wildlife habitats.
- A hotel upgrading its booking software can assess the impact the processes followed have on people and planet.

P5 Categories, Subcategories, and Elements

The P5 Ontology - a set of concepts and categories in a subject area that shows their properties and the relationships among them - has three categories for classification, People, Planet, and Prosperity. Each category is further broken down into subcategories and elements.

Figure 2.42

The P5 Ontology



Note. From P5 Ontology [Photograph], by GPM, 2023, GPM.

(<https://greenprojectmanagement.org/>). CC BY NC-ND 4.0 Deed

P5 elements comprise aspects of project governance that should support and enhance organisational governance in accordance with the sustainability goals, targets, and commitments adopted by the sponsoring organisation(s).

ReP5 Perspectives and Lenses

The impacts that a project's activities, results, and outcomes have on people, the planet, and prosperity all come as a result of decisions made about product characteristics and project management practices.

P5 analyses these impacts using two perspectives and five lenses. The two perspectives are:

- Product impacts based on the project's results and outcomes
- Process impacts based on the project management processes used to manage project activities

Each perspective is evaluated using a focus lens:

- Lifespan and servicing for the product perspective

- Efficiency, effectiveness, and fairness for the process perspective

All five lenses are essential for fully understanding the sustainability impacts of a project as they help to reveal impacts that might otherwise be missed.

PRiSM™ (Projects integrating Sustainable Methods)

PRiSM is an innovative, principles-based, and sustainable project management methodology, setting it apart from traditional approaches. At its core, PRiSM revolves around a value-maximization model that emphasizes a sustainable asset lifecycle.

Unlike conventional methods, PRiSM elevates projects to a strategic level, leveraging existing organisational systems to ensure comprehensive benefits are realized horizontally and vertically. With unwavering attention to process and product sustainability, PRiSM fosters an environment that encourages lasting positive impacts.

The foundation of PRiSM is built upon our esteemed P5 Standard for Sustainability in Project Management,

By embracing PRiSM, projects experience a remarkable reduction in risk from environmental, social, and economic standpoints, all while expanding the range of potential benefits. The uniqueness of PRiSM extends beyond the typical project lifecycle, adopting a five-phased approach that thoughtfully incorporates pre-project planning, product/service adoption and integration, as well as benefits realization. This comprehensive framework ensures that projects not only meet their objectives but also contribute to a sustainable future. In essence, PRiSM is more than just a methodology—it's a transformative force that sets the stage for projects to flourish while positively impacting the world we live in.

Unit 14 Activity: Deploying the GPM P5 Standard for Sustainability in Project Management

Read the following case study and answer to the questions that follow by taking into consideration the GPM P5 Standard for Sustainability in Project Management.

Case Study: Sustainable Tourism Development Project by ABC Tours

ABC Tours is a leading tourism company specialising in adventure tours in remote areas. Concerned about the environmental and social impacts of its operations, ABC Tours embarked on a sustainable tourism development project to integrate sustainability principles into its



operations and offerings. The project aimed to align with the GPM P5 Standard for Sustainability in Project Management.

The project objectives were:

- Develop sustainable tourism practices that minimise environmental impact.
- Enhance socio-economic benefits for local communities.
- Improve stakeholder engagement and satisfaction.
- Ensure financial viability and long-term sustainability of operations.

During the planning phase the project team conducted a comprehensive environmental impact assessment (EIA) to identify potential ecological risks and opportunities for mitigation. In addition, they engaged with local communities to understand their needs and concerns, ensuring their involvement in project planning. Finally, they aligned project objectives with the principles outlined in the GPM P5 Standard, emphasizing the economic, environmental, and social dimensions of sustainability.

When the project passed to the execution phase the project team implemented eco-friendly practices, such as waste reduction, energy conservation, and water management, across all tour operations. Furthermore, they collaborated with local artisans and businesses to source goods and services, thereby supporting the local economy. Providing training and employment opportunities for community members, fostering socio-economic development, were some of the actions among others, the project materialised.

The project manager monitored key performance indicators (KPIs) related to environmental impact, community engagement, and financial performance. External auditors conducted regular audits to ensure compliance with sustainability standards and identify areas for improvement. Finally, the project team solicited feedback from customers, employees, and local stakeholders to assess satisfaction levels and address concerns promptly.

Results

Environmental Impact:

- Reduced carbon emissions by 20% through the adoption of eco-friendly transportation and energy-efficient practices.
- Implemented waste management initiatives, leading to a 30% decrease in landfill waste.
- Protected fragile ecosystems by promoting responsible tourism practices, including wildlife conservation and habitat preservation.

Social Benefits:



- Empowered local communities by providing alternative sources of income and promoting cultural exchange through authentic experiences.
- Enhanced community infrastructure and facilities, such as schools and healthcare centers, through corporate social responsibility initiatives.
- Fostered cultural awareness and appreciation among tourists, contributing to cross-cultural understanding and respect.

Stakeholder Engagement

- Strengthened relationships with local communities, indigenous groups, government agencies, and non-profit organisations through transparent communication and collaboration.
- Established a feedback mechanism to address stakeholder concerns and incorporate their input into decision-making processes.
- Built trust and credibility by demonstrating a commitment to sustainability and responsible tourism practices.

Lumi File: [M2L3_Unit 14_Activity Case Studie Sustainable Tourism Development Project by ABC Tours_QuestionsAnswers](#) (The following text is embedded in the Lumi File.)

Question 1: Environmental Impact Assessment (EIA)

In the planning phase, ABC Tours conducted an EIA. How does this align with the P5 Standard's perspective on the environmental impact of products?

- A) It directly corresponds to the 'Project Health and Safety' subcategory by ensuring safe tour operations.
- B) It aligns with the 'Energy Conservation' element by identifying eco-friendly practices for tour operations.
- C) It is part of the 'Biological Diversity' element by assessing and planning for the protection of ecosystems.
- D) It serves the 'Transport' element by preparing to manage the environmental impact of necessary logistics.

Question 2: Socio-Economic Benefits

Which P5 Standard element is best represented by ABC Tours' actions to enhance socio-economic benefits for local communities?

- A) 'Employment and Staffing' under People Impact due to the creation of job opportunities.
- B) 'Local Economic Impact' under Prosperity Impact due to supporting local businesses.
- C) 'Project Feasibility' under Prosperity Impact due to ensuring the project's long-term

sustainability.

D) 'Labor Practices and Decent Work' under People Impact due to the focus on fair employment practices.

Question 3: Stakeholder Engagement

The project's approach to stakeholder engagement and feedback aligns with which aspect of the P5 Standard's principles?

A) 'Consumer Health and Safety' under the People Impact for ensuring the well-being of tourists.

B) 'Fair Competition' under the People Impact for maintaining ethical business practices.

C) 'Market and Economic Stimulation' under Prosperity Impact for involving stakeholders in economic decisions.

D) 'Social Return on Investment' under Prosperity Impact for assessing the social benefits of stakeholder engagement.

Question 4: Training and Employment Opportunities

Providing training and employment opportunities for community members best aligns with which P5 Standard element?

A) 'Organisational Learning and Development' under People Impact for fostering skills development.

B) 'Society and Customers' under People Impact for enhancing the well-being of the local community.

C) 'Efficiency' under Project Impact for optimizing resource use through skilled labor.

D) 'Market and Economic Stimulation' under Prosperity Impact for promoting local employment.

Question 5: Eco-Friendly Practices (Product)

Which product impact element did ABC Tours address by implementing eco-friendly transportation and energy-efficient practices?

A) Ethical Behavior

B) Energy Conservation

C) Waste Generation

D) Product and Service Labeling

Question 6: Responsible Tourism Practices (Product)

ABC Tours promoted responsible tourism practices to protect ecosystems. This approach is most closely associated with which 'Product Impact' element?

- A) Human Rights
- B) Society and Customers
- C) Biological Diversity
- D) Equal Opportunity

Question 7: Stakeholder Engagement (Process)

ABC Tours improved stakeholder engagement and satisfaction. Under the 'Process Impact' perspective, which lens does this initiative best exemplify?

- A) Efficiency
- B) Effectiveness
- C) Fairness
- D) Lifespan

Question 8: Training and Local Collaboration (Process)

The collaboration with local artisans and businesses for sourcing goods and services best aligns with which 'Process Impact' element?

- A) Local Procurement
- B) Energy
- C) Transport
- D) Consumption

Unit 15 Activity: Using the Project Canvas

This activity is designed to enhance your understanding of the Project Canvas framework as it applies to the 'EcoVenture Tours' initiative. You will engage in an activity to correctly associate the various elements of the Project Canvas with their definitions.

Instructions:

First read the short introduction to the Project Canvas Framework and its domains and sections. Then your task is to match the domain titles and section headers to their corresponding descriptions within the Project Canvas, for the project entitled “EcoVenture Tours: Sustainable Tourism Development Initiative”.

The left side: Displays the descriptions of the 14 sections of the Project Canvas without their titles for the specific project.

The right side: Contains a list of unassigned domain titles and section headers.

Procedure:

- Review Descriptions: Read the descriptions on the left to understand each section of the Project Canvas.
- Match Titles: Click on a title from the right and drag it to the corresponding description on the left.
- Verification: The system will indicate whether your selection is correct. If a match is incorrect, you may attempt again.
- Completion: Continue the process until all titles are correctly matched with their descriptions.

Guidelines:

- There is no time limit; focus on accuracy and comprehension.
- Utilize logical reasoning to determine the correct matches.
- Mistakes are part of the learning process; use them as an opportunity to understand the Project Canvas better.

After completing this activity, select a project of your own and fill out the Project Canvas, by also integrating the GPM P5 Standard or/and the 17 Sustainable Development Goals, in order in the end to have a complete Project Canvas with your sustainable project.

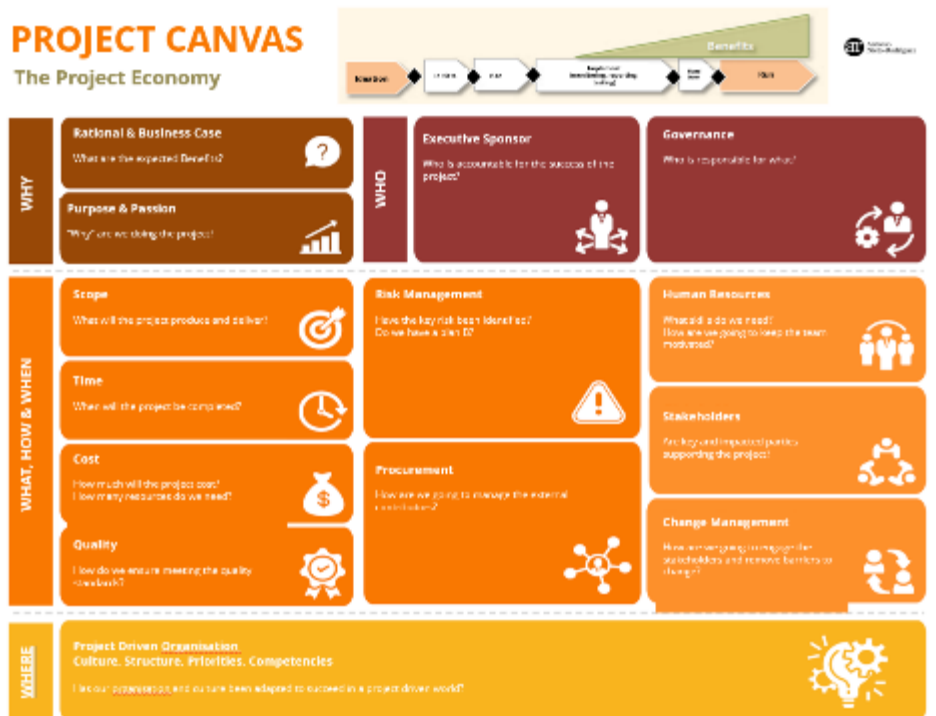
The Project Canvas

The “Project Canvas”, developed by Antonio Nieto-Rodriguez, is a free tool that increases alignment and success in every project. It covers the basic principles and fundamentals of projects that everyone should know, is practical and easy to implement. It is a proven tool that will assist you in leading projects more successfully and in making your dreams a reality (Rodriguez, 2021).

The Project Canvas is composed of 14 dimensions – the ones that research has proven to influence and determine project success. These are grouped into four major domains. Each domain, or area of expertise, has a specific weight in the success of a project, which is indicated by a percentage (Antonio Nieto-Rodriguez, 2021).

Figure 2.43

The Project Canvas



Note. From *Project Canvas* [Photograph], by Antonio Nieto-Rodriguez, 2021, Antonio Nieto-Rodriguez.com.

(<https://antonionietorodriguez.com/project-canvas/>). CC BY 4.0

How to Apply the Project Canvas Framework

- Leaders and project managers should use the framework at the beginning of a project to assess how well it has been defined and whether it is worth starting right away or needs further refinement.
- Use it through the project lifecycle to assess the health of the project and areas that need attention.
- It can be applied to programs, strategic initiatives and any other activities that can be considered projects.

Domain 1: Why

The **Why** dimension covers the triggers and actual meaning of a project (the rationale and business case, and the purpose and passion), which will become the drivers once the project gets underway. The drivers are to obtain buy-in and resources (from the organisation), to obtain attention and time from the executives, to obtain engagement from the members of the team, and to obtain support from the individuals impacted by the project.

1. Rationale and Business Case

All project management methodologies demand that projects always have a well-defined business case. It is a great exercise to learn about the alternatives and the project expected returns. Experience shows, however, that business cases have biases and subjective assumptions, especially concerning the financial benefits from the project, which often get inflated in order to make the project seem more attractive to the decision-makers.

2. Purpose and Passion

A project's purpose is its fundamental reason for being. An effective purpose reflects the importance people attach to the project's work – it taps their idealistic motivations – and gets at the deeper reasons for a project's existence beyond just making money.

Domain 2: Who

The **Who** domain relates to the executive sponsor and governance, and it addresses the elements of accountability and allocation of responsibilities. An organisation or business has a chief executive in charge and is accountable for its operations. The same should happen with a project, in the role of the executive sponsor, who is the ultimately accountable person. Yet, more often than not, the role is either not understood or not performed consistently with the importance it has for the success of the project. Establishing a clear governance structure at the beginning of the initiative is essential too.

3. Executive Sponsor

Many projects start without it being decided who is ultimately accountable for their successful delivery. As projects tend to go across departments, business units and countries, they are often prone to 'shared accountability and collective sponsorship.' As a result, many executives feel responsible, yet no one is really accountable for driving the project to completion.

4. Governance

The executive sponsor, together with the project manager, should define the project governance. The governance in a project is represented by a project chart in which the various contributing roles and decision-making bodies are defined.

One of the most important bodies in a project is the steering committee, which is chaired by the executive sponsor and run by the project manager. The members and the frequency with which they meet often determine the importance the project has for the organisation.

Domain 3: What, How & When

The **What, How & When** domain covers the fundamental elements that constitute the project. They can be split into technical areas and people-related elements. These are the project fundamentals: hard aspects (definition, design, plans, milestones, cost, risk and procurement) and soft aspects (motivation, skills, stakeholders, change and communication). Addressing all

of the elements at the right time and with enough depth will increase the chances of project success.

5. Scope

Understanding and agreeing on what the project will consist of and deliver – the scope – is one of the *raisons d'être* of project management. Other terms for scope include specifications, detailed requirements, design, and functionality. The scope is the most important element in making an accurate estimation of the cost, duration, plan, and benefits of the project. Various tools can be used to try to determine what the outcome of the project will look like, yet this remains one of the most difficult tasks.

6. Time

“Time is money”: this famous phrase, attributed to Benjamin Franklin, is an absolute in projects. Time is one of the major characteristics of projects in that, unless there is an articulated, compelling, official and publicly announced deadline, there is a good chance that the project will be delivered later than originally planned. Delays in projects mean, besides extra costs, a loss of benefits and expected revenues, both having a tremendous negative impact on the business case of the initiative. A project without a deadline should not be considered a project – better call it an experiment, an exploration of daily business activities.

7. Cost

Budget in projects is composed mostly of the time dedicated by the project resources. These mainly include the people working on the project plus all other investments (consultants, material, software, hardware, etc.) required to develop the scope of the project. Budget is, together with time and scope, the third main constraint in traditional project management. Without a budget, there is no project.

8. Quality

Ensuring that the outcome of the project meets the quality expectations is an integral part of project management, yet it is often overlooked or not a priority. Often teams focus on doing the work and leave the quality part to the end of the project when adjustments are most expensive.

9. Risk Management

Risk management is one of the most important techniques in project management and essential duty of the project manager. Bluntly, if a project fails, it is because the risks that caused the failure were either not identified or not mitigated on time by the project team.

10. Procurement

Projects tend to have a novelty component; therefore, the need to hire external capabilities to deliver the project is much higher. As projects are temporary assignments, it is cheaper to engage external capacity during the project than to hire internal resources.

11. Human Resources

Today, project managers need to be project leaders too, especially for the more complex and cross-functional projects. These require pulling resources across the organisation and changing the old status quo. In fact, we can argue that the best project managers are leaders but also entrepreneurs – they are the CEOs of their projects.

12. Stakeholders

Stakeholders are individuals and groups (entities, organisations, etc.) that are impacted by, are involved in, or have an interest in the outcome of a project. The larger the project, the more stakeholders there will likely be. The more stakeholders, the more efforts are required in terms of communication and change management activities.

13. Change Management

Project managers today need to understand change management, rather than just communication. Based on the stakeholder analysis, the project manager will define a change management plan, including different activities, such as training, communications, info sessions, etc. According to PMI's Guide to the Project Management Body of Knowledge (2017), about 75-90 percent of a project manager's time is spent formally or informally communicating during the implementation phase of a project.

Domain 4: Where

The **Where** domain covers the external elements that can have a positive or negative impact on the project. These areas are often outside the control of the project leader, yet there are ways that the leader can influence the project favorably. The executive sponsor plays an important role in influencing the organisation too.

Lumi File: [M2L3_Unit 15_Using the Project Canvas](#) (The following text is embedded in the Lumi File.)

WHY

Rationale-Business Case ABC Tours will harness sustainable practices to minimize environmental impact, creating a unique selling proposition in the growing eco-tourism market. Anticipated benefits include cost savings through efficient resource use, enhanced brand reputation, and market share growth among eco-conscious travelers.



Purpose-Passion Our mission is to provide immersive adventure experiences that protect and celebrate the natural world, fostering a deep connection between travelers and the local environment, culture, and communities.

WHO

Executive Sponsor The CEO of ABC Tours will be the executive sponsor, accountable for project success and aligning it with the company's strategic vision.

Governance A Project Steering Committee will be formed, comprising department heads and an external sustainability consultant, to oversee project milestones, budget, and risk management.

WHAT, HOW & WHEN

Scope The project will develop eco-friendly tour packages, including local culture and nature tours, using sustainable transport and accommodation. It will also include community projects like clean-ups and conservation education programs.

Time The project is scheduled for completion within 18 months, with the first six months dedicated to planning and partnerships, followed by a year of incremental implementation of sustainable practices across operations.

Cost The budget is estimated at 500,000 €, covering sustainable infrastructure development, community training programs, and marketing. Resource needs include capital investment, local expertise, and sustainable materials.

Quality Adherence to international sustainability and tourism standards, with regular checks by environmental and social impact auditors, will guarantee the project meets the highest benchmarks of excellence and reliability.

Risk Management Key challenges include potential regulatory changes, environmental impact concerns, and market acceptance. These will be addressed through a dynamic register, regular stakeholder engagement, and adaptable contingency planning.

Procurement The focus will be on sourcing from local suppliers and hiring experts in sustainable construction and renewable energy solutions. Contracts will emphasize sustainable practices and fair labor conditions.

Human Resources Skills in sustainable project management, local cultural knowledge, and eco-friendly hospitality are needed. Staff motivation will be maintained through engagement in project design and incentive programs linked to sustainability goals.

Stakeholders Key parties involved include local communities, NGOs in conservation, tourism boards, and government bodies. Their support will be secured through transparent communication and collaborative planning.

Change Management Stakeholders will be engaged through workshops and regular updates. Barriers, such as resistance to new practices, will be addressed through education and by demonstrating the benefits of sustainable tourism.

WHERE

Project Driven Organisation We will cultivate a culture of sustainability, modifying our framework to incorporate roles focused on sustainable practices and establishing priorities that highlight the importance of long-term benefits over immediate advantages. Competencies will be built through training and hiring practices. Regulatory bodies, the global sustainable tourism community, and the local socio-economic landscape, influence the project. The executive sponsor will leverage industry networks and advocacy, promoting policies supportive of sustainable tourism.

Lesson 4: Initiating a Hybrid Project

Unit 1 Introduction

In the dynamic landscape of the tourism business, the pre-initiation phase is of paramount importance for project success, especially in the context of hybrid project management. During this phase, it is essential not only to select the appropriate project management approach, but first determine which projects to implement, in order to align with the business strategy. After making these strategic decisions, the initiation phase will follow as the next step. At this stage, as the project managers don't usually have all the information, in cooperation with the sponsor, and the project team (if it's available) begin to lay the groundwork for the project. The emphasis is laid upon the preparation of requisite documentation that will give rise to preludes for the project and thus lay down a strong basis for the planning phase that follows.

Unit 2 Multiple Choice Question

Lumi File: M2L4_Unit 2 Multiple Choice Question_Project Management Approaches (The following text is embedded in the Lumi File.)

What is the primary focus of the initiation phase in the context of tourism business project management?

- A) Executing project tasks
- B) Selecting appropriate project management approach
- C) Developing project documentation
- D) Elaborating a business case

Unit 3 Theoretical Chapter: Project Pre-Initiation

Introduction

In the complex tourism business environment, especially when the sustainability factor should be integrated into the project scope and to be embedded in all the project deliverables, outcomes and processes, the pre-initiation phase is of much importance, as it is focused on identifying the reasons for launching a project both on organisational and project level, so as to ensure that the intended value will be delivered and responsible management is implemented. In this chapter, important considerations for the performing organisation are illustrated, so as to decide what projects to undertake.



Strategic Alignment and Stewardship

In the pre-initiation phase two project management principles should be taken into consideration which are linked to the terms “Strategic Alignment” and “Stewardship”.

One of the main principles of project management is the focus on value (PMBOK, 2021). That means that in order a project to consider a success, the project manager and the team should continuously evaluate and adjust project alignment to business objectives and intended benefits and value. And this must be done from the beginning; from the time the project idea is conceived.



Strategic alignment refers to the process of aligning projects with an organisation's strategic objectives, ensuring that each project contributes towards achieving broader goals. This alignment is crucial for maximising resources and achieving competitive advantage (Kerzner & Kerzner, 2017). So, projects should directly contribute to the organisation's broader strategy (PMI, 2021).

Businesses cannot undertake all the potential projects, due to resource limitations and other constraints. Organisation's vision and mission and its overall needs act as a filter in the process of project selection and prioritisation (Schwalbe, 2021). And a business plays the role of this filter.



A Business Case is a document that is usually elaborated to provide all the appropriate information for the organisation to decide whether to undertake a project or not. It evaluates the benefit, cost and risk of alternative options and provides a rationale for the preferred solution (Murray-Webster and Dalcher, 2019). It has the form of a value proposition for a proposed project that may include financial and nonfinancial benefits (PMI, 2021).

The main components of a business case are the business need, project justification and business strategy, providing the team with all the information that allows them to make informed decisions (PMI, 2021).

While the business case is elaborated, another aspect should be taken into consideration by the organisation, the “Stewardship”.



Stewardship in project management emphasises responsible management and oversight, ensuring that projects are executed with a focus on long-term sustainability and ethical considerations. This approach promotes accountability and transparency (Crawford, 2020).

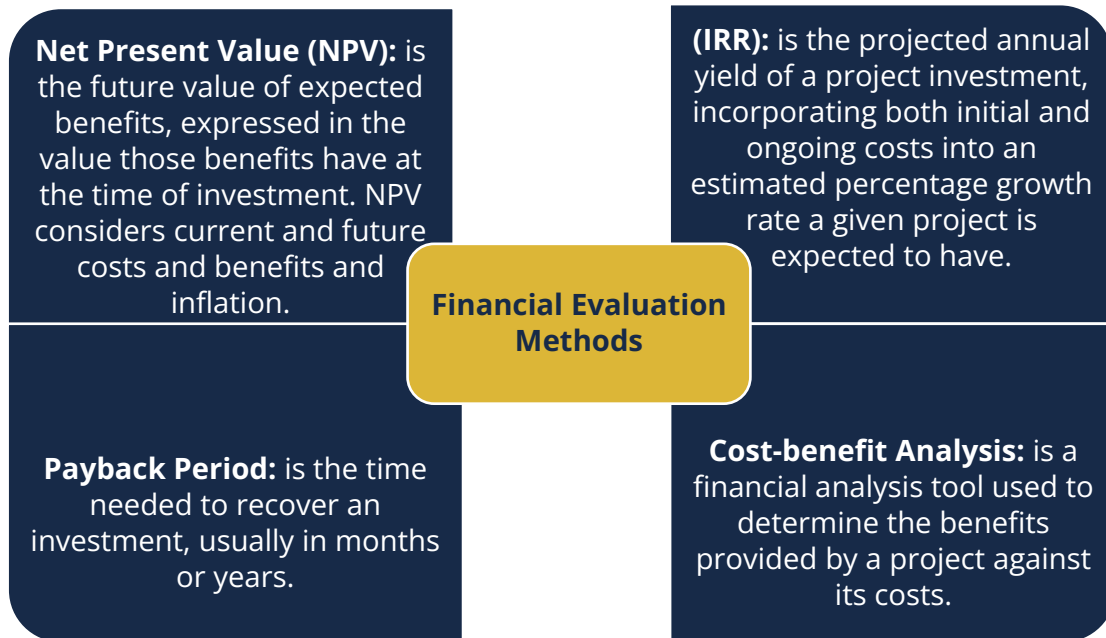
Stewardship is a mindset that every project manager and team member should possess, as it balances internal and external to the organisation responsibilities, ensuring fair treatment and oversight (Parashar, 2023). The four (4) pillars of stewardship are: integrity, care, trustworthiness, and compliance (PMI, 2021). It is linked to the responsible project management, addressing environmental sustainability, societal impacts and stakeholder relationships.

Financial Considerations in the Pre-Initiation Phase

For the performing organisation to decide which project to select, financial considerations play a pivotal role in the process of determining the feasibility and the potential return on investment (ROI) of a project. This information should be included in the Business Case, for justifying the proposed solution to be undertaken.

Project managers that take responsibility for developing a business case should have the knowledge of the most commonly methods used for determining the projected financial value of projects. They have to speak to the potential sponsor or the organisation’s executives or the business owner in their language.

The four (4) most commonly used methods linked with financial considerations for selecting a project are the following (PMI, 2017; Schwalbe, 2021; PMI, 2021).

Figure 2.44*Financial evaluation methods for projects*

Non-Financial Considerations in the Pre-Initiation Phase

While using the above-mentioned financial analysis methods for evaluating and prioritising project, they are not enough in today's business environment. They may be limiting and they may not capture the full scope of a project's potential value. A more holistic approach should be followed, leading to better strategic alignment and more successful project outcomes. So, taking into account the following factors is of paramount importance (Schwalbe, 2021; GPM, 2023):

- **Project time frame:** it refers to the time it will take for a project to complete or its deadline
- **Project priority:** organisations may prioritise projects as being high, medium, or low priority, based on the current business environment or their strategic objectives.
- **Sustainability:** environmental impact, social, economic and customer impact
- **Employ growth and satisfaction**

Some methods that can be used to incorporate non-financial criteria into the decision making process are (Schwalbe, 2021; GPM, 2023):

- **Weighted Scoring:** is a tool that provides a systematic process for selecting projects based on many criteria. These criteria include such factors as meeting strategic goals or broad organisational needs; addressing specific problems or opportunities; the amount of time it will take to complete the project; the overall priority of the project; and the projected financial performance of the project.
- **Balanced scorecard:** is a methodology that converts an organisation's value drivers—such as customer service, innovation, operational efficiency, and financial performance—to a series of defined metrics. Organisations record and analyse these metrics to determine how well projects help them achieve strategic goals.

Unit 4 Activity Question Set: Project Pre-Initiation

Lumi File: [M2L4_Unit 4_Question Set_Pre-Initiation Phase](#) (The following text is embedded in the Lumi File.)

Read each multiple-choice question carefully. Based on your understanding of the theory of Unit 3, select the options that you believe best answers the questions.

Question 1: In the context of integrating sustainability into tourism projects during the pre-initiation phase, how is strategic alignment best described?

- A) The process of reducing operational costs to the minimum possible level to increase project profitability.
- B) The process of aligning projects with an organisation's strategic objectives to ensure each project contributes towards achieving broader goals.

Question 2: Which of the following best describes the concept of stewardship in the pre-initiation phase of tourism projects, especially when considering sustainability?

- A) Stewardship is about leveraging technology to ensure project success by considering the project's impact on society and the environment.
- B) Stewardship involves responsible management and oversight, focusing on long-term sustainability, ethical considerations, and promoting integrity, care, trustworthiness, and compliance.

By combining the various words given in the list on the right, come up with each one of the four financial evaluation methods presented in theory of Unit 3 and then match it with the correct example that illustrates its application.

..... - A project with an initial outlay of \$40,000 is anticipated to generate benefits of \$12,000 annually over five years. This example involves determining whether the anticipated financial benefits justify the initial and ongoing costs.

..... - This scenario requires determining the duration required to recoup an initial investment of \$50,000, given expected cash inflows of \$10,000 in the first year, \$20,000 in the second year, and \$30,000 in the third year.

..... - An initial investment of \$75,000 is made with the expectation of generating specific cash inflows over time. This example involves identifying the specific threshold at which the cash inflows offset the original investment, indicating the project's financial effectiveness.

..... - With an initial investment of \$100,000, expected cash inflows of \$15,000 in the first year, \$25,000 in the second year, \$35,000 in the third year, and \$45,000 in the fourth year are projected. This method involves evaluating whether the cumulative benefits over time outweigh the initial and ongoing costs.

Unit 5 Theoretical Chapter Tailoring in Project Management

Introduction

The ever-evolving business landscape and the market dynamics of the tourism sector, combined with the challenges our society and planet face, necessitates organisations to adopt innovative, sustainable and integrated solutions, at product, service and process levels. The Sustainable Hybrid Project Management is well-suited to support business towards that direction, as it proposes to combine various methodologies and practices.

Tailoring

Tailoring in project management does not only involves selecting the most appropriate project management approach in order to implement a project.



Tailoring is the deliberate adaptation of the approach, governance, and processes of project management to make them better suited to a given environment and the work to be done (PMI, 2021). It implies picking and adjusting, conscious of various project factors, without regard to whether the label "tailoring" will be used. In a project environment, tailoring considers the development approach, the processes, the project life cycle, the deliverables, and the people involved (PMI, 2021).

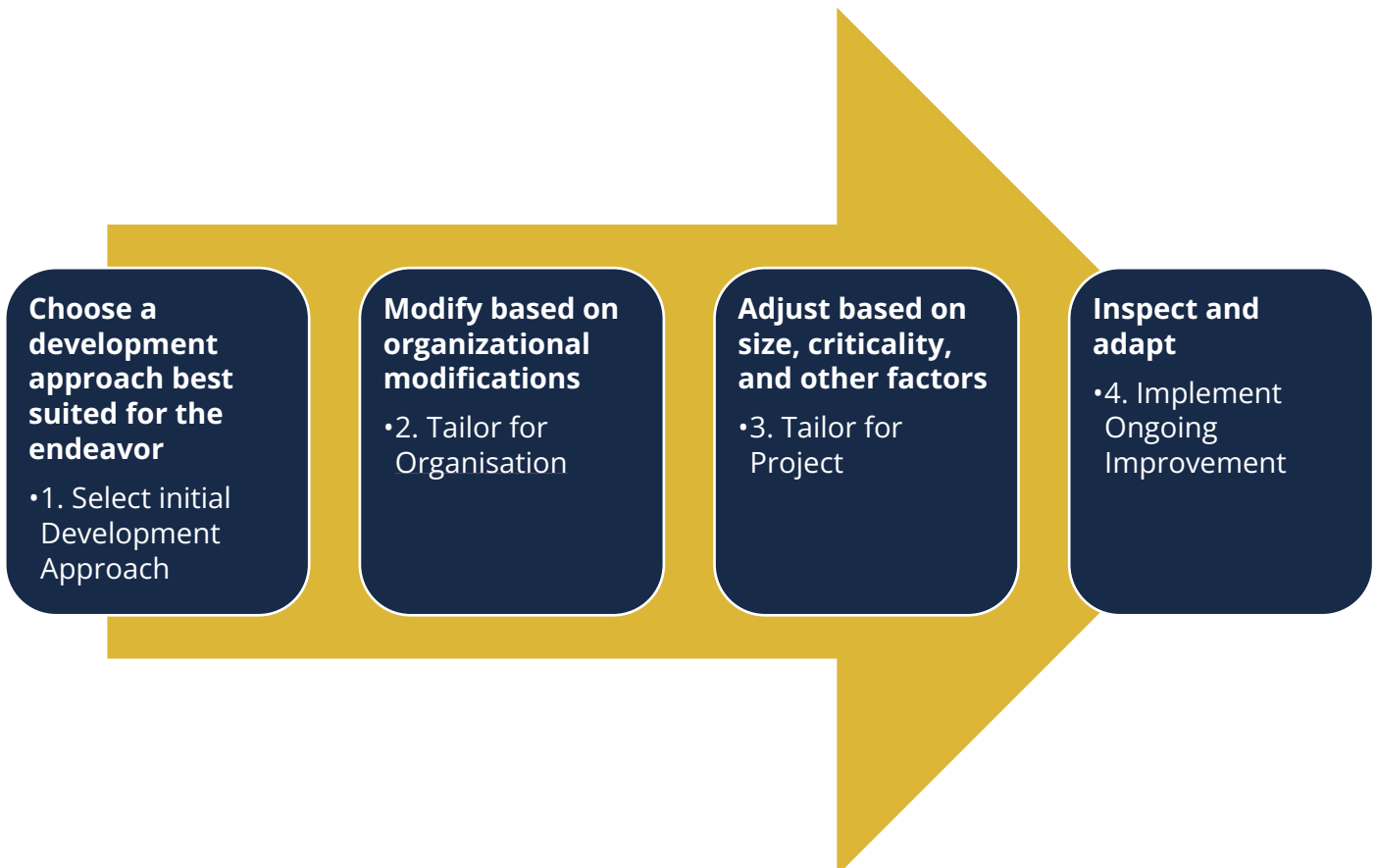
The tailoring process follows four steps (PMI, 2021):

1. Select the initial development approach
2. Tailor the organisation

3. Tailor the project
4. Implement continuous process improvements

Figure 2.45

The tailoring process



Tailoring can have direct and indirect positive impacts to a tourism business, as tourism projects are closely linked with great complexity, and they are implemented within the framework of various tourism sub-sectors. Tourism companies can gain more easily the project team commitment, in case they help in the tailoring process, and they can make a more effective and efficient use of the available resources. Furthermore, as tourism products/services should be customer-oriented, tailoring can support the customisation of the business offerings, based on the customer needs, by utilising more adaptive frameworks, processes, and tools. Finally, the integration of various sustainable practices asks for embedding sustainable project management processes to achieve net positive results.

Tailoring is a process that takes place **from the planning to the execution and monitoring and controlling project phases**, allowing for greater flexibility and project customisation. That

means that implementing ongoing improvement is a must during the project life cycle, depending on how the project deliverables are evolving and the lessons learned gathered.

What to Tailor

Table 2.6

The tailoring project management process for the project and for the organisation

Tailor for the Project	
Life cycle and development approach	Selection of the most appropriate predictive and adaptive development approaches, in order to create a customised Sustainable Hybrid Project Management Approach, based on the project life cycle that best suit the project, based on its Business Case, scope and stakeholders involved.
Processes	Blending the most appropriate processes included in the various project management frameworks and methodologies, such as PMBOK Guide 6 th Edition and 7 th Edition, PRINCE 2, Scrum, Kanban, PM2, GPM P5.
Engagement	This aspect has to do with the people involved in managing and executing the project and it includes: selecting the people with the most appropriate skills and knowledge; choosing which responsibilities and forms of local decision making should be deferred to the project team; and creating a project team consisting of various contributions that may work inside or outside the organisation.
Tools	Selecting tools such as software etc., that the project team will deploy for the project.
Methods and Artifacts	Selecting and blending the means that will be used to achieve the project results, such as documents, templates and other artifacts.
Tailor for the Organisation	



Project Management Frameworks

Some organisations have established project management frameworks, indicating the approach, the processes and the tools and artifacts to be used for implementing their projects. But as change is everywhere, many times these established frameworks should be reformed or evolved in order to follow a more sustainable and hybrid approach, taking also into considerations issues linked with compliance to certain laws, safety and product/service/process quality.

Unit 6 Activity: Developing a Sustainable Hybrid Project Management Framework

Lumi File: [M2L4_Unit 6_Sort the Paragraphs_Sust. Hybrid PM Framework](#) (The following text is embedded in the Lumi File.)

Put the titles and paragraphs in the correct order, so as in the end to have a complete Sustainable Hybrid Project Management Framework for the ABC Travel Agency.

The Hybrid Project Management Framework for the ABC Travel Agency is designed to integrate the flexibility and efficiency of agile methodologies with the structure and predictability of traditional project management. This framework aims to help ABC Travel Agency's projects achieve sustainability goals across environmental, economic, and social dimensions, while offering products and services that meet customers' needs and wants. Here are the key components and guidelines of the framework:

Framework Overview

Performance Metrics and Sustainability Reporting

- Sustainability and Agile Training: Provide training for project teams on sustainability principles and Agile methodologies, ensuring they have the skills to implement the framework effectively.
- Community Engagement and Empowerment: Offer training and capacity-building programs for local communities, enhancing their ability to participate in and benefit from sustainable tourism projects.

Scope: Applicable to a wide range of tourism projects, including destination development, hospitality services, tour operations, and conservation initiatives.



- **Continuous Feedback Loop:** Establish mechanisms for ongoing stakeholder feedback, including tourists, local communities, and environmental groups, to ensure projects remain aligned with sustainability goals.
- **Stakeholder Collaboration:** Foster a collaborative environment where stakeholders can contribute ideas and feedback throughout the project lifecycle.

The tools the project team will deploy for the effective planning, execution, monitoring and controlling and closure of the project are:

- **Project Management Software:** Atlassian Jira or BaseCamp or similar
- **Sustainability Tracking Tools:** Implement EcoChain or similar environmental management information systems (EMIS) to monitor and report on the project's carbon footprint and overall environmental impact.
- **Pre-initiation Phase (Hybrid):** Utilise predictive and adaptive project management practices, including developing a business case for the proposed project, a project vision, a project charter and a constraints/assumptions log.
- **Planning Phase (Hybrid):** Utilise traditional and adoptive project management approaches for developing the project management plan, depending on the character of the deliverables, including a table illustrating the approaches to be utilised per deliverable, a table indicating the work to be done per specific project phase based on the project scope, the scope management plan and the scope statement, the Work Break Down Structure and its Dictionary, requirement documentation, and backlogs for the requirements, a schedule management plan, a Responsibility Assignment Matrix, a hybrid project schedule and budget, a stakeholder register and communication plan, a risk management plan and risk register and risk-adjusted backlog, a change management plan and a change-log document, This phase should incorporate sustainability goals as fundamental project objectives and a sustainability management plan.
- **Execution Phase (Hybrid):** Blend Agile practices, such as Scrum or Kanban, into the execution phase to allow for flexibility, iterative development, and stakeholder feedback. Regularly revisit and adjust plans based on sustainability performance metrics and implement predictive and adaptive project meetings. Follow the planned change procedure and update the risk register and the risk-adjusted backlog.
- **Monitor and Control Phase (Hybrid):** Combine traditional review methods, measures with agile retrospectives to assess progress towards project objectives, develop status reports and make necessary adjustments, by implementing preventive and corrective actions.

- **Closure Phase (Hybrid):** implement the administrative closure, evaluate success, acknowledge the project team and develop the final project report.

Sustainability Considerations

- Ensure projects contribute to local economies by promoting local employment, using local suppliers, and developing sustainable tourism products that attract diverse market segments.
- Monitor and adjust economic impact based on feedback and performance data.

Environmental Sustainability:

Objective: To implement hybrid project management practices that balance structured planning with agile responsiveness, specifically tailored to promote sustainability in tourism projects.

Integration of Project Management Approaches

- Engage local communities in the planning and decision-making processes to ensure projects align with local needs and values.
- Promote cultural sensitivity and inclusivity, preserving local heritage and traditions while fostering community well-being.

Economic Sustainability:

Social Sustainability:

Project Management Frameworks/Methodologies

Tools

Stakeholder Engagement

- **Continuous Improvement**
- **Sustainability Metrics:** Define clear, measurable sustainability objectives for environmental, economic, and social aspects. Use these metrics to guide project execution and measure progress.
- **Reporting and Transparency:** Regularly report on sustainability performance to stakeholders, maintaining transparency and accountability.

Training and Capacity Building

- Incorporate eco-friendly practices in project design and execution, such as using sustainable materials, minimizing waste, and conserving natural resources.
- Implement iterative improvements based on environmental impact assessments.

- Lessons Learned: Conduct post-project reviews to capture lessons learned, particularly related to sustainability outcomes. Use these insights to improve future projects.
- Adaptive Planning: Remain open to changing project plans based on sustainability outcomes and stakeholder feedback, embodying the Agile principle of adaptability.

The following frameworks/methodologies will be deployed, according to the project nature:

- PMBOK Guide 7th Edition
- PM2
- Scrum
- Kanban
- GPM P5

Unit 7 Theoretical Chapter: Starting-up a Hybrid Project – ppt format

Introduction

In the pre-initiating phase, the business case is developed, along with a Project Management Framework, which is the result of the tailoring process. In the initiation phase, depending on the type of the project, you may elaborate a project charter, identify the stakeholders and develop an assumption/constraints log, following a predictive approach, or you may develop a project vision, a product strategy and a product roadmap, if you follow an adaptive approach. In a hybrid project management approach, you mix and match the above-mentioned processes, leading to specific outputs that feed the planning phase. Sustainability considerations should be well placed in the above-mentioned documents.

Initiating a Project Following the Predictive Development Approach

Figure 2.46

The develop project charter process.



This process is performed once or at predefined points in the project (PMI, 2023).

A project charter is a document that formally authorises the existence of a project and provides a summary of the project's objectives and management. It provides the project manager with the authority to apply organisational resources to project activities. Ideally, the project manager

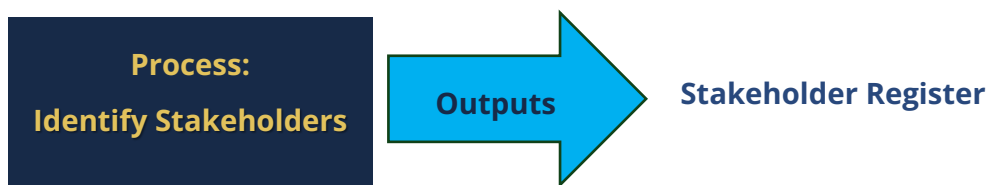
will play a major role in developing the project charter. The contents of a project charter may vary depending on the project needs (PMI, 2023).

An assumption log is a dynamic document used to record and track assumptions and constraints throughout the project life cycle. It aids in communicating information to key stakeholders and avoids potential confusion. Most projects include several assumptions that affect the scope, time, cost, risk, and other knowledge areas. It is important to document and validate these assumptions (Schwalbe, 2021).

An assumption is something that is considered true for purposes of the project, while a constraint is a limiting or restricting factor (Dionisio, 2023). For example, when starting a project, there may be an assumption that project staff will have sufficient skills to accomplish the work. Funding or deadline limitations or restrictions posed by an environmental regulation may be some of the constraints for a project.

Figure 2.47

The identify stakeholders process.



This process is performed periodically throughout the project as needed (PMI, 2023).



Stakeholder is an **individual, group, or organisation** that may **affect, be affected by, or perceive themselves to be affected by a decision, activity, or outcome of a project, program, or portfolio**. Stakeholders can be internal to the organisation or external (PMI, 2021).

Internal project stakeholders generally include the project sponsor, project team, support staff, and internal customers for the project. Other internal stakeholders include top management, other functional managers, and other project managers (Schwalbe, 2021).

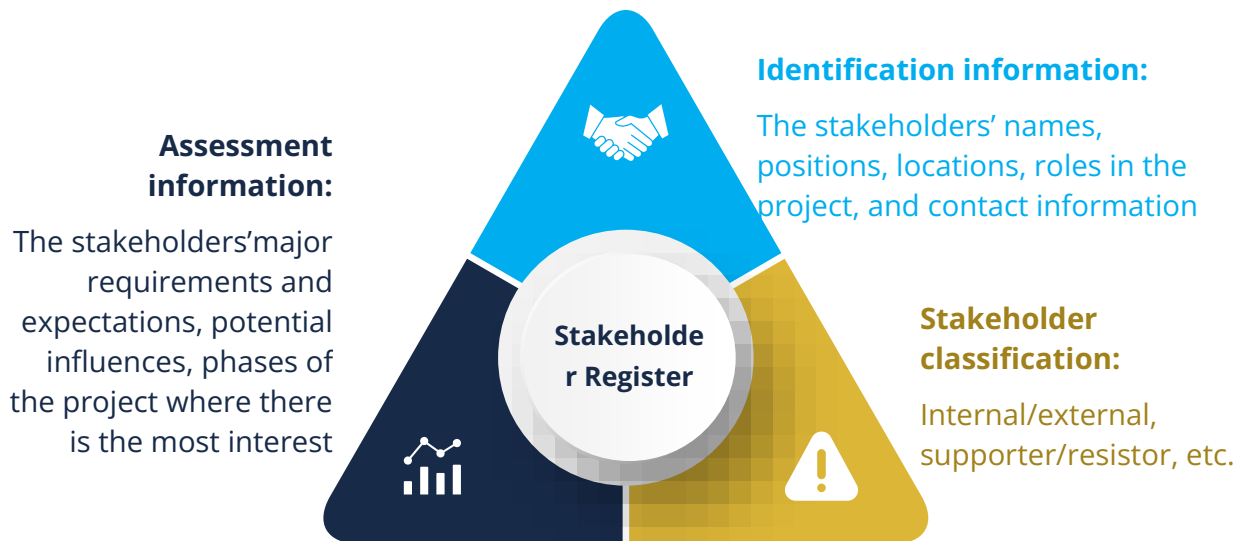
External project stakeholders include the project's customers (if they are external to the organisation), competitors, suppliers, and other external groups that are potentially involved in or affected by the project, such as government officials and concerned citizens (Schwalbe, 2021).

stakeholders, it is critical that project managers and their teams take adequate time to identify, understand, and manage relationships with all project stakeholders.

A **Stakeholder Register** is a document that includes details related to the identified project stakeholders. It can take various forms and include the following information.

Figure 2.48

Information included in the stakeholder register.



Initiating a Project Following the Adaptive Development Approach

Identify Key Stakeholders

Figure 2.49

The identify key stakeholders process.

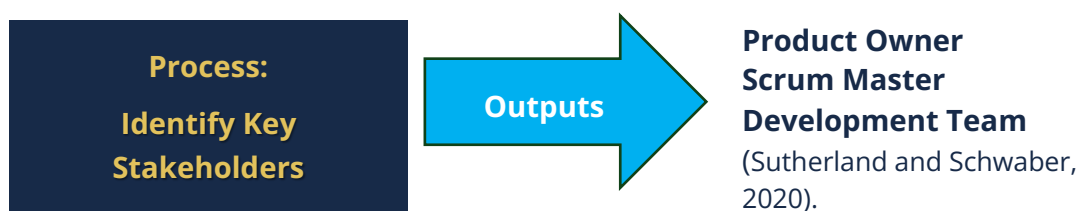


Figure 2.50

Create the product vision statement process.



Product Vision



A **product vision** provides the **direction of the product**, acting as the guiding force for the product and enables decision making at all levels. This vision is usually written down after confirmation from market-research – from talking to customers and working with all stakeholders (Ponniah, 2017).

It answers to the questions:

- **Why are we doing it?**
- **Who are we building it for?**
- **What are we building?**
- **When are we looking to deliver?**
- **What does it solve? - Need for the Product**

Product Vision Statement

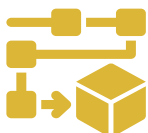
The Product Vision Statement has the following form (Moore, 2014):

For _____ identifies the customer _____
 Who _____ provides more detail _____
 The _____ names the product _____ is
 a _____ describes the product _____
 That _____ identifies what the product does _____
 Unlike _____ describes competitor products _____
 Our product _____ provides differentiating factors _____.

Create the Product Strategy and Product Roadmap



The **Product Strategy** outlines on a high level what the organisation will accomplish with its product and how it plans to do so. This strategy is embedded in a Product Roadmap (Schuurman, 2017).



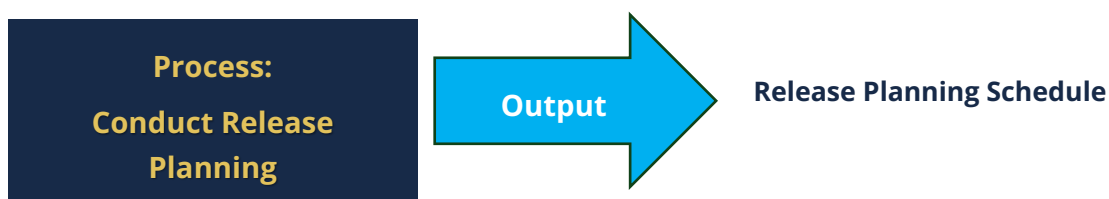
The **Product Roadmap** visualises the likely development of the product over the next period of time. The roadmap should support the products' purpose and vision and it helps the Product Owners to keep their stakeholders aligned. The roadmap also makes it easier to coordinate the development of different products and it fosters transparency in order to manage customer expectations (Schuurman, 2017).

Figure 2.51*The develop epic(s) process.*

In this process, the Project Vision Statement serves as the basis for developing Epics. User Group Meetings may be held to discuss appropriate Epics.

Figure 2.52*The create prioritized product backlog process*

In this process, Epic(s) are refined, elaborated, and then prioritized to create a Prioritized Product Backlog for the project. The Done Criteria is also established at this point.

Figure 2.53*The conduct release planning process*

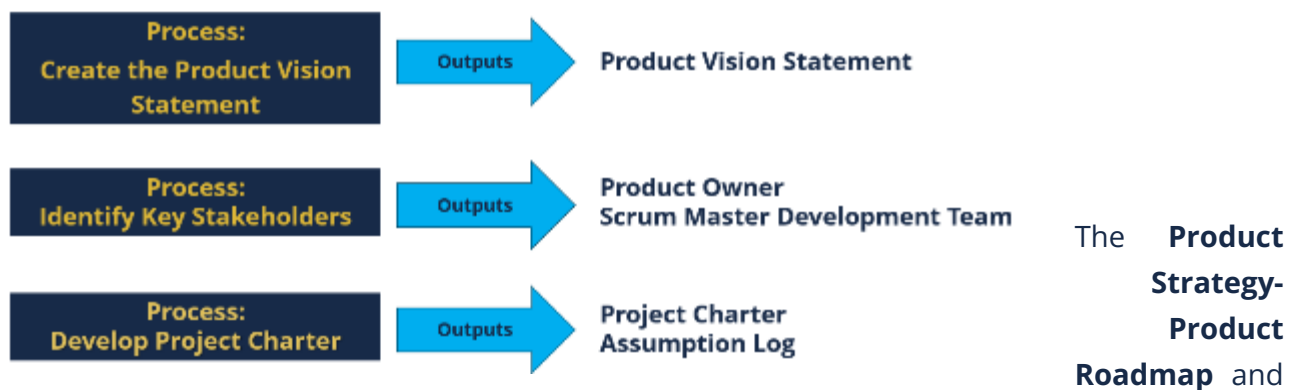
In this process, the Product Owner with support from the Scrum Team develops a Release Planning Schedule, which is essentially a phased deployment schedule that can be shared with the project's business stakeholders. Length of Sprint is also determined in this process.

Initiating a Project Following the Sustainable Hybrid Approach

As in the beginning of every project, the project manager doesn't have all the required information, especially in the case of following the hybrid approach, which means that the project is more complex, the following processes are taking place:

Figure 2.54

Processes followed in initiating a hybrid project



the **Epics** and **Product Backlog** are developed in the next phase, the **planning phase**, as more information is available.

The **sustainability aspect** should be considered, by **incorporating into the Project Charter sustainable elements**, and by implementing a high-level impact analysis **using the GPM P5 Standard**.

Unit 8 Activity: Initiating a Hybrid Project

In order to understand better the processes and outputs of each project phase of a sustainable hybrid project management approach, a case study entitled “Sustainable Tourism Project at the Arcadian Eco-Resort” will be deployed, throughout lesson 4, lesson 5 and lesson 6 of Module 2.

Case Study: Sustainable Tourism Project at the Arcadian Eco-Resort

Background

The Global Green Travel Group (GGTG) is a renowned operator in the sustainable tourism sector. Following its series of successful eco-friendly resorts, GGTG is venturing into a new project by acquiring a historical estate in the heart of Tuscany, Italy. The estate will be transformed into the Arcadian Eco-Resort, embracing 40 hectares of lush landscapes and a traditional but aging villa and farm structures.

GGTG's vision for the Arcadian Eco-Resort includes renovating the existing facilities to become a model of sustainability. The plan encompasses the renovation of the traditional villa and the farm buildings, the development of an eco-boutique hotel, a farm-to-table restaurant, and a series of nature trails and outdoor activities that promote environmental awareness and local culture. Additionally, the resort will implement an advanced management system for efficient operations in guest services, agricultural practices, and resource management. The initiative also aims to launch a membership program offering exclusive benefits and educational opportunities about sustainable living and conservation efforts.

Mauricio Verde is the project manager of this initiative, having huge experience in managing projects by deploying predictive and adaptive methods.

Mary Mercer, the Chief Operating Officer (COO) of GGTG, is the project sponsor and is accountable to GGTG's board of directors for the successful launch and operations of the Arcadian Eco-Resort.

Lumi File: [M2L4_Unit 8_Drag the Words_Vision Statement](#) (The following text is embedded in the Lumi File.)

Drag the words into the correct boxes to form the Product Vision Statement

For *.....*

Who *.....*

The *.....*

That *.....*

Unlike *.....*

The Arcadian Eco-Resort will offer eco-conscious lodging, *.....*, *.....*, local cultural experiences and *.....* on sustainability, while *.....* the *.....* of *.....* and *.....*.

Lumi File: [M2L4_Unit 8_Sort the paragraphs_Project Charter](#) (The following text is embedded in the Lumi File.)

Put the titles and paragraphs in the correct order, so as in the end to have a complete Project Charter for the project entitled "Sustainable Tourism Project at the Arcadian Eco-Resort"

PROJECT PURPOSE

To establish the Arcadian Eco-Resort as a premier, sustainable tourism destination that offers guests a unique blend of eco-friendly accommodation, local cultural and outdoor experiences, and environmental education in Tuscany, Italy.

HIGH-LEVEL PROJECT DESCRIPTION



The people that may affect or may be affected by the project are:

- Global Green Travel Group (GGTG)
- Project Sponsor: Mary Mercer, COO of GGTG
- Project Manager: Mauricio Verde
- Local community and cultural groups
- Local farmers/agricultural producers and artisans
- Local outdoors activity vendors
- Environmental organisations and groups
- Future guests and members
- Government and regulatory bodies
- Tourists/visitors
- Universities/Research Institutes
- Media and tourism promoters

HIGH-LEVEL REQUIREMENTS

ASSIGNED PROJECT MANAGER, RESPONSIBILITY, AND AUTHORITY LEVEL

PROJECT OBJECTIVES AND SUCCESS CRITERIA

Potential risks include:

- Delays in construction due to the availability of sustainable materials.
- Difficulty in finding staff with expertise in eco-tourism and sustainability practices.
- Changes in environmental regulations that could affect project deliverables.
- Risks associated with climate conditions affecting outdoor activities planning.
- Changes in the cost of materials

This project encompasses all work necessary to:

- Renovate the traditional villa and farm buildings using sustainable practices.
- Develop the eco-boutique hotel with 20 eco-friendly rooms.
- Construct a farm-to-table restaurant with a capacity for 80 guests.
- Develop an advanced management system for efficient operations in guest services, agricultural practices, and resource management
- Design and implement nature trails and outdoor activities that promote environmental and cultural awareness.
- Launch a membership program focused on sustainable living and conservation efforts.
- Organize a grand opening event to highlight the resort's commitment to sustainability and its benefits to the local community.
- Recruit and train staff with an emphasis on sustainability practices and local cultural knowledge.



- Engage with all stakeholders to ensure the project aligns with community values and environmental goals.
- Lead cross-functional multiple teams to deliver the project within scope, schedule, budget, resources, risks and quality standards.
- Provide regular status updates to GGTG on project progress.

Mary Mercer, as the project sponsor and Chief Operating Officer (COO) of the Global Green Travel Group (GGTG), holds ultimate accountability for the project's success, including approval of the project's scope, budget, major changes, and resolving issues beyond the project manager's authority.

Signatures:

[Space for signatures of the Project Manager and Project Sponsor]

SUMMARY MILESTONE SCHEDULE

SUMMARY BUDGET

- The project will be considered a success if the following objectives will be met:
- Complete the eco-resort renovation and construction activities within the agreed timeline and budget, with a maximum deviation of $\pm 10\%$.
- Manage the scope without any scope creep of the construction deliverables
- Evolve the scope for the efficient operations in guest services, agricultural practices, and resource management
- Achieve a sustainability certification for the resort's operations within the first year of opening.
- Establish a fully operational membership program that educates and engages guests in sustainability practices.
- Evolve the scope for the grand opening event and the initial nature trails and outdoor activities that promote environmental and cultural awareness

The project cost is set at 1,000,000 € excluding contingency and management reserve funds.

KEY STAKEHOLDERS

HIGH-LEVEL RISKS

PROJECT APPROVAL REQUIREMENTS

The project sponsor will consider the project complete when the following criteria are met:

- All project deliverables are fulfilled according to their requirements
- Necessary permits and sustainability certifications are obtained.
- The resort is fully staffed, and all team members have completed their training.
- The grand opening event has been successfully executed.

- Resort operations have been fully transitioned to the operational management team and staff.

Mauricio Verde is granted the authority to lead project planning, execution, and team management. He is responsible for budget oversight and making key technical decisions within the scope of the project charter. He has the authority and accountability to estimate, monitor, and control all funds, other than salaries and operating expenses.

The project manager does not have the authority to sign contracts independently, to hire or fire staff, but his input will be strongly considered or make unilateral decisions affecting the project's strategic direction, especially when the biodiversity conservation and farm practices.

The following milestones will be used to track progress:

- Project initiation and team formation.
- Completion of renovation for the villa and farm buildings.
- Completion of the eco-boutique hotel and farm-to-table restaurant construction.
- Advanced management system deployed
- Development and implementation of the membership program.
- Staff recruitment and completion of training programs.
- Grand opening event and official launch of the Arcadian Eco-Resort.
- Transition to operational status and continuous improvement phase.

NAME AND AUTHORITY OF SPONSOR

The project must:

- Prioritize the use of local labor and materials to support the regional economy and reduce transportation emissions.
- Adopt a hybrid project management approach, blending traditional and agile methods for each deliverable while maintaining a master plan, schedule and budget, to adapt to the dynamic nature of sustainable development;
- Utilize eco-friendly materials and renewable energy sources throughout the construction and operation phases.
- Ensure all renovations and constructions comply with local, national and European laws, regulations and international environmental standards.
- Build the hotel to 4-star rating standard
- Achieve a sustainability certification for the hotel and restaurant.
- Incorporate accessibility and inclusivity in the design of all guest facilities and activities.
- The grand opening will include food from the restaurant, outdoor activities and a local traditional music festival

Lesson 5: Planning a Hybrid Project

Unit 1 Introduction

Planning is essential for every project in order to achieve the desired outcomes. Project managers that reach project closure successfully are aware of how important is to develop, refine and follow plans to meet project goals. Additionally, project team members are more likely to perform well if they know what exactly they must do and when. Predictive and adaptive project planning is different, and when it comes to plan a hybrid project, it's challenging, as different processes, project outputs and documentation is needed. But, the main purpose of project planning is the same: to guide project execution.

Unit 2 Multiple Choice Question

Lumi File: M2L5_Unit 2 Multiple Choice Question_Planning a Hybrid Project (The following text is embedded in the Lumi File.)

Which statement best summarizes the importance of planning in project management?

- A) Project managers must strictly adhere to plans to ensure project success.
- B) Predictive planning is more effective than adaptive planning for achieving project goals.
- C) The primary goal of project planning is to dictate every detail of project execution.
- D) Planning is essential for guiding project execution and achieving desired outcomes.

Unit 3 Theoretical Chapter: Planning and Structuring a Hybrid Project

Introduction

Hybrid projects require up-front thought and planning to structure them appropriately. Project managers and project management teams should decide the development approach to be followed for each deliverable and the life cycle phases. Furthermore, the project manager has to develop the Project Management Plan and the level of detail it will provide, along with the **types and number of reviews to be undertaken**. Visualising all the above information is of much importance for a hybrid project to succeed.

Predictive Project Planning

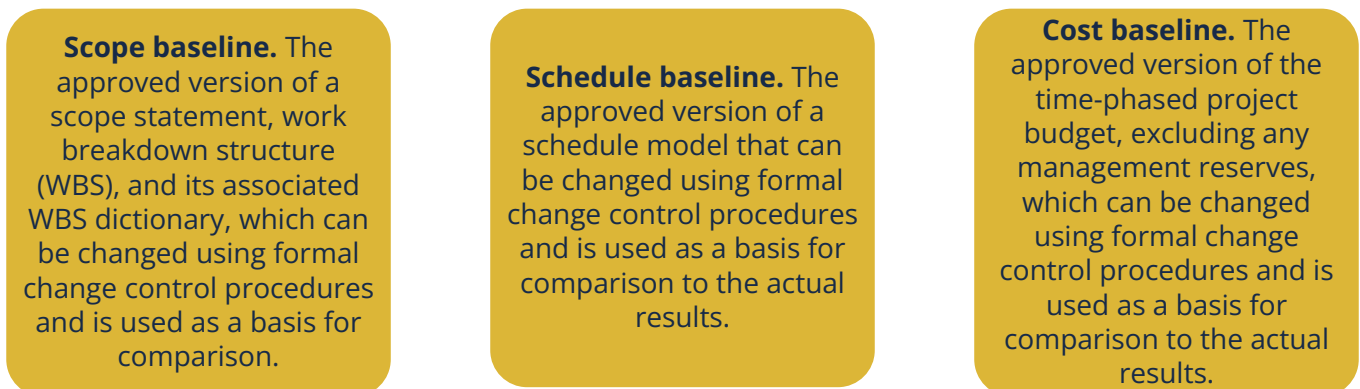
The **main output of the project planning phase** is the **Project Management Plan**, which is defined as the document that describes how the project will be executed, monitored, and controlled. It integrates and consolidates all of the **subsidiary management plans** and **baselines**, and other information that is essential for managing the project. The individual aspects of the project determine which components of the project management plan are needed (PMI, 2023).

Project management plan components include but are not limited to the following subsidiary plans (PMI, 2023).

Figure 2.55

Subsidiary project management plans



Figure 2.56*Project baselines***Additional components**

Most components of the project management plan are produced as outputs from other processes, though some are produced during this process. Those components developed as part of this process will be dependent on the project; however, they often include but are not limited to:

- ≠ **Change management plan.** Describes how the change requests throughout the project will be formally authorized and incorporated.
- ≠ **Configuration management plan.** Describes how the information about the items of the project (and which items) will be recorded and updated so that the product, service, or result of the project remains consistent and/or operative.
- ≠ **Performance measurement baseline.** An integrated scope-schedule-cost plan for the project work against which project execution is compared to measure and manage performance.
- ≠ **Project life cycle.** Describes the series of phases that a project passes through from its initiation to its closure.
- ≠ **Development approach.** Describes the product, service, or result development approach, such as predictive, iterative, agile, or a hybrid model.
- ≠ **Management reviews.** Identifies the points in the project when the project manager and relevant stakeholders will review the project progress to determine if performance is as expected, or if preventive or corrective actions are necessary.

The processes implemented during the planning phase of a project that follows the predictive approach are in total 24, having specific outputs (European Commission, 2023; PMI, 2023; PMI, 2017), as described in the table that follows.

Table 2.7

The 24 predictive project management processes and their outputs

Process	Outputs
Develop Project Management Plan	Project Management Plan
Plan Scope Management	Scope Management Plan Requirements Management Plan
Collect Requirements	Requirements Documentation Requirements Traceability Matrix
Define Scope	Project Scope Statement Project documents updates
Create WBS	Scope Baseline Project documents updates
Plan Schedule Management	Schedule Management Plan
Define Activities	Activity List Activity Attributes Milestone List Project documents updates
Sequence Activities	Project Schedule Network Diagrams Project documents updates
Estimate Activity Durations	Duration Estimates Basis of Estimates Project documents updates
Develop Schedule	Schedule Baseline Project Schedule Schedule Data Project Calendars



	Project Management Plan updates Project documents updates
Plan Cost Management	Cost Management Plan
Estimate Costs	Cost Estimates Basis of Estimates Project documents updates
Determine Budget	Cost Baseline Project Funding Requirements Project documents updates
Plan Quality Management	Quality Management Plan Quality Metrics Project Management Plan updates Project documents updates
Plan Resource Management	Resource Management Plan Team Charter Project documents updates
Estimate Activity Resources	Resource Requirements Basis of Estimates Resource Breakdown Structure Project documents updates
Plan Communications Management	Communications Management Plan Project Management Plan updates Project documents updates
Plan Risk Management	Risk Management Plan
Identify Risks	Risk Register
Perform Qualitative Risk Analysis	Risk Register Updates Project documents updates
Perform Quantitative Risk Analysis	Risk Report
Plan Risk Responses	Change Request Project Management Plan updates



	Project documents updates
Plan Procurement Management	Procurement Management Plan Procurement Strategy Bid Documents Procurement statement of work Source selection criteria Make-or-by decisions Independent cost estimates Change requests Project Management Plan updates Project documents updates
Identify Stakeholders	Stakeholder Register Stakeholder Engagement Plan

Adaptive Project Planning

An agile project plan is divided into releases and sprints.

Agile planners define **a release as creating a new product or substantially updating an existing product**. Each release is broken down into several iterations called **sprints**. Each sprint has a fixed length, typically two weeks, and the team has a predefined list of items to work through in each sprint. The work items are called **user stories**. The release plan is broken down into several iterations (sprints) that include user stories (items) (Wojno, 2022).

The **Plan and Estimate phase**, following the Scrum or other Agile Frameworks, consists of the following processes (ScrumStudy, n.d.).



Table 2.8*Processes within the Agile Plan and Estimate phase*

1	Create User Stories - In this process, User Stories and their related Acceptance Criteria are created by the Product Owner and incorporated into the Prioritized Product Backlog. User Stories are designed to ensure that the customer's requirements are clearly depicted and can be fully understood by all business stakeholders.
2	Estimate User Stories - In this process, the Scrum Team, supported by the Scrum Master, estimates the User Stories and identifies the effort required to develop the functionality described in each User Story.
3	Commit User Stories - In this process, the Scrum Team commits to deliver Product Owner-approved User Stories for a Sprint. The results of this process are the committed User Stories and the Sprint Backlog.
4	Identify Tasks - In this process, the committed User Stories are broken down into specific tasks and compiled into a Task List.
5	Estimate Tasks - In this optional process, the Scrum Core Team estimates the effort required to accomplish each task in the Task List.
6	Develop the Initial Release Plan with Timeboxes/Sprints or the Kanban Board
7	Update Sprint Backlog - In this process, the Scrum Core Team updates the Sprint Backlog with further details about the tasks as part of the Sprint Planning Meeting.



8 Manage Quality using Definitions of Done

9 Manage Risks using Risk-Adjusted Backlog

10 Manage Procurement using Lead-Agile Procurement and A Master Agreement

Sustainable Hybrid Project Planning

A sustainable hybrid project usually follows a **progressive elaboration** and **rolling wave planning procedure** meaning, developing more detail as more information is known about the project.

More specifically, **activities in the near future are planned in detail, and activities further out in the future are less specific.**

A **sustainable hybrid project planning phase** may consist of the following processes, taking into account its inherited complex character.

- ☒ Develop the Project Management Plan: Document the Development Approach and the Life Cycle of the Project; List the subsidiary plans; List the key reviews; Develop the Project Roadmap, the graphic high-level view of the project that includes phases, reviews, milestones, and other key information.
- ☒ Develop Scope Management Plan
- ☒ Collect and Document Requirements
- ☒ Define Scope
- ☒ Develop the Work Breakdown Structure (WBS) for the deliverables produced by following a predictive approach
- ☒ Develop a Backlog for the deliverables produced by following an adaptive approach
- ☒ Develop a Schedule Management Plan
- ☒ Develop the Predictive Schedule
- ☒ Develop the Adaptive Schedule
- ☒ Develop the Hybrid Schedule
- ☒ Estimate Costs

- ☒ Develop Budget
- ☒ Develop Internal Communication Plan (meetings)
- ☒ Develop Quality Plan including: quality metrics for the predictive project management approach and definitions of done for the adaptive project management approach
- ☒ Develop Stakeholder Register
- ☒ Develop Stakeholder Communication Plan
- ☒ Develop Riks Management Plan
- ☒ Develop Risk Register for the work to be done by following a predictive approach
- ☒ Develop a Risk-Adjusted Backlog for the work to be done by following an adaptive approach
- ☒ Develop a Change Management Plan
- ☒ Develop a Procurement Management Plan (if needed)
- ☒ Develop a Sustainability Project Management Plan

When the planning phase formally starts, a **project kick-off meeting** is implemented, which is a gathering of project team members and other key stakeholders, at the outset of a project to formally set expectations, gain a common understanding, and commence work. It establishes the start of a project, phase or iteration (PMI, 2021).

Unit 4 Activity Developing the Project Management Plan for a Sustainable Hybrid Project

Read again the background of the Case Study: Sustainable Tourism Project at the Arcadian Eco-Resort and the Project Charter Developed in Unit 8 of Lesson 4 of Module 2.

Then read carefully the table provided that refer to some of the parts of the Project Management Plan for the project under discussion, which concern the Development Approach of the Project.

Your task is to answer the questions that follow.

The Case Study

The Global Green Travel Group (GGTG) is a renowned operator in the sustainable tourism sector. Following its series of successful eco-friendly resorts, GGTG is venturing into a new project by acquiring a historical estate in the heart of Tuscany, Italy. The estate will be transformed into the Arcadian Eco-Resort, embracing 40 hectares of lush landscapes and a traditional but aging villa and farm structures.

GGTG's vision for the Arcadian Eco-Resort includes renovating the existing facilities to become a model of sustainability. The plan encompasses the renovation of the traditional villa and the farm buildings, the development of an eco-boutique hotel, a farm-to-table restaurant, and a series of nature trails and outdoor activities that promote environmental awareness and local culture. Additionally, the resort will implement an advanced management system for efficient operations in guest services, agricultural practices, and resource management. The initiative also aims to launch a membership program offering exclusive benefits and educational opportunities about sustainable living and conservation efforts.

Mauricio Verde is the project manager of this initiative, having huge experience in managing projects by deploying predictive and adaptive methods.

Mary Mercer, the Chief Operating Officer (COO) of GGTG, is the project sponsor and is accountable to GGTG's board of directors for the successful launch and operations of the Arcadian Eco-Resort.



Table 2.9

The deliverables and the development approach chosen within the Aradian Eco-Resort project

Deliverable	Development Approaches	Comments
Eco-boutique Hotel	Waterfall	The requirements for the hotel are well understood and are not likely to change. Much of the planning can take place at the start, and the plans can be baselined and followed.
Farm-to-Table Restaurant	Waterfall	The requirements for the restaurant are well understood and are not likely to change. Much of the planning can take place at the start, and the plans can be baselined and followed.
Renovated Traditional Villa	Waterfall	The requirements for the traditional villa are well understood and are not likely to change. Much of the planning can take place at the start, and the plans can be baselined and followed.
Renovated Farm Buildings	Waterfall	The requirements for the farm buildings are well understood and are not likely to change. Much of the planning can take place at the start, and the plans can be baselined and followed.
Eco-resort Management System	Agile	The management system can start with a list of prioritized features and requirements. Different aspects of the management system can be developed by different teams at the same time. The teams can use the same timeboxes and demonstrate working software at regular intervals. As the stakeholders see how the



Deliverable	Development Approaches	Comments
		system is evolving, they can make modifications, change the priority, and add new features. There is the option to release increments of the software while continuing to add functionality.
Recruit and train staff	Iterative	Recruiting and training staff can use an iterative approach because each of the main functions (farm, hotel, restaurant, etc.) will have their own requirements and their own timing for hiring and training. However, the deliverable won't be considered complete until all functions are staffed and trained. There may be opportunities to learn and adapt hiring and training processes along the way
Membership Program	Incremental	The membership program can use an incremental approach by starting with a minimal set of benefits for members and adding and adapting benefits based on feedback from members.
Grand Opening	Waterfall	The grand opening will need to be planned up front because some of the activities, such as outdoor activities, will need to be booked in advance. The requirements can be defined at the start, and while there may be minor adjustments, there shouldn't be significant changes. Additionally, the grand opening event has a hard end date; it is not expected to evolve.

Questions

Lumi File: [M2L5_Unit 4_Essay](#) (The following text is embedded in the Lumi File.)



What subsidiary plans do you think the project manager and the team should develop?

Lumi File: M2L5_Unit 4_Drag the Words (The following text is embedded in the Lumi File.)

Drag the words to match the title of each critical review with the corresponding description.

Critical Reviews

In a strategic meeting, Mauricio and Mary alongside the executive team, outlined the critical reviews for evaluating the progression of their project and authorizing for advancement. They agreed upon the necessity of four pivotal evaluations.

..... - The IBR will be used to ensure all the plans are complete, integrated, and incorporate sufficient risk responses. This will take place once the general contractor and key subcontractors are onboard. The review will include construction scope, schedule, and cost baselines along with an integrated risk register. When the IBR is complete, the project will advance into the architecture and engineering phase.

..... - The CRR will give senior management an opportunity to review and approve all blueprints, along with any updates to schedule and cost estimates. Once the CRR is complete, the construction of the hotel and restaurant, can begin, along with the renovations of the farm buildings and the villa.

..... - The SRR will be used before taking the resource management, guest services, agricultural practices, membership, management system live. Because an Agile development approach will be used, stakeholders will see the features as they are developed. The SRR will allow stakeholders to see the entire system integrated and operating in a test environment.

..... - The ORR will include a walkthrough of each venue, a dinner at the restaurant, and a presentation by the managers of each function (hotel, restaurant, farm, facilities, HR, etc.). This review will take place two weeks before the grand opening. This will assure management that all the systems are in place to welcome guests and transition the project to operations.

Unit 5 Theoretical Chapter: Defining Scope and Documented Requirements of a Hybrid Project

Introduction



Defining scope is crucial, especially for a hybrid project, as it drives all other aspects of the project. You can either develop a scope management plan, a scope statement, a work breakdown structure or you can deploy user stories and a backlog.

Developing the Scope Management Plan



A Scope Management Plan is a subsidiary plan that describes how the scope will be defined, developed, managed, and validated (PMI, 2023).

The development of the scope management plan and the detailing of the project scope begin with the analysis of information contained in the project charter, the latest approved subsidiary plans of the project management plan, historical information contained in the organisational process assets, and any other relevant environmental factors (Schwalbe, 2021).

As in a **hybrid project**, there are some deliverables that will be elaborated by deploying **predictive** development approaches and some that will **evolve the scope as the project progresses**, the **scope management plan should document the way the work will be done**. There may be two sections, **one referring to the predictive scope**, documenting how the scope will be decomposed, organised, controlled and verified. The other section, **the adaptive**, may present how the scope will be prioritized and validated.

If the project is complex, incorporating elements of cooperating with vendors, the scope management plan will illustrate how the scope that will be developed in-house will be integrated into the scope developed via outsourcing.

Smaller projects may not need the development of a scope management plan.

Processes for Defining Scope

#1 Collecting Requirements

The collecting requirements process refers to determining, documenting, and managing stakeholder needs and requirements to meet objectives. It provides the basis for defining the product and project scope (PMI, 2023).

A requirement can be defined as a capability that must be present or a condition that must be met to achieve the project objectives (Dionisio, 2023).

It is of much importance to **document requirements** in **enough detail**, so as to be **easily measured** during project execution. Additionally, **requirements become the foundation of the work breakdown structure**, as well as of the **processes associated with cost, schedule, quality planning and procurement**. The tools that can be used to collect project/product requirements are the following (PMI, 2023).

Figure 2.57

Tools for collecting project requirements



#2 Documenting Requirements in Hybrid Projects

As soon as the project manager and the team have the requirements in their hands, they have to **prioritise** them, based on the schedule or their importance and **document** them. In **hybrid projects** there are **two ways** for **documenting the collected requirements** (Dionisio, 2023): **requirement card** and **user story**.

Requirement Card

A card, usually in digital format, which includes the following information: requirement number, category (based on the deliverables), description, originator, priority, acceptance criteria, comments.

Figure 2.58*Project requirement card*

Requirement #:	Category:
Description:	
Originator:	Priority:
Acceptance criteria:	
Comments:	

User Story

It describes the needs and wants of the stakeholders, and the benefits they will receive. A user story has the following format:

As a [description of user], I want [functionality] so that I can [benefit]

Examples

As the chef of the restaurant, I want to track the inventory by brand so I can ensure we have all the raw materials for creating our menus and meet demand.

As a member of the programme that offers exclusive benefits and educational opportunities about sustainable living and conservation efforts, I want to know the various sustainable agricultural practices the company uses, so that I can apply them to my farm.

#3 Defining Scope

Defining scope in the best way is of paramount importance for project success, as it (Schwalbe, 2021):

- Helps improve the accuracy of time, cost, and resource estimates
- Defines a baseline for performance measurement and project control
- Aids in communicating clear work responsibilities.



A Scope Statement describes in detail the project and the product scope based on the collected requirements (PMI, 2023). It provides deliverables' characteristics, and identifies what work is out-of-scope.

Usually, the **first part** of the scope provides in more detail the purpose of the project that is included in the Project Charter, in a narrative description format. The **second part** of the scope statement offers a detailed description of each of the project deliverables. The **third part** of the scope statement presents the work that is out of scope. This section is crucial, as it helps the project team to avoid scope creep, manage stakeholder expectations and address any concerns about in and out of scope before creating a baseline.

Example of a scope statement having a narrative format

The Arcadian Eco-Resort, conceived by the Global Green Travel Group (GGTG), will be an eco-friendly sanctuary nestled in the heart of Tuscany, Italy, offering a harmonious blend of luxury and sustainability. Guests will have the opportunity to explore sustainable living through interactive experiences such as farm-to-table dining, using ingredients sourced from our own gardens and local farms. In addition to embracing eco-luxury, the Arcadian Eco-Resort will host engaging activities like guided nature trails, sustainability workshops, and outdoor adventures that connect visitors with the local culture and environment. Our eco-boutique hotel and restaurant will embody the essence of a sustainable Tuscan retreat, providing an ambiance that marries tradition with eco-innovation. The estate will also serve as a picturesque setting for weddings, anniversaries, and special events, offering guests a unique blend of romantic and eco-conscious experiences.

Example of a scope statement having a more technical format

Scope Inclusions:

Renovation of the estate's traditional villa and farm buildings to meet sustainability standards.

Construction of an eco-boutique hotel within the estate.

Development of a farm-to-table restaurant.

Creation of nature trails and the organization of outdoor activities promoting environmental and cultural education.

Implementation of an advanced management system for sustainable operations.

Launch of a membership program with a focus on sustainable living and conservation.

Scope Exclusions:

Any development outside the designated 40 hectares of the estate.

Projects or activities that do not align with sustainability and environmental conservation principles.

Developing a Work Breakdown Structure

In order the scope to be organised, the **Work Breakdown Structure** is used as a tool.



Create Work Breakdown Structure is the process of subdividing project deliverables and project work into smaller, more management components. The key benefit of this process is that it provides a framework of what has to be delivered (PMI, 2023).



The Work Breakdown Structure is a hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables (Dionisio, 2023).

The **work defined at the lowest level of the WBS**, where it can be appropriately assigned to and managed by a single accountable person, is called **a work package**. Each work package should be defined in enough detail to estimate what it would cost and how long it would take to create. It is a **foundation document** in project management because it **provides the basis for planning and managing project schedules, costs, resources, and changes** (Schwalbe, 2021).

While a WBS is organised around deliverables, in some cases the work is organised by life cycle phase.

The WBS can be visually depicted, like an organisational chart, or can have an outline format.

Figure 2.59

Example of a WBS created by following the outline format

1. Project Management

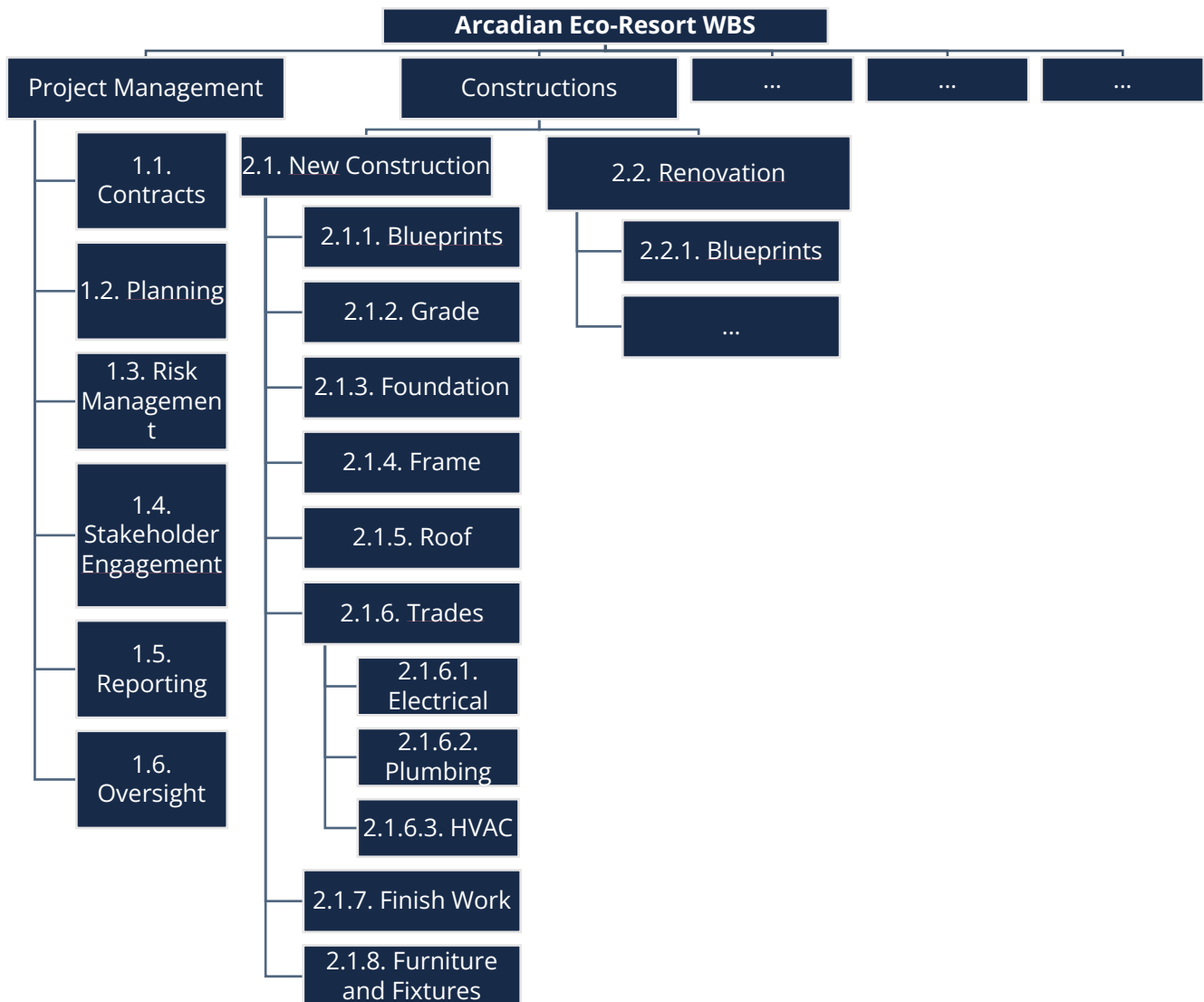
- 1.1. Contracts
- 1.2. Planning
- 1.3. Risk Management
- 1.4. Stakeholder Engagement
- 1.5. Reporting
- 1.6. Oversight

2. Construction

- 2.1. New Construction
 - 2.1.1. Blueprints
 - 2.1.2. Grade
 - 2.1.3. Foundation
 - 2.1.4. Frame
 - 2.1.5. Roof

- 2.1.6. Trades
 - 2.1.6.1. Electrical
 - 2.1.6.2. Plumbing
 - 2.1.6.3. HVAC
- 2.1.7. Finish Work
- 2.1.8. Furniture and Fixtures
- 2.2. Renovation
 - 2.2.1. Blueprints
 - ...



Figure 2.60*Visual representation of a WBS*

Prioritising Scope with a Backlog

As WBS is used in predictive projects, in **agile projects with evolving scope, a prioritised backlog is deployed**. The backlog is developed and updated by the Product Owner, in cooperation with the development team. This is a **dynamic document**, as the work evolves, because new requirements may come up due to stakeholders' feedback. A backlog can be documented by using a specific project management software, on a flipchart or by using sticky notes.

Figure 2.61

Example of a Backlog for developing a Digital Management System



Unit 6 Activity Developing a Work Breakdown Structure

Lumi File: [M2L5_Unit 6_Essay](#) (The following text is embedded in the Lumi File.)

For the Arcadian Eco-Resort Project and by taking into consideration its scope and its project charter, develop its Work Breakdown structure following the outline format.

Unit 7 Theoretical Chapter: Developing the Schedule of a Hybrid Project

Introduction

Project schedule management involves the processes required to ensure timely completion of a project. Knowing how to perform these processes is very important, as a project schedule contains all the information needed to implement the project tasks on time.

Developing the Schedule Management Plan

Plan Schedule Management is the process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule. The key benefits of this process is that it provides guidance and direction on how the project schedule will be managed throughout the project.

It's crucial for a hybrid project to have such a plan in place, as this type of projects need to put



The Schedule Management Plan is a subsidiary plan of the project management plan that describes how the schedule will be developed, managed, and maintained.

together a schedule that accounts for deliverables that will be elaborated following the predictive project management approach and for deliverables that cannot be defined or agreed to until part way through the project.

A schedule management plan can include the following (Dionisio, 2023).

Figure 2.62

Contents of a schedule management plan

Schedule methodology:

Document the scheduling methodology that will be used for the project, including critical path, Agile, or other methodology.

Scheduling tool:

Identify the scheduling tool(s) that will be used for the project: scheduling software, task boards, and so forth.

Level of accuracy:

Describe the level of accuracy needed for estimates. If there are guidelines for rolling wave planning and the level of refinement that will be used for duration and effort estimates, then you will indicate the levels of accuracy desired as time progresses.

Units of measure:

Indicate whether duration estimates will be in days, weeks, months, story points, or some other unit of measure.

Variance thresholds:

Indicate acceptable variances for work to be considered on time, in jeopardy, or late.

Schedule updates:

Document the process for updating the schedule, including update frequency and version control. Indicate the guidelines for maintaining baseline integrity and for re-baselining if necessary.

Predictive Scheduling

Predictive scheduling consists of a series of processes, which are the following (PMI, 2023).

Figure 2.63

The four predictive scheduling processes



An activity is a distinct, scheduled portion of work performed during the course of a project. The activity list that is one of the outputs of the above-mentioned processes, is created by identifying the activities required to create each work package on the WBS. So, all the defined activities should be in line with the WBS (Schwalbe, 2021).

In order to sequence the activities, the project manager has to take into consideration their relationships/dependencies, of which there are four (4) different types (Yarbrough, 2021).

- **Finish-to-Start (FS):** In a Finish-to-Start dependency, Task A must be completed before Task B can start.
- **Finish-to-Finish (FF):** In a Finish-to-Finish dependency, Task A must be completed before Task B can be completed.
- **Start-to-Finish (SF):** In a Start-to-Finish dependency, Task B cannot be completed before Task A has started.
- **Start-to-Start (SS):** In a Start-to-Start dependency, Task B cannot start before Task B has started.

To ensure that all major activities are accounted for, project teams often create a **milestone list**.



A milestone is a significant point or event in a project. It usually includes many activities, and therefore a lot of work, to complete a milestone. Unlike a deliverable, which is the output of activities, and unlike an activity, which is the actual project work, a milestone is simply a marker to help in identifying necessary activities. There is usually no cost or duration associated with a milestone (Schwalbe, 2021).

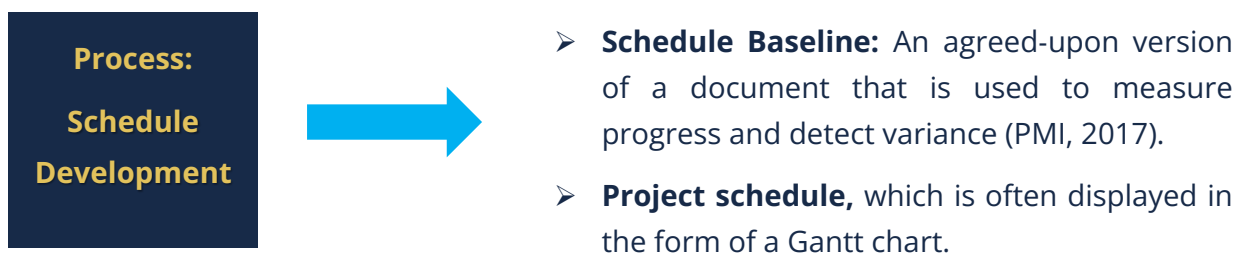
While **assign team members** is part of the “Plan Resource Management” and “Estimate Activity Resources” processes, it is highly recommended that before executing the process of “Estimate Activity Durations”, to assign team members to the identified activities. And this can be done by implementing the process of “**Resource Loading**”, which means entering the team member roles or even their names into a scheduling tool (software). For doing so the following tools/techniques can be deployed:

- A resource breakdown structure, showing the number of people that are needed in each role
- A Responsibility Assignment Matrix: A responsibility assignment matrix (RAM) is a matrix that maps the work of the project as described in the work breakdown structure (WBS) to the people responsible for performing the work. A RAM allocates work to responsible and performing organisations, teams, or individuals, depending on the desired level of detail. For smaller projects, it is best to assign WBS deliverables to individuals. For larger projects, it is more effective to assign the work to organisational units or teams (Schwalbe, 2021). A common version of a responsibility assignment matrix is called a **RACI chart** because it documents who is **Responsible, Accountable, Consulted, and Informed** (Dionisio, 2023).

Figure 2.64*RACI chart*

	Project Manager	Production Manager	Architect	Cement Contractor
Requirements	I	A/R	I	
Drawings	C	C	A/R	
Foundation				R

The two main outputs of the schedule development process are the following.

Figure 2.65*Outputs of the schedule development process*

A **Gantt chart**, commonly used in project management, is one of the most popular and useful ways of showing activities (tasks or events) displayed against time. On the left of the chart is a list of the activities and along the top is a suitable time scale. Each activity is represented by a bar; the position and length of the bar reflects the start date, duration and end date of the activity (Gantt.org, 2024). This allows you to see at a glance:

- What the various activities are
- When each activity begins and ends
- How long each activity is scheduled to last
- Where activities overlap with other activities, and by how much
- The start and end date of the whole project

Figure 2.66*Project Gantt Chart*

WP/Task	Jan	Febr	Mar	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
WP1: Project Management											
T1.1 Contracts											
T1.2 Planning											
T1.3 Risk Management											
T1.4 Stakeholder Engagement											
T1.5 Reporting											
WP2: Construction											
...											

Adaptive Scheduling

Projects that use **Agile schedule work in iterations** that are a set duration, such as one week, two weeks, or four weeks. Iterative and incremental development approaches may or may not use fixed duration timeboxes for their iterations, depending on the nature of the deliverables.

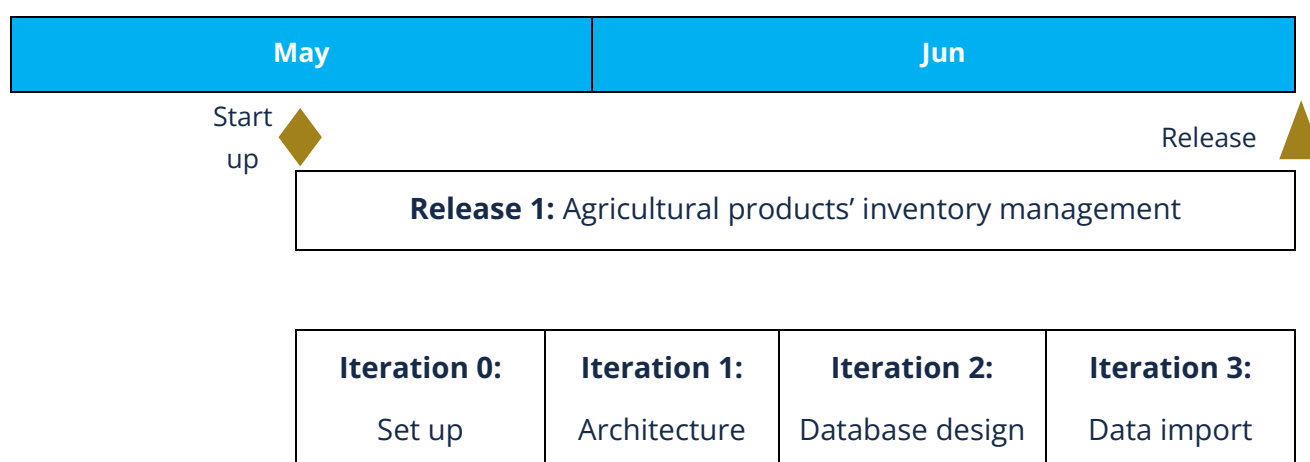
The main output of the scheduling process is the **Release plan**, that shows the expected timing, milestones, and outcomes for releases, based on the Product Roadmap.



Figure 2.67*Project release plan*

For each release, an **iteration plan** is developed, showcasing the estimates and the plan for the work in the current iteration. Remember that iteration is a brief, set time interval in a project where the team performs work. Also known as a timebox or sprint.

The development team performs the **most detailed schedule planning for agile projects during the sprint planning meetings where they create the sprint backlog. Sprint planning** should take eight hours or less for each sprint. During sprint planning, the developers review the prioritized product backlog and initial release plan, discuss the items with the product owner to make sure they understand them, and then select how many items they think they can complete during the sprint. These items are then discussed in more detail to develop good estimates. The user stories help provide more detail to make these estimates (Schwalbe, 2021).

Figure 2.68*Project iteration plan*

Hybrid Scheduling

Hybrid scheduling is a **blend of predictive and adaptive methods** to create an **integrated master schedule**. Some ways of developing an integrated master schedule are:

- **Predictive with Releases and Iterations**
- **Predictive with Iterations Inserted**
- **Adaptive then Predictive**

Figure 2.69*Predictive Schedule with Releases*

WP/Task	Duration	Jan	Febr	Mar	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
WP1: Project Management	300 days											
WP2: Construction	250 days											
WP3: Eco-Resort Management System	200 days											
Start up	2 weeks											
Release 1	6 weeks											



Release 2	6 weeks												
Release 3	4 weeks												
Release 4	4 weeks												
Release 5	4 weeks												
...													
System Testing	0 days												
WP3:													
WP4:													

Unit 8 Activity: Developing the Schedule of a Hybrid Project

Lumi File: M2L5_Unit 8_Drag the Words_Hybrid Scheduling (The following text is embedded in the Lumi File.)

Drag the words into the correct boxes so as in the end to have the three alternatives of a hybrid project schedule.

..... - This type of hybrid plan uses a predictive schedule and creates a placeholder for releases. The detailed work for each iteration is managed with task board software or whiteboards if the team is in the same location. The predictive work is shown as summary tasks, and the adaptive work is shown at the release level.

..... - Some scheduling software allows you to build a predictive schedule or an adaptive schedule. You can build each type of schedule separately and insert the adaptive schedule into the predictive schedule. The predictive work is shown at a summary level. The adaptive work shows all the releases with the first release elaborated to show the work for each iteration.

..... - New product development projects often use an adaptive approach to identify and develop the features and functions for the product. Once the product is finalized, the project moves to a predictive approach for manufacture, packaging, marketing, and distribution.

Unit 9 Theoretical Chapter: Developing the Budget of a Hybrid Project

Introduction

In order the project budget to be developed, several processes need to be implemented in advance, so as the project manager and the project team to proceed with estimating the costs



per project activity and determine the budget. The final output is the cost baseline, which supports the monitoring and controlling of the project.

Predictive Budget Development

A project can only come together with all the necessary materials and labor, and those materials and labors cost money. Putting together a budget that keeps costs to a minimum, while maximizing the project's quality and scope can be challenging. This is why proper cost estimation is important (Wrike, n.d.).

Estimate costs is the process of developing an approximation of the cost of resources needed to complete project work. The key benefit of this process is that it determines the monetary resources required for the project (PMI, 2023). It's a process that is performed periodically throughout the project as needed.

An initial cost estimation is taking place when the performing organisation develops the business case in the pre-initiation phase and the project charter in the initiation phase.

In order the most accurate estimates to occur, the project manager and the team should make use of the **WBS** and the **human resources allocated to each project activity**. Furthermore, they have to take into consideration that there are **two broad cost categories**:

- **Direct costs:** Costs associated with a single area, such as a department or the project itself. Examples of direct costs include fixed labor, materials, and equipment.
- **Indirect costs:** Costs incurred by the organisation at large, such as utilities and quality control.

Within these two categories, here are some typical elements that a cost estimation will take into account (Wrike, n.d.).

Figure 2.70*Elements of cost estimation*

				
Labor: The cost of team members working on the project, both in terms of wages and time.	Materials and equipment: The cost of resources required for the project, from physical tools to software to legal permits.	Facilities: The cost of using any working spaces not owned by the organisation.	Vendors: The cost of hiring third-party vendors or contractors.	Risk: The cost of any contingency plans implemented to reduce risk.

Cost estimates are generally expressed in **units of some currency** (e.g. euros, dollars etc.), although in some instances other units of measure, such as **staff hours** or **staff days**, are used to facilitate comparisons by eliminating the effects of currency fluctuations (PMI, 2023).

Once the costs are determined, then the project budget per work package and activity is developed, as well as the cost baseline.



A cost baseline is a time-phased budget that project managers use to measure and monitor cost performance (Schwalbe, 2021).

Adaptive Budget Development

Unlike predictive projects, therefore, there is **no total project budget or detailed cost estimate for the entire project or for various WBS items.**

In general, in agile project the method used for determining the budget is **by multiplying the rates of individual team members by the number of iterations**, then **factoring in additional expenses like overhead, materials, and third-party services.**

Other approaches in cost estimation include the following.

Figure 2.71

Approaches in cost estimation

Iterative and Incremental Estimation	Agile projects embrace iterative and incremental development, extending this philosophy to cost estimation (Martin, 2019). Teams estimate work for short iterations or sprints, refining estimates as the project progresses, and new information becomes available. This iterative approach enables teams to adapt to changing requirements and priorities while maintaining cost transparency and accountability.
Relative Estimation	Agile teams commonly employ relative estimation techniques such as Planning Poker, where team members assign relative sizes or points to user stories or tasks based on their perceived complexity or effort required (Leffingwell, 2020). This approach fosters rapid estimation without getting bogged down in excessive detail, promoting efficient planning and resource allocation.
Story Points	Story points serve as a fundamental unit of measure in agile cost estimation, allowing teams to assess the relative size and effort of user stories (Cohen & Golden, 2020). By assigning story points based on complexity, uncertainty, and effort, teams can estimate project costs more accurately, focusing on value delivery rather than strict adherence to fixed timeframes.

Hybrid Project Development

In hybrid projects, the budget should be developed based on the approach selected in order the project deliverables to be produced.

Unit 10 Activity: Estimating Costs in Hybrid Projects

Lumi File: [M2L5_Unit 10_Question Set_Project Budget](#) (The following text is embedded in the Lumi File.)

The project budget development process starts only after all project activities have been fully defined and estimated.

Direct costs are those incurred by the organisation at large, such as utilities and quality control.

Cost estimates are expressed only in currency units to avoid the effects of currency fluctuations.

Story points in agile cost estimation are used to estimate the project costs based on the complexity, uncertainty, and effort, focusing on value delivery rather than strict adherence to fixed timeframes.

There are several tools and methods that can be deployed in order to support the project manager and the team to go through the cost estimation process in hybrid projects (Dionisio, 2023).

Drag the words into the correct boxes so as in the end to have the six different cost estimation methods/tools for a hybrid project.

..... - using information from previous similar projects to develop an estimate for the current project. Used for predictive projects. Can be used to estimate effort, duration, cost, resources, and reserve.

..... - Developing a mathematical model based on significant historical data. Used for predictive projects. Usually used for cost but can be used for effort, duration, resources, and reserve.

..... - Developing optimistic, pessimistic, and most likely estimates and calculating an average or weighted average. Used for predictive projects. Can be used to estimate effort, duration, cost, resources, and reserve.

..... - Summing estimates from individual work packages to arrive at an overall estimate. Used for predictive projects. Most often used to estimate costs and aggregate them into a budget.

..... - Categorizing elements into groups based on similar characteristics. Used for adaptive projects. Most often used to estimate effort, duration, or story points.

..... -: Working with a group of experts to develop individual estimates, discuss, and reestimate until consensus is reached. Used for adaptive projects. Most often used to estimate effort, duration, or story points.



Unit 11 Theoretical Chapter Planning for Risks for a Hybrid Project

Introduction

Project risk management is crucial in hybrid projects due to their blend of traditional and agile elements, presenting unique challenges and uncertainties. This approach necessitates proactive identification, assessment, and mitigation of risks, ensuring efficient resource allocation and timely project delivery.

The Risk Management Plan

Risk management is performed continuously through the project life cycle.



A risk is defined as an uncertain event or condition that can have an impact on a project. While risks are equated with threats the definition of risk includes both negative and positive outcomes. A risk with a positive outcome is called an opportunity, and a risk with a negative impact on a project is called a threat.

The **Risk Management Plan** is a subsidiary plan of the project management plan that describes how risks will be identified, analysed, and addressed. It includes roles and responsibilities, as well as how risks are identified, and analysed (PMI, 2023; Schwalbe, 2021). It prosed also to include the Risk Register, which is comprised of the results of the risk identification and analysis processes, in addition to the planned response strategies.

Risk Identification

Identifying risks is the process of determining which risks may affect the project and documenting their characteristics. In order to identify all the possible project risks, the project management team should take into consideration all the other parts of the project management plan and to have in mind the different types of project risks (PMI, 2017).

Risk Analysis

Once risks are identified it is important to determine the **probability and impact of each risk** in order to allow the project team to prioritize the risk avoidance and mitigation strategy.

Risk probability assessment investigates the likelihood that each specific risk will occur (PMI, 2017).

Risk impact assessment investigates the potential effect on a project objective such as schedule, cost, quality, or performance including both negative effects for threats and positive effects for opportunities (PMI, 2017).

Probability and impact are assessed for each identified risk.

Probability impact matrix is one of the commonly used qualitative methods for risk assessment. The two components of risk are the variables of such matrix (PMI, 2017).

Once analyzed, risks should be evaluated to determine the likelihood of a risk or threat being realized and the seriousness, or impact, should the risk occur.

'Likelihood' is a qualitative measure of probability to express the strength of our belief that the threat will emerge generally ranked as

- Low (L)
- Medium (M)
- High (H)

'Seriousness' is a qualitative measure of negative impact to convey the overall loss of value from a project if the threat emerges, based on the extent of the damage ranked as

- Low (L)
- Medium (M)
- High (H)
- Extreme (E)

The risks are graded as **A, B, C, D** or **N** according to the following matrix.

Figure 2.72

Risk probability and impact matrix

Likelihood	Seriousness				
		Low	Medium	High	EXTREME
	Low	N	D	C	A
	Medium	D	C	B	A
	High	C	B	A	A

Risk Response Planning

Once risks have been analyzed, the project team determines **how to address those risks**. This section explains the considerations which must be made and the options available to the project team in managing these risks.



Risk Register is a document in which the results of risk analysis and risk response planning are reported (PMI, 2017).

This document is constituted by the List of Identified Risks as well as the results of the Risk Analysis procedure. Additionally, ways of mitigating risks are mentioned.

Table 2.10

Risk responses according to the type of risk

The choices of response strategies for any project risk include (PMI, 2017):	
Avoid:	Eliminate the threat by eliminating the cause (e.g., remove the work package or person).
Mitigate:	Reduce the probability or the impact of a threat, thereby making it a smaller risk and removing it from the list of top risks on the project. Options for reducing the probability are looked for separately from options for reducing the impact. Any reduction will make a difference, but the option with the most probability and/or impact reduction is often the option selected.
Transfer (Deflect, Allocate):	Make another party responsible for the risk by purchasing insurance, performance bonds, warranties, guarantees, or outsourcing the work. Here is where the strong connection between risk and procurement (or contracts) begins. One must complete risk assessment before a contract can be signed! Transference of risk is included in the terms and conditions of the contract.
The choices of response strategies for opportunities include (PMI, 2017):	
Exploit:	(the reverse of avoid) Add work or change the project to make sure the opportunity occurs
Enhance	(the reverse of mitigate): Increase the likelihood (probability) and positive impacts of the risk event

Share: Allocate ownership of the opportunity to a third party (forming a partnership, team, or joint venture) that is best able to achieve the opportunity

A response strategy for both threats and opportunities is (PMI, 2017):

Accept: Do nothing and say, "If it happens, it happens." Active acceptance may involve the creation of contingency plans to be implemented if the risk occurs and the allocation of time and cost reserves to the project. Passive acceptance leaves actions to be determined as needed, if (after) the risk occurs. A decision to accept a risk must be communicated to stakeholders

Mitigation of risks involves the identification of actions to reduce the likelihood that a threat occur named as preventive actions and/or reduce the impact of a threat that does occur named contingency actions. This strategy also involves identifying the stage of the project when the action should be undertaken, either prior to the start of or during the project.

Risk Management in Hybrid Projects

While the processes described earlier are implemented within the framework of the projects that follow the predictive approach, **in many agile projects, the project team uses risk registers**. Other teams may use the **risk-adjusted backlog**, which is a backlog incorporating actions to reduce impediments or threats to the project.

But as risks, even if they have positive or negative impact on the project, need careful management, it **is highly recommended the risk register methodology to be deployed in hybrid projects**.

Unit 12 Activity: Developing a Risk Management Plan of a Hybrid Project

Lumi File: [M2L5_Unit 12_Fill in the Blanks_Risk Register](#) (The following text is embedded in the Lumi File.)

Read the following risks and fill in the blanks providing:

- **Their grade (A, B, C, D, or N), based on the matrix presented in the Theoretical Chapter of Unit 11**
- **The response strategy you think is the most appropriate**

Because a nearby farm is closing its doors, there is an opportunity to acquire some of their agricultural machinery at a discounted price.

Because the cost of outdoor security cameras is greater than anticipated, we may overrun the budget for that work package.

Because of a labor shortage for housekeeping staff, we may not be able to staff all the positions, causing a degradation in performance for the hotel.

Due to global supply chain issues, the machinery for drying the aromatic plants used for the meals may be delayed, causing a delay in the start of operations for the restaurant.

Unit 13 Activity: Developing the Sustainability Management Plan of a Hybrid Project

In units 13 and 14 of Lesson 3 of Module 2, you get introduced to the Green Project Management P5 Standard. While it should be deployed from the pre-initiation and initiation project phase, in order to embed sustainability in the purpose and project objectives, it is of much importance to utilise it in the planning phase, by developing the Sustainability Management Plan of a project.

The purpose of a Sustainability Management Plan is to help ensure that the project team members manage the project in a sustainable way. It provides a framework for Project Sustainability by describing the approach, the roles and responsibilities, the budgeting, and the reporting practices. The Sustainability Management Plan (SMP) helps support the commitment of the project team to economic growth, environmental protection, and social accountability.

The approach for developing a Sustainability Management Plan is the same for both predictive and adaptive projects, and consequently, it applies to hybrid projects as well.

Go through the following steps and develop the Sustainability Management Plan for the case study project entitled “Sustainable Tourism Project at the Arcadian Eco-Resort”, used earlier in other activities of Module 2.

Step 1: Review the Project Charter of the “Sustainable Tourism Project at the Arcadian Eco-Resort”,

Step 2: Use the GPM P5 Ontology to implement a P5 Impact Analysis. A P5 Impact Analysis (P5IA) is used to define and prioritise sustainability impacts to:

- Improve the project’s expected benefits.
- Increase positive impacts and reduce negative impacts to society, the environment, and the project’s value.
- Contribute to the sponsoring organisation’s sustainability goals.

To perform a P5IA, follow the steps:

- Identify internal and external events which may occur during the project or during the useful life of the project product for each of the elements of the P5 Ontology
- Describe the cause(s) of the event and the potential sustainability impacts of each.
- Rate the impacts based on the magnitude of their effect on sustainability.
- Identify possible responses to each event to minimize the impact of negative events and maximise the impact of positive events.
- Re-rate the impacts based on the assumption that the response is implemented.

Keep in mind that the Impact Analysis is closely connected with Risk Analysis, as the identified impacts are risks that have a negative or positive effect to the planet, people and prosperity.

Step 3: Fill out the various sections of the provided Sustainability Management Plan template, offered for free by the GPM Global (2023). While you do so, have in front of you the P5 Ontology or you can download the [GPM P5 Standard](#).

A Sustainability Management Plan (SMP) describes how sustainability will be addressed during a project. P5 has an integral role in developing an SMP as P5 identifies the subjects to be addressed. An SMP should generally include:

- Purpose
- Approach
- Roles and Responsibilities
- Budget
- Key Performance Indicators for Sustainability
- Impact of Scope Exclusions on Sustainability
- Reviews and Reporting
- P5 Impact Analysis

Sustainability Management Plan

[Organisation Name]

Purpose

This purpose of this document is to help ensure that we (the Project Team members) manage this project in a sustainable way. It provides a framework for Project Sustainability by describing our approach, our roles and responsibilities, our budgeting, and our reporting practices. This Sustainability Management Plan (SMP) will help support our commitment to economic growth, environmental protection, and social accountability.

Approach

Planning for sustainability management will be done by completing this document. [\[insert description of any additional sustainability management planning activities\]](#)

Identifying sustainability impacts will include:

- Time will be reserved during the first team meeting of each month to focus on reviewing sustainability impacts.
- Key performance indicators (KPIs; see below) for relevant topics from P5 will be documented.
- [\[insert description of any additional sustainability impact identification activities\]](#)

Responding to sustainability impacts will include:

- Implementing responses to all items with a high positive or negative impact score.
- Avoidance of unacceptable impacts.
- Keeping this Project Sustainability Management Plan current throughout the project.
- Inclusion of “sustainability impact updates” as an agenda item for each team meeting.
- Integrating sustainability risk and opportunity management with overall project risk and opportunity management.
- [\[insert description of any additional sustainability-response-related activities\]](#)

Roles and Responsibilities

The Project Manager shall:

- Incorporate the resources and time required to execute the Sustainability Management Plan in the project budget and schedule.
- Develop, distribute, and implement this Sustainability Management Plan.
- Develop and update the P5 Impact Analysis (P5IA) with the support of the Project Team and include it in the project plan.
- Coordinate with the Response Owners to implement responses identified in the P5IA.
- Update the lessons learned database at the end of each project phase.
- Provide a report to the function or office that is responsible for sustainability reporting.
- [\[insert description of any additional roles and responsibilities\]](#)

The Project Team shall:

- Identify sustainability impacts and describe them in the prescribed formats.



- Assess the impact of sustainability-related actions on project success criteria.
- Perform the impact response actions assigned.
- [insert description of any additional roles and responsibilities]

Sustainability Impact Owner responsibilities include:

- Develop and/or update the assigned risk response strategy.
- Monitor the risk assigned and inform PM of any changes to probability or impact.
- Monitor the risk trigger and risk cues and inform the PM as appropriate.
- [insert description of any additional roles and responsibilities]

Budget

The budget for this project will include the following items related to project sustainability management:

- [insert description of any sustainability-related budget items]

Key Performance Indicators

Table 2.11

Sustainable project management KPIs

P5 Domain	Lens	Category	Element	Key Performance Indicator	Metric
People	<i>Fairness</i>	<i>Human Rights</i>	<i>Dignity, Diversity, Equity & Inclusion</i>	<i>Employee Satisfaction Level</i>	<i>Survey results on work-life balance</i>
Planet	<i>Efficiency</i>	<i>Energy</i>	<i>Energy Consumption</i>	<i>Reduction in Energy Consumption</i>	<i>Percentage reduction per year</i>
	<i>Effectiveness</i>	<i>Business Agility</i>	<i>Resiliency</i>	<i>Increased</i>	<i>Number of</i>



P5 Domain	Lens	Category	Element	Key Performance Indicator	Metric
Prosperity				<i>stakeholder support for the project team</i>	<i>stakeholders supporting the project team</i>

Potential Impact on Sustainability of Scope Exclusions

[Describe the potential impact on sustainability of any scope exclusions. For example, most highway construction projects explicitly exclude maintenance costs. Failure to maintain the new roadway could have negative impacts.]



Reviews and Reporting

Meetings for the purpose of discussing and making decisions on project sustainability will be held [insert frequency of such meetings].

The initial sustainability management actions shall occur during the development of the initial project plan. A full review and update of the P5 Impact Analysis will occur at the beginning of each subsequent phase of the project.

The following forms will be used for documenting risk management activities:

- [insert list or refer to standard forms]

P5 Impact Analysis

The P5 Impact Analysis (P5IA) for this project is an integral part of this Sustainability Management Plan. It can be found here:

- [insert link or other method of access to the project's P5IA]



Lesson 6: Executing, Monitoring, Controlling and Closing a Hybrid Project

Unit 1 Introduction

Project execution is the project phase that the majority of a project's time and budget is spent. It is the phase where the projects plans developed in the planning phase, along with all other documents are implemented by the project team. The successful materialisation of the planned activities and the effective delivery of the project results depend on well-established monitoring and controlling procedures, allowing the project manager and the team to take corrective actions when necessary, while ensuring that the project will reach its closure in an efficient way.

Unit 2 Multiple choice question

Lumi File: M2L6_Unit 2 Multiple Choice Question_Exec. Mon. Contr. Clos. Projects (The following text is embedded in the Lumi File.)

What is the primary purpose of monitoring and controlling in the project management process?

- a) To develop project plans and documents
- b) To allocate resources effectively
- c) To ensure that project objectives are met and take corrective actions as necessary
- d) To finalize project activities and release resources

Unit 3 Theoretical Chapter: Executing, Monitoring and Controlling a Hybrid Project

Introduction

Navigating a hybrid project involves tailoring traditional and adaptive project management methodologies and this is very challenging when it comes to project execution, monitor and control. While project execution and monitoring and controlling are two distinct phases, they run in parallel, ensuring that project teams can effectively deliver results while remaining responsive to evolving requirements and stakeholders' needs.

Executing a Hybrid Project

Project execution is the phase where specific processes are performed to complete the work defined in the project management plan to satisfy the project requirements. It involves



coordinating resources, managing stakeholder engagement, and integrating and performing the activities of the project (PMI, 2023). In other words, **it involves the actual work, coordination, and delivery of project tasks, resources, and outcomes.**

During the execution phase of a **waterfall project**, the following processes are performed (PMI, 2023).

Table 2.12

Processes performed during the waterfall execution phase

1

Direct and Manage Project Work: is the process of leading and performing the work defined in the project management plan and implementing approved changes to achieve the project's objectives. An issue log may be kept to document, monitor, and track issues that need to be resolved for effective work to take place. Furthermore, change requests are documented, by using the corresponding project templates.

2

Manage Project Knowledge: is the process of using existing knowledge and creating new knowledge to achieve the project's objectives and contribute to organisational learning. A lessons learned register is kept and updated by the project team, documenting challenges, problems, realized risks and opportunities, and other content to assist in knowledge management on current and future projects.

3

Manage Quality: is the process of translating the quality management plan into executable quality activities that incorporate the organisation's quality policies into the project. Quality reports and test and evaluation documents are produced during this process.

4

Acquire Resource: is the process of obtaining team members, facilities, equipment, materials, supplies, and other resources necessary to complete project work. Physical and team resource assignments are documented.

5

Develop Team: is the process of improving competencies, team member interaction, and overall team environment to enhance project performance. Team performance assessments are regularly implemented.

6

Manage Team: Manage Team is the process of tracking team member performance, providing feedback, resolving issues, and managing team changes to optimize project performance.

7

Manage Communications: is the process of ensuring timely and appropriate collection, creation, distribution, storage, retrieval, management, monitoring, and the ultimate disposition of project information.

8

Implement Risk Responses: Implement Risk Responses is the process of implementing agreed-upon risk response plans.

9

Conduct Procurements: Conduct Procurements is the process of obtaining seller responses, selecting a seller, and awarding a contract. Lists of selected sellers and contracts are the main outputs of this process.

10

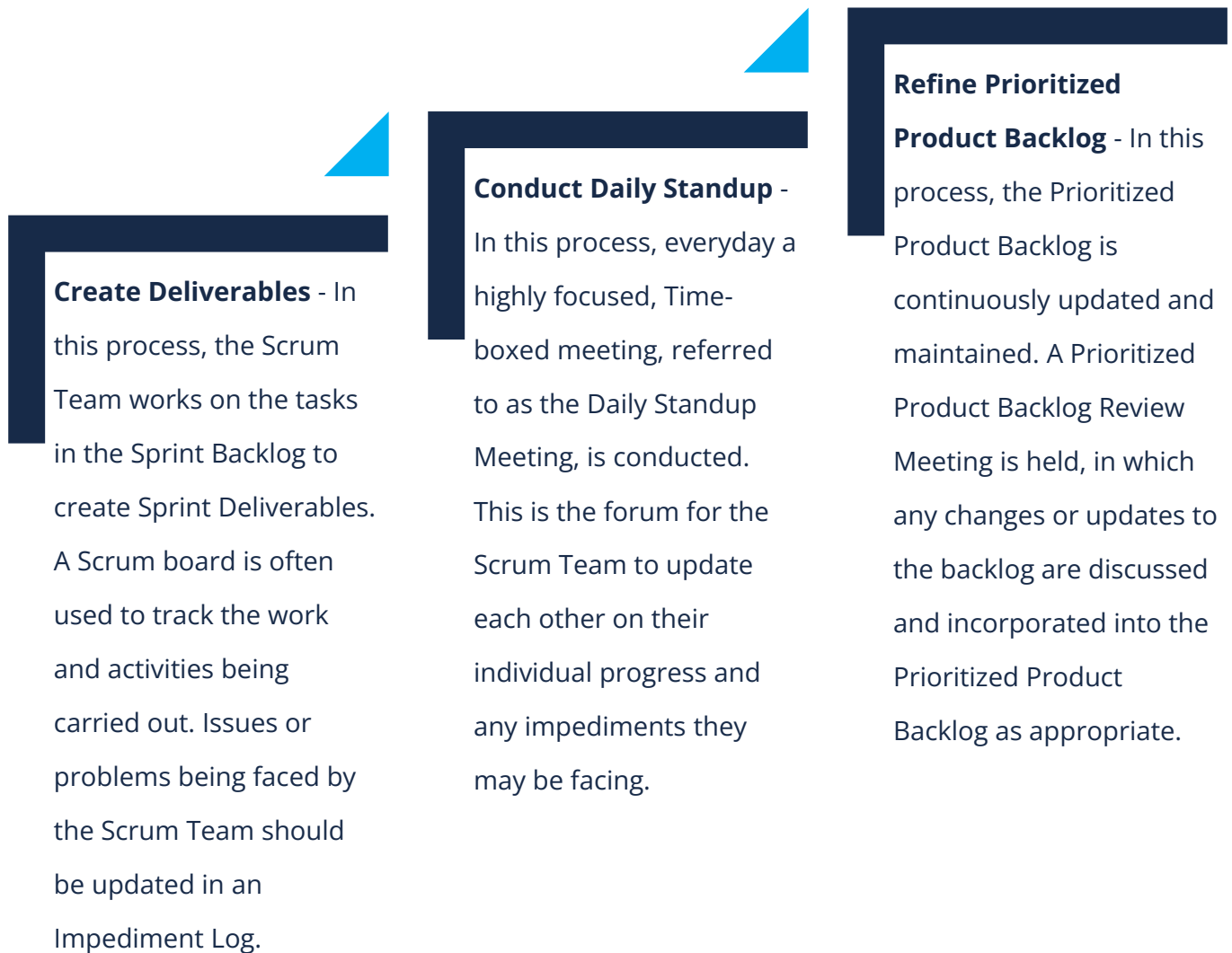
Manage Stakeholder Engagement: Manage Stakeholder Engagement is the process of communicating and working with stakeholders to meet their needs and expectations, address issues, and foster appropriate stakeholder involvement.

In **adaptive project management approach**, the execution phase is called **“The Implement Phase”** and includes the following processes (ScrumStudy, n.d.).



Figure 2.73

Process of the implementation phase in agile projects



In **hybrid projects**, the project managers and their teams **can use any of the predictive project executing processes mentioned earlier, or they can mix some of them with the processes suggested by the Scrum Framework.**

Monitoring and Controlling a Hybrid Project

Project monitoring and controlling is the phase in **traditional project management** where all the processes required to track, review, and regulate the progress and performance of the project; to identify any areas in which changes to the plan are required; and initiate the corresponding changes, are taking place (PMI, 2023). During this phase the schedule, cost and scope baselines are monitored, controlled and reported.

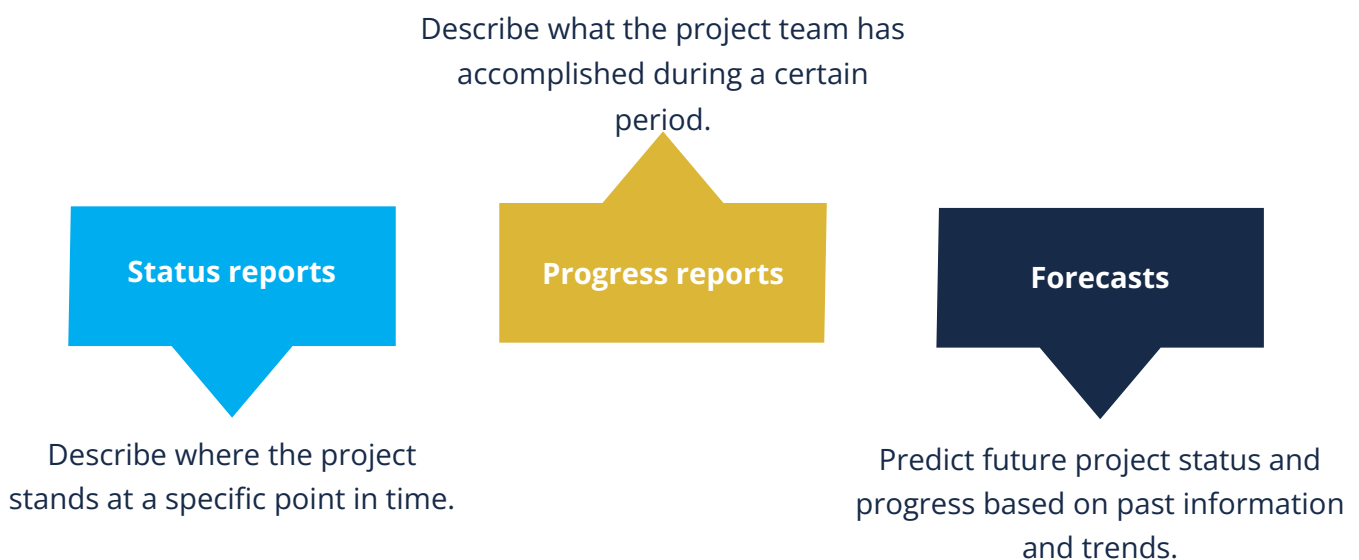
Project monitoring ensures that as activities/tasks are being completed they're staying on schedule and overspending is avoided. Furthermore, it assists project managers in the process of managing risks and avoiding scope creep. To neglect project monitoring and control is like leaving the project in the hands of fate.

The main tools and techniques for monitoring and controlling project work are expert judgment, data analysis, decision making, and meetings. Earned value management reports are a powerful tool for monitoring and controlling overall project performance it (Schwalbe, 2021).

During this phase a **series of reports** are generated which are it (Schwalbe, 2021).

Figure 2.74

Reports developed within the monitoring and controlling project phase



In the **adaptive project management** this phase is called **“Review and Retrospect phase”**, consisting of the following processes (ScrumStudy, n.d.).

Figure 2.75

Processes of the adaptive project management review and retrospect phase



Demonstrate and Validate Sprint - In this process, the Scrum Team demonstrates the Sprint deliverables to the Product Owner and relevant business stakeholders in a Sprint Review Meeting. The purpose of this meeting is to secure approval and acceptance of the Sprint User Stories by the Product Owner.

Retrospect Sprint - In this process, the Scrum Master and Scrum Team meet to discuss the lessons learned throughout the Sprint. This information is documented and should be applied to future Sprints. Often, as a result of this discussion, there may be agreed actionable improvements or updated Scrum Guidance Body recommendations.

As teams that work with adaptive deliverables focus on efficiency, the metrics they use track velocity, the time it takes to get a new feature developed and estimates for the future rate of work (Dionisio, 2023).

Hybrid projects can use any of the predictive and adaptive processes, tools, and techniques to monitoring and controlling project work, according to the specific project characteristics.

Unit 4 Activity: Meetings in Hybrid Projects

Project meetings often feel as if they're in the way of your work. If you're not working from an agenda or you don't manage those meetings, that can be true. But meetings are critical for project execution and team collaboration, especially in hybrid projects, where various methodologies, processes and tools are deployed (Schwartz, 2023).

Adaptive teams and predictive teams have very different sets of meetings (Dionisio, 2023).

Meetings in Scrum are named as “Events”. According to the Scrum Guide, each event is a formal opportunity to inspect and adapt Scrum artifacts. These events are specifically designed to enable the transparency required. Failure to operate any events as prescribed results in lost opportunities to inspect and adapt. Events are used in Scrum to create regularity and to minimize the need for meetings not defined in Scrum.

Predictive meetings may have a set cadence, such as weekly status meetings, or they may be held as needed. Unlike adaptive meetings, which are primarily self-organised by the team, with predictive meetings the project manager generally manages the agenda, timeline, and participation (Dionisio, 2023).

In order to get acquainted with the types of meetings used in hybrid projects, solve the crossword by having in mind that you are looking for the following words/phrases: Status meeting, Kick-off meeting, Daily Standup, Iteration planning, Lessons learned meeting, Retrospective, Iteration review.

Lumi File: M2L6_Unit 4_Meetings in Hybrid Projects (The following text is embedded in the Lumi File.)

- a gathering of project team members and other key stakeholders, at the outset of a project to formally set expectations, gain a common understanding, and commence work. It establishes the start of a project, phase or iteration.
- A brief meeting held by adaptive teams to review progress from the previous day, describe the intention for the day's actions, and surface impediments.
- An event to identify, clarify, and estimate work that will be done in the current iteration.
- A workshop to review the work product and processes to find ways to improve outcomes.
- An event to demonstrate the work that was accomplished in the current iteration.
- A meeting to discuss the current progress on the project.
- A meeting to identify and document areas that are working well on the project and areas that can be improved.

Unit 5 Theoretical Chapter: Sustainable Hybrid Project Closure

Introduction



Even if project teams don't spend so much time on activities related to the project closure, it is a phase that for sure demands not only their attention but their dedication, ensuring the positive long-term project impact.

Closing a Hybrid Project

Closing is the phase that consists of the process(es) performed to formally complete or close a project, phase, or contract.

These processes are related to the following (Dionisio, 2023).

Figure 2.76

Activities performed within the closure project phase



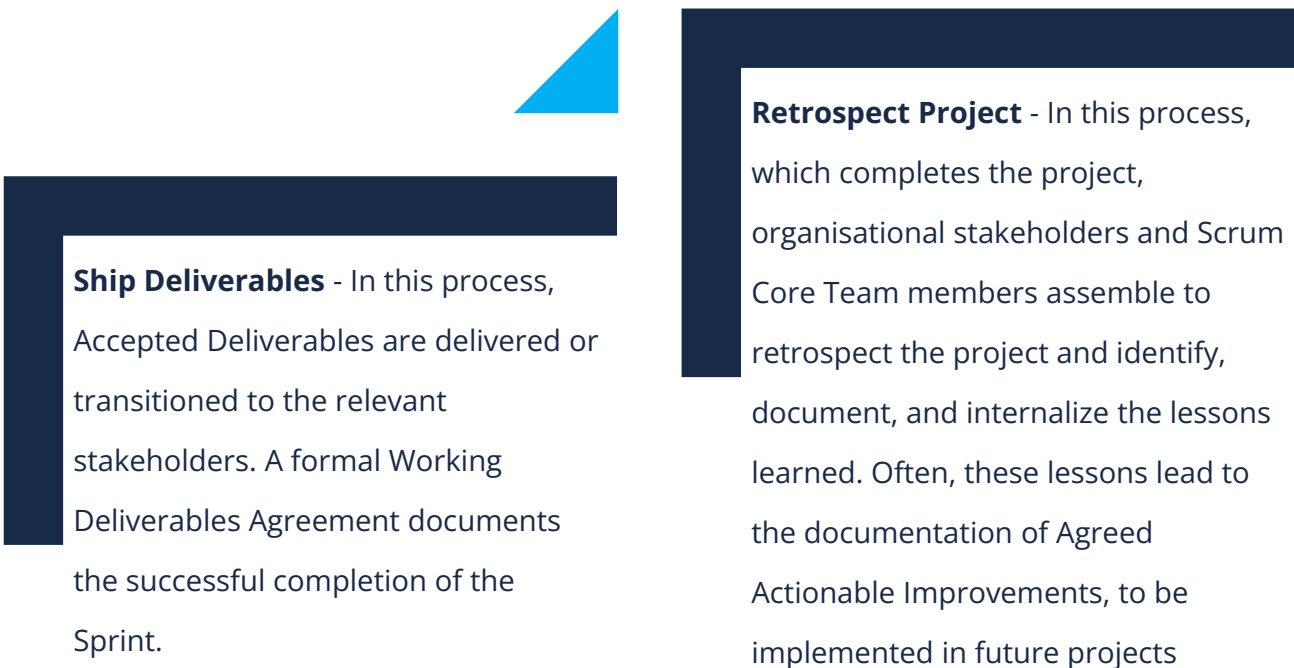
In many projects, **quality** or/and **financial audit** is performed during this phase and then a **formal customer acceptance/project completion form** is signed by the project sponsor, officially terminating the project.

Regarding the projects that have in their core sustainability, the formal project closure is apparent to ensure its long-term success and impact.

In **adaptive projects**, this phase is called **"The Release Phase"**, consisting of the following two processes (ScrumStudy, n.d.):

Figure 2.77

Processes of the release phase in adaptive projects



In **hybrid projects**, the **same procedure is followed for project closure**.

The two **close-out reports** that are important to be elaborated are (Dionisio, 2023):



Final Project Report: a report that summarises high-level information about the project, aiming at providing the sponsor with all the needed information about the project and record all the appropriate project data for historical purposes. It can be very detailed or quite brief, depending on the project.

Normally a final sustainable hybrid project report has the following contents (Dionisio, 2023; GPM Global, 2023):

- **Scope:** Describe the scope objectives and the success criteria for the project; provide evidence that the success criteria were achieved; describe any variances, along with the reason and impact for the variances. If appropriate, differentiate between adaptive work and predictive work.

- **Quality:** Describe the quality requirements and acceptance criteria for the deliverables; summarize the verification and validation information for deliverables; describe any waived requirements or variances, along with the reason and impact.
- **Schedule:** Document the specific dates that needed to be met to meet the schedule objectives, including milestone delivery dates. Document the actual dates and describe any variances along with the reason and the impact for the variances. If appropriate, differentiate between adaptive and predictive scheduling.
- **Cost:** Enter the approved budget for the project, along with the range that indicates budgetary success; enter the final project costs; describe any variances, along with the reason and impact for the variances.
- **Sustainability:** enter the KPIs included in the Sustainability Management Plan and document the project performance against the three measurable elements to sustainability: people, planet, prosperity
- **Risks, Issues, and Impediments:** Provide a summary of the risk register, issue log and impediment log; discuss any significant risks, issues, or impediments that affected the project, along with the responses.



Lessons Learned Report: A final report for lessons learned on a hybrid project will summarise information collected from lessons learned throughout the project as well as relevant information from team retrospectives.

Often the team comes together at the end of a project to conduct a **lessons learned meeting**, and the information from that meeting is captured in the final lessons learned report. The purpose is to identify those aspects of the project that went well, so other teams can adopt those practices. You also want to cover aspects of the project that didn't go well and discuss how that can be avoided in the future.

Unit 6 Activity Case Study

Lumi File: M2L6_Unit 6_True/False Project Closure (The following text is embedded in the Lumi File.)

State whether the following statements are true or false

- It is mandatory to complete all planned project work before initiating the closure phase, regardless of the project's current status.
- Transitioning the final product or service to the client is an optional step in the project closure phase.



- Performing administrative closure work includes submitting final reports but does not involve any financial audits.
- Acknowledging the project team and celebrating their success is considered a best practice but is not necessary for project closure.
- Documenting lessons learned is a formal requirement only in projects that failed to meet their objectives.
- Evaluating the project's success is solely based on whether the project was completed on time and within budget.
- Submitting final reports is the last step in the project closure phase and occurs after all audits are completed.
- A quality or financial audit is optional and typically performed only if the project team suspects issues with project deliverables.
- Formal customer acceptance or project completion forms are required to officially terminate any project, including adaptive projects.
- Sustainability considerations are only relevant during the planning and execution phases of a project, not during closure.
- In adaptive projects, the Release Phase replaces the traditional closure phase and involves no formal documentation.

Unit 7 Module Completion - Video

Congratulations on completing this transformative journey through the realms of sustainable and hybrid project management in tourism. You've explored the critical aspects of hybrid project management tailored to the sustainable tourism industry, and you're now equipped with the knowledge and skills to make a difference.

But the journey doesn't end here. The world of sustainable tourism is ever-evolving, and there's always more to learn, more to explore, and more to implement.

Dive deeper into the topics you've just uncovered with an additional 10 hours of training material. From the foundational principles of project management in sustainable tourism to the nuanced strategies of initiating, planning, executing, monitoring, controlling, and closing hybrid projects – there's much more to master.

These advanced materials are designed to further enhance your understanding, sharpen your skills, and empower you to lead hybrid sustainable projects with greater impact.

Are you ready to take the next step?

Module 2 Closing Video

Congratulations on successfully completing Module 2, 'Hybrid Project Management for the Sustainable Tourism Sector.' Your dedication and commitment have brought you this far, propelling you through extensive learning about the fundamentals and complexities of hybrid sustainable project management.

Now, as you stand at this milestone, poised with knowledge and skills, a new horizon awaits. As a hybrid sustainable project manager in the tourism sector, you are also called to pioneer change, spark innovation, and drive the industry forward.

That's why it's crucial for you to continue your learning journey by enrolling in Module 3, 'Creativity and Entrepreneurship in the Sustainable Tourism Sector.'

Do it now!



Module 2 Assessment Exams

Welcome to Module 2 exams designed to evaluate your comprehension and mastery of the content presented in this module. Please read the following instructions carefully before you begin.

Answering Questions: The exam consists of two types of questions:

- Multiple Choice: Each multiple-choice question is followed by four possible answers. Read each question carefully and select the one best answer that is correct or most accurately responds to the question.
 - True or False: For true or false questions, read each statement carefully. Decide whether it is true or false based on your knowledge of the subject material and indicate your choice accordingly.
1. What fundamental aspect highlights the indispensable role of proficient project management in fostering sustainability within the dynamic landscape of the tourism industry?
 - a) Mastery of niche event planning techniques
 - b) Strategic adaptation to the multifaceted dynamics of the evolving project economy
 - c) Efficient management of stakeholder conflicts in the absence of predefined strategies
 - d) Neglect of regulatory fluctuations due to overemphasis on operational intricacies
 2. A Programme is a temporary endeavor undertaken to create a unique product, service, or result. The temporary nature of projects indicates a beginning and an end to the project work or a phase of the project work. Projects can stand alone or be part of a program or portfolio.
 - a) True
 - b) False
 3. Which one of the following reasons can lead to project failure?
 - a) Limited marketing efforts
 - b) Limited funding for infrastructure development
 - c) Poor communication within the project team and with stakeholders
 - d) Insufficient expertise in sustainable tourism practices among project team members
 4. Which aspect of project management emphasizes flexibility by blending elements from different methodologies to suit specific project needs?



- a) Principles of Project Management
 - b) Functions Associated with Projects
 - c) Project Roles
 - d) Hybrid Project Management Development Approach
5. Which is the best project management development approach for the following project?
- In a bid to promote sustainable tourism, the coastal town of Bluehaven launches the Green Getaways Project. This initiative aims to minimize the environmental impact of tourism by introducing electric shuttle services for tourists, creating eco-friendly lodging options, and enhancing natural trails for walking and cycling. The project plans to adapt to evolving environmental standards and tourist expectations while meeting specific milestones, such as the deployment of electric shuttles and the development of green lodging. Key stakeholders include local government, hospitality businesses, environmental groups, and the local community, all working together to balance tourism growth with ecological preservation.
- a) Predictive
 - b) Adaptive
 - c) Hybrid
 - d) Waterfall
6. Which of the following statements is true regarding project management frameworks and methodologies?
- a) They are the same thing and can be used interchangeably.
 - b) They provide a structured approach to managing projects, but do not offer any tools or techniques.
 - c) They are only useful for traditional project management approaches.
 - d) They provide a diverse set of tools and techniques for managing projects effectively and can be tailored to the specific needs and complexities of each project.
7. PM² is a Project Management Methodology (EU, 2023) developed by the European Commission, often characterized as descriptive, outlining project management methodologies, process inputs and outputs, and knowledge domains without prescribing specific application methods.
- a) True
 - b) False

8. Why is it important to develop a project charter document and stakeholder register at the beginning of the project?
 - a) To outline project objectives and timelines
 - b) To secure authorization to commence the project
 - c) To identify potential risks and mitigation strategies
 - d) To conduct final inspections and closure activities
9. Lean, founded on empiricism and Scrum thinking, is a lightweight framework that helps people, teams and organisations generate value through predictive solutions for complex problems.
 - a) True
 - b) False
10. In the planning phase, Roger's Resort conducted an Environmental Impact Assessment. How does this align with the Green Project Management P5 Standard's perspective on the environmental impact of products?
 - a) It directly corresponds to the 'Project Health and Safety' subcategory by ensuring safe tour operations.
 - b) It aligns with the 'Energy Conservation' element by identifying eco-friendly practices for tour operations.
 - c) It is part of the 'Biological Diversity' element by assessing and planning for the protection of ecosystems.
 - d) It serves the 'Transport' element by preparing to manage the environmental impact of necessary logistics.
11. In the context of integrating sustainability into tourism projects during the pre-initiation phase, how is strategic alignment best described?
 - a) It involves responsible management and oversight, focusing on long-term sustainability, ethical considerations, and promoting integrity, care, trustworthiness, and compliance.
 - b) The process of reducing operational costs to the minimum possible level to increase project profitability.
 - c) The process of aligning projects with an organisation's strategic objectives to ensure each project contributes towards achieving broader goals.

- d) Is about leveraging technology to ensure project success by considering the project's impact on society and the environment.
12. The three baselines that are used in hybrid projects are: scope baseline, schedule baseline and cost baseline.
- a) True
 - b) False
13. The Work Breakdown Structure is a hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables and is used in projects following the adaptive project management approach.
- a) True
 - b) False
14. What is the primary purpose of monitoring and controlling in the project management process?
- a) To develop project plans and documents
 - b) To allocate resources effectively
 - c) To ensure that project objectives are met and take corrective actions as necessary
 - d) To finalize project activities and release resources
15. Documenting lessons learned is a formal requirement only in projects that failed to meet their objectives.
- a) True
 - b) False

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Module 3: Creativity and Entrepreneurship in Sustainable Tourism Sector

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Module 3: Creativity and Entrepreneurship in Sustainable Tourism Sector

Introductory Video

Welcome to the module on "Creativity and Entrepreneurship in Sustainable Tourism Sector." In today's global landscape, sustainability has become a crucial aspect of every industry, especially in tourism. As the world recognizes the importance of preserving natural resources and cultural heritage, there is a growing demand for innovative and sustainable approaches within the tourism sector.

This module aims to explore the intersection of creativity, entrepreneurship, and sustainability within the tourism industry. We will delve into various concepts, strategies, and case studies to understand how creativity and entrepreneurial thinking can drive sustainable practices and foster responsible tourism development.

By the end of this module, participants will gain a deeper understanding of how creativity and entrepreneurship can contribute to the sustainable development of the tourism sector. They will be equipped with practical insights and strategies to implement innovative and responsible practices in their own tourism endeavors.

Let's embark on this journey together to explore the exciting nexus of creativity, entrepreneurship, and sustainability in the dynamic world of tourism.



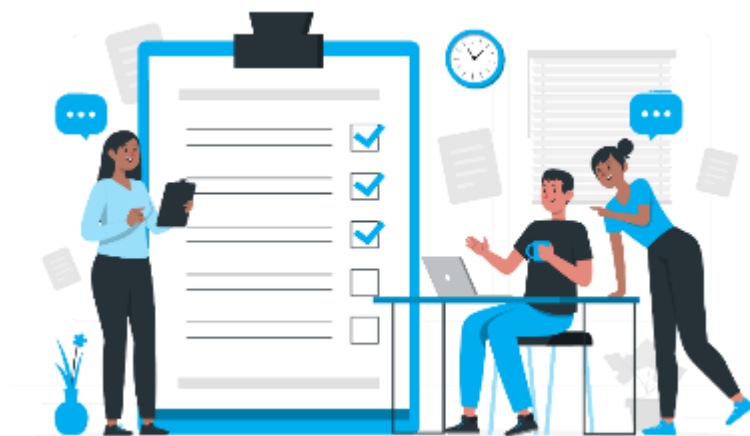
Lesson 1: Creativity and Innovation Essentials

Unit 1 Introduction to lesson 1

In the context of the sustainable tourism industry, project management stands as a linchpin for success, particularly in navigating the complexities of the evolving project economy. Understanding the basics of project management is essential for orchestrating sustainable initiatives within this dynamic sector. The project environment, characterized by diverse stakeholders, limited resources, and shifting regulatory landscapes, underscores the need for adept project management to effectively balance competing interests and drive progress towards sustainable outcomes. Recognizing why projects fail highlights the critical role of proficient project management in mitigating risks and fostering resilience. Moreover, delineating the differences between project, product, and event management elucidates the distinct approaches required for each endeavor, with project management focusing on temporary endeavors to achieve specific goals within predefined constraints, a vital distinction in steering sustainable tourism initiatives towards long-term viability and positive environmental and socio-economic impacts.

Figure 3.1

Introduction



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Unit 2 Creativity and Innovation Essentials

What is creativity?

Creativity is any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one. Output of the creative process is an idea, a product, or a solution to a problem.

Three reasons why people are motivated to be creative:

- need for novel, varied, and complex stimulation
- need to communicate ideas and values
- need to solve problems

Creative people (Csikszentmihalyi study):

- (1) produce works that are publicly recognized as creative, and
- (2) influence or affect their culture in some important way.

Characteristics of creative people:

- Crucial learning occurred elsewhere, either in college or through advanced training
- The capacity to experience “flow,” defined as the timeless and total involvement of individuals in the activity with which they are engaged.

Figure 3.2

Creativity



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Creative process models:

Systems view of creativity - creative person's relationship to the world - comprises of.

- (1) the creative individual (in sociocultural environ,new patter),
- (2) the creative domain (knowledge, mastery, specialisation),
- (3) field of practice (authorities, gatekeepers on selected filed).

Phase models of creativity - process of steps taken toward solving problems – (Marcu Runco)
6 stages.

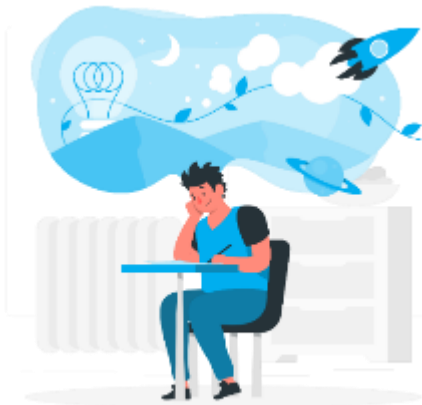
- 1) "orientation" (an intense interest and curiosity),
- 2) "incubation," (defining the problem)
- 3) "Illumination," (divergent thinking)
- 4) "verification," (evaluate own work and compare)
- 5) "communication" (publicize to experts)
- 6) "Validation" (available to society)

Business context of creativity: Innovation:

- Latin verb "innovare," meaning to renew.
- In business context, it is a process of renewing and updating a domain, product, or service by applying new processes, techniques, or successful ideas to create new value.

Figure 3.3

Creative process



Note. Source Storyset, n.d., Freepik, CC 2.0

Categories of Innovation:

- Process improvement and organizational innovation.
- Product development.
- Service innovation.
- Business Model Innovation.

Tools for Managing Innovation

- Diverse methods, including innovation processes, open innovation, customer co-creation, innovation labs, and innovation challenges.
- Essential to select the right tools for innovation projects and build an innovation culture.
- Supporting Innovation Culture in organisation:
- Implementation of innovation processes and culture supported by appropriate
- Overcoming barriers to creativity and innovation is crucial.
- Establishing a positive culture ensures employee support with motivation and enthusiasm.

Figure 3.4

Innovation



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 3 Question

Figure 3.5

Question



Note. Source Storyset, n.d., Freepik, CC 2.0

Which one concept does not fit in Marco Runco's six stages phase model of creativity?

- Communication
- Incubation
- Prototyping
- Verification*
- Orientation
- Validation

Unit 4 Creative thinking

What is creative thinking?

Creative thinking is the ability to come up with innovative ideas, solutions or perspectives.

It involves breaking away from traditional thought patterns (thinking outside a box), exploring unconventional connections, and approaching problems with an open mindset (setting aside biases/assumptions).

Creative thinking includes the process of innovative problem solving, which consists of fact/data analysis, brainstorming ideas and collaboration.

- **Analysis** – ability to analyse data and facts aids the development of rational solutions and answers to problems. Analytical skills are especially useful in the first stages of creative thinking process – brainstorming and generating ideas.
Analytical skills include: research abilities, data analysis, interpreting, forecasting, communication;
- **Innovation** – ability to come up with something new. »Something new« in this context can mean experimenting with new methods and processes and finding new connections between already existing ideas, products or concepts.
Innovation skills include: brainstorming, imagination, critical thinking, willingness to take risks;
- **Collaboration** – ability to work with others towards the same goal, considering various viewpoints, ways of thinking or approaches.
- **Collaboration** skills include: communication (written/verbal), inclusivity, active listening, empathy, giving feedback;

Figure 3.6

Creative thinking



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How to build creativity

Although it may seem that creativity is something you are born with, creative thinking is in fact a skill, that can be developed over time. Building creativity can enhance the quality of one's work and have a significant impact on how we tackle challenging assignments.

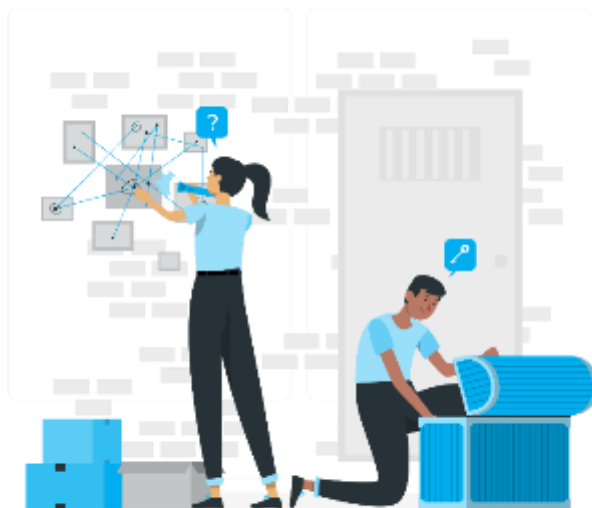
Strategies to help you build your creativity:

- **Inspiration:** Thinking creatively doesn't happen in a vacuum. It's critical to solicit the thoughts and opinions of others. Creative thinkers are observant of other people's perspectives and take into account many different points of view.
- **Challenge status quo:** Consider different scenarios and imagine your response. For example, if you are working on a project, consider what you would do if you had additional budget, more time or access to a different network of experts, as well as what you would do if you were short on resources, how would you address any crises that might occur. By imagining these numerous conceivable scenarios, you will be forced to solve problems and make adjustments for a variety of (quite possible!) events.
- **Inside the box:** While "thinking outside the box" is a key component of creative thinking, placing constraints on your problem-solving process might encourage more creative and original thinking. For instance, if tasked with creating a travel itinerary, the open-ended request might be challenging. However, if you're asked to design a weekend getaway with a budget constraint, transportation limitations, and a requirement to include a unique local experience, you're more likely to craft a distinctive and interesting plan.
- **Routine switch up:** Although routine can greatly increase productivity, it can also stifle innovation. Exercise switching up your routine. This could be anything as minor as the place where you are sitting while working or something more significant like the way you handle tasks. You'll be able to come up with innovative strategies to adjust to your new surroundings if you challenge yourself to do something unusual.
- **Feedback:** Receiving feedback from others is the best way to get better, and you don't need to hold a formal feedback session to accomplish this. Ask open ended questions while working with others to motivate curiosity rather than trying to find a predetermined response. For example, ask how they felt about your brainstorming leadership style and what would they have done differently.



Figure 3.7

Build creativity



Note. Source Storyset, n.d., Freepik, CC 2.0

Mindsets behind creative thinking

- **The Linear Mindset:**
Approaching problem-solving or planning in a sequential, step-by-step manner.
Key Point: The creative process involves non-linear thinking, iteration, and feedback loops, challenging the preference for linear methods.
- **The Benchmarking Mindset:**
Emulating competitors without truly understanding the roots of their success.
Key Point: Fixating on competitors can lead to imitation rather than learning, hindering the development of unique and innovative solutions.
- **The Prediction Mindset:**
Thinking in terms of short-term results and making upfront promises, often under pressure.
Key Point: Forcing predictions can constrain innovative thinking, as leaders may feel compelled to over-promise, risking under-delivery.
- **The Structural Mindset:**
Focusing on flattening organizational structures without addressing the complexity of creativity.

Key Point: Flattening structures is a simplistic approach; creativity requires more than changing boxes and arrows on an organizational chart.

- **The Focus Mindset:**

Prioritizing one or two projects for intense focus rather than multitasking.

Key Point: The myth of productive multitasking; creative breakthroughs often result from focused efforts with occasional breaks for perspective.

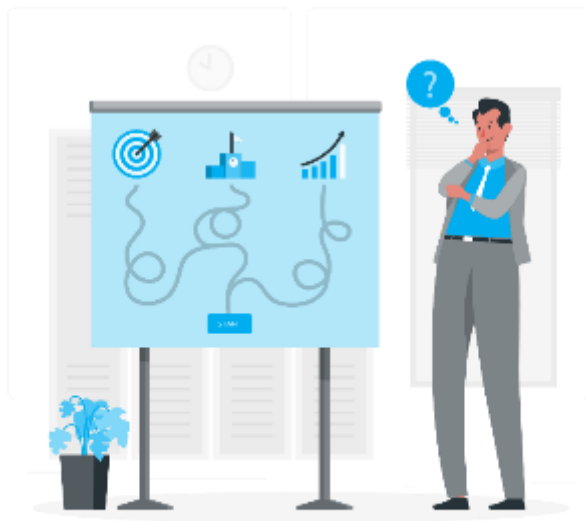
- **The Naysayer Mindset:**

Overly critical perspectives that block ideas by highlighting potential failures.

Key Point: Constructive evaluation is essential, but relentless negativity impedes creative thinking; embrace a premortem approach for effective assessment.

Figure 3.8

Paths for creative thinking



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 5 Creative thinking exercises

Watch Video: https://www.youtube.com/watch?v=pfg9a9diN40&ab_channel=Visme

Unit 6 An exercise to improve creative thinking

Paper clip test

Here how to test your imaginative or creative capacity using this simple method:

Come up with as many different shapes and ways to use a paperclip.

Figure 3.9

Paper clip



Note. Source Storyset, n.d., Freepik, CC 2.0

How many shapes or ways can you come up with?

Figure 3.10

Paper clip shape



Note. Source Freepik, CC 2.0

The majority of individuals can generate 10 to 15 applications, while a proficient "divergent" thinker can produce approximately 200 applications (assuming time constraints are not a concern). Engaging in the paperclip test regularly serves as an excellent means to hone divergent thinking abilities or as a preliminary exercise before a productive creative thinking or brainstorming session.

Unit 7 Development of ideas

What is idea development?

The methodical process of idea development/optimization involves determining the precise components of a concept that have the biggest impact in order to narrow down a pool of ideas.

This process consists of putting various methods of idea exploration into practice and creating solutions that best address the issue in the most efficient way.

Idea development allows you to create concepts that can be implemented in real-world circumstances, in order to meet people's needs and assist their problem solving.

Figure 3.11

Idea development

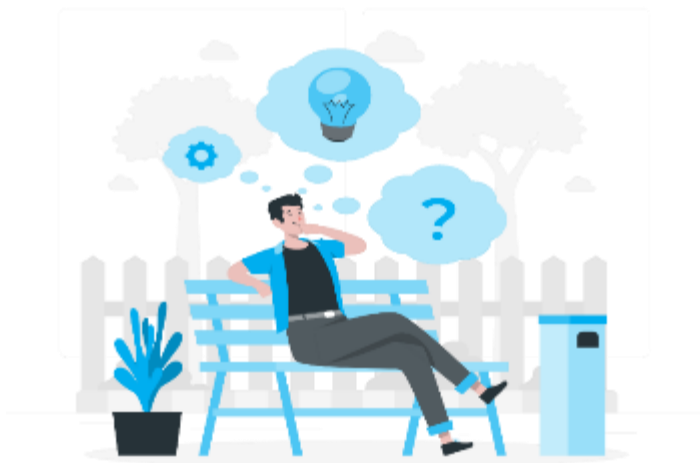


Note. Source Storyset, n.d., Freepik, CC 2.0

Stages of idea development

Figure 3.12

Idea development



Note. Source Storyset, n.d., Freepik, CC 2.0

1. Inspiration phase

The main point of this phase is coming up with an idea – usually, there is more than one idea to consider. In order to choose the best idea (most relevant for a situation), you can use some of the well established guiding tactics:

- Brainstorming
- Mind mapping
- SCAMPER technique
- Reverse thinking
- Collaboration

2. Incubation phase

This is the phase for planning how to develop an idea – thinking about the best methods and techniques to use in order to bring your idea to life and determining which opportunities, industries or contexts are the most suitable to put the idea into practice.

Every idea has to have an execution strategy, that keeps intended target audience in mind and serves as a guide throughout the development. Plan is supposed to aid you in the efforts to bring the idea to the market and to engage the chosen audience/target group.

3. Illumination phase

This is the phase for processing, evaluating and assessing ideas in reference to the execution strategy (plan), that was developed in the incubation phase. During this phase, you are able to identify any potential weaknesses and shortcomings and begin to look for the most effective ways to address them. It is also a time to start thinking about possible ways to implement the idea and search for the suitable tools to aid you in this attempt, keeping in mind your goal and objectives.

4. Implementation phase

This is the phase in which we put our ideas into practice. This entails putting your thoughts into action by taking some concrete steps, such as testing your idea and process of reviewing and refining it. It might also be necessary to look for resources and assistance, like financing, partnerships, or mentorship.

Figure 3.13

Idea development



Note. Source Storyset, n.d., Freepik, CC 2.0

A developed idea has the following indicators:

- Clarity – clear understanding of the idea, the problem it solves and benefits it has to others;
- Feasibility – clear understanding of required resources, potential risks, and challenges for idea implementation;
- Action plan - concrete plan for implementation,,: timeline, budget, and necessary resources;
- Evidence – supportive evidence, such as market research, customer feedback, or prototype testing;
- Passion – a deep commitment and excitement about transforming the idea into reality;

Figure 3.14

Idea development



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 8 Activity: Anyone can create ideas

Watch videos:

- https://www.youtube.com/watch?v=mtn31hh6kU4&ab_channel=TEDArchive
- https://www.youtube.com/watch?v=yAidvTKX6xM&t=2s&ab_channel=InvestisDigital%2CFormerlyVerticalMeasures
- https://www.youtube.com/watch?v=NugRZGDbPFU&ab_channel=RiverheadBooks

Unit 9 Brainstorming & Mind mapping

What is brainstorming?

Figure 3.15

Design teams



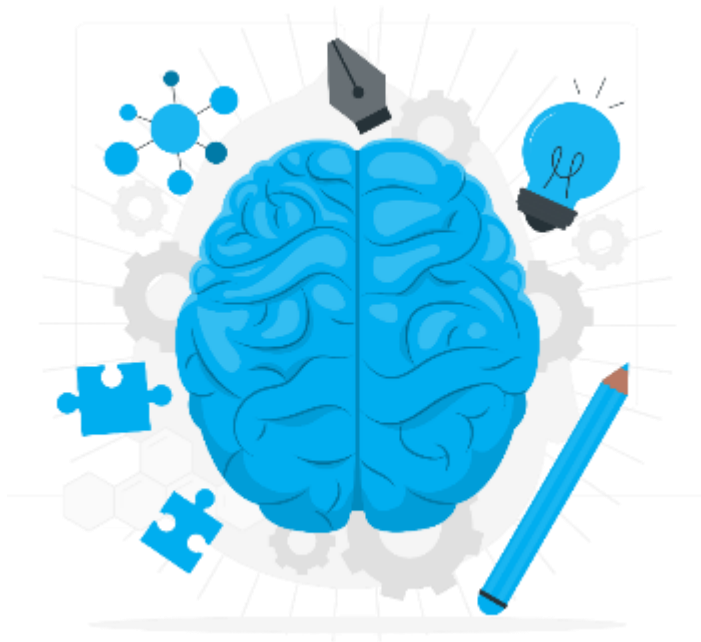
Note. Source Storyset, n.d., Freepik, CC 2.0

Design teams utilise brainstorming as a technique to come up with solutions for well-defined design problems. Teams use techniques like "How Might We" inquiries to approach problems in a regulated and creative setting. They generate a wide range of ideas and make connections between them to identify possible answers.

Participants should refrain from endorsing or criticising ideas during brainstorming sessions, since judgement and analysis might hinder creativity and stifle the generation of ideas. The goal is to open up new possibilities and think beyond the perceived problem limits.

Figure 3.16

Brainstorming



Note. Source Storyset, n.d., Freepik, CC 2.0

What should a brainstorming session look like?

Structured Constraints:

- Brainstorming requires adherence to certain rules and a designated moderator.
- The rules will provide necessary constraints for a productive session.

Time Management:

- Set a time limit of 15–60 minutes and adjust based on the complexity of the problem.
- Participants should focus on a sharply defined question, plan, or goal to stay on topic.

Positive Atmosphere:

- Emphasize a judgment-free environment; no negativity or criticism is allowed, even through body language.
- Encourage the generation of weird and wacky ideas, maintaining an open and inclusive atmosphere.

Quantity Over Quality:

- Prioritize quantity, understanding that the sifting-and-sorting process for quality comes later.

- Quantity is seen as a catalyst for generating high-quality ideas.

Collaborative Expansion:

- Promote building on others' ideas through association and expansion.
- Encourage the use of "and" instead of "but" to foster a collaborative environment.

Visual Representation:

- Utilize diagrams and Post-Its to enhance visualization and bring ideas to life.
- Visual aids help participants see concepts from different perspectives.

Focused Conversations:

- Maintain one conversation at a time to ensure concrete results and demonstrate respect for all ideas.
- This approach aids in staying on track and fostering a focused, respectful brainstorming session.

Figure 3.17

Brainstorming session



Note. Source Storyset, n.d., Freepik, CC 2.0

What is mind-mapping?

A mind map is a graphic representation of tasks, words, concepts, or items interconnected and organized around a central idea or subject. It employs a non-linear layout, enabling users to construct an intuitive framework centered on a core concept. Transforming tedious information into a vibrant, well-organized diagram, a mind map aligns with the natural cognitive processes of the brain.

Think of a mind map like a city map: the city center symbolizes the main idea, primary roads emanating from it depict key thoughts, and secondary roads or branches represent supporting thoughts. Special images or shapes serve as landmarks, for ideas that are of particular interest.

Figure 3.18

Mind mapping



Note. Source Storyset, n.d., Freepik, CC 2.0

How to create a mind map?

1. **Define the central topic** – put the problem you are trying to solve in the center of the page.
2. **Create the first level topics** – draw the main branches out of the center, to represent the main big categories that are related to your central topic.
3. **Expand the branches** – for each of your main branches (big categories, fundamental ideas) draw additional branches to break down the problem into manageable parts. Rather than writing whole sentences and cluttering the map with a lot of text – use only keywords.
4. **Add images/drawings** – it may be helpful to use graphical representation for key concepts in order to make the stand out and be more memorable.

There are no strict rules to creating a mind map. Use these simple rules as guidelines, experiment with them and find what works best for you and your team.

Unit 10 Video on How to create a mind map

Watch videos:

- https://www.youtube.com/watch?v=3iFH717xb90&ab_channel=BrainFreeze
- https://www.youtube.com/watch?v=wLWV0XN7K1g&ab_channel=SusanGregory

Unit 11 Exercise: Create your own mind map

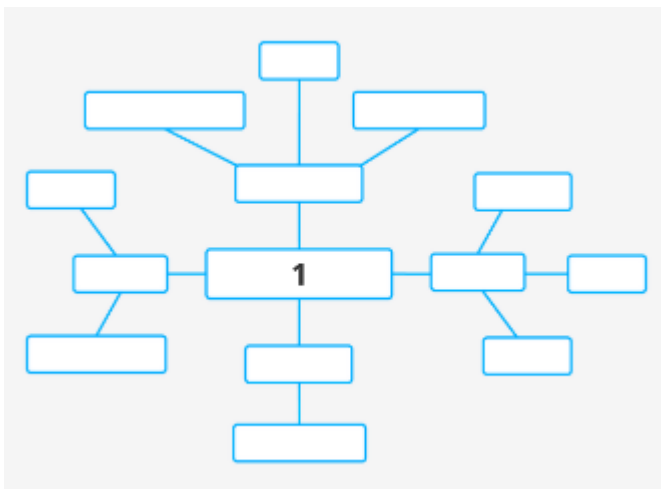
1. Start with the main idea.

Identify the core purpose of your mind map and jot it down. As mind maps grow outward from the center, your central idea becomes the focal point. It could be:

- A problem you're tackling
- The project you're brainstorming
- A complex concept you're learning

Figure 3.19

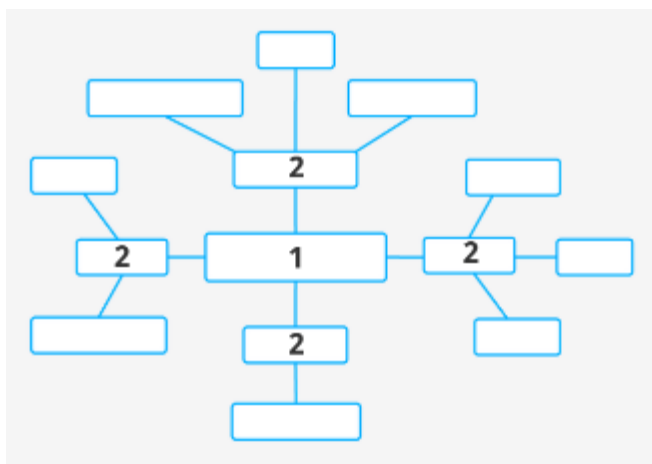
Mind mapping – step 1



Note. Source Storyset, n.d., Freepik, CC 2.0

2. Add branches to outline basic subtopics.

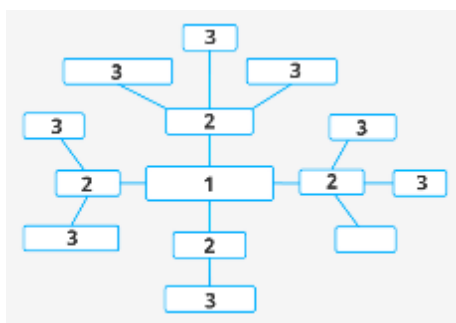
These branches will help organize information, focusing on keywords and short phrases rather than detailed content.

Figure 3.20*Mind mapping – step 2*

Note. Source Storyset, n.d., Freepik, CC 2.0

3. Explore topics by adding additional branches

Continue adding shapes until all valuable information is included. Organize information with the most important details closer to the main concept shape, and more specific details farther away.

Figure 3.21*Mind mapping – step 3*

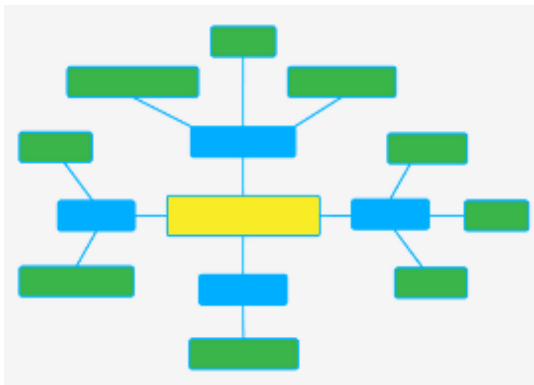
Note. Source Storyset, n.d., Freepik, CC 2.0

4. Add images and colors to maintain organization in your mind map.

Standard colors represent different levels of thoughts. Additionally, incorporating images aids visualization and memorization of various parts of your mind map. Images can also be used to connect shapes instead of using traditional box shapes.

Figure 3.22

Mind mapping – step 4



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 12 Innovation Phases

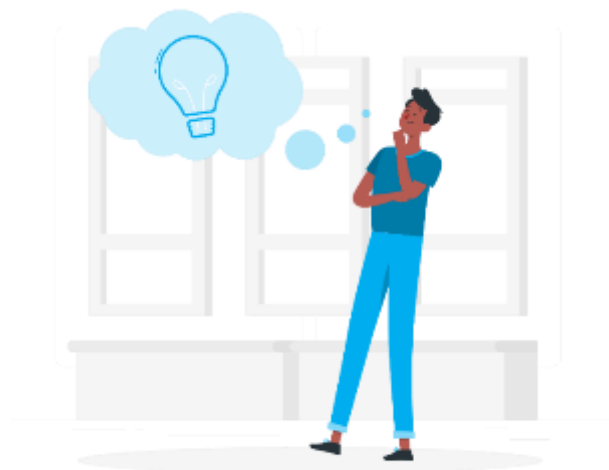
Innovation phases

Innovation is a creative process of developing and implementing a novel idea through fostering entrepreneurship.

Addressing the challenges of innovation, characterized by uncertainty and complexity, demands a structured methodology. A practical innovation process, balancing creativity and focus, becomes imperative for the development and implementation of new products in the face of risk and uncertainty.

Figure 3.23

Innovative thinking

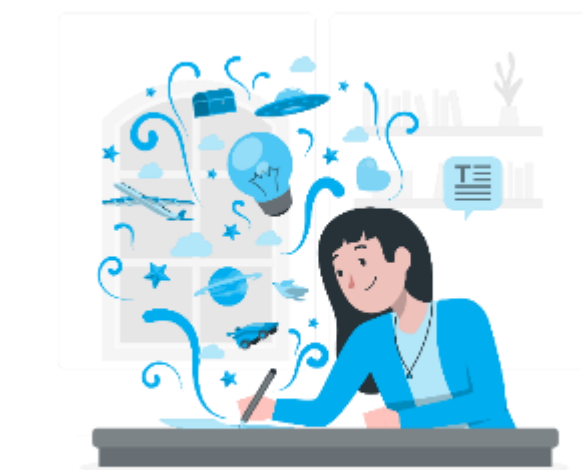


Note. Source Storyset, n.d., Freepik, CC 2.0

The 4 phases of innovation

Figure 3.24

Systematic innvation



Note. Source Storyset, n.d., Freepik, CC 2.0

1. Ideas

The innovation process initiates by identifying innovative potentials and deriving ideas, followed by their evaluation. Innovation potentials can stem from unmet customer needs, customer problems, potential new markets, or novel technical solutions.

There are two different approaches to finding innovation potentials:

- Targeted search – search is based on an innovation strategy, relying on various methods to find ideas internally and externally (workshops, idea competitions);
- Random finding – randomly encountering and discovering potential ideas (in line with company suggestions, customer feedback etc.);

2. Concept

First phase concludes with a concrete idea, with objectives and expectations. Afterwards comes the process of extensive analysis in order to collect as much data and information as possible to further process the idea, such as market and customer requirements, market potential, competition, feasibility, market barriers to entry, laws and standards. Analyzing customer needs is the most important part - understanding their needs and problems you can solve for them.

A concept review is required before the idea or concept is released for the following stage. It consists of a complete analysis of the needs for the solution, execution, and marketing. Special consideration is given to the solution concept, which is best assessed by prospective clients and users. Iterative approach is recommended for this phase - first rough concepts are assessed and continuously developed through feedback loops, until we reach the desired result.

3. Solution

In Phase 3, the objective is to develop a market-ready solution through prototype construction, and comprehensive testing, including real-market tests for thorough feedback. Upon reaching maturity, the solution proceeds to implementation and marketing, with ongoing refinement of implementation and marketing concepts. Key outputs from this phase typically include technical specifications, Computer-Aided Designs (CADs), and application and production know-how.

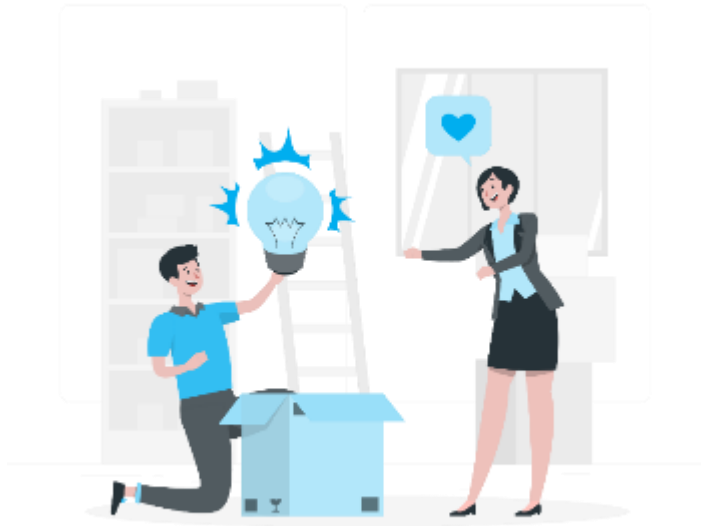
4. Market

The final phase centers on delivering the product to potential customers. This involves ensuring physical product availability through defined procurement, production, and logistics concepts. Simultaneously, customer interest is stimulated and met through the activation of marketing and sales channels. Internal sales teams are trained to effectively bring the products to customers. This collective effort is encapsulated as innovation marketing.



Figure 3.25

Ideas to product management



Note. Source Storyset, n.d., Freepik, CC 2.0

After the innovation phases, product management takes over for product lifecycle management, incorporating continuous evaluation and market analysis based on customer feedback and quantitative market studies. Utilizing tools such as the renowned 4Ps of innovation, measures are implemented to enhance sales, margins, and customer satisfaction.

Figure 3.26

Product management



Note. Source Storyset, n.d., Freepik, CC 2.0

4Ps of innovation

1. Product innovation

Product innovation is the most commonly associated type of innovation, often synonymous with people's perception of innovation. It encompasses modifications to the products or services offered by a startup or organization. Product innovation can involve alterations in the design of existing products or a complete transformation of the product or service itself.

2. Process innovation

Process innovation centers on revitalizing operational processes and is typically internal to a company. It involves implementing innovations that help companies align their processes in a customer-centric manner, ensuring long-term business success. The key elements of processes include process deliverables, process flow, process management, and technologies.

3. Position innovation

Positioning innovation involves repositioning a product or service, presenting it in a new market or with a fresh perspective. It serves as the foundation for other types of innovation, creating the space needed for novel initiatives. The initial step in introducing something new is establishing a unique position, and position innovation achieves just that. Innovations centered

around positioning also involve transforming how a particular process or product is perceived or utilized.

4. Paradigm innovation

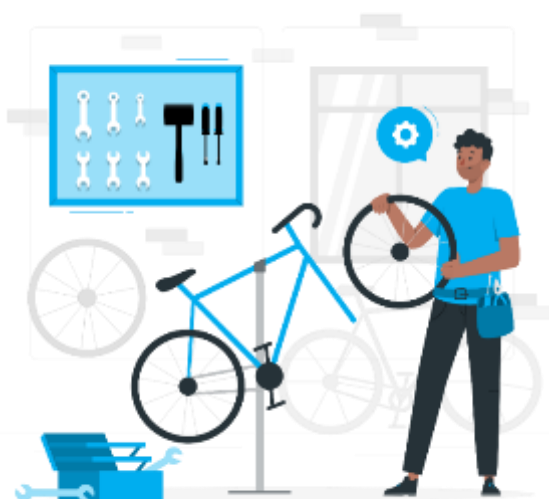
Paradigm innovation involves a shift in the fundamental theoretical model, disrupting the established business status quo. It is not only the most common method of innovation but also the most impactful. Paradigm innovations go beyond improving existing products; they fundamentally alter what is possible within that innovation space, contributing significantly to key economic development.

Unit 13 Exercise on completing missing words

Missing words on creative thinking exercises

Figure 3.27

Missing parts (words)



Note. Source Storyset, n.d., Freepik, CC 2.0

Drag the words into the correct boxes within these sentences.

Creativity exercises improve your mental _____.

If you or your team have been working in the same field for a long time, you might use the same ideas _____. Creativity exercises help you discover entirely _____ to repetitive problems.

Some creativity exercises help develop your _____, allowing you to see objects, ideas and problems in a new way. This is highly beneficial when looking for a _____ to a _____.

Creativity exercises help individuals and _____ improve _____ skills like communication, problem-solving and unity.

Unit 14 Innovation Management

What is innovation management?

Innovation management, or an innovation management system, involves the process of overseeing new ideas from conception to realization. The approach comprises four key steps:

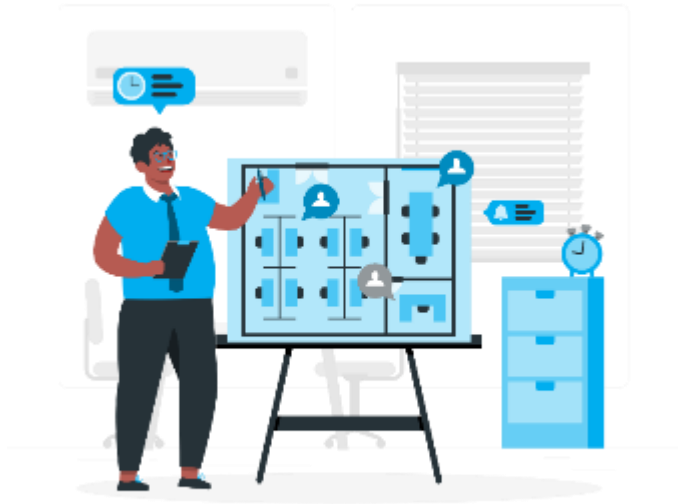
1. **Generating** - involves brainstorming and soliciting employee input to unearth hidden concepts.
2. **Capturing** - entails recording ideas in a shareable format with key stakeholders.
3. **Evaluating** - involves discussions and critiques of innovative ideas to assess their alignment with organizational needs.
4. **Prioritizing** - entails deciding which innovative ideas will be implemented to optimize time and resource allocation.

Innovation management aligns with high-level business objectives, generating substantial value. The process is reciprocal, with actions and practices stemming from innovation, responding to the organization's vision and challenges. Effective innovation management requires robust communication across all employee levels and a collaborative environment to uncover additional innovative ideas.



Figure 3.28

Managing innovation



Note. Source Storyset, n.d., Freepik, CC 2.0

Importance of innovation management

Companies that neglect innovation, regardless of their size or resources, face the risk of decline and obsolescence. Not only innovating but fostering a collaborative culture that encourages employees to contribute ideas and supports an entrepreneurial mindset is of vital importance. Without such a culture, employees may hesitate to share valuable insights.

Effective innovation management can lead to the discovery of new products, cost reduction, and significant process improvements. Failing to embrace innovation management puts organizations at risk of delivering outdated solutions, limiting their ability to stay competitive.

Figure 3.29

Innovation management in business



Note. Source Storyset, n.d., Freepik, CC 2.0

Key characteristics of innovation management

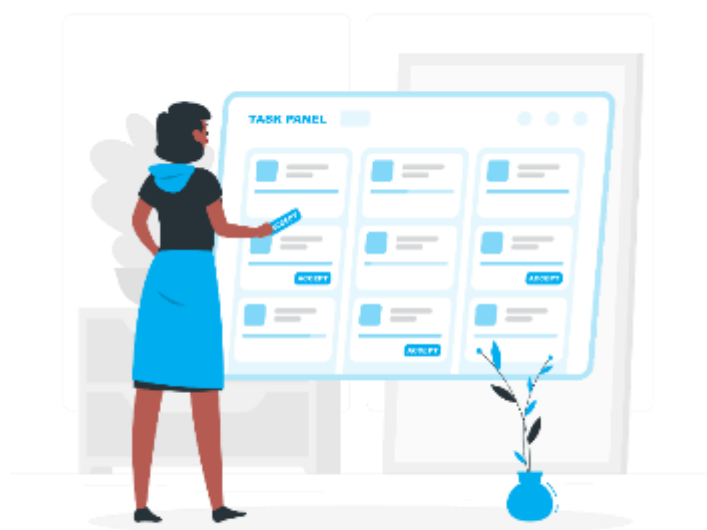
The four key pillars of innovation management are competency, structure, culture, and strategy, providing a comprehensive framework for organized innovation. Here's a closer look at each pillar:

1. **Competency** - focuses on the core competencies of the organization, distinguishing employee competencies from those of the overall organization and involves working with external partners, maximizing resource value, and setting concrete short-term and long-term goals. Key abilities include collaboration, resource optimization, and strategic management systems.
2. **Structure** - encompasses the systems and business processes within the organization, essential for effective innovation control. A well-designed structure empowers the organization to operate efficiently and generate powerful ideas.
3. **Culture** - culture can either enhance or detract from innovation success. Fostering pro-innovation culture consists of encouraging behaviors such as a meritocratic approach to idea evaluation, emphasis on speed to market, ongoing learning, and accepting failure as part of the process.

4. **Strategy** - long-term planning to achieve financial and organizational goals. A clear strategy allows confident launch of new ideas and informed decision-making. It guides resource allocation, adapting over time to shift resources towards developing new ideas.

Figure 3.30

Innovation management system



Note. Source Storyset, n.d., Freepik, CC 2.0

Different types of innovation

Open innovation

Open innovation is an approach that embraces the philosophy of welcoming ideas generated externally, as opposed to relying solely on internal sources within the company. This stands in contrast to closed innovation, which exclusively focuses on internal ideas. Open innovation can offer a significant competitive advantage by providing access to a broader flow of ideas, as well as new experts and teams to evaluate and implement these concepts.

Incremental innovation

Incremental innovation involves seeking opportunities within existing tools, markets, and business processes, resulting in a lower barrier to change. Due to its controlled nature and the ability to leverage existing resources, this method serves as a common starting point for many companies in their innovation journey.

Sustaining innovation

Sustaining innovation aims to enhance current processes without heavily investing in "reinventing the wheel." This approach focuses on refining and optimizing existing methods, often with the goal of maintaining efficiency and effectiveness.

Disruptive innovation

Disruptive innovation is a higher-risk approach that entails the use of new technologies or the creation of alternative solutions that are novel to both your company and often the broader market. This approach involves introducing groundbreaking ideas or products that can significantly alter the existing landscape.

Architectural Innovation

Architectural innovation involves taking a proven process or innovation from one area of your business and applying it across the architecture in various use cases. This approach seeks to leverage successful solutions from one context and adapt them to address challenges or opportunities in different areas within the organization.

Radical innovation

Similar to disruptive innovation, but going a step further by not only transforming existing industries but creating entirely new ones and shaping new consumer habits. This realm is often referred to as category design, emphasizing the creation of entirely novel product or service categories.



Figure 3.31

Innovation for common good



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 15 Exercise on completing missing words

Figure 3.32

Drag the elements (words)



Note. Source Storyset, n.d., Freepik, CC 2.0

Drag the words into the correct boxes

_____ management is a business discipline that aims to drive a sustainable innovation process or _____ within an organization.

Oftentimes, these innovation management initiatives utilize a _____ of change to transform _____.

With _____ transformation, organizations are faced with the need to innovate more and innovate quickly. Innovation drives business growth and helps organizations stay ahead of their _____.

Innovation management helps generate new _____ and creates new _____ designed for the changing _____. Proper innovation management also boosts customer _____ and employee _____.

Unit 16 The Innovation Paradox

The 'innovation paradox' concept encapsulates a set of puzzling observations indicating that substantial investments in innovation may result in either insignificant or undesirable economic outcomes. The paradoxical nature of these observations lies in their contradiction to conventional expectations.

The innovation paradox posits a counterintuitive reality, suggesting that the optimal time to invest in strategic innovation is precisely when an organization feels the least need to do so. This occurs during periods of robust growth, strong brand and product performance, and heightened confidence.

The paradox becomes evident when a brand's performance plateaus or declines due to shifting market forces. Unfortunately, the signs of an underperforming brand often trigger an organizational shift toward consolidation, leading to efforts to minimize negative impacts through budget constraints, operational tightening, and redirecting investment from other projects, that are considered non-core.

During this phase, someone may suggest innovation as a strategic response to the changed market. However, the company's new cost-cutting and risk-averse environment often hinders the success of an innovation program, resulting in weak outcomes, diminished confidence in the innovation process, and potentially further budget constraints.

In contrast, companies that comprehend the paradox tend to heavily invest in innovation when resources and confidence are high, thus future-proofing against potential downturns or major market shifts.



Figure 3.33

Unsuccessful innovation



Note. Source Storyset, n.d., Freepik, CC 2.0

Innovation paradoxes

- **Big ideas are desired but small ones pay the bills**
While big, disruptive ideas capture attention, small, incremental innovations often sustain financial success. Innovation legends are often associated with transformative ideas that reshape industries. Yet, the majority of corporate innovations driving substantial growth are incremental, building upon existing products and services. Both types of innovation, transformative and incremental, play essential roles in driving overall progress.
- **Small ideas pay the bills, but companies need big, disruptive ideas too**
While small, incremental ideas contribute to short-term success, organizations relying solely on them may overlook disruptive innovations crucial for long-term viability.

Figure 3.34

Big ideas



Note. Source Storyset, n.d., Freepik, CC 2.0

- **Process creates discipline, but can hinder good ideas**
An effective innovation process is crucial, but if it becomes overly cumbersome, it may discourage employees from sharing ideas, and the process itself might stifle innovative concepts.
- **Internal communication is crucial for innovation, but maintaining confidentiality is essential to protect ideas from external competitors**
Effective leaders understand the importance of collaboration and information sharing in innovation while also taking measures to prevent the sharing of secrets outside the organization.

Figure 3.35

Internal communication for innovation



Note. Source Storyset, n.d., Freepik, CC 2.0

- **Idea that fails in one year can succeed in another with different circumstances**
Effective leaders recognize that the timing of ideas is crucial, and an idea that fails in one year can succeed in another with different circumstances or adjustments. They avoid dismissing ideas based on past failures, opting for a mindset of continuous improvement and willingness to try again with enhancements.
- **Impostor syndrome and growth mindset**
Innovators frequently grapple with imposter syndrome, a sense of inadequacy and self-doubt. Effective leaders reshape colleagues' perspectives on self-doubt, framing it as part of a growth mindset—an acknowledgment that not knowing everything is an opportunity to learn and grow.

Figure 3.36

Impostor syndrome



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 17 Exercise with multiple choice questions

Figure 3.37

Multiple choice questions quiz



Note. Source Storyset, n.d., Freepik, CC 2.0

1. Drag the words into the correct boxes:

_____ management is a business discipline that aims to drive a sustainable innovation process or _____ within an organization.

Oftentimes, these innovation management initiatives utilize a _____ of change to transform _____.

With _____ transformation, organizations are faced with the need to innovate more and innovate quickly. Innovation drives business growth and helps organizations stay ahead of their _____.

Innovation management helps generate new _____ and creates new _____ designed for the changing _____. Proper innovation management also boosts customer _____ and employee _____.

2. Drag the words into the correct boxes:

Broadly speaking, _____ can be incremental, breakthrough or disruptive.

Incremental: In an era where businesses are required to constantly reinvent themselves, incremental innovation helps them thrive by * _____* current products, services, processes or methods.

Breakthrough: A breakthrough innovation refers to * _____* that can boost the level of a product or service, within an * _____*, ahead of its competitors.

Disruptive: Any ideas that are capable of * _____* changing the * _____* after being implemented are disruptive innovations.

Unit 18 Video on The Innovator's Dilemma

Watch videos:

- https://www.youtube.com/watch?v=yUAtIQDllo8&ab_channel=SnackableIdea
- https://www.youtube.com/watch?v=RQSG_d0mmf0&ab_channel=StartupGrind



Unit 19 Exercise with True or False questions quiz

Figure 3.38

True/false questions quiz



Note. Source Storyset, n.d., Freepik, CC 2.0

Creativity and Innovation Essentials Quiz

1. Creativity is any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one
True / False
2. Input to the creative process is an idea, a product, or a solution to a problem.
True / False
3. Three reasons what motivates people to be creative are:
 - need for novel, varied, and complex stimulation
 - need to communicate ideas and values
 - need to solve problemsTrue / False
4. According to Csikszentmihalyi study, creative people are often lazy.
True / False
5. One of the characteristics of creative people is that their crucial learning occurred in a large family.
True / False

6. Establishing a positive organisational culture ensures employee support with motivation and enthusiasm.
True / False

Unit 20 Innovation in sustainable tourism

Sustainable tourism

Figure 3.39

Sustainable vision



Note. Source Storyset, n.d., Freepik, CC 2.0

Sustainable development, a continually evolving concept, involves meeting present needs without compromising the well-being of future generations. In the context of tourism, sustainable development serves as the foundation for shaping the tourism product, giving particular attention to the local community and environmental management.

Sustainable tourism, consequently, is identified as a type of tourism closely linked to the residents' quality of life and the visitors' quality of experience. The emphasis is on creating a tourism model that aligns with environmental preservation and community well-being.

Figure 3.40*Tourism industry*

Note. Source Storyset, n.d., Freepik, CC 2.0

In the tourism industry, innovation plays a crucial role in differentiating and enhancing the competitiveness of a destination. We can define this innovation as the application of new processes, organizational methods, and the introduction of new services or novel ways of providing existing services at a destination. Despite the significance of innovation, studies highlight a relative lack of it in the tourism industry, especially compared to other sectors. However, the adoption of innovative practices is essential for generating added value and promoting sustainable development.

In the tourism sector, creating innovative applications involves complex processes. There is a recognized need for more comprehensive research on tourism innovation, both theoretically and empirically.

Figure 3.41

Tourism innovation and marketing



Note. Source Storyset, n.d., Freepik, CC 2.0

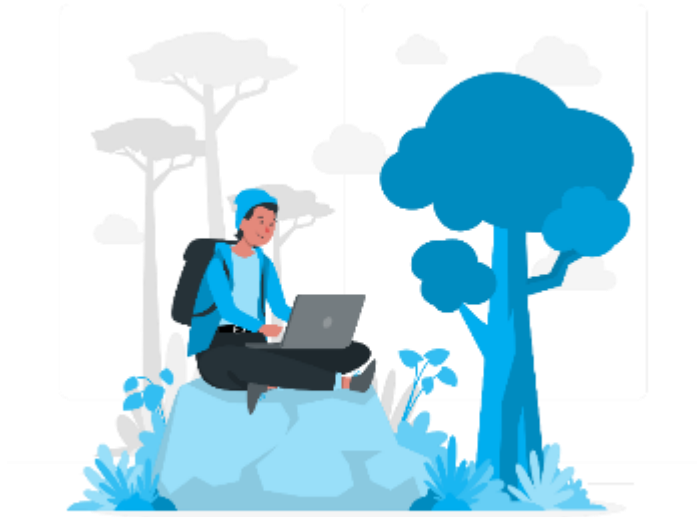
Achieving social and sustainable innovations in tourism destinations requires new planning, management structures, and organizational practices, aligning with local resources, collective community interests, and sustainable development principles.

To effectively realize these innovations, tourism management and development organizations should involve society actively in destination planning and implementation, ensuring that both residents and businesses derive benefits from tourism.

Consequently, strategies for tourism development and planning should prioritize innovation in managing relationships between regional tourism destinations and local stakeholders.

Figure 3.42

Planning sustainable tourism development



Note. Source Storyset, n.d., Freepik, CC 2.0

Good practices in sustainable tourism

Regenerative tourism

Tourism, by its nature, often carries negative environmental impacts and can be extractive when not well managed. Sustainable tourism typically aims to maintain existing tourism activities while minimizing environmental damage and negative impacts on host communities. In contrast, regenerative tourism takes a holistic approach, leveraging nature's principles to actively restore degraded environments and uplift host communities. The goal is not just to sustain but to actively contribute to the flourishing of both the environment and the local communities involved.

Figure 3.43

Regenerative tourism



Note. Source Storyset, n.d., Freepik, CC 2.0

Transformational travel

Transformational travel is an intentional approach designed to support travelers in learning, and growing into new ways of engaging with the world. It encourages mindfulness about travel choices, consumption habits, and the impact on destinations. This transformative approach inspires travelers to be more conscious of their journey, consumption patterns, and how they contribute to and engage with the places they visit.

Figure 3.44

Transformational tourism



Note. Source Storyset, n.d., Freepik, CC 2.0

Destination stewardship

Destination stewardship, as defined by the Global Sustainable Tourism Council, is a collaborative process involving local communities, governmental agencies, NGOs, and the tourism industry. This multi-stakeholder approach aims to preserve the cultural, environmental, economic, and aesthetic integrity of a country, region, or town. The focus is on safeguarding the qualities that make a place not only a great destination but also a wonderful place to live. It emphasizes the importance of maintaining the intrinsic appeal of a location while fostering sustainable tourism practices.

Figure 3.45

Destination based tourism



Note. Source Storyset, n.d., Freepik, CC 2.0

Nature-based solutions

Nature-based solutions for urban destinations involve utilizing natural elements to address climate change, protect biodiversity, and enhance human well-being. These solutions often include the incorporation of street trees, green roofs, green walls, and green spaces within urban environments. These approaches not only contribute to climate resilience and biodiversity conservation but also enhance the overall quality of urban living by promoting greenery and natural elements in built environments.

Figure 3.46

Nature based tourism



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 21 Case study of Innovation in sustainable tourism

This chapter contains a case study related to the innovation in sustainable tourism. It describes the case, the processes, the problems and solutions.

Albergo Diffuso (scattered hotel)

The idea of a scattered hotel – albergo diffuso has been developed in Italy in 1980. Albergo Diffuso represents a sustainable tourism model, which is grounded in local resources, committed to preserving local identity, and aims at the integration of tourist activities with territorial growth and landscape conservation.

Model is based on the following key requirements:

- Unitary management
- Housing units are located close together in different buildings in the proximity of the city/village center;
- Distance between housing units and communal areas is no more than 200 meters;
- Presence of living community;
- Local crafts and arts are close at hand;

- Surrounded by authentic environment;
- Recognition of services offered;
- Integrated management that maintains the style and culture of the territory,

The innovation in the Albergo Diffuso (AD) model stems from the engagement of diverse stakeholders operating under a unified management. This collaborative approach aims to enhance the unique features of the region, including culture, history, traditions, food products, and scenic beauty, while minimizing environmental impact.

Even with separate ownership, the integrated management ensures a cohesive service that brings together the strengths of various contributors for a comprehensive and sustainable hospitality experience.

Figure 3.47

Decentralised, scattered hotels



Note. Source Storyset, n.d., Freepik, CC 2.0

In essence, the Albergo Diffuso (AD) aligns seamlessly with the preferences of the "third-generation tourist," emphasizing the desire for meaningful connections not only with fellow guests but predominantly with the local residents. Operating as a virtual service network, the AD model not only stimulates territorial development but also fosters inter-organizational cooperation.

Rooted in principles such as environmental respect, preservation of local culture, community engagement in tourism activities, and equitable distribution of social and economic benefits, the AD model exemplifies a holistic and sustainable approach to hospitality.

The Albergo Diffuso Borgo di Sempronio, situated near the village of Sempronio Maremma in the woodlands of Mount Amiata, epitomizes the philosophy of diffused hospitality. AD is located in the village center in various historical buildings, where the interiors seamlessly blend traditional Tuscan elements with contemporary features. The communal areas, including an old mill transformed for wine and oil tasting, reflect the commitment to preserving local traditions.

Borgo di Sempronio collaborates with local farmers and restaurants with the aim to rediscover traditions, protect the natural territory, and promote sustainable, multifunctional, and biodiversity-conscious food production. Hotel offers free bikes for adults and children who want to explore and discover local landscapes and offers a variety of other activities, such as nordic trekking, archery, cooking and art lessons, spas and winetasting tours.

The Albergo Diffuso (AD) distinguishes itself in the tourist market by incorporating a set of unique features that position it as a competitive player. Simultaneously, the AD model contributes to promoting sustainable economic development in the territory, where it operates.

This model of hospitality is described as the "engine" of territorial development, leveraging both public goods (such as natural resources, history, culture, and infrastructure) and private goods (including homes, businesses, and local production).

The success of the AD is closely tied to storytelling, offering tourists narratives about the land to enrich the social, historical, and artistic context. Establishing a positive relationship with the local community is emphasized as a critical factor for the success of the Albergo Diffuso.

Unit 22 Exercise with branching scenarios in sustainable tourism development

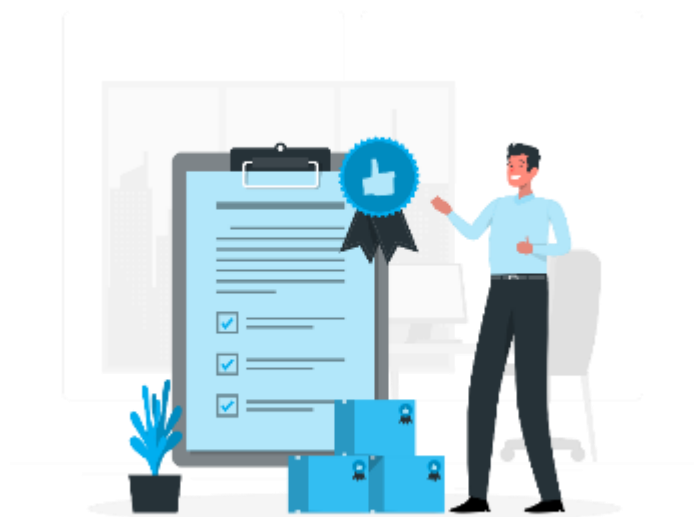
[Lumi File: M3-L1-U22-branching-scenarios.h5p](#)



Unit 23 Wrap – up & Conclusion

Figure 3.48

Congratulations on completing Lesson 1 of Module 3



Note. Source Storyset, n.d., Freepik, CC 2.0

In this lesson, we delved into fundamental concepts of creativity, creative thinking, and innovation. We gained insights into fostering creativity, generating new ideas, and effectively employing brainstorming and mind mapping techniques. Exploring the phases of the innovation process, we also covered the basics of innovation management. Additionally, we examined the innovation paradox and delved into the specific realm of innovation in sustainable tourism. The lesson concluded with a case study illustrating the application of these concepts in the context of sustainable tourism.

Lesson 2: Design thinking essentials

Unit 1 Introduction to lesson 2

Figure 3.49

Checklist



Note. Source Storyset, n.d., Freepik, CC 2.0

In this lesson we will be focusing on Design Thinking – firstly explaining what it is and why it is important. We will learn about the 5 steps of design thinking, delving deeper into each step throughout the lesson. For each of the steps, we will see some best practices and some methods and tools that may be useful for implementing the steps in the real world context.

We will learn about the design thinking frameworks and explore the connections between agile methodologies and design thinking and how they work together. We will also be introduced to the most common challenges that may arise in the process of design thinking and conclude the lesson with some real world examples of design thinking and see what it looks like in practice.

Unit 2 What is design thinking and why it is important?

Figure 3.50

Design and thinking



Note. Source Storyset, n.d., Freepik, CC 2.0

Design thinking is a customer-centric approach to innovation, emphasizing a deep understanding of customer needs, rapid prototyping, and the generation of creative ideas. This methodology transforms the development of products, services and processes by prioritizing decisions based on genuine customer needs rather than relying solely on historical data or instinctive judgments.

Figure 3.51

User-centric design



Note. Source Storyset, n.d., Freepik, CC 2.0

Design thinking originated as a response to the challenges faced by large corporations in generating creative and customer-centric solutions. At its essence, this methodology

incorporates a deep understanding of people's ethnographic background, behaviours, thoughts, motivations, habits, and needs. The design thinking process revolves around empathizing with users to uncover unmet needs and create innovative products and services.

Figure 3.52

Business optimisation



Note. Source Storyset, n.d., Freepik, CC 2.0

Design thinking places a strong emphasis on understanding context and maintaining continuous engagement with people to identify the problems to be solved, determine success metrics, and outline the emerging business landscape resulting from solving these problems.

Designers employ a wide array of tools to research problems, generate ideas, and explore use cases, offering valuable insights not only in product development but also across various domains like finance and customer service.

Design thinking integrates three key aspects: desirability, feasibility, and viability.

- **Desirability:** Focuses on what makes sense to people and is meaningful for them. It aims to understand and address the genuine needs, aspirations, and preferences of users or customers.
- **Feasibility:** Considers what is technically possible within the foreseeable future. This aspect ensures that proposed solutions are not only desirable but also realistic and achievable from a technological perspective.

- **Viability:** Explores what is likely to become part of a sustainable business model. It involves assessing the economic aspects, ensuring that the proposed solutions are not only desired by users and feasible technically but also make sense from a financial and strategic standpoint.

By combining these three elements, design thinking aims to create solutions that are well-aligned with human needs, technologically achievable, and economically sustainable.

Why invest in design thinking?

The process of deciding on and developing a new product can be a costly and complex endeavour. However, applying design thinking can result in significant cost savings. Design thinking, with its user-centric and problem-solving approach, is portrayed as a valuable methodology that directs attention to specific user needs. By doing so, it not only enhances the effectiveness of product development but also contributes to immediate cost savings, forming an integral part of the return on investment (ROI) of design thinking.

Figure 3.53

Business benefits



Note. Source Storyset, n.d., Freepik, CC 2.0

IEEE, the world's largest technical professional organization, in their article »Why software fails« estimated that financial investment in worldwide IT projects is approximately \$1 trillion annually. The article highlights that a considerable portion of project failures (among the top twelve reasons) can be attributed to issues related to user-centered design. Specifically, three aspects contribute to project failure: badly defined requirements, poor communication between customers and developers, and stakeholder politics. These challenges underscore the importance of effective user-centered design practices in ensuring the success of IT projects.

Investing in design thinking offers several compelling benefits for businesses:

- **Cost Savings:**
Conducting upfront User Experience (UX) research can save significant engineering hours and reduce overall development costs.

- **Customer Support Cost Reduction:**
Prioritizing UX can lead to a decrease in customer support costs as users encounter fewer issues with well-designed products.
- **Revenue Growth:**
Emphasizing UX is linked to increased revenue through factors such as:
- **Higher Conversion Rates:**
Well-designed experiences often result in more successful conversions.
- **Improved Customer Retention:**
Positive user experiences contribute to increased customer loyalty.
- **Competitive Advantage:**
Insisting on great UX gives your business a competitive edge, influencing overall market positioning and impacting the bottom line.

Design thinking does not guarantee better products or solutions by itself, but it fosters a culture of experimentation, data gathering, and analysis. It encourages designers to approach challenges with a fresh perspective. The transition from a "standard" model to one embracing user-centered design processes is a strategic move to invigorate organizations, make them more agile, well-organized, and creative.

Unit 3 Exercise with dragging words

Thoughts on Design thinking

Drag the words into the correct boxes to complete the short essay on design thinking.

Design thinking is an _____ centered on _____, emphasizing a thorough comprehension of their _____, quick prototyping, and the generation of inventive ideas. This methodology revolutionizes the creation of _____ by prioritizing decisions rooted in genuine customer needs rather than solely relying on historical data or instinctual judgments.

Design thinking encompasses three core elements:

- _____: Focuses on understanding and meeting the genuine needs, aspirations, and preferences of users or customers.
- Feasibility: Ensures proposed solutions are _____ and _____ within the foreseeable future.
- Viability: Evaluates the economic aspects to ensure proposed solutions make _____ for a _____ business model.

By integrating these aspects, design thinking aims to develop solutions that align with human needs, are technically feasible, and are economically sustainable.



Investing in design thinking offers significant _____ in the complex process of product development. With its _____ and problem-solving approach, design thinking addresses specific user needs, enhancing product development effectiveness and immediate cost reduction. As highlighted by IEEE, a substantial portion of the annual \$1 trillion investment in IT projects globally faces failure, often due to issues in user-centered design such as _____, communication gaps, and stakeholder politics. Effective user-centered design practices, therefore, are crucial for the success of IT projects, emphasizing the _____ of design thinking investment.

Figure 3.54

Happy thinking



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 4 Introduction to the 5 Steps of the Design Thinking

Design thinking is a non-linear, iterative process that can consist of three to seven different phases, depending on the context. In this unit, we will present the five-stage design thinking model proposed by the Hasso Plattner Institute of Design at Stanford.

Stage 1 – Empathize: research your user’s needs

- Gain a deep understanding of user needs.
- Conduct user-centric research and observations.
- Immerse yourself in users' physical environments for better insights.
- Develop empathy to set aside assumptions and comprehend real user needs.

Figure 3.55

Communicate and empathize



Note. Source Storyset, n.d., Freepik, CC 2.0

Stage 2 – Define: state your users' needs and problems

- Organize information from the Empathize stage.
- Define core problems in a human-centered manner.
- Create a problem statement aligned with users' needs.
- Transition towards ideation by questioning how to solve identified problems.

Figure 3.56

Lock down on definitions



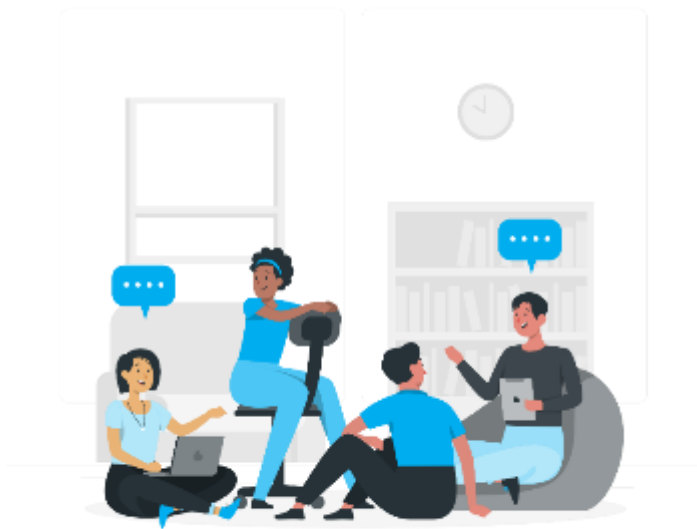
Note. Source Storyset, n.d., Freepik, CC 2.0

Stage 3 – Ideate: challenge assumptions and create ideas

- Generate ideas based on user-centric problem statements.
- Utilize various ideation techniques (e.g. brainstorm, create mind maps).
- Approach problems from different perspectives to innovate solutions.
- Choose ideation techniques for investigation, testing, and refinement.

Figure 3.57

Group ideation



Note. Source Storyset, n.d., Freepik, CC 2.0

Stage 4 – Prototype: start to create solutions

- Develop scaled-down versions of the product or features.
- Investigate key solutions from the ideation phase.
- Experiment and share prototypes within the team or small groups.
- Identify the best possible solutions for each problem.

Figure 3.58

Prototype



Note. Source Storyset, n.d., Freepik, CC 2.0

Stage 5 – Test: try your solutions out

- Rigorously test the complete product using the best solutions.
- Gain a deep understanding of the product and its users.
- Use results to redefine problems or iterate through the process.
- Achieve a comprehensive understanding to inform further refinements.

Figure 3.59

Testing the solution



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 5 Exercise on ordering words

Design Thinking steps

Order design thinking stages in ascending order according to Hasso Plattner Institute of Design at Stanford.

Prototype: start to create solutions

Ideate: challenge assumptions and create ideas

Define: state your users' needs and problems

Empathize: research your user's needs

Test: try your solutions out

Figure 3.60

Order the stages



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 6 The 1st step is to Empathize

Empathy serves as the core element in a human (customer)-centered design process. Empathize mode involves endeavors to fully understand individuals within the framework of

your design challenge, which means understanding how people engage in activities, the reasons behind their actions, their physical and emotional needs, their perspectives of the world, and topics that are significant for them.

In the realm of design thinking, the issues you aim to address are rarely personal; instead, they belong to a specific group of individuals. To create designs tailored to their needs, it is imperative to cultivate empathy for their identity and values.

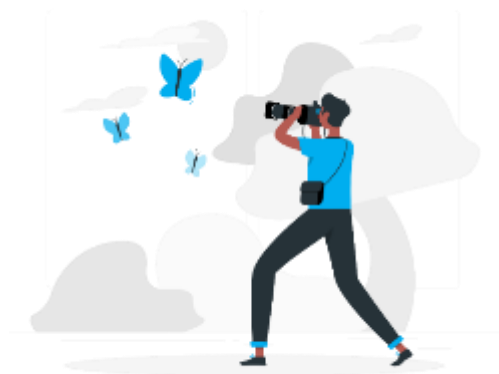
Implementation – how to empathize

To cultivate empathy, implement the following techniques:

1. **Observe:** Witness users and their actions within the context of their daily lives. Opt for observations in relevant environments, complementing interviews. Valuable insights often stem from recognizing disparities between verbal expressions and actions, or discovering ingenious workarounds that users may not explicitly mention.

Figure 3.61

Observation



Note. Source Storyset, n.d., Freepik, CC 2.0

2. **Engage:** While this technique is commonly referred to as 'interviewing,' it should resemble a genuine conversation. Prepare some questions as a starting point, but be flexible enough to let the discussion wander. Keep the conversation loosely structured, encourage individuals to share stories, and consistently try to explore further by asking "Why?" to unveil underlying meanings. Engagement can occur through brief 'intercept' encounters or more extended, scheduled dialogues.

Figure 3.62

Engage and refine ideas

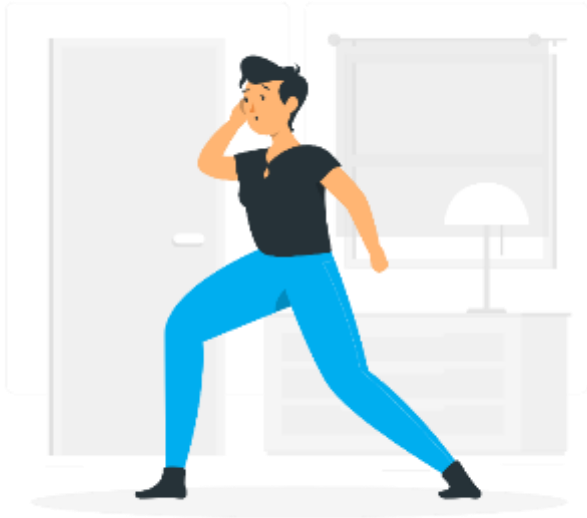


Note. Source Storyset, n.d., Freepik, CC 2.0

3. **Watch and Listen:** Combine observation and engagement for a comprehensive understanding. Request individuals to demonstrate how they accomplish a task, guiding you through the steps and elucidating their reasoning. Encourage them to verbalize their thoughts during a task or interaction. Conduct conversations in their natural environment, like their home or workplace, as artifacts in these settings often hold untold stories and can prompt insightful questions.

Figure 3.63

Listen



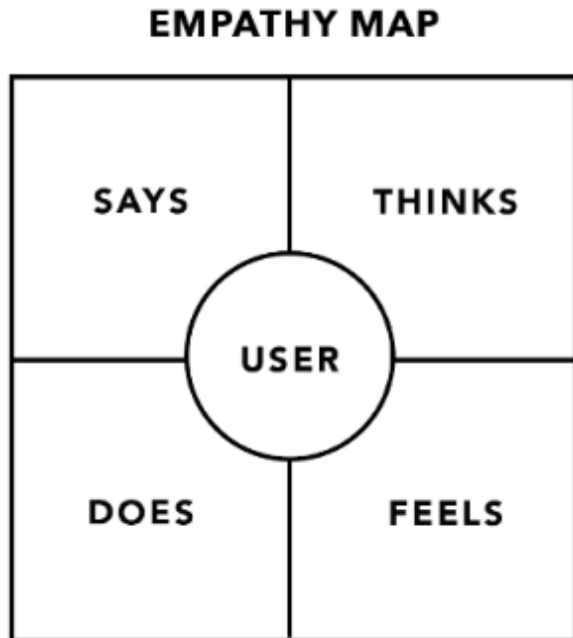
Note. Source Storyset, n.d., Freepik, CC 2.0

The primary objective of the Empathize stage is to cultivate the most thorough understanding possible of your users, comprehending their needs and identifying the challenges that form the basis for the creation of the desired product or service.

Empathy maps

An empathy map functions as a collaborative visualization tool employed to articulate our insights into a specific user type. It serves the purpose of externalizing knowledge about users to achieve two main goals: 1) establish a shared comprehension of user needs, and 2) facilitate decision-making processes.

Empathy maps are typically divided into four quadrants: Says (verbatim quotes from users obtained through interviews or usability studies), Thinks (user thoughts and considerations during the experience, exploring their mindset), Does (actions taken by the user, focusing on their physical interactions and behaviours), and Feels (the emotional state of the user, expressed as an adjective with short explanations), with the user or persona positioned at the center. These maps offer a holistic view of the user, and they are not organized in a chronological or sequential manner.

Figure 3.64*Empathy map diagram*

Note. Empathy map from source Nielsen Norman Group, 2018, retrieved from <https://www.nngroup.com/articles/empathy-mapping/>.

Users are complex, and empathy maps may reveal inconsistencies or conflicts between quadrants. Such contradictions can be valuable insights, prompting further investigation and resolution. The quadrants provide a framework to understand users comprehensively, and any ambiguity or overlap is acceptable. Empathy maps can be created for individual users based on interviews or diary studies, or they can represent aggregated insights from multiple users. These maps aid UX professionals in understanding user needs and guide further research or design decisions.

Unit 7 Empathy maps videos

Watch videos:

- https://www.youtube.com/watch?v=Qz7EwkprvFE&ab_channel=OptimaTraining%28UK%29Limited
- https://www.youtube.com/watch?v=WT7wl8Wbgo8&ab_channel=Simplilearn

Unit 8 Exercise on creating your own empathy map

Lumi File: M3-L2-U8-missing-words.h5p (The following text is embedded in the Lumi File)

Creating Empathy maps

An empathy map is a collaborative visualization used to articulate what we know about a particular type of user. It externalizes knowledge about users in order to

- 1) create a shared understanding of user needs, and
- 2) aid in decision making.

Figure 3.64

User profile



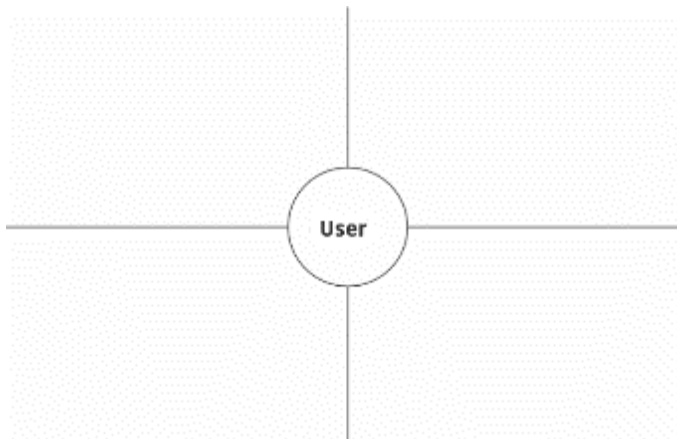
Note. Source Storyset, n.d., Freepik, CC 2.0

Before creating Empathy map:

- 1) Understand the goal of an empathy map
- 2) Conduct user research

Figure 3.65

Blank Empathy map template

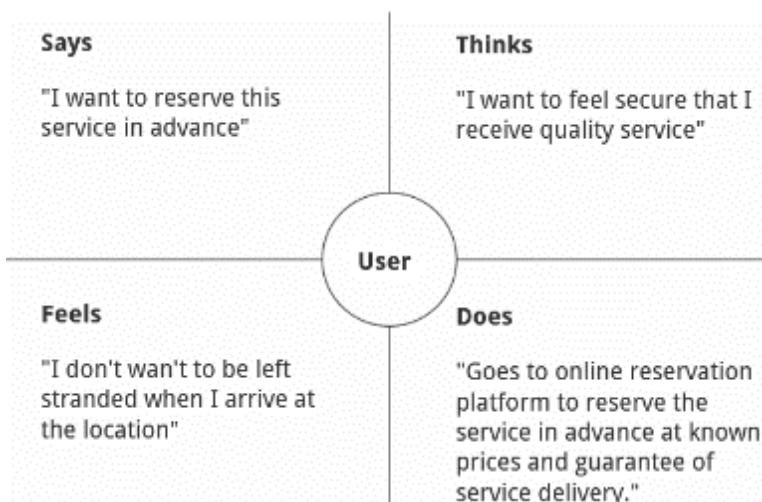


Note. Created by authors, CC 2.0

Fill in Empathy map in 4 sections what User ...

Figure 3.66

Filled-in Empathy map example



Note. Created by authors, CC 2.0

Figure 3.67*Expanding on Empathy map - example*

Note. IBM, Empathy map toolkit, source

<https://www.ibm.com/design/thinking/page/toolkit/activity/empathy-map>

Unit 9 The 2nd step is to Define

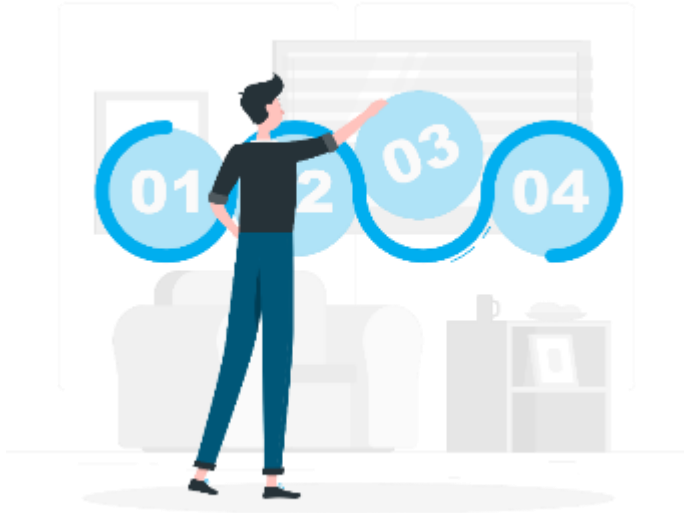
The Define mode in the design process aims to bring clarity and direction to the design space. As a design thinker, your role is to articulate the challenge based on your understanding of the user and the context.

Having gained empathy and expertise in the subject, this stage involves synthesizing the gathered information to create a meaningful problem statement, known as a point-of-view. This statement should focus on the insights and needs of a specific user or a composite character.

The Define mode is essentially about sense making, where insights are derived from the synthesis of information to uncover connections and patterns.

Figure 3.68

Formulation process



Note. Source Storyset, n.d., Freepik, CC 2.0

Implementation – how to define?

To better define your problem, answer these fundamental questions:

- 1) **Who's** having the problem? Identify your core user, understanding their desires, motivations, and interactions with your product. Knowing your target user is essential for delivering meaningful value.
- 2) **What** problem is your user actually having? Examine the pain points identified during the Empathize stage to try and understand the user's real needs. Brainstorm solutions accordingly.
- 3) **Where** is the issue? Determine the specific area (e.g., mobile app, desktop version) where the problem exists. Focusing on one space or understanding multiple contexts helps refine your problem-solving approach.
- 4) **Why?** Explore the profound impact of solving the problem for the user. Consider the value gained and how addressing the user's problem contributes to the overall success of the business.

Best practices

- **Point Of View (POV) – Problem Statement:**

A Point Of View (POV) is a crucial problem statement in the design thinking process. It captures the design vision by reframing challenges into actionable statements. The POV combines information about the user, their needs, and insights gained during research or the Empathize mode. It shapes the right challenge for ideation sessions and steers the design work.

Structure of a POV:

[User . . . (descriptive)] needs [need . . . (verb)] because [insight. . . (compelling).]

- **How Might We (HMW) Questions:**

Once a design challenge is defined in a POV, generate ideas using "How Might We" (HMW) questions. These questions, broad yet focused, spark ideation sessions like brainstorming. They should be based on observations from the Empathize stage.

Figure 3.69

Producing scenarios



Note. Source Storyset, n.d., Freepik, CC 2.0

- **Why-How Laddering:**

During the define stage, designers use "why" to define problems and progress to the Why-How Ladder. This method helps uncover the root causes and leads to specific solutions. HMW questions bridge the define and ideation stages in design thinking.

The Define mode is a pivotal step in the design process as it leads to the creation of your point-of-view (POV). The POV is a clear articulation of the problem you aim to solve. Importantly, the POV defines the precise challenge to address, guided by your enhanced understanding of people and the problem space. Contrary to intuition, formulating a more narrowly focused problem statement tends to generate a greater quantity and higher quality of solutions during the ideation phase.

Key Points:

- The Define mode produces the point-of-view (POV), expressing the problem explicitly.
- The POV guides you to define the right and focused challenge based on a deeper understanding of people and the problem space.
- Crafting a narrowly focused problem statement enhances the quantity and quality of solutions during idea generation.

Unit 10 Customer Journey Maps

Customer journey maps serve as visual depictions of customers' interactions with an organization, offering a comprehensive overview of their engagement with a brand across various channels over time.

Figure 3.70

Process for to support customer journey



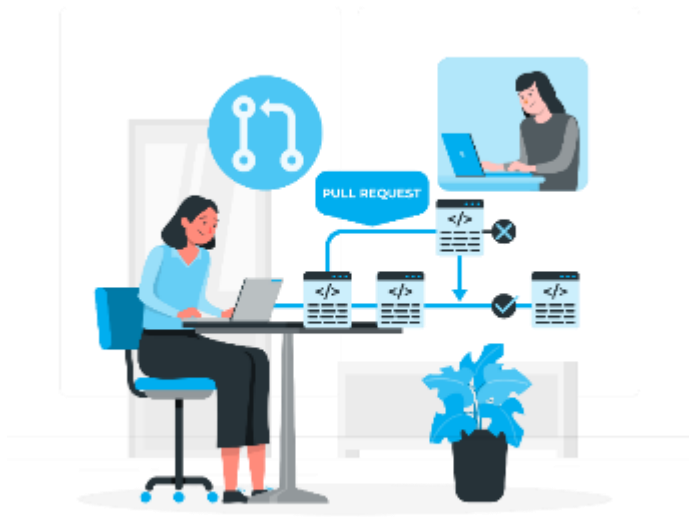
Note. Source Storyset, n.d., Freepik, CC 2.0

These maps are valuable tools for product teams, enabling them to uncover customer needs and pathways to access a product or service. By leveraging this insight, organizations can pinpoint pain points and discover opportunities to improve the overall customer experience, ultimately leading to increased customer retention.

Customer journey maps are research-driven tools designed to illustrate common customer experiences over time, providing valuable insights for brands seeking a deeper understanding of their target audience.

Figure 3.71

Customer journey research



Note. Source Storyset, n.d., Freepik, CC 2.0

These maps feature comprehensive timelines that highlight essential sub-tasks and events, allowing for an exploration of customers' thoughts and feelings along the journey.

Key elements of a customer journey map include:

- a defined journey period;
- scenarios outlining goal-oriented events;
- identification of channels where actions take place;
- description of touchpoints and customer interactions;
- insights into thoughts and feelings at each touchpoint;

How to create a customer journey map?

1. **Decide what** journey/process you want to map.
2. Put the steps in **writing**. Don't forget to include even seemingly insignificant little steps. The intention is to have you think about the subtleties of the experience that you might otherwise ignore.
3. Create a **map with the steps** arranged. Typically, we show the steps on a timeline, going from step to step. Branches on your map could indicate different routes that customers could take. A sequence of images might also be used, or any other technique that works with your data.
4. Seek for **understanding**. What trends show up? Is there anything odd or surprising? Ask yourself why particular processes happen, what sequence they happen in etc. Consider how you could innovate at every stage.
5. Ask for **feedback** from people already familiar with the journey to find what you missed or misinterpreted.

Figure 3.71

Customer journey map



Note. Source Storyset, n.d., Freepik, CC 2.0

Watch video:

- https://www.youtube.com/watch?v=X7iXcP-wlkk&ab_channel=PlaybookUX

Unit 11 Exercise on Customer journey map with drag and drop quizzes

Customer Journey Map - Awareness stage

Fill in the related fields of Customer Journey Map in the Awareness stage (1/3):

- 1) What is the customer thinking or feeling?
- 2) What is the customer's action?
- 3) What or where is the customer searching?
- 4) How we will move the customer his or her journey, with us in mint?

Customer Journey Map - Consideration stage

Fill in the related fields of Customer Journey Map in the **Consideration stage** (2/3)

- 1) What is the customer thinking or feeling?
- 2) What is the customer's action?
- 3) What or where is the customer searching?
- 4) How we will move the customer his or her journey, with us in mint?

Customer Journey Map - Decision stage

Fill in the related fields of Customer Journey Map in the **Decision stage** (3/3)

- 1) What is the customer thinking or feeling?
- 2) What is the customer's action?
- 3) What or where is the customer searching?
- 4) How we will move the customer his or her journey, with us in mint?

Unit 12 The 3rd step is to Ideate

During the Ideation stage, design thinkers unleash their creativity through dynamic activities like brainstorming and »worst possible idea« sessions. These exercises, fuelled by curiosity, pave the way for a multitude of questions and solutions.

In the hands of a skilled facilitator, Ideation becomes a thrilling process. The objective is to generate a profusion of ideas—ideas that serve as catalysts for even more imaginative thoughts. Subsequently, the team sifts through this abundance to distil the finest, most pragmatic, and innovative concepts.

The core objective of the Ideation stage is to harness creativity and innovation, steering the design team toward the development of solutions. By broadening the solution space, the team transcends conventional problem-solving methods, aiming for superior, more refined, and



gratifying resolutions to challenges that impact a user's interaction with a product. This stage encourages exploration beyond the ordinary, fostering the discovery of novel approaches to enhance user experiences.

Fostering Innovation Through Environment and Dynamics

In the realm of ideation, crafting an environment conducive to creativity is paramount. Unlike traditional boardroom setups, successful ideation sessions demand equality among participants. The designated space should be expansive enough for comfort, avoiding a clinical atmosphere that stifles interaction. The ambiance must encourage curiosity, courage, and concentration, fostering a culture where individuals are treated as equals, irrespective of their roles, titles, or hierarchical positions.

Figure 3.72

Strategic thinking



Note. Source Storyset, n.d., Freepik, CC 2.0

Key considerations for the Ideation room include ample space, an atmosphere that promotes ease of communication without the need for raised voices, and an individual tasked with documenting and visualizing ideas. When the session encounters stagnation, effective facilitators introduce constraints or targets, such as eliminating a top-level navigation bar or ideating from an 8-year-old's perspective. Delving into the best practices of brainstorming rules will further illuminate the essentials of steering a successful Ideation session.

Selecting the best ideas

After the ideation session concludes, it's essential to gather, categorize, refine, and narrow down the ideas. Some methods that can help us do that are:

- Post-it voting/Dot voting
- Four categories method
- Bingo selection

Figure 3.73

Selecting ideas



Note. Source Storyset, n.d., Freepik, CC 2.0

We will take a closer look at these three methods and explain them in more details.

Post-it/Dot voting

In the post-it voting method, each team member is allocated a set number of votes, typically three to four. This approach aims to identify the most favored ideas generated during ideation sessions. Here's how the process works:

- Ideas from the ideation session are transcribed onto individual post-it notes.
- Participants vote for their favourite ideas by using stickers or markers to make dots on the post-its that relate to the ideas they prefer.

- Every team member has an equal opportunity to influence the selection process by allocating their allotted votes.
- The transparent nature of the process ensures that everyone's opinions are considered in choosing from the shortlisted ideas.
- Post-it voting promotes a collaborative and inclusive decision-making environment, allowing the team to collectively determine the most promising ideas for further development.

Four categories method

The four categories method is a structured approach to evaluating ideas based on their degree of abstractness, ranging from practical choices to more speculative ones. The process involves categorizing ideas into four distinct groups:

- Rational choice - ideas considered as the most practical and feasible choices.
- Most likely to delight - ideas that have the potential to pleasantly surprise and delight users.
- The darling - ideas that stand out as particularly unique and captivating.
- Long shot - ideas that are more speculative or unconventional, representing a departure from the norm.

Team members collaborate to select one or two ideas for each category. This method ensures comprehensive coverage of idea exploration, spanning from practical solutions to those with the potential for innovative breakthroughs. The four categories method encourages a balanced consideration of ideas with varying levels of risk and creativity.

Bingo selection

The Bingo selection method introduces a nuanced approach to idea division, prompting contributors to categorize ideas based on different form factors. Rather than a singular criterion, this method encourages the classification of ideas according to their suitability for various prototyping approaches:

- Physical prototype - ideas earmarked for realization through tangible, physical prototypes.
- Digital prototype - ideas intended for implementation in a digital context or platform.
- Experience prototype - ideas identified for crafting prototypes that simulate user experiences.

By employing the Bingo selection method, teams gain a focused perspective on how ideas can be tailored for different prototyping methods. This approach streamlines the process of selecting ideas that align with specific prototyping goals, fostering a more targeted and efficient development phase.



Figure 3.74

Ideas selection methodology



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 13 Exercise with true or false question quiz

Figure 3.75

True or false quiz



Note. Source Storyset, n.d., Freepik, CC 2.0

Quiz on ideation

- 1) The Four Categories Method involves categorizing ideas into four groups based on their degree of abstractness.
True / False

- 2) The "Most likely to delight" category includes ideas that are practical and feasible choices.
True / False
- 3) The "Darling" category comprises ideas that stand out as particularly unique and captivating.
True/ False
- 4) Ideas categorized under "Long shot" are conventional and represent the norm.
True / False
- 5) During the Ideation stage, design thinkers engage in activities like brainstorming and "worst possible idea" sessions to unleash their creativity.
True/ False
- 6) The objective of the Ideation stage is to narrow down ideas to only the most practical and feasible ones.
True / False
- 7) The core objective of the Ideation stage is to harness creativity and innovation to develop solutions.
True / False
- 8) The Ideation stage encourages exploration beyond conventional problem-solving methods.
True/ False
- 9) The Four Categories Method ensures comprehensive coverage of idea exploration by categorizing ideas into only two distinct groups.
True / False
- 10) The "Rational choice" category includes ideas that are more speculative or unconventional.
True / False

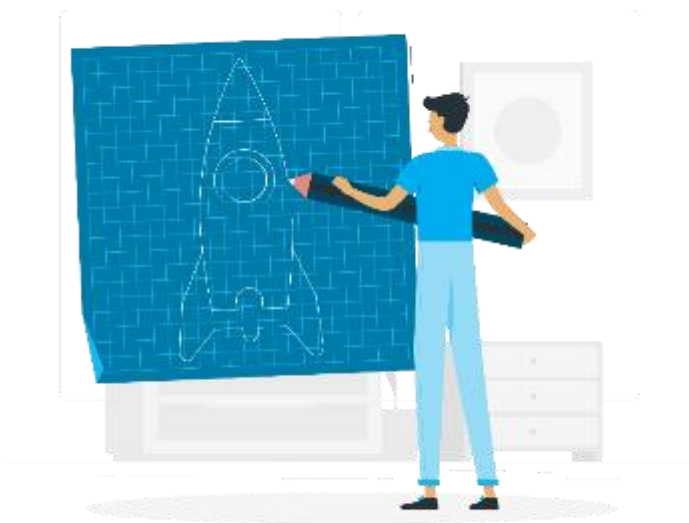
Unit 14 The 4th step is to Prototype

In a Design Thinking process, one of the most effective ways to gain insights is through prototyping. This method involves creating an initial, cost-effective, and scaled-down version of the product to identify any issues with the existing design. Prototyping allows designers to give tangible form to their ideas, assess the feasibility of the current design, and explore the thoughts and sentiments of a sample of users toward the product.

Prototypes are commonly employed during the concluding testing phase in a Design Thinking process. This step aims to observe user behavior with the prototype, uncover novel solutions to challenges, and assess the success of implemented solutions. The findings from these tests are then utilized to reevaluate one or more problems identified in the earlier stages of the project, fostering a more comprehensive understanding of the challenges users might encounter while interacting with the product in its intended environment.

Figure 3.76

Outlining prototypes



Note. Source Storyset, n.d., Freepik, CC 2.0

Why prototyping is important?

Prototyping serves as a crucial step in assessing whether the design or proposed changes align with your intended objectives—prior to their implementation and widespread use by your users.

Prior to product launch, it is essential to confirm that the product functions as intended. Does it effectively address the user's problem as envisioned? Is it user-friendly and easy to navigate? Ideally, these aspects are evaluated before significant resources are invested in the final product development, ensuring that the end product aligns with the intended goals and meets user expectations.

How does it work?

It's crucial to keep in mind that prototypes are meant to be swift and straightforward tests of design solutions. Here are some guidelines for the prototyping stage:

- **Just start building**
Design thinking emphasizes taking action. If uncertainties arise about your goals, creating a prototype can provide a tangible perspective, offering insights for potential improvements.
- **Don't spend too much time**
Prototyping is about speed. Prolonged efforts may lead to emotional attachment to your idea, hindering objective evaluation of its merits.
- **Remember what you're testing for**
Every prototype should address a central testing issue. Stay focused on that issue while remaining open to additional insights that may arise during the process.
- **Keep the user in mind**
Evaluate the prototype based on expected user behaviors and needs. Identify disparities between expectations and realities, allowing you to enhance and refine your ideas.



Figure 3.77

Prototyping aspects



Note. Source Storyset, n.d., Freepik, CC 2.0

Prototyping tools and methods

- **Starting with the absolute basics: a marker and a sheet of paper**
There's hardly a better, quicker, faster, or more cost-effective solution for prototyping. Paper prototyping offers a swift, straightforward, and enjoyable way to gain initial insights into your concept. It's accessible to individuals from various backgrounds, and the simplicity of paper prototypes directs focus toward the idea and flow of your product rather than intricate design details.
- **Craft a digital prototype using Microsoft Office PowerPoint or Keynote**
If you're not a designer, it's advisable to commence with the software you're already familiar with and have readily available on your desktop, rather than delving into more complex tools like Photoshop or other professional services.
- **Smartphone sketch templates**
If you are creating ideas for apps and digital services, Smartphone sketch templates offer an excellent starting point. Sneakpeekit provides these helpful templates, complete with or without a precision grid, to kickstart your creative process. Use them to transform your app ideas into tangible screen designs, perfect for testing product assumptions with your customers.

- **Easily convey your solution through storytelling with explainer videos**

These videos offer a chance to share your concept with a broad audience through social media, gaining instant quantitative and qualitative feedback. Previously a slow and costly process, tools like Lumen5 or Moovly now make it quick and affordable to create compelling explainer videos.

- **Figma**

Figma stands out as a comprehensive design tool, offering advanced collaboration features to facilitate the entire design process. Figma is recognized for its user-friendly nature, making it accessible for designers with different skill levels. It enables the incorporation of interactivity into designs without necessitating any coding expertise.

- **Photoshop**

Regarded as one of the most versatile programs available, Photoshop is an excellent tool for transforming wireframes into visually appealing designs. While not originally intended for prototyping, Photoshop proves effective for this purpose. Its extensive range of options makes it a top choice, especially for those already familiar with the software.

Figure 3.78

Prototyping



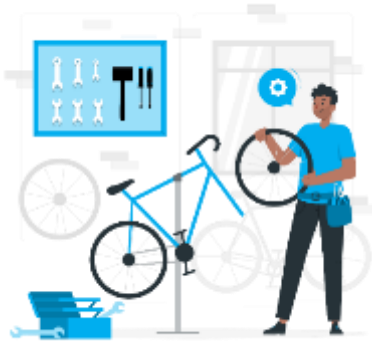
Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 15 Exercise with missing words on prototyping

Prototyping

Figure 3.79

Missing parts (words)



Note. Source Storyset, n.d., Freepik, CC 2.0

Drag the words into the correct boxes

In the Design Thinking process, _____ emerges as a vital tool for gaining insights and refining designs. By creating initial, scaled-down versions of products, designers can * _____ * potential issues and gauge user sentiments effectively.

Prototypes provide * _____ * for ideas, enabling assessment of * _____ * and user * _____ *, contributing to a more comprehensive understanding of * _____ * and product functionality.

Additionally, prototypes play a significant role in concluding testing phases, facilitating observation of user behavior, uncovering * _____ *, and * _____ * the success of implemented designs, thereby informing adjustments to enhance user experiences and address identified challenges.

Prototyping serves as a critical checkpoint in the * _____ *, ensuring alignment with intended objectives and user expectations before widespread implementation. By conducting swift and focused tests of * _____ *, designers can * _____ *, gather valuable insights, and * _____ * effectively.

Utilizing basic tools like paper and markers or digital platforms such as Microsoft Office PowerPoint offers accessible and * _____ * means to prototype, empowering designers to iterate efficiently and * _____ * early in the development process, ultimately leading to more successful and * _____ * product outcomes.

Unit 16 The 5th step is to Test

Figure 3.80

Planning testing



Note. Source Storyset, n.d., Freepik, CC 2.0

Throughout the design thinking process, a diverse array of testing methods is employed drawing from practices utilized in human-computer interaction (HCI) and user-centered design (UCD). The central objective of these methods is to test solutions comprehensively for iterative improvement. User feedback is deemed invaluable, serving as a linchpin for the success of the design process.

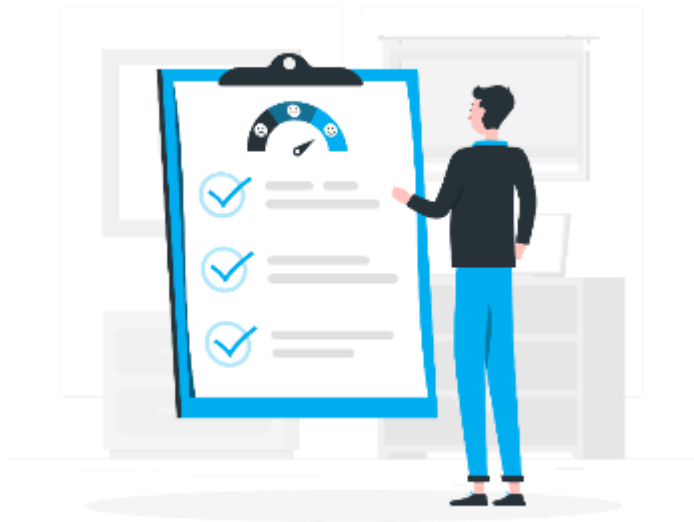
It is imperative to actively seek feedback, engage real users in tests, and analyze results to identify strengths and weaknesses in the design. This iterative approach ensures the creation of solutions that are not only desirable to users but also feasible to implement and sustainable for long-term success.

The Test stage in the design thinking process is integral and contributes insights that may influence other stages: fostering deeper empathy, shaping the definition of the problem statement, inspiring new ideas for problem-solving, and refining prototypes for optimal outcomes.

How to conduct a test

Figure 3.81

How to test



Note. Source Storyset, n.d., Freepik, CC 2.0

1. Show, don't tell: let users experience the prototype

- Introduce yourself but avoid claiming to be the designer to encourage honest feedback.
- Clearly communicate the duration and expectations for the session.
- Refrain from over-explaining the prototype; let users explore and observe their reactions.

2. Ask participants to talk through their experience

- Encourage participants to think out loud and share their thoughts during the test.
- If necessary, remind them to vocalize their expectations and reactions.
- Emphasize this expectation in the test introduction, providing examples.

3. Observe your participants

- Maintain a neutral observer role, resist correcting participants, and focus on testing the prototype, not the participant.

- Treat mistakes as valuable learning opportunities.

4. Ask follow-up questions

- Pose follow-up questions to gain deeper insights, even if you believe you understand the participant's feedback.
- Examples include clarifying statements, exploring emotions, understanding expectations, and asking "Why?"

5. Embrace negative feedback

- Acknowledge that negative feedback is crucial for learning and improvement.
- Embrace critiques as opportunities to uncover unforeseen problems and enhance the overall design.

The end goal

Figure 3.82

Testing results



Note. Source Storyset, n.d., Freepik, CC 2.0

The design thinking process doesn't adhere to a rigid sequence of steps, but it does aim for a specific endpoint. The ultimate objective of any design thinking project is to develop a solution that is desirable, feasible, and viable.

- **Desirability:** This centers on people and incorporates the human element into human-centered design. A solution is deemed desirable if it resonates with the needs, emotions, and behaviors of the targeted audience.

- **Feasibility:** This aspect pertains to technology. Is the proposed design solution technically achievable, or does it rely on technology that may not exist or isn't sufficiently developed for practical use?
- **Viability:** Focuses on the business aspect. Is there a sound business model supporting the solution, or would it falter without consistent investor or donor contributions? While design thinking is not profit-centric, effective design solutions should be self-sustainable, ensuring continued support and improvement beyond the project's timeline.

Successfully creating a prototype or a final product that passes the desirability, feasibility, and viability tests is a significant achievement. It marks the development of a solution that positively impacts people's lives and holds the potential for ongoing enhancements in the years ahead.

Testing constitutes the fifth stage in the five-stage design thinking process, often conducted in conjunction with the prototyping stage. Testing serves as a crucial phase to gain deeper insights into users, enhance prototypes, and refine the problem statement.

It's important to note that the design thinking process is characterized by its fluidity, iteration, and flexibility. The stages frequently interconnect and may not strictly adhere to a predefined sequence. Nevertheless, the ultimate goal in design thinking is reached when the product or service achieves desirability, feasibility, and viability—marking the completion of a successful and impactful design journey.

Unit 17 Exercise on testing with true or false statements quiz

Testing test

- 1) The central objective of these methods is to test solutions comprehensively for finalisation.
True / False
- 2) Testing is important to actively seek feedback, engage real users in tests, and analyze results to identify strengths and weaknesses in the design.
True / False
- 3) The Test stage in the design thinking process is integral and contributes insights that does not influence other stages.
True / False
- 4) Acknowledge that negative feedback is crucial for learning and improvement.

True / False

- 5) Testing constitutes the fifth stage in the five-stage design thinking process, often conducted in conjunction with the prototyping stage.

True / False

Figure 3.83

True/false questions quiz



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 18 Exercise with crossword

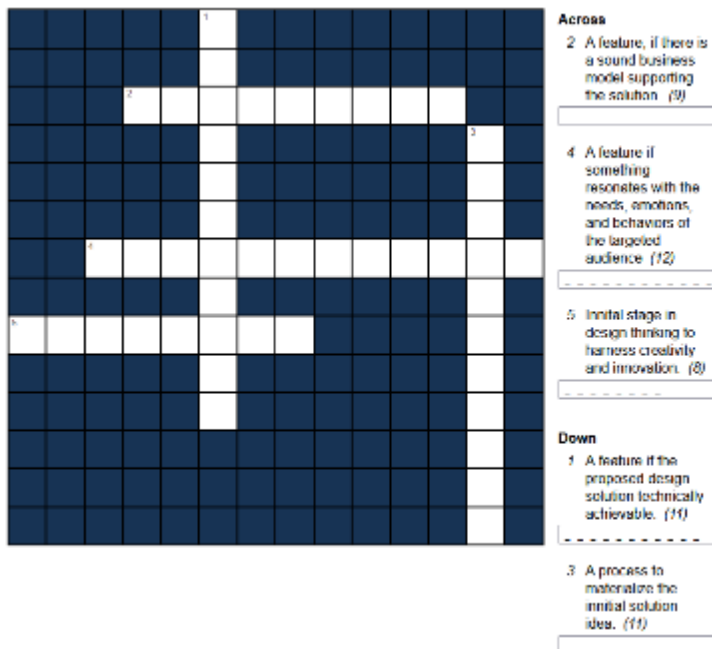
Solve the crossword

1. Clue: A feature if something resonates with the needs, emotions, and behaviors of the targeted audience
2. Clue: A process to materialize the innital solution idea.
3. Clue: A feature if the proposed design solution technically achievable.
4. Clue: A feature, if there is a sound business model supporting the solution.
5. Clue: Innital stage in design thinking to harness creativity and innovation.
6. Clue: 2nd step of design process, which involves synthesizing the gathered information to create a meaningful problem statement

7. Clue: The 1st step in design process, involves endeavors to fully understand individuals.

Figure 3.84

Crossword in Lumi (H5P)



Note. Lumi tool, by HyPro4ST partners UL

Unit 19 Other Design Thinking Frameworks

Various implementation frameworks or models may have distinct names and different numbers of stages, yet they all incorporate the same fundamental principles. All these frameworks involve key stages such as empathizing, reframing, ideating, prototyping, and testing. We will briefly present some popular frameworks to gain a deeper understanding of this innovative process.

Figure 3.85

Design thinking frameworks



Note. Source Storyset, n.d., Freepik, CC 2.0

1. Head, heart and hand

The American Institute of Graphic Arts (AIGA) emphasizes the significance of the modern design practice, which derives its value from the unique blend of head, heart, and hand employed by designers. Throughout the design thinking process, participants wear multiple hats, utilizing their intellectual capabilities to solve intricate problems. In the initial stages, they also engage their emotional intelligence to empathize and comprehend human needs and emotions. Designers possess a distinctive talent in translating these insights into tangible creations through practical, hands-on work. This holistic approach integrates input from all faculties, resulting in a comprehensive and successful process.

2. Double diamond design process model

In the mid-2000s, the British Design Council gained prominence for popularizing the Double Diamond diagram, which serves as a visual representation of the design thinking process, highlighting the divergent and convergent modes of thinking. It consists of four distinct phases:

- Discover: This phase initiates the project by exploring initial ideas or inspirations, often rooted in the identification of user needs.
- Define: User needs are interpreted and aligned with business objectives during this phase.

- Develop: Design-led solutions are created, iterated upon, and tested.
- Deliver: The final product or service is completed and launched into the market.

Figure 3.86

Design thinking process



Note. Source Storyset, n.d., Freepik, CC 2.0

3. Collective action toolkit

Frog Design, an organization dedicated to social impact, introduced the Collective Action Toolkit (CAT) to democratize the design process for communities worldwide. The aim is to empower these communities to organize, collaborate, and generate solutions tailored to address the specific challenges impacting their local areas.

4. The LUMA system of innovation

The LUMA Institute, a global firm specializing in innovation and human-centered design, has formulated its version of the design thinking process, emphasizing three essential design skills: looking, understanding, and making. They assert that their system is adaptable and versatile, suitable for addressing various problems in diverse settings. The process can be implemented through a single set of activities or a combination of multiple methods, with the latter recommended for more complex challenges.

Figure 3.87

Design thinking methods



Note. Source Storyset, n.d., Freepik, CC 2.0

5. The human-centered design toolkit – IDEO

IDEO has created contextualized toolkits that repack the design thinking process, tailoring it to specific contexts or applications. They have reinterpreted the human-centered design (HCD) toolkit acronym to mean "hear, create, and deliver" in the context of their toolkits.

In the Hear stage, participants focus on developing an empathic understanding of users and defining the problem to be solved. The Create stage involves exploration, experimentation, and learning through making, similar to the ideate and prototype phases in other design thinking processes. The Deliver phase is centered around logistical implementation. It focuses on overcoming obstacles during the rollout of a solution within the required context.

Figure 3.88

Multi-layered frameworks for design management



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 20 Exercise on missing words on other design thinking frameworks

Other Design Thinking Frameworks

Drag the words into the correct boxes to complete some of the alternative design thinking frameworks titles in the list.

1. Head, *_____* and hand
2. *_____*-* design process model
3. *_____* action toolkit
4. The LUMA system of *_____*
5. The *_____* design toolkit – IDEO

Figure 3.89

Drag the words in their place



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 21 Challenges of design thinking

Design thinking is a flexible problem-solving framework applicable to a wide range of challenges or projects. The five stages of design thinking — Empathize, Define, Ideate, Prototype, and Test — assist teams in navigating the ambiguity of problem-solving and fostering collaboration to find optimal solutions for complex problems.

However, teams may encounter challenges if they haven't fully mastered or committed to each step of the process. We will explore four common challenges teams face when implementing design thinking practices.

Figure 3.90

Design thinking challenges



Note. Source Storyset, n.d., Freepik, CC 2.0

1. Lack of in-depth user research

One common challenge in implementing design thinking is not delving deep enough into user research. The initial stage of empathizing heavily relies on well-developed user personas. If the research to create these personas is insufficient, it becomes challenging to empathize effectively and understand customer needs, hindering the ideation of a suitable solution.

Figure 3.91

Inclusion of users challenge



Note. Source Storyset, n.d., Freepik, CC 2.0

Solution: The solution lies in dedicating ample time to each step of the design thinking process. Rushing through the initial steps can lead to weak user personas. It is crucial to conduct thorough and accurate research to ensure that user personas are detailed and reflective of the actual target users. The goal is to create personas that provide insights into various aspects of users' lives, enabling a more informed and effective design process.

2. Company culture

Implementing new processes, including design thinking, often faces challenges due to resistance to change within businesses. Achieving success with the Design Thinking process requires widespread acceptance and engagement. If there is resistance or if only a limited number of individuals are on board with the idea, the implementation is likely to fall short.

A challenge in implementing design thinking can arise if a company culture lacks a collaborative environment or does not prioritize the development of employees' collaboration skills. In organizations with siloed departments or inadequate collaboration standards, working together throughout the design thinking process can be challenging. Additionally, remote

companies may face difficulties if they lack the necessary tools or do not have the right tools for effective collaboration.

Figure 3.92

Company culture challenges



Note. Source Storyset, n.d., Freepik, CC 2.0

Solution: Achieving buy-in from the entire team is essential for the successful implementation of design thinking. The team should adopt an attitude of persistence and commitment, expressing a willingness to try the approach until it yields the desired results. However, commitment alone is insufficient; providing training is crucial. Consider investing in a Design Thinking professional who can motivate and teach the team the principles and techniques of the process.

3. Viewing design thinking as a linear process

Viewing Design Thinking as a linear process is a common misconception. The five stages of Design Thinking - empathize, define, ideate, prototype, and test—are not strictly sequential. Unlike a linear progression, the process can be dynamic, with teams moving back and forth between stages based on insights and feedback. For example, teams might empathize with users, prototype a solution, test it, and then redefine the problem based on the feedback received. This fluid approach enables creativity, adaptability, and the refinement of solutions through multiple iterations.

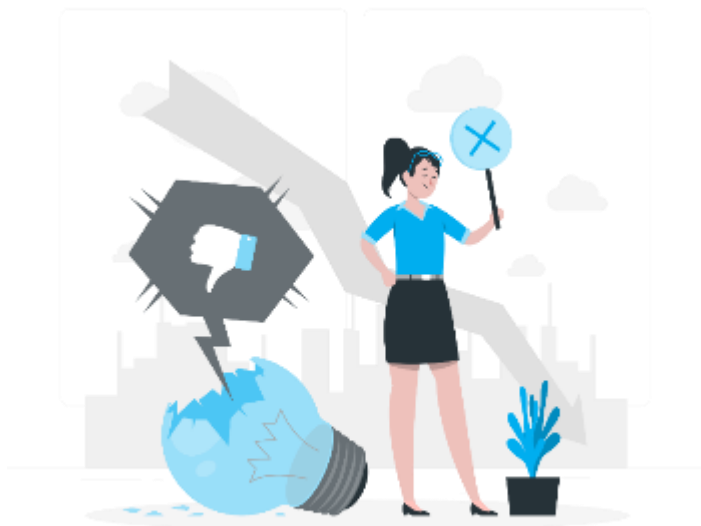
Solution: Encouraging your team to adapt the design thinking process to their needs is essential for fostering creativity and problem-solving. Emphasizing that stages can run concurrently, repeat, or be approached in various ways reinforces the non-linear nature of the process. This flexibility allows teams to explore different paths, iterate on ideas, and adapt to evolving insights.

4. Not letting go of a bad idea

It's natural for team members to become attached to their work, especially when there's a significant investment of time and effort. However, maintaining a user-centric focus and being willing to pivot or iterate based on testing feedback is crucial for the success of the overall project.

Figure 3.92

Idea challenges



Note. Source Storyset, n.d., Freepik, CC 2.0

Solution: Transparency and clear communication are key elements in managing expectations and fostering a collaborative and adaptive mindset within the team. Encouraging a culture that values exploration and iteration over perfectionism is essential for embracing the dynamic nature of the design thinking process. It's all about creating a culture that values learning, flexibility, and continuous improvement throughout the design journey.

Adopting a design-focused perspective can be transformative for organizations. It goes beyond creating aesthetically pleasing products and services; it's about understanding and addressing the needs, desires, and emotions of users. Design thinking, with its emphasis on empathy and user-centricity, encourages organizations to humanize technology and create solutions that genuinely connect with people.

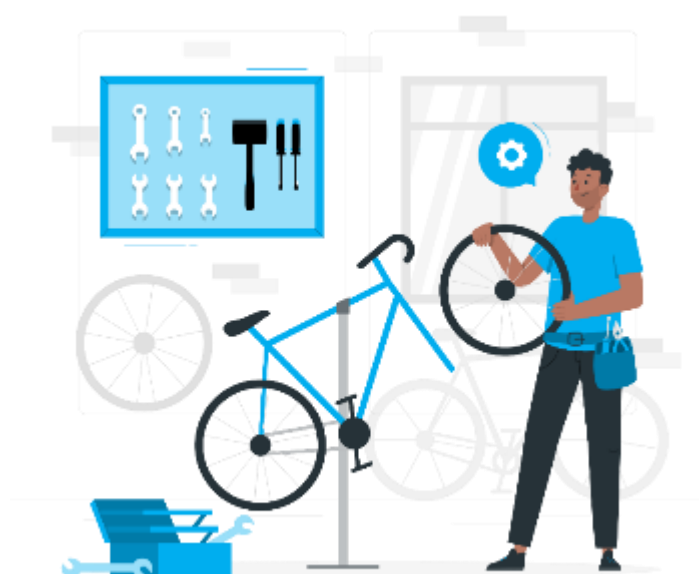
By embracing a design-driven approach, organizations can foster a workplace culture that values creativity, collaboration, and innovation. It enables teams to respond more effectively to changing business dynamics and encourages a mindset of continuous improvement. A focus on design inherently promotes a more thoughtful and human-centered approach to business, where the end-user experience is a central consideration in decision-making processes

Unit 22 Exercise on design challenges

Challenges of design thinking

Figure 3.93

Missing parts (words)



Note. Source Storyset, n.d., Freepik, CC 2.0

Drag the bottom solutions to these challenges into the correct boxes.

1. Lack of in-depth user research challenge: Not delving deep enough into user research hinders effective empathizing and understanding of customer needs.
 2. Company culture challenge: Resistance to change and lack of widespread acceptance hinder successful implementation.
 3. Viewing design thinking as a linear process challenge: Misconception of Design Thinking as strictly sequential restricts creativity and adaptability.
 4. Not letting go of a bad idea challenge: Attachment to ideas inhibits user-centric focus and adaptation based on testing feedback.
- Solution would be to: *Foster transparency and clear communication, promoting a culture that values exploration, iteration, and continuous improvement over perfectionism.*
 - Solution would be to: *Encourage adaptation of the process to needs, emphasizing non-linearity, concurrent stages, and various approaches for exploration and iteration.*
 - Solution would be to: *Dedicate ample time to each step, ensuring thorough and accurate research to create detailed user personas reflective of actual users.*
 - Solution would be to: *Achieve buy-in from the entire team, fostering persistence and commitment, while providing training to motivate and teach Design Thinking principles and techniques.*

Unit 23 Design thinking and Hybrid Project Management Methodology: Together or separately?

Figure 3.94

Agile methods iterative, cyclical process



Note. Source Storyset, n.d., Freepik, CC 2.0

Agile methodology and design thinking

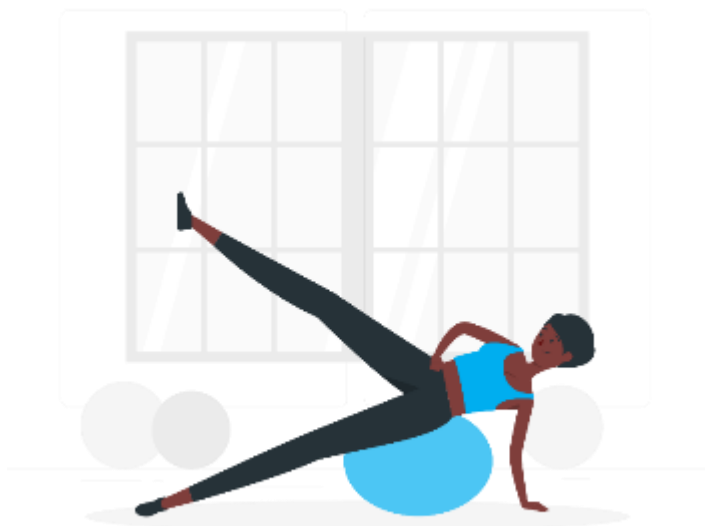
Agile methodology is a management process for projects and products that businesses use to break down the product/project into many different phases, so that the whole process is more feasible and clearer – through completion of each phase that enables rapid adaption of the plan to the design.

The combination of design thinking and Agile methodologies is a powerful approach to product development. Design thinking brings a deep understanding of user needs, empathy, and problem framing, ensuring that the right problems are identified and addressed. On the other hand, Agile provides a flexible and iterative framework for the actual development and delivery of solutions.

How to leverage agile and design thinking

Figure 3.95

Leveraging agile



Note. Source Storyset, n.d., Freepik, CC 2.0

1. Start small - Beginning with high-value, low-risk opportunities allows teams to learn and adapt without overwhelming themselves. Starting with manageable projects allows for experimentation and refinement of the combined Agile and design thinking approach.

2. Create cross-functional teams - Cross-functional teams are key to integrating design thinking and Agile. Bringing together individuals with diverse skills, including designers, developers, and end users, fosters collaboration and ensures a holistic approach to problem-solving. Physical co-location with end users enhances communication and collaboration.

3. Balance design and development - Striking the right balance between design thinking and Agile development is crucial. While Agile encourages a rapid development cycle, it's important not to skip or rush through the design thinking phases. Planning and allocating sufficient time for empathy, definition, and ideation ensure a solid foundation for development.

4. Ensure understanding of the value of design thinking - Teams need to recognize the value of each phase in the design thinking process. Demonstrating how design empathy, problem definition, and ideation contribute to the overall success of the project helps the team

appreciate the importance of these stages. Uncovering new insights and reframing problems lead to more innovative and user-centered solutions.

Watch video:

- https://www.youtube.com/watch?v=n397Pv46Ouk&ab_channel=NNgroup

Unit 24 Exercise with multiple choice questions quiz on Design thinking and Hybrid Project Management Methodology

Figure 3.96

Multiple choice quiz



Note. Source Storyset, n.d., Freepik, CC 2.0

Design thinking and Hybrid Project Management Methodology

1. What is Agile methodology primarily focused on?
 - a. Understanding user needs
 - b. Flexible and iterative development
 - c. Problem framing
 - d. Physical co-location with end users
2. What does design thinking emphasize in the product development process?
 - a. Rapid adaptation of plans
 - b. Iterative framework

- c. Deep understanding of user needs and problem framing
- d. Cross-functional teams
- 3. What is a key recommendation for leveraging Agile and design thinking together?
 - a. Starting with large-scale projects
 - b. Creating siloed teams
 - c. Striking a balance between design and development
 - d. Rushing through the design thinking phases
- 4. Why is it important for teams to understand the value of design thinking?
 - a. To skip or rush through the design thinking phases
 - b. To allocate sufficient time for empathy, definition, and ideation
 - c. To undermine the importance of Agile development
 - d. To avoid physical co-location with end users
- 5. What does starting small in leveraging Agile and design thinking allow for?
 - a. Overwhelming teams with high-risk opportunities
 - b. Skipping experimentation and refinement
 - c. Learning and adapting without overwhelming teams
 - d. Avoiding collaboration within cross-functional teams

Unit 25 Design Thinking in Practice

Examining real-world examples can provide valuable insights into how design thinking is applied successfully. In this unit, we will go through some real world examples to gain further insight and solidify our understanding of design thinking and the value it can bring to a business.

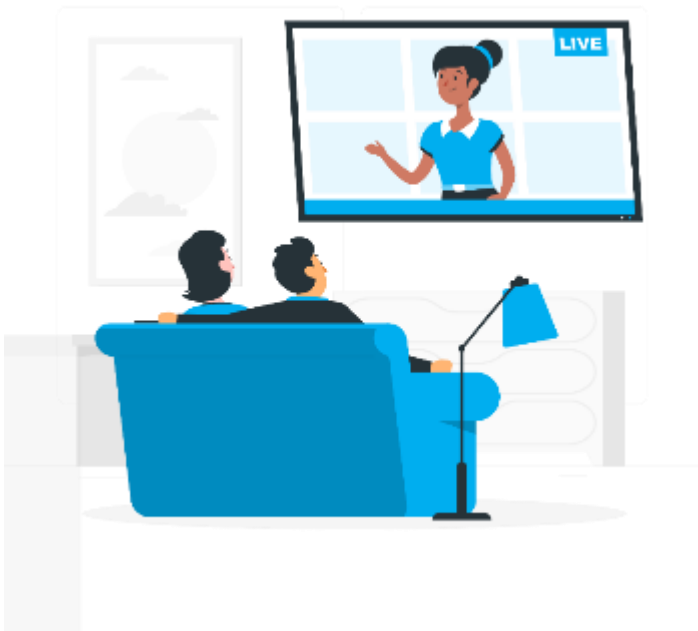
Netflix

While many companies have embraced design thinking, Netflix stands out as a prime example of leveraging this approach to attain industry dominance. In its early days, Netflix faced competition from Blockbuster, a company that required customers to visit physical stores for DVD rentals and returns, causing significant inconvenience. Netflix addressed this pain point by introducing a subscription model, delivering DVDs directly to customers' homes.

Figure 3.97

Streaming services





Note. Source Storyset, n.d., Freepik, CC 2.0

The innovation didn't stop there; as DVDs became outdated, Netflix anticipated the shift and pioneered an on-demand streaming service, eliminating the waiting time for DVDs. In 2011, recognizing customers' desire for unique, thought-provoking content, Netflix delved into original programming not available on traditional networks. Subsequently, in 2016, it enhanced user experience by incorporating short trailers into its interface. Each of these significant updates from Netflix exemplifies a commitment to meeting customer needs through an effective design thinking process.

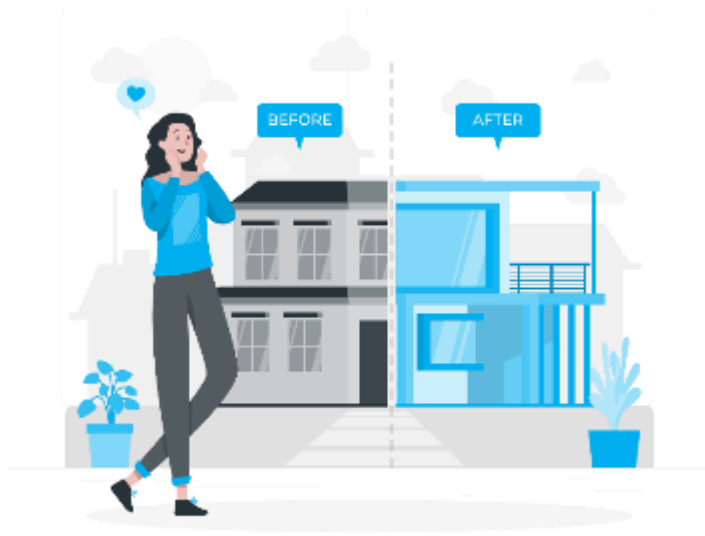
Airbnb

Airbnb, initially generating a modest income of around \$200 per week, faced a breakthrough by applying design thinking principles. Recognizing that the low-quality advertising images posted by hosts were dissuading potential customers, the founders took a user-centric approach.

To truly empathize with customers, the founders immersed themselves in various locations, envisioning the needs and preferences of users seeking temporary accommodations. Their solution involved investing in high-quality cameras to capture images aligned with customer expectations. This included showcasing every room, highlighting special features like hot tubs or pools in the descriptions, and emphasizing the neighborhood or nearby areas. The outcome was a remarkable doubling of Airbnb's revenue within a week.

Figure 3.98

Short-term renting service transformation



Note. Source Storyset, n.d., Freepik, CC 2.0

Rather than pursuing a broader audience, Airbnb's founders exemplified the power of design thinking by addressing the specific concerns of their existing user base. Their shift in focus, prioritizing user experience over traditional business values like scalability, underscored the effectiveness of a human-centered approach to solving business problems.

Oral B

Oral B sought to enhance its electric toothbrush, and in this endeavor, designers Kim Colin and Sam Hecht were brought on board. The company's initial inclination was to add more features, such as tracking brushing frequency, monitoring gum sensitivity, and incorporating music. However, during the problem clarification phase, Colin and Hecht recognized that brushing teeth was a ritualistic activity for many users. Adding more functionalities could potentially induce stress rather than enhance the experience.

In response, they proposed two solutions aimed at improving user experience without introducing unnecessary features. First, they suggested making the toothbrush more convenient to charge, particularly during travel. Second, they recommended enhancing the process of ordering replacement heads by allowing toothbrushes to connect to phones and send reminder notifications. Both recommendations proved successful as they centered on addressing users' needs rather than simply fulfilling the company's desire for additional features.

UberEats

UberEats, the prominent food delivery service app, attributes its success to its adeptness at rapid iteration and a strong emphasis on empathizing with customers.

A notable illustration of this approach is the Walkabout Program initiated by UberEats. In this program, designers engage in on-the-ground observations of cities where the service operates. They examine various elements such as food culture, cuisine, infrastructure, delivery processes, and transportation. Through this immersive research, innovations like the driver app emerged, addressing the challenges faced by delivery partners, particularly regarding parking in densely populated urban areas. The driver app, designed with insights gained from this empathetic research, provides step-by-step directions from the restaurant to the customer, aiming to enhance the efficiency of the delivery process.

Figure 3.99

Food delivery services



Note. Source Storyset, n.d., Freepik, CC 2.0

By recognizing that challenges and pain points differ across geographic locations, UberEats strategically implements upgrades tailored to specific areas, effectively solving problems and improving service quality.

The principles of design thinking empower teams to unleash their full creativity in developing solutions to problems. This process not only aids in creating innovative and engaging solutions but also streamlines the use of time and effort. Additionally, it enhances the ability to explore and incorporate features that resonate with customers, thereby providing a competitive edge to businesses.

Figure 3.100

Completing the Lesson 2 in Module 3



Note. Source Storyset, n.d., Freepik, CC 2.0

In lesson 2 we learned about the concept of design thinking. We explored each of the 5 steps of design thinking in more depth, we saw some examples and understood why this is important and how it can bring value to our business.

Key takeaways include the five stages of design thinking—Empathize, Define, Ideate, Prototype, and Test—and the importance of incorporating user feedback throughout the process. Design thinking emphasizes collaboration, creativity, and adaptability, encouraging teams to explore diverse solutions and iterate based on user insights. The lesson has also highlighted the flexibility of design thinking, allowing teams to adapt the process to their specific needs and challenges. The real-world examples of successful applications, ranging from Netflix to Airbnb, showcase how design thinking can lead to innovative solutions and business success.

Lesson 3: Entrepreneurial Mindset & Starting Your Business

Unit 1 Introduction

Welcome, aspiring tourism entrepreneurs. The tourism industry is a vibrant landscape fuelled by innovation, adaptability, and a deep commitment to responsible practices. To navigate its dynamic currents and seize captivating opportunities, you'll need a powerful compass: the entrepreneurial mindset.

This lesson equips you with the tools to cultivate this mindset, laying the foundation for your journey as a successful tourism entrepreneur. We'll embark on an exploration, deciphering the very essence of entrepreneurship and unpacking its core components, revealing how they empower your tourism venture to thrive.

Demystifying Entrepreneurship

Entrepreneurship is characterized by three key components (Greene, 2020):

1. **Risk & Uncertainty:** Imagine forging a path through dense foliage, where sunlight illuminates unknown territories. Risks and uncertainties are always present on an entrepreneur's journey. Risks can be managed, while uncertainties cannot. Entrepreneurship is therefore a process in which the unknown is transformed into tangible risks – bringing solutions that are beneficial for an entrepreneur and society. As an entrepreneur your journey involves transforming these uncertainties into quantifiable risks, paving the way for solutions that benefit both you and society.
2. **The Entrepreneur:** Not a superhero with a cape, but rather someone determined to "make things happen," as economist Joseph Schumpeter described. Whether pioneering radical innovations or introducing subtle changes, you embody the "arbitrageur" or "innovator" spirit, constantly adapting and embracing a continuous learning mindset.
3. **The Context:** Forget solely focusing on "who" you are; explore "what" you do. Your entrepreneurial journey lies in transforming ideas into reality, assembling teams and organizations, and harnessing resources to turn dreams into tangible ventures.

Tourism Entrepreneurship: Your Unique Quest

Now, let's zoom in on your specific odyssey– tourism entrepreneurship. It's a thrilling adventure of uncovering hidden gems: identifying fresh opportunities for tourism businesses, crafting innovative products or practices, and injecting existing ventures with renewed dynamism. Your mission? To cater to diverse traveler needs, generate value for stakeholders like local communities, and contribute to the global marketplace, all while championing social, economic, cultural, and environmental sustainability.

Figure 3.101



Introduction to the Lesson 3



Note. Source Storyset, n.d., Freepik, CC 2.0

Remember, the tourism industry is more than just hotels and tours; it's a tapestry woven with diverse threads of experience, responsibility, and impact. By cultivating an entrepreneurial mindset, you become a changemaker, weaving your unique vision into the very fabric of tourism, ensuring your venture not only prospers but leaves a positive footprint on the world.

Are you ready to embark on this journey? The next chapters delve deeper into the tools and strategies that will shape your entrepreneurial mindset and empower you to build a thriving, sustainable tourism venture.

Unit 2 Quiz

Which of the following is NOT a component of entrepreneurship, as defined in the text?

- a. Risk and uncertainty management.
- b. The entrepreneur's adaptability and continuous learning mindset.
- c. The focus on 'who' entrepreneurs are.
- d. Transformation of the unknown into quantifiable risks.

Unit 3 Types of Entrepreneurs

In the previous section, we learned what one needs to do to call themselves an entrepreneur. Now, we delve deeper, examining the unique landscape of tourism entrepreneurship.

Within the diverse world of entrepreneurship, diverse motivations take root. Let's explore three distinct types of entrepreneurial personas (Dincer et al., 2011):

1. The Pathfinder: growth-oriented entrepreneurs.

Imagine a map brimming with uncharted territories, beckoning the intrepid explorer. This resonates with the growth-oriented entrepreneur, ignited by a potent desire for rapid expansion. Scaling their ventures within a compressed timeframe fuels their passion, driving them to conquer new markets and territories.

2. The Artisan: craft-oriented entrepreneurs.

For some, the allure lies not in vast landscapes, but in the intricate details of a chosen craft. The craftsman-oriented entrepreneur is drawn to a specific niche, their heart set on mastery and perfection. With unwavering dedication, they refine their skills, meticulously honing their offerings to become true artisans of their chosen field.

3. The Independent Spirit: independence-oriented entrepreneurs.

Imagine the open sea, vast and limitless, beckoning a solo navigator. This encapsulates the independence-oriented entrepreneur, driven by a yearning for self-determination. Breaking free from conventional constraints, they carve their path, cherishing the autonomy and control that entrepreneurship offers. Their journey is a testament to self-reliance.



Remember, these are not rigid categories, but rather guiding archetypes. You may find yourself resonating with aspects of each, forging your unique blend of motivations. As you start your tourism entrepreneurial journey, introspect on your driving forces. Are you the ambitious pathfinder, the meticulous artisan, or the independent spirit charting your course? Identifying your entrepreneurial type can act as a compass, guiding your decisions and shaping your approach to achieving success.

Figure 3.102

Types of Entrepreneurs



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 4 Specificity of SMEs

The specificity of tourism as an industry leads to several differences from other industries. One way to look at these differences is through the scale: according to the European Commission, 99% of tourism businesses in the EU are small and medium enterprises (SMEs).

The European Union defines small and medium-sized enterprises based on a set of criteria that include the number of employees, annual turnover, and balance sheet total (European Commission, 2003).

Table 3.1*SMEs Criteria*

Company category	Staff headcount	Turnover	Balance sheet total
Medium-sized	< 250 m	≤ € 50 m	≤ € 43 m
Small	< 50 m	≤ € 10 m	≤ € 10 m
Micro	< 10 m	≤ € 2 m	≤ € 2 m

Note. Source: European Commission (2003)

For the economy, SME is a driving force: there are more SMEs than large firms, they employ vast numbers of people, they have more local impact, and are more entrepreneurial and innovative. In tourism, in SMEs, especially those in the category of micro-, one employee often carries multiple roles. This is also true for family-run companies: e.g. works with reservations, greets guests at a front desk, does the marketing, etc.; they are responsible for both the strategic decisions and operations. This means, that as an entrepreneur, the person must be versatile, an excellent problem-solver, leader, and manager. More about entrepreneur's skills will follow in the next chapters.

Unit 5 Specificity of Tourism

Another way to look at the specificity of entrepreneurship in tourism is through the unique features of tourism as a service and experiential industry. Let's briefly review, what makes tourism products different from traditional ones:

1. Inseparability is one of the unique characteristics of services, including those in the tourism and hospitality industry. It refers to the idea that the production and consumption of services often occur simultaneously and are inseparable. In other words, services are typically created, delivered, and consumed in real-time, and the customer is often present during the production process. For example, think of a guided tour. The guide interacts with tourists, provides information, and facilitates the tour experience, which is co-created by the tourist and the guide in real time.
2. Heterogeneity - services are often variable. Due to the involvement of people in service delivery and the influence of external factors, it's challenging to achieve the same level of consistency in services as one might with a standardized product. For example, a restaurant experience. Even if a restaurant has a set menu and service standards, the quality of the service and the dining experience may vary based on



factors such as the chef's performance, the server's attitude, or the atmosphere in the restaurant. This variability is inherent in service-based industries.

3. Intangibility refers to the idea that services lack physical form, making them intangible and challenging to evaluate before consumption. Unlike tangible products that can be seen, touched, and tested before purchase, services are experienced rather than possessed. Even though some of the "try before buy" aspects can be done with virtual tourism tools, it is not the same as trying the actual service. An example to explain this can be a travel insurance policy. While the customer receives a document outlining the terms and conditions, the core service (financial protection during travel) is intangible. The customer only fully experiences and evaluates the service when a need arises, such as during a trip when they need to make a claim.
4. Perishability highlights that services cannot be stored for future use. Once a service is not consumed during a particular period, it is lost forever. This is particularly relevant to time-sensitive services. If hotel rooms remain unoccupied for a night, the revenue potential for those rooms is lost permanently. The opportunity to sell those rooms for that specific period has "perished."

In addition, Pine and Gilmore (1998, 2011, 2013) suggest that economic values developed from commodities to goods, then services, then experiences and personal transformations, highlighting two more features:

5. Experientiality – in comparison to offering goods or services, which are external to the consumer, tourism is built around experiences, which are internal, and personal, and exist in the mind of a person, who engages in the emotional, physical, intellectual, and spiritual.



6. Transformative tourism suggests that a new product is a better customer. Customers seek experiences tailored to their personal needs. Previously focused more on the luxury segment of travel - people seeking recharge, revitalize, and improve health, nowadays transformative experiences can be found across different kinds of tourism products that result in personal growth and fulfilment. For example, offering

Figure 3.103

Specificity of Tourism



immersive programs that involve travelers in volunteer projects, cultural exchanges, or skill-sharing activities that contribute positively to the destination.

Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 6 Tourism Entrepreneurial Landscape

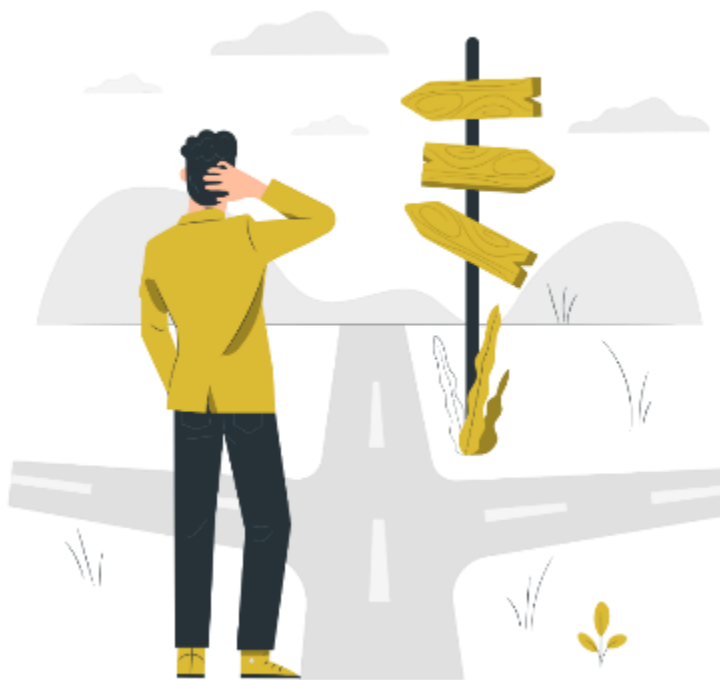
Tourism isn't a one-size-fits-all game. The unique blend of service, experience, and intangibility creates a distinct entrepreneurial landscape. Forget predictable production lines; think co-creating memories with guests, managing ever-changing experiences, and delivering value often before customers can even touch it:

- Embrace your versatility: wear multiple hats, adapt to changing situations, and be a master of problem-solving and leadership.
- Leverage your local impact: understand your community's needs and aspirations, build meaningful connections, and contribute to its development.
- Capitalize on agility and innovation: stay ahead of trends, be flexible, and experiment with new ideas to differentiate your offering.

- Master the intricacies of service and experience: deliver consistent quality, manage intangibility through clear communication and storytelling, and minimize perishability by optimizing resource allocation and pricing strategies.
- Craft authentic experiences and transformations: go beyond mere service provision; design experiences that engage your customers emotionally, intellectually, and personally, offering opportunities for growth and fulfillment.

Figure 3.104

Tourism Entrepreneurial Landscape



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 7 Quiz

Match the type of entrepreneur with the best-fitting example below:

Types:

1. Growth-oriented entrepreneurs
2. Craftsman-oriented entrepreneurs
3. Independence-oriented entrepreneurs

Examples:

- a. Boutique winery and vineyard, focusing on the mastery of winemaking, an active member of winemaking associations and networks.
- b. Self-sufficient tourism farm, offering home-grown food, using autonomous energy sources.
- c. City Hotel negotiating with investors for a new building project.

Unit 8 Entrepreneurial Mindset for Tourism

Entrepreneurs in the tourism sector need to navigate the challenges posed by specificity of tourism, while also embracing opportunities for innovation (Greene, 2020). The key features of an entrepreneurial mindset tailored to the specificity of tourism are:

- A foundational element of the entrepreneurial mindset in tourism is a focus on the customer. Acknowledging the diverse needs, preferences, and motivations of travelers is crucial. Entrepreneurs in this domain thrive by tailoring products and services to provide unique, personalized, and memorable experiences that resonate with the clientele.
- Innovation and creativity stand as pillars of the entrepreneurial mindset, given the industry's dynamic and competitive nature. The need for constant innovation drives entrepreneurs to introduce novel offerings – be it unique tour packages, technology-driven solutions, or unprecedented experiences that shape a distinct niche in the market.
- Adaptability and flexibility: recognizing the seasonality, changing trends, and external factors influencing tourism demand, entrepreneurs adjust strategies to accommodate fluctuations, introducing seasonal promotions and diversifying offerings to align with evolving traveler preferences.
- Community engagement and collaboration: entrepreneurs actively cultivate positive relationships with local communities and stakeholders, fostering collaboration with local businesses and implementing initiatives that mutually benefit the business and the destination.

- Sustainability takes the central stage, reflecting an acute awareness of its significance for long-term success. Entrepreneurs champion eco-friendly measures, promote responsible tourism, and embed sustainability into the core values and operations of their ventures.
- Crisis management and resilience: anticipating potential crises such as natural, anthropogenic disasters, or global health events. Entrepreneurs develop robust crisis management plans, build resilience, and institute contingency measures to navigate unforeseen challenges.
- A tech-forward approach means recognizing technology's role in enhancing customer experience and operational efficiency. Entrepreneurs embrace online booking systems, leverage social media for marketing, and adopt emerging technologies to improve the overall travel experience.
- Cultural sensitivity and local knowledge. Entrepreneurs actively invest in staff training on cultural sensitivity, curate authentic cultural experiences, and ensure their business contributes positively to the preservation of local heritage.
- Risk-taking and entrepreneurial courage: taking calculated risks of entrepreneurship, exploring new markets, and having the courage to innovate and differentiate their ventures in a competitive landscape.
- Marketing and branding: recognizing the power of effective promotion in attracting tourists. Entrepreneurs develop a robust brand identity, employ targeted marketing strategies, and adeptly communicate the unique value proposition of their business.

Fostering an entrepreneurial mindset is a journey for anyone involved in sustainable tourism. It goes beyond financial success; it involves contributing to the preservation of our planet, fostering positive social impacts, and creating memorable experiences for travelers. We will discuss entrepreneurial skills more in Lesson 4.



Figure 3.105

Entrepreneurial Mindset



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 9 Entrepreneur: Self-Reflection Map

In the experience economy, where individuals are at the heart of the journey, understanding your core motivations and capabilities is crucial. To embark effectively, we invite you to create a self-reflection map using the following prompts (Kimbell, 2014):

1. Setting your intention

Place your primary intention at the centre. For example, "I want to design an innovative and sustainable tourism service." What do you hope to achieve, and why is it personally meaningful?

2. Navigating issues and challenges

Reflect on the current issues you're addressing. If they're recent, what sparked your attention? If they've persisted, what keeps you dedicated to addressing them?

3. Charting responsibilities

Across your personal, professional, and community roles, who or what do you hold yourself accountable to? How does this responsibility manifest in your actions?

4. Vision and values

Envision the future you want to contribute to. How do your values, beliefs, and political commitments or those of individuals and communities you collaborate with, shape your vision? Are your vision and values primarily shared or unique to your experiences?

5. Your beliefs about change

How do you perceive future opportunities and challenges? What are your experiences with change, and how do you approach it?

6. Expanding your network: weak ties

Consider your less frequent connections in personal, professional, and community contexts. Reflect on what makes these connections meaningful to you.

7. Cultivating strong bonds: strong ties

Reflect on your close connections in personal, professional, and community settings. What fosters the strength of these ties?

8. Your capacities and resources

What are your current skills, knowledge, understanding, emotional well-being, social capital, and financial resources across personal, professional, and community aspects?

9. Your approach when starting off

Assess your openness to try new approaches. How frequently do you incorporate diverse perspectives and methods into new endeavours?



Use the template from the figure 3.106 below or simply draw the mind map on a paper. Repeat it from time to time to see how your standpoint changes depending on your experience and emerging goals.

Figure 3.106

Template for self-reflection.



Note. Source: adapted from Kimbell (2014).

Unit 10 Quiz

What is a crucial aspect of the entrepreneurial mindset in tourism, as highlighted in the text?

- Prioritizing technology adoption for operational efficiency over staff training.
- Focusing on constant innovation and creativity.
- Prioritizing risk-taking for competitive advantage.
- Ignoring the seasonality and trends in tourism demand.

Unit 11 Thinking Outside the Box

The essence of tourism products is exploration and discovery. Travelers seek experiences that ignite their senses, broaden their horizons, and create lasting memories. However, with established destinations and competitive markets, entrepreneurs can sometimes feel trapped in a box of "been there, done that" offerings.

This is where the thinking outside the box steps in. By embracing bold ideas and unconventional approaches, you can transform your tourism venture into a haven for unique experiences, attracting new customers and leaving a lasting impact on the industry.

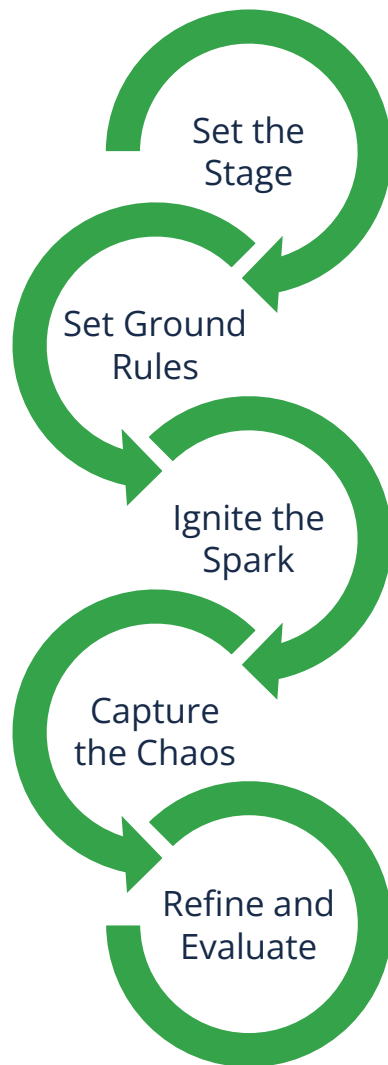
But how do we break free from the mold and tap into our creative thinking? The journey begins with recognizing the need for innovation.

Imagine rows of tourists snapping the same photo at a crowded landmark, or generic tours echoing well-worn narratives. While these traditional experiences still hold value, they fail to cater to the growing demand for authenticity, personalization, and deeper connections. In an oversaturated market, predictability becomes a liability.



Figure 3.107

Brainstorming Process.



Thinking outside the box does not require extraordinary talents. It's a deliberate process fuelled by exploration and collaboration. The following tools will help with the innovation process.

Brainstorming

We have shortly covered brainstorming in the lesson about Design Thinking. In this part, we will explain in more details how to organize a successful brainstorming session (Figure 3.107). Gather your team, unleash your ideas, and don't shy away from the seemingly strange or impossible. Here's your step-by-step guide:

1. Set the stage:
 - a. Clearly articulate the problem you're trying to solve or the question you're seeking answers to. This provides a focused direction for the brainstorming session.
 - b. Assemble a diverse group with varied perspectives, expertise, and experiences. Include team members, clients, or even complete outsiders for a fresh viewpoint.
 - c. Opt for a comfortable, stimulating space free from distractions. Encourage creative energy with whiteboards, markers, and other visual aids.
2. Ground rules for success:
 - a. Encourage "out-of-the-box" thinking. There are no bad ideas! Build on each other's suggestions and embrace wild ideas – they might spark game-changers.
 - b. Foster a safe space where everyone feels comfortable sharing, listening, and building upon each other's ideas.
 - c. Aim for many diverse ideas initially. Don't get bogged down in judging or evaluating potential at this stage.
3. Ignite the spark:
 - a. Use quick, creative activities to break the ice and get everyone into a thinking mode. Try drawing random images, word association games, or quick role-playing scenarios.
 - b. Choose a method that suits your group and objective. Popular options include brainwriting (anonymous written contributions), mind mapping (visualizing connections between ideas), or rapid idea generation.
 - c. Use prompts, questions, or analogies to stimulate further thinking and prevent stalling. Rotate roles to ensure everyone has a chance to contribute and lead.
4. Capture the chaos:
 - a. Record all ideas, no matter how seemingly irrelevant, using whiteboards, flip charts, or digital tools. Visual aids can help capture connections and spark further inspiration.
 - b. Once the brainstorming session concludes, categorize and group similar ideas to identify patterns and potential themes.
5. Refine and evaluate:

- a. After the initial burst of creativity, evaluate the generated ideas against your original challenge or question. Choose the most promising options based on feasibility, impact, and alignment with your objectives.
- b. Flesh out the chosen ideas, assigning ownership, outlining action steps, and setting deadlines. Celebrate your collective creativity and get ready to put your innovative solutions into action.

Negative Brainstorming

Instead of chasing solutions, you and your team can embrace the dark side, brainstorming everything that could go wrong. Sounds counterintuitive, right? However, exploring negative scenarios can lead to surprising breakthroughs.

Negative brainstorming is also known as reverse brainstorming (Panell, 2022). Our mind works in a way that it is more likely to focus on potential problems. This can be used to our advantage. Therefore, the purpose of this technique is to identify potential problems before commencing a project. In negative brainstorming, the team brainstorms for everything that could make the problem worse, instead of brainstorming for possible solutions. The output from this brainstorm is then taken and explored to see if any new ideas for a solution are suggested by thinking about how to eliminate the things that make the problem worse. Negative brainstorming is usually more focused than regular brainstorming and the solutions turn out to be more realistic and useful. It is a powerful tool that can help unlock new ideas and solutions to problems and can be used when you want the team to let go of the pre-conceived ideas about a topic.

Unit 12 Innovativeness in Tourism

Boosting Creativity

Thinking outside the box can help with exploring innovative and unconventional approaches. How can we boost creativity and innovations? Forbes experts suggests research-supported tips for incorporating creativity into teamwork (Massie, 2024):

1. Cultivate a growth mindset where obstacles are seen as opportunities to learn and improve. Encourage employees to learn from constructive feedback and persevere through setbacks.
2. Promote a diverse and inclusive environment where everyone feels comfortable sharing their ideas. Diverse groups generate more creative solutions.
3. Provide autonomy and flexibility to explore ideas and experiment with new approaches. This enhances creativity and individual ownership.
4. Encourage inclusive decision-making by involving diverse voices.



5. Prioritize continuous learning for yourself and your team. Attend workshops, engage in stimulating activities, and set the tone for lifelong learning.
6. Create a supportive environment where calculated risks are welcomed. This allows for experimentation and unexpected breakthroughs.

Where to look for ideas for innovative tourism offerings?

1. Local collaboration: Businesses with complementary tourism products can collaborate to offer a complete experience for tourists. This could involve partnerships between local accommodations, tour operators, and activity providers to offer unique and comprehensive experiences (TMA, 2024).
2. Alternative travel solutions: Encouraging travelers to consider alternative travel options, such as taking a long layover to explore a new destination, finding creative ways to reach their desired location, or seeking out off-the-beaten-path experiences, can lead to unique and memorable travel experiences (Quick Whit Travel, 2022).
3. Embracing local practices: Encouraging travelers to embrace local practices and seek out authentic experiences can lead to a deeper understanding of the destination. This could involve asking locals for recommendations, trying authentic local cuisine, or participating in traditional activities (Quick Whit Travel, 2022).
4. Under-the-radar destinations: Encouraging travellers to explore under-the-radar destinations that are not typically included in mainstream travel bucket lists. This can lead to unique and less crowded experiences, allowing travellers to discover hidden gems and support lesser-known communities.



Figure 3.108

Innovativeness



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 13 Business Processes

Business processes are what a company does to deliver services to customers.

A business process as a collection of interrelated events, activities, and decision points that involve several actors and objects, which collectively lead to an outcome that is of value to at least one customer.

BPM is a body of methods, techniques, and tools to identify, discover, analyze, redesign, execute, and monitor business processes to optimize their performance (Dumas et al., 2018, p. 6).

Business process management (BPM) guides how work unfolds within an organization. Its primary objectives are to ensure consistent outcomes and to strategically leverage opportunities for improvement (Dumas et al., 2018). Business process management should align with the mission, vision, and values of the organization, and serve as a basis for decision-making (Geoff Southern & Luiz Moutinho, 2022).

Business process management is a discipline involving any combination of modelling, automation, execution, control, measurement, and optimization of business activity flows in applicable combination to support enterprise goals, spanning organizational and system boundaries, and involving employees, customers, and partners within and beyond the enterprise boundaries (Swenson & von Rosing, 2015, p. 87).

How the business processes are organized impacts the quality of services and efficiency with which the services are delivered (Dumas et al., 2018).

In tourism, business process management assumes a holistic approach that is not only focusing on product or service quality. It should consider how each performance aspect within a tourism company, from reservation systems to customer service operations, contributes to the amalgam of interconnected processes, enable an organization to optimize and to satisfy needs of all stakeholders.



Figure 3.109

Business Process



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 14 Stages of Business Processes

There are various stages of business processes that can be observed across industries (Dumas et al., 2018). Applying them to tourism context would look like following:

- Concept-to-prototype - developing new products.
- Quote-to-order – when tourist company receives a request for a quote and ends when tourist/customer places purchase order based on the quote.
- Order-to-pay – the process starting with tourist asking for a service and ends when tourist pays for the service.

- Procure-to-pay - – is an alternative to stages 2-3 (Quote-to Cash) in business-to business operations.
- Issue-to-resolution – starts with the tourist, partner or supplier raising the issue, e.g., if they are unsatisfied with the service, or place an insurance claim, and continues until both sides agree that the issue is resolved.
- Application-to- approval – the process of applying for a benefit or a privilege, e.g., for tourists it can be a visa application, for a tourism operator – a license. The process ends with approval or denial.

If the company wants to improve performance significantly – be it cost, quality, service or speed, direct or indirect value, it needs to go through the business process re-engineering. There are two approaches to the business process re-engineering, differing in how the technology is used:

- Big Bang – technology is an enabler of change, e.g., think about how digital platforms changed booking process.
- Continuous improvement – technology is a driver of change, which is, however, happening through the overall quality management – continuous improvement and sustaining of the quality of products and services.



Figure 3.110

Business Process Approaches



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 15 The Key Elements of the Business Process

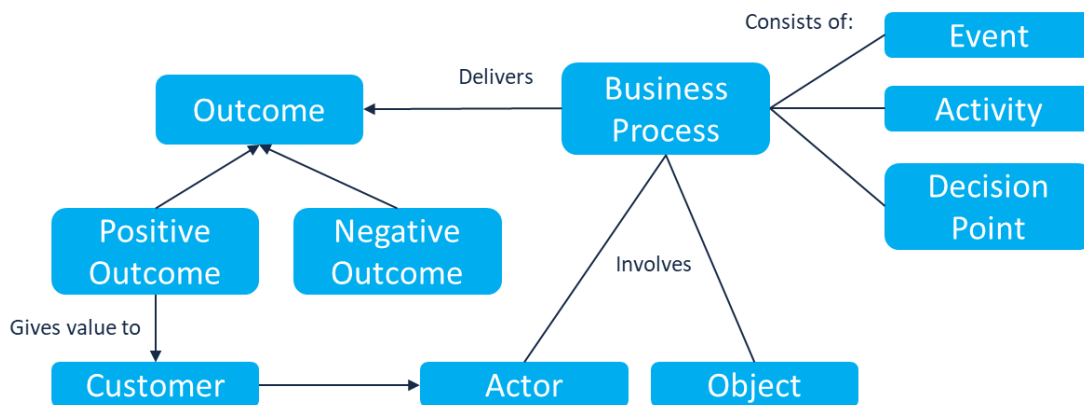
The key elements of the business process are (Figure 3.111):

1. Event, activity, task – e.g. morning delivery of fresh fruits to hotel's restaurant is an activity, arrival of the food truck is an event, while the tasks related to it are: 1) checking the number, 2) quality, 3) signing the documents by the staff. Therefore, task refers to the work performed by the single process participant, the event is happening at a certain point in time and its duration can be ignored, while activity involves multiple events and tasks.
2. Decision points are critical stages that define how the process is executed. For example, the kitchen assistant might reveal during the inspection, that delivered fruits are not what has been expected.

3. Actors – humans, organizations, or software acting on behalf of humans or organizations. For example, a fruit truck driver, kitchen assistant, and hotel's food procurement system, crashed and repeated the order from the previous week.
4. Physical objects, such as equipment, materials, products, and paper documents.
5. Informational objects - electronic documents and electronic records.
6. Process participants – work inside the organization, where the process is executed.
7. Business party – are participants from the outside organization, e.g., a food supplier or a software support company.
8. Outcome is the final stage of the business process; it can be positive or negative.

Figure 3.111

The key elements of business process



Note. Source: Dumas et al. (2018).

Unit 16 Business Process Design

Business process design involves creating the business process for an organisation from scratch. The organisation's business processes can be divided into three types:

- Operational processes: These are related to how a business produces outputs (the product or service sold to a customer, resulting in customer satisfaction) based on the inputs (labour, equipment, money). Operational processes cover development, marketing, and customer service. For example, preparing breakfast in a hotel involves buying products from suppliers, kitchen work, and serving food at the restaurant.

- Supporting processes: Also known as secondary processes, these do not directly generate income but support all the processes that do so. For example, the work of the financial department ensures that hotel employees receive their salaries on time.
- Management processes: These coordinate, plan and monitor the operational and supporting processes. For example, they ensure that the hotel is meeting its targets, is safe as a workspace, and provides training to the staff.

Figure 3.112

Business Process Design



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 17 Business Process Management Lifecycle

Business process management is a continuous cycle, shown in Figure 3.113. It includes the following stages (Dumas et al., 2018):

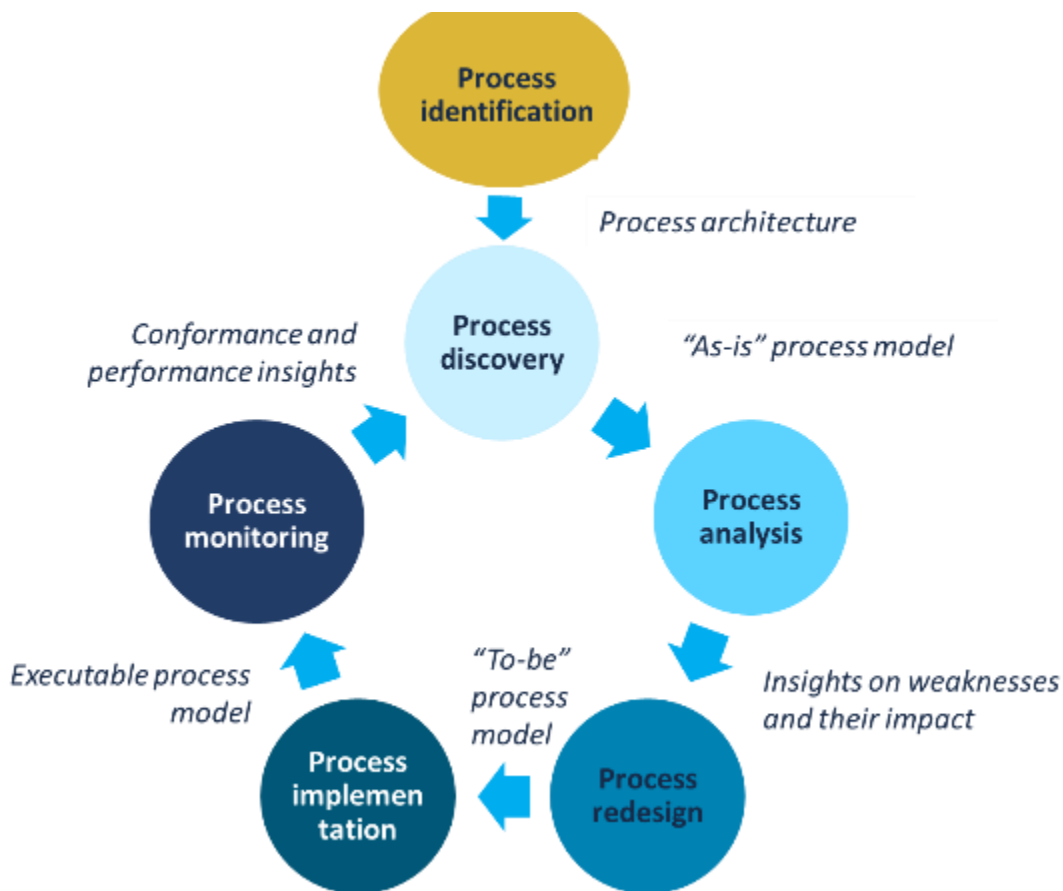
1. Process identification: This involves identifying a specific business problem and the processes related to the problem. This allows us to address the selected processes in the next stages of the lifecycle.
2. Process discovery: At this stage, it is time to shed light and document the chosen process in its current state - prepare an "as-is" model.
3. Process analysis: Here, we identify, document, and, if possible, quantify all the issues related to the process. Then, the issues are sorted based on the potential impact and effort needed to solve them.
4. Process redesign: The goal is to identify the changes that will address the issues and ensure that we achieve performance goals. The changes are then evaluated with

process analysis and, if they promise a solution, incorporated in a redesigned process.

5. Process implementation. This exciting part involves putting the redesigned process into action. This stage involves two key aspects: organizational change management and process automation. Change management ensures everyone adapts to the new way of working, while automation leverages technology to streamline the process.
6. Process monitoring: Once the redesigned process is running, it is crucial to monitor its performance. If the new issues arise, the process is repeated.

Figure 3.113

Business Process Lifecycle



Note. Source: Dumas et al. (2018)

Unit 18 Business Process Mapping Exercise

Visualising the business process of an organisation is a valuable tool for identifying potential weaknesses and determining how to address them. A business process map acts as a blueprint, revealing the intricacies of the operations, from inputs and outputs to the ownership of each crucial stage. These are key steps for conducting a business process mapping. Let's use a hotel

booking process at a fictional hotel chain "Paradise" to illustrate the business process mapping steps:

1. Identify the process. Start by clearly defining the scope and boundaries of the process you intend to map. This includes identifying the start and end points, as well as the key activities involved. E.g., *Scope*: Booking a hotel room online through the Paradise website; *Start Point*: Customer starts browsing hotels on the Paradise website; *End Point*: Confirmation email with booking details is sent to the customer.
2. Determine the objectives. Clearly articulate the objectives of mapping the process. These could include improving efficiency, identifying bottlenecks, ensuring compliance, or enhancing customer satisfaction. E.g., improve online booking efficiency, identify potential customer drop-off points, enhance customer experience during booking.
3. Identify people. Determine who is involved in or affected by the process. E.g., Customer, Online booking system, Reservation staff (if needed for confirmation or special requests).
4. Define process boundaries. Clearly outline the beginning and end of the process. This step helps focus the mapping effort on the specific activities that contribute to the overall process. E.g., the process starts when a customer searches for a hotel on the Paradise website and ends when they receive a confirmation email with their booking details.
5. Gather information. Collect data and insights about the process from various sources, including documentation, interviews with stakeholders, and direct observation of the actual process:
 - a. Analyze website traffic data to understand customer behavior during booking.
 - b. Interview customer service representatives about common booking inquiries.
 - c. Observe customers using the online booking system to identify potential difficulties.
6. Create a high-level overview. Develop a high-level, visual representation of the entire process. This could be in the form of a flowchart or a diagram, providing a bird's-eye view of the key steps and decision points. E.g., a simple flowchart showing the basic steps: *Search for hotel -> Select room & dates -> Enter guest details -> Payment -> Confirmation email*.
7. Detail each step. Break down the process into detailed steps, activities, and decision points. Use symbols, shapes, or icons to represent different elements, and clearly label each step for easy understanding.
8. Include decision points and inputs/outputs: Clearly indicate decision points within the process and illustrate the inputs and outputs at each step. This helps in



understanding the flow of information and decision-making logic. E.g., one of the decision points is selecting dates by tourists.

9. Sequence and connect steps: Arrange the steps in a logical order and use connectors to illustrate the flow from one step to the next. This enhances the clarity of the mapping and facilitates a better understanding of the process flow.
10. Review with stakeholders: Share the draft map with customer service, website developers, and marketing teams for feedback on usability and clarity. This ensures accuracy and incorporates insights from those directly involved in or impacted by the process.
11. Refine and finalize. Incorporate feedback from stakeholders, make necessary adjustments, and finalize the business process map. Ensure that the map accurately represents the actual workflow and is comprehensible to a diverse audience.
12. Document and communicate. Document the finalized process map and communicate it effectively within the organization. Use it as a reference for training, process improvement, and ongoing analysis.



Figure 3.114

Mapping Exercise



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 19 Benefits of the Business Process Mapping

Conducting this exercise and presenting the results to the team has several benefits:

1. Business process flowcharts facilitate the establishment of best practices and standard operating procedures by providing a visual representation of the ideal workflow.
2. Process mapping reduces inefficiencies and identifies inadequacies within processes, enabling the development of effective solutions.
3. By mapping processes, organizations create an ideal path for approaching various tasks, ensuring a clear and standardized process for specific departments.
4. Involving everyone associated with a process fosters collaboration, ensuring that team members are on the same page and reinforcing a sense of unity.
5. Recognizing employees' input and opinions through process mapping boosts morale and strengthens relationships among team members.
6. Process mapping provides new employees with a checklist blueprint for various tasks.
7. Deepening employees' understanding of processes allows them to visualize the big picture and comprehend the result they are working towards.
8. Process mapping promotes a shared vision among employees, facilitating a collective understanding of roles and responsibilities in achieving organizational goals.

You can find more resources to help you with the business process mapping here:

- <https://asana.com/resources/process-mapping>

- <https://checkify.com/blog/process-mapping/>

Figure 3.115

Benefits of Business Process Mapping

Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 20 Quiz

Business process management (BPM) is a continuous cycle that aims to improve the efficiency



and effectiveness of an organization's processes.

Match the following descriptions with the corresponding stage of the BPM lifecycle:

Stages:

- Process identification
- Process discovery
- Process analysis
- Process redesign
- Process implementation

- Process monitoring

Descriptions:

1. Documenting the current state of a chosen process. (___)
2. Continuously monitoring the performance of the redesigned process and identifying any new issues. (___)
3. Analysing and identifying issues within a process, prioritizing them based on impact and effort to solve. (___)
4. Putting the redesigned process into action, including managing organizational change and implementing automation. (___)
5. Designing changes to address the identified process issues and improve performance. (___)
6. Identifying a specific business problem and the related processes. (___)

Unit 21 Business Plan Development

As you embark on the exciting journey of transforming your passion into a thriving business, there is a crucial roadmap you need in your hands: the business plan. In this part, we will explore its purpose and importance for sustainable tourism business. We will unveil how a well-structured plan becomes a powerful guide for navigating success and ensuring long-term sustainability.

A business plan is a document that outlines the goals and strategies of a company, providing a roadmap for its first several years of operation. It is an important tool for creating new businesses, whether as a start-up or an offshoot of an existing business. Business plans are often shared with funding agencies, potential investors, and venture capitalists to obtain the necessary funding. The plan typically includes an executive summary, business description, market analysis, organizational and managerial section, products or services section, marketing and sales section, funding request, and financial projections. A business plan is similar to a business model, but the latter is a representation of how an existing business works, rather than how a prospective business can work. A well-conceived business plan can help a business focus on its goals, anticipate future challenges, and attract investors.

Let's go through the key components of a business plan:

1. Executive summary: A brief overview of the entire plan, summarizing the essentials.
2. Company description: Describes the proposed new endeavor, its purpose, and target market.
3. Market analysis: Describes the industry and the market environment of the proposed business, including a profile of the competition.



4. Organizational and managerial section: Explains the structure of the business, types of positions, and departments it will encompass.
5. Products and services: Details the offerings, including a full description of the products or services and the plan for product lifecycle management.
6. Marketing and sales: Explains the strategies for branding, marketing, and selling the product or service.
7. Funding request: Details the funding needed and the type of information required by the funding party.
8. Financial projection: Covers the expected performance and milestones over the first years of operation, usually five years.
9. Sustainability and social responsibility: Increasingly, business plans for tourism include a section on sustainability and social responsibility, outlining the business's commitment to environmental and social consciousness.
10. Appendix: Includes useful information that does not belong in any of the other sections, such as tables, charts, budgets, and other "hard" figures.



Figure 3.116

Business Plan Development



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 22 Business Plan: Accounting for Tourism Specificity

To prepare a sustainable business plan, an entrepreneur should understand their business model well – what is the core value the business will create, how it will be delivered to the end customer, and what will be the cost structure, revenues and expenses (Beech & Chadwick, 2006). We will learn more about business models in the next unit.

Moreover, when developing a business plan, entrepreneurs should account for the challenges of the tourism industry, some of which are (Cabie, 2014; SLU, 2022):

- Poor understanding of the concept of sustainability among stakeholders, including businesses, tourists, and local communities, can hinder the effective implementation of sustainable tourism practices.
- Many businesses struggle with the transition from short-term profit-focused thinking to a long-term, sustainable mindset. This shift often requires significant changes to business models and operations, which can be challenging to implement.
- Tourism businesses often face challenges related to community opposition, especially in areas where tourism development may impact local cultures and traditional ways of life. Additionally, seasonality in tourism can lead to economic and environmental challenges that businesses must address.
- Greenwashing. Businesses may face challenges related to ensuring that their operations are truly sustainable and not just presented as such for marketing purposes.
- Achieving financial sustainability while implementing sustainable tourism practices can be a significant challenge. Without a clear path to profitability, businesses may struggle to justify the investment required for sustainable initiatives.
- Businesses may face regulatory and policy barriers that hinder the implementation of sustainable tourism practices. Lack of supportive government policies and regulations can make it difficult for businesses to prioritize sustainability.



Figure 3.117

Specifics of Business Planning in Tourism



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Unit 23 Quiz

The business plan and business model are both important documents for a business, but they serve different purposes. Which of the following best describes the key difference between a business plan and a business model?

- a. A business plan is a legal document required for starting a business, while a business model is a marketing strategy.
 - b. A business plan outlines the specific steps to achieve a business goal, while a business model describes the overall approach to creating and capturing value.
- (Correct Answer)**

- c. A business plan is a short document for internal use, while a business model is a detailed document for investors.
- d. A business plan focuses on the past performance of a business, while a business model focuses on the future.

Unit 24 Business Models for Sustainable Tourism

What is business model and why it is important?

A business model is a strategic plan that outlines how a company operates, generates revenue, and creates value for its customers. It encompasses various elements, such as the products or services offered, target market, revenue streams, cost structure, key activities, resources, and partnerships. Business models are crucial for both new ventures and established businesses as they help to attract investment, recruit talent, motivate staff, and adapt to changing market trends. It is essential for companies to understand their business model thoroughly to make informed decisions and ensure long-term success (Magretta, 2002; Ovens, 2015).

Business Model Canvas

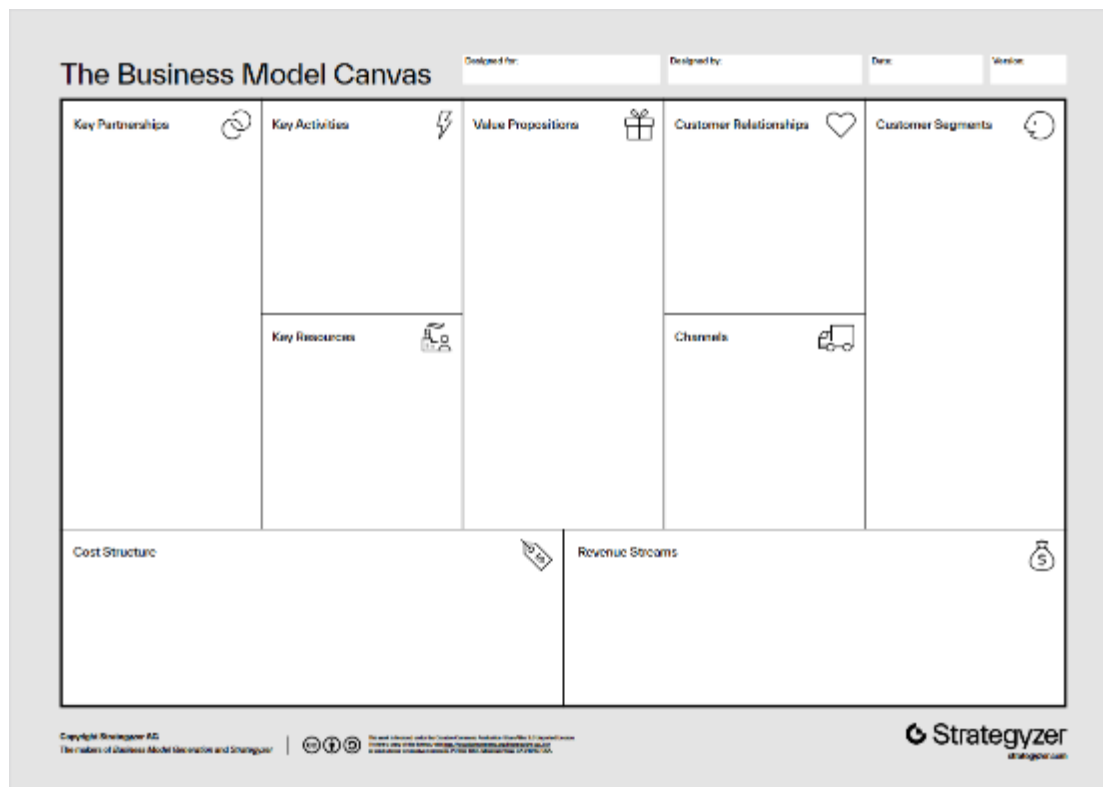
The Business Model Canvas is a strategic management tool that provides a visual and structured approach to designing, analysing, and communicating a business model. It consists of nine key building blocks that represent the essential aspects of a business (Figure 3.118).

The Business Model Canvas was designed by Alexander Osterwalder and Yves Pigneur. They published the book "Business Model Generation" in 2008, which introduced the Business Model Canvas and popularized it as a tool for entrepreneurs and businesses of all sizes.



Figure 3.118

Business Model Canvas preview by Strategyzer



Note. Source: Strategyzer (2008).

Elements of the Business Model Canva

- **Customer Segments.** The different groups of people or organizations a business aims to reach and serve. Here we answer questions, such as: For whom are we creating value? Who are the most important customers?
- **Value Proposition.** What value do we deliver to the customer? Which customer problems will we solve? Which bundle of products and services we offer to a specific customer segment? Which customer needs will be satisfied?
- **Channels.** How a company communicates with and reaches its customer segments to deliver a value proposition.
- **Customer Relationships.** The types of relationships a company establishes with specific customer segments.
- **Revenue Streams.** The way a company makes money from each customer segment.
- **Key Resources.** The most important assets required to make a business model work.
- **Key Activities.** The most important things a company must do to make its business model work.

- **Key Partnerships.** The network of suppliers and partners that make the business model work.
- **Cost Structure.** The costs a business incurs while operating under a particular business model.

Unit 25 Activity

Watch the YouTube video about Business Model Canva from its authors (34 mins).

<https://www.youtube.com/watch?v=xvCfUBOZPJQ&t=220s>

This keynote by Professor Yves Pigneur and Alex Osterwalder dives into how businesses can design models that balance purpose and profit. Here are the key takeaways:

- Traditional models need to be challenged to make way for sustainable practices and social good.
- A new leadership approach is needed to drive this transformation.
- Continuous improvement and iteration are crucial for success.
- Businesses can thrive while making a positive impact.

Figure 3.119

Sustainable Business Models



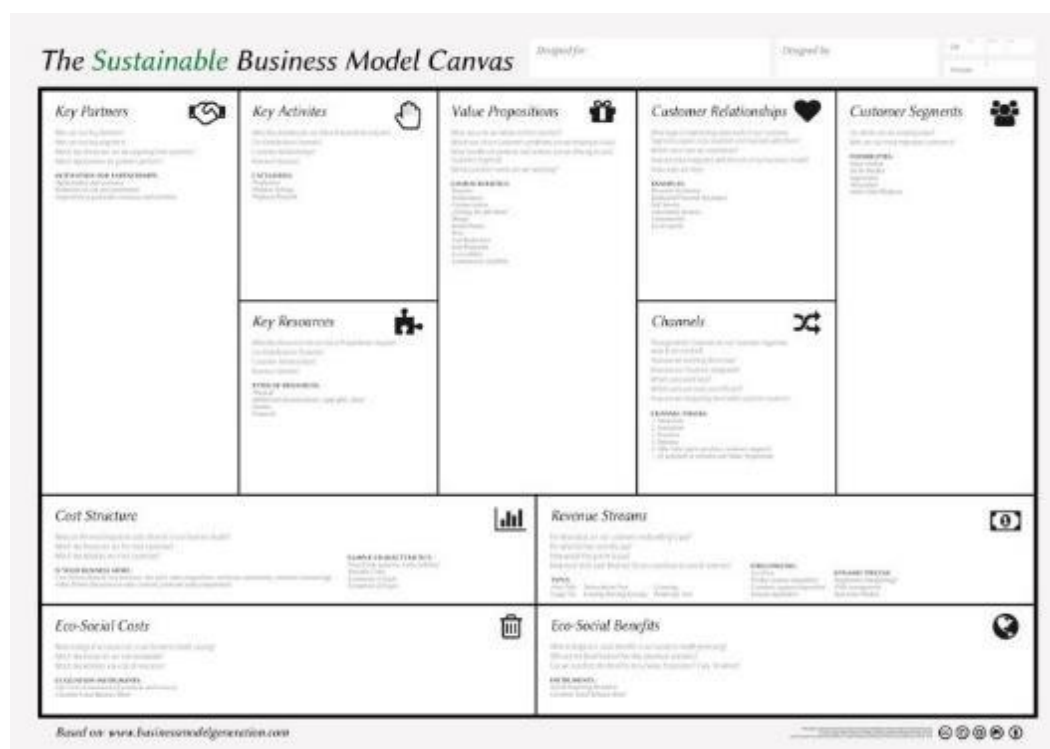
Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 26 Sustainable Business Model Canvas

It is a modification of the traditional Business Model Canvas, focusing on the integration of ecological and social consequences of business activities (Martin-Rios, 2019). It includes the same nine building blocks as the traditional canvas, but with additional elements that address sustainability. These additional elements are Eco-Social Costs and Eco-Social Benefits, which focus on the environmental and social impacts of business activities (EcoCation, 2024). The Sustainable Business Model Canvas aims to maximize positive and avoid negative impact on society and nature, making sustainability an integral part of the core business. The visualization on the canvas fosters coherence of the concept and clarification among the team members (Figure 3.120).

Figure 3.120

Sustainable Business Model Canvas



Note. Source: Ecocation (2024)

Examples of sustainable business models (EcoCation, 2024):

- Ecotourism: Focused on low-impact nature experiences while supporting conservation and local communities.
- Community-based tourism: Managed and owned by local communities, ensuring fair distribution of benefits.

- Social enterprises: Operate for social impact alongside financial sustainability, often addressing specific community needs.
- Responsible travel platforms: Promote sustainable travel options and educate travelers about responsible tourism practices.
- Circular business: Shifts from linear "take-make-dispose" to closed-loop systems, minimizing waste and resource consumption. For example, zero-waste shops, selling only in customer-brought packaging that is used multiple times.
- Sharing economy & product-service systems: Focuses on providing access to goods and services rather than ownership, promoting collaborative consumption. Examples are Airbnb (short-term accommodation) and Uber (transportation).
- Innovation & biomimicry: Draws inspiration from nature to solve problems through biomimicry (imitating natural designs). An example is wind turbine efficiency improvement inspired by humpback whale fins.
- Cradle-to-Cradle: Designs products with end-of-life in mind, aiming for materials that decompose or return to industrial cycles.
- Reverse logistics: Optimizes the return of goods through the supply chain for value recovery or responsible disposal. For example, Patagonia, an outdoor equipment company, provides Worn Wear services for fixing the goods, encourages to train-in used items to store, and recycles the used items.

Unit 27 Case Study

Case of Fairbnb.coop

Fairbnb.coop (Figure 3.121) is an example of a sustainable business model in the tourism industry, focusing on community-driven tourism that aims to benefit everyone involved. Here are the key aspects of Fairbnb's business model (Fairbnb, 2024):

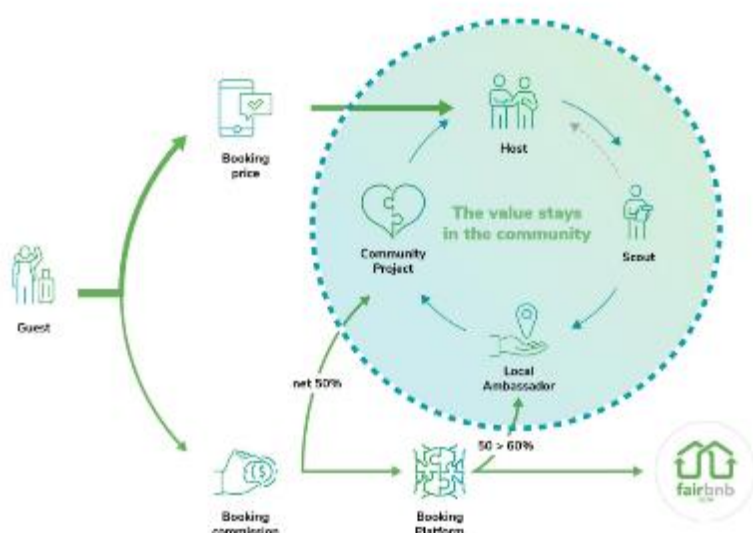
- Cooperative booking platform: Fairbnb.coop is a cooperative platform that prioritizes people and places. It connects conscious travellers with local hosts, redirecting 50% of its net commission to community projects.
- Sustainable hosts: The platform only works with lawful and sustainable hosts who proactively participate in creating a tourism model that values people and the planet, providing authentic local experiences that respect both guests and the community.
- "One Host, One Home" policy: This policy aims to promote responsible and sustainable home sharing by restricting hosts to listing only one property at a time, aiming to prevent the operation of multiple properties as illegal hotels and ensuring a more community-centred approach to vacation rentals.



- Redistributive model: Fairbnb's business model is based on a redistributive model, where 50% of the net commission paid goes directly to community projects in the host area.
- Experience platform: In addition to booking platforms, Fairbnb has introduced fairUP®, an experience platform that follows the same redistributive model, allowing users to book and offer authentic local activities.
- Scouts: Fairbnb introduces new actors called "Scouts", who are local activists that help underrepresented/marginalized local businesses become visible on the digital market and improve fairUP®.

Figure 3.121

Fairbnb.coop Model



Note. Source: Fairbnb (2024)

By implementing these sustainable practices, Fairbnb.coop aims to create a more equitable and sustainable tourism model that benefits local communities and supports social well-being.

Fairbnb as an Example of Sustainable Business Model

In the table below, we analyze how the Fairbnb example can be illustrated through the Sustainable Business Model Canva.

Table 3.2*Fairbnb as Sustainable Business Model*

Business Model Canvas Fairbnb.coop				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Local communities (providing unique lodging and experiences), eco-travel organizations (reaching target audience), secure payment processing companies.	Platform maintenance and development, managing community engagement, promoting eco-friendly travel practices, facilitating communication between hosts and guests, ensuring fair treatment for all participants.	Immerse in local culture, minimize environmental impact, contribute to social and environmental projects through booking fees.	Encourage interaction between travellers and hosts, provide transparent communication tools, showcase positive reviews and social impact stories, offer opportunities to engage with local communities.	Eco-conscious travellers seeking authentic experiences that benefit local communities.
	Key Resources		Channels	
	Online platform infrastructure, secure payment system, communication tools for hosts and guests, and collaboration with local communities and organizations.		Online platform and mobile app, partnerships with eco-travel organizations, social media marketing highlighting community-driven experiences and sustainability efforts.	
Cost Structure		Revenue Streams		
Platform maintenance and development, marketing and promotion expenses, customer support, partnership fees, secure payment processing.		Commission on bookings (50% goes to local communities), potential premium features for hosts (e.g., highlighted listings), partnerships with sustainable travel agencies.		
Eco-social Costs		Eco-social Benefits		
Carbon footprint from platform operation and travel, potential for gentrification in certain areas. Encouraging low-impact travel options, promoting responsible tourism practices, collaborating with communities to ensure positive local impact.		Supports local communities economically, fosters cultural exchange, promotes sustainable tourism practices, contributes to social and environmental projects through commission split.		

Note. Source: own elaboration, based on the Fairbnb (2024) webpage information and EcoCation (2024) template.

Link to the Fairbnb.coop platform for further exploration:

- <https://fairbnb.coop/about-fairbnb/>

Questions for the discussion:

1. How does Fairbnb's "one host-one home" policy contribute to sustainable and responsible tourism practices?
2. In what ways does Fairbnb engage with local communities through its platform, and how does this impact the overall travel experience for users?
3. Can you explain the role of Local Nodes in Fairbnb's business model and how they support the platform's mission of promoting a more equitable and sustainable tourism model?
4. How does Fairbnb select and prioritize community projects for funding, and what criteria are considered in this decision-making process?



Unit 28 Quiz

1. Which of the following business models prioritizes providing access to a product or service over ownership, often facilitated by online platforms?
 - a. Circular economy
 - b. Cradle-to-Cradle
 - c. Sharing economy
 - d. Biomimicry
2. What are the two additional elements included in the Sustainable Business Model Canvas that are not found in the traditional Business Model Canvas?
 - a. Customer segments and value propositions
 - b. Eco-social costs and eco-social benefits
 - c. Channels and customer relationships
 - d. Revenue streams and cost structure
3. Which of the following is a key feature of Fairbnb's business model that supports sustainable and responsible tourism?
 - a. One host-one home policy
 - b. Focus on luxury accommodations
 - c. Competitive pricing strategy
 - d. Cost-plus pricing model

Unit 29 Wrap-Up & Conclusion to Lesson 3

In this lesson, we explored the essential concepts that fuel successful businesses.

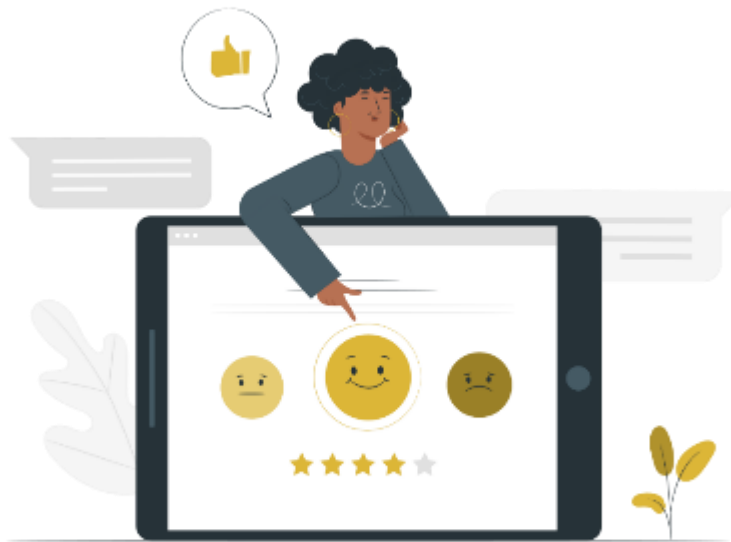
- We unpacked the characteristics of an entrepreneurial mindset.
- We discussed how to think outside the box and identify opportunities that might not be immediately apparent.
- We demystified the concept of business processes, the building blocks of how company function, and how to manage them for optimal efficiency.
- Finally, we clarified the distinction between a business plan, a roadmap for a venture, and a business model, which outlines how a business creates value and captures profit.

Take some time to revisit the topics that resonated most with you. Check our additional resources to delve deeper into these concepts [[links to resources](#)].

Remember, the most successful entrepreneurs are lifelong learners. Dive deeper into these topics and continue to fuel your passion for building something great.

Figure 3.122

Completing the Lesson 3



Note. Source Storyset, n.d., Freepik, CC 2.0

Lesson 4: Entrepreneurial Skills

Unit 1 Introduction to Lesson 4 Entrepreneurial Skills

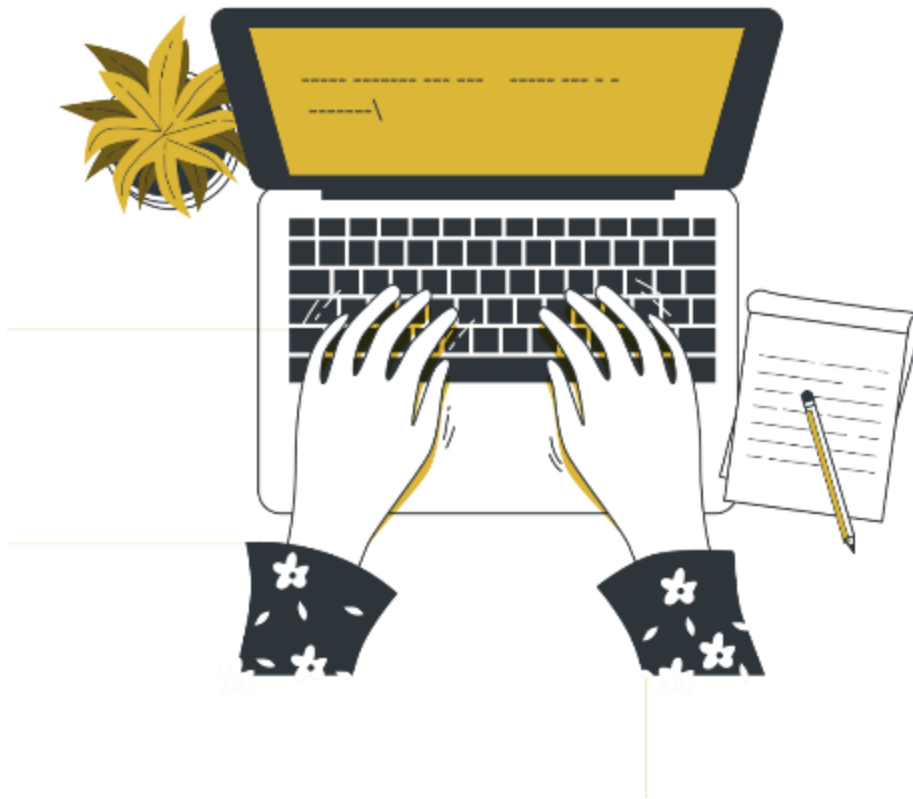
In this lesson, we will delve into essential topics on entrepreneurial skills that are crucial for successful business planning and long-term sustainability. Throughout this lesson, we will cover creative problem-solving, decision-making, business strategy, organizing and delegating work, team management, self-awareness, self-efficacy, business finances and risk management. By mastering these entrepreneurial skills, individuals can position themselves as agile leaders capable of steering their businesses towards success in an ever-evolving marketplace. The topics we will cover include:

1. Creative problem-solving – This skill encourages innovative thinking to find unique solutions to complex challenges, fostering adaptability and resilience in the face of uncertainty.
2. Effective decision-making – This skill involves a systematic approach to making informed choices that align with organizational goals.
3. Business strategy – Strategic planning focuses on setting clear objectives, analysing market trends, and developing long-term strategies to achieve competitive advantage. It guides the organization towards its vision.
4. Organizing and delegating work – This skill is essential for optimizing productivity and efficiency within a team. Effective delegation empowers employees and ensures tasks are completed effectively.
5. Team management – Building cohesive teams with diverse skills and strengths is key to fostering collaboration and achieving collective goals.
6. Self-awareness – Understanding one's strengths, weaknesses, and values is vital for personal growth and effective leadership.
7. Self-efficacy – Believing in one's ability to accomplish tasks and overcome challenges. It is a cornerstone of entrepreneurial success.
8. Financial management – Understanding key financial concepts empowers entrepreneurs to make informed financial decisions.
9. Risk management – This skill helps to proactively identify, assess, and mitigate potential threats.



Figure 3.123

Introduction to Lesson 4



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 2 Quiz

Which of the following skills is NOT directly related to effective leadership in an entrepreneurial context?

- a. Self-awareness: understanding one's own strengths and weaknesses.
- b. Creative problem-solving: finding innovative solutions to challenges.
- c. Strategic planning: setting long-term goals and developing plans to achieve them.
- d. Micromanagement: closely controlling all aspects of employee work.

Unit 3 Creativity

"A solution to a problem is creative if it involves concepts not present in statement of the problem and the general knowledge surrounding it" (McCarty, 1999, p. 45).

Creativity can be defined as the ability to challenge assumptions, recognize patterns, see in new ways, make connections, take risks, and seize upon chance (Herrmann, 1996). If we dive into each aspect of the definition, you can see that there is a significant overlap between entrepreneurship and creativity:

- Challenging assumptions: This involves questioning the way problems are presented and seeking alternative framings.
- Recognizing patterns: This involves identifying underlying structures that can lead to solutions.
- Seeing in new ways: This involves approaching problems from diverse perspectives (logical, emotional, intuitive, etc.).
- Making connections: This involves combining seemingly unrelated ideas to create novel solutions.
- Taking risks: This involves accepting the possibility of failure while pursuing new ideas.
- Seizing upon chance: This involves capitalizing on unexpected opportunities and serendipitous discoveries.

One of the key researchers of creativity, Torrance, demonstrated that creativity is not a linear process but can be nurtured and enhanced throughout life. Creativity is not something we are born with; it is a developmental process. He emphasized the power of activities, teaching methods, motivation, and appropriate procedures to stimulate creativity, even in older individuals. Torrance emphasized the infinite potential for creativity, stating that it can be practised and expressed in endless ways. He believed consistent practice was a central element in unlocking and expanding one's creative potential (Vidal, 2010).

Therefore, every person is creative, but in their own way. There are multiple ways of classifying types of creativity. For example, we can distinguish between (Vidal, 2010):

Problem solvers: These individuals tackle challenges with a creative approach, for example, as doctors, managers, scientists, and advisors do.

Artistic creators: These individuals generate new artistic works, often forming a close connection with the creation. Their "artistic soul" becomes embedded in the object, whether



it is a tangible product, such as a painting, or a more intangible process, like a dance performance.

Lifelong creatives: These individuals integrate creativity into every aspect of their lives, both professionally and personally, expressing themselves in both extroverted and introverted ways. Examples include inventors, full-time artists, and fashion designers.

Another approach to analyse one's creativity can be borrowed from Maslow, who distinguished between "special talent creativeness" and "self-actualizing creativeness". Special talent creativeness refers to specific skills or abilities individuals possess. Self-actualizing creativeness, in contrast, defines creativity as a fundamental characteristic of self-actualized people, those who are fully realizing their potential and living to their fullest capacity. Consequently, there are several characteristics of self-actualizing creativity:

- Possessing a renewed sense of wonder and appreciation for life's simple joys.
- Spontaneous expression: They freely express their ideas and emotions without fear of judgment.
- Childlike: Their perception and expression are natural, pure, and uncritical, resembling a child's openness.
- Embracing the unknown: They are drawn to the unknown and find excitement in exploring uncharted territory.
- Ability to reconcile seemingly conflicting ideas, synthesise, unify, and integrate.
- Transformative experiences: Life-changing moments of deep joy and understanding, altering the perspective on life.

Furthermore, self-actualizing individuals tend to have independent moral codes and approach the world with open, uncritical curiosity, seeking to understand reality without judgment or preconceived notions. Their creativity, Maslow suggests, is omnipresent, influencing every



aspect of their lives and extending beyond specific problems to impact their entire worldview (Vidal, 2010)

Note. Source Storyset, n.d., Freepik, CC 2.0

Figure 3.124

Creativity



Unit 4 Quiz

Creativity is:

- a. Limited to those with special talents.
- b. A fixed ability you're born with.
- c. A process that can be developed throughout life.
- d. Only applicable to artistic endeavours.

Self-actualizing creativity is focused on:

- a. Following established rules and procedures.
- b. Expressing oneself freely without fear of judgement.

- c. Solving specific problems in a practical way.
- d. Creating new artistic works with a strong personal connection.

Unit 5 Creative Problem Solving

Creative problem solving is a method developed by Alex Osborn in 1940 that leverages creativity to generate innovative solutions (MindTools, 2023). It works by intentionally separating two distinct thinking styles:

1. Divergent thinking: This stage focuses on expanding possibilities and generating a wide range of ideas without judgment, known as brainstorming.
2. Convergent thinking: This stage involves critically evaluating the ideas generated, analysing their feasibility and selecting the most promising ones for further development.

If used simultaneously, these ways of thinking can cancel out each other: evaluation while generating ideas can lead to bias against less conventional ideas during the idea generation phase, hindering exploration and potentially overlooking innovative solutions. Therefore, mastering creative problem solving involves:

- Separating the two thinking styles: First, time should be dedicated to unrestricted brainstorming (divergent thinking) followed by a separate stage for critical evaluation (convergent thinking).
- Asking open-ended questions: Problems should be rephrased as questions with multiple possibilities to spark rich discussions and generate diverse solutions. Closed-ended questions that limit responses to "yes" or "no" should be avoided.
- Deferring judgment: Shutting down ideas during brainstorming should be avoided. The evaluation comes later.
- Embracing "Yes, and": This phrase encourages further exploration and building upon existing ideas, fostering collaboration and creativity. "No, but" tends to negate previous contributions and hinder progress.

Steps in Creative Problem Solving Process

There are four key steps in the creative problem solving process:

Step 1. Clarify

Define your objective: Clearly identify the problem, goal, or challenge you are facing. Do not assume you fully understand it; explore and refine your objective for clarity.

- Gather data: Once you understand the problem, collect information to develop a comprehensive understanding. Gather details about:



- Who and what is involved: individuals, stakeholders, and any relevant factors.
- All relevant facts: data and information related to the challenge.
- Opinions and feelings: consider the perspectives and emotions of those involved.
- Formulate questions: Ask questions to spark solution generation. Explore potential obstacles and turn them into opportunities.

Step 2. Ideate

- Explore ideas: Generate solutions to the questions identified in step 1. Avoid relying on past solutions; embrace creativity and explore new possibilities. Use brainstorming and mind maps, other techniques to explore diverse ideas during this divergent thinking stage.

Step 3. Develop

- Formulate solutions: Analyse potential solutions. Assess if they meet your needs, criteria, and check the feasibility. Refine them further and identify the solution that best fits your needs.

Step 4. Implement

- Develop a clear action plan to implement your chosen solution.
- Identify resources and actions needed for successful execution.



- Communicate the plan to ensure understanding and acceptance by everyone involved.

Figure 3.125

Creative Problem Solving



Note. Source Storyset, n.d., Freepik, CC 2.0

Example of Creative Problem Solving

Problem: Tourists complain about long waiting time at the airport shuttle service offered by a tour operator.

Step 1. Clarify

- Data Gathering: Analyze peak hours for shuttle service usage, customer feedback on wait times, and capacity of shuttle vehicles.

Step 2. Ideate

- Brainstorm solutions: Increase shuttle frequency, offer real-time tracking app for wait times, explore alternative transportation options.

Step 3. Develop

- Analyze feasibility: Cost of adding more shuttles vs. implementing a tracking app.

Step 4. Implement

- Implement a tracking app to show estimated wait times and offer pre-booking options for the shuttle service.

Unit 6 Quiz

Which of the following statements is MOST important for the "Ideate" stage of creative problem solving?

- a. Critically analyze the feasibility of each idea.
- b. Generate a wide range of ideas without judgment.
- c. Refine and select the most promising solutions.
- d. Identify the resources needed for implementation.

Unit 7 Decision Making

What is Decision Making?

Decision making can be defined as simply as making a choice (McKinsey & Company, 2023). However, when it comes to an organisation, decision-making becomes a complex process that, as McKinsey research suggests, consumes up to 40% of managers' time and a lot of resources. Being overwhelmed by decisions – in everyday life as well as in work processes –, we often experience decision fatigue. For the enterprise, this means poor decisions and lost opportunities.

Many organizations seeking to streamline decision-making view agility as key. Agile organizations excel in two key areas: empowering the right individuals to make decisions and adapting quickly to changing business landscapes. This approach also attracts top talent who value increased autonomy and fewer bureaucratic hurdles (McKinsey & Company, 2023).

Despite an abundance of data and the possibility to automate some of the processes, which should have led to better decision-making, business leaders still struggle. This is often due to internal roadblocks, such as unclear roles, overreliance on consensus, and slow bureaucratic processes. More data also translates to an increased decision-making burden, exceeding the capacity of individuals or teams. This hinders effective delegation and ultimately impacts productivity.

Leaders are increasingly dissatisfied with inefficient decision-making processes, citing factors like slow deliberations, uneven outcomes, and a lack of timeliness. The McKinsey (2019) survey results suggest that less than half of respondents believe decisions are made promptly, and over 60% feel their time spent deliberating is largely ineffective.



The solution lies in categorizing decisions and applying appropriate processes for each category. Additionally, each type should be paired with a specific improvement-oriented practice, such as fostering healthy debate or empowering employees to make choices.

How to Improve Decision Making?

First of all, we need to distinguish between the types of decisions and optimal strategies for approaching them:

1. Big-bet decisions (high risk, but infrequent): Critical decisions, such as acquisitions, significantly influence the company's future. Decisions are typically made by top executives and the board. The strategy lies in stimulating productive debate by assigning someone to present arguments for and against the decision, fostering comprehensive analysis.
2. Cross-cutting decisions (high risk, frequent): Decisions, such as pricing, impacting various departments, carry high risk but occur regularly. They are made by business unit heads. The strategy lies in refining the decision-making process to ensure clarity in objectives, metrics, and targets. The refined process guides effective choices.
3. Delegated decisions (low risk, frequent): They have lower risk; everyday decisions are handled by individuals or teams with occasional input. The strategy lies in ensuring clear ownership by placing decision-making responsibility firmly with those directly involved. This fosters engagement and accountability for the outcomes.

Beyond category-specific strategies, here are additional actions entrepreneurs can take to foster a culture of efficient decision-making:

- Focus on "game-changing" decisions: Prioritize choices with significant value creation and alignment with the organization's purpose.
- Streamline meetings: Minimize unnecessary meetings and lengthy reports. Use concise pre-reads for essential meetings to facilitate decision-making.
- Define roles and voices: Clearly outline who holds voting power and who provides advisory input.
- Delegate decision-making authority: Delegate it to those closest to the action while fostering a culture of learning from mistakes.



Figure 3.126

Decision Making



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 8 Quiz

What is the major DISADVANTAGE of having an abundance of data for decision-making in organizations?

- a. It empowers employees.
- b. It attracts top talent seeking increased autonomy.
- c. It can lead to faster and more efficient decision-making.
- d. It can increase the decision-making burden.

Unit 9 Business Strategy

What is a Business Strategy?

A **business strategy** is a guiding principle and action plan for an organization, built through a vision, objectives, and a dedicated decision-making process. The importance of a business strategy lies in its ability to position a company's goals and offerings against market demand, competitors, and new opportunities. It is a long-term plan that helps a business to achieve its strategic goals, and guides the different departments within a business to work together effectively (Boyles, 2022).

Business strategy can be broken down into three levels: **corporate** (company-wide, overarching), **business** (department-wide, contextual), and **functional** (team-wide, tactical). The corporate strategy is the top-level strategy that guides the organization, while the business strategy is contextual to a department, and the functional strategy is tactical to a team.

A well-crafted business strategy is a market differentiator and competitive advantage, vital to achieving sustained growth and success. It is the foundation for every method and tactic a business takes to accomplish its goals and mission.

Key Components of a Business Strategy

The key components of a business strategy are (IMD, 2024):

1. Vision and objectives: A business strategy is intended to help you reach your business objectives. The vision element of this provides a clear direction for the business.
2. Core values: A business strategy guides leaders, as well as departments, about what should and should not be done, according to the organization's core values.
3. SWOT (Strengths, Weaknesses, Opportunities, and Threats): For any business, understanding its strengths, weaknesses, opportunities, and threats is critical.
4. Tactics and operational delivery: The tactical element of a business strategy will set out the operational details that define how the work should be delivered.
5. Resources and resource allocation: Generally, the resource element of a business plan will cover the allocation of existing resources, as well as where additional resources will be found.
6. Market objectives (creating customer value): Strategic market objectives can help a company support and improve its market position by creating customer value.
7. Operational objectives for the business strategy: Operational objectives provide the type of guidance and direction that are crucial for long-term success.
8. Feasibility, desirability, viability, measurability, strategic playground, and external environment: These elements ensure that a business strategy is realistic, impactful, and adaptable:



- a. Feasibility: Can your strategy be put into action? Consider resource limitations, technical capabilities, and legal or regulatory hurdles. Is the strategy achievable with your current resources and budget?
- b. Desirability: Is this the right strategy for your company? Does it align with your vision, values, and target market? Will it achieve your desired outcomes?
- c. Viability: Is the strategy commercially sound? Will it generate enough revenue and profit to be sustainable in the long run? Can you make money with this approach?
- d. Measurability: Can you track the progress of your strategy? How will you know if it's working? Define metrics to measure success (e.g., sales growth, customer satisfaction).
- e. Strategic playground: This refers to the competitive landscape your business operates in. Who are your competitors? What are their strengths and weaknesses? What niche are you targeting within the market?
- f. External environment: Consider factors outside your direct control that can impact your strategy. This includes economic trends, technological advancements, political changes, and social movements. How might these external factors affect your business?



Figure 3.127

Business Strategy



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Unit 10 Building a Business Strategy for a Small Business

To build a business strategy for a SME, consider the following key components:

- Create a growth plan: Develop a comprehensive growth plan that includes data collection on sales, profit margins, pricing, and costs. Research expected price increases, evaluate products and services, set revenue goals, and perform cost-benefit analyses for investments (Monster, 2024).
- Tend to current customers: Focus on providing excellent customer service to retain existing clients. Building customer loyalty is essential for sustainable growth (Monster, 2024).
- Increase market penetration: Explore ways to expand the reach within the current market by offering discounts, bulk purchase incentives, or alternative sales channels. Consider online platforms to reach a broader audience (Kolesnikova, 2021).

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- Focus on market segmentation: Divide the market into smaller segments based on demographics or buying habits to target specific customer groups effectively. Tailoring marketing strategies to these segments can enhance customer engagement (Kolesnikova, 2021).
- Build strategic partnerships: Collaborate with complementary businesses to access new audiences and expand your reach. Strategic partnerships can be mutually beneficial and help increase brand visibility (Kolesnikova, 2021).
- Diversify product or service offerings: Identify opportunities for new products or services and consider bundling or subscription options to attract new customers. Diversification can help broaden the customer base (The Hartford, 2024).
- Extend to new markets: Explore opportunities for exporting products or services globally to increase market reach and revenue. Exporting can open up new avenues for growth and expansion (The Hartford, 2024).
- Introduce new offerings: Keep existing customers engaged by introducing special promotions and new offerings. Engaging with customers through various means, such as email campaigns, can drive growth (Fraraccio, 2023).
- Automate time-consuming processes: Implement automation tools to streamline repetitive tasks and free up time for employees to focus on more critical activities. Automation can improve efficiency and accuracy in business operations (Fraraccio, 2023).
- Make use of technology solutions: Invest in AI and machine learning tools to modernize processes, eliminate outdated procedures, and enhance operational efficiency (Fraraccio, 2023).



Figure 3.128

Small Business Owner



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Unit 11 Quiz

What are the three levels of a business strategy?

- a. Individual, departmental, corporate
- b. Corporate, business, functional
- c. Internal, external, operational
- d. Short-term, mid-term, long-term

Which of the following is NOT an internal roadblock hindering effective decision-making in organizations?

- a. Unclear roles and responsibilities
- b. Overreliance on consensus-based decision making
- c. Lack of access to relevant data
- d. Legislative obstacles

Unit 12 Organizing and Delegating Work

What is Delegation?

Delegation is the act of assigning tasks or responsibilities to others. This can initially feel daunting, especially for solopreneurs or those accustomed to doing everything themselves. However, it is crucial for sustainable growth and efficiency in a small business.

Organizations often grapple with finding the right balance between control and autonomy for their employees. While clear leadership is crucial, excessive micromanagement can stifle creativity, hinder productivity, and ultimately impede an organization's agility. Empowered teams often show better results. For example, frontline workers during disasters often demonstrate remarkable efficiency and ingenuity when operating with minimal oversight (Aminov, De Smet, & Kakkar, 2018).

Empowering Employees through Delegation

There is a number of benefits in empowering employees (Aminov, De Smet, & Kakkar, 2018):

- Faster decision-making by eliminating unnecessary approvals and bureaucratic delays allows for swifter responses to changing circumstances.
- Empowered teams can adapt and react quickly to challenges, fostering a more nimble and responsive organization.
- Delegation frees up time. Focus on tasks requiring your unique expertise while others handle routine or less specialized work.
- Building a team boosts employee morale. Delegation fosters collaboration and empowers individuals, fostering a sense of ownership and engagement.
- Improves efficiency. Utilizing team strengths allows tasks to be completed by the most qualified individuals, potentially leading to better results.

Barriers to effective delegation (Aminov, De Smet & Kakkar, 2018):

- Micromanagement: Excessive control, driven by fear or ego, can stifle initiative and lead to inhibited growth.
- Poor delegation practices: Lack of clarity in direction, priorities, and accountability can lead to ineffective delegation and hinder empowerment efforts.
- Fear of failure: Both managers and employees may be averse to taking risks due to fear of repercussions, hindering innovation and learning opportunities.

Steps for effective delegation (Cross, 2020):

- Review your tasks: Categorize your workload based on:
 - Love to do: Keep these tasks for yourself.
 - Hate to do: Prioritize delegation for these tasks.



- Neutral: Consider delegation if it frees up time for higher-value activities.
- Think small: Break down large tasks into smaller, manageable steps. This allows for more granular delegation and easier identification of suitable tasks.
- Document processes: Provide clear instructions and documentation outlining the task expectations, ensuring successful completion by the delegated individual.

Figure 3.129

Work Delegation



Note. Source Storyset, n.d., Freepik, CC 2.0

Delegation with Limited Resources

- Delegate within your team:
 - Offer bonuses or overtime as incentives for additional responsibilities.
 - Encourage collaboration and teamwork by dividing work equitably based on skillsets and workloads.
 - View delegation as a team-building opportunity to develop individual skillsets and foster shared goals.
- Partner with another business:

- Negotiate discounts with freelancers by offering them consistent or bulk work.
- Collaborate with other businesses in your industry with similar needs to share the cost of outsourced services.
- Use automation software:
 - Identify repetitive tasks suitable for automation, freeing up human resources for more complex tasks.

Remember: Delegation extends beyond work tasks. Consider delegating personal errands or chores to free up mental space and improve overall work-life balance, ultimately leading to increased productivity.

Example of Talents Management

An example from practice to illustrate the principles of organizing teams and talents is Google's "20% Time" policy. This policy allows employees to spend 20% of their work time on projects of their choosing, outside of their regular job responsibilities. This approach not only fosters creativity and innovation but also empowers employees to explore their interests and talents, leading to the development of new skills and ideas. Google's "20% Time" policy showcases how organizing teams with flexibility and autonomy can enhance employee engagement, creativity, and overall organizational success (The Upwork, 2023).





Dictionary

- **Agile:** An iterative project management approach that emphasizes flexibility, collaboration, and continuous improvement. Projects are divided into short cycles (sprints) where teams work on small, deliverable chunks of work and receive feedback to adapt and improve throughout the development process.
- **Helix:** A type of organizational structure that combines elements of hierarchical and flat structures. It features a central core team responsible for strategic decision-making and several semi-autonomous teams focused on specific projects or functions. This structure aims to offer a balance between centralized control and team autonomy.
- **KPI** (Key Performance Indicator): A measurable metric used to track progress towards a specific goal or objective. KPIs help organizations and individuals to quantify success and to make data-driven decisions.
- **OKR** (Objectives and Key Results): A goal-setting framework used to define qualitative objectives (what you want to achieve) and measurable key results (how you will know if you are achieving your objectives). OKRs help teams set ambitious and clear goals and track their progress effectively.
- **Sandbagging:** Refers to the deliberate act of underestimating one's capabilities or setting intentionally low targets. This can be done to avoid appearing overly ambitious or to make it easier to exceed expectations and receive praise. However, sandbagging can be detrimental as it hinders transparency, trust, and overall performance.

Unit 13 Quiz

Which of the following is NOT a benefit of empowering employees through delegation?

- Increased employee morale and a sense of ownership.
- Faster decision-making due to fewer approvals.
- Improved efficiency by utilizing team member strengths.
- Reduced workload for the delegator.



Unit 14 Entrepreneurial Self-Awareness

Power of Self-Awareness

For any entrepreneur, embarking on their business journey requires a deep understanding of not just the market but also themselves. This is where entrepreneurial self-awareness comes into play.

What is it? Simply put, it is the ability to see oneself clearly –strengths, weaknesses, motivations, and emotions – all through the lens of entrepreneurial endeavours. This includes:

- Consciously recognizing your values, beliefs, and behaviours: How do these shape decisions and interactions within the business?
- Understanding your "why": What motivates the pursuit of the venture?
- Why is it important? Self-awareness is the foundation for success in several ways (Say, 2012):
- Authenticity: Self-awareness allows the development of a genuine personal brand that resonates with the target audience and team.
- Informed decisions: A deep understanding of oneself allows for decisions that align with your strengths and mitigate potential blind spots.
- Resilience: Recognizing weaknesses empowers the development of strategies to overcome them and navigate challenges more effectively.
- Empathy: Self-awareness fosters the ability to connect with others on a deeper level, understand their perspectives, and build stronger relationships.

Journey of Self-Awareness

Cultivating self-awareness is an ongoing process requiring continuous reflection and effort. Entrepreneurs can develop self-awareness through various strategies and practices, including (Stagno, 2023; Badal & Streur, 2012):

- Self-reflection: Taking time to reflect on one's thoughts, emotions, actions, and decisions can help entrepreneurs gain insights into their behaviours and motivations.
- Seeking feedback: Actively seeking feedback from mentors, peers, employees, and customers can provide valuable perspectives on strengths, weaknesses, and blind spots.
- Emotional intelligence training: Developing emotional intelligence skills can enhance self-awareness by improving the understanding of emotions and their impact on behaviour and decision-making.
- Journaling: Keeping a journal to record thoughts, experiences, challenges, and successes can help entrepreneurs track patterns, identify triggers, and reflect on personal growth.

- Mindfulness practices: Engaging in mindfulness techniques, such as meditation or deep breathing exercises, can increase self-awareness by promoting present-moment awareness and clarity of thought.
- Personality assessments: Utilizing tools, such as personality assessments or psychometric tests, can provide insights into individual traits, preferences, and tendencies that contribute to self-awareness.
- Continuous learning: Engaging in continuous learning through workshops, courses, seminars, or reading relevant literature can broaden perspectives and deepen self-awareness.

Figure 3.130

Self-Awareness



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Unit 15 Entrepreneurial Self-Efficacy

Believing in Your Ability to Succeed

Entrepreneurial self-efficacy refers to an individual's confidence and belief in their ability to successfully launch and grow a business. It is a multi-faceted concept encompassing (Drnovšek, Wincent & Cardon, 2010):

- Task-specific confidence: Belief in one's ability to perform specific entrepreneurial tasks, such as market research, financial planning, and marketing.
- Skill mastery: Confidence in acquiring and mastering the cognitive and behavioral skills required for entrepreneurial success.

- Managing thoughts: The ability to control negative thoughts and self-doubt while fostering positive and optimistic thinking related to entrepreneurial goals.

Stages of Self-Efficacy

Entrepreneurial self-efficacy plays a critical role in influencing entrepreneurial success. It can be described through four stages (Shook et al., 2003, cited in Drnovšek, Wincent, & Cardon, 2010, p. 337):

1. Intent formation: This initial stage is where entrepreneurs develop a strong desire and commitment to starting a business. They are motivated to actively pursue this goal and turn their vision into reality.
2. Opportunity identification: Once the entrepreneurial fire is lit, the search begins! In this stage, entrepreneurs actively seek and identify potential business opportunities. This involves exploring various markets, analyzing customer needs, and identifying gaps that their venture could address.
3. Decision to exploit: After identifying promising opportunities, entrepreneurs face a crucial decision: which opportunity to pursue? This stage involves carefully evaluating options, weighing risks and rewards, and ultimately committing to exploiting the chosen opportunity.
4. Venture creation: With a clear direction and chosen opportunity, it is time to build! This final stage focuses on assembling the necessary resources, including funding, personnel, and infrastructure, to transform the business idea into a functioning reality.

Figure 3.131

Self-Efficacy



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 16 Quiz

How does self-awareness benefit entrepreneurs in making decisions?

- a. It allows them to avoid challenges altogether.
- b. It helps them make choices that align with their strengths.
- c. It removes the need for feedback from others.
- d. It guarantees the success of their ventures.

Which of the following is NOT a facet of entrepreneurial self-efficacy?

- a. Confidence in acquiring the skills needed for entrepreneurial success.
- b. Belief in overcoming challenges and achieving business goals despite setbacks.
- c. Confidence in performing specific entrepreneurial tasks, like marketing or finance.
- d. Reliance on the expertise and guidance of others to make decisions.

Unit 17 Case Study

Gen Z and Teamwork

Gen Z's impact on teamwork in organizations is multifaceted. Here are some ways in which Gen Z influences teamwork in the workplace (Choughari, 2024; Fernandez et al., 2023):

1. **Mental health challenges:** Gen Z employees often struggle with mental health issues, such as anxiety and depression, which can impact their work performance and teamwork dynamics. Organizations need to prioritize mental health support and create a supportive environment to help Gen Z employees thrive in team settings, such as offering mental health days as an employee benefit.
2. **Higher stress levels:** Research indicates that Gen Z workers report higher stress and burnout at work compared to other generations. This increased stress can affect teamwork by impacting communication, collaboration, and overall team dynamics.
3. **Skills development:** Gen Z recognizes the importance of skills development, including proficiency in AI tools like generative AI. Gen Z employees are more adaptable to new technologies and digital tools, which can enhance teamwork by facilitating collaboration and communication across various platforms.
4. **Peer reviews and feedback:** Some Gen Z employees may find it challenging to navigate peer reviews and feedback processes, which are essential for effective collaboration. Lack of experience or discomfort with giving and receiving feedback can hinder their ability to work collaboratively with others.
5. **Focus on hard skills:** Gen Z employees often prioritize hard skills over soft skills, such as collaboration and teamwork. Their emphasis on technical abilities may lead to challenges in effectively working together with team members who require strong interpersonal skills.
6. **Differences from Millennials:** Gen Z may have different preferences and expectations in the workplace. They are more focused on individual success.

Link:

For more information about Gen Z and workspace adaptation, check the blog article by Johns Hopkins University (2023):

<https://imagine.jhu.edu/blog/2023/04/18/gen-z-in-the-workplace-how-should-companies-adapt/>

Questions for the discussion:

1. How do the expectations and values of Gen Z employees, as highlighted in the case study, influence the workplace dynamics and organizational culture?

2. Considering the growing influence of Gen Z on workplace trends and practices, how should companies prepare for the future of work to align with the preferences and values of this generation?

Figure 3.132

Employees' Motivation



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Unit 18 Management Control Systems

What is Management Control System?

A Management Control System (MCS) is a framework that organizations use to evaluate performance across various aspects like physical, financial, and overall organizational strategies. It influences the behaviour of resources within an organization to implement strategic objectives. MCS can be formal - implemented through the rules, procedures, guidelines, or informal - shared values, loyalty to organisation, unwritten norms. MCS aids management in steering the organization towards its strategic goals. It involves elements such as measurement, resource allocation, motivation, and performance evaluation (Indeed, 2023; Vancil, 1973).

Management control, far from being a modern invention, has roots that stretch back to the early 20th century. Henri Fayol, considered a pioneer of modern management methods, established five core functions of management in the 1920s, with control being one of them. Managers rely on control functions to (Adobe, 2023):

- Receive feedback on processes.
- Identify deviations from plans and standards.
- Implement corrective actions to stay on track.

While the tools and technologies have evolved, the fundamental principles haven't changed. As Fayol outlined, a control process typically involves (Adobe, 2023):

- • Characteristic to be tested: what is monitored, such as product sales or quality standards.
- • Sensors: methods of measuring, like software or physical inspections.
- • Comparative standards: defining acceptable deviation from set standards.
- • Activator: taking corrective actions based on the comparison, bringing the process back under control.

Advantages and Disadvantages of Control Management

Control management plays a vital role in keeping organizations on track. While it offers numerous benefits, it's crucial to acknowledge its limitations as well (Adobe, 2023):

Advantages:

- Clarity and direction: control management provides a clear roadmap for achieving organizational goals by laying out undeviating paths and establishing target-based, quantifiable measures of success. This clear direction can also help motivate employees by providing them with well-defined tasks and expectations.
- Efficiency and order: by fostering efficient resource allocation, control management can help organizations optimize operations. It promotes order, discipline, and coordination across departments, leading to smoother workflows and improved performance.

Disadvantages:

- Limited scope: control management often focuses heavily on quantitative metrics which can overlook qualitative aspects of performance like innovation, creativity, and employee morale. This can lead to a narrow understanding of success and hinder holistic growth.
- Uncertainties and external forces: external factors like competition, economic fluctuations, technological advancements, and shifting government policies can significantly impact outcomes, making it difficult to control all aspects and guarantee success through internal control measures alone.
- Potential resistance and costs: implementing and maintaining control systems can be costly, especially for smaller organizations. Additionally, overly stringent controls



can lead to employee resistance, decreased autonomy, and potentially high staff turnover, impacting morale and productivity.

Figure 3.133

Control



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Unit 19 Quiz

What is a disadvantage of Management Control Systems?

- a. It does not provide clear direction and a roadmap for achieving goals.
- b. It does not promote order, discipline, and efficient resource allocation.
- c. It can overlook factors like employee morale and innovation.

Unit 20 Manage Finances as an Entrepreneur

While the thrill of building something from the ground up is undeniable, managing the financial side of your business can feel overwhelming. These steps should help to take control of your finances:

1. Separate your personal and business finances: Treat your business as a distinct entity. Open a dedicated business bank account and credit card to track income and expenses clearly and simplify tax filing. This separation also protects your personal assets in case of unforeseen circumstances.
2. Familiarize yourself with financial statements: Financial statements are the windows into your business's financial health. Learn the basics of the Profit & Loss (P&L) statement, balance sheet, and cash flow statement. These documents tell you about your profitability, financial position, and cash flow situation, empowering you to make informed decisions.
3. Create a budget and track expenses: Develop a realistic budget outlining your anticipated income and expenses. Include operational costs, marketing expenses, potential loan repayments, and even your own salary as an owner. Use accounting software or a simple spreadsheet to meticulously track your actual spending against your budget. This will help identify areas for cost-cutting and ensure your spending aligns with your plan.
4. Prioritize cash flow management: Cash flow, the movement of money in and out, is the lifeblood of any business. Here are two crucial aspects to master:
 - a. Ensure timely collection of payments from customers and prioritize paying your own bills on time. Consider offering early payment discounts to incentivize faster payments from customers.
 - b. Set aside a reserve fund to cover unexpected expenses or potential dips in revenue. This "rainy day fund" provides a safety net and prevents financial strain during challenging times.
5. Seek professional guidance: Consulting a financial advisor or accountant experienced in working with startups is invaluable. They can provide expert advice on financial planning, tax strategies, and investment options, saving you time and money in the long run.
6. Develop a business plan and set financial goals: Your business plan serves as a roadmap for your venture. Integrate clear financial goals aligned with your overall business objectives. These goals could be related to revenue growth, profitability targets, or securing funding for future expansion.
7. Explore funding options: Research various funding options available to entrepreneurs, such as angel investors, venture capitalists, or small business loans. Each option comes with its own pros and cons, so careful evaluation based on your needs is crucial.
8. Plan for long-term stability: Develop a strategy for long-term financial stability. This might involve diversifying your income streams, building a strong brand reputation, and establishing a sustainable business model that can weather market fluctuations.

Figure 3.134



Entrepreneurship



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Unit 21 Ensuring Profitability

The task of an entrepreneur is to make sure that the revenues exceed the cost. In the competitive world of business, setting the right price for your product or service is crucial. This is where pricing strategy comes in. It's the deliberate process of establishing the prices at which your offerings will be sold to customers, considering various factors that impact both profitability and market competitiveness.

Here's a breakdown of key aspects involved in crafting an effective pricing strategy:

1. Understanding your costs: It all starts with a clear understanding of your costs. This includes fixed costs (rent, salaries) and variable costs (materials, labour) associated with producing and delivering your product or service. Knowing your cost structure is essential to ensure you price above your break-even point, where your total revenue covers all your expenses.

2. Analysing the market: Don't operate in a vacuum. Conduct thorough market research to understand the pricing strategies of your competitors, customer price sensitivity, and overall market dynamics. This helps you position your pricing competitively while aligning with customer expectations.
3. Considering your value proposition: Beyond just production costs, consider the value proposition your product or service offers to customers. This includes its unique features, benefits, and problem-solving capabilities. Pricing should reflect the perceived value customers are willing to pay for what you offer.
4. Choosing a right pricing model. Some of the most common models include:
 - a) *Value-based pricing*: Setting prices based on the perceived value the customer places on the product or service. For example, a room with a sea view will cost more than one facing the street even if all other features are identical. This is because customers perceive the sea view to be more valuable.
 - b) *Price-skimming strategy* is similar to value-based pricing principles: companies initially charge a higher price for new products and gradually lower it over time. Examples include Apple's new iPhone releases. Or, the opposite: airlines offering early-bird discounts and raising prices closer to the travel date, when the demand is higher.
 - c) *Cost-plus pricing*: Determining prices by adding a profit margin to the cost of producing and delivering the product or service. For example, if a hotel room cost is €100 per night, and we sell it for €150, the profit margin has been set at 33,3% ($\text{Margin} = \frac{\text{Profit}}{\text{Revenue}} \times 100\% = \frac{€150 - €100}{€150} \times 100\% = 33.3\%$).
 - d) *Competitive pricing*: Setting prices based on what competitors charge for similar products or services. This strategy aims to maintain or gain market share by offering comparable prices.
 - e) *Economy pricing*: offering the lowest prices among competitors to attract price-sensitive customers who prioritize low cost over high quality. This strategy targets individuals willing to compromise on quality for a lower price, while for business it allows to enter the new market.
 - f) *Freemium pricing*: a combination of "free" and "premium," this strategy involves offering a basic version of a product or service for free with the hope that users will eventually upgrade or pay for additional features. This model is commonly used in software and mobile apps.



Figure 3.135

Setting the Goals



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Unit 22 Financial Constraints

Since the majority of tourism businesses are small and medium-sized enterprises (SMEs), they often face common financial constraints, especially if they don't optimally utilize available funding sources (Greene, 2020). These constraints include:

- Barriers to entry: Talented individuals who lack initial resources may struggle to secure external financing and launch their businesses. This can create a chicken-and-egg situation where they need resources to start, but can't access them without already having a running business.
- Undercapitalization: New businesses can find themselves undercapitalized, meaning they lack sufficient funds to cover operational costs and pay creditors. This can

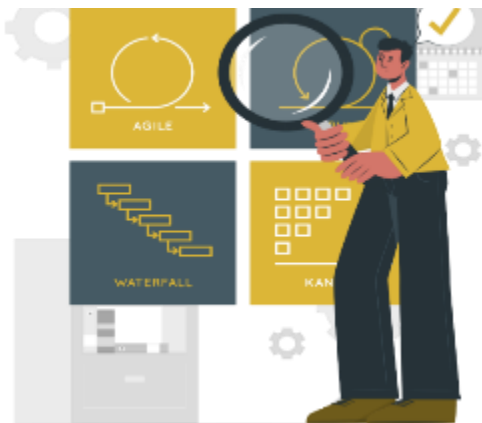
happen if they are not generating enough cash flow or have not established good relationships with lenders who might provide debt or equity financing. Undercapitalized companies often resort to high-cost, short-term financing like credit cards, which can lead to a higher risk of bankruptcy. This issue is often seen in young companies that underestimate initial costs or in larger companies that take on excessive debt without adequate resources for expansion.

- **Fear of rejection:** Due to a fear of being rejected, some starting and small businesses avoid seeking external resources altogether, such as bank loans. This reluctance to explore financing options can lead to suboptimal investment decisions and ultimately, reduced business productivity.

Note. Source Storyset, n.d., Freepik, CC 2.0

Figure 3.136

Constraints



Unit 23 Funding Options

Even though entrepreneurs theoretically have multiple funding sources, they often rely heavily on their own finances (Greene, 2020).

- **Internal sources:** These include funds from the entrepreneur's own or family savings, personal loans and credits, or reinvested profits from a successful business. While internal sources offer independence, they are often limited and may not support ambitious business goals.

- **External sources:** Although offering more possibilities, they come with drawbacks like dependence on others and potential shared control over the business with investors. Various types of external funding exist (Greene, 2020):
 - Banks: Provide loans and credits with the expectation of repayment plus interest.
 - Public funds: Governments may offer grants, low-interest loans, loan guarantees, or even equity finances, often focused on specific areas like promoting small businesses or supporting vulnerable groups.
 - Crowdfunding: Platforms like Kickstarter enable individuals to fund entrepreneurs through donations, rewards, or equity investments. These platforms typically charge a fee for hosting projects.
 - Asset financing: Options like hire purchase and leasing allow businesses to acquire fixed assets like equipment or buildings. Hire purchase involves paying an initial deposit and making regular payments to own the asset eventually. Leasing is similar, but ownership remains with the provider after the lease period.
 - Trade creditors: These suppliers provide goods or services with a delayed payment date.
 - Factoring/invoice discounting: This involves selling unpaid invoices for immediate cash at a discounted rate.
 - Equity funders: These investors exchange cash for shares of the company, expecting to sell them later at a profit. Common types include business angels and venture capitalists.



Figure 3.137

Management



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 24 Quiz

Based on the text, entrepreneurs who are initially funding their businesses primarily rely on:

- a. Bank loans with high interest rates.
- b. Equity investments from venture capitalists.
- c. Their own finances or savings (internal sources).
- d. Government grants.

Unit 25 Profit Before Perks

The pursuing a company's objectives without undue regard for personal gain is often associated with ethical principles and corporate social responsibility. It involves prioritizing the organization's goals and values over individual interests. This approach aligns with codes of

ethics, standards of conduct, and the broader idea of sustainability in business, emphasizing the importance of balancing financial success with social and environmental progress.

To ensure that employees are not solely pursuing personal gain, companies can implement various strategies (Dhingra et al., 2021; Spiliakos, 2018; The Upwork, 2023):

- Help employees find purpose: Supporting employees in finding purpose in their work can enhance their commitment and motivation, aligning personal goals with organizational objectives.
- Ensure employee compliance: By establishing clear written policies, contracts, and regulatory compliance measures, companies can guide employees towards actions that benefit the organization as a whole.
- Encourage ownership: Aligning job functions and projects with company goals, mission, vision, and values can empower employees to take ownership of their work and contribute to the overall success of the business.
- Prevent conflicts of interest: Providing business ethics training to help employees recognize and navigate conflicts of interest can safeguard against personal agendas conflicting with company interests.
- Promote sustainability: Embracing sustainability practices that balance social and environmental progress with financial gain can foster a culture where employees prioritize broader organizational goals over individual benefits.

Some examples of companies that have successfully implemented approaches to ensure employees prioritize organizational values, in particular, those related to sustainability:

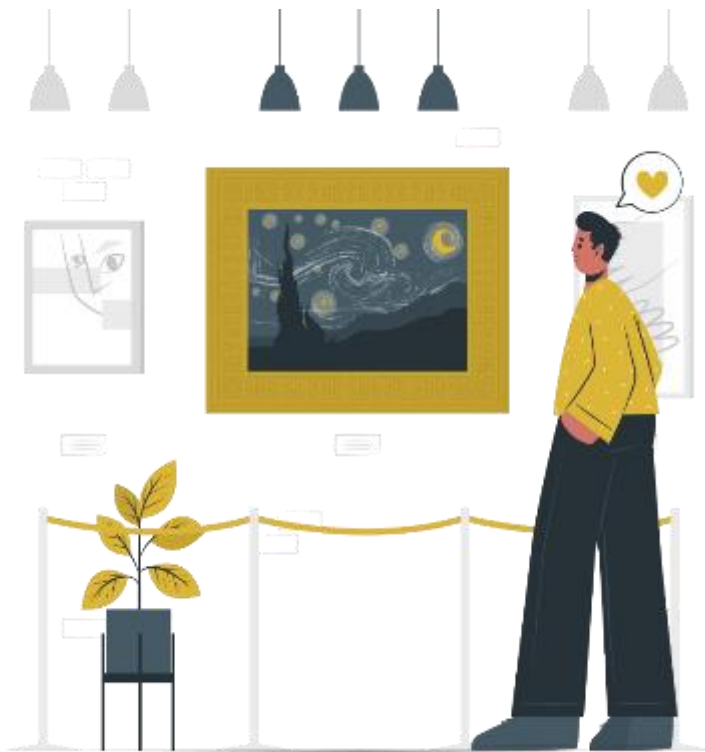
- Salesforce, a company that provides customer relationship management software and applications focused on sales, customer service, marketing automation, e-commerce, analytics, and application development. Salesforce is known for its strong commitment to corporate social responsibility (CSR) through initiatives like the 1-1-1 model, where they donate 1% of their product, equity, and employee time to charitable causes (Westwood, 2023).
- Patagonia, a designer of outdoor clothing and gear for sports and recreation, adopted a motto "Earth is now our only stakeholder." Patagonia is a company that exemplifies corporate social responsibility by prioritizing environmental sustainability in its business practices. Besides supporting environmental causes, the company reinvests maximum profit that is not used for business development in the fight against the climate crisis (Strauss, 2023).
- Google: Since its early days, Google has a list of ten values that employees are encouraged to align their work with (Google, 2024):
 - Focus on the user and all else will follow.
 - It's best to do one thing really, really well.



- Fast is better than slow.
- Democracy on the web works.
- You don't need to be at your desk to need an answer.
- You can make money without doing evil.
- There's always more information out there.
- The need for information crosses all borders.
- You can be serious without a suit.
- Great just isn't good enough.

Figure 3.138

Profit before Perks



Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 26 Quiz

A company wants to encourage employees to prioritize the company's goals over personal gain. Which of the following strategies is the MOST relevant to achieving this outcome?

- Mandating participation in company social events.

- b. Offering generous performance-based bonuses.
- c. Aligning individual roles with the company's mission and values.
- d. Enforcing strict dress codes and office etiquette.

Unit 27 Case Study

A Crowdfunding Success Story of Teple Misto

Teple Misto, a non-profit organization in Ukraine, faced a challenge in 2014. The country was embroiled in war, making it difficult to attract traditional investment for the projects. Undeterred, they turned to crowdsourcing with the Urban Space initiative (Forbes, 2019; Teple Misto, 2023).

The Project:

- Goal: raise EUR 100,000 through 100 individuals contributing EUR 1,000 each to establish a restaurant.
- Method: leveraged the founders' personal networks to spread the word.
- Outcome: the restaurant, managed by a catering company, proved highly successful. After covering operational costs, 80% of the profits were reinvested in local social projects.

Impact beyond the initial project:

- The success of Urban Space led Teple Misto to offer franchises for the concept, generating additional income.
- Importantly, investors didn't expect a financial return but gained voting rights to determine which social projects received funding.
- These social projects included revitalizing community spaces, organizing events, and educational initiatives.

Evolving model:

In 2017, Teple Misto embarked on another ambitious project: the adaptive reuse of the Promprylad industrial area in Ivano-Frankivsk. This initiative demonstrates a combination of funding models:

- Crowdsourcing/charity: as seen in the initial Urban Space project.
- Impact investment: investors see their share value increase alongside the area's revitalization.
- Fintech: utilizing technology to facilitate investment processes.
- Safe guarding and grant funds: providing financial support and ensuring project accountability.



Teple Misto's journey showcases the power of innovative funding models and community engagement in driving positive social change. With over \$15 million raised from 1,530 investors and almost \$2 million in grant funding, the Promprylad project is a testament to this approach's potential.

Learn more about the project:

- Teple Misto. (2023). Promprylad.Renovation. <https://promprylad.ua/en/#about-project>
- Forbes. (2019). Urban-Space 100. Ukrainian Crowdfunded Fintech and Franchise Expands Globally. <https://getpocket.com/read/3921643430>

Question for the discussion:

Discuss the broader implications of Teple Misto's funding models on social entrepreneurship and community development, particularly in terms of empowering investors to have a say in funding decisions, reinvesting profits into local social initiatives, and fostering a sustainable ecosystem for social impact projects.

Figure 3.139

Participation



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Unit 28 Risk Management

What is Risk Management?

The tourism industry operates in a dynamic environment fraught with unforeseen challenges. Unlike a factory assembly line, the intricate web of interconnected sectors within tourism necessitates constant adaptation. This unit delves into the crucial role of risk management in

helping tourism businesses navigate these turbulent waters. The disruptions can manifest in various forms, ranging from business internal processes to global health threats like pandemics, natural disasters like earthquakes and floods, or even political unrest and terrorist attacks (CBI, 2020b).

Risk management for entrepreneurs involves identifying, assessing, and mitigating risks to ensure the success and sustainability of their businesses:

- Entrepreneurs need to recognize that risk is inherent in entrepreneurship and that some level of risk-taking is necessary for potential profits.
- There are different types of risks, such as financial, operational, legal, market, and reputational risks, each requiring a tailored approach to manage effectively.
- Building a risk management culture within the organization is crucial for all employees to identify and address risks effectively.

You can learn more about risk management in the Module 2, Lesson 5.

Types of Risks in Entrepreneurship

A one-size-fits-all approach to risk management will not work. Entrepreneurs need to tailor their strategies based on the type of risk they are facing (Kaplan & Mikes, 2012):

Preventable Risks:

- Description: Internal risks from employee actions or breakdowns in processes. They offer no strategic benefit.
- Mitigation objective: Eliminate or avoid occurrence.
- Control model: Integrated culture and compliance model (mission statements, values, rules, procedures, internal controls).
- Risk management role: Coordinates controls, oversees revisions, runs risk workshops.
- Example: A travel agency accidentally books a client the wrong flight. Mitigation: Implement a double-checking system for bookings, ensure proper staff training, and have clear procedures for handling booking errors.

Strategy Risks:

- Description: Risks voluntarily taken for potentially higher returns (e.g., research & development, credit risk in lending).
- Mitigation objective: Reduce likelihood and impact cost-effectively.
- Control model: Interactive discussions with tools like risk maps, key risk indicators, and resource allocation.



- Risk management role: Runs risk workshops, helps develop risk mitigation plans, acts as devil's advocate.
- Example: An adventure travel company launches a new trekking tour in a remote location with limited infrastructure. Mitigation: Thoroughly assess the risks of the location (weather, terrain, medical access), invest in proper safety equipment and training for guides, and have a clear emergency response plan.

External Risks:

- Description: Risks from uncontrollable external events (natural disasters, economic shifts).
- Mitigation objective: Reduce impact cost-effectively if they occur.
- Control model: "Envisioning" risks through scenario planning, stress testing, and war-gaming exercises.
- Risk management role: Runs stress tests, scenario planning, and war-gaming exercises, acts as devil's advocate.
- Example: A global pandemic disrupts travel and forces a hotel to cancel all bookings for several months. Mitigation: Develop flexible cancellation policies, maintain a healthy cash reserve to weather financial downturns, and stay informed about potential disruptions.

Workbook and Checklist for Risk Management in Tourism

We suggest to use these external resources for the reference to prepare your own risk management plan.

1. A checklist to make a plan for an immediate response to the disaster (CBI, 2020a): <https://www.cbi.eu/sites/default/files/inline-files/108184---CBI-Checklist-immediate-plan.pdf>
2. A workbook for managing risks in tourism, prepared by APEC International Centre for Sustainable Tourism in partnership with UNWTO (Robertson et al., 2004): https://www.apec.org/docs/default-source/publications/2007/4/tourism-risk-management-an-authoritative-guide-to-managing-crisis-in-tourism-december-2006/toc/introduction-participants-workbook.pdf?sfvrsn=1afdb111_1

Figure 3.140

Managing Processes





Note. Source Storyset, n.d., Freepik, CC 2.0

Unit 29 Quiz

In the tourism industry, which type of risk can be mitigated by implementing a double-checking system for bookings and clear error-handling procedures?

- a. Preventable Risk
- b. Strategy Risk
- c. External Risk
- d. Financial Risk

Unit 30 Wrap-Up & Conclusion to Lesson 4

We've now explored a comprehensive set of entrepreneurial skills that are critical for both successful business planning and long-term sustainability.

This lesson equipped you with the knowledge to:

- Think creatively and tackle challenges head-on, fostering adaptability in a dynamic marketplace.
- Make informed decisions that propel your business towards its strategic goals.
- Develop a winning business strategy through market analysis and clear objective setting.
- Optimize your team's productivity by effectively organizing and delegating tasks.
- Build cohesive teams that leverage diverse skills and strengths for maximum impact.
- Cultivate strong self-awareness to become a leader who understands their own strengths and weaknesses.
- Develop unwavering self-efficacy – the belief in your ability to achieve success.
- Master essential financial concepts for sound decision-making.
- Proactively manage risks to safeguard your venture's future.

Remember, mastering these entrepreneurial skills is an ongoing journey. Take time to revisit the areas that sparked your interest the most. Explore additional resources [links to additional resources] to further refine your skillset.

Figure 3.141

Finishing Lesson 4



Note. Source Storyset, n.d., Freepik, CC 2.0



Summary to the Module 3

Congratulations! You've Completed the Module on Creativity and Entrepreneurship in Sustainable Tourism Sector.

This course has equipped you with the knowledge, skills, and competencies to become a creative and innovative force in the sustainable tourism industry. Let's recap your incredible journey:

Knowledge gained:

- You've mastered the concepts of creativity, including creative thinking skills.
- You understand the principles and practices of innovation, including innovation management in sustainable tourism.
- You're familiar with the design thinking process, including various frameworks and potential challenges.

Skills developed:

- You can now confidently create and utilize mind maps, empathy maps, and customer journey maps – powerful tools for understanding your target audience.

Competencies acquired:

You've developed the responsibility and autonomy to:

- Employ different brainstorming and idea development processes.
- Apply the 5 steps of Design Thinking to solve problems.
- Proactively seek innovative solutions to enhance your tourism product or business.

Deepen your learning (optional):

Take advantage of the 10-hour non-obligatory training to further solidify your knowledge. This section offers:

- Practical, project-based activities that directly translate to your daily work.
- Supplemental reading materials – scientific papers, articles, translated videos, and podcasts.
- In-depth case studies with reflective questions to explore various topics within sustainable tourism.

Remember, this is just the beginning! You've equipped yourself with the tools and mindset to become a successful entrepreneur in sustainable tourism. Now, go forth and innovate!



Module 3 Assessment Exam Questions

Welcome to Module 3 examinations intended to assess your understanding and proficiency of the material covered in this module. Before commencing, please ensure to thoroughly review the following instructions.

Responding to Questions: The examination comprises two question formats:

- Multiple Choice: Each multiple-choice question is accompanied by four potential answers. Carefully read each question and select the answer(s) that is deemed correct or most accurately addresses the question.

- True or False: When encountering true or false inquiries, carefully consider each statement. Determine its accuracy based on your familiarity with the subject matter and indicate your choice accordingly.

1. Creativity and innovation play a minor role in the sustainable tourism sector compared to other industries.

- True
- False

2. What role does creativity play in the sustainable tourism sector?

- Creativity is not important in sustainable tourism
- A major driver of innovation and differentiation
- Creativity is solely focused on creating new attractions, regardless of their environmental impact.
- Creativity is only for large tourism businesses; small businesses don't need to be creative

3. What are the potential benefits of fostering creativity and innovation in sustainable tourism? (Select all that apply)

- Increased visitor satisfaction
- Reduced environmental impact
- Higher operational costs
- Enhanced destination competitiveness

4. Design thinking in the sustainable tourism sector emphasizes the importance of understanding customer needs and environmental impact simultaneously

- True
- False

5. Which stage of the design thinking process involves brainstorming and generating ideas?

- Test



- Empathize
- Ideate
- Define

6. Identify the correct definition: "Design thinking integrates three key aspects: desirability, feasibility, and _____".

- Viability
- Creativity
- Flexibility

7. Market analysis is an optional step when starting a sustainable tourism business

- True
- False

8. What is a key characteristic of an entrepreneurial mindset in the sustainable tourism sector?

- Risk Aversion
- Risk-taking
- Short-Term Profit Focus
- Resistance to Collaboration

9. Adaptability is a crucial entrepreneurial skill needed to navigate the dynamic landscape of the sustainable tourism sector.

- True
- False

10. Which entrepreneurial skill is essential for identifying and seizing opportunities in the sustainable tourism sector?

- Excellent public speaking
- Micromanagement
- Creativity
- Legacy focus

11. Which of the following are considered entrepreneurial skills important for success in the sustainable tourism sector? (Select all that apply)

- Creativity
- Teamwork
- Procrastination
- Flexibility

12. What is a problem-solving?



- Capacity to navigate and resolve complex challenges
- Skill in collaborating effectively with others
- Aptitude for making sound and timely choices
- Ability to reach mutually beneficial agreements

13. What is crowdfunding financing?

- Personal investment and reinvestment of profits
- Funding obtained through online platforms from a large number of individuals
- Financial support from wealthy individuals in exchange for equity or ownership stake
- Borrowed capital from financial institutions with specified repayment terms

14. Identify the correct definition: _____ is one of the unique characteristics of services, including those in the tourism and hospitality industry.

- Inseparability
- Quality
- Beauty
- Innovativeness

15. Identify the correct word of the phrase: "The ____: Not a superhero with a cape, but rather someone determined to "make things happen," as economist Joseph Schumpeter described."

- Tourist
- Entrepreneur
- Fighter
- Beginner

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Module 4: Digital Skills for the Sustainable Tourism Sector



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Module 4: Digital Skills for the Sustainable Tourism Sector

Introductory Video

Welcome to the transformative journey of the “Digital Skills for the Sustainable Tourism Sector” module, designed for tourism professionals eager to upgrade their digital skills while managing high-impact tourism projects.

This module is your gateway to unlocking a world of digital opportunities in sustainable tourism. Our goal is to empower you with the essential skills and cutting-edge tools needed to navigate the digital landscape with confidence. Through hands-on learning, you'll gain invaluable insights into using digital technologies to drive meaningful change in the tourism sector.

Throughout this module, we'll equip you with the digital skills and tools you need while working in the sustainable tourism sector. You'll learn how to use new digital technologies effectively, how to make informed and data-driven decisions while using digital tools, and how to develop smart digital strategies for your projects. We'll also cover topics such as creating digital content, understanding emerging technologies, and using data analytics.

By the end of this module, you'll have a comprehensive understanding of digital project management, effective digital communication strategies, and effective use of data analytics. Not only will you grasp the significance of leveraging advanced technologies such as AI and XR, but you will also master the intricacies of GDPR compliance, copyright, and licensing protocols.

Through practical exercises and real-world scenarios, you'll learn to wield digital tools and platforms with precision, execute data-driven strategies, and create compelling digital content that resonates with your audience. By honing your skills in social media marketing, content management, and digital campaign execution, you'll be poised to make a tangible impact on your projects and stakeholders.

As you embark on this transformative journey, envision yourself as a dynamic and forward-thinking project manager, ready to embrace the challenges and opportunities of the digital age in the tourism sector. By integrating sustainability principles and hybrid project management techniques, you'll not only elevate your projects, but also your career.

Join us as we shape the future of tourism, where sustainability and innovation come together to create unforgettable experiences. Are you ready to advance your career with technology as your trusted tool?

Your journey starts here!



Lesson 1: Information and Communication Technologies for Project Management

Unit 1. Introduction to Lesson 1

In this comprehensive lesson, we explore the connection of modern technology and effective project management strategies in relation to the tourism sector, especially in sustainable tourism. As organisations increasingly benefit from the power of digital transformation, it becomes essential for project managers not only to adapt but also utilise information and communication technologies (ICT) both to simplify and rationalise processes and workflow, enhance communication and collaboration between teams and colleagues, and ensure project success. This also applies to organisations operating in the tourism sector.

As learners, you will gain insights into the role of the “project manager” in navigating and making the most of technological developments. Emphasizing on this role and combining it with the demands of the digital age in knowledge and skills, this lesson will provide you with information on how project managers in the digital era can act as leaders, navigate the evolving corporate landscape, while building on technology to drive innovation, collaboration, and efficiency. You will also focus on the essential aspects of digital communication and collaboration, both inside and outside the workplace, with an emphasis on the practical use of online interaction and collaboration tools and netiquette.

Sit tight and join us on this educational journey as we decode the intricacies of Information and Communication Technologies, equipping you with the skills and knowledge needed to excel in project management in the digital age!



Unit 2. Question/Quiz

Lumi File: M4_L1_Unit 2 (The following text is embedded in the Lumi File).

Activity type: Questionnaire

Question 1: Which of these categories of digital tools are you generally familiar with?

- ☐ Social Media management tools (i.e. Buffer, Later, Hootsuite, Crowdfire).
- ☐ Digital communication and collaboration tools (i.e. Google Chat, Viber, WhatsApp, Messenger).
- ☐ Video conference tools (i.e. Google Meet, Zoom, Microsoft Teams, Skype).
- ☐ Image editing and publishing tools (i.e. Canva, Adobe Photoshop, Pixl, GIMP).
- ☐ Project management tools (i.e. Basecamp, Monday, Microsoft Project, Trello).
- ☐ Email client and email marketing tools (i.e. eM Client, Gmail, Microsoft Outlook, Mailchimp, MailerLite).
- ☐ Website management and performance tools (i.e. Wix, Weebly, WordPress, Google Analytics, Google Search Console, SEO Powersuite).
- ☐ Customer relationship and support tools (i.e. Zoho CRM, Insightly, Salesforce, HubSpot CRM).
- ☐ Tourism and travel marketplaces (Booking.com, Tripadvisor, Expedia, Agoda, Trivago).

Question 2: Which of these categories of digital tools are you mostly unfamiliar with?

- ☐ Social Media management tools (i.e. Buffer, Later, Hootsuite, Crowdfire).
- ☐ Digital communication and collaboration tools (i.e. Google Chat, Viber, WhatsApp, Messenger).
- ☐ Video conference tools (i.e. Google Meet, Zoom, Microsoft Teams, Skype).
- ☐ Image editing and publishing tools (i.e. Canva, Adobe Photoshop, Pixl, GIMP).
- ☐ Project management tools (i.e. Basecamp, Monday, Microsoft Project, Trello, Jira).
- ☐ Email client and email marketing tools (i.e. eM Client, Gmail, Microsoft Outlook, Mailchimp, MailerLite).
- ☐ Website management and performance tools (i.e. Wix, Weebly, WordPress, Google Analytics, Google Search Console, SEO Powersuite).
- ☐ Customer relationship and support tools (i.e. Zoho CRM, Insightly, Salesforce, HubSpot CRM).
- ☐ Tourism and travel marketplaces (Booking.com, Tripadvisor, Expedia, Agoda, Trivago).

Question 3: Which of these digital tools do you use during your daily tasks?

- ☐ Social Media management tools (i.e. Buffer, Later, Hootsuite, Crowdfire).
- ☐ Digital communication and collaboration tools (i.e. Google Chat, Viber, WhatsApp, Messenger).



- ☐ Video conference tools (i.e. Google Meet, Zoom, Microsoft Teams, Skype).
- ☐ Image editing and publishing tools (i.e. Canva, Adobe Photoshop, Pixl, GIMP).
- ☐ Project management tools (i.e. Basecamp, Monday, Microsoft Project, Trello, Jira).
- ☐ Email client/applications (i.e. Gmail, eM client, Microsoft Outlook, Thunderbird).
- ☐ Email marketing tools (i.e. Mailchimp, MailerLite).
- ☐ Website management and performance tools (i.e. Wix, Weebly, WordPress, Google Analytics, Google Search Console, SEO Powersuite).
- ☐ Customer relationship and support tools (i.e. Zoho CRM, Insightly, Salesforce, HubSpot CRM).
- ☐ Tourism and travel marketplaces (i.e. Booking.com, Tripadvisor, Expedia, Agoda, Trivago).
- ☐ Document and presentation editor (i.e. Microsoft Word-PowerPoint, Google Docs-Slides).
- ☐ Cloud storage and file sharing platform (i.e. OneDrive, Google Drive, Dropbox).
- ☐ Spreadsheet and database software (i.e. Microsoft Excel, Microsoft Access, Google Sheets, Libre Office Calc).

Question 4: Are there any tools you use in everyday tasks that are not included in the categories already mentioned? If so, please specify them.

Note: This survey was created to map the user's level of using or interacting with digital tools.

Unit 3. Theoretical Chapter: The importance of ICT in Project Management

In order to explain why the use of digital tools is important in Project Management and how to avoid feeling lost in a world that is increasingly becoming “more digital” every day, it is necessary to understand some key definitions.

Defining Project Management

Project Management (PM) is defined by the Project Management Institute (PMI) as “the practice of using knowledge, skills, tools, and techniques to complete a series of tasks to deliver value and achieve a desired outcome” (PMI, n.d.).

The accelerated digital transition is unlocking economic and technology innovation, boosting

growth, and enabling new forms of social engagement across the globe.

Learners who wish to deepen their knowledge in Project Management can attend Module 2 “Hybrid Project Management for the Sustainable Tourism” of the present course.

Defining ICT

The term *Information and communication technologies (ICT)* is defined as “a diverse set of technological tools and resources used to transmit, store, create, share or exchange information” (UNESCO, n.d.). As described by UNESCO’s International Institute for Educational Planning, these technological tools and resources involve certain aspects of contemporary humans’ everyday life the general use of computers, the Internet (such as accessing websites, blogs and exchange of emails), live broadcasting and recorded broadcasting technologies (radio, television, webcasting, podcasting, audio and video players, and storage devices), and telephony (fixed or mobile, satellite, visio/video-conferencing, etc.). As stated in Eurostat Statistics Explained (Eurostat, 2023), “ICT covers all technical means used to handle information and aid communication. This includes both computer and network hardware, as well as their software”.

Defining Digital Transformation

Digital Transformation is a broad concept that lacks a unified definition of what it actually is (Chamorro-Premuzic, 2021; McKinsey & Company, 2023).

It could be defined as the integration of digital technology into all areas of a business, fundamentally changing how it operates and delivers value to customers (Lamarre et al., 2023; World Economic Forum, 2023) or the long-term rewiring of an organisation, with the goal of creating value by continuously deploying tech at scale (McKinsey & Company, 2023).

Figure 4.3

Coding is a fundamental element of the Digital Era





Note. From Pexels [Photograph], by Negative Space, 2016, Pexels. (<https://www.pexels.com/photo/pink-white-black-purple-blue-textile-web-scripts-97077/>). CC0 1.0 DEED.

Digital transformation refers to the integration of digital technologies into various aspects of an organisation's operations, processes, and strategies to fundamentally change how it operates and delivers value to its customers. The goal of digital transformation is to leverage the potential of digital technologies to improve efficiency, agility, and innovation within an organisation. The term is linked to digitalization and digital skills.

Key elements of digital transformation, resulting from several authors (Chamorro-Premuzic, 2021; Delpiano, n.d.; Gartner, n.d.; Gonçalves et al., 2023; Hamdan, 2023; Lamarre et al., 2023; McKinsey & Company, 2023; St-Jean, 2023; World Economic Forum, 2023) include:

Technology Adoption

Implementing new and emerging technologies such as cloud computing, artificial intelligence, machine learning, Internet of Things (IoT), blockchain, and others to enhance operations and decision-making.

Process Optimisation

Rethinking and redesigning existing business processes to leverage digital tools for increased efficiency, speed, and accuracy.

Data-driven Decision-making

Utilizing data analytics and business intelligence tools to gather, analyse, and derive insights from large sets of data, aiding in more informed decision-making.

Customer Experience Enhancement

Focusing on improving customer interactions by using digital channels, personalisation, and data-driven insights to provide a more seamless and customized experience.

Cultural Shift

Encouraging a cultural change within the organisation that promotes innovation, collaboration, and a willingness to embrace new technologies.

Agile Work Practices

Adopting agile methodologies and flexible work practices to respond quickly to changing market conditions and customer demands.

Cybersecurity

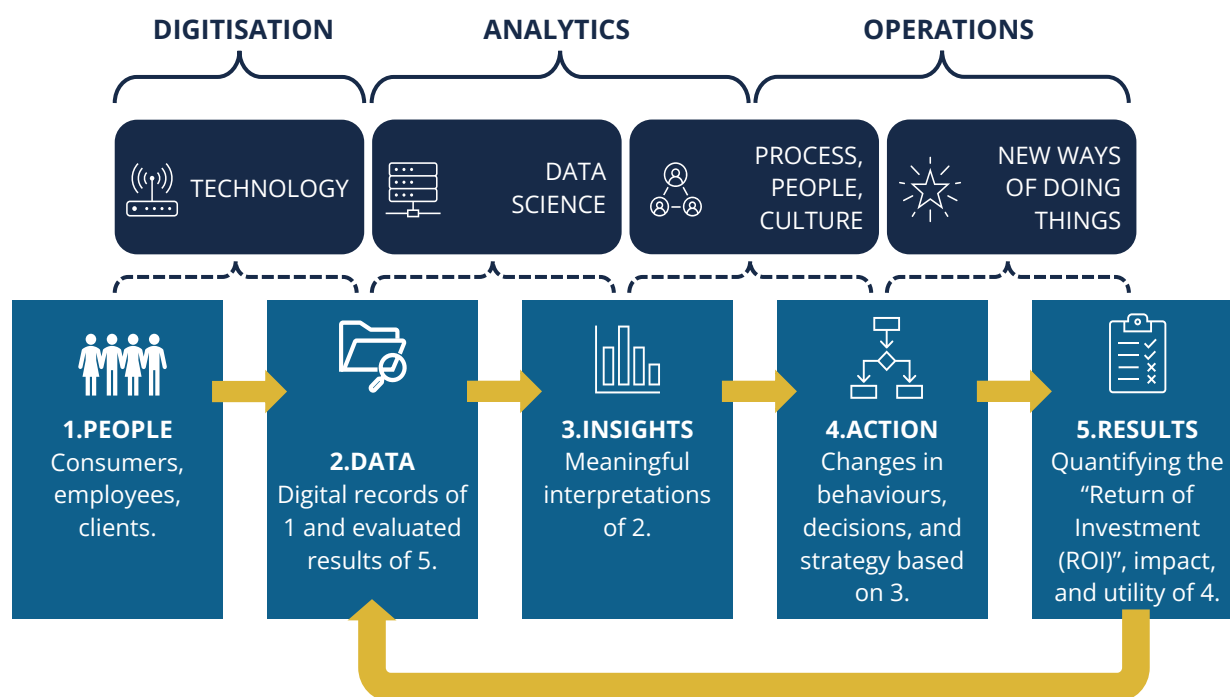
Ensuring robust cybersecurity measures to protect digital assets, sensitive data, and maintain the trust of customers and stakeholders.

Go digital or go home

Digital transformation is not only about adopting new technologies but also about changing the mindset, culture, and processes within an organisation to adapt to the digital era. It is a continuous and ongoing process, as technology continues to evolve, and organisations need to stay adaptable to remain competitive in the digital landscape (Chamorro-Premuzic, 2021; Gartner, n.d.; Gonçalves et al., 2023; McKinsey & Company, 2023).

Figure 4.4

The 5 Essential Components of a Digital Transformation



Note. Adapted from Chamorro-Premuzic, T. (2021, November 23). *The Essential Components of Digital Transformation*. Hbr.Org. (<https://hbr.org/2021/11/the-essential-components-of-digital-transformation>)

Digital transformation across governments and industries has the potential to grow the economy and enable a brighter future for all. Now is a critical time for the public and private sectors to come together to embrace this opportunity through a shared vision and strategic planning.

- Cristiano Amon -

The Connection between ICT and PM

During the last decade and as the technology is advancing faster than ever, digital tools have become an inseparable element of PM. ICT has become a vital aspect of managing projects, people and timelines (Delpiano, n.d.).

Nowadays, many digital tools are available for project managers (Kulikov, et al., 2022); others aspire to provide a holistic approach on project management and others (specialised tools and software) being targeted in specific fields.

ICT Project Management involves the planning, implementation, and monitoring of projects that involve information and communication technology (Delpiano, n.d.; Hamdan, 2023). ICT Project Management helps organisations to deliver projects on time, within budget, and to the required quality (Gonçalves et al., 2023). It also helps organisations to manage risks and mitigate potential problems that could impact the success of the project (Delpiano, n.d.).

Digital tools in PM: Helping or hindering?

The use of digital tools in project management is vital for several reasons and brings a range of benefits that contribute to the overall success of projects.

The adoption of digital tools in project management boosts efficiency, collaboration, and decision-making, ultimately contributing to the successful delivery of projects (Hamdan, 2023; *How Can You Use Technology to Improve Project Management?*, n.d.). The specific benefits may vary depending on the tool selected and its features, but the overall impact is a more modern and efficient project management process.

Advantages in a nutshell (Chamorro-Premuzic, 2021; Delpiano, n.d.; Gartner, n.d.; Gonçalves et al., 2023; Hamdan, 2023; Lamarre et al., 2023; McKinsey & Company, 2023; World Economic Forum, 2023):

Increased efficiency and productivity

Digital tools automate routine tasks, reducing the time and effort required for project management activities. (Automated scheduling, task tracking and communication streamline processes, leading to increased efficiency and productivity).

Facilitation of Collaboration and Communication

(inside and outside of the teams). Digital tools facilitate real-time collaboration between team members, regardless of their physical location. Communication channels, document sharing and messaging features improve information flow and enhance team collaboration. Many digital tools include features that facilitate collaboration with customers and stakeholders. Providing visibility into project progress and milestones promotes transparency and trust with external partners.



Improved task and time management

Digital tools often include functions for assigning tasks, monitoring, and prioritisation. Time tracking functions help monitor project progress, identify bottlenecks, optimise resource allocation, keep track of deadlines, and make any necessary adjustments to the schedule as the project progresses.

Effective resource allocation

Resource management tools allow project managers to efficiently allocate resources and monitor their usage. Budget-wise they help plan and keep track of budgets, plan payments and ensure that project remains within budget by regularly monitoring project expenses and controlling costs. Also, they ensure that team members are appropriately assigned to tasks based on their skills and availability.

Optimal risk management

Digital tools allow systematic monitoring and management of project risks. Risk assessment features help teams identify potential issues early, enabling proactive mitigation strategies.

Collection and processing of data and information

Digital tools provide a central repository for project-related data, documents, and information. They can also provide real-time project data, such as project progress, risks, and budget. Team members can access and update project information in real time, ensuring that everyone is working with the latest and most accurate data.

ICT's impact on the tourism sector

ICT has a significant impact on the tourism sector, transforming the way businesses operate and the way travellers plan, book and experience their trips.

The main findings regarding ICT's impact on tourism (Hughes & Moscardo, 2019; UN Tourism, n.d.) can be summarised as:

Online Booking and Reservations

Booking websites and mobile apps provide real-time availability, prices, and reviews, allowing travellers to book and pay online for flights, accommodation, and other services with ease. Especially, mobile apps provide travellers with on-the-go information, navigation and access to travel services such as digital maps, language translation and real-time updates on local attractions and events.

Digital Marketing and Promotion

Tourism businesses use digital marketing strategies to reach a global audience through social media, search engine optimisation (SEO), and online advertising.

Customer Reviews/Feedback and Social Media Influence

Online review platforms enable travellers to share their experiences, helping others make informed decisions. At the same time, businesses in the tourism sector use feedback to improve services and maintain a positive online reputation. Social media platforms also play a crucial role in shaping travel trends and influencing destination choices. Tourism businesses actively engage with travellers on social media, sharing content, running campaigns, and building communities.

Smart Destinations

ICT supports the development of smart destinations with connected infrastructure, data-driven decision-making, and sustainable tourism practices, creating a seamless and exciting experience for tourists while managing local resources efficiently.

Data Analytics and Personalisation

Tourism businesses analyse data to understand traveller preferences and behaviour. Personalisation techniques enable businesses to offer tailored recommendations, promotions, and experiences based on individual preferences.

IoT in the Tourism Industry

The Internet of Things (IoT) is used to enhance guest experiences in hotels, resorts, and other accommodations. IoT devices, such as smart room controls and connected amenities, contribute to a more comfortable and personalised stay.

Augmented Reality (AR) and Virtual Reality (VR)

AR and VR technologies enhance the pre-travel experience by providing virtual tours of destinations, hotels, and attractions. Tourism businesses use AR for interactive experiences, such as location-based information and augmented guides.

A quick recap

To sum up, the new technologies have revolutionised the tourism sector, making it more accessible, efficient, and personalised for both businesses and travellers. The ongoing integration of new technologies is likely to continue shaping the future of travel and tourism. Digital technologies and tools can bring significant improvements to project management in the tourism sector, addressing specific challenges and enhancing overall efficiency.

Unit 4. Video: The role of the Project Manager in Digital Transformation

Video: The role of the project manager in digital transformation (https://www.canva.com/design/DAF6_KogkNo/5dYJj7b78E6OwniF9_y8aQ/edit?utm_content=DAF6_KogkNo&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)

Note: The following text is converted to a video.

The role of the Project Manager in Digital Transformation

Introduction

In the tourism industry, the role of a Project Manager in Digital Transformation involves orchestrating technology-driven changes that can enhance the overall travel experience, optimise operations, and improve customer engagement.

Key aspects

Digital technologies and tools can bring significant improvements to project management in the tourism sector, addressing specific challenges and enhancing overall efficiency.



How can they help the Project Managers in the tourism industry? What are they?

KEY ASPECT #1

Tourism Technology Assessment

- **Identifying Technological Needs:** Assessing the current technological landscape within the tourism industry and identifying areas where digital tools can bring significant improvements.
- **Evaluation of Tourism Technologies:** Conducting a thorough evaluation of digital tools and technologies that are specifically relevant to the tourism sector, such as booking platforms, customer relationship management (CRM) systems, and destination management systems.

KEY ASPECT #2

Stakeholder Engagement

- **Collaborating with Industry Partners:** Engaging with key stakeholders in the tourism industry, including travel agencies, hotels, transportation providers, and local attractions, to understand their digital readiness and collaborative potential.
- **Communication and Education:** Communicating the benefits of digital transformation and digital tools to stakeholders, fostering understanding, and encouraging collaboration for the adoption of shared technologies.

KEY ASPECT #3

Digital Customer Experience Enhancement

- **Implementing Customer-Focused Technologies:** Identifying and deploying digital tools that enhance the overall customer experience, such as mobile apps, augmented reality (AR) for virtual tours, and personalised customer engagement platforms.
- **Feedback Mechanisms:** Implementing digital tools that allow for the collection of customer feedback and preferences, enabling the tourism industry to tailor services to individual needs.

KEY ASPECT #4

Online Booking Platforms

- **Enhancing Reservation Systems:** Implementing advanced online booking platforms and integrating them with other tourism technologies to streamline the booking process for accommodations, transportation, and activities.
- **Integration with Partners:** Ensuring seamless integration between the digital booking platform and various partners in the tourism ecosystem to provide a comprehensive



and integrated experience for travellers.

KEY ASPECT #5

Destination Management Systems

- **Centralized Information:** Implementing destination management systems that provide centralized information about tourist attractions, events, and services, ensuring real-time updates and accurate information.
- **Digital Maps and Navigation:** Utilising digital mapping and navigation tools to assist tourists in navigating destinations, finding points of interest, and accessing relevant information.

KEY ASPECT #6

Data Analytics and Business Intelligence

- **Tourist Behaviour Analysis:** Leveraging data analytics to analyse tourist behaviour, preferences, and trends, enabling the tourism industry to make data-driven decisions for better service delivery.
- **Market Trends Analysis:** Using business intelligence tools to monitor market trends, competitor activities, and emerging technologies that could impact the tourism sector.

KEY ASPECT #7

Cybersecurity and Data Protection

- **Ensuring Data Security:** Implementing robust cybersecurity measures to protect sensitive customer data, ensuring compliance with data protection regulations, and building trust in the use of digital tools.
- **Secure Online Transactions:** Ensuring the security of online transactions and payment processes to safeguard customer financial information.

KEY ASPECT #8

Project Planning and Execution

- **Agile Project Management:** Adopting agile project management methodologies to accommodate changing requirements, address emerging challenges, and deliver incremental value throughout the digital transformation journey.
- **Cross-functional Collaboration:** Facilitating collaboration among different stakeholders, departments, and tourism service providers involved in the digital transformation initiatives.

KEY ASPECT #9



Training and Change Management

- **End-User Training:** Developing and implementing training programmes for tourism industry professionals to ensure they are proficient in using new digital tools.
- **Change Management Strategies:** Employing change management strategies to address resistance to adopting digital technologies, both among industry professionals and end-users.

KEY ASPECT #10

Continuous Improvement

Iterative Enhancements: Continuously improving and iterating on digital tools based on feedback from industry professionals and end-users, as well as adapting to changing market dynamics.

Benchmarking and Best Practices: Keeping abreast of industry best practices and benchmarking against successful digital transformation initiatives in the tourism sector.

Unit 5. Theoretical Chapter: Communication through Digital Technologies and Project Management

Effective communication is central to successful PM. With the rise of digital technologies, communication has undergone significant transformations, presenting both challenges and opportunities. To highlight the importance of effective communication in the workplace, and especially between PM teams, it is important to first present various types of communication, provide strategies for improving communication skills, and discuss the impact of the digital era on communication within project management contexts.

Figure 4.5

Communication and Teaching through Digital Technologies



Note. From Pexels [Photographs], by cottonbro, 2021, Pexels. (<https://www.pexels.com/photo/online-class-in-a-laptop-7013900/> and <https://www.pexels.com/photo/senior-teacher-teaching-geometry-in-an-online-class-7013898/>). CC0 1.0 DEED.

The Importance of Effective Communication in the Workplace

There are several reasons as to why communication is crucial in the workplace, especially when it takes place in digital environments or through digital means (Hargie, 2021):

Enhanced Collaboration

Clear and open communication fosters collaboration among team members, leading to increased productivity and innovation.

Conflict Resolution

Effective communication skills enable individuals to address conflicts constructively, thereby minimizing misunderstandings and improving relationships within the team.

Goal Alignment

Clear communication ensures that everyone understands the goals and objectives of a project, aligning individual efforts towards a common purpose.

Customer Satisfaction

Effective communication with clients and stakeholders ensures their needs are understood and met, leading to higher levels of satisfaction and repeat business.

Types of Communication

According to Adler, Maresh-Fuehrer, Elmhorst, and Lucas (Chaffey & Ellis-Chadwick, 2022), communication can take various forms.



Verbal Communication

This involves the use of spoken or written words to convey messages. It includes face-to-face conversations, phone calls, emails, and formal presentations.



Non-verbal Communication

Nonverbal cues such as body language, facial expressions, and gestures also play a significant role in conveying meaning and emotions.



Visual Communication

Visual aids such as charts, graphs, and diagrams are used to enhance understanding and convey complex information quickly.



Digital Communication

In the digital era, communication increasingly occurs through digital channels such as emailing, instant messaging, video conferencing, and social media platforms.

images: Flaticon.com

Strategies and principles for Improving Communication Skills

To enhance communication skills, individuals can adopt the following strategies (Shockley-Zalabak, 2015):

Active Listening

Paying full attention to what others are saying without interrupting and responding appropriately.

Clarity and Conciseness

Expressing ideas clearly and succinctly to avoid ambiguity and confusion.

Empathy

Understanding others' perspectives and emotions to communicate effectively and build rapport.

Feedback

Providing and soliciting feedback to improve understanding and refine communication processes.

Adaptability

Tailoring communication style and approach to suit the audience and context.

These general rules and tips become extremely important when applied to digital environments, considering that there are many technical issues to be resolved (e.g. voice delay due to poor internet connection) and there is often a lack of visual contact to facilitate a better perception of the speaker's intentions (e.g. while using instant messaging apps).

Impact of the Digital Era on Communication

The digital era has revolutionised communication in several ways (Bordi et al., 2018; Cai, 2024; Chaffey & Ellis-Chadwick, 2022):

Increased Connectivity

Digital technologies have facilitated instant communication across geographical boundaries, enabling real-time collaboration and information sharing.

Diverse Communication Channels

Organisations now have access to a wide range of digital communication channels, allowing them to choose the most suitable platforms for different purposes and audiences.

Virtual Collaboration

Remote work and virtual teams have become increasingly common, necessitating the use of digital tools for communication, project management, and collaboration.

Data-driven Insights

Digital communication platforms generate vast amounts of data that can be analysed to gain insights into communication patterns, preferences, and effectiveness.

Unit 6. Activity: Find the words

Lumi File: M4_L1_Unit 6 (The following text is embedded in the Lumi File).

Find the words from the grid

COLLABORATION, CONFLICT, VERBAL, DIGITAL, COMMUNICATION, LISTENING, CONNECTIVITY

Unit 7. Video: Communication and Project Management (video script)

Note: This is the video script. It will be added in a ppt and then converted in a video file with voice over.

Communication serves as the glue that holds teams together, ensuring everyone is aligned and empowered to contribute effectively towards project goals. In today's interconnected business environment, the significance of communication cannot be overstated. It transcends traditional boundaries, encompassing various channels and mediums, including face-to-face interactions, digital platforms, and written documentation.

Importance of Communication in Project Management

A project's success relies heavily in effective communication. It facilitates the exchange of ideas, information, and feedback among team members, stakeholders, and other project participants. By focusing on transparency and clarity, communication helps mitigate risks, resolve conflicts, and maintain project momentum. Strong communication skills enable project managers to inspire trust, build rapport, and lead teams with confidence.

The role of digital communication in project management cannot be overlooked. Digital tools and technologies have revolutionised how teams collaborate, communicate, and coordinate their efforts. From emails and instant messaging apps to project management software and virtual collaboration platforms, these tools provide a way to connect dispersed teams, share information in real-time, and track project progress efficiently. With digital communication channels, project managers can streamline workflows, enhance productivity, and adapt to the demands of modern project environments.



Communication Strategies

Effective communication in project management requires a strategic approach. Project managers must develop and implement communication strategies tailored to the needs and dynamics of their projects. This involves identifying key stakeholders, defining communication objectives, establishing channels and protocols, and continually monitoring and refining communication processes throughout the project lifecycle. Project managers can overcome barriers, mitigate risks, and drive project success, by adopting a proactive and systematic approach to communication.

One of the fundamental principles of effective communication in project management is tailoring messages to suit the needs and preferences of different stakeholders. Stakeholders encompass a diverse range of individuals with varying levels of interest, influence, and expertise in the project. To effectively engage stakeholders, project managers must understand their specific requirements, concerns, and communication preferences.

Clear and concise messaging is essential for effective communication in project management. In the context of complex and fast-paced projects, clarity is paramount to avoid misunderstandings, errors, and delays. Project managers must articulate their messages in a straightforward and unambiguous manner, using simple language and avoiding jargon or technical terminology whenever possible.

Building a Collaborative Culture

Effective communication is not just about transmitting information; it's about fostering a collaborative culture where team members feel empowered to share ideas, provide feedback, and collaborate towards common goals. Project managers play a critical role in nurturing this culture by creating an open and inclusive environment where trust, respect, and accountability are valued. Applying this in a digital environment is crucial, since they lack proximity in relation with face-to-face meetings.

Insights on Effective Communication

Effective communication is a multifaceted process that involves not only conveying information but also listening actively, seeking feedback, and adapting communication strategies as needed. Project managers must be attuned to the nuances of interpersonal communication, recognizing the importance of nonverbal cues, empathy, and emotional intelligence in building strong relationships and fostering collaboration.

Communication Plan

A communication plan serves as a roadmap for how communication will be managed and executed throughout the project lifecycle. It outlines the objectives, audience, messages,



channels, and frequency of communication, providing a structured framework for ensuring that stakeholders are informed, engaged, and aligned with project goals. A well-designed communication plan helps project managers anticipate communication needs, proactively address potential issues, and adapt to changing circumstances, enhancing overall project effectiveness and success.

Active listening is a foundational skill for effective communication in project management. It involves fully engaging with the speaker, paying attention to verbal and nonverbal cues, and seeking to understand their perspective and concerns. Project managers must cultivate active listening skills to build trust, foster empathy, and promote open dialogue within their teams.

Communication Challenges and Solutions

Despite the best intentions, communication challenges are inevitable in project management. From miscommunication and misunderstandings to cultural differences and conflicting priorities, project managers must be prepared to address a myriad of obstacles that can hinder effective communication. By identifying common communication challenges and implementing proactive solutions, project managers can minimize risks, resolve conflicts, and keep projects on track. Whether through clarifying expectations, establishing clear channels of communication, or fostering a culture of open dialogue, project managers can overcome communication barriers and drive project success.

Overcoming Communication Barriers and feedback loops

Overcoming communication barriers requires a combination of awareness, adaptability, and resilience. Project managers must be proactive in identifying potential barriers, whether they stem from language differences, cultural nuances, or technological limitations. Additionally, leveraging diverse communication channels and technologies can help bridge gaps and facilitate effective communication across geographical and cultural boundaries.

Integrating feedback loops into communication processes is essential for promoting continuous improvement and learning. Feedback loops provide valuable insights into the effectiveness of communication strategies, allowing project managers to identify areas for improvement and address concerns in a timely manner. By soliciting feedback from stakeholders, project managers can gauge satisfaction levels, identify issues, and make necessary adjustments to communication approaches and content.

Conclusion

Communication plays a lead role in successfully managing a project. It facilitates collaboration, fosters trust, and drives project success. As project managers continue to navigate the complexities of modern project environments, prioritizing effective communication will remain essential for driving project success and achieving organisational objectives.



This information was gathered as a result of many authors (Bordi et al., 2018; Delpiano, n.d.; PMI, 2018; Rajkumar, 2010; Shockley-Zalabak, 2015; Sutu, 2016)

Unit 8. Theoretical Chapter: Digital communication and collaboration inside and outside the workplace

Traditional vs. Digital Communication

Communication methods have undergone a fundamental evolution, transitioning from traditional face-to-face interactions to the era of virtual collaboration. This shift holds profound implications for project managers. According to several authors (Apuke, 2016; Graw, 2023; Mikkola & Valo, 2019; Naha, 2024; Sutu, 2016) the two main styles of communication are:

Traditional Communication



In the traditional model, communication primarily occurred through face-to-face meetings, phone calls, and physical documents. Project managers would gather teams in physical spaces, fostering direct interaction but often constrained by geographical limitations. The exchange of information was typically synchronous and relied heavily on in-person cues for understanding.

It is essential to recognize the importance of personalisation and human interaction. Traditional communication channels excel at fostering personal connections through face-to-face meetings or phone calls. These channels often offer a more personalised and empathetic experience, which plays a key role in fostering trust and loyalty with colleagues and associates.

Digital Communication



Contrastingly, the digital era has ushered in a new paradigm. Communication now transcends physical boundaries, facilitated by a variety of digital tools and platforms. As organisations increasingly operate on a global scale with teams spread across different locations, digital communication platforms have proven to be vital tools that facilitate collaboration between employees in different geographical locations.

Virtual meetings, emails, instant messaging, and collaborative software redefine how teams interact. These digital environments serve to transcend the limitations of traditional office spaces, seamlessly connecting individuals and facilitating access to work-related resources and information beyond the conventional boundaries of the workplace. This asynchronous communication model enables real-time collaboration regardless of team members' locations, unlocking a world of possibilities for globalized project management.

images: Flaticon.com

Setting the Stage for Exploration

Teamwork and collaboration are crucial aspects of how companies operate today, shaping the very core of modern corporate operations.

As we explore the area of digital communication, it is obvious that its benefits extend far beyond mere convenience. In contrast to traditional methods, digital communication serves as a catalyst for enhancing teamwork and collaboration within organisational contexts. In fact, the adoption of digital communication establishes a new era of teamwork, where collaboration thrives in the interconnected landscape of the digital age.

Understanding this shift from traditional to digital communication sets the stage for exploring the benefits of the digital era. As we navigate through the subsequent content, we'll explore how embracing digital tools revolutionises project management, improving efficiency, accessibility, and overall project success. The comparison lays the groundwork for project managers to adapt and leverage these advancements in communication for enhanced project outcomes.

Benefits of Digital Communication in the Workplace

In the world of Project Management, embracing digital tools is a strategic imperative. The shift towards digital communication brings forth a multitude of advantages, each playing a key role in steering projects towards success (Bow Valley College, 2024; Naha, 2024; Postelnyak, 2022).

Efficiency

Digital communication streamlines information exchange, eliminating the delays associated with traditional methods.

Flexibility

Digital communication tools are revolutionizing the way workers interact and exchange information in remote or hybrid work environments.

Productivity

The ability to schedule virtual meetings and conduct remote work sessions reduces the time and resources spent on travel, enabling employees to allocate more time to productive tasks.

Money and Time Saving

Digital communication saves time and money by cutting costs associated with paper, postage, and travel.

Sustainability

Digital communication is environmentally healthier and more sustainable than traditional methods due to several key factors.

Accessibility

One of the pylons of digital communication is its ability to transcend geographical constraints.

Project Success

The ultimate goal of project management is success, and digital communication plays a central role in achieving this by minimising time-consuming procedures and going beyond the limits of space and time.

Training and Development

Digital communication enables remote training and development opportunities for employees irrespective of their geographical location, fostering a culture of lifelong learning and innovation, leading to sustainable productivity and competitive advantage in today's dynamic business landscape.

Communication Culture

Communication culture encompasses the values, norms, practices, and behaviours related to how communication occurs within an organisation, community, or society (Indeed Editorial Team, 2022; Martic, 2023). It reflects the shared beliefs and expectations surrounding communication processes and interactions.

A healthy "communication culture" contributes to achieving project success. This section investigates into the key role of communication culture, offering a comprehensive understanding of its definition and impact on creating an environment where information flows seamlessly (Janssen & Carradini, 2021). Through a positive communication culture, organisations and communities can enhance relationships, productivity, and overall well-being (Basset, 2020).

Role in Seamless Information Flow

Creating an environment where information flows seamlessly is paramount for project success. A robust communication culture ensures that information is not only exchanged promptly but also comprehensively. Team members feel empowered to share insights, express concerns, and contribute to discussions openly, fostering a collaborative atmosphere.



Real-World Scenarios and Best Practices

Real-world scenarios and best practices that highlight the significance of a healthy communication culture can make us better understand the importance of communication culture. These examples illustrate instances where effective communication culture led to enhanced teamwork, reduced misunderstandings, and ultimately contributed to project success.

Example 1

Agile Communication in Tech Projects. In agile development environments, a strong communication culture encourages daily stand-up meetings, facilitating quick updates and issue resolution. This agile approach ensures that all team members are aligned with project goals and challenges and stay motivated.

Example 2

Transparent Communication in Complex Projects. In complex projects, transparent communication is vital. A communication culture that values honesty and openness enable team members to share project complexities without fear of reprisal. This transparency promotes proactive problem-solving and collaborative decision-making.

Tools for Digital Communication and Collaboration

Efficient communication is synonymous with employing the right tools. This section introduces essential platforms designed to integrate project management procedures, enhance collaboration, and facilitate seamless communication (Aston, 2024a; Ellen, 2020, 2020; Graw, 2023).

Project Management Software: Central to effective project management is the selection of the right Project Management Software (PMS). Platforms such as [Asana](#), [Trello](#), or [Jira](#) empower project managers to organise tasks, track progress, and ensure deadlines are met. These insights are drawn from industry best practices and user testimonials.

Collaboration Platforms: Enhancing teamwork within and outside the organisation is made possible through collaboration platforms. Tools like [Slack](#), Microsoft Teams, and [Google Workspace](#) redefine how teams collaborate in real-time. These recommendations are based on industry trends and user reviews, showcasing their popularity and effectiveness.



Communication Tools: Digital communication thrives on instant connectivity. Email, once a primary communication tool, is now complemented by more immediate options like [Zoom](#), Microsoft Teams Meetings, Google Meet and Slack calls. These tools facilitate virtual meetings, video conferences, and instant communication, creating a dynamic communication ecosystem for project teams.

Cloud Storage Tools: Platforms like Google Drive, Dropbox, and Microsoft OneDrive allow users to store documents, spreadsheets, presentations, and other files securely in the cloud. Users can access their files from any device with internet access, share documents with collaborators, and organise files into folders for easy management.

Unit 9. Activity: Drag the Words

Lumi File: M4_L1_Unit 9 (The following text is embedded in the Lumi File).

Trello, traditional, Communication Culture, Slack, Efficiency, Zoom, MS Teams, Accessibility, Google Workplace, Dropbox, digital, Productivity

Drag the words into the correct boxes.

1. The use of instant messaging, collaborative platforms, and project management software facilitates quick and direct communication, ensuring faster decision-making and rapid problem-solving. This describes the efficiency of * _____ * communication.

2. A project manager wants to ensure that all team members are aligned with project goals and challenges.

Match with the benefit of digital communication: * _____ *

3. A project requires real-time updates and quick responses to changing requirements.

Match with the benefit of digital communication: * _____ *

4. * _____ * is a cornerstone for achieving project success as it refers to shared values and practices in exchanging information.

5. * _____ * is a digital communication tool.

6. * _____ * is a project management software.

7. * _____ * is a cloud storage tool.

Unit 10. Theoretical Chapter: Usage of online interaction tools and Netiquette

In this session, examples and best practices of online interaction tools are presented, the term “netiquette” is explained and how to create a positive communication culture is being analysed.

The importance of effective online interaction tools

Online interaction tools have become an integral part of our lives. The purpose of these tools is to facilitate communication, collaboration, and teamwork. Utilising these tools effectively and practicing proper “netiquette” is crucial for maintaining positive and productive online interactions.

The advantages of frequently using online interaction tools in project management (Chen, 2024; Glossop, 2021) are:

1. Time and resources conservation;
2. Productivity enhancement;
3. Communication improvement;
4. Remote working and collaboration are facilitated and made easier;
5. Strengthening team morale;
6. Helping to overcome obstacles.

Examples of Online Interaction Tools

Online interaction tools are software applications and platforms that facilitate communication, collaboration, and interaction over the internet. These tools are essential for individuals and organisations to connect, communicate, and work together in virtual environments.



Figure 4.6

Categories of Online Interaction Tools



Some of the most popular tools (Behnke, 2024; Chen, 2024; Nugraha & Mauladhika, 2024; Robinson, 2024) can be summarised as:

- Email: Gmail, Outlook, eM Client
- Video Conferencing Platforms: Zoom, Microsoft Teams, Google Meet
- Social Media Platforms: LinkedIn, Twitter, Facebook, Instagram
- Instant Messaging and Collaboration Tools: Slack, Microsoft Teams, Discord, Telegram
- Collaboration and Document Sharing Tools: Google Workspace (G Suite), Microsoft 365
- Project Management: Trello, Jira, Asana
- Design tools: Canva, Miro
- Team Building Apps & Software: Scavify, Kahoot!, Miro
- Other tools: Insightly, WeTransfer

Before adopting any tool and proceed with deciding to frequently use it, it is important to consider several factors (*How Can You Use Online Communication Tools to Work Better with Your Team?*, n.d.; Nugraha & Mauladhika, 2024).



The audience



The ease of use



Specific needs and preferences



Security



The nature of collaboration within the team or the organisation

images: Flaticon.com

It is important for a Project Manager to keep up to date with the new tools that are available, as they evolve rapidly.



Challenges and Best Practices

Challenges associated with using Online Interaction Tools

- Lack of Face-to-Face Interaction
- Misinterpretation of messages
- Time zone differences
- Technical issues

Best Practices for Online Interaction

- Choose the right platform for your needs and goals and understand their rules
- Set clear expectations and establish a communication plan
- Prepare for discussions around solving problems or making decisions on the project
- Evaluating Success and Lessons Learned
- Protect Your Privacy
- Use "Netiquette" rules

Netiquette: Politeness is not enough

Definition

"Netiquette" refers to internet etiquette, the code of conduct governing online communication, a set of unofficial rules that apply to cyber behaviour.

When being a Digital Project Manager and making use of digital skills in any field, it is required to be aware of the unwritten rules of netiquette while also ensuring these rules are applied by your team members (Bow Valley College, 2024; UOTP MARKETING, 2021). Leading by example is crucial when it comes to communication between a team (Sharma, 2022) and Project Managers should be considered leaders in communication, since the team members are following on their footsteps.

Respect

Treat others as you want to be treated.

Courtesy

Be polite and considerate of others and their feelings.

Clarity

Communicate clearly and concisely, people are not mind readers.

Responsiveness

Promptly reply to messages and requests.

Clear Communication

Be accurate and factual, check your facts.

Time Management

Set and adhere to meeting agendas and timelines.

Active Listening

Give full attention to the speaker. If something is unclear ask for clarifications.

Usage of Proper Grammar and Punctuation

Getting someone to understand exactly what you mean is difficult, especially when it's not written correctly. Especially in cases where communication takes place in a different language, it is very important to proofread what is being communicated.



Netiquette in Practice

A well usage of netiquette would increase the quality of online communications and strengthen the reputation of the user.

Having good netiquette involves being mindful of your behaviour, avoiding offensive or derogatory language, and treating others as you would in face-to-face interactions.

- Avigail Lev -

Table 4.2

Netiquette applications in daily working life

Netiquette fields	Netiquette application ways
General rules	Follow platform-specific etiquette rules (e.g., proper use of hashtags, tagging, etc.).
Email etiquette	Use clear and descriptive subject lines. Be mindful of the tone. Avoid using all caps or exclamation marks (considered shouting or being angry). Address recipients appropriately. Be mindful of attachments.
Virtual meetings	Test your equipment beforehand. Join meetings on time. Dress appropriately. Mute when not speaking. Respect others' speaking time. Use video appropriately. Avoid multitasking.

Netiquette fields	Netiquette application ways
Social media netiquette	Avoid overusing hashtags. Acknowledge direct messages. Share credible information. Mindful commenting. Respect privacy.
Instant Messaging and Chat Platforms	Set a clear status. Use channels appropriately. Respond to direct messages.

How to create a positive communication culture with ethics

Creating a positive communication culture by deploying effective communication ethics and applying netiquette is essential for fostering collaboration, productivity, and a healthy work environment (Alyammahi et al., 2021; Sendra & Villano, n.d.). A positive communication culture in the digital era requires adapting traditional communication principles to the unique challenges and opportunities presented by digital platforms.

Strategies to help Project Managers establish and maintain a positive communication culture are (Alyammahi et al., 2021; Indeed Editorial Team, 2022):

Set Clear Communication Channels

Clearly define the channels for communication, ensuring that everyone is aware of the appropriate platforms for different types of messages.

Establish Specific Guidelines

Develop a set of communication guidelines that align with the organisation's values.

Utilise of Digital Tools

Acknowledge the successful use of digital tools and innovative approaches to communication.

Utilise of Multimedia Communication

Incorporate multimedia elements such as videos and podcasts to diversify communication channels and engage different learning styles.

Promote Netiquette and Ethics

Establish and transmit guidelines for online communication etiquette and encourage behaviours that are based on mutual communication ethics.

Encourage Video Conferencing

Utilise video conferencing tools to enhance face-to-face communication, especially in remote work environments.

Support Expression of Feelings and Emotions

Utilise features like reactions in virtual meetings, emojis and gifs to facilitate a way of communicating which is not based solely on words.

Embrace Social Media Positively

Encourage the use of social media for positive communication and networking.

Organise Team Building Activities

Online team-building activities are important in digital environments. These activities encourage communication and collaboration, can help strengthen relationships and build trust within the team members.

Table 4.3

Examples of using Netiquette properly

Means of Communication	Tip		Examples
Discussion Forums and Online Communities	Search Before Posting: Check if your question has already been answered before creating a new post.	✓	<i>I found a similar thread, but I'm still unclear about...</i>
	Stay On Topic: Keep discussions focused on the original topic of the thread.	✓	<i>While that's interesting, let's get back to discussing the project deadline.</i>
		✗	<i>This topic is completely unrelated to what we are talking about.</i>
	Be Respectful in Disagreements: Provide constructive arguments and be polite, disagree when necessary and be careful not to create animosity.	✓ ✓	<i>I see your point, but I would like to offer an alternative perspective.</i> <i>Let's also take into account this aspect when talking about this issue.</i>
		✗	<i>I completely disagree with you. I cannot believe that you thought what you are saying is true.</i>
Instant Messaging and Chat Platforms	Avoid Excessive Quoting: Quote only relevant parts of a previous post to avoid clutter.	✓	<i>I agree with the points made by UserXYZ, especially regarding...</i>
	Set a Clear Status: Set your status to indicate your availability or when you'll return.	✓	<i>Away from desk, back in 30 minutes.</i>
	Use Channels Appropriately: Use different channels or	✓	<i>Let's continue this discussion in the #project-updates channel.</i>



Means of Communication	Tip		Examples
	groups for specific topics to avoid clutter.	✗	<i>I know that this group chat was created for updates regarding our project, but I would like to say something irrelevant here.</i>
	Respond to Direct Messages: Acknowledge and respond to direct messages in a timely manner, set auto-replies.	✓	<i>Thanks for reaching out! I'll get back to you shortly.</i>
Collaborative Document Editing	Use Comments Effectively: Add comments to provide feedback or ask questions instead of making direct edits, track your changes and do not make unnecessary edits.	✓	<i>Can you clarify the data source for this paragraph?</i>
		✓	<i>We could also add this point in this paragraph...</i>
		✓	<i>We could rephrase this sentence like this to make it easier to understand.</i>
		✗	<i>This sentence does not make sense, change it.</i>
	Version Control: Clearly label document versions to avoid confusion.	✓	<i>2023.1.15_Project1_Final_Report_v2.0.docx</i>
		✗	<i>Document 25_draft_final.docx</i>
Virtual Teams and Project Management Tools	Clearly Define Roles: Clearly define team roles and responsibilities.	✓	<i>As the project manager, I'll be coordinating the weekly updates.</i>
	Use Task Assignments: Assign tasks using project management tools.	✓	<i>I've assigned the research tasks to each team member. Please check the platform and let me know if you are not assigned.</i>
		✗	<i>I thought it was common sense that whoever was responsible for that other task, will also do this task.</i>



Means of Communication	Tip		Examples
	Use Calendar Invitations: Send a calendar invitation in advance to make sure that the date and time slot you need, will be available for the team members.	✓	<i>I have sent you a calendar invitation for next month's coordination meeting.</i>
		✗	<i>We will have our coordination meeting in an hour, so make sure to be available.</i>
Online Learning and Collaborating Platforms	Participate Actively in Discussions: Contribute meaningfully to online class or webinar discussions.	✓	<i>In addition to the textbook, I found an interesting article that expands on this topic.</i>
	Be Mindful of Posting Frequency and Monopolising a topic: Avoid dominating online discussions; allow space for others to participate and express their thoughts.	✓	<i>I've shared my thoughts. I'm interested in hearing what others think.</i>

Unit 11. Video: Why Netiquette is important?

Video: Why Netiquette is important?
https://www.canva.com/design/DAF6zgMbvlo/STaNoU5k51vq2C4pAK963Q/edit?utm_content=DAF6zgMbvlo&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)

Note: This is the video script. It will be added in a ppt and then converted in a video file with voice over.

In this unit, we examine a critical aspect of project management: the behaviour of online communication, also known as Netiquette. Effective communication in the digital realm is indispensable for successful project outcomes. Let's explore the fundamental rules and guidelines that govern online interactions and ensure professionalism and efficiency in our communications.

Politeness in Online Communication



The cornerstone of effective online communication is politeness. Tone and language convey our attitudes, emotions, and intentions. Using inappropriate tone or language can lead to misunderstandings, offense, or a negative perception of the sender. Maintaining a polite and respectful demeanour drives positive interactions and enhances the overall communication experience.

Proofreading and Editing

Spelling, grammar, and factual errors can undermine the credibility and effectiveness of our messages. Proofreading and editing before sending emails or messages is essential to ensure clarity and accuracy. Using tools like spell checkers and grammar checkers helps eliminate errors and enhances the professionalism of our communications.

Conciseness and Clarity

Long-winded or poorly formatted emails can overwhelm recipients and lead to information overload. Keeping messages concise and clear is paramount to ensure that recipients grasp the intended message quickly and efficiently. Proper formatting techniques aid in organising information and enhancing readability, contributing to effective communication.

Appropriateness of CC and BCC

The use of CC or BCC in emails requires careful consideration. Unnecessary or incorrect CCing/BCCing can clutter inboxes, breach privacy, and create confusion. It is crucial to use CC or BCC properly, ensuring relevance, appropriateness, and agreement from all involved parties to maintain professionalism and clarity in communication.

Subject Line Clarity

The subject line serves as the first point of contact in email communication. Vague or misleading subject lines can deter recipients from engaging with emails or lead to confusion regarding the message's purpose. Clear and specific subject lines that summarize the email's main topic or purpose enhance recipient understanding and facilitate efficient communication.

Responsiveness and Follow-up

Timely responses and follow-ups are indicative of professionalism and respect in online communication. Failing to reply or follow up on emails can convey disinterest or lack of commitment, potentially damaging relationships, and reputations. Prompt communication demonstrates accountability and fosters positive interactions in online exchanges.

Proper File Sharing Practices

Sending large files via email can pose challenges for recipients, such as limited storage space or slow internet connections. Utilising cloud services or personal sites for file sharing alleviates



these issues and ensures seamless access to shared files. Implementing proper file sharing practices enhances efficiency and convenience in online collaboration.

Source Verification

Accurate information is crucial in online communication. Conducting thorough research and verifying sources before making factual claims online is essential to maintain credibility and trustworthiness. Ensuring the accuracy of information promotes transparency and integrity in digital interactions, safeguarding against misinformation and misunderstandings.

Etiquette in Video Meetings

Video meetings require a heightened level of professionalism and etiquette. Ensuring audio and video functionality, creating a non-disruptive background, and using professional screen names contribute to a polished meeting environment. Additionally, active listening and muting oneself when not speaking foster productive and respectful interactions in video conferencing.

Online Information Accuracy

Maintaining accurate online information across social media profiles, company websites, or business platforms is paramount. Inaccurate information can lead to confusion or misrepresentation, undermining trust, and credibility. Updating online information regularly and ensuring its accuracy promotes transparency and reliability in digital presence.

Legal and Ethical Considerations

Respecting copyright laws, avoiding plagiarism, and refraining from cyberbullying or harassment are fundamental ethical considerations in online communication. Adhering to these guidelines fosters a lawful and ethical online environment, upholding integrity, and accountability in digital interactions.

Reputation Management

Online actions have long-term implications for personal and professional reputations. Following netiquette principles helps maintain a positive online reputation, which is critical for building and sustaining relationships in the digital sphere. Prioritizing reputation management fosters trust and credibility in online interactions, facilitating meaningful connections and opportunities.

Mastering the rules of online communication is essential for navigating the digital landscape effectively. By focusing on principles of politeness, clarity, and professionalism, we can enhance the quality and impact of our online interactions. Keep in mind that the internet provides a false sense of anonymity and don't forget the importance of practicing netiquette.

This information was gathered as a result of many authors (Hartney, 2023; Molinaro, 2022; *What*



Are Some Common Email Etiquette Mistakes That You Should Avoid?, n.d.; *What Is Netiquette?*, 2023).

Unit 12. Activity: Fill in the missing words

Lumi File: M4_L1_Unit 12

Be quick to make your point: Sending long or poorly formatted *_____* can overwhelm your recipient or cause them to lose interest.

Proofread and edit before sending: Spelling, grammar, or factual *_____* in your email can damage your *reputation* and credibility.

Maintaining reputations: Following *_____* helps individuals uphold a positive *online* image and avoid negative consequences.

Be polite: *_____* and language are crucial aspects of communication that can convey your attitude, emotions, or *_____*.



Lesson 2: Project Management in the Digital Era

Unit 1. Introduction to Lesson 2

In this lesson, we will explore project management within the context of modern digital technologies. Our aim is to equip you with the knowledge and skills necessary to navigate the complexities of project management in today's fast-paced and interconnected world.

Figure 4.7

Working in the Digital Era



Note. From Pexels [Photographs], by Ketut Subiyanto, 2020, Pexels. (<https://www.pexels.com/photo/crop-faceless-female-entrepreneur-doing-multitasking-work-on-different-devices-4474033/>). CC0 1.0 DEED.

Throughout this lesson, we will examine various topics, including the use of project management tools in hybrid workplaces, the best technologies available for project management, and how to select the right project management software for someone's needs. Additionally, we will discuss the importance of sharing information securely and compliantly, considering regulations such as GDPR.

By the end of this lesson, you will:

1. Understand the significance of project management in the digital era.
2. Recognize the challenges and opportunities presented by hybrid work environments.

3. Identify key technologies and tools used in modern project management.
4. Gain insights into selecting the most suitable project management software for your projects.
5. Appreciate the importance of sharing information securely and in compliance with regulations like GDPR.

Unit 2. Theoretical Chapter: Project Management Tools in the Hybrid Workplace

In today's dynamic work environment, characterized by the integration of digital technologies and remote collaboration, the role of project management tools has become increasingly significant. As organisations navigate the complexities of hybrid workplaces, where teams operate both in physical offices and remotely, the need for effective project management tools has risen exponentially. This chapter highlights the importance of utilising project management tools, their adaptation in the digital workspace, the definition of a hybrid workplace, and provides examples of tools and workspaces that lead to efficient project management.



Figure 4.8

Daily usage of digital tools



Note. From Pexels [Photographs], by Deepanker Verma, 2018, Pexels. (<https://www.pexels.com/photo/black-google-smartphone-on-box-1482061/>). CC0 1.0 DEED.

The importance of Project Management Tools

Project management tools are essential for successful project execution in modern organisations. They offer a variety of benefits that enhance collaboration, simplify workflows, and improve overall project outcomes.

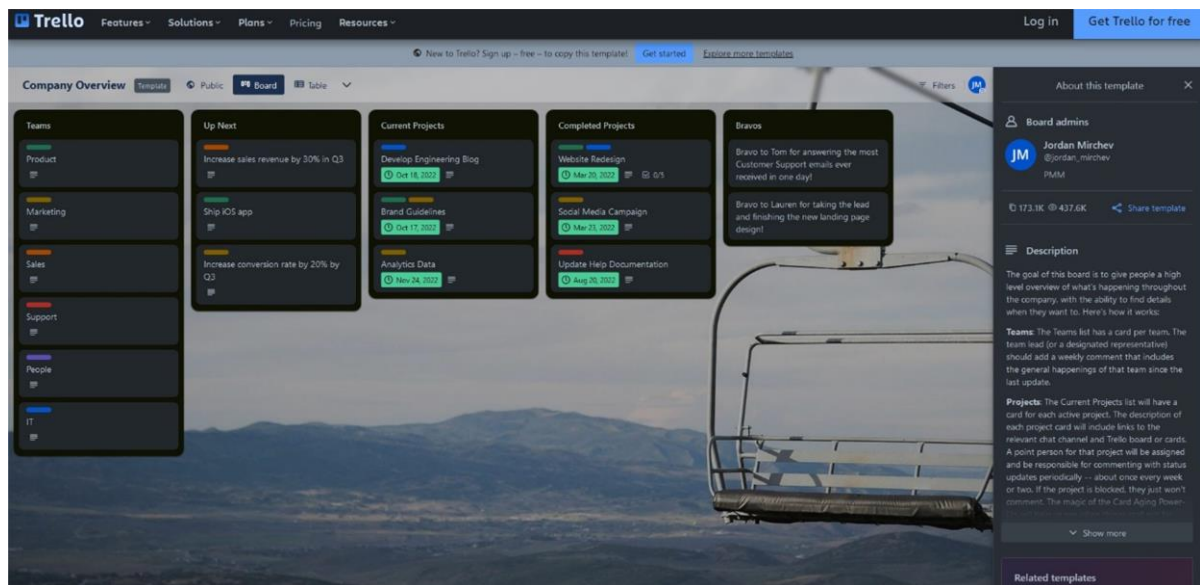
Key competencies acquired when using PM tools in everyday work (Aston, 2024b; Strasser & Schmidt-Sibeth, n.d.; VirtualSpace, 2023):

Enhanced Collaboration

Project management tools provide a centralized platform where team members can collaborate seamlessly, regardless of their physical location. By facilitating communication, file sharing, and task assignment, these tools improve teamwork and promote collective problem-solving.

Figure 4.9

Trello application screenshot – Boards

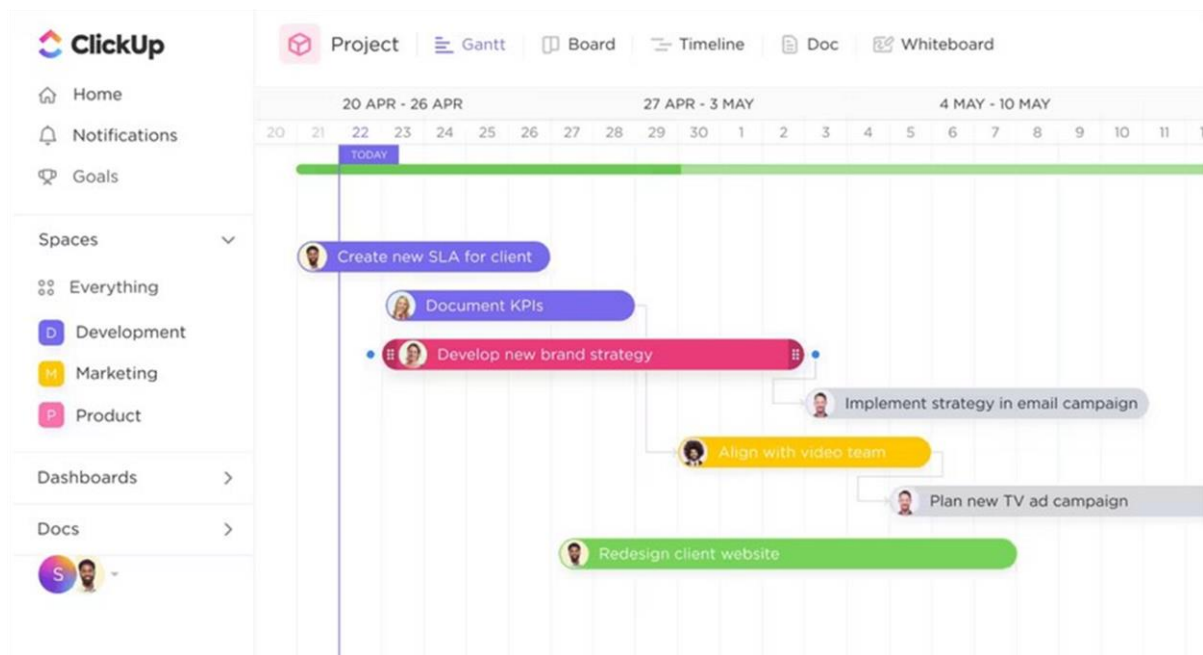


Simplified Workflows

With features such as task lists, calendars, and progress trackers, project management tools help streamline project workflows. They enable teams to organise tasks, set deadlines, and track progress efficiently, ensuring that projects stay on schedule and within budget.

Figure 4.10

ClickUp application screenshot – Gantt Chart



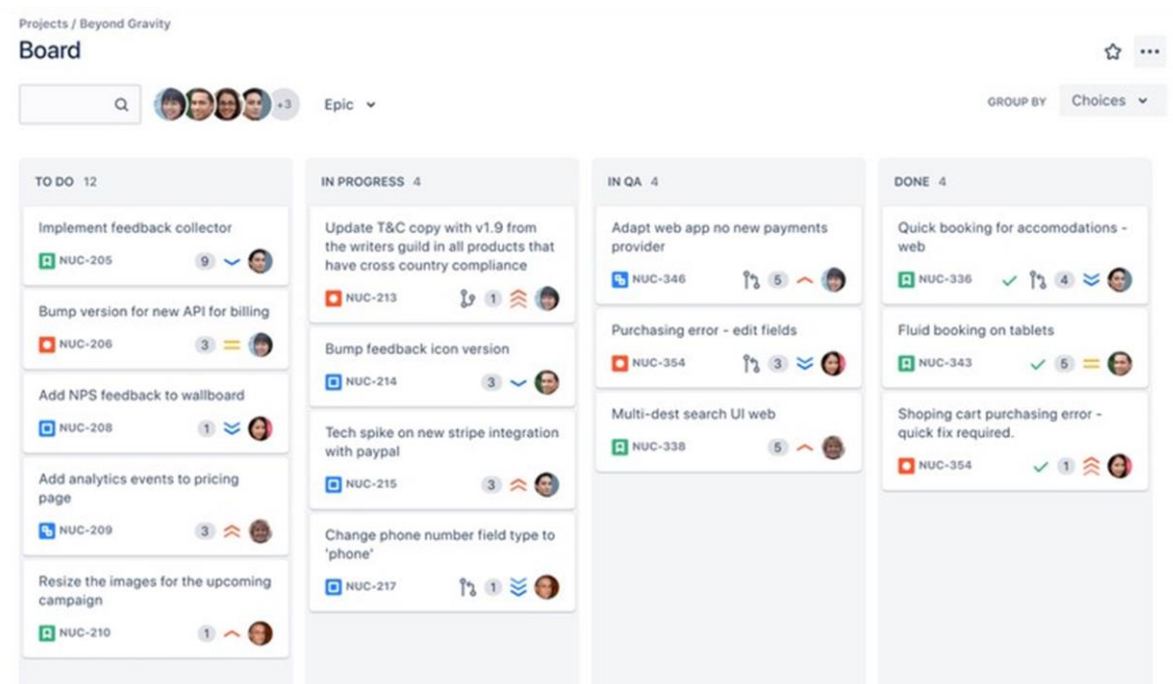
Note. ClickUp, n.d. (<https://clickup.com/features/gantt/software-developers>)

Improved Productivity

By automating repetitive tasks, eliminating manual processes, and providing real-time insights into project status, project management tools boost team productivity. They enable teams to focus their time and energy on value-adding activities, thereby enhancing overall project efficiency.

Figure 4.11

Jira application screenshot - Board



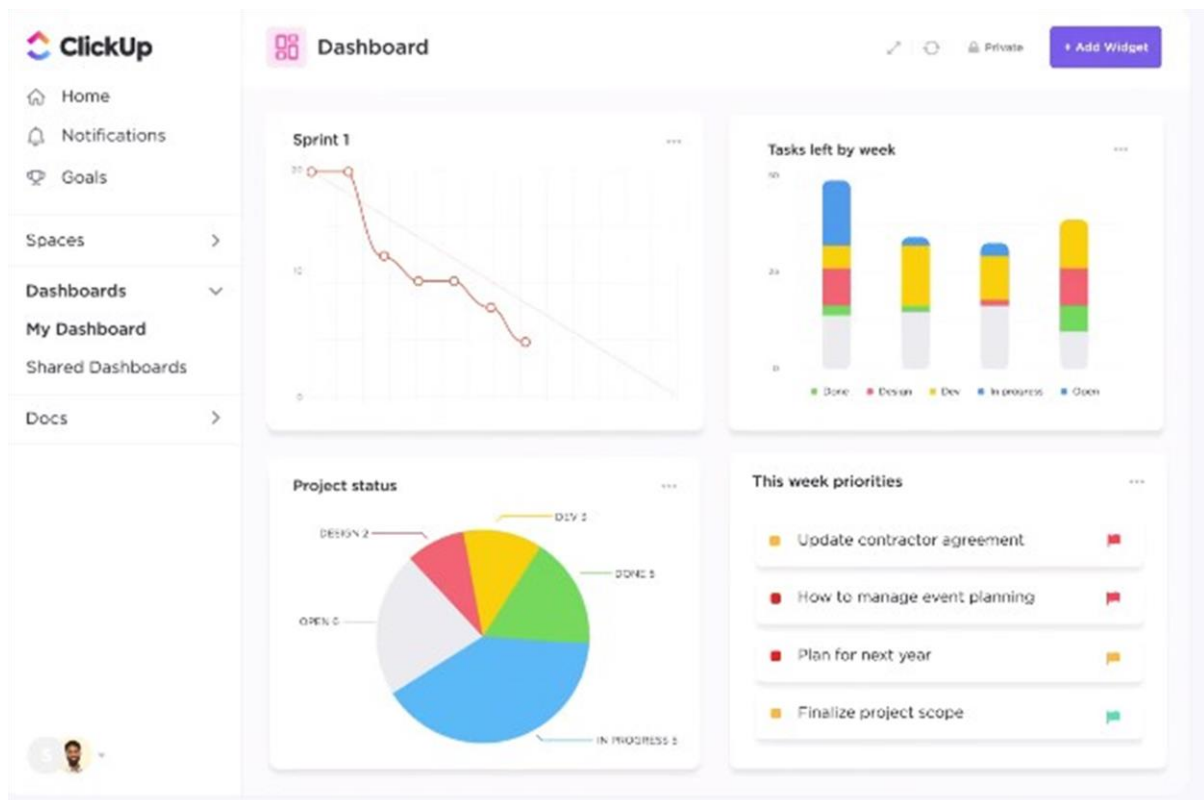
Note. Jira Software, n.d. (<https://www.atlassian.com/software/jira/features>)

Better Decision-Making

Project management tools offer valuable data and analytics that empower managers to make informed decisions. From resource allocation and risk assessment to performance tracking and forecasting, these tools provide insights that enable managers to steer projects in the right direction and mitigate potential risks.

Figure 4.12

ClickUp application screenshot - Dashboard



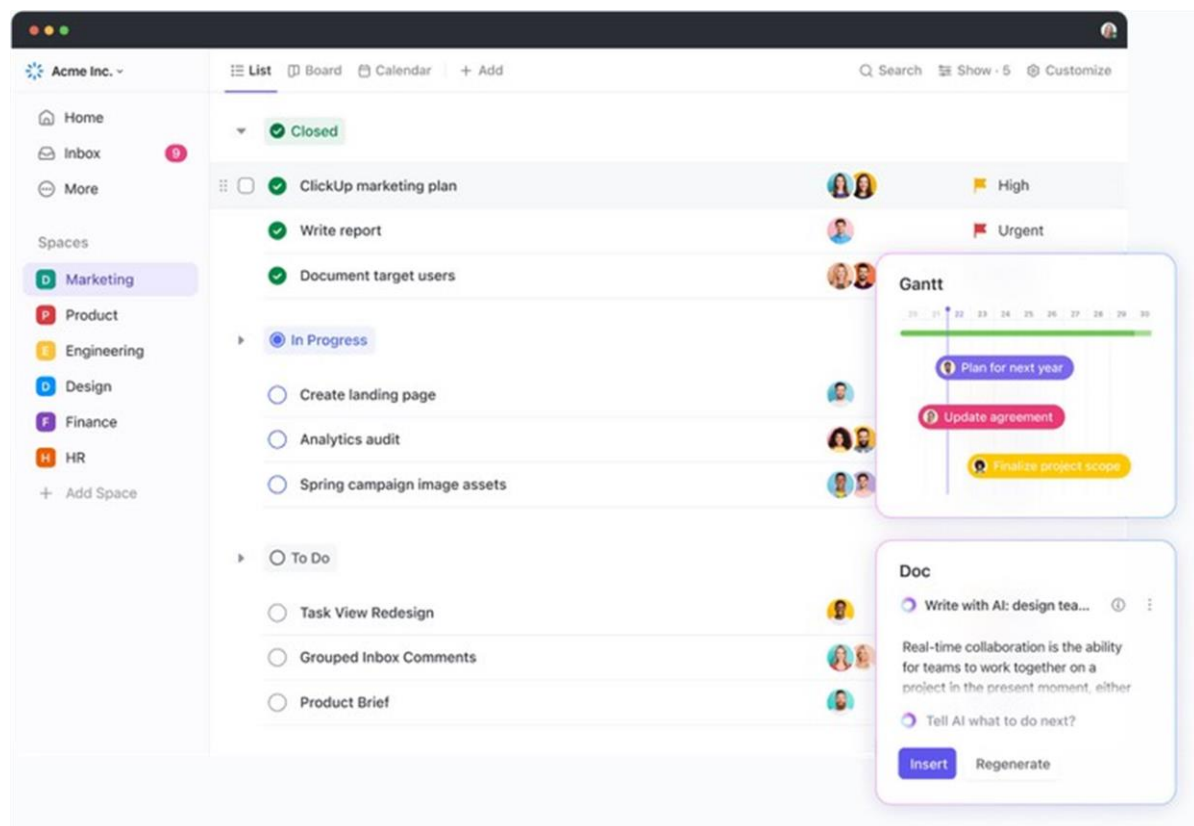
Note. ClickUp, n.d. (<https://clickup.com/features/dashboards>)

Increased Accountability

With clearly defined roles, responsibilities, and deliverables, project management tools promote accountability among team members. They ensure that everyone understands their role in the project and is accountable for their contributions, thereby fostering a culture of ownership and commitment.

Figure 4.13

ClickUp application screenshot – List view



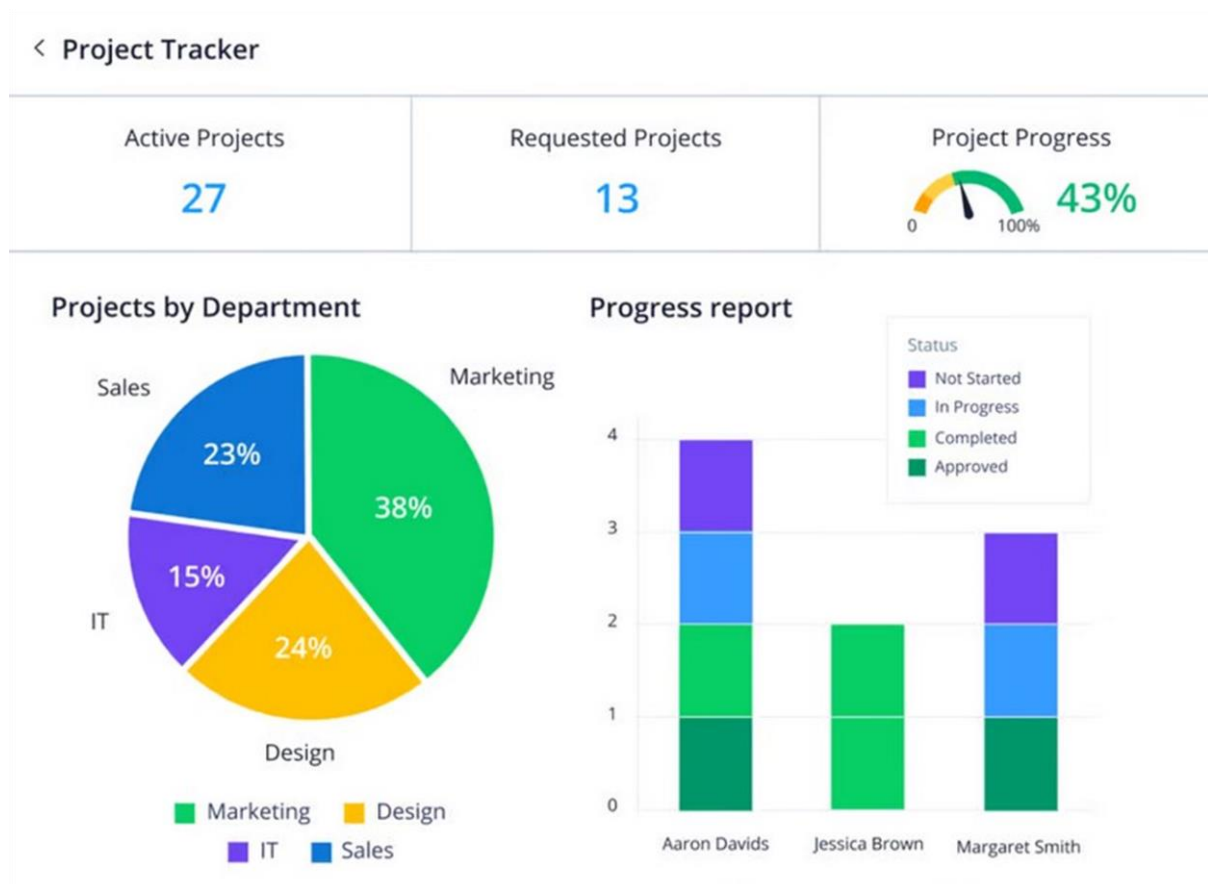
Note. ClickUp, n.d. (<https://clickup.com/teams/it-pmo>)

Scalability

Project management tools are highly scalable and adaptable to the needs of projects of all sizes and complexities. Whether managing a small-scale project or a large-scale initiative, these tools can accommodate varying project requirements and scale up or down as needed.

Figure 4.14

Wrike application screenshot – Reporting page



Note. From *Wrike vs. Microsoft Project: Compare MS Project Alternatives*, by Kealy, R., 2023. (<https://www.wrike.com/blog/wrike-vs-microsoft-project/>)

Adaptation of Project Management Tools in the Digital Workspace

The digital workspace encompasses the suite of digital tools and technologies that enable remote collaboration, flexible work arrangements, and digital transformation (Aston, 2024b; Strasser & Schmidt-Sibeth, n.d.; VirtualSpace, 2023). In the context of project management, digital workspace solutions play a crucial role in facilitating communication, collaboration, and project execution. These tools are adapted to meet the unique needs and challenges of remote and distributed teams, enabling them to work together effectively irrespective of their physical location. Especially, the COVID-19 pandemic, accelerated the adoption of these tools especially in large enterprises, as they incorporated these technologies into their hybrid or remote work model.

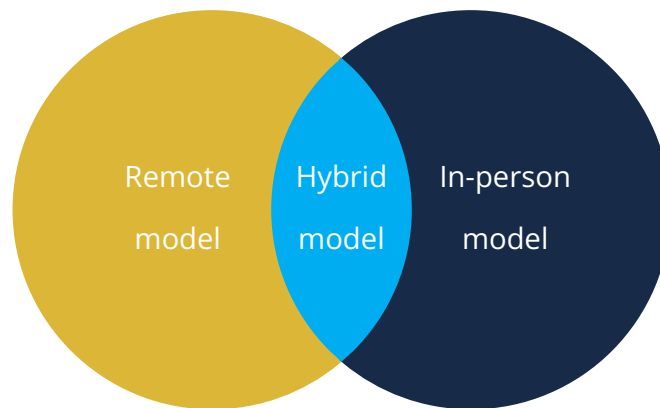
In the digital workspace, project management tools are integrated with a variety of digital technologies to enable virtual collaboration and ensure continuity of project operations. From cloud-based storage solutions and video conferencing platforms to collaborative document editing tools and task management software, the digital workplace offers a comprehensive ecosystem of tools that support remote project management.

Definition and Examples of a "Hybrid Workplace"

A hybrid workplace is a work environment that combines elements of remote work and in-person work (SAP, n.d.). It allows employees to work from both physical office spaces and remote locations, such as their homes or co-working spaces. The hybrid workplace model offers flexibility and autonomy to employees, enabling them to choose where and how they work based on their preferences and requirements.



Figure 4.15
The Hybrid Workplace Model



Note. Adapted from *What is a hybrid workplace model?*, by Sap.com (<https://www.sap.com/products/hcm/what-is-a-hybrid-workplace-model.html>).

Examples of tools and technologies that facilitate collaboration in a hybrid workplace include (Alexander, 2022; Aston, 2024a):



Microsoft Teams

[Microsoft Teams](#) is a unified communication and collaboration platform that integrates chat, video conferencing, file sharing, and task management functionalities. It enables remote teams to communicate and collaborate in real-time, regardless of their physical location.



Zoom

[Zoom](#) is a cloud-based video conferencing platform that allows remote teams to conduct virtual meetings, webinars, and conference calls. It offers high-quality audio and video conferencing capabilities, making it an ideal solution for remote collaboration in hybrid workplaces.



Google Workspace

[Google Workspace](#) (formerly G Suite) offers a suite of productivity tools, including Gmail, Google Drive, Google Docs, and Google Meet. It enables remote teams to collaborate on documents, share files, and conduct virtual meetings, enhancing productivity and communication in hybrid work environments.



Slack

[Slack](#) is a cloud-based messaging platform that facilitates real-time communication and collaboration among remote teams. It offers channels for group communication, direct messaging for one-on-one conversations, and integrations with other productivity tools, making it a valuable asset for remote collaboration.



Asana

[Asana](#) is a cloud-based project management platform that enables remote teams to organise tasks, set deadlines, and track project progress in real-time. It offers features such as task lists, kanban boards, and Gantt charts, making it an ideal solution for project management in hybrid workplaces.

Criteria to decide on which tools are most fitted for tourism sector users and businesses

When deciding which platforms to use for a hybrid workplace, especially in sectors like business and tourism, it's essential to consider various criteria that align with the needs and preferences of different types of users and organisations. Here are some criteria to consider when selecting platforms for the hybrid workplace in the business and tourism sector (Aston, 2024b; VirtualSpace, 2023; Wrike, n.d.):

Communication and Collaboration Features

Evaluate the communication and collaboration features offered by each platform, such as messaging, video conferencing, file sharing, and task management. Choose platforms that provide comprehensive communication and collaboration tools to facilitate seamless interaction and coordination among team members.

Integration Capabilities

Consider the integration capabilities of each platform with other essential tools and applications used in the business and tourism sectors. Look for platforms that offer seamless integrations with popular productivity tools, customer relationship management (CRM) systems, booking platforms, and payment gateways to streamline workflows and enhance productivity.

Scalability and Flexibility

Assess the scalability and flexibility of each platform to accommodate the evolving needs and growth of businesses in the business and tourism sectors. Choose platforms that can scale with the organisation's growth and adapt to changing business requirements, such as seasonal fluctuations in demand or expansion into new markets.

Security and Compliance

Prioritize platforms that offer robust security measures and compliance with industry regulations, such as GDPR in the tourism sector. Ensure that the platforms adhere to strict data security standards, encryption protocols, and compliance.

User-Friendly Interface

Consider the user-friendliness of each platform's interface, especially for non-technical users and employees in the business and tourism sectors. Choose platforms that are intuitive, easy to navigate, and require minimal training for users to get started and collaborate effectively.

Cost and Affordability

Evaluate the cost and affordability of each platform, considering the organisation's budget constraints and ROI expectations. Consider both upfront costs and ongoing subscription fees, as well as any additional costs for integrations, customization, and support services.

Customer Support and Training

Assess the quality and availability of customer support and training resources offered by each platform vendor. Choose platforms that provide responsive customer support, comprehensive documentation, training materials, and user communities to assist users in resolving issues and maximising the platform's capabilities.

Industry-Specific Features

Look for platforms that offer industry-specific features and functionalities tailored to the unique needs and requirements of businesses in the tourism sector. Consider features such as booking management, itinerary planning, customer engagement tools, and multilingual support to enhance the customer experience and drive business growth.

Feedback and Recommendations

Seek feedback and recommendations from peers, industry experts, and organisations similar to yours in the business and tourism sectors. Consider their experiences and insights when evaluating and selecting platforms for the hybrid workplace to make informed decisions that align with your organisation's goals and objectives.

Unit 3. Activity: Crossword

Lumi file: M4_L2_Unit 3.h5p (The following text is embedded in the Lumi File).

Learners should guess the words in the crossword based on a description given.

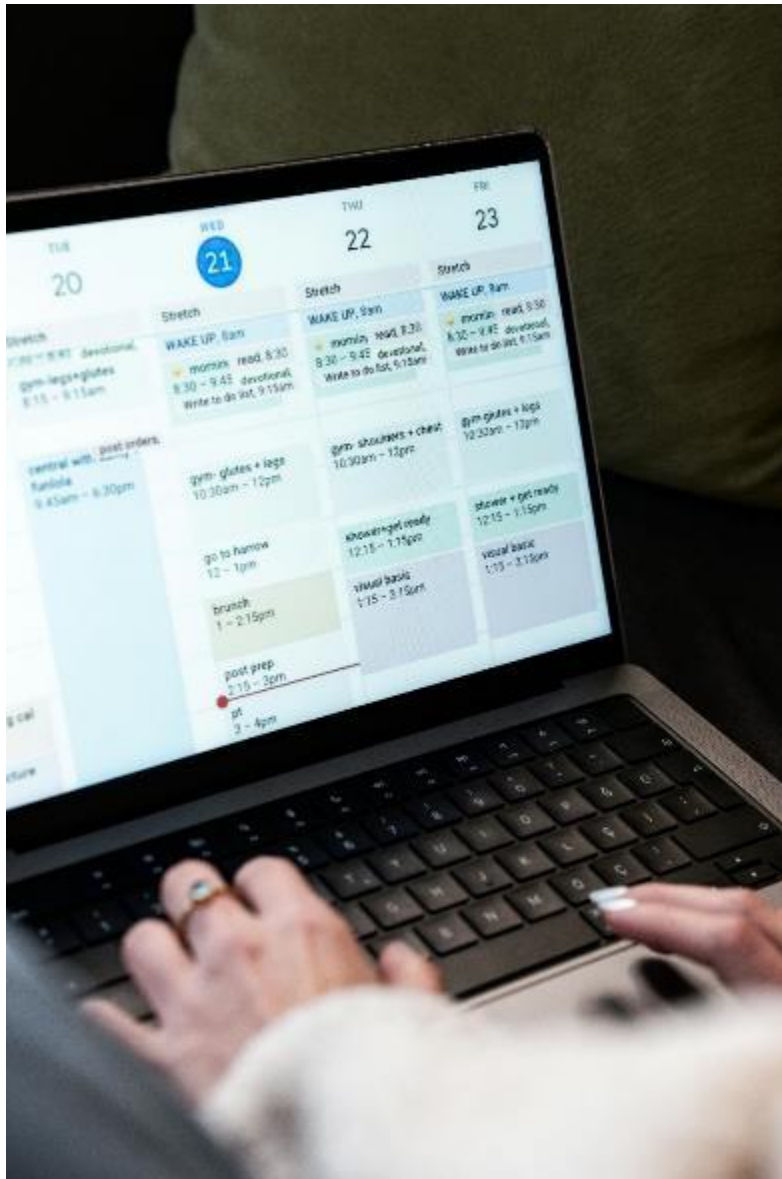
- 1.The process of working together to achieve a common goal. (13 letters)
2. Working from a location outside of the traditional office environment. (6 letters)
3. The exchange of information, ideas, and messages among team members. (13 letters)
- 4.The integration of digital technologies into all areas of business, fundamentally changing how organisations operate and deliver value. (21 letters, 2 words)
- 5.The ability to adapt and adjust to changing circumstances or requirements. (11 letters)
- 6.A workplace model that combines elements of remote work and in-person work. (15 letters, 2 words)
7. A tool used for scheduling and tracking project activities. (17 letters, 2 words)

Unit 4. Theoretical Chapter: The Best Technologies for Project Management

In the project management ecosystem, as we already know from previous chapters, technology

has revolutionised the way projects are planned, executed, and monitored. From the advent of digital project management tools to the integration of artificial intelligence (AI) and automation, advancements in technology have enabled project managers to optimise processes, improve efficiency, and achieve better project outcomes. In this theoretical chapter, we will explore some of the best technologies for project management, focusing on their applications in an online context.



Figure 4.16**Time management through digital tools**

Note. From Pexels [Photographs], by Ahmed ツ, 2024, Pexels. (<https://www.pexels.com/photo/making-a-schedule-on-the-laptop-19915766/>). CC0 1.0 DEED.

Digital Project Management Tools

Digital project management tools have become necessary for modern project managers. These tools offer a centralized platform where project teams can collaborate, plan, and track project progress in real-time (Aston, 2024c). Features such as task management, Gantt charts, timesheets, and document sharing facilitate efficient project execution and communication.

Gantt Chart Creation: Gantt charts are essential tools for project planning and scheduling.

With digital project management tools, project managers can easily create, update, and share Gantt charts with team members. These charts provide a visual representation of project tasks, dependencies, and timelines, allowing project teams to plan and manage project schedules effectively. Additionally, Gantt charts help identify critical path tasks, track progress, and adjust timelines as needed.

Timesheets Keeping: Timesheets are used to track the time spent by team members on project tasks. Digital project management tools offer built-in timesheet features that enable team members to log their time spent on specific tasks or projects. Timesheets provide project managers with valuable insights into resource allocation, task duration, and project costs. By accurately tracking time with timesheets, project managers can optimise resource utilisation, identify potential bottlenecks, and ensure project deadlines are met.

Cloud Computing

Cloud computing (ICAEW, 2019) has transformed the way project data is stored, accessed, and managed. Using cloud-based storage solutions, project teams can store project documents, files, and data in a secure and centralized location accessible from anywhere with an internet connection. Cloud computing also offers scalability, flexibility, and cost-efficiency, giving project teams the flexibility to scale resources up or down as needed and pay only for the resources they use.

In addition to storage, cloud computing also enables project teams to access powerful computing resources on-demand. This allows for complex data analysis, simulations, and modelling tasks to be performed quickly and efficiently, enhancing project planning and decision-making capabilities.

Artificial Intelligence (AI) and Machine Learning

Artificial intelligence (AI) and machine learning are increasingly being integrated into project management processes to automate repetitive tasks, analyse data, and make data-driven decisions (Kelleher et al., 2015; Shalev-Shwartz & Ben-David, 2014). AI-powered project management tools can analyse project data to identify patterns, predict project outcomes, and optimise resource allocation.

Machine learning algorithms can also automate tasks such as scheduling, risk assessment, and quality control, freeing up project managers to focus on higher-value activities. AI and machine learning algorithms can analyse huge amounts of data quickly and accurately, providing project managers with valuable insights and recommendations to improve project performance.

Virtual Reality (VR) and Augmented Reality (AR)

Virtual reality (VR) and augmented reality (AR) technologies are transforming project planning,

design, and visualisation. VR and AR tools allow project teams to create immersive virtual environments where they can visualise project plans, simulate construction processes, and identify potential issues before they arise.

These technologies enable stakeholders to experience projects in a virtual environment, providing valuable insights and feedback early in the project lifecycle. VR and AR also facilitate virtual walkthroughs, enabling project teams to collaborate remotely and make informed decisions without the need for physical presence on-site.

Data Analytics and Business Intelligence

Data analytics and business intelligence tools empower project managers to make informed decisions based on real-time data and insights. These tools enable project teams to analyse project data, track key performance indicators (KPIs), and identify trends and patterns that could impact project performance.

With data analytics and business intelligence, project managers can proactively identify risks and make data-driven decisions to ensure project success. Data visualisation tools such as dashboards and reports provide project stakeholders with clear and actionable insights, facilitating communication and alignment across the project team.

Collaborative Communication Platforms

As mentioned before, effective communication is essential for project success, especially in online contexts where team members may be geographically dispersed. Collaborative communication platforms such as Slack, Microsoft Teams, and Zoom provide project teams with real-time messaging, video conferencing, and document sharing capabilities.

These platforms enable project teams to communicate and collaborate effectively, regardless of their physical location. Features such as chat channels, video calls, and screen sharing facilitate seamless communication and enable remote teams to work together as if they were in the same room.

The best technologies for project management in an online context encompass a diverse range of tools and platforms that help project managers to plan, execute, and monitor projects effectively (Aston, 2024b; Wrike, n.d.).

Categories	Tools
Digital Project Management Tools	- Asana: Asana - Trello: Trello - Monday.com: Monday.com - Microsoft Project: Microsoft Project - TeamGantt: TeamGantt



	- Click Up: ClickUp - Wrike: Wrike
Cloud Computing	- Amazon Web Services (AWS): AWS - Microsoft Azure: Microsoft Azure - Google Cloud Platform (GCP): Google Cloud Platform
Artificial Intelligence (AI) and Machine Learning	- IBM Watson: IBM Watson - Google AI: Google AI - Microsoft Azure AI: Microsoft Azure AI - Amazon AI: Amazon AI
Virtual Reality (VR) and Augmented Reality (AR):	- Oculus: Oculus - HTC Vive: HTC Vive - Microsoft HoloLens: Microsoft HoloLens
Data Analytics and Business Intelligence	- Tableau: Tableau - Power BI: Microsoft Power BI - Google Data Studio: Google Data Studio
Collaborative Communication Platforms	- Slack: Slack - Microsoft Teams: Microsoft Teams - Zoom: Zoom

Unit 5. Activity: Best practice

Integration of Customer Relationship Management (CRM) System by Intrepid Travel

Background:

[Intrepid Travel](#) is a globally recognized tour operator specializing in sustainable and responsible travel experiences across various destinations worldwide. With a commitment to delivering authentic adventures while minimising environmental impact, Intrepid Travel recently implemented a Customer Relationship Management (CRM) system to enhance customer relationships and streamline operations.

Intrepid Travel recognised the need to better understand its customers, personalise interactions, and improve overall service delivery. By integrating a CRM system into its operations, the company has successfully achieved these objectives and elevated its customer experience.



1. Centralised Customer Database:

- Intrepid Travel implemented a CRM system to consolidate customer data from multiple touchpoints, including website bookings, email inquiries, and social media interactions.
- The CRM system serves as a centralized repository of customer information, enabling the company to access comprehensive customer profiles, travel preferences, and booking history in one place.
- With a unified view of customer data, Intrepid Travel can tailor its offerings and communications to meet individual needs and preferences.

2. Automated Communication Workflows:

- Intrepid Travel configured automated communication workflows within the CRM system to streamline customer interactions and engagement.
- Automated email responses, booking confirmations, and post-trip surveys are triggered based on predefined customer actions, ensuring timely and personalised communication throughout the customer journey.
- These automated workflows enhance operational efficiency, improve response times, and provide a consistent brand experience for customers.

3. Personalised Customer Engagement:

- Using insights exported from the CRM system, Intrepid Travel delivers personalised experiences and recommendations to its customers.
- The company segments its customer base based on travel interests, demographics, and past behaviour to create targeted marketing campaigns and promotions.
- By personalising interactions and offers, Intrepid Travel builds stronger connections with customers, increases loyalty, and drives repeat bookings.

4. Real-time Performance Tracking:

- Intrepid Travel utilizes the reporting and analytics capabilities of the CRM system to track key performance metrics and monitor customer satisfaction levels.
- Real-time dashboards and reports provide visibility into booking trends, customer feedback, and revenue generated, enabling data-driven decision-making.
- By analysing performance metrics, Intrepid Travel can identify areas for improvement, optimise marketing strategies, and enhance the overall customer experience.

5. Key Technologies and Tools Used:

- CRM software for customer data management and interaction tracking.
- Marketing automation platforms for personalised communication.
- Analytics and reporting tools for performance monitoring and analysis.
- Integration with booking platforms and website for data synchronization.

Intrepid Travel has transformed its approach to customer relationship management and elevated the level of service it provides to its clients. The best practice demonstrates the importance of using innovative technology to centralize customer data, automate communication workflows, personalise customer engagement, and track performance metrics in the travel industry. As Intrepid Travel continues to innovate and deliver sustainable travel experiences, its CRM-driven approach sets a benchmark for excellence in tour operations.

Unit 6. Theoretical Chapter: Project Management Software and Platforms

As already highlighted, project management software and platforms are important in facilitating collaboration, organising tasks, and ensuring project success. This theoretical chapter aims to explore some of the most popular project management software and platforms, including Basecamp, Jira, Asana, Microsoft Project, and ClickUp. We will look into the features, pros, cons, and specifications of each tool, as well as provide instructional resources to learn how to use them effectively.

Project management software and platforms have transformed the way teams plan, execute, and track projects. These tools offer a wide range of functionalities designed to simplify project workflows, improve communication, and increase productivity. Whether you're managing a small team or a large enterprise project, selecting the right project management software is



necessary for achieving your project goals efficiently.

There is a wide range of project management tools available in the market, each offering unique features and capabilities to support the project management process. Some practical examples of project management tools include:



Asana: Asana is a cloud-based project management platform that allows teams to organise tasks, set deadlines, and track project progress in real-time. It offers features such as task lists, kanban boards, and calendar views to help teams stay organised and focused.



Jira: Jira is a project management tool specifically designed for software development teams. It enables teams to plan, track, and release software updates, manage bug fixes, and collaborate on code changes effectively.



Trello: Trello is a visual collaboration tool that uses boards, lists, and cards to organise tasks and projects. It is particularly useful for teams that prefer a more visual and flexible approach to project management.



Basecamp: Basecamp is an all-in-one project management and team collaboration platform that offers features such as to-do lists, file sharing, messaging, and scheduling to help teams stay organised and connected.



Monday.com: Monday.com is a customizable work operating system that allows teams to plan, track, and execute projects in a collaborative and transparent manner. It offers customizable workflows, templates, and integrations to suit the unique needs of different teams and projects.

Note: The following chapters will be turned into video tutorials.

How-to Guide: Basecamp

Figure 4.17

Basecamp Logo



Note. From Basecamp.com, n.d, (<https://basecamp.com/>).

Basecamp is a popular project management tool known for its simplicity and user-friendly interface. It offers a comprehensive set of features designed to help teams collaborate effectively and manage projects with ease. Below is a step-by-step guide on how to use Basecamp to streamline your project management processes:

1. Getting Started:

- Sign up for a Basecamp account on their website.
- Once logged in, you'll be taken to your Dashboard, where you can create new projects and collaborate with your team.

2. Creating a Project:

- Click on the "+ New Project" button to create a new project.
- Enter the project name, description, and choose project collaborators.
- Click "Create Project" to create your project space.

3. Adding To-dos and Tasks:

- Within your project, click on the "To-dos" tab to start adding tasks.
- Click on "+ Add a to-do" to create a new task.
- Enter the task details, assign it to team members, set due dates, and add any necessary attachments or comments.
- Click "Save" to add the task to your project.

4. Managing Discussions:

- Use the "Message Board" tab to initiate discussions and share updates with your team.
- Click on "+ New Message" to create a new message.
- Write your message, mention team members if necessary, and click "Post" to share it with your team.

5. Sharing Files and Documents:

Basecamp allows you to share files and documents with your team within the project space.

- Navigate to the "Docs & Files" tab and click on "+ New Doc" to upload a new document.
- Choose the file from your computer, add a title and description if needed, and click "Upload" to share it with your team.

6. Scheduling Events and Meetings:

- Use the "Schedule" tab to plan events, meetings, and deadlines.
- Click on "+ New Event" to create a new event.
- Enter the event details, set the date and time, and invite team members to attend.
- Click "Save" to add the event to your project schedule.

7. Tracking Progress:

- Basecamp offers various tools for tracking project progress, including check-in questions, progress reports, and project timelines.
- Use these features to monitor task completion, identify bottlenecks, and ensure project milestones are met.

8. Integration with Other Tools:

- Basecamp integrates with a variety of third-party tools and services, including Google Drive, Dropbox, and Slack.



- Explore the available integrations to enhance your project management experience and streamline your workflows.



How-to Guide: Jira

Figure 4.18

Jira Software logo



Note. From Atlassian.com, n.d, (<https://www.atlassian.com/software/jira>).

Jira is a widely used project management tool, particularly popular among software development teams for its powerful features in issue tracking, agile project management, and bug tracking. Below is a step-by-step guide on how to use Jira effectively for managing projects:

1. Getting Started:

- Sign up for a Jira account on the Atlassian website or log in if you already have an account.
- Once logged in, you'll be taken to the Jira dashboard, where you can view existing projects and create new ones.

2. Creating a Project:

- To create a new project, click on the "+ Create" button at the top right corner of the dashboard.
- Select "Project" from the dropdown menu and choose the project template that best fits your needs, such as Scrum, Kanban, or a Basic Software Development template.
- Enter the project name, key, and project lead, then click "Create" to create your project.

3. Creating Issues:

- In Jira, tasks, bugs, or any work items are referred to as "issues."
- To create a new issue, navigate to your project's board and click on the "+ Create" button.
- Select the issue type (e.g., Task, Bug, Story) and fill in the necessary details such as summary, description, priority, and assignee.

- Click "Create" to add the issue to your project.

4. Managing Issues on Boards:

- Jira boards provide a visual representation of your project's tasks and their status.
- Use boards to organise, prioritize, and track the progress of your issues.
- You can customize your board columns, workflows, and filters to match your project's requirements.

5. Working with Agile Methodologies:

- Jira offers robust support for agile methodologies such as Scrum and Kanban.
- Use Scrum boards for sprint planning, backlog grooming, and sprint execution.
- Use Kanban boards for visualising work in progress, limiting work in progress, and optimising workflow efficiency.

6. Collaboration and Communication:

- Jira enables seamless collaboration and communication among team members.
- Use comments to discuss issues, provide updates, and ask questions.
- @mention team members to notify them about specific issues or comments.

7. Tracking Progress and Reporting:

- Jira provides built-in reports and dashboards to track project progress, monitor team performance, and identify bottlenecks.
- Use the various reporting features such as burndown charts, velocity charts, and cumulative flow diagrams to gain insights into your project's status and trends.

8. Integrations and Extensions:

- Jira integrates with a wide range of third-party tools and services, including Slack, Confluence, Bitbucket, and GitHub.
- Explore the available integrations and extensions to extend Jira's functionality and streamline your project management workflows.



How-to Guide: Trello

Figure 4.19

Trello logo



Note. From Trello.com, n.d, (<https://trello.com/>).

Trello is a popular project management tool known for its visual and intuitive interface, making it easy for teams to organise tasks and collaborate effectively. Below is a step-by-step guide on how to use Trello to manage your projects:

1. Getting Started:

- Sign up for a Trello account on the Trello website or log in if you already have an account.
- Once logged in, you'll be taken to your Trello dashboard, where you can create new boards and organise your projects.

2. Creating a Board:

- To create a new project board, click on the "+ Create new board" button.
- Enter the name of your board and select whether it's a team or personal board.
- Click "Create" to create your board.

3. Adding Lists and Cards:

- Each Trello board consists of lists, which represent different stages or categories of your project, and cards, which represent tasks or items within each list.
- Click on "Add a list" to create your first list. You can name your lists based on project stages (e.g., To Do, In Progress, Done).
- Within each list, click on "Add a card" to create a new task card. Enter the task title and

click "Add" to create the card.

4. Organising Cards:

- Drag and drop cards between lists to organise them based on their current status or priority.
- Use labels, due dates, and attachments to add additional information and context to your cards.

5. Collaboration and Communication:

- Trello allows for seamless collaboration and communication among team members.
- Add team members to your board by clicking on the "Invite" button and entering their email addresses.
- Use comments to discuss tasks, provide updates, and ask questions. @mention team members to notify them about specific comments.

6. Customizing Boards:

- Customize your board by adding backgrounds, changing board settings, and enabling power-ups (additional features and integrations).
- Explore the various power-ups available in Trello, such as calendar view, voting, and custom fields, to enhance your board's functionality.

7. Using Checklists and Due Dates:

- Within each card, you can create checklists to break down tasks into smaller subtasks.
- Set due dates for tasks to keep track of deadlines and ensure timely completion.

8. Viewing Activity and Tracking Progress:

- Trello provides activity feeds and notifications to keep you informed about changes and updates on your board.
- Use the progress meter to visualise the completion status of tasks and monitor overall project progress.

9. Integrations and Power-Ups:

- Trello integrates with various third-party tools and services, including Slack, Google Drive, and GitHub.
- Explore the available integrations and power-ups to extend Trello's functionality and streamline your project management workflows.



How-to Guide: Asana

Figure 4.20

Asana logo



Note. From Asana.com, n.d, (<https://asana.com/>).

Asana is a versatile project management tool designed to help teams organise tasks, streamline workflows, and collaborate effectively. Below is a step-by-step guide on how to use Asana to manage your projects:

1. Getting Started:

- Sign up for an Asana account on the Asana website or log in if you already have an account.
- Once logged in, you'll be taken to your Asana dashboard, where you can create new projects and tasks.

2. Creating a Project:

- To create a new project, click on the "+ New Project" button.
- Enter the project name and select whether it's a list or board project.
- Click "Create Project" to create your project.

3. Adding Tasks:

- Within your project, click on the "+ Add Task" button to create a new task.
- Enter the task title and any additional details such as description, due date, and assignee.
- Click "Add Task" to add the task to your project.

4. Organising Tasks:

- Use sections or columns to organise tasks within your project based on their status, priority, or category.
- Drag and drop tasks between sections to reorganise them as needed.

5. Assigning Tasks and Collaborating:

- Assign tasks to team members by clicking on the assignee field and selecting their name from the dropdown menu.
- Use the comment section within each task to communicate with team members, provide updates, and ask questions.
- @mention team members to notify them about specific tasks or comments.

6. Setting Due Dates and Dependencies:

- Set due dates for tasks to ensure timely completion.
- Use task dependencies to indicate when one task relies on the completion of another task before it can start.

7. Creating Subtasks and Checklists:

- Break down tasks into smaller subtasks by creating subtasks within each task.
- Use checklists to track progress and ensure all necessary steps are completed within a task.

8. Viewing Project Progress:

- Use the project dashboard to view progress on your project, including tasks completed, tasks in progress, and overdue tasks.
- Use the timeline view to visualise project timelines and dependencies.

9. Integrations and Automations:

- Asana integrates with a wide range of third-party tools and services, including Slack, Google Drive, and Microsoft Teams.
- Explore the available integrations and automations to streamline your workflows and



enhance your project management experience.



How-to Guide: Monday.com

Figure 4.21

Monday.com logo



Note. From Monday.com, n.d, (<https://monday.com/>).

Monday.com is a versatile project management tool that offers customizable workflows, task tracking, and collaboration features. Below is a step-by-step guide on how to use Monday.com to manage your projects effectively:

1. Getting Started:

- Sign up for a Monday.com account on the Monday.com website or log in if you already have an account.
- Once logged in, you'll be taken to your Monday.com dashboard, where you can create new boards and projects.

2. Creating a Board:

- To create a new project board, click on the "+ New Board" button.
- Enter the board name and select a template that best fits your project needs, such as Task Management, Project Planning, or Sales Pipeline.
- Click "Create Board" to create your board.

3. Adding Groups and Items:

- Within your board, create groups to organise your tasks or items by category, phase, or team.
- Click on "+ Add Group" to create a new group and give it a relevant name.
- Within each group, click on "+ Add Item" to create a new task or item.
- Enter the task name, assignee, due date, and any other relevant details.

- Click "Add" to add the task to your board.

4. Customizing Columns and Views:

- Customize your board columns to match your workflow and project requirements.
- Add or remove columns such as status, priority, progress, or custom fields as needed.
- Use different views such as Kanban, Timeline, or Calendar to visualise your project tasks and timelines.

5. Assigning Tasks and Collaborating:

- Assign tasks to team members by clicking on the assignee field and selecting their name from the dropdown menu.
- Use the comment section within each task to communicate with team members, provide updates, and share files or attachments.
- @mention team members to notify them about specific tasks or comments.

6. Setting Due Dates and Dependencies:

- Set due dates for tasks to ensure timely completion.
- Use dependencies to indicate when one task relies on the completion of another task before it can start.

7. Using Automations and Integrations:

- Take advantage of Monday.com's automation features to streamline your workflows and save time.
- Set up automations to automatically assign tasks, send notifications, or update statuses based on predefined triggers.
- Explore the available integrations with third-party tools and services such as Slack, Google Drive, and Trello to enhance your project management experience.

8. Tracking Progress and Reporting:



- Use Monday.com's built-in progress tracking and reporting features to monitor project progress and performance.
- Generate reports to track key metrics, analyse team performance, and identify areas for improvement.



How-to Guide: Zoho Projects

Figure 4.22

Zoho Projects logo



Note. From Zoho.com, n.d, (<https://www.zoho.com/projects/>).

Zoho Projects is a comprehensive project management tool that offers features for task management, collaboration, and reporting. Below is a step-by-step guide on how to use Zoho Projects to manage your projects effectively:

1. Getting Started:

- Sign up for a Zoho Projects account on the Zoho Projects website or log in if you already have an account.
- Once logged in, you'll be taken to your Zoho Projects dashboard, where you can create new projects and tasks.

2. Creating a Project:

- To create a new project, click on the "+ New Project" button.
- Enter the project name, description, and start date.
- Choose a project template or create a custom template based on your project requirements.
- Click "Create Project" to create your project.

3. Adding Tasks and Milestones:

- Within your project, click on the "Tasks" tab to start adding tasks.

- Click on "+ New Task" to create a new task.
- Enter the task name, assignee, due date, priority, and any other relevant details.
- Click "Save" to add the task to your project.
- You can also add milestones to mark significant project achievements or deadlines.

4. Organising Tasks and Subtasks:

- Use task lists to organise your tasks by category, phase, or team.
- Create subtasks within tasks to break down larger tasks into smaller actionable items.
- Assign subtasks to team members and set due dates as needed.

5. Assigning Tasks and Collaborating:

- Assign tasks to team members by selecting their name from the assignee dropdown menu.
- Use the comment section within each task to communicate with team members, provide updates, and share files or attachments.
- @mention team members to notify them about specific tasks or comments.

6. Setting Task Dependencies:

- Set dependencies between tasks to indicate when one task depends on the completion of another task before it can start.
- Specify the type of dependency (Finish to Start, Start to Start, Finish to Finish) and the lag time, if applicable.

7. Tracking Time and Progress:

- Use the timesheets feature to track time spent on tasks and projects.
- Enter the time spent on each task manually or use the built-in timer to track time in real-time.
- Monitor task progress and status updates in the task list or Gantt chart view.



8. Generating Reports:

- Use Zoho Projects' reporting features to generate custom reports on project progress, task completion, and team performance.
- Choose from a variety of pre-built report templates or create custom reports based on your specific requirements.
- Export reports in different formats (PDF, Excel, CSV) for sharing with stakeholders.

9. Integrations and Extensions:

- Zoho Projects integrates with a wide range of third-party tools and services, including Zoho CRM, Google Drive, and Slack.
- Explore the available integrations and extensions to extend Zoho Projects' functionality and streamline your project management workflows.



How-to Guide: Wrike

Figure 4.23

Wrike logo



Note. From Wrike.com, n.d, (<https://www.wrike.com/>).

Wrike is a powerful project management tool designed to streamline workflows, improve collaboration, and increase productivity. Below is a step-by-step guide on how to use Wrike effectively for managing your projects:

1. Getting Started:

- Sign up for a Wrike account on the Wrike website or log in if you already have an account.
- Once logged in, you'll be taken to your Wrike workspace, where you can create new projects and tasks.

2. Creating a Project:

- To create a new project, click on the "+ New" button in the top left corner.
- Select "Folder" to create a new project folder or "Project" to create a standalone project.
- Enter the project name and description, then click "Create."

3. Adding Tasks and Subtasks:

- Within your project, click on the "+" icon to add a new task.
- Enter the task name, assignee, due date, priority, and any other relevant details.
- Click "Save" to add the task to your project.

- To create subtasks, click on the task, then click on the "+" icon next to "Subtasks" and enter the subtask details.

4. Organising Tasks and Folders:

- Use folders to organise your projects into categories or departments.
- Drag and drop tasks between folders to reorganise them as needed.
- Use custom tags and labels to further categorize and organise tasks within folders.

5. Assigning Tasks and Collaborating:

- Assign tasks to team members by selecting their name from the assignee dropdown menu.
- Use the comment section within each task to communicate with team members, provide updates, and share files or attachments.
- @mention team members to notify them about specific tasks or comments.

6. Setting Dependencies and Priorities:

- Set dependencies between tasks to indicate when one task depends on the completion of another task before it can start.
- Use the priority feature to designate the importance of tasks and highlight critical tasks that require immediate attention.

7. Tracking Progress and Timelines:

- Use the timeline view to visualise project timelines and dependencies.
- Drag and drop tasks on the timeline to adjust their start and end dates.
- Monitor task progress and status updates in real-time on the timeline.

8. Generating Reports:

- Use Wrike's reporting features to generate custom reports on project progress, task completion, and team performance.
- Choose from a variety of pre-built report templates or create custom reports based



on your specific requirements.

- Export reports in different formats (PDF, Excel, CSV) for sharing with stakeholders.

9. Integrations and Automations:

- Wrike integrates with a wide range of third-party tools and services, including Slack, Google Drive, and Microsoft Teams.
- Set up automations to automate repetitive tasks, send notifications, or trigger actions based on predefined conditions.
- Explore the available integrations and automations to streamline your workflows and enhance your project management experience.



How-to Guide: Microsoft Project

Figure 4.24

Microsoft Project logo



Note. From Microsoft.com, n.d, (<https://www.microsoft.com/en-us/microsoft-365/project/project-management-software>).

Microsoft Project is a powerful project management software that offers a wide range of features for planning, scheduling, and tracking projects. Below is a step-by-step guide on how to use Microsoft Project effectively:

1. Getting Started:

- Launch Microsoft Project on your computer.
- If you don't have Microsoft Project installed, you can download and install it from the Microsoft website or use the web version available through Microsoft 365 subscription.

2. Creating a New Project:

- Click on the "File" tab and select "New" to create a new project.
- Choose a template based on your project type or start with a blank project.
- Enter the project name, start date, and other project details, then click "Create."

3. Adding Tasks:

- In the Gantt Chart view, click on the first empty row in the Task Name column to add a new task.

- Enter the task name, duration, start date, and any other relevant details.
- Press "Enter" to add the task to your project.

4. Setting Task Dependencies:

- To link tasks together, select the successor task (the task that depends on another task to be completed) and click on the "Task" tab.
- Click on the "Link Tasks" button and select the predecessor task (the task that needs to be completed before the successor task can start).
- Repeat this process to set dependencies between multiple tasks.

5. Assigning Resources:

- Click on the "Resource" tab and select "Resource Sheet" to view the list of resources available for your project.
- Enter the names of the resources, their working hours, and any other relevant details.
- Once resources are added, go back to the Gantt Chart view and assign resources to tasks by double-clicking on the task and selecting the appropriate resource from the Resource Name dropdown menu.

6. Scheduling and Adjusting Dates:

- Use the Gantt Chart view to adjust task durations, start dates, and end dates by dragging task bars on the chart.
- Microsoft Project will automatically update the project schedule based on changes made to task durations and dependencies.

7. Tracking Progress:

- As work progresses on tasks, update the percent complete for each task by entering the actual completion percentage in the % Complete column.
- You can also track progress using the "Tracking Gantt" view, which displays planned vs. actual progress for tasks.

8. Generating Reports:



- Click on the "Report" tab to access a variety of built-in reports and dashboards.
- Choose the report or dashboard that best suits your needs, customize it as necessary, and generate the report to analyse project performance.

9. Sharing and Collaboration:

- Save your project file and share it with team members using Microsoft Project's sharing options.
- You can also export project data to other Microsoft Office applications such as Excel or PowerPoint for further analysis and presentation.

How-to Guide: ClickUp

Figure 4.25

ClickUp logo



Note. From Clickup.com, n.d, (<https://clickup.com/>).

ClickUp is a versatile project management platform that offers a wide range of features for organising tasks, collaborating with teams, and tracking project progress. Below is a step-by-step guide on how to use ClickUp effectively:

1. Getting Started:

- Sign up for a ClickUp account on the ClickUp website or log in if you already have an account.
- Once logged in, you'll be taken to your ClickUp workspace, where you can create new spaces, folders, and lists.

2. Creating a Space:

- Click on the "+ New Space" button to create a new workspace for your project.
- Enter the space name and description, then click "Create Space."

3. Adding Folders and Lists:

- Within your space, click on the "+ New Folder" button to create a new folder for organising your lists.
- Enter the folder name and description, then click "Create Folder."
- Within each folder, click on the "+ New List" button to create a new list for organising

your tasks.

- Enter the list name and description, then click "Create List."

4. Adding Tasks:

- Within your list, click on the "+ Add Task" button to create a new task.
- Enter the task name, assignee, due date, priority, and any other relevant details.
- Click "Add Task" to add the task to your list.

5. Organising Tasks with Views:

- Click on the "Views" dropdown menu to switch between different task views, such as List view, Board view, or Calendar view.
- Customize each view to display tasks in the format that best suits your workflow and preferences.

6. Assigning Tasks and Collaborating:

- Assign tasks to team members by selecting their name from the assignee dropdown menu.
- Use the comment section within each task to communicate with team members, provide updates, and share files or attachments.
- @mention team members to notify them about specific tasks or comments.

7. Setting Due Dates and Dependencies:

- Set due dates for tasks to ensure timely completion.
- Use task dependencies to indicate when one task depends on the completion of another task before it can start.

8. Tracking Progress and Time:

- Use task statuses and custom tags to track the progress of tasks.
- Log time spent on tasks using the time tracking feature to monitor project progress and billable hours.

9. Generating Reports:

- Click on the "Reports" tab to access a variety of built-in reports and dashboards.
- Choose the report or dashboard that best suits your needs, customize it as necessary, and generate the report to analyse project performance.

10. Integrations and Automations:

- ClickUp integrates with a wide range of third-party tools and services, including Slack, Google Drive, and Trello.
- Set up automations to automate repetitive tasks, send notifications, or trigger actions based on predefined conditions.
- Explore the available integrations and automations to streamline your workflows and enhance your project management experience.



How-to Guide: Smartsheet

Figure 4.26

Smartsheet logo



Smartsheet is a versatile work management platform that allows teams to collaborate, organise tasks, and track project progress in real-time. Below is a step-by-step guide on how to use Smartsheet effectively:

1. Getting Started:

- Sign up for a Smartsheet account on the Smartsheet website or log in if you already have an account.
- Once logged in, you'll be taken to your Smartsheet dashboard, where you can create new sheets and projects.

2. Creating a Sheet:

- Click on the "+ New" button to create a new sheet.
- Choose a template from the template gallery or start with a blank sheet.
- Enter the sheet name and description, then click "Create."

3. Adding Columns and Rows:

- Customize your sheet by adding columns and rows to organise your data.
- Click on the "+" icon to add a new column or row.
- Enter the column name and choose the column type (e.g., Text, Date, Dropdown) as needed.

4. Entering Data:

- Enter your project tasks, deadlines, assignees, and any other relevant information into the appropriate cells.
- Use formulas and cell linking to calculate totals, percentages, or other derived values automatically.

5. Collaborating with Teams:

- Share your sheet with team members by clicking on the "Share" button and entering their email addresses.
- Assign tasks to team members by @mentioning them in the task description or comments.
- Use the comment section within each cell to communicate with team members, provide updates, and share files or attachments.

6. Setting Reminders and Alerts:

- Set reminders and alerts to notify team members of approaching deadlines or changes to the sheet.
- Click on the cell containing the due date or milestone, then click on the "Remind Me" button to set a reminder.

7. Tracking Progress:

- Use conditional formatting to highlight important tasks, overdue items, or critical milestones.
- Track task progress by updating status columns or adding checkboxes to indicate completion.

8. Creating Reports and Dashboards:

- Use Smartsheet's reporting features to create custom reports and dashboards to visualise project data and track key metrics.
- Choose from a variety of chart types, including Gantt charts, bar charts, and pie charts, to display your data.

9. Integrations and Automations:

- Smartsheet integrates with a wide range of third-party tools and services, including Google Drive, Microsoft Office, and Slack.
- Set up automations to automate repetitive tasks, send notifications, or trigger actions based on predefined conditions.



How-to Guide: OpenProject

Figure 4.25

OpenProject logo



Note. From [Openproject.com](https://www.openproject.org/), n.d, (<https://www.openproject.org/>).

OpenProject is an open-source project management software that provides powerful features for planning, tracking, and collaborating on projects. Below is a step-by-step guide on how to use OpenProject effectively:

1. Accessing OpenProject:

- OpenProject can be accessed via web browser by navigating to the OpenProject website or by self-hosting the software on your own server.

2. Creating a New Project:

- Log in to your OpenProject account or create a new account if you haven't already.
- Once logged in, click on the "New project" button or navigate to the "Projects" tab.
- Enter the project name, description, and other relevant details, then click "Create" to create your project.

3. Setting up Work Packages:

- Within your project, click on the "Work packages" tab to start adding tasks, issues, or user stories.
- Click on the "+ Add" button to create a new work package.
- Enter the work package title, description, assignee, due date, priority, and any other relevant details.

- Click "Save" to add the work package to your project.

4. Organising Work Packages:

- Use categories, versions, and custom attributes to organise your work packages into logical groupings.
- Group work packages by priority, status, or type to facilitate easier navigation and tracking.

5. Assigning Tasks and Collaborating:

- Assign work packages to team members by selecting their name from the assignee dropdown menu.
- Use the comment section within each work package to communicate with team members, provide updates, and share files or attachments.
- @mention team members to notify them about specific work packages or comments.

6. Tracking Progress:

- Update the status of work packages as they progress through different stages.
- Use custom workflows to define the lifecycle of work packages and track their progress from start to finish.

7. Using Gantt Charts and Timelines:

- Visualise project timelines and dependencies using Gantt charts.
- Navigate to the "Roadmap" or "Gantt" tab to view your project timeline and dependencies.
- Drag and drop work packages to adjust their start and end dates directly on the Gantt chart.

8. Generating Reports:

- Use the reporting features in OpenProject to generate custom reports on project progress, workload distribution, and team performance.
- Choose from a variety of report templates or create custom reports based on your specific requirements.

9. Integrations and Extensions:

- OpenProject integrates with a variety of third-party tools and services, including GitLab, GitHub, and Slack.
- Explore the available integrations and extensions to extend OpenProject's functionality and streamline your project management workflows.

Pricing of different tools

OpenProject:



Pricing: OpenProject offers both free and paid plans.

Free Plan: OpenProject is an open-source software, so the basic version is free to use.

Paid Plan: OpenProject also offers paid plans with additional features and support options.

Smartsheet:



Pricing: Smartsheet is a paid software with subscription-based pricing.

Free Trial: Smartsheet offers a free trial period for new users.

Paid Plan: After the trial period, users need to subscribe to one of Smartsheet's paid plans to continue using the software.

ClickUp:



Pricing: ClickUp offers both free and paid plans.

Free Plan: ClickUp offers a free forever plan with limited features and storage.

Paid Plan: ClickUp also offers paid plans with additional features, storage, and support options.

Wrike:



Pricing: Wrike is a paid software with subscription-based pricing.

Free Trial: Wrike offers a free trial period for new users.

Paid Plan: After the trial period, users need to subscribe to one of Wrike's paid plans to continue using the software.

Microsoft Project:



Pricing: Microsoft Project is a paid software with subscription-based pricing.

Subscription: Microsoft Project is available as part of the Microsoft 365 suite, which requires a subscription.

Zoho Projects:



Pricing: Zoho Projects offers both free and paid plans.

Free Plan: Zoho Projects offers a free plan with limited features and a maximum number of users.

Paid Plan: Zoho Projects also offers paid plans with additional features and support options.

Monday.com:



Pricing: Monday.com offers both free and paid plans.

Free Plan: Monday.com offers a free trial period and a free plan with limited features.

Paid Plan: Monday.com also offers paid plans with additional features, users, and support options.

Asana:



Pricing: Asana offers both free and paid plans.

Free Plan: Asana offers a free forever plan with limited features and a maximum number of users.

Paid Plan: Asana also offers paid plans with additional features, users, and support options.

Basecamp:



Pricing: Basecamp is a paid software with subscription-based pricing.

Subscription: Basecamp offers subscription plans for users to access its features and services.

Unit 7. Video: 5 Best Project Management Software Tools Reviewed

YouTube Video: <https://youtu.be/riyeUZXPjf4?feature=shared>

Note: Translations can be provided in transcript.

Unit 8. Theoretical Chapter: Project Management Software: How to pick the one you need

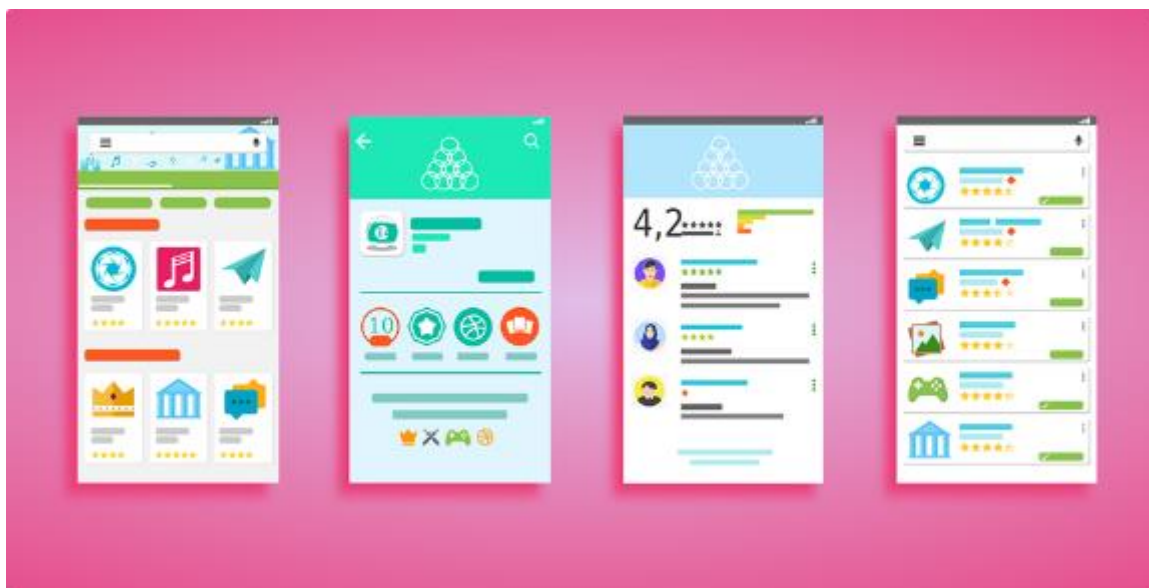
When selecting project management tools for a project, it is essential to consider the specific requirements, goals, and constraints of the project, as well as the preferences and skills of the project manager and team members.



Figure

4.26

Tools mock-up screens



Note. From *A BEGINNER'S GUIDE TO USER INTERFACE DESIGN* [Photographs], by NYFA, 2017, Pexels. (<https://www.nyfa.edu/student-resources/a-beginners-guide-to-user-interface-design/>). Image © by 200degrees.

Key factors to consider when evaluating project management tools (DeMuro, 2024; Project Management Institute, 2021):

Functionality

Assess the features and capabilities of the tool to ensure that it aligns with the project requirements and objectives. Consider whether the tool offers essential features such as task management, collaboration, reporting, and integration with other tools and platforms.

Scalability

Determine whether the tool can scale to accommodate the size and complexity of the project. Consider whether it can support multiple users, projects, and workspaces, and whether it offers flexible pricing plans to accommodate changing needs and budgets.

Usability

Evaluate the user interface and user experience of the tool to ensure that it is intuitive and easy to use. Consider whether the tool offers customizable workflows, templates, and shortcuts to streamline project management tasks and enhance productivity.

Integration

Check whether the tool integrates seamlessly with other tools and platforms used by the team. Consider whether it offers integrations with popular productivity tools, communication platforms, and project management software to ensure smooth collaboration and data exchange.

Support and Training

Assess the level of support and training provided by the tool vendor to ensure that the team can effectively adopt and use the tool. Consider whether the vendor offers documentation, tutorials, customer support, and training resources to help users get started and troubleshoot issues.

Security and Compliance

Verify the security features and compliance standards of the tool to ensure that sensitive data and information are protected. Consider whether the tool offers encryption, access controls, audit trails, and compliance with regulations such as GDPR to safeguard confidential information and ensure regulatory compliance.

With numerous options available in the market, selecting the software that aligns with your team's needs, preferences, and project requirements can be challenging. We will start by organising the procedure, highlighting essential factors to consider when picking project management software that suits your needs.

1. Define Your Requirements:

Begin by identifying your team's specific requirements and project needs. Consider factors such as project size, complexity, team size, collaboration needs, budget constraints, and integration requirements.

2. Assess Key Features:

Evaluate the features offered by different project management software solutions. Key features to consider include task management, scheduling, collaboration tools, file sharing, reporting, integration capabilities, and customization options.

3. Consider User Experience:

User experience plays a significant role in the adoption and usability of project management software. Look for software with an intuitive interface, easy navigation, and customizable workflows that align with your team's preferences and working style.

4. Scalability and Flexibility:

Choose software that can scale with your team and project requirements over time. Consider whether the software offers flexible pricing plans, customization options, and the ability to accommodate future growth and changes in project scope.



5. Integration Capabilities:

Ensure that the project management software integrates seamlessly with other tools and applications used by your team. Look for software that offers integrations with popular productivity tools, communication platforms, file storage services, and third-party apps.

6. Budget Considerations:

Determine your budget for project management software and choose a solution that offers the best value for money. Consider both upfront costs and ongoing subscription fees, as well as any additional costs for integrations, training, and support.

7. Security and Compliance:

Prioritize security and compliance features to protect sensitive project data and ensure regulatory compliance. Look for software that offers robust security measures, data encryption, access controls, and compliance certifications such as GDPR or SOC 2.

8. Trial and Testing:

Take advantage of free trials or demo versions offered by project management software vendors to test the software's functionality, usability, and suitability for your team's needs. Involve key stakeholders and end-users in the evaluation process to gather feedback and insights.

9. Customer Support and Training:

Consider the level of customer support and training provided by the software vendor. Choose a vendor that offers responsive customer support, comprehensive documentation, training resources, and user communities to help your team get started and address any issues or questions.

10. Gather Feedback and Reviews:

Research online reviews, testimonials, and case studies from other organisations using the project management software you're considering. Pay attention to feedback related to ease of use, reliability, customer support, and overall satisfaction to inform your decision.

More specifically, as in this course we look into the “sustainable tourism project manager” use case, we can examine some tailored recommendations for each learner/ user based on their background.

Hospitality Management:



For hotel and accommodation management, learners may benefit from project management software that offers features for reservation management, guest communication, and facility maintenance tracking. Tools like [Basecamp](#), which provide centralized communication and task management, can be useful for coordinating housekeeping, maintenance, and guest services teams.

Event Planning:



Event planners require software with robust scheduling, budgeting, and task management capabilities to organise and execute successful events. Platforms like [Asana](#) or [Trello](#), with customisable project boards and calendar integrations, can help event planners coordinate vendors, manage timelines, and track event logistics effectively.

Tour Operations:



Tour operators need software that facilitates itinerary planning, booking management, and customer communication. Solutions like [Rezdy](#) or [TrekkSoft](#), which offer features for tour scheduling, online bookings, and customer relationship management (CRM), can streamline operations and enhance the customer experience for tour operators.

Destination Management:

Destination management organisations (DMOs) require software that supports destination marketing, stakeholder collaboration, and tourism development initiatives. Tools like [Slack](#), with its channels for cross-team communication and file sharing, can facilitate collaboration among DMOs, tourism boards, and local stakeholders to promote destinations and drive tourism growth.

Travel Agencies:

Travel agencies need software that enables efficient itinerary planning, booking management, and client communication. Platforms like [Amadeus](#) or [Sabre](#), which offer integrated travel management solutions with features for booking flights, accommodations, and activities, can help travel agents streamline bookings and provide personalised services to clients.

Tourism Marketing:

Marketing professionals in the tourism sector require software that supports content creation, social media management, and campaign tracking. Tools like [HubSpot](#) or [Hootsuite](#), with their marketing automation features and analytics dashboards, can help tourism marketers create targeted campaigns, engage with audiences, and measure campaign performance effectively.

images: Flaticon.com

Unit 9. Activity: Branching Scenario

Lumi file: M4_L2_Unit 9.h5p (The following text is embedded in the Lumi File).

Scenario: You are a project manager tasked with overseeing the launch of a new eco-tourism initiative in a remote coastal region. The project involves collaborating with local communities, coordinating with environmental organisations, and marketing the initiative to tourists. You need to decide on the order of steps to follow and the best tools to use for each stage of the project.

Instructions: Read each scenario carefully and select the best course of action and tools to use at each stage of the project. Your decisions will impact the success of the initiative.

During the planning phase of the eco-tourism initiative, you need to outline its goals and objectives and decide your first move. What will that be?

- Conduct a stakeholder analysis to identify key stakeholders and their interests.
- Create a project charter to define the project scope, objectives, and deliverables.
- Use a project management tool to create a Gantt chart and schedule tasks for each phase of the project.

During the planning phase of the eco-tourism initiative, you need to develop a comprehensive project plan outlining goals, timelines, and resources needed. The options to continue are:

- Conduct stakeholder interviews and workshops to gather input and create a project charter outlining the project scope, objectives, and deliverables.
- Utilise a project management software such as Microsoft Project or Asana to create a detailed project plan with tasks, timelines, and resource allocation.
- Use a collaboration platform such as Slack or Microsoft Teams to facilitate communication and collaboration among project team members.

As the eco-tourism initiative enters the execution phase, it's crucial to ensure smooth implementation of planned activities and efficient coordination among project stakeholders. Select the best fit continuation scenario for the initiative.

- Utilise a project management software such as Basecamp or Trello to track project tasks, assign responsibilities, and monitor progress in real-time.
- Conduct regular site inspections and progress reviews using drone technology equipped with high-resolution cameras to monitor project developments and identify any potential issues or bottlenecks.

During the execution phase, you encounter unexpected challenges with resource allocation and scheduling conflicts arise among project team members.

- Hold a project team meeting to discuss the issues and brainstorm solutions collaboratively, ensuring buy-in and commitment from all stakeholders.
- Seek assistance from external consultants or specialists in project management to provide expert advice and guidance on overcoming the challenges.
- Utilise project management software features such as resource levelling in Microsoft Project to optimise resource allocation and resolve scheduling conflicts proactively.

As the eco-tourism initiative approaches its closing phase, it's essential to ensure that all project deliverables have been successfully completed, stakeholders are satisfied, and project resources are appropriately allocated for post-project activities. During the closing phase of the eco-tourism initiative, what is the most critical step to ensure project success?

- Conduct a comprehensive project review to assess the achievement of project goals, identify lessons learned, and document best practices for future projects.
- Organise a stakeholder feedback session to gather input and feedback on the eco-

tourism initiative's overall performance and impact on the local community.

Unit 10. Theoretical Chapter: Sharing information and GDPR

In today's interconnected digital world, the exchange of information is fundamental to project management. However, with the advent of stringent data protection regulations such as the General Data Protection Regulation (GDPR), project managers must navigate a complex “road” to ensure the lawful and ethical sharing of information while safeguarding individuals' privacy rights. In this unit, we examine the key concepts of GDPR and explore best practices for sharing information in compliance with these regulations, including data breach management.

Understanding GDPR

The General Data Protection Regulation (GDPR) is a comprehensive data protection framework enacted by the European Union (EU) to harmonize data privacy laws across EU member states and protect individuals' personal data (Intersoft Consulting, n.d.). GDPR applies not only to organisations based in the EU but also to those outside the EU that process personal data of EU residents.

Key Principles of GDPR (Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA Relevance), 2016): GDPR is built upon several core principles to ensure the fair and transparent processing of personal data. These principles include:

- Lawfulness, fairness, and transparency in data processing.
- Purpose limitation: Personal data must be collected for specified, explicit, and legitimate purposes.
- Data minimization: Only the minimum amount of personal data necessary for the intended purpose should be processed.
- Accuracy and data integrity: Personal data must be accurate, up to date, and kept secure from unauthorized access or alteration.
- Storage limitation: Personal data should not be retained for longer than necessary for the purpose for which it was collected.
- Accountability and transparency: Organisations must demonstrate compliance with GDPR principles and be transparent about their data processing practices.

Implications for Sharing Information in Projects: Project managers should ensure that



information sharing practices within projects comply with GDPR requirements (Clark, 2020; Harrin, n.d., 2020; *How Will GDPR Impact Project Management?*, n.d.; Todorović et al., 2018).

Key considerations include:

- Consent: Obtain explicit consent from individuals before collecting and processing their personal data. Consent must be freely given, specific, informed, and unambiguous.
- Data protection by design and default: Implement privacy measures such as pseudonymization, encryption, and access controls to protect personal data from unauthorized access or disclosure.
- Third-party data processors: Assess the data protection practices of third-party vendors and service providers to ensure GDPR compliance when sharing personal data with them.
- Cross-border data transfers: Ensure that any transfer of personal data outside the EU complies with GDPR requirements, such as using standard contractual clauses or obtaining adequacy decisions from the EU Commission.

Data Breach Management: Despite robust security measures, data breaches can occur, posing risks to individuals' privacy rights and organisations' reputations. Project managers must have effective data breach management processes in place (Todorović et al., 2018), including:

- Detection and investigation: Implement mechanisms to detect and investigate potential data breaches promptly, such as monitoring systems and incident response plans.
- Notification: If a data breach poses a risk to individuals' rights and freedoms, organisations must notify the relevant supervisory authority and affected individuals without undue delay. Notifications should include details of the breach, its potential impact, and recommended actions for affected individuals.

GDPR has reshaped data protection and privacy, placing greater emphasis on accountability, transparency, and individuals' rights. Project managers must familiarize themselves with GDPR principles and integrate data protection considerations into their project management practices. By adhering to GDPR requirements and adopting best practices for sharing information and data breach management, project managers can mitigate risks, foster trust, and uphold the highest standards of data protection.

Data Protection Impact Assessments (DPIAs)

In the context of GDPR compliance, Data Protection Impact Assessments (DPIAs) and Data Protection Officers (DPOs) are vital in ensuring the lawful and ethical handling of personal data. A Data Protection Impact Assessment (DPIA) is a systematic process designed to identify and assess the potential risks and impacts of processing personal data on individuals' privacy rights

(Friedewald et al., 2022). DPIAs are essential for organisations to evaluate and mitigate risks associated with their data processing activities.

Aspects of DPIAs and the process of implementing a DPIA for an organisation include:

Purpose and Scope

Define the purpose and scope of the DPIA, including the nature, scope, context, and purposes of the processing activities.

Data Processing Activities

Identify and document the types of personal data processed, the purposes of processing, and the data subjects involved.

Assessment of Risks

Assess the potential risks to individuals' privacy rights and freedoms arising from the processing activities, including risks of unauthorized access, disclosure, alteration, or destruction of personal data.

Risk Mitigation Measures

Implement appropriate technical and organisational measures to mitigate identified risks and ensure compliance with GDPR requirements, such as pseudonymization, encryption, access controls, and data minimization.

Documentation and Review

Document the DPIA process, findings, and conclusions, including any decisions and measures taken to address identified risks. Then, review and update the DPIA regularly to reflect changes in processing activities, technology, or organisational practices.

Data Protection Officers (DPOs)

A Data Protection Officer (DPO) is a designated individual responsible for overseeing an organisation's compliance with data protection laws and regulations, including GDPR. DPOs serve as a point of contact for data subjects, supervisory authorities, and internal stakeholders



on data protection matters (Šidlauskas, 2021). The responsibilities of a DPO include:

Advisory Role

- Provides advice and guidance to the organisation and its employees on data protection requirements, best practices, and compliance strategies.

Monitoring Compliance

- Monitors the organisation's compliance with GDPR requirements, including data protection policies, procedures, and practices.
- Conducts internal audits and assessments to identify areas of non-compliance and implement corrective actions as necessary.

Handling Data Subjects' Requests

- Handles data subjects' requests, inquiries, and complaints regarding the processing of their personal data, including requests for access, rectification, erasure, and data portability.

Cooperation with Supervisory Authorities

- Serves as the primary point of contact for supervisory authorities on data protection matters, including notification of data breaches and cooperation in investigations or audits.

Data Protection Impact Assessments (DPIAs)

- Oversees the implementation of DPIAs for high-risk processing activities and ensure that appropriate measures are taken to mitigate identified risks and protect individuals' privacy rights.

Unit 11. Activity: True/False Questions

Lumi file: M4_L2_Unit 11.1.h5p (The following text is embedded in the Lumi Files).

GDPR applies not only to organisations based in the European Union (EU) but also to those outside the EU that process personal data of EU residents.

True or False?

Lumi File: M4_L2_Unit 11.2.h5p (The following text is embedded in the Lumi Files).

Data Protection Officers (DPOs) are responsible for providing legal advice to organisations on data protection matters but do not play a role in monitoring compliance with GDPR requirements.

True or False?

Lumi File: M4_L2_Unit 11.3.h5p (The following text is embedded in the Lumi Files).

Data Protection Impact Assessments (DPIAs) are mandatory under GDPR for organisations engaging in high-risk processing activities, regardless of the type of personal data being processed.

True or False?

Lumi file: M4_L2_Unit 11.4.h5p (The following text is embedded in the Lumi Files).

GDPR applies only to organisations based in the European Union (EU) and does not impact businesses outside the EU.

True or False?

Lumi File: M4_L2_Unit 11.5.h5p (The following text is embedded in the Lumi Files).

According to GDPR principles, organisations are not required to obtain explicit consent from individuals before collecting and processing their personal data.

True or False?

Lumi File: M4_L2_Unit 11.6.h5p (The following text is embedded in the Lumi Files).

Project managers play a minimal role in ensuring information sharing practices within projects comply with GDPR requirements.

True or False?

Lesson 3: Data Analytics in Project Management

Unit 1. Introduction to Lesson 3

In this lesson, we will explore the fundamental concepts and practical applications of data analytics within project management.

Figure 4.27

Project Management Analytics Results



Note. From Pexels [Photograph], by Lukas, 2017, Pexels. (<https://www.pexels.com/photo/person-holding-chart-and-bar-graph-669612/>). CC0 1.0 DEED.

Throughout this lesson, the learner will gain a comprehensive understanding of how data analytics is reshaping the landscape of project management, enabling better decision-making, enhanced efficiency, and ultimately, project success. We will examine theoretical chapters discussing the definition of data analytics in project management, its benefits, and the essential tools for project managers. Throughout this lesson, we aim to achieve the following learning objectives:

- 1. Define Data Analytics in Project Management:** By the end of this lesson, you will be able to articulate a clear definition of data analytics within the context of project management, understanding its significance and implications for project success.

- 2. Explore the Benefits of Data Analytics and Big Data:** You will examine the various advantages that data analytics and big data offer to project management, including improved decision-making, enhanced efficiency, and better risk management.
- 3. Identify Essential Data Analytics Tools for Project Managers:** We will introduce you to a range of essential tools and technologies used in data analytics for project management, equipping you with the knowledge to select and utilise the most appropriate tools for your projects.
- 4. Understand Data-Driven Decision Making:** You will learn how to make informed, data-driven decisions in project management by analysing and interpreting data effectively, leading to more successful project outcomes.
- 5. Implement Data Analytics in Project Management Processes:** By the end of this lesson, you will have the skills to integrate data analytics seamlessly into various project management processes, from planning and execution to monitoring and control.

Unit 2. Theoretical Chapter: Defining data analytics in Project Management

In the rapidly evolving landscape of project management, the integration of data analytics has become imperative for organisations seeking to optimise their project outcomes and drive strategic initiatives. To get a holistic view of data analytics in project management, let's explore its foundational concepts, methodologies, and practical applications.

Figure 4.28

Digital Graphs in Project Management



Note. From Pexels [Photograph], by ThisIsEngineering, 2020, Pexels. (<https://www.pexels.com/photo/graph-on-laptop-screen-3861957/>). CC0 1.0 DEED.

Understanding Big Data and Data Analytics

At the core of data analytics in project management lies the concept of big data. Big data refers to the massive volumes of structured and unstructured data generated from various sources, including social media, sensors, digital transactions, and more (Manyika et al., 2011). This data is characterised by its volume, velocity, and variety, posing significant challenges for traditional data processing methods (Manyika et al., 2011).

Figure 4.29

The definition of big data



Big Data

Large diverse sets of information that grow at ever-changing rates.

Note. Adapted from *What Is Big Data? Definition, How It Works, and Uses*, by Segal, T., 2024. (<https://www.investopedia.com/terms/b/big-data.asp>). Copyright 2024 by Ellen Lindner.

Data analytics, on the other hand, is the process of analysing and interpreting datasets to extract actionable insights and inform decision-making (Provost & Fawcett, 2013). It encompasses a range of techniques, including statistical analysis, machine learning, data mining, and predictive modelling, among others. Data analytics empowers organisations to derive value from big data by uncovering hidden patterns, correlations, and trends that can drive strategic initiatives and operational efficiency.

Figure 4.30**The definition of Data Analytics**

Data Analytics

The science of analysing raw data to make conclusions about that information.

Note. Adapted from *Data Analytics: What It Is, How It's Used, and 4 Basic Techniques*, by The Investopedia Team, 2024. (<https://www.investopedia.com/terms/d/data-analytics.asp>). Copyright 2024 by Joules Garcia.

The Role of Data Analytics in Project Management

In the context of project management, data analytics plays a leading role in transforming how projects are planned, executed, and evaluated.

Let's explore some key areas where data analytics is revolutionising project management practices (Gandomi & Haider, 2015; Obaid & Abu-Naser, 2023):

Strategic Planning and Forecasting

Data analytics enables project managers to develop more accurate project plans and forecasts by analysing historical project data, market trends, and external factors. By using predictive analytics, project teams can anticipate potential risks and opportunities, enabling proactive decision-making and resource allocation.

Risk Management and Mitigation

By analysing historical project data and identifying patterns of risk occurrence, data analytics empowers project managers to mitigate risks more effectively. Real-time monitoring of project metrics allows project teams to identify emerging risks and implement timely interventions to minimize their impact on project outcomes.

Resource Optimisation

Data analytics enables project managers to optimise resource allocation by identifying inefficiencies in resource utilization. By analysing workforce productivity, equipment usage, and other operational metrics, project teams can allocate resources more effectively to maximise productivity and minimize costs.

Performance Monitoring and Control

Real-time data analytics tools provide project managers with insights into project performance, giving them the opportunity to monitor progress and identify deviations from the plan. Real-time dashboards and analytics facilitate interventions to address issues and ensure project objectives are met.

Continuous Improvement

Data analytics promotes a culture of continuous improvement in project management by identifying areas for optimisation and innovation. While analysing project data and performance metrics, project teams can identify best practices, lessons learned, and areas for process refinement, driving ongoing improvement and organisational agility.

Data Quality and Governance

Figure 4.31

The fingerprint as a security measure



Note. From Pixabay [Photograph], by ar130405, 2017, Pixabay. (<https://pixabay.com/illustrations/finger-fingerprint-security-digital-2081169/>). CC BY 2.0.

In project management, ensuring the quality and governance of data is paramount to the success of any project. Data quality refers to the accuracy, completeness, consistency, and reliability of project data, while data governance involves the policies, processes, and controls put in place to manage and protect that data (Ladley, 2020b).

To maintain data quality throughout the project lifecycle, organisations must implement robust data validation, cleansing, and integration processes. Data validation involves verifying the accuracy and integrity of incoming data, while data cleansing focuses on identifying and correcting errors, duplicates, and inconsistencies in the data. Data integration, on the other hand, involves combining data from disparate sources into a unified, coherent dataset.

Effective data governance frameworks are essential for establishing clear roles and responsibilities for managing project data, defining data standards and policies, and ensuring compliance with regulatory requirements (Ladley, 2020a). By implementing data governance practices such as data stewardship, data security, and data access controls, organisations can safeguard sensitive project data and mitigate the risk of data breaches or compliance violations.

Ethical and Legal Considerations

The growth of data analytics within project management raises important ethical and legal considerations that organisations must address to ensure responsible and compliant use of data. Ethical considerations include privacy concerns, transparency, fairness, and accountability in the collection, use, and sharing of project data (Mittelstadt et al., 2016).

From a legal standpoint, organisations must comply with data protection laws and regulations, such as the General Data Protection Regulation (GDPR) in Europe or the Health Insurance Portability and Accountability Act (HIPAA) in the United States. These regulations govern the collection, storage, processing, and sharing of personal and sensitive data and impose strict penalties for non-compliance.

To navigate these ethical and legal complexities, organisations should establish clear guidelines and policies for data handling and governance, conduct regular audits and assessments to ensure compliance, and provide training and awareness programmes for project teams on data ethics and privacy best practices.

Data Visualization and Communication

Figure 4.32

Data Visualisation through Graphs and Charts



Note. From Pixabay [Photograph], by Wallusy, 2021, Pixabay. (<https://pixabay.com/illustrations/charts-tables-graph-statistics-6246450/>). CC BY 2.0.

Effective data visualisation plays a crucial role in communicating project insights and findings to stakeholders in a clear and actionable manner. Data visualisation techniques, such as charts, graphs, maps, and dashboards, help project managers and teams to distil complex project data into easily understandable visual representations.

When designing data visualisations, it's essential to consider the audience and their information needs, choose the appropriate visualisation types to convey the intended message, and ensure clarity, simplicity, and accuracy in the presentation of data. Interactive visualisations and drill-down capabilities can enhance user engagement and enable stakeholders to explore data in more detail.

In addition to static visualisations, real-time dashboards and analytics tools provide stakeholders with dynamic, up-to-date insights into project performance and progress. These dashboards can be customized to display key performance indicators (KPIs), milestones, risks, and other relevant metrics, enabling stakeholders to monitor project status and make informed decisions in real-time.

Predictive Analytics and Forecasting

Predictive analytics leverages historical project data, statistical algorithms, and machine learning techniques to forecast future project trends, outcomes, and performance. By analysing patterns and correlations in past project data, predictive models can identify potential risks, opportunities, and performance gaps, enabling project managers to make proactive decisions and mitigate risks effectively (Siegel, 2016).

Forecasting techniques, such as time series analysis, regression analysis, and machine learning algorithms (e.g., decision trees, neural networks), can be applied to predict project timelines, budgets, resource requirements, and other key parameters (Montgomery et al., 2021). These forecasts provide valuable insights into project dynamics and enable project teams to anticipate and plan for future scenarios more effectively.

In addition to forecasting, predictive analytics can also be used for scenario planning, simulation, and optimisation, allowing project managers to explore alternative strategies, evaluate trade-offs, and identify the most optimal course of action for achieving project objectives (Obaid & Abu-Naser, 2023).

Machine Learning and Artificial Intelligence

Machine learning (ML) and artificial intelligence (AI) algorithms are revolutionising project management by automating repetitive tasks, analysing complex datasets, and providing valuable insights to support decision-making. ML techniques, such as classification, regression, clustering, and reinforcement learning, can be applied to various project management tasks, including risk assessment, resource allocation, and schedule optimisation.

In project risk management, ML algorithms can analyse historical project data to identify patterns of risk occurrence and develop predictive models to assess and prioritize project risks. AI-driven decision support systems can assist project managers in evaluating alternative scenarios, predicting project outcomes, and recommending optimal courses of action based on data-driven insights.

Furthermore, AI-powered chatbots and virtual assistants can enhance communication and collaboration within project teams by providing real-time updates, answering queries, and facilitating decision-making processes. With ML and AI technologies, project managers can simplify project workflows, improve decision-making efficiency, and drive project success in an increasingly complex and dynamic business environment.

Unit 3. Activity: Find the words

Lumi file: M4_L3_Unit 3.h5p (The following text was added to the Lumi File).

Find the words from the grid



VISUALISATION, DATA, BIGDATA, REGRESSION, MANAGEMENT, MACHINE-LEARNING, DECISION-SUPPORT, PREDICTIVE, ARTIFICIAL, RISKS, CHARTS, PROCESSING, SECURITY

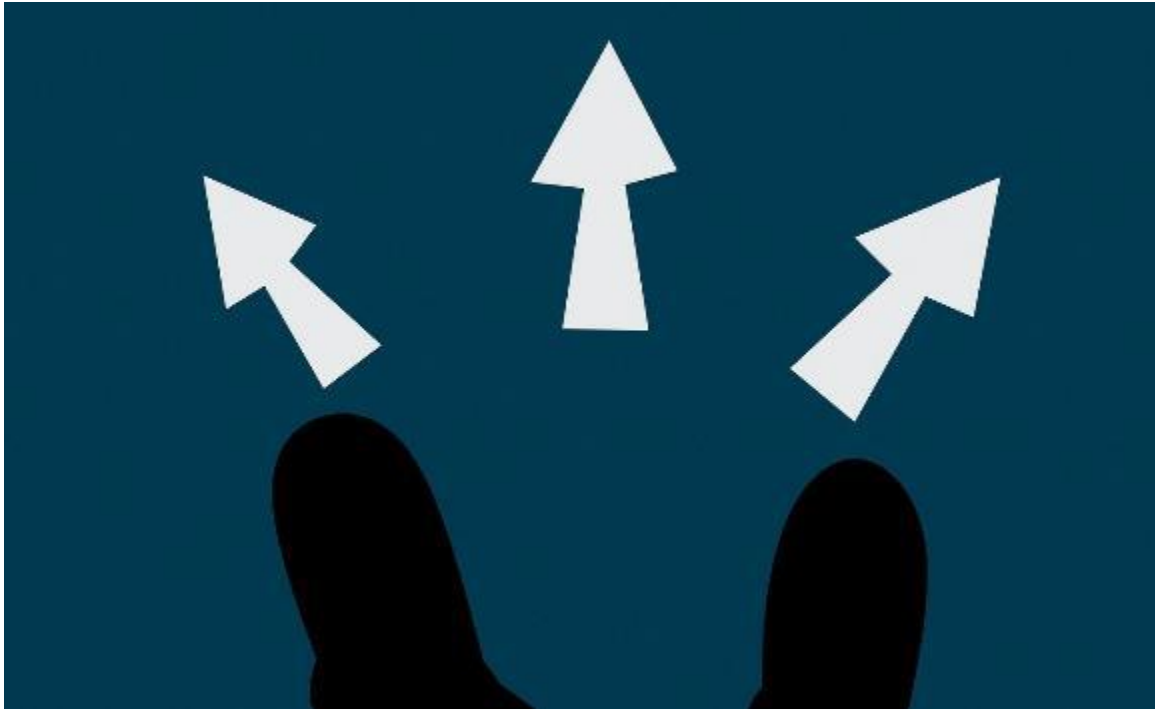
Unit 4. Theoretical Chapter: Benefits of data analytics and big data in Project Management

In today's business landscape, data analytics and big data have emerged as powerful tools that offer use benefits for project management. The integration of these technologies not only enhances decision-making but also facilitates strategic planning, resource optimisation, risk management, and continuous improvement within project environments. In this Unit, we continue our course by looking at the advantages that data analytics and big data usage provide in project management, along with best practices and applications.



Figure 4.33

Decisions affect the course of the future



Note. From Pixabay [Photograph], by Mohamed_hassan, 2018, Pixabay. (<https://pixabay.com/illustrations/decision-making-direction-career-3566980/>). CC BY 2.0.

Enhanced Decision-Making

Data analytics and big data empower project managers to make informed, data-driven decisions by providing access to real-time insights and actionable intelligence (Alstete & Cannarozzi, 2014; ICAEW, 2019). By leveraging advanced analytics techniques such as machine learning and predictive modelling, project managers can gain deeper insights into project performance, identify trends, patterns, and correlations, and anticipate potential issues or opportunities. Real-time monitoring of project metrics and key performance indicators (KPIs) enables project teams to respond promptly to emerging challenges, adjust strategies as needed, and capitalize on opportunities for optimisation and growth.

Improved Forecasting and Planning

Figure 4.34

Growth depends on the integration of technology

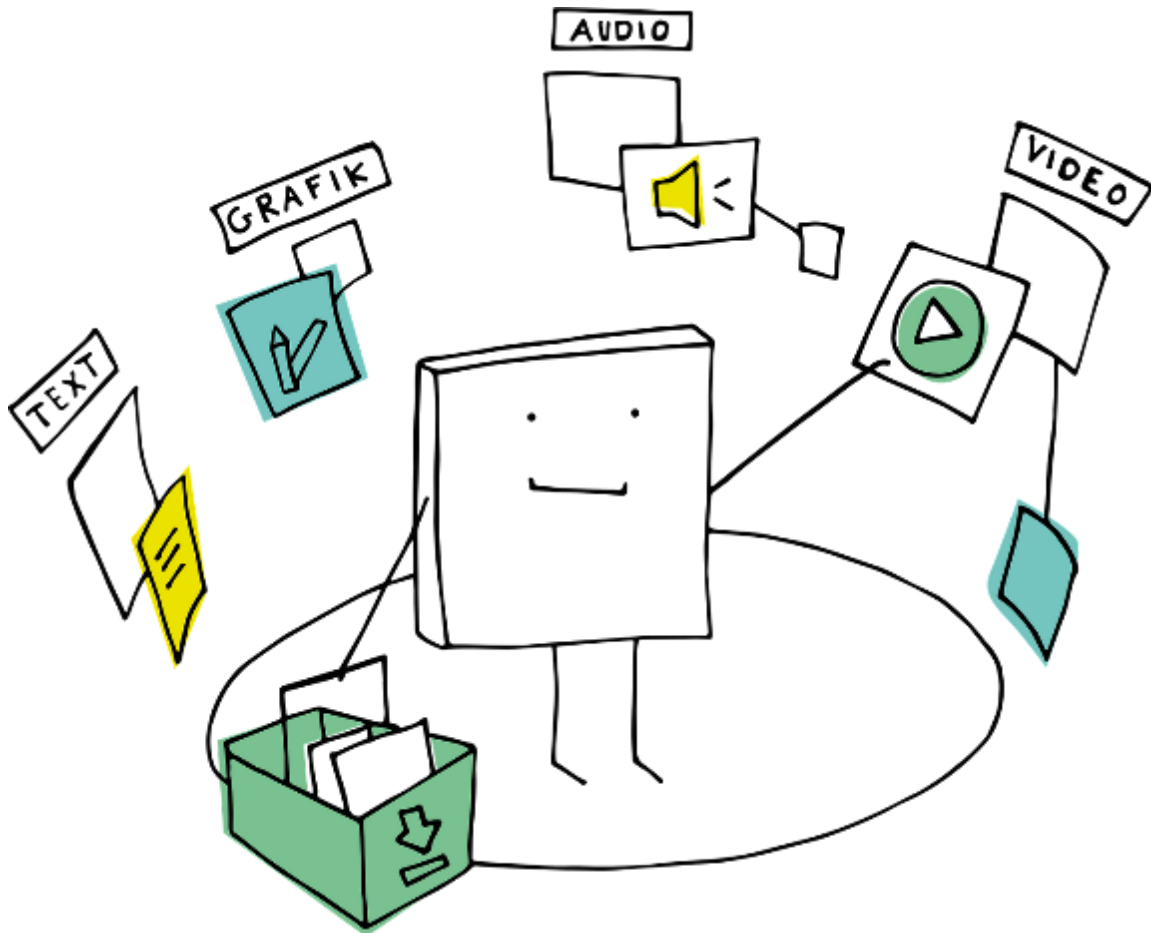


Note. From Pixabay [Photograph], by Mediamodifier, 2018, Pixabay. (<https://pixabay.com/illustrations/growth-progress-graph-diagram-3078543/>). CC BY 2.0.

The utilisation of data analytics facilitates more accurate forecasting and planning processes in project management (ICAEW, 2019; Obaid & Abu-Naser, 2023). By analysing historical project data, market trends, and external factors, project managers can develop more realistic project timelines, budgets, and resource requirements. Predictive analytics algorithms can forecast project outcomes, identify potential risks, and simulate various scenarios to evaluate their impact on project objectives. This enables project teams to proactively address potential issues, allocate resources efficiently, and align project plans with organisational goals, ultimately increasing the likelihood of project success.

Optimised Resource Allocation

Figure 4.35
Media types



Note. From Pixabay [Photograph], by manfredsteger, 2019, Pixabay. (<https://pixabay.com/vectors/pixel-cells-resource-oer-audio-3947916/>). CC BY 2.0.

Data analytics plays a crucial role in optimising resource allocation within project environments. By analysing workforce productivity, equipment utilisation, and other operational metrics, project managers can identify inefficiencies and bottlenecks in resource allocation and make data-driven decisions to optimise resource utilisation (Chong & Shi, 2015; ICAEW, 2019). Advanced analytics tools enable project teams to forecast resource demand, anticipate fluctuations in resource availability, and allocate resources strategically to high-priority tasks or critical milestones. This ensures that resources are utilised efficiently, project timelines are met, and project costs are minimized, thereby enhancing overall project performance and profitability.

Enhanced Risk Management

Figure 4.36

Risk Management is easier with data analytics



Note. From Pixabay [Photograph], by Mohamed_hassan, 2022, Pixabay. (<https://pixabay.com/vectors/risk-management-assessment-safe-7628950/>). CC BY 2.0.

The integration of data analytics into project management enables organisations to adopt a proactive approach to risk management. By analysing historical project data, identifying patterns of risk occurrence, and utilising predictive modelling techniques, project managers can anticipate potential risks, assess their likelihood, and impact, and develop risk mitigation strategies (Alstete & Cannarozzi, 2014). Real-time monitoring of project risks allows project teams to track risk exposure, evaluate the effectiveness of risk mitigation measures, and implement timely interventions to minimize the impact of risks on project outcomes. This risk management approach reduces the likelihood of project delays, cost overruns, and other adverse consequences, ultimately improving project outcomes and stakeholder satisfaction (Alstete & Cannarozzi, 2014).

Continuous Improvement

Figure 4.37
Continuous Improvement is important to succeed



Note. From Pixabay [Photograph], by Mohamed_hassan, 2022, Pixabay. (<https://pixabay.com/vectors/success-motivation-cartoon-win-7097008/>). CC BY 2.0.

Data analytics fosters a culture of continuous improvement within project environments by providing insights into project performance, identifying areas for optimisation, and facilitating evidence-based decision-making (ICAEW, 2019; Obaid & Abu-Naser, 2023). By analysing project data and performance metrics, project teams can identify best practices, lessons learned, and areas for process refinement. This enables organisations to iterate on project processes, strategies, and methodologies, drive ongoing improvement and innovation, and adapt to changing market conditions or stakeholder requirements. With the usage of data analytics to track project performance and outcomes, project managers can identify opportunities for optimisation, drive process improvements, and enhance overall project efficiency, delivering greater value to stakeholders and achieving project success.

Best Practice for Data Analytics in Project Management: Implementing a Comprehensive Data Governance Framework

Incorporating a robust data governance framework is essential for effective data analytics in project management. This technique involves establishing clear policies, procedures, and controls to ensure the quality and security of project data throughout its lifecycle. Key components of a comprehensive data governance framework include:

1. Data Quality Management:

Implement processes for data validation, cleansing, and enrichment to ensure the accuracy and consistency of project data. Regular data audits and quality checks should be conducted to maintain data integrity.

2. Data Security and Privacy:

Establish measures to safeguard sensitive project data and protect it from unauthorized access, breaches, or misuse. This could include implementing encryption, access controls, and data anonymization techniques to mitigate security risks and comply with regulatory requirements.

3. Data Lifecycle Management:

Define clear guidelines for the collection, storage, retention, and disposal of project data, ensuring compliance with legal and regulatory requirements. Establish data retention policies and procedures to manage data lifecycle effectively and minimize storage costs.

4. Stakeholder Engagement:

Engage project stakeholders, including project managers, team members, and data users, in the data governance process. Foster a culture of data accountability and transparency, encouraging collaboration and communication to ensure alignment with project goals and objectives.

Organisations can ensure the reliability, consistency, and usability of project data, enabling better decision-making, risk management, and project performance.

Best Practice for Data Analytics in Project Management in the Tourism Sector: Personalised Customer Experience Optimisation

In the tourism sector, making use of data analytics to optimise the personalised customer experience is essential for driving customer satisfaction and loyalty. This involves harnessing customer data, including demographic information, preferences, behaviour, and feedback, to tailor products and marketing initiatives to individual customer needs and preferences. Key components of personalised customer experience optimisation include:

1. Customer Segmentation:

Analyse customer data to identify distinct customer segments based on demographics, psychographics, and purchasing behaviour. Develop targeted marketing campaigns, offers, and promotions tailored to the needs and interests of each segment to enhance engagement and conversion rates.

2. Predictive Analytics for Demand Forecasting:

Utilise predictive analytics techniques, such as machine learning algorithms, to forecast future demand for tourism products and services. By analysing historical booking data, market trends, and external factors, organisations can anticipate fluctuations in demand, optimise inventory management, and allocate resources effectively to meet customer demand.

3. Real-Time Personalisation:

Implement real-time personalisation strategies to deliver relevant and timely content, recommendations, and offers to customers across various touchpoints, including websites, mobile apps, and social media platforms. Leverage data analytics tools and technologies to track customer interactions in real-time, personalise messaging based on customer behaviour and preferences, and enhance the overall customer experience.

4. Continuous Feedback and Iteration:

Collect and analyse customer feedback through surveys, reviews, and social media monitoring to identify areas for improvement and innovation. Use data analytics insights to iteratively refine products, services, and customer experiences based on customer feedback, driving continuous improvement and innovation in the tourism offerings.

Organisations in the tourism sector can differentiate themselves in a competitive market, adopting a personalised customer experience optimisation approach powered by data analytics, and finally build strong customer relationships, and drive business growth and profitability.

Best Practice for Data Analytics in Project Management in the Tourism Sector: Dynamic Pricing Optimisation

In the tourism industry, dynamic pricing optimisation is a best practice that utilises data analytics to maximise revenue and profitability. This strategy involves adjusting prices for tourism products and services in real-time based on various factors such as demand, market conditions, competitor pricing, and customer preferences. Here's an example of how dynamic pricing optimisation can be implemented:

Imagine a hotel chain operating in a popular tourist destination. By integrating data analytics tools and techniques into their pricing strategy, the hotel chain can analyse historical booking data, seasonal demand patterns, and local events to forecast future demand for hotel rooms. Using machine learning algorithms, the hotel chain can develop predictive models to anticipate fluctuations in demand and optimise room rates accordingly.

For instance, during peak tourist seasons or major events such as festivals or conferences, the hotel chain may experience increased demand for accommodations. In response to high demand, the hotel chain can dynamically adjust room rates upward to capitalize on the surge in demand and maximise revenue. Conversely, during off-peak periods or low-demand periods, the hotel chain may lower room rates to attract more customers and fill vacant rooms.

Furthermore, the hotel chain can segment customers based on factors such as booking behaviour, loyalty status, and preferences. By analysing customer data and booking patterns, the hotel chain can tailor pricing offers and promotions to different customer segments, incentivizing repeat bookings and fostering customer loyalty.

Additionally, real-time monitoring of market trends, competitor pricing, and customer feedback allows the hotel chain to adapt its pricing strategy on the fly. Automated pricing algorithms can continuously analyse incoming data and adjust room rates dynamically to stay competitive and



maximise revenue potential.

The hotel chain can achieve several benefits following this best practice:

1. Maximising Revenue:

Adjusting prices dynamically based on demand fluctuations, can help the hotel chain maximise revenue and profitability, capturing the full value of its inventory during peak demand periods.

2. Improving Occupancy Rates:

By optimising room rates in real-time, the hotel chain can increase occupancy rates by attracting more customers during off-peak periods and filling vacant rooms.

3. Enhancing Customer Satisfaction:

Tailoring pricing offers and promotions to individual customer preferences can enhance the overall customer experience, driving customer satisfaction and loyalty.

4. Staying Competitive:

By monitoring market trends and competitor pricing, the hotel chain can stay competitive in the marketplace, ensuring that its pricing remains aligned with customer expectations and market dynamics.

Unit 5. Activity: Crossword

Lumi file: M4_L3_Unit 5.h5p (The following text was added in the Lumi file).

The objective of this activity is to reinforce understanding of key terms and concepts related to data analytics in project management through an interactive crossword puzzle.

1. A technique used to analyse historical project data and identify patterns or trends. (8 letters)
2. The process of managing the availability, usability, integrity, and security of the data in enterprise systems, based on internal standards and policies that also control data usage. (14 letters, 2 words)
3. The process of extracting insights and knowledge from large and complex datasets. (11

letters, 2 words)

4. The practice of dividing a company's customers into groups that reflect similarity among customers in each group. (20 letters, 2 words)
5. The practice of using data analytics to optimise project schedules and workflows. (20 letters, 2 words)
6. Large volumes of data that can be analysed to extract valuable insights. (7 letters, 2 words)
7. Tailoring products or services to individual customer preferences. (15 letters)
8. Adjusting prices in real-time based on demand and other factors. (14 letters, 2 words)

Unit 6. Theoretical Chapter: Data-driven decision making in Project Management

Data-driven decision-making has become crucial in modern project management practices, as it alters how projects are planned, executed, and monitored. This chapter explores the significance of data-driven decision-making, its application in project management, and the multitude of benefits it brings to project success.



Figure 4.38**Decision-making based on data is crucial for Project Management**

Note. From Pixabay [Photograph], by Megan_Rexazin_Conde, 2019, Pixabay. (<https://pixabay.com/vectors/strategy-mind-business-success-4496456/>). CC BY 2.0.

Understanding Data-driven Decision Making

At its core, data-driven decision-making involves taking advantage of data analytics to inform and guide strategic decisions within project management (Alstete & Cannarozzi, 2014). Rather than relying only on intuition or past experiences, project managers use data-driven insights to make informed decisions grounded in empirical evidence. By collecting, analysing, and interpreting relevant data, project teams gain a deeper understanding of project dynamics, stakeholder needs, and market trends, enabling them to make decisions that are more accurate, timely, and impactful (Alstete & Cannarozzi, 2014).

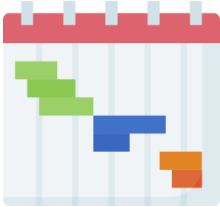
Importance of Data-driven Decision Making

Data-driven decision-making is paramount in project management due to its ability to enhance decision-making accuracy, drive project efficiency, and mitigate risks (Alstete & Cannarozzi, 2014). In order to harness the power of data analytics, project managers can identify patterns, trends, and correlations within project data, enabling them to anticipate challenges, optimise resource allocation, and capitalize on opportunities (Fattah & Arief, 2023). Moreover, data-driven decision-making encourages a culture of transparency and accountability within project teams, as decisions are based on objective data rather than subjective opinions or biases.

Applications of Data-driven Decision Making in Project Management

Data-driven decision-making finds application across various facets of project management, spanning project planning, execution, monitoring, and evaluation (Obaid & Abu-Naser, 2023). Let's delve into some specific examples to illustrate how data-driven approaches are applied in each phase:

a. Project Planning:



During the planning phase, project managers leverage data analytics to develop accurate project forecasts, estimate resource requirements, and identify potential risks. For example, in a construction project, historical data on similar projects can be analysed to forecast project timelines, budget requirements, and resource allocation. By examining past performance metrics, such as project duration, cost overruns, and resource utilisation, project managers can identify trends and patterns to inform their planning decisions.

b. Project Execution:



In the execution phase, real-time monitoring of project metrics and performance indicators enables project teams to track progress, identify deviations from the plan, and make data-driven adjustments to project strategies. For instance, in an IT project, project managers may use project management software to track task completion rates, identify bottlenecks, and allocate resources dynamically based on real-time data. By monitoring key performance indicators such as project progress, budget utilisation, and resource allocation, project teams can identify potential issues early and take corrective actions to ensure project success.

c. Project Monitoring:



Data-driven decision-making extends to project monitoring, where project teams continuously track project metrics and performance indicators to ensure project progress aligns with predefined objectives. For example, in a marketing campaign project, project managers may use data analytics tools to track campaign performance metrics such as click-through rates, conversion rates, and return on investment (ROI). By analysing campaign data in real-time, project teams can identify underperforming campaigns, optimise marketing strategies, and allocate resources to high-impact initiatives to maximise ROI.

d. Project Evaluation:



In the evaluation phase, project outcomes are analysed, lessons learned are identified, and best practices are documented for future projects. For instance, in a product development project, project managers may conduct post-project reviews to analyse product performance metrics, customer feedback, and market trends. By leveraging data analytics, project teams can identify areas for improvement, refine product features, and develop strategies to enhance product competitiveness in the market. Additionally, data-driven insights derived from project evaluations can inform future project initiatives and guide strategic decision-making across the organisation.

images: Flaticon.com

A quick recap

In summary, data-driven decision-making is essential in project management, and enables project teams to make informed decisions, optimise project performance, and drive project success. Project managers can gain valuable insights, identify opportunities for improvement, and deliver projects that meet or exceed stakeholder expectations throughout the project's lifecycle.

Best Practice: Dynamic Resource Allocation in Healthcare Project Management

In healthcare project management, the efficient allocation of resources is critical for ensuring the timely delivery of quality patient care. One best practice involves using data-driven decision-making to dynamically allocate resources based on patient needs, staff availability, and operational demands.

Example Scenario: Imagine a hospital embarks on a project to improve emergency department (ED) efficiency to reduce patient wait times and enhance patient satisfaction. Using data-driven decision-making, the project team implements a dynamic resource allocation strategy to optimise staffing levels and streamline patient flow through the ED.

Implementation Steps:**1. Data Collection:**

The project team collects data on patient arrival patterns, peak hours, staffing levels, patient acuity, and treatment times from the hospital's electronic health record (EHR) system and operational databases.

2. Data Analysis:

Utilising data analytics tools, the project team analyses historical ED data to identify patterns, trends, and bottlenecks in patient flow. They use statistical techniques such as regression analysis and predictive modelling to forecast patient demand and staffing requirements.

3. Real-Time Monitoring:

The project team implements real-time monitoring systems to track patient volumes, wait times, and staff workload in the ED. Dashboard visualizations provide instant insights into ED performance metrics, enabling proactive decision-making.

4. Dynamic Staffing Adjustments:

Based on real-time data insights, the project team dynamically adjusts staffing levels and resource allocation to match fluctuating patient demand. During peak hours or surges in patient volume, additional staff members are deployed to ensure timely patient care and minimise wait times.

5. Continuous Improvement:

The project team conducts regular performance reviews and feedback sessions to evaluate the effectiveness of the dynamic resource allocation strategy. They use data-driven insights to identify areas for improvement, refine staffing algorithms, and optimise operational workflows.

Benefits

- **Improved Patient Outcomes:** By dynamically allocating resources based on real-time data insights, the hospital enhances patient flow, reduces wait times, and ensures timely access to care, leading to improved patient outcomes and satisfaction.
- **Enhanced Operational Efficiency:** Data-driven resource allocation optimises staffing levels, minimizes resource underutilisation, and maximises operational efficiency, enabling the hospital to deliver high-quality care cost-effectively.
- **Proactive Decision-Making:** Real-time data monitoring empowers hospital administrators and clinical leaders to make proactive decisions, anticipate capacity constraints, and allocate resources strategically to address emerging challenges.
- **Continuous Improvement:** By embracing a data-driven approach, the hospital promotes a culture of continuous improvement, innovation, and learning, driving ongoing enhancements in ED performance and patient care delivery.

Unit 7. Activity: Best Practice

Customer Segmentation and Personalisation in E-commerce

Description:

A leading e-commerce platform implements a sophisticated data-driven approach to customer segmentation and personalisation to enhance the online shopping experience and drive sales. Leveraging advanced analytics and machine learning algorithms, the platform analyses vast amounts of customer data, including purchase history, browsing behaviour, demographics, and preferences.

Data Collection and Analysis:

The e-commerce platform collects a wide range of data points from customer interactions, such as product views, add-to-cart actions, purchase history, time spent on site, and device preferences. This data is stored in a centralized database and processed using cutting-edge analytics tools and algorithms.

Segmentation Strategy:

Based on the analysis of customer data, the platform identifies distinct customer segments with unique characteristics, preferences, and purchasing behaviours. These segments may include loyal customers, bargain hunters, trendsetters, and occasional shoppers. By segmenting customers into groups, the platform can tailor its marketing strategies and product recommendations to better meet the needs and preferences of each segment.

Personalisation Tactics:

Using machine learning algorithms, the e-commerce platform delivers highly personalised shopping experiences to individual customers. By analysing past behaviour and preferences, the platform can recommend relevant products, promotions, and content to each customer in real-time. For example, if a customer has previously purchased running shoes, the platform may suggest complementary products such as athletic apparel or fitness accessories.



Dynamic Pricing and Promotions:

In addition to personalised product recommendations, the platform employs dynamic pricing algorithms to optimise pricing strategies in real-time. By considering factors such as demand, inventory levels, competitor pricing, and customer segmentation, the platform can adjust prices dynamically to maximise revenue and profitability. For example, the platform may offer targeted discounts or promotions to specific customer segments to incentivize purchases.

Results and Benefits:

The implementation of data-driven customer segmentation and personalisation has yielded significant results for the e-commerce platform. By delivering personalised shopping experiences and targeted promotions, the platform has increased customer engagement, loyalty, and conversion rates. Additionally, dynamic pricing strategies have led to improved revenue and profitability, as well as a better understanding of customer behaviour and preferences.

Lumi File: M4_L3_Unit 7.1.h5p (The following text was added in the Lumi file).

Which of the following data analysis techniques is utilized by the e-commerce platform to inform its customer segmentation and personalisation strategies?

- Regression analysis
- Machine learning algorithms
- Survey-based research

Lumi File: M4_L3_Unit 7.2.h5p (The following text was added in the Lumi file).

How does the e-commerce platform use dynamic pricing algorithms to optimise its pricing strategies?

- By analysing competitor pricing
- By considering demand fluctuations
- By adjusting prices based on inventory levels

Unit 8. Theoretical Chapter: Essential data analytics tools for project managers

In this theoretical chapter, we'll explore data analytics tools that project managers need to know to effectively manage and analyse project data. Data analytics tools are instrumental in helping project managers derive actionable insights, track progress, and make informed decisions throughout the project lifecycle. We'll provide detailed descriptions of each tool, along with practical guidance on their usage and recommendations for further learning resources.



Google Analytics

Figure 4.39

Google Analytics is a powerful tool of data analytics for websites



Note. From *Prepare for the future with Google Analytics 4* [Photograph], by Russell Ketchum, 2022, Blog.google.com. (<https://blog.google/products/marketingplatform/analytics/prepare-for-future-with-google-analytics-4/>). Image © by Google

Description: Google Analytics is a robust web analytics tool that provides comprehensive insights into website traffic, user behaviour, and conversion metrics. It offers a wide range of features, including audience demographics, acquisition channels, and behaviour flow analysis.

Usage: Project managers can use Google Analytics to track key performance indicators (KPIs) related to their project's online presence, such as website visits, page views, bounce rates, and conversion rates. They can create custom dashboards and reports to monitor project performance, identify trends, and optimise digital marketing strategies.

How to Use:

1. Sign up for a Google Analytics account or log in if you already have one.
2. Set up a new property for your project website and obtain the tracking code.
3. Install the tracking code on all pages of your project website.
4. Configure goals and events to track specific actions users take on your website, such as form submissions or purchases.
5. Explore the various reports available in Google Analytics, including audience, acquisition, behaviour, and conversion reports.
6. Customize reports and dashboards to focus on the metrics that matter most to your

project.

7. Use segmentation to analyse different user groups and compare their behaviour.
8. Set up automated email reports to receive regular updates on project performance.

Resources for Further Learning:

- Google Analytics Academy: Offers free online courses and tutorials on Google Analytics.

Microsoft Excel

Figure 4.40

Microsoft Excel is offering great data analysis possibilities



Note. From Unsplash [Photograph], by Rubaitul Azad, 2022, Unsplash. (<https://unsplash.com/photos/icon-GauA0hiEwDk>). CC BY 2.0.

Description: Microsoft Excel is a versatile spreadsheet software that offers powerful data analysis capabilities, including data visualisation, formula-based calculations, and pivot tables. It is widely used for organising, analysing, and presenting project data in a structured format.

Usage: Project managers can use Excel to create project schedules, budget forecasts, and resource allocation plans. They can perform basic data analysis tasks, such as sorting, filtering, and summarizing data, and generate visualisations, such as charts and graphs, to communicate insights to stakeholders.

How to Use:

1. Open Microsoft Excel and create a new spreadsheet.
2. Organise your project data into rows and columns, with each row representing a data point and each column representing a variable or attribute.
3. Use built-in functions and formulas to perform calculations on your data, such as sum, average, and count.
4. Create pivot tables to summarize and analyse large datasets.
5. Use conditional formatting to highlight important trends or outliers in your data.
6. Create charts and graphs to visualise your data and communicate insights effectively.
7. Use data validation to ensure data accuracy and consistency.

8. Save and share your Excel files with stakeholders for collaborative analysis.

Resources for Further Learning:

- Microsoft Excel Training: Microsoft offers comprehensive online tutorials and training courses for Excel users.

Tableau**Figure 4.41****Tableau logo**

Note. From Tableau.com, n.d, (<https://www.tableau.com>).

Description: Tableau is a leading data visualisation tool that allows users to create interactive and dynamic dashboards and reports. It offers advanced features for visualising complex data sets and uncovering insights through interactive data exploration.

Usage: Project managers can use Tableau to visualise project performance metrics, identify trends, and communicate insights effectively to stakeholders. They can create interactive dashboards that provide a holistic view of project progress, enabling stakeholders to drill down into specific data points and explore underlying patterns.

How to Use:

1. Connect Tableau to your project data source, such as an Excel spreadsheet or database.
2. Drag and drop fields from your data source onto the Tableau canvas to create visualisations.
3. Customize your visualisations by adjusting colours, labels, and formatting options.
4. Create dashboards by combining multiple visualisations onto a single canvas.
5. Add interactivity to your dashboards by adding filters, parameters, and actions.
6. Use advanced features such as calculated fields and level of detail expressions to perform complex analysis.
7. Publish your dashboards to Tableau Server or Tableau Online to share them with stakeholders.
8. Schedule data refreshes to ensure your dashboards are always up to date with the latest project data.

Resources for Further Learning:

- Tableau Training Videos: Tableau provides free training videos and tutorials on its website.



Zoho Analytics

Figure 4.42

Zoho Analytics logo



Note. From Zoho.com, n.d, (<https://www.zoho.com/analytics/features.html>).

Description: Zoho Analytics is a powerful self-service business intelligence and analytics platform that offers a wide range of features, including data visualisation, reporting, and predictive analytics. It enables project managers to analyse project data, generate actionable insights, and monitor project performance in real-time.

Usage: Project managers can use Zoho Analytics to create customized reports and dashboards that provide insights into project progress, resource utilisation, and budget tracking. They can analyse historical project data to identify trends, forecast future performance, and make data-driven decisions to optimise project outcomes.

How to Use:

1. Sign up for a Zoho Analytics account or log in if you already have one.
2. Import your project data into Zoho Analytics from spreadsheets, databases, or cloud storage services.
3. Create reports by dragging and dropping fields onto the report canvas and selecting the desired visualisation type.
4. Customize your reports by adding filters, sorting options, and calculated fields.
5. Create dashboards by combining multiple reports onto a single canvas and arranging them to tell a cohesive story.
6. Share your reports and dashboards with stakeholders by generating secure links or embedding them on websites.
7. Schedule automated report generation and distribution to keep stakeholders informed of project progress.

8. Use advanced analytics features such as predictive analytics and what-if analysis to gain deeper insights into your project data.

Resources for Further Learning:

- Zoho Analytics Documentation: Zoho offers comprehensive documentation and support resources for Zoho Analytics users.



PostHog**Figure 4.43****PostHog logo**

Note. From Posthog.com, n.d, (<https://posthog.com/handbook/company/brand-assets>).

Description: PostHog is a product analytics platform that helps organisations understand user behaviour and track product usage metrics. It offers features such as event tracking, user segmentation, and funnel analysis to help project managers optimise product features and user experiences.

Usage: Project managers can use PostHog to track user interactions with project-related products or services, analyse user engagement metrics, and identify opportunities for improvement. They can create custom events and funnels to track specific user actions, such as sign-ups, purchases, or feature usage, and use the insights gained to prioritize product enhancements.

How to Use:

1. Sign up for a PostHog account or log in if you already have one.
2. Integrate PostHog into your project's digital products or applications using its developer-friendly APIs and SDKs.
3. Set up event tracking to capture user interactions with key features and functionalities of your project.
4. Define user segments based on demographic or behavioural criteria to analyse different user groups.
5. Create funnels to track user journeys and identify points of friction or drop-off within your project.
6. Analyse user engagement metrics such as retention rates, session durations, and conversion rates to measure project success.
7. Use cohort analysis to track the behaviour of specific user groups over time and assess the impact of changes or interventions.
8. Iterate and optimise your project based on insights gained from PostHog analytics to improve user satisfaction and retention.

Resources for Further Learning:

- **PostHog Documentation:** PostHog provides extensive documentation and support resources to help users get started with the platform.



Unit 9. Activity: Single Choice Set Questions

Lumi File: M4_L3_Unit 9.h5p (The following text was added in the Lumi file).

Your team is tasked with launching a new marketing campaign for a product, and you need to determine the most effective marketing channel to reach your target audience. What's your approach?

- **Conduct A/B testing across multiple marketing channels to gather data on engagement, conversion rates, and return on investment (ROI) before making a decision.**
- Choose the marketing channel that has the highest engagement rates based on evidence and past experiences.

You're managing a tourism marketing campaign for a new travel destination, and you notice a significant decrease in website traffic after launching a promotional offer. What do you do?

- **Conduct a thorough analysis of website traffic data to identify user behaviour patterns and understand the impact of the promotional offer on conversion rates and booking inquiries.**
- Roll back the promotional offer to the previous pricing to prevent further loss of revenue.

You're planning a guided tour itinerary for a group of tourists, and you need to set realistic timelines and activities to ensure a seamless travel experience. How do you proceed?

- **Use historical travel data and industry benchmarks to estimate travel times, allocate sufficient time for each activity, and ensure adequate rest periods for travellers.**
- Set arbitrary timelines and activities based on assumptions without considering factors such as travel distance, traffic conditions, and visitor preferences.

You're evaluating potential tour operators for a partnership to offer specialized cultural tours, and you need to select the operator that offers the best value proposition for your clients. What's your approach?

- **Evaluate tour operators based on criteria such as reputation, tour offerings, customer feedback, and alignment with your brand values to ensure a positive experience for travellers.**
- Choose the tour operator with the lowest upfront costs without considering factors such as tour quality, guide expertise, and customer reviews.

You're analysing customer feedback and online reviews to assess the satisfaction levels of travellers who participated in a recent tour, and you need to identify areas for improvement.



How do you communicate your findings?

- **Use sentiment analysis and data visualisation tools to create detailed reports and presentations that highlight key themes, trends, and actionable recommendations for enhancing the tour experience.**
- Provide a generic summary of customer feedback without taking into account specific issues or actionable insights.

Unit 10. Theoretical Chapter: Implementing data analytics in the Project Management process

In today's evolving business landscape, as already mentioned in previous units, project managers are increasingly turning to data analytics to gain insights, optimise processes, and drive project success. Implementing data analytics in the project management process empowers project managers to make informed decisions, mitigate risks, and achieve better outcomes.

Project managers can effectively utilise data analytics in everyday tasks and projects by:

1. Understanding the Role of Data Analytics in Project Management

Data analytics plays an important role in project management by providing valuable insights into project performance, resource utilisation, and stakeholder engagement. Project managers can use data analytics tools and techniques to monitor project progress, identify potential bottlenecks, and proactively address issues before they escalate. By analysing historical project data and performance metrics, project managers can make data-driven decisions to optimise project delivery and achieve business objectives.



2. Leveraging Data Analytics for Project Planning and Forecasting:

One of the key areas where data analytics adds value to project management is in planning and forecasting. Project managers can use historical project data, market trends, and predictive analytics models to develop more accurate project plans and forecasts. By analysing past project performance and identifying patterns and trends, project managers can better estimate project timelines, resource requirements, and budget allocations. This enables project managers to set realistic goals, allocate resources efficiently, and minimize project risks.

3. Monitoring Project Performance and KPIs:

Data analytics enables project managers to monitor project performance in real-time and track key performance indicators (KPIs) effectively. By integrating project management software with data analytics tools, project managers can access comprehensive dashboards and reports that provide insights into project progress, resource utilisation, and budget variance. This allows project managers to identify deviations from the project plan, address issues promptly, and make data-driven adjustments to keep the project on track.

4. Identifying Risks and Opportunities:

Data analytics helps project managers identify potential risks and opportunities early in the project lifecycle. By analysing historical project data, market trends, and external factors, project managers can anticipate potential risks and develop contingency plans to mitigate their impact. Similarly, data analytics enables project managers to identify emerging opportunities and capitalize on them to drive project success. By incorporating predictive analytics models and scenario analysis techniques in their work model, project managers can assess the potential outcomes of different scenarios and make informed decisions to maximise project value.

5. Enhancing Stakeholder Communication and Engagement:

Effective communication is essential for project success, and data analytics can enhance stakeholder communication and engagement. By providing stakeholders with access to real-time project data and performance metrics, project managers can improve transparency, build trust, and facilitate collaboration. Data-driven insights enable project managers to communicate project status, milestones, and risks more effectively, enabling stakeholders to make informed decisions and support project objectives.

6. Continuous Improvement and Optimisation:

Data analytics facilitates continuous improvement and optimisation in project management by enabling project managers to analyse past performance, identify areas for improvement, and implement corrective actions. By conducting post-project reviews and lessons learned sessions, project managers can gather valuable insights into project successes and failures, identify best practices, and implement process improvements. Data analytics also enables project managers to measure the impact of process changes and initiatives, enabling continuous optimisation and refinement of project management practices.



Example of using data analytics tools for everyday tasks

Google Analytics for Website Traffic Analysis

Figure 4.44

Using data provided by digital tools can help you make decisions



Note. From Pixabay [Photograph], by s7akti, 2022, Pixabay. (<https://pixabay.com/vectors/backlink-web-internet-link-building-6955490/>). CC BY 2.0.

Project managers responsible for overseeing a tourism company's website can use Google Analytics for everyday tasks, such as analysing website traffic. By accessing Google Analytics reports, project managers can:

- **Track Website Traffic Trends:** Project managers can regularly monitor website traffic trends, including the number of visitors, page views, and session durations. While analysing this data over time, project managers can identify patterns, peak traffic periods, and areas for improvement in website performance.
- **Identify Top-performing Content:** Google Analytics provides insights into the most visited pages and content on the website. Project managers can analyse this data to identify top-performing content that resonates with visitors and drives engagement. This information can guide content strategy and inform future marketing campaigns.
- **Monitor User Behaviour:** Project managers can use Google Analytics to track user behaviour on the website, such as click-through rates, bounce rates, and conversion

rates. By understanding how users interact with the website, project managers can identify usability issues, optimise user journeys, and enhance the overall user experience.

Example of using data analytics for managing a project

Microsoft Power BI for Project Reporting

Figure 4.45

Performance analysis tools can assist project managers to achieve their goals



Note. From Pixabay [Photograph], by Mohamed_hassan, 2022, Pixabay. (<https://pixabay.com/vectors/business-report-chart-analytics-7047158/>). CC BY 2.0.

In a project management context, project managers can use Microsoft Power BI for project reporting and performance analysis. Here's how:

- **Consolidate Project Data:** Project managers can integrate data from various sources, such as project management software, time tracking tools, and financial systems, into Microsoft Power BI. By integrating project data in one centralized dashboard, project managers can gain a comprehensive view of project performance and status.
- **Visualise Key Metrics:** Microsoft Power BI allows project managers to create interactive dashboards and visualisations to represent key project metrics, such as task completion rates, budget utilisation, and resource allocation. Visualising data in this way enables project managers to quickly identify trends, outliers, and areas requiring attention.
- **Monitor Project KPIs:** Project managers can set up Key Performance Indicators (KPIs) within Microsoft Power BI to track project performance against predefined targets and

benchmarks. By monitoring KPIs in real-time, project managers can proactively identify deviations from the project plan and take corrective action as needed to keep the project on track.

Unit 11. Activity: Crossword

Lumi file: M4_L3_Unit 11.h5p (The following text was added in the Lumi file).

Data analytics enables project managers to record project performance in real-time and track key performance indicators effectively. This process is called _____. (10 letters)

Data analytics facilitates continuous improvement and _____ in project management by enabling project managers to analyse past performance and identify areas for improvement. (12 letters)

Microsoft _____ is a commonly used software for data analysis and visualization in project management. (5 letters)

Data analytics _____ provide project managers with insights and visualizations to analyse project data efficiently. (5 letters)

Incorporating data analytics into the project management process empowers project managers to make _____ decisions and achieve better outcomes. (10 letters, 2 words separated with -)

Understanding the role of data _____ in project management is crucial for project managers to make informed decisions and optimise project performance. (9 letters)

Unit 12. Theoretical Chapter: Evaluating data

In project management, evaluating data is a critical step in ensuring that decisions are based on reliable information. In this unit, we will discuss various ways to determine which data are useful for a project and how to effectively evaluate them.

Figure 4.46

Data evaluation is an important process in Project Management



Note. From Pixabay [Photograph], by 20degrees, 2016, Pixabay. (<https://pixabay.com/vectors/statistic-survey-website-template-1606951/>). CC BY 2.0.

1. Define Project Objectives:

Before evaluating data, it's essential to clearly define the objectives of the project. Understanding what information is needed to achieve these objectives will guide the data evaluation process.

Example: In a tourism development project for a local community, the objective is to identify key attractions and cultural heritage sites to promote tourism and boost economic growth.

2. Relevance:

Evaluate the relevance of the data to the project goals. Ask whether the data provide insights that directly contribute to addressing project objectives. Data that are not relevant to the project should be excluded from further consideration.

Example: In a hotel renovation project, guest feedback surveys provide relevant data on customer preferences for room amenities and dining options, directly contributing to improving guest satisfaction and loyalty.

3. Accuracy:

Assess the accuracy of the data by examining the sources, methodology, and credibility of the information. Look for data that are obtained from reliable sources and have undergone rigorous validation processes to ensure accuracy.

Example: Visitor arrival statistics provided by the local tourism board are considered accurate as they are based on official records collected at border checkpoints and are regularly audited for precision.

4. Timeliness:

Consider the timeliness of the data in relation to the project timeline. Evaluate whether the information is current and up-to-date or if it is outdated and no longer relevant to the project goals.

Example: Market research data collected during the peak tourist season provides timely insights into visitor spending patterns and travel preferences, guiding marketing strategies for upcoming tourist seasons.

5. Completeness:

Ensure that the data provide a comprehensive view of the subject matter. Evaluate whether the dataset covers all relevant aspects of the project or if there are gaps that need to be addressed.

Example: When evaluating tourist satisfaction levels, it's essential to consider data on accommodation quality, transportation options, dining experiences, and recreational activities to gain a comprehensive understanding of the tourist experience.

6. Consistency:

Check for consistency within the data and across different sources. Inconsistencies or discrepancies may indicate errors or inaccuracies that need to be resolved before the data can be used effectively.

Example: When analysing visitor feedback across multiple online review platforms, inconsistencies in ratings for the same attraction may indicate disparities in visitor experiences or biased reviews.



7. Validity:

Determine the validity of the data by assessing whether they measure what they are intended to measure. Look for data that have been collected using reliable methods and are appropriate for the intended purpose.

Example: A survey conducted to assess tourist interest in ecotourism activities is considered valid if it accurately measures tourists' willingness to engage in environmentally friendly tourism experiences.

8. Bias:

Evaluate the data for any biases that may influence the interpretation or analysis. Be mindful of factors such as sample selection bias, response bias, or researcher bias that may skew the results.

Example: In a destination marketing campaign targeting younger travellers, social media analytics may show a bias toward platforms popular among younger demographics, potentially overlooking older travellers' preferences.

9. Ethical Considerations:

Consider ethical implications when evaluating data, particularly concerning privacy, confidentiality, and consent. Ensure that data collection and usage comply with ethical standards and regulations.

Example: When collecting personal data from tourists for marketing purposes, ensuring transparent data usage policies and providing options for opting out of data collection uphold ethical standards and protect tourists' privacy rights.

10. Consult Experts:

When in doubt, seek input from subject matter experts or data analysts who can provide valuable insights and guidance on evaluating data effectively.

Example: In a destination branding project aimed at positioning a city as a culinary tourism destination, consulting with local chefs, restaurateurs, and tourism experts ensures that data evaluation methods align with industry expertise and cultural authenticity.

Unit 13. Activity: True/False Questions

Lumi file: M4_L3_Unit 13.1.h5p (The following text has been added in the Lumi file)

In project management, relevance refers to the accuracy of the data collected.

True or False?

Lumi file: M4_L3_Unit 13.2.h5p (The following text has been added in the Lumi file)

Timeliness is a critical factor in evaluating data for tourism projects, ensuring that the information collected is current and up-to-date.

True or False?

Lumi file: M4_L3_Unit 13.3.h5p (The following text has been added in the Lumi file)

Data accuracy can be compromised if collected from unreliable sources or without proper validation processes.

True or False?

Lumi file: M4_L3_Unit 13.4.h5p (The following text has been added in the Lumi file)

Ethical considerations are not relevant when collecting personal data from tourists for marketing purposes in tourism projects.

True or False?

Lumi file: M4_L3_Unit 13.5.h5p (The following text has been added in the Lumi file)

Consulting with subject matter experts, such as local chefs and tourism professionals, is essential to ensure that data evaluation methods align with industry expertise in tourism projects.

True or False?



Lesson 4: Digital Project Management

Unit 1. Introduction to Lesson 4

This lesson provides a comprehensive introduction to digital project management and various technologies associated with online marketing. The curriculum examines the role of a digital project manager, emphasizing the skills and responsibilities required in overseeing projects within the digital environment. Participants will explore the fundamentals of online and content marketing, gaining insights into strategies for effective digital campaigns.

We will explore the core concepts of digital project management, including planning, execution, and oversight, and gain insights into the responsibilities and key competencies of a digital project manager. We will also investigate the intricacies of online and content marketing, learning how to develop and implement effective strategies to reach target audiences and we shall explore the dynamics of social media marketing. We will explore the use of digital platforms in the tourism industry, and we will understand the functionalities of Content Management Systems (CMS) like WordPress (*Blog Tool, Publishing Platform, and CMS, 2024*).

Moving on, we will look into the fundamentals of Digital Marketing Analytics, of Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) systems and we will try to conduct a comparative analysis of various ERP systems.



Unit 2. Theoretical Chapter: Defining Digital Project Management

Digitalization in project management

Figure 4.47

Digital devices play a key role in our everyday lives



Note. From Pexels [Photograph], by picjumbo.com, 2016, Pexels. (<https://www.pexels.com/photo/woman-using-a-smartphone-while-fronting-a-macbook-pro-and-black-ipad-196656/>). CC0 1.0 DEED.

The rise of digital management (Daddey, n.d.) goes hand in hand with the broader digital transformation happening in businesses, where the use of digital technologies is reshaping industries. According to the Project Management Institute (PMI), project management practices have changed notably over the last decade due to digital disruption and the need for quicker and more flexible project execution. This evolution is important for modern organisations that have to deal with the complexities of a more digital world, where customer expectations are higher, market dynamics are more unpredictable, and change happens faster.

Digitalization is also advancing, particularly in light of the COVID-19 pandemic, which halted all activities and necessitated a thorough reassessment and restructuring of established norms. Due to the Covid 19 pandemic, knowing how to use digital tools has become even more important for managing remote teams and handling increasingly complex projects.

What is digital project management?

Digital project management (DPM) (*What It Means to Be a Digital Project Manager* | Blog Wrike, n.d.) involves directing, planning, arranging, motivating, and executing web-based projects. It's about creating things in a digital space, specifically designed for the digital world. It involves managing projects that produce digital results like data, images, interfaces, and screens.

Digital project management is specifically required when projects involve digital deliverables. These deliverables, often produced in environments like agencies, studios, internal web teams, or consultancies, demand a different approach from project managers. They need a unique mindset, skills, and tools to handle digital projects effectively.

Digital project managers utilise internet technologies to deliver a variety of products, including websites, mobile apps, videos, games, ecommerce platforms, emails, social media campaigns, virtual reality experiences, and digital outdoor advertisements. This involves delivering projects within an interconnected, online environment where brands and organisations engage directly with customers.

But, although it was a difficult job, man, by his nature, found a solution: digital tools, which allowed the resumption of many activities, including online meetings (working sessions, conferences, courses or simply connecting with close ones). Digital tools also provided real support for ongoing projects, enabling activities such as business meetings, as well as the creation and transmission of documents. Therefore, in our research we propose to find out how digital tools have been used and what impact they have had on projects.

Digital post tools simplify project management from the point of view of managing them, starting from the project idea to the total completion of the project, within the defined budget and using a certain number of resources. The main project management activities include planning, tracking, reviewing, delegating and measuring results. (Kukhnavets, 2019)

Digital tools used in project management have enabled easier collaboration between team members. With the right tool, project managers can assign tasks to team members, who, in return, can add comments, set alerts and organise various tasks, etc. This level of collaboration leads to better results and helps foster a cooperative, synergistic environment. (Ripton, 2021).

Unit 3. Activity: Single Choice Questions

Lumi File: M4_L4_Unit 3 (The following text has been added in the Lumi file).

What distinguishes digital project management (DPM) from traditional project management?

- DPM focuses on managing projects that produce digital deliverables, such as websites and mobile apps.



- Digital project management involves executing projects exclusively in the physical space.
- Traditional project management is more agile and flexible in handling project complexities.
- DPM relies solely on traditional tools and methodologies for project execution.

How has the COVID-19 pandemic impacted the importance of digital tools in project management?

- The pandemic has heightened the importance of digital tools for managing remote teams and complex projects.
- The pandemic has reduced the reliance on digital tools for remote collaboration.
- Digital tools have become less relevant due to the pandemic's disruption of project activities.
- Digital tools have remained static in their significance, unaffected by the pandemic.

What is one of the main advantages of using digital tools in project management?

- Digital tools enable easier collaboration, task assignment, and result measurement.
- Digital tools restrict project managers from assigning tasks and tracking progress.
- Digital tools increase project complexity and make management more challenging.
- Digital tools hinder collaboration between team members.

Unit 4. Theoretical Chapter: The role of a digital project manager

The role of a Digital Project Manager (DPM) (*What It Means to Be a Digital Project Manager | Blog Wrike*, n.d.) is paramount in ensuring the successful execution of digital projects. This unit will present the basic skills of a Digital Project Manager, the essential soft skills required for the role, and provide valuable tips for becoming a successful DPM in the new digital era.

Digital Project Manager

Figure 4.48

Digital devices are crucial to a Digital Project Manager





Note. From Pexels [Photograph], by Canva Studio, 2019, Pexels. (<https://www.pexels.com/photo/photo-of-people-using-laptop-3194519/>). CC0 1.0 DEED.

A Digital Project Manager serves as the orchestrator of digital projects, responsible for planning, executing, and delivering initiatives within scope, on time, and within budget. Basic features, or skills that a DPM should have include:

1. Project Planning:

DPMs plan every aspect of a digital project, including defining project goals, outlining deliverables, creating timelines, and allocating resources. They ensure that project objectives align with organisational strategies and stakeholder expectations.

2. Team Coordination:

DPMs collaborate closely with cross-functional teams, including designers, developers, marketers, and content creators, to ensure seamless project execution. They facilitate effective communication, delegate tasks, and foster a collaborative work environment to maximise team productivity.

3. Risk Management:

DPMs anticipate and mitigate potential risks throughout the project lifecycle. They proactively identify obstacles, develop contingency plans, and adapt strategies to overcome challenges, ensuring project success even in the face of adversity.

4. Client Communication:

DPMs serve as the primary point of contact for clients, providing regular updates, addressing concerns, and managing expectations. They strive to build strong client relationships based on trust, transparency, and effective communication.

Soft Skills for a Successful Digital Project Manager

In addition to technical expertise, successful DPMs possess a range of soft skills (*How To Become a Digital Project Manager in 6 Steps | Indeed.Com, n.d.*) that are essential for navigating the complexities of digital projects. Some key soft skills for a DPM include:

1. Effective Communication:

DPMs must excel in both verbal and written communication, conveying information clearly, concisely, and persuasively to diverse stakeholders. They listen actively, empathise with team members, and foster open dialogue to facilitate collaboration and alignment.

2. Leadership:

DPMs exhibit strong leadership qualities, inspiring and motivating team members to achieve project goals. They lead by example, demonstrate confidence in decision-making, and empower team members to take ownership of their tasks and responsibilities.

3. Adaptability:

In the fast-paced digital landscape, DPMs must be adaptable and resilient in the face of change. They embrace uncertainty, pivot strategies as needed, and thrive in dynamic environments, ensuring project success amidst evolving circumstances.

4. Problem-solving:

DPMs are adept problem solvers, capable of identifying challenges, analysing root causes, and implementing effective solutions. They approach obstacles with creativity and resourcefulness, leveraging their analytical skills to overcome barriers and drive project progress.

Tips for Success in the New Digital Era

To excel as a DMP in the new digital era, consider the following tips:

1. Stay Updated:

Keep abreast of emerging trends, technologies, and best practices in digital project management through continuous learning and professional development.

2. Embrace Collaboration:

Promote a culture of collaboration and teamwork, leveraging the collective expertise of cross-functional teams to achieve project success.

3. Prioritise Stakeholder Engagement:

Cultivate strong relationships with clients and stakeholders, ensuring their needs and expectations are met throughout the project lifecycle.

4. Focus on Quality:

Strive for excellence in project delivery, prioritising quality over quantity and ensuring that deliverables meet or exceed client expectations.

In summary, the role of a Digital Project Manager is multifaceted, requiring a blend of technical proficiency, soft skills, and strategic acumen. Someone who is able to master these skills, can navigate the complexities of the digital era and drive impactful project outcomes.

Unit 5. Activity: Fill in the blanks

Lumi File: M4_L4_Unit 5 (The following text was added in the Lumi file).

Fill in the Blanks:

A Digital Project Manager serves as the **orchestrator** of digital projects, responsible for **planning**, executing, and delivering initiatives within **scope**, on time, and within budget.

Basic features, or skills that a DPM should have include: **technical** expertise, **soft skills**, and **strategic** acumen.

In addition to that, successful DPMs possess a range of soft skills that are essential for navigating the complexities of digital projects. Some key soft skills for a DPM include: effective **communication**, **leadership**, and **adaptability**.

To excel as a DPM in the new digital era, consider the following tips: embrace **collaboration**, prioritise **stakeholder** **engagement**, favour **quality** over **quantity**, and stay **updated**.

Unit 6. Theoretical Chapter: Online/digital marketing and Content marketing

Online marketing and content marketing have emerged as innovative strategies for businesses aiming to connect with their target audiences and achieve their marketing objectives. In Unit 6, we will examine the fundamentals of online/digital marketing and content marketing, exploring key concepts, strategies, and best practices for success in the digital field.



Figure 4.49**Online marketing**

Note. From Pexels [Photograph], by Dominika Roseclay, 2018, Pexels. (<https://www.pexels.com/photo/brown-framed-eyeglasses-905163/>). CC0 1.0 DEED.

Introduction to Online/Digital Marketing

Online marketing, also known as digital marketing, encompasses a broad range of strategies and tactics aimed at promoting products, services, or brands through digital channels. Unlike traditional marketing approaches, which rely on offline mediums such as print ads and TV commercials, online marketing leverages the power of the internet to reach and engage target audiences effectively. Key components of online marketing include search engine optimisation (SEO) ('Search Engine Optimization', 2024), social media marketing, email marketing, content marketing, pay-per-click (PPC) advertising, and more.

Content Marketing Essentials

Content marketing is a subset of online marketing that focuses on creating and distributing valuable, relevant, and consistent content to attract and retain a clearly defined audience — ultimately, to drive profitable customer action. Content marketing takes various forms, including blog posts, articles, videos, infographics, podcasts, social media posts, and more. The primary goal of content marketing is to provide value to the audience by addressing their needs, interests, and pain points, thereby building trust, authority, and brand affinity over time.

Creating a Digital Content Strategy

A digital content strategy ('How to Create a Digital Content Strategy', 2021) serves as the foundation for successful content marketing initiatives. It involves defining clear objectives, identifying target audiences, conducting research, and developing a plan to create, distribute, and measure content effectively. A well-crafted digital content strategy aligns content initiatives with business goals, ensures consistency across channels, and maximises the impact of content

efforts.

Key steps in creating a digital content strategy

1. Defining Objectives:

Clearly outline the goals and objectives of your content marketing efforts, whether it's to increase brand awareness, generate leads, drive website traffic, or boost conversions.

2. Understanding Audience

Conduct thorough audience research to identify the needs, preferences, demographics, and behaviours of your target audience. This insight will inform content creation and distribution strategies tailored to resonate with your audience.

3. Content Creation:

Develop high-quality, relevant, and engaging content that addresses the pain points and interests of your target audience. Content can take various forms, including blog posts, videos, infographics, eBooks, webinars, and more.

4. Content Distribution

Determine the most effective channels and platforms to distribute your content based on where your target audience spends their time online. This may include social media, email newsletters, industry publications, content syndication platforms, and more.

5. Measuring and Optimisation:

Implement robust analytics tools to track the performance of your content marketing efforts. Monitor key metrics such as website traffic, engagement metrics, lead generation, conversion rates, and ROI. Use this data to optimise your content strategy over time, refining tactics based on insights and feedback.

Best practice – example

Utilising Jira for Marketing Teams



Jira, a widely used project management tool (Jira For Marketing Teams: How To Use Jira Work Management For Marketing, n.d.), can also be leveraged effectively by marketing teams to streamline workflows, collaborate more efficiently, and manage marketing projects with ease. By utilising Jira's flexible work management features, marketing teams can organise tasks, track progress, prioritize initiatives, and communicate effectively within cross-functional teams. Using Jira, a Digital Project Manager can enhance these traditional project management methodologies:

1. Task Management:

Create and assign tasks to team members, set deadlines, and track progress in real-time. Jira's customisable boards and workflows enable marketing teams to visualise and manage their work effectively.

2. Collaboration:

Foster collaboration and transparency among team members by centralising project information, communication, and files within Jira. Team members can communicate, share updates, and provide feedback within the platform, reducing reliance on email and other communication channels.

3. Agile Methodology:

Implement agile marketing practices using Jira's agile boards and sprints. Agile methodologies such as Scrum and Kanban enable marketing teams to adapt to changing priorities, iterate on campaigns, and deliver value to stakeholders more efficiently.

4. Reporting and Analytics:

Gain insights into marketing project performance through Jira's reporting and analytics features. Track key metrics, visualise project progress, and identify areas for improvement to optimise marketing strategies and campaigns.

5. Online/digital marketing and content marketing:

These elements are important in modern business strategies, enabling organisations to reach, engage, and convert audiences in the digital landscape.



Unit 7. Activity: Crossword

Lumi File: M4_L4_Unit 7

The process of creating and distributing valuable content to attract and engage a target audience. (16 letters, 2 words)

The digital marketing strategy that involves optimising a website to rank higher in search engine results pages. (3 letters, abbreviation)

A metric used to measure the effectiveness of content marketing efforts, indicating the percentage of recipients who took a desired action. (14 letters, 2 words)

The process of analysing data to track the performance of content marketing efforts and make data-driven decisions. (8 letters)

A form that content marketing may take. (12 letters)

Unit 8. Theoretical Chapter: Social media marketing and managing Social Media

Nowadays, social media has become an integral part of marketing strategies for businesses of all sizes. This unit will explore the fundamentals of social media marketing, strategies for effectively managing social media channels, and insights from academic research and industry experts.



Figure 4.50

Social Media Marketing



Note. From Pexels [Photograph], by Tracy Le Blanc, 2017, Pexels. (<https://www.pexels.com/photo/person-holding-iphone-showing-social-networks-folder-607812/>). CC0 1.0 DEED.

Introduction to Social Media Marketing

Social media marketing is the process of using social media platforms to connect with your audience, build brand awareness, drive website traffic, and generate leads or sales. With billions of users worldwide, platforms like Facebook, Instagram, Twitter, LinkedIn, and TikTok offer businesses unprecedented opportunities to reach and engage their target audience in a more personalised and interactive manner.

Key Components of Social Media Marketing

- 1. Content Strategy:** A well-defined content strategy is crucial for social media marketing success. This involves identifying your target audience, determining the type of content that resonates with them, and creating a content calendar to ensure consistency in posting.
- 2. Community Engagement:** Social media is not just a broadcast platform; it's a two-way

communication channel. Engaging with your audience through comments, messages, and direct interactions fosters a sense of community and builds brand loyalty.

3. **Paid Advertising:** While organic reach on social media is valuable, paid advertising can amplify your message and reach a wider audience. Platforms like Facebook Ads, Instagram Ads, and LinkedIn Ads offer sophisticated targeting options to reach specific demographics and interests.
4. **Analytics and Measurement:** Tracking key metrics such as engagement rate, reach, clicks, conversions, and return on investment (ROI) is essential for evaluating the effectiveness of your social media efforts. Analysing data allows you to refine your strategy and optimise performance over time.

Strategies for Managing Social Media

1. **Establish Clear Objectives:** Before diving into social media management, it's essential to establish clear objectives aligned with your overall marketing goals. Whether it's increasing brand awareness, driving website traffic, or generating leads, having specific, measurable objectives will guide your social media strategy.
2. **Know Your Audience:** Understanding your target audience's demographics, interests, and online behaviour is critical for creating relevant and engaging content. Conduct audience research to identify their pain points, preferences, and the type of content they engage with the most.
3. **Consistent Branding:** Maintain a consistent brand voice, tone, and visual identity across all social media channels. Consistent branding helps reinforce your brand's identity and makes it easier for your audience to recognize and connect with your brand.
4. **Engagement and Interaction:** Actively engage with your audience by responding to comments, messages, and mentions promptly. Encourage conversations, ask questions, and solicit feedback to foster meaningful interactions and build relationships with your followers.

Insights from Academic Research and Industry Experts

Academic research provides valuable insights into the effectiveness of social media marketing strategies and best practices for managing social media channels. Studies such as those published in the *International Journal of Physical Distribution & Logistics Management* (Gössling, 2021) and the *Journal of Retailing and Consumer Services* (Kanagarajoo et al., 2019) offer in-depth analysis and empirical evidence on topics ranging from social media engagement to influencer marketing.

Additionally, industry experts and thought leaders contribute valuable perspectives through platforms like YouTube, where they share case studies, trends, and practical tips for social media success. Learning from both academic research and industry expertise can inform and

enhance your social media marketing efforts, ensuring they are grounded in data-driven insights and industry best practices.

Case Study: Driving Bookings Through Targeted Social Media Advertising

A boutique hotel located in a coastal town sought to boost bookings and increase occupancy rates, especially during off-peak seasons. This case study examines how the hotel utilised targeted social media advertising to achieve remarkable results and drive business growth.

Despite offering charming accommodations and personalised experiences, the boutique hotel faced challenges in attracting guests beyond peak tourist seasons. Traditional marketing efforts yielded limited results, prompting the hotel to explore alternative strategies to enhance brand visibility and drive bookings.

Social Media Advertising Strategy: Recognising the potential of social media advertising, the hotel devised a targeted strategy to reach and engage potential guests effectively. The strategy focused on the following key elements:

- 1. Audience Segmentation:** Utilising social media analytics and insights, the hotel segmented its target audience based on demographics, interests, and travel preferences. This segmentation enabled the hotel to tailor advertising messages and offers to specific audience segments, maximising relevance, and effectiveness.
- 2. Compelling Ad Creative:** The hotel invested in visually appealing ad creative that showcased its unique amenities, stunning views, and exceptional hospitality. Each ad was meticulously designed to evoke emotions and inspire travel among potential guests, driving interest and engagement.
- 3. Strategic Ad Placement:** Leveraging the targeting capabilities of social media platforms, the hotel strategically placed ads across relevant channels, including Facebook, Instagram, and travel-related websites. Ads were served to users who exhibited behaviours indicative of travel intent or affinity for similar destinations.
- 4. Promotional Offers:** To incentivize bookings, the hotel crafted exclusive promotional offers, discounts, and packages for social media advertising campaigns. These offers were tailored to appeal to different audience segments, such as couples seeking romantic getaways or families planning vacations.

Results and Impact: The targeted social media advertising campaigns delivered specific results, significantly impacting the hotel's bookings and revenue:

Remarkable Increase in Bookings: The strategic use of targeted social media advertising led to a remarkable increase in bookings, particularly during off-peak seasons. By reaching potential guests with relevant messaging and offers, the hotel successfully converted social media engagement into direct bookings, filling rooms that would otherwise remain vacant.



Revenue Growth and Improved Occupancy Rates: The surge in bookings resulting from social media advertising contributed to substantial revenue growth for the hotel. The increased occupancy rates during traditionally slower periods provided a much-needed boost to the hotel's bottom line, enhancing profitability and financial sustainability.

Enhanced Return on Investment (ROI): The hotel achieved an impressive return on investment (ROI) from its social media advertising efforts, with the cost per acquisition (CPA) of bookings significantly lower compared to traditional marketing channels. The ability to track and measure the performance of advertising campaigns allowed the hotel to optimise spending and maximise ROI effectively.

Positive Guest Feedback and Satisfaction: Guests who booked through social media advertising campaigns expressed high levels of satisfaction with their stay, citing the personalised offers and seamless booking experience. Positive reviews and word-of-mouth recommendations from satisfied guests further reinforced the hotel's reputation as a preferred destination for travellers seeking memorable experiences.

Through targeted social media advertising, the boutique hotel successfully overcame challenges associated with seasonality and drove significant business growth.

Unit 9. Activity: Single Choice Questions

Lumi File: M4_L4_Unit 9.1 (The following text has been added to the Lumi File).

What is the primary objective of social media marketing for businesses?

- ☐ To connect with the target audience and drive engagement
- ☐ To decrease the cost of products
- ☐ To decrease brand visibility
- ☐ To limit customer interaction

Lumi File: M4_L4_Unit 9.2 (The following text has been added to the Lumi File).

Which of the following is NOT a key component of social media marketing?

- ☐ Content Strategy
- ☐ Community Engagement
- ☐ Financial Planning
- ☐ Paid Advertising

Lumi File: M4_L4_Unit 9.3 (The following text has been added to the Lumi File).

Why is it essential to establish clear objectives before managing social media channels?

- ☐ It increases confusion among team members



- ☐ It helps align social media efforts with overall marketing goals
- ☐ It reduces the need for audience research
- ☐ It limits creativity in content creation



Unit 10. Theoretical Chapter: Using Content Management Systems

In this chapter, we look into comprehensive overview of Content Management Systems (CMS), an important part of digital project management.

A Content Management System is the core of digital content creation and management, offering users a robust platform to organise, create, and deploy content without necessitating extensive technical expertise.

Figure 4.51

Content Management Systems



Note. From Pixabay [Photograph], by 200degrees, 2022, Pixabay. (<https://pixabay.com/vectors/statistic-wordpress-web-data-1820320/>). CC BY 2.0.

Key Features of CMS

Content Management Systems offer various features that aid users in efficiently handling digital content. Understanding these key features is essential for digital project managers aiming to make informed decisions about the most suitable CMS for their projects.

User-Friendly Interfaces

At the forefront of CMS functionality is its user-friendly interface. The intuitive design allows users, even those without extensive technical backgrounds, to navigate through the system seamlessly. This accessibility fosters collaboration among team members and minimizes the learning curve, enabling contributors to focus on content creation rather than grappling with complex tools.

Consider platforms like WordPress, known for its straightforward dashboard and customizable interface. The drag-and-drop functionalities and easily accessible settings empower users to manage content effortlessly.

Version Control

Version control is an important feature that ensures the integrity of digital content throughout its lifecycle. CMS platforms maintain a record of changes made to content, allowing users to revert to previous versions if needed. This feature is invaluable for collaborative projects where multiple team members contribute to content creation, ensuring that every iteration is documented and reversible.

For instance, systems like Git integrated into CMS platforms provide robust version control capabilities, enabling project managers to track changes systematically and maintain content consistency.

Collaborative Editing

Facilitating collaboration is important in CMS design. Collaborative editing features empower multiple users to work on the same document simultaneously, enhancing productivity and reducing bottlenecks in content creation. Real-time updates and commenting systems enable instant communication among team members, fostering a dynamic and efficient workflow.

Google Docs is a prime example of a platform that embodies collaborative editing, allowing team members to work together seamlessly and see changes as they happen.

Flexibility and Scalability

The flexibility and scalability of CMS platforms make them adaptable to diverse project needs and future growth. CMS systems can handle various types of content, from text and images to multimedia elements, ensuring versatility in content creation. Additionally, these systems are designed to scale, accommodating an increasing volume of content and users without compromising performance.

Platforms like Drupal, known for its flexibility are good examples for creating complex websites and scalable architecture that can grow with the evolving needs of a project.

In summary, the key features of CMS, including user-friendly interfaces, version control, and collaborative editing, collectively contribute to an efficient content management ecosystem.



Project managers should carefully assess these features to choose a CMS that aligns with the specific requirements and collaborative dynamics of their digital projects.

Benefits of CMS

Moving forward, let's explore the benefits that Content Management Systems (CMS) bring to the table, enhancing the efficiency of digital project management.

Optimised Workflow

One of the primary advantages of CMS lies in its ability to optimise workflows. CMS provide a centralized platform for content creation, editing, and publication, and facilitate collaboration among team members. This process reduces the complexity of content management, allowing teams to focus on generating high-quality content rather than navigating convoluted processes.

Content Consistency

Maintaining consistency across digital content is paramount for establishing and reinforcing a unified brand voice. CMS plays a leading role in ensuring this consistency; providing templates, style guides, and centralized content repositories. Team members can adhere to predefined guidelines, fostering a cohesive brand identity across various digital channels.

Referencing the Content Marketing Institute's insights on brand consistency (CMI, 2023), (we find that organisations that prioritize brand consistency through CMS implementation are more likely to build trust with their audience. Consistent messaging across platforms reinforces brand values and increases brand recall, contributing to long-term success.

Case Study

To underscore the practical advantages of CMS, let's turn our attention to real-world case study showcasing successful implementation.

Case Study: The New York Times (Vnenchak, 2014):

The New York Times adopted a CMS to manage their vast array of digital content across platforms. The implementation led to a 25% increase in digital engagement, as the centralized system allowed for quicker updates and a more seamless user experience. This case illustrates how CMS can contribute to audience engagement and satisfaction.

These case studies underscore how using a CMS can result in evident improvements, from time efficiency to audience engagement. Project managers can draw inspiration from these success stories to tailor CMS implementations to the unique needs and goals of their digital projects.

Acknowledging and Addressing Challenges in CMS Implementation

It becomes crucial though to acknowledge and proactively address potential challenges that may arise during implementation. These challenges range from security concerns to the

learning curve associated with certain CMS platforms.

Security Concerns

One of the foremost challenges in CMS implementation is security. As CMS platforms handle sensitive content and user data, they become attractive targets for cyber threats. Digital project managers must prioritize security measures to safeguard against unauthorized access, data breaches, and other cyber threats.

References from the OWASP (Open Web Application Security Project) ('OWASP', 2024) guide on CMS security provide valuable insights into best practices for securing CMS platforms. Employing encryption, regular security audits, and ensuring CMS software is up-to-date are fundamental steps in mitigating security risks. By implementing robust security protocols, project managers can instil confidence in stakeholders regarding the protection of valuable digital assets.

Learning Curve and Training

The learning curve associated with certain CMS platforms can pose initial struggle for users, potentially impacting the efficiency of digital project teams. Different CMS solutions have varying levels of complexity, and users may require time to familiarize themselves with the interface, features, and functionalities.

Drawing from educational resources such as the CMS user guides, tutorials, and training materials provided by the respective CMS platforms is essential. These resources, often available on platforms like WordPress (*Documentation*, n.d.) or Drupal (*Drupal User Guide*, 2016), offer comprehensive insights into navigating the CMS effectively. Furthermore, investing in proper training and onboarding sessions for team members ensures a smoother transition and accelerates the proficiency of users.

Strategic Navigation

Strategically navigating through these challenges is imperative for digital project managers to ensure the seamless integration of CMS into their projects. It involves a proactive approach in identifying potential risks, devising mitigation strategies, and fostering a culture of cybersecurity awareness and continuous learning within the project team.

Regular training sessions, workshops, and updates on security best practices contribute to building a resilient team capable of effectively managing CMS challenges. Moreover, establishing clear communication channels for reporting potential security issues and providing timely updates on CMS advancements helps in maintaining a proactive stance against emerging threats.

Exploring CMS Integration into Digital Project Management Processes



As we continue with Content Management Systems (CMS), we will examine how CMS integrates into digital project management processes, collaboration and optimisation of workflows.

Content Creation to Publication

CMS platforms serve as the main tool for content creation within digital projects. The intuitive interfaces of CMS allow content creators to draft, edit, and collaborate on content in real-time. The collaborative nature of CMS facilitates team members working concurrently, ensuring that the content creation process is not only efficient but also collaborative, fostering creativity and diverse inputs.

During this phase, referencing insights from CMS industry reports, such as those provided by W3Techs (*W3Techs - Extensive and Reliable Web Technology Surveys*, n.d.), highlights the widespread adoption of CMS across various sectors. Understanding this adoption trend is crucial for project managers, affirming the relevance and impact of CMS in modern digital landscapes.

Tracking Changes and Managing Permissions

An important feature of CMS in the digital project management ecosystem is the ability to track changes and manage permissions. Version control mechanisms embedded in CMS platforms enable project managers to monitor alterations made to content throughout its lifecycle. This not only enhances accountability but also allows for easy identification and rollback of undesired changes.

Simultaneously, the granular control over permissions ensures that only authorized individuals can access, edit, or publish specific content. This feature is paramount in maintaining data integrity and complying with regulatory requirements.

Drawing insights from CMS user documentation, such as that provided by platforms like Joomla (*Joomla! Documentation*, n.d.), empowers project managers with a deeper understanding of how to effectively implement and leverage version control and permission management features.

Workflow Automation

Automation is an important feature of CMS integration into digital project management. CMS platforms often offer workflow automation tools that streamline repetitive tasks, reducing manual efforts and minimizing the risk of errors. This is particularly beneficial in the approval and publication stages, where predefined workflows ensure that content goes through the necessary checks and balances before reaching the audience.

Referring to industry analyses on the impact of workflow automation in CMS, such as those found in reports from Forrester Research ('Research', n.d.), provides project managers with insights into the broader trends and innovations in workflow automation. Understanding and



leveraging these trends ensure that digital project managers stay ahead in optimising their workflows for efficiency and effectiveness.

Fundamental Symbiosis

In essence, the relationship between CMS and digital project management is symbiotic. CMS streamlines content creation, tracks changes, manages permissions, and automates workflows. Simultaneously, digital project management principles guide the strategic implementation and optimisation of CMS to align with project goals.

This symbiotic relationship is fundamental for optimising workflows and achieving project success. Recognizing the interdependence of CMS and project management empowers digital project managers to harness the full potential of these systems, ensuring that content creation, publication, and overall project processes are not only efficient but also strategically aligned with project objectives.

Future Trends and Innovations

Emerging trends such as headless CMS and AI-driven content management are reshaping the landscape, offering new possibilities and efficiencies.

Headless CMS (*Headless CMS Explained in 1 Minute*, 2023), with its decoupled architecture, allows for greater flexibility in delivering content across various channels and devices. Artificial Intelligence, on the other hand, is transforming content creation and personalisation, automating tasks and enhancing user experiences.

By following these innovations, digital project managers can position themselves at the forefront of technology, ensuring their projects are not only current but also future-proof.

In wrapping up the exploration of Content Management Systems, remember to consult the additional material to enrich your understanding further. A holistic grasp of CMS and its evolving landscape is crucial for successful digital project management in today's environment.

Unit 11. Activity: Single Choice Set Questions

Lumi File: M4_L4_Unit 11 (The following text has been added to the Lumi file).

Which of the following is a primary function of a CMS?

- Facilitating content creation and publication
- Analysing website traffic
- Managing social media accounts

Which CMS platform is known for its flexibility and extensive plugin ecosystem?

- WordPress
- Shopify
- Wix

What is the primary purpose of version control in a CMS?

- Monitoring alterations made to content
- Tracking changes made to website design
- Managing user permissions

Which of the following is a key benefit of using a CMS?

- Enhancing website security
- Reducing search engine optimisation (SEO) efforts
- Increasing website load speed

What does the acronym CMS stand for in the context of web development?

- Content Management System
- Communication Management System
- Customer Management System

Which feature of a CMS allows users to schedule content publication in advance?

- Content scheduling
- Role-based access control
- Version control

Unit 12. Theoretical Chapter: Using e-tourism platforms

Lumi File: M4_L4_Unit 12 (The following text has been added to the Lumi File).

Content type: Interactive Book

E-tourism platforms

Now let's have a look into the use of e-tourism platforms.

Hotspot 1: The integration of e-tourism platforms in the travel industry has become instrumental in reshaping how travellers plan, book, and experience their journeys. These platforms leverage digital technologies to offer a wide array of services, ranging from booking accommodations and transportation to discovering local attractions and experiences. Ranging from dedicated websites to mobile applications, they serve as comprehensive hubs that connect travellers with an abundance of travel-related information and services.

Hotspot 2: E-tourism platforms have come a long way since their inception. Initially, they started

as simple websites offering basic information about destinations and travel services. However, with advances in technology and the widespread adoption of the internet, these platforms have evolved into sophisticated ecosystems catering to every aspect of the travel experience.

Hotspot 3: One of the key advantages of e-tourism platforms lies in their ability to offer a centralised and user-friendly interface for travellers. With just a few clicks, users can access information about destinations, compare various accommodation options, and tailor their itineraries to suit personal preferences. Integration with interactive maps, real-time availability, and user reviews further enhances the decision-making process, providing travellers with the tools they need to make informed choices.

Hotspot 4: E-tourism platforms also play a crucial role in streamlining the booking process. From flights and hotels to activities and transportation, these platforms offer a one-stop-shop for all travel-related needs. This not only simplifies the planning phase but also contributes to a more efficient and organized travel experience. Additionally, the integration of secure payment gateways ensures a hassle-free and secure transaction process, fostering trust among users.

Hotspot 5: The evolution of e-tourism platforms is marked by ongoing innovations that cater to the changing demands of modern travellers. Artificial intelligence and machine learning, for instance, are being integrated into these platforms to offer personalised recommendations based on user preferences and behaviours. Advanced algorithms analyse vast amounts of data to suggest tailored itineraries, accommodations, and activities, elevating the level of personalisation in travel planning. Additionally, virtual reality (VR) and augmented reality (AR) technologies are beginning to find their place in e-tourism, allowing users to virtually explore destinations, hotels, and attractions before making decisions. These immersive experiences contribute to more informed and confident travel choices.

Hotspot 6: As the travel industry continues to embrace digital transformation, e-tourism platforms are set to play an increasingly pivotal role. Their ability to provide personalized, efficient, and socially connected travel experiences positions them as indispensable tools for both seasoned and first-time travellers, ensuring that the journey is as memorable as the destination itself.

Images used:

<https://www.pexels.com/photo/person-with-toy-airplane-on-world-map-3769138/>

<https://www.pexels.com/photo/boats-and-body-of-water-417344/>

<https://www.pexels.com/el-gr/photo/269790/>

<https://www.pexels.com/photo/close-up-of-laptop-keyboard-331684/>



<https://www.pexels.com/photo/woman-taking-pictures-of-ruins-2087391/>

<https://www.pexels.com/photo/man-leaning-against-wall-using-laptop-941572/>

Unit 13. Activity: Single Choice Questions

Lumi File: M4_L4_Unit 13 (The following text has been added in the Lumi file).

What is one of the key advantages of e-tourism platforms?

- They offer a centralised and user-friendly interface for travellers.
- They offer limited information about destinations and travel services.
- They provide a decentralized and complex interface for travellers.

How do e-tourism platforms contribute to streamlining the booking process?

- By offering a one-stop-shop for all travel-related needs.
- By only showing the options available for accommodation and transportation.
- By making the planning phase more complicated and disorganised.

Which technology is being integrated into e-tourism platforms to offer personalized recommendations based on user preferences?

- Artificial Intelligence (AI)
- Virtual Reality (VR)
- Augmented Reality (AR)

Unit 14. Theoretical Chapter: Interpreting digital marketing analytics

Welcome to Unit 14, where we interpret digital marketing analytics, a fundamental skill in the ever-evolving digital marketing landscape. In this chapter, we will explore the significance of analytics, analyse key metrics, and discuss actionable insights derived from digital marketing data.

Figure 4.52

Digital Marketing Analytics





Note. From Pexels [Photograph], by Tima Miroshnichenko, 2021, Pexels. (<https://www.pexels.com/photo/marketing-man-laptop-internet-7567536/>). CC0 1.0 DEED.

Digital Marketing Analytics

Let's begin by understanding the foundational importance of digital marketing analytics. Analytics serve as the compass for digital marketers and project managers, providing invaluable insights into the performance of campaigns, user behaviour, and the overall effectiveness of digital strategies. We'll explore the evolution of digital marketing analytics and how it has become an indispensable tool for making informed decisions.

Key Metrics in Digital Marketing

There are specific key metrics that define the success of digital marketing efforts. From website traffic and conversion rates to click-through rates (CTR) and customer acquisition costs (CAC), understanding these metrics is crucial for optimising campaigns. We'll discuss how each metric contributes to the broader picture and explore industry benchmarks for comparison. (Adobe Experience Cloud Team, 2024; *Analytics Academy*, n.d.).

1. Return on investment (ROI)

Return on investment is the most basic — and important — digital marketing metric. It shows

what revenue you received in exchange for your investment in marketing. ROI attributes profit and revenue growth to your marketing tactics, so you can see which efforts lead to the most financial results for your business.

Marketers measure ROI with this formula:

$$\text{ROI} = \left\{ \frac{[(\text{number of leads} \times \text{lead to customer rate} \times \text{average sale price}) - \text{cost for marketing}]}{\text{cost for marketing}} \right\} \times 100$$

ROI attributes profit and revenue growth to your marketing tactics.

It is important to mention that ROI is not exclusively used for marketing. Therefore, we are presenting only one of its interpretations adapted to the marketing sector with different values incorporated in the formula.

2. Total website traffic

Total website traffic measures how many visitors your website receives over a certain time period. This includes both new and returning visitors to your website, which gives you insight into your site's visibility and popularity.

Total website traffic gives you an idea of how aware people are of your brand and how effective your online presence is in general. In conjunction with other digital marketing metrics, total website traffic tells you how effective a campaign is at driving customers to your website. Ideally, you should see steady growth in your traffic from week to week.

3. Traffic from channels

Once you know your website's traffic figures, it's time to determine where that traffic came from. Traffic from channels breaks down your total traffic numbers by channel. The right analytics platform will tell you which channels are the most effective at driving traffic to your website.

The most common channels are:

Direct visitors:

These are users who access your site by directly typing your URL into their web browser. This usually indicates that the users regularly visit your site or are very familiar with your company.

Organic visitors:

Organic traffic comes to your website through unpaid search engine traffic from Google or Bing.

Referred visitors:

Referrals come to your site from another site that links to yours. For example, if you earned a feature in a news article, that outlet's readers would be referred visitors if they click on your link in the article.

Email visitors:

These users access your site through a link you send to them in an email message or in a newsletter.

Social media visitors:

Social media visitors access your site from platforms like Facebook, Instagram, Twitter, LinkedIn or TikTok.

Paid visitors:

This traffic finds your site as a result of paid ads. This includes pay-per-click (PPC) advertising, display advertising, or social media ads.

When you understand which channels drive the most traffic to your website, you can identify the channels that most need your attention. For example, if your social media visitors are significantly lower than other channels, then you might want to improve that channel.

4. Conversions

Conversions is a critical digital marketing metric that measures how many visitors turn into paying customers or subscribers. It's a metric that measures whether a site visitor makes a transaction with you, whether it's paid or not. While it's great to have high traffic to your site, a lot of traffic doesn't mean much if that traffic doesn't convert. Your goal should be to convert as many site visitors as possible so you can bring them through your sales funnel.



Conversion rate (CR) is the numerical percentage of visitors that complete a desired action. This is the formula for calculating your CR:

$$CR = \left(\frac{\text{number of conversions}}{\text{total number of visitors}} \right) \times 100$$

Conversion rate is the numerical percentage of visitors that complete a desired action.

You can either set your CR goals before or after starting a campaign. Use your target CR as a benchmark to determine whether your digital marketing campaign was engaging enough for your target audience.

5. Average bounce rate

Bounce rate tells you the number of users who visit your site and then leave (or bounce) without clicking a link, filling out a form, or making a purchase. It can also tell you how long visitors tend to spend on your website.

A shorter bounce rate indicates that users find your content valuable, which suggests the possibility of more conversions.

6. Returning visitors

The returning users metric measures the number of visitors who come to your site multiple times. If you have a lot of returning visitors, that likely means your audience finds your content valuable. But if your returning visitors is low, your content might not be engaging enough to encourage people to come back.

This metric is especially helpful for evaluating the value of content marketing campaigns. To use this metric, establish an evaluation period. This could be weekly, monthly, or quarterly depending on your campaign details and goals. At the end of the campaign, see how many visitors returned to your site. Try to optimise this figure over time to foster deeper connections with your audience.

7. Click-through rate (CTR)

Click-through rate measures the number of clicks a paid ad receives per impression. A higher CTR means that more people are clicking on your ads. You can calculate CTR with this formula:

$$CTR = \left(\frac{\text{total clicks on ad}}{\text{total impressions}} \right) \times 100$$

Click-through rate measures the number of clicks a paid ad received per impression.

CTR is helpful because it indicates how relevant your ad is. If people find your ad compelling, they're much more likely to click it and engage with you. A low CTR, on the other hand, indicates that users don't find your ad engaging enough to click on.

8. Cost per lead (CPL)

Lead generation is the process of generating consumer interest for a product or service with the goal of turning that interest into a sale, using methods that usually require internet, or some sort of software or technology (Waters, 2022).

Cost per lead measures how much your business spends on capturing a lead (*Cost Per Lead*, n.d.; Waters, 2022), which tells you how profitable your marketing efforts are. This way, you can decide where to allocate funds for specific campaigns.

By optimising your campaigns to generate more leads at a lower CPL, you'll generate higher quality leads while protecting your margins.

9. Page views

Page views measures how many pages a user visits in a single session. This digital marketing metric is useful, but it's best to use it in conjunction with how much time someone spends on your website. After all, someone who visits 10 pages in 30 seconds isn't as engaged as someone who visits the same number of pages in 15 minutes.

Page views will show you the most-visited areas of your website. For ecommerce stores, this will tell you which products are the most popular. For blogs, it shows which content users spend the most time reading. By optimising for page views, you can decide where to strategically place content on your website in the hopes of keeping people on-site longer.

10. Exit rate

It sounds similar to bounce rate but exit rate measures how many users leave your site from a specific page. While bounce rate measures the rate at which people leave, exit rate measures which page people leave from.

Exit rate helps you identify holes in your conversion strategy. A page with a high exit rate indicates some kind of flaw with your strategy, like poor user experience or irrelevant content.

11. Cost per acquisition (CPA)

Cost per acquisition focuses on revenue. It calculates the cost you invest in each person who becomes a paying customer. CPA tells you how much the business spent to move a person from their first touchpoint to their ultimate conversion. For example, if you spend an average of \$200 to convert a prospect into a customer, your CPA would be \$200.



A lower CPA is ideal because it means your marketing efforts are high-value, but your target CPA will depend on your industry, products, and target audience.

12. Cost per click (CPC)

Cost per click shows you how much you paid when someone clicks on your ad. This digital marketing metric is used to determine how cost-effective your advertising campaigns really are. This simplified formula measures CPC:

$$\text{CPC} = \frac{\text{ad cost}}{\text{number of clicks}}$$

Cost per click shows you how much you paid when someone clicks on your ad.

CPC tells you the real cost of clicks received from an ad, versus the maximum cost indicated by your advertising account. The higher the CPC, the less likely you are to see ROI from a paid ad campaign. The goal is to get your CPC as low as possible while maximising return on advertising spend (ROAS).

13. Customer lifetime value (CLV)

Customer lifetime value is the dollar amount you can expect a customer to spend with your company during their time with you. CLV can be historical, which is the sum of all profits made from the customer's purchases. CLV can also be predictive, which means you use past data to project the revenue you expect to earn from each customer.

The longer a customer stays with your company, the higher the revenue. Measuring CLV will tell you how effective your marketing is at keeping customers happy and loyal to your business.

14. Return on advertising spend (ROAS)

Return on ad spend calculates profit or loss in advertising. It measures, in dollar signs, how effectively your campaigns perform. This allows you to determine which ad campaigns are effective and which campaigns won't generate enough revenue to make up for advertising costs.

15. Customer retention rate (CRR)

Also called reverse customer churn, customer retention rate tracks customers who return to your company to spend money. It's more expensive to acquire new customers than it is to retain existing customers, so optimising your CRR can significantly cut marketing costs. You can measure CRR with this formula:

$$CRR = \left[\left(\frac{E - N}{S} \right) \right] \times 100$$

S = customers at the beginning of the period

E = customers at the end of the period

N = new customers gained within the period

Customer retention rate tracks customers who return to your company to spend money.

The ideal CRR is 100%, although that isn't realistic. Even so, try to keep your CRR as high as possible. If you notice a dip in retention, assess why customers aren't returning to your business.

Tools for Digital Marketing Analytics

There is a variety of tools available for digital marketing analytics (**Okonkwo** et al., 2022), from Google Analytics to more specialised platforms like Moz and SEMrush. We'll discuss the functionalities of each tool, their advantages, and how they contribute to a holistic understanding of digital marketing performance.

Google Analytics: one of the most widely adopted analytics platforms globally, Google Analytics reigns supreme in providing comprehensive insights into website performance

Moz: suite of SEO tools designed to optimise website visibility and performance

SEMrush: range of tools for SEO, PPC, content marketing, and social media management

HubSpot: marketing and sales software, offering a suite of tools for lead generation, email marketing, CRM, and analytics

Adobe Analytics: enterprise-level analytics solution that caters to the needs of large-scale businesses and organisations

Ahrefs: comprehensive backlink analysis and competitor research capabilities

Unit 15. Activity: Branching Scenario

Lumi File: M4_L4_Unit 15 (The following text has been added to the Lumi File)

Scenario: You are working in a B2B software company that offers project management solutions. The company has been experiencing a plateau in lead generation despite investing in various marketing initiatives.



To address this challenge, the marketing team decides:

- to examine their website analytics to gain insights into user behaviour and identify areas for improvement.
- to invest more money on in another new marketing initiative.
- to drop all their initiatives altogether and start over.

Correct answer feedback: Great job! The marketing team starts by collecting data from their website analytics platform, such as Google Analytics. They analyse metrics such as page views, bounce rates, and conversion rates to understand how users interact with their website. Additionally, they segment the data based on different landing pages to identify patterns and trends.

Wrong answers feedback: Oh, no! This action could result to another waste of money. / Oh, no! Why should they give up before identifying the problem?

Upon analysis, the team discovers that certain landing pages consistently outperform others in terms of conversion rates. These pages effectively capture the interest of visitors and compel them to take desired actions, such as signing up for a free trial or downloading a whitepaper.

- The team decides to adjust the website with only the content of the pages with high conversion rates.
- The team dives deeper into user behaviour on these high-converting landing pages.

Correct answer feedback: Great job! They analyse factors such as time spent on page, scroll depth, and click-through rates to understand what elements resonate most with visitors. Insights from heatmaps and user recordings provide valuable qualitative data on user interactions. Armed with insights from their analytics, the marketing team devises optimization strategies to further enhance the performance of their landing pages. They experiment with different elements such as headlines, call-to-action buttons, and form fields to determine the most effective combinations. A/B testing allows them to validate their hypotheses and iterate on improvements.

Wrong answers feedback: Oh, no! This action could result to false evaluation criteria.

Great job! They analyse factors such as time spent on page, scroll depth, and click-through rates to understand what elements resonate most with visitors. Insights from heatmaps and user recordings provide valuable qualitative data on user interactions. Armed with insights from their analytics, the marketing team devises optimization strategies to further enhance the performance of their landing pages. They experiment with different elements such as headlines, call-to-action buttons, and form fields to determine the most effective combinations. A/B testing allows them to validate their hypotheses and iterate on improvements.

The team closely monitors the impact of their optimization efforts through continuous tracking



of key metrics. They observe an uptick in conversion rates and lead generation as the optimized landing pages resonate more effectively with their target audience. Regular iteration based on ongoing analysis ensures that the company maintains a competitive edge in lead generation. Ultimately, the company's strategic use of website analytics leads to tangible results. The optimized landing pages contribute to a significant increase in lead generation, driving growth and revenue for the business. The marketing team's data-driven approach underscores the importance of leveraging analytics for informed decision-making and continuous improvement.

In this example scenario, we witness firsthand how a B2B software company harnesses the power of website analytics to identify high-converting landing pages and boost lead generation. This demonstrates the practical application of digital marketing analytics in driving measurable results and achieving business objectives.

Unit 16. Theoretical Chapter: Basics of using CRM and ERP systems

Lumi File: M4_L4_Unit 16 (The following text was added in the Lumi File).

Content type: Interactive Book

Basics of using CRM and ERP systems

Hotspot 1: Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) are two essential types of software systems that help organizations manage their business processes more efficiently.

Hotspot 2: CRM systems support and connect front-office business functions, such as marketing, sales, advertising, and customer service. Basically, these systems automate how a customer interacts with a business, with the goal of improving customer relationships, retention, and sales growth.

Hotspot 3: One of the main features of CRM systems is the centralized storage of customer information, which can be analysed to create more consistent, personalized customer experiences. Moreover, CRM systems aid in creating and managing marketing campaigns like email marketing, tracking their effectiveness, and generating leads. They also provide tools for managing customer support, including ticketing systems, knowledge bases, and communication channels. CRM systems clearly improve customer satisfaction and loyalty, enhance sales and marketing effectiveness, and streamline business processes.

Hotspot 4: On the other hand, ERP systems collect and store data from multiple back-office departments in a common database. This unifies critical business functions, breaks down data silos, and gives employees a single source of truth for more accurate decision-making in



financial management, supply chain management, human resources, and other areas. ERP also expedites business processes and drives productivity by automating many manual tasks, such as data entry, that can slow work down.

Hotspot 5: ERP systems lowers operational costs by consolidating several business functions into a single system and automating processes across the organization. This means that more work can be done in less time and with fewer resources, and staff can spend more time on more innovative projects that drive growth. Modern ERP systems use process automation and artificial intelligence to optimize manual, repetitive tasks that are prone to human error, like the closing of books for example. ERP also helps companies by tracking all materials in every stage of the inventory lifecycle, as well as all customer orders, on a single system. This improves visibility and supply chain planning and helps get the right products into customers' hands on time.

Hotspot 6: Another key feature that ERP systems offer is a comprehensive view into financial and operational performance, with customizable reports and real-time insight, without the need for manual reporting. It can also reduce the time needed to complete many tasks by making processes more straightforward and by reducing the time spent searching for the information they need. This, coupled with automated processes and connected systems, helps teams get accurate information to decision-makers fast- so they can respond to changing business and economic conditions.

Hotspot 7: The single source of data and the common interface that ERP systems provide, allow users from across departments to easily share information and improve tasks such as financial planning, sales and inventory management, logistics, workforce planning, and customer experience. Instead of departments working with multiple software solutions that only one group can access, teams can work proactively and access information independently.

Hotspot 8: So, the conclusion is obvious. Both CRM and ERP systems help businesses increase productivity, improve automation, and boost revenue generation, one from the side of sales and customer service (CRM) and the other from the side of financial data and operations (ERP).

Images used:

<https://www.pexels.com/photo/colleagues-looking-at-survey-sheet-3183153/>

<https://www.pexels.com/photo/man-with-headphones-facing-computer-monitor-845451/>

<https://www.pexels.com/photo/train-subway-236698/>

<https://www.pexels.com/photo/server-racks-on-data-center-4508751/>

<https://www.pexels.com/photo/golden-round-gears-on-black-surface-3785933/>

<https://www.pexels.com/photo/person-holding-black-ipad-221185/>



<https://www.pexels.com/photo/aerial-photography-of-concrete-road-1646164/>

<https://www.pexels.com/photo/black-blue-and-red-graph-illustration-186461/>

Source: Vollmer, C. (2022). *CRM vs. ERP: Know the Differences*. <https://www.oracle.com/erp/erp-vs-crm/>

Unit 17. Theoretical Chapter: ERP systems comparison

Enterprise Resource Planning (ERP) systems are integral to modern business operations, providing a centralised platform for managing various aspects of an organisation, including finances, supply chain, human resources, and customer relationships. In this unit, we will learn about ERP systems by comparing two prominent solutions: Cloudsuite by Infor and Epicor.

Figure 4.53

ERP systems can assist in managing projects and organisations



Note. From Pexels [Photograph], by Lukas, 2017, Pexels. (<https://www.pexels.com/photo/two-white-printer-papers-near-macbook-on-brown-surface-590016/>). CC0 1.0 DEED.

Understanding Cloud vs. SaaS

Before jumping on the comparison, it's essential to comprehend the differences between cloud and Software as a Service (SaaS) deployment models in ERP systems. Cloud computing involves accessing computing resources, software applications, and data storage over the internet, enabling flexibility, scalability, and accessibility from anywhere with an internet connection. SaaS, on the other hand, delivers software applications via the internet on a subscription basis, eliminating the need for local installation and maintenance.

Factors Affecting ERP Cost

Cost considerations are paramount when evaluating ERP systems. The pricing structure of ERP solutions can vary significantly based on factors such as software licensing, hardware requirements, implementation, customization, maintenance, and ongoing support. SaaS subscriptions typically offer a predictable, subscription-based pricing model, encompassing software, maintenance, and support services. In contrast, traditional on-premise deployments may incur higher upfront costs for software licenses, hardware infrastructure, and implementation services, with additional expenses for ongoing maintenance and upgrades.

Businesses must carefully assess their budgetary constraints, scalability requirements, and long-term strategic goals when determining the most cost-effective ERP solution for their organisation.

Software and Maintenance Considerations

One of the key advantages of SaaS-based ERP solutions is the inclusion of maintenance and support services as part of the subscription package. SaaS providers assume responsibility for software maintenance, including updates, patches, and system enhancements, ensuring that customers have access to the latest features and security updates without the need for internal IT resources. This alleviates the burden on organisations to manage and maintain their ERP systems, allowing them to focus on core business activities.

In contrast, traditional on-premise or hosted ERP deployments may require dedicated IT resources to manage software updates, patches, and system maintenance. Neglecting regular maintenance tasks can result in system vulnerabilities, performance issues, and compliance challenges, underscoring the importance of proactive maintenance and support strategies.

Comparing Cloudsuite and Epicor

While mentioning ERP systems, it would be wrong not to mention a comparison of the two applications offered (*The Top ERP Systems*, n.d.).

Infor's Cloudsuite (*Infor CloudSuite | ERP Cloud Solutions*, n.d.):

- Infor offers a comprehensive suite of industry-specific ERP solutions tailored to various

sectors, including manufacturing, healthcare, retail, and distribution.

- Cloudsuite provides modules for core business functions such as financial management, supply chain management, human capital management, and customer relationship management (CRM).
- Infor's Cloudsuite is renowned for its industry-specific features, configurable workflows, and flexible deployment options, including on-premise, cloud, and hybrid deployment models.
- Cloudsuite prioritizes user experience, scalability, and agility, enabling organisations to adapt to evolving business needs and market dynamics seamlessly.

Epicor (*Epicor*, n.d.):

- Epicor specializes in delivering ERP solutions for industries such as manufacturing, distribution, retail, and service sectors.
- Epicor's ERP software encompasses a broad range of functionality, including supply chain management, production management, financial management, and CRM capabilities.
- Known for its flexibility and scalability, Epicor offers deployment options tailored to each organisation's preferences, including on-premise, cloud, and hybrid deployment models.
- Epicor's robust suite of industry-specific solutions caters to the unique needs of businesses, empowering them to optimise operations, drive growth, and enhance competitiveness in their respective markets.

While both Cloudsuite and Epicor offer comprehensive ERP solutions with common features such as financial management, supply chain management, and CRM, they differ in terms of industry focus, customisation options, deployment models, scalability, and integration capabilities. Businesses must carefully evaluate their specific requirements, operational processes, and strategic objectives to select the ERP solution that best aligns with their needs and supports their long-term growth and success.

By understanding these key aspects and conducting thorough due diligence, organisations can make informed decisions when selecting an ERP system that drives operational efficiency, accelerates growth, and fosters innovation.

Unit 18. Activity: Single Choice Questions

Lumi File: M4_L4_Unit 18 (The following text has been added in the Lumi file).

What is a distinguishing feature of SaaS-based ERP solutions compared to traditional on-premise deployments?



- SaaS providers assume responsibility for software maintenance and updates.
- On-premise deployments offer more flexibility and scalability.
- SaaS-based solutions require higher upfront costs for software licenses.

What should businesses consider when evaluating ERP systems in terms of cost?

- Long-term strategic goals
- Number of software licenses
- Hardware requirements

Which statement accurately describes the comparison between Infor's Cloudsuite and Epicor ERP solutions?

- Both solutions offer industry-specific features and flexible deployment options.
- Infor's Cloudsuite is renowned for its flexibility and scalability.
- Epicor specializes in delivering ERP solutions for industries such as healthcare and distribution.

What does SaaS stand for?

- Software as a Service
- Software as Algorithm Service
- Software as a Solution
- Software as Algorithm Support

Lesson 5: Creating and Managing Digital Content

Unit 1. Introduction to Lesson 5

In this lesson we will set the scope on the creation and management of Digital Content. Starting off we will see different content strategies that project managers and their teams can utilise while creating digital content and how to set up a successful digital content plan. Moving on, we will explore different types of digital content from podcasts to infographics and interactive visualisations and how to develop all those correctly, avoiding some issues that arise from not appropriate content.

Moreover, the creation of accessible digital content, adhering to official standards and guidelines, is crucial for inclusivity and compliance. Whether it's optimising for screen readers or ensuring compatibility across devices, prioritizing accessibility enhances user experiences and fosters inclusivity in the digital realm. The rise of AI technology offers unprecedented capabilities, and this lesson will provide insights on how to incorporate this technology into the work of a Project Manager.

To have a successful campaign, we must use the proper tools but in some cases that we are going to look into, we have to find ways to surpass issues that arise from a non-successful digital campaign. During and after having created all this content, we must make sure that we do not violate copyright on other's work and how to protect our own.

Unit 2. Theoretical Chapter: Developing digital content strategies and plans

Effective content creation requires more than just producing engaging material. It necessitates a comprehensive strategy and a well-defined plan to ensure that your content not only resonates with your target audience but also aligns with your overarching goals. This chapter will present various content strategies and outline the steps to formulate a successful digital content plan. Digital content is important not only for professionals in the communication and marketing fields but also for tourism professionals, since many people tend to check the online presence of a destination before deciding to visit it. Therefore, creating high-quality digital content is a useful skill for project managers in the sustainable tourism sector.



Figure 4.54

Social media marketing has become a trend



Note. From Pixabay [Photograph], by narciso1, 2015, Pixabay. (<https://pixabay.com/illustrations/wordcloud-tagcloud-cloud-text-tag-679949/>). CC BY 2.0.

Understanding Content Strategies

- a) **Content Marketing Strategy:** Content marketing ('Strategy - Content Marketing', n.d.) revolves around creating and distributing valuable, relevant, and consistent content to attract and retain a clearly defined audience. It aims to drive profitable customer action by providing solutions to their problems or fulfilling their needs.
- b) **SEO Content Strategy:** Search engine optimisation (SEO) content strategy ('SEO Content Marketing', n.d.) focuses on optimising content to improve its visibility and ranking in search engine results pages (SERPs). This strategy involves keyword research, on-page optimisation, and creating high-quality, authoritative content.
- c) **Social Media Content Strategy:** Social media content strategy (Newberry, 2023) involves planning and creating content specifically tailored for various social media platforms. It includes defining target audiences, determining content formats, scheduling posts, and engaging with followers to build brand awareness and drive

engagement.

- d) Content Personalisation Strategy:** Personalisation ('Personalization and ABM', n.d.) involves tailoring content to individual users based on their preferences, behaviour, and demographics. This strategy enhances user experience, increases engagement, and fosters customer loyalty by delivering relevant content that resonates with each user.

Setting Up a Successful Digital Content Plan

- a) Define Goals and Objectives:** Before exploring content creation, it's essential to define your goals and objectives. Ask yourself, what do you hope to achieve with your digital content? Whether it's increasing brand awareness, driving website traffic, generating leads, or boosting sales, having clear goals will guide your content strategy and shape your approach.
- b) Know Your Audience:** Understanding your audience is fundamental to creating content that resonates with them. Conduct thorough audience research to gain insights into their demographics, interests, preferences, and pain points. By understanding who your audience is and what they care about, you can tailor your content to meet their needs and preferences effectively.
- c) Content Calendar and Schedule:** Developing a content calendar is a crucial aspect of effective content planning. A content calendar outlines the topics, formats, and publishing schedule for your content. By planning ahead and scheduling content in advance, you can ensure consistency in your messaging and stay organised with your content creation efforts. This also allows you to align your content with key events, holidays, or marketing campaigns relevant to your audience.
- d) Content Creation and Distribution Channels:** Once you have a clear understanding of your goals, audience, and content schedule, it's time to create and distribute your content. Consider the types of content that resonate with your audience and the channels through which they prefer to consume content. Whether it's blog posts, videos, infographics, or podcasts, choose formats that align with your audience's preferences and behaviours. Additionally, leverage a mix of owned, earned, and paid media channels to maximise your content's reach and impact.
- e) Monitor and Measure Performance:** Monitoring and measuring the performance of your digital content is essential for evaluating its effectiveness and making informed decisions. Implement analytics tools to track key metrics such as website traffic, engagement levels, conversion rates, and social media metrics. If you analyse these metrics, you can identify what's working well, what needs improvement, and make necessary adjustments to optimise your content strategy over time.



Unit 3. Activity: Multiple Choice Questions

Lumi File: M4_L5_Unit 3 (The following set has been added in the Lumi file).

1. What is the first step in setting up a successful digital content plan?
 - Creating a content calendar
 - Defining goals and objectives
 - Knowing your competition
 - Designing content formats
2. Why is it important to know your audience when creating digital content?
 - To increase website traffic
 - To generate leads
 - To tailor content to their preferences and interests
 - To schedule content publishing
3. What is the purpose of monitoring and measuring the performance of digital content?
 - To create more content
 - To evaluate effectiveness and make informed decisions
 - To know your competition
 - To design content formats

Unit 4. Theoretical Chapter: Developing digital content

In the digital era, content comes in various forms and formats and is delivered to diverse audiences with unique communication objectives. This chapter will present the different types of digital content and provide guidelines on how to develop each type effectively. We will also discuss the potential issues that arise from inappropriate digital content creation.

Figure 4.55

Digital Content



Note. From Pixabay [Photograph], by WebTechExperts, 2020, Pixabay. (<https://pixabay.com/illustrations/marketing-advertising-internet-5187244/>). CC BY 2.0.

Types of Digital Content

Text/Posts:

Text-based content includes articles, blog posts, social media updates, and website copy. When developing text content, focus on clarity, conciseness, and relevance to the target audience. Use headings, bullet points, and formatting to improve readability.

Figure 4.56

Creating a blog post in WordPress



Note. From Pixabay [Photograph], by StockSnap, 2015, Pixabay.

(<https://pixabay.com/photos/wordpress-blogging-writing-typing-923188/>). CC BY 2.0.

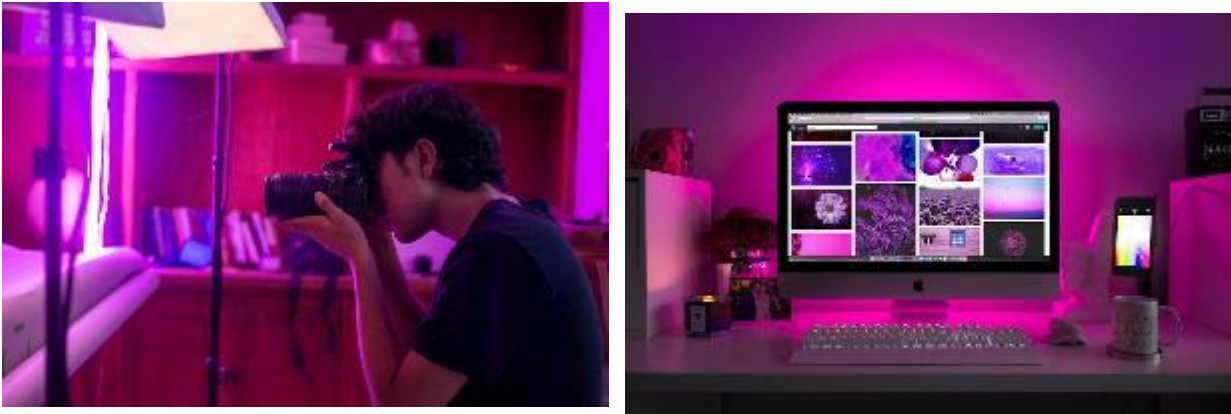
Images:

Images play a crucial role in digital content, enhancing visual appeal and conveying information quickly. When creating images, consider factors such as resolution, file format, and alt text for accessibility. Use high-quality visuals that align with your brand identity and messaging.



Figure 4.57

Image creation and photography sometimes share the same goal



Note. (Left picture) From Pexels [Photograph], by Amar Preciado, 2022, Pexels. (<https://www.pexels.com/photo/man-in-black-t-shirt-holding-dslr-camera-12458999/>). CC0 1.0 DEED.

Note. (Right picture) From Pexels [Photograph], by Designecologist, 2019, Pexels. (<https://www.pexels.com/photo/silver-imac-displaying-collage-photos-1779487/>). CC0 1.0 DEED.

Audio/Podcasts:

Audio content, including podcasts, offers a convenient way for audiences to consume information on the go. When developing audio content, focus on clear audio quality, engaging storytelling, and providing valuable insights or entertainment to listeners.

Figure 4.58

Audio and Podcast equipment



Note. From Pixabay [Photograph], by Studio Iris, 2023, Pixabay. (<https://pixabay.com/photos/podcast-microphone-music-audio-7876792/>). CC BY 2.0.

Video:

Video content (Initiative (WAI), n.d.) is highly engaging and versatile, suitable for various platforms and purposes. When creating videos, pay attention to factors such as video quality, audio clarity, pacing, and storytelling techniques. Incorporate visuals, animations, and captions for accessibility and engagement.

Figure 4.59

Video editing process



Note. From Pixabay [Photograph], by honeycombhc, 2021, Pixabay. (<https://pixabay.com/photos/podcast-microphone-music-audio-7876792/>). CC BY 2.0.

Applications:

Digital applications offer interactive experiences and functionalities to users, such as mobile apps, web apps, and software programmes. When developing applications, prioritize user experience, usability, and accessibility across different devices and platforms.

Figure 4.60

Mobile applications



Note. From Pexels [Photograph], by cottobro studio, 2020, Pexels. (<https://www.pexels.com/photo/holding-a-smartphone-5054355/>). CC0 1.0 DEED.

Infographics:

Infographics combine visuals and text to present complex information in a visually appealing and digestible format. When designing infographics, focus on clarity, simplicity, and the effective use of visual elements to communicate key messages quickly and effectively.

Figure 4.61

Infographic showing the process of business set-up



Note. From Pexels [Photograph], by RDNE Stock project, 2020, Pexels. (<https://www.pexels.com/photo/holding-a-smartphone-5054355/>). CC0 1.0 DEED.

Presentations:

Presentations are used for conveying information or delivering speeches in a visual format. When creating presentations, organise content logically, use visuals to support key points, and ensure readability and accessibility for all audience members.

Figure 4.62

Presentations have become an invaluable part of everyday working life



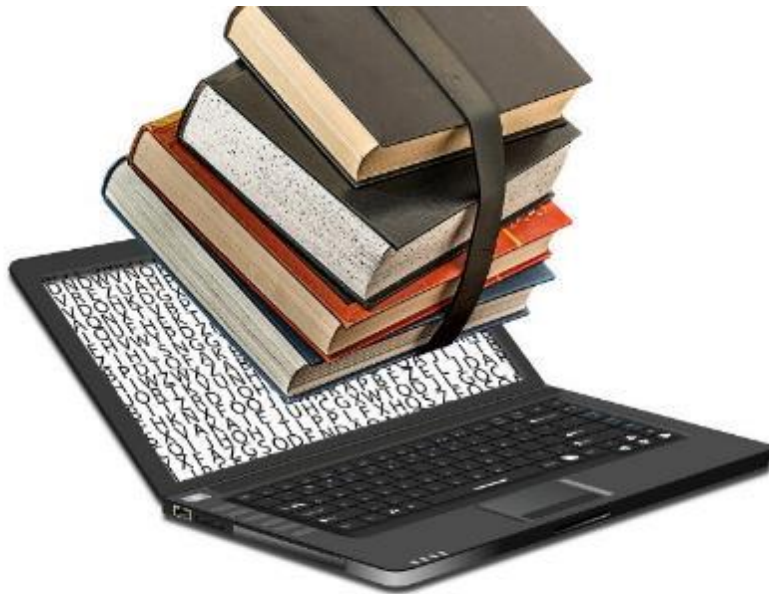
Note. From Pexels [Photograph], by RDNE Mikael Bolmkvist, 2021, Pexels. (<https://www.pexels.com/photo/project-presentation-on-a-monitor-6476580/>). CC0 1.0 DEED.

Wikis:

Wikis are collaborative platforms where users can create, edit, and share content. When developing wikis, encourage participation and contribution from users, maintain quality control measures, and ensure accurate and up-to-date information.

Figure 4.63

Wikis have become a popular way to compiling information in one place



Note. From Pixabay [Photograph], by geralt, 2018, Pixabay. (<https://pixabay.com/photos/digitization-of-library-electronic-3068971/>). CC BY 2.0.

Interactive Visualisations:

Interactive visualisations allow users to explore and interact with data dynamically. When designing interactive visualisations, focus on user engagement, intuitive navigation, and providing meaningful insights through data exploration.

Figure 4.64

Interactive visualisations allow users to modify them real-time and display different sections of the data



Note. From Pixabay [Photograph], by ghasoub, 2024, Pixabay. (<https://pixabay.com/illustrations/ai-generated-business-meeting-8627526/>). CC BY 2.0.

Developing Digital Content Correctly

- **Understand your audience:** Tailor content to the preferences, interests, and needs of your target audience.
- **Maintain consistency** (Experience, n.d.): Use consistent branding, messaging, and tone across different types of digital content.
- **Follow best practices:** Adhere to industry standards, guidelines, and legal requirements for each type of digital content.
- **Prioritize accessibility:** Ensure that content is accessible to users with disabilities by incorporating features such as alt text, captions, and keyboard navigation.
- **Test and iterate:** Continuously evaluate and refine digital content based on user feedback, analytics, and emerging trends.

Issues Arising from Inappropriate Digital Content

1. Poor User Experience:

Inappropriate digital content can lead to a negative user experience, resulting in decreased engagement, higher bounce rates, and lower conversions.

2. Accessibility Barriers:

Content that is not accessible to users with disabilities may exclude a significant portion of the audience and result in legal or ethical issues.

3. Inconsistent Brand Messaging:

Inconsistencies in branding, messaging, or tone across digital content can confuse or alienate audiences, damaging brand reputation and credibility.

4. Legal and Compliance Risks:

Inconsistencies in branding, messaging, or tone across digital content can confuse or alienate audiences, damaging brand reputation and credibility.

5. Loss of Trust:

Inaccurate, misleading, or offensive content can erode trust and credibility with audiences, leading to reputational damage and loss of customer loyalty.

To conclude this unit, developing digital content requires careful planning, execution, and adherence to best practices. Understanding the different types of digital content, following guidelines for development, and addressing potential issues proactively, can help organisations to create engaging and effective digital experiences for their audiences.

Unit 5. Activity: Crossword

Lumi File: M4_L5_Unit 5 (the following text has been added in the Lumi file).

Type of digital content that combines visuals and text to present complex information. (11

letters)

An internationally recognised set of guidelines for web accessibility. (4 letters)

An important factor to consider when developing audio content. (13 letters)

A type of digital content that combines visuals, animations, and captions. (5 letters)

A platform for delivering spoken content, often used for interviews or storytelling. (7 letters)

Unit 6. Theoretical Chapter: Creating accessible digital content and following official standards and guidelines

In today's digital landscape, accessibility is an important aspect of content creation, ensuring that everyone, regardless of ability, can access and interact with digital content effectively. Unit 6 will examine various methods to create accessible content, discuss important official standards and guidelines such as WCAG 2.1 (*How to Meet WCAG (Quickref Reference)*, n.d.) and EN 301 549 ('EN 301 549', 2024), provide strategies to check compliance with these standards, highlight the importance of inclusivity for Digital Project Managers, and outline how they can ensure their work is inclusive.



Figure 4.65

Accessibility is important when websites and other media are created



Note. From Pexels [Photographs], by fauxels Verma, 2019, Pexels. (<https://www.pexels.com/photo/people-inside-building-3184455/>). CC0 1.0 DEED.

Creating Accessible Content

1. Adding ALT Text to Images, Tables, and Graphs:

Alternative text (ALT text) provides a textual description of non-text content such as images, tables, and graphs. It enables individuals who are blind or visually impaired to understand the content. When adding ALT text, ensure it accurately describes the content and its context.

2. Creating a Proper and Well-Labelled Document Structure:

A proper document structure ensures that content is organised logically and can be navigated easily by assistive technologies. Use heading tags (e.g., H1, H2, H3) to structure content hierarchically and provide descriptive labels to sections and elements within the document.

3. Using Accessible Fonts, Colours, and Links:

Choose fonts that are easy to read and avoid decorative or complex fonts. Ensure there is sufficient colour contrast between text and background to improve readability for users with low vision. Use descriptive link text that provides context and indicates the purpose of the link.

4. Adding Captions in Video Players and Recorded Presentations:

Captions provide synchronised text transcripts of spoken dialogue in videos. This benefits users who are deaf or hard of hearing, as well as those who may have difficulty understanding spoken language. Ensure that captions are accurate, synchronized, and available in multiple languages if necessary.

Figure 4.66**Making content accessible is important for inclusivity**

Note. From istockphoto [Photographs], by abdoudz, 2021, istockphoto. (<https://www.istockphoto.com/photo/accessibility-computer-icon-stock-photo-gm1319994839-406696969>). Royalty-free licence.

Official Standards and Guidelines

Web Content Accessibility Guidelines (WCAG) 2.1:

WCAG 2.1, developed by the World Wide Web Consortium (W3C), is the most widely recognized standard for web accessibility. It provides guidelines for making web content perceivable, operable, understandable, and robust. WCAG 2.1 outlines principles, guidelines, and success criteria for ensuring digital content is accessible to all users.

EN 301 549:

EN 301 549 is a European standard that specifies accessibility requirements for ICT products and services. It aligns with WCAG 2.1 and provides additional requirements specific to European regulations and directives.

Checking Compliance

Automated Accessibility Testing Tools:

Use automated accessibility testing tools ('Axe', n.d.) such as WAVE, Axe, or WebAIM to identify accessibility issues in digital content. These tools scan web pages or documents and highlight areas that may not comply with accessibility standards, allowing you to make necessary adjustments.

Manual Review and User Testing:

Conduct manual reviews (*WAVE Web Accessibility Evaluation Tools*, n.d.) and user testing with individuals with disabilities to identify accessibility barriers that automated tools may not detect. Solicit feedback from users with diverse disabilities to ensure content is accessible to a wide range of users.

Importance of Inclusivity for Project Managers

Inclusivity is critical for Project Managers for several reasons:

- **Legal Compliance:** Ensuring accessibility compliance mitigates legal risks and protects organisations from potential litigation related to discrimination against individuals with disabilities.
- **Ethical Responsibility:** Project Managers have an ethical responsibility to ensure that digital content is accessible to all users, regardless of their abilities or disabilities.
- **Enhanced User Experience:** Creating inclusive content enhances the user experience for all users, not just those with disabilities. Accessible design principles often result in better usability and satisfaction for all users.
- **Market Expansion:** By prioritizing inclusivity, organisations can tap into a larger market segment consisting of individuals with disabilities who may otherwise be excluded from accessing digital content.

Ensuring Inclusive Work

Project Managers can ensure their work is inclusive by:

1. Setting Accessibility Goals:

Establish clear accessibility goals and requirements for digital content projects from the outset. Include accessibility criteria in project plans, timelines, and deliverables.

2. Training and Education:

Provide training and education to project teams on accessibility best practices, standards, and guidelines. Ensure team members understand their role in creating accessible content and have the necessary knowledge and skills to implement accessibility requirements.

3. Collaboration with Accessibility Experts:

Collaborate with accessibility experts, such as accessibility consultants or disability advocacy groups, to ensure that accessibility considerations are integrated into project planning, design, and development processes.

4. Continuous Monitoring and Improvement:

Continuously monitor and evaluate the accessibility of digital content throughout the project lifecycle. Implement feedback mechanisms and user testing to identify and address accessibility barriers promptly.

Creating accessible digital content is essential for ensuring that individuals with disabilities can fully participate in the digital world. By adapting to official standards and guidelines, employing accessible design principles, and prioritizing inclusivity, Digital Project Managers can contribute to a more inclusive and equitable digital environment for all users.

Unit 7. Activity: Drag the words

Lumi File: M4_L5_Unit 7 (The following text has been added in the Lumi File).

Text, ALT, Automated, structure, Captions, Proper, WCAG 2.1, testing, Accessibility, document, EN 301 549, Inclusivity, accessibility

1. An internationally recognised standard for web accessibility. * _____ *
2. Text alternative provided for images, tables, and graphs. * _____ * * _____ *
3. Ensuring that digital content is accessible to individuals with disabilities. * _____ *
4. A European standard specifying accessibility requirements for ICT products and services. * _____
5. Providing synchronized text transcripts of spoken dialogue in videos. * _____ *
6. Organizing content logically and providing headings for easy navigation. * _____ * * _____ * * _____ *
7. The process of using tools to identify accessibility issues in digital content. * _____ * * _____ * * _____ *
8. Considering the needs of diverse users and ensuring everyone can access content effectively. * _____ *

Unit 8. Theoretical Chapter: AI and digital content creation

In recent years, Artificial Intelligence (AI) has enhanced digital content creation, as it offers tools and techniques to optimise processes and enhance creativity. This chapter will explain how to incorporate AI-edited/manipulated digital content into one's own work, highlight efficient AI tools that can assist in digital content creation, and discuss ways that Digital Project Managers can use AI tools and editing applications to effectively manage their content, time, and costs.

Incorporating AI-Edited/Manipulated Digital Content

AI technologies have made significant advancements in content creation, offering tools that can automate various tasks, enhance creativity, and improve efficiency. Here are some ways to incorporate AI-edited/manipulated digital content into your work:

1. Image Editing and Enhancement:

AI-powered tools like Adobe Photoshop's (*Official Adobe Photoshop - Leading AI Photo & Design Software*, n.d.) Content-Aware Fill and Luminar AI can automatically remove objects, enhance colours, and improve composition in images. These tools can save time and effort in manual editing processes.



Figure 4.67

Editing and enhancement of Images and Photos through specific software



Note. From Pexels [Photographs], by George Milton, 2021, Pexels. (<https://www.pexels.com/photo/woman-with-printed-pictures-sitting-at-table-with-laptop-7014402/>). CC0 1.0 DEED.

2. Video Editing and Post-Production:

AI-driven video editing tools like Adobe Premiere Pro's (*Professional Video Editing Software | Adobe Premiere Pro*, n.d.) Auto Reframe feature and Magisto (*Online Video Editor | Smart Video Maker by Magisto*, n.d.) can automate tasks such as video stabilization, colour correction, and even generate video montages from raw footage. These tools can accelerate the editing process and produce professional-quality results.

Figure 4.68

Video Editing and Post-production Software



Note. From Pexels [Photograph], by Pixabay, 2016, Pexels. (<https://www.pexels.com/photo/low-angle-view-of-lighting-equipment-on-shelf-257904/>). CC0 1.0 DEED.

3. Text Generation and Content Creation:

AI-powered writing assistants like Grammarly (Grammarly, n.d.) and AI content generators like GPT-3 (GPT-3 Powers the next Generation of Apps, n.d.) can help generate high-quality written content, from blog posts to marketing copy. These tools can assist in brainstorming ideas, improving grammar and readability, and generating content at scale.

Figure 4.69

Using AI-powered apps like ChatGPT has become a new habit



Note. From Pexels [Photograph], by Matheus Bertelli, 2023, Pexels. (<https://www.pexels.com/photo/man-using-smartphone-with-chat-gpt-16094052/>). CC0 1.0 DEED.

4. Voice and Audio Editing:

AI-based voice cloning and audio editing tools like Descript (*Descript | All-in-One Video & Podcast Editing, Easy as a Doc.*, n.d.) can manipulate audio recordings, remove background noise, and even generate synthetic voices that sound like real people. These tools can streamline podcast production and audio editing workflows.

Figure 4.70

Audio Recording Equipment



Note. From Pexels [Photograph], by Dmitry Demidov, 2020, Pexels. (<https://www.pexels.com/photo/silver-dynamic-microphone-on-black-microphone-stand-3783471/>). CC0 1.0 DEED.

Efficient AI Tools for Digital Content Creation

1. Adobe Sensei:

Adobe Sensei (*Experience Cloud AI Services with Adobe Sensei*, n.d.) is an AI and machine learning platform integrated into Adobe Creative Cloud applications. It offers features such as auto-tagging, content-aware fill, and image recognition, enhancing creativity and productivity in content creation workflows.

2. Canva's Design Tools:

Canva (*Canva*, n.d.) utilises AI algorithms to provide design suggestions, resize images, and automatically remove backgrounds from images. It offers a user-friendly interface and a wide range of templates for creating visually appealing graphics and social media posts.

3. OpenAI's GPT-3:

GPT-3 is a powerful natural language processing model developed by OpenAI. It can generate human-like text based on prompts provided by users, making it useful for content creation, writing assistance, and even coding tasks.

4. IBM Watson Media:

IBM Watson Media (*IBM Video Streaming*, n.d.) offers AI-powered video analytics, transcription, and closed captioning services. It can automatically generate metadata, analyse audience engagement, and optimise video content for accessibility and search engine optimisation.

Ways for Digital Project Managers to Utilise AI Tools

Project Managers can leverage AI tools and editing applications to effectively manage their content, time, and costs in the following ways:

Automating Repetitive Tasks

AI tools can automate repetitive tasks such as image editing, video processing, and content generation, allowing Project Managers to focus on higher-level strategic tasks and decision-making.

Enhancing Creativity and Innovation

AI-powered tools can inspire creativity and innovation by offering suggestions, generating ideas, and assisting in the creation of engaging content. Project Managers can explore new possibilities and experiment with different approaches to content creation.

Improving Efficiency and Productivity

By streamlining workflows and automating manual processes, AI tools can improve efficiency and productivity in content creation projects. Project Managers can meet deadlines more effectively and deliver high-quality content within budget constraints.

Optimising Resource Allocation

AI analytics tools can provide insights into audience preferences, content performance, and market trends, helping Project Managers optimise resource allocation and make data-driven decisions about content strategy and distribution.

Unit 9. Activity: Single Choice Set

Lumi File: M4_L5_Unit 9 (The following text has been added in the Lumi file).

What is one benefit of using AI-powered tools in digital content creation?

- Streamlined processes
- Increased manual effort
- Limited creativity
- Higher costs

Which AI tool is known for its ability to analyse content, auto-tag images, and offer creative suggestions?



- Adobe Sensei
- IBM Watson Media
- OpenAI's GPT-3
- Canva's Design Tools

How can AI-driven video editing tools assist content creators?

- By automating tasks like colour correction
- By increasing manual editing time
- By destabilising shaky footage
- By reducing video quality

What role can AI play in improving efficiency for Project Managers?

- Automating repetitive tasks
- Complicating resource allocation
- Decreasing productivity
- Increasing manual tasks

Unit 10. Theoretical Chapter: Implementing digital campaigns

In digital campaigns, creativity meets technology to engage audiences and achieve marketing objectives. In this unit, we will see how digital campaigns differ from traditional campaigns, discuss essential tools for setting up successful campaigns, learn to develop strategies for ensuring campaign success, and explore ways to overcome challenges that arise from unsuccessful digital campaigns.



Figure 4.71

Working in a Group for the creation of a Digital Campaign



Note. From Pexels [Photograph], by Kaboompics.com, 2015, Pexels. (<https://www.pexels.com/photo/working-in-a-group-6224/>). CC0 1.0 DEED.

Digital vs. Traditional Campaigns

Digital campaigns differ from traditional campaigns in several key points:

Reach and Targeting:

Digital campaigns offer the ability to reach highly targeted audiences based on demographics, interests, and online behaviour. Traditional campaigns, such as print or TV ads, have a broader reach but may lack precision in targeting.

Interactivity and Engagement:

Digital campaigns allow for interactive experiences such as polls, quizzes, and social media engagement. This fosters greater engagement and interaction with the audience compared to traditional one-way communication channels.

Measurement and Analytics:

Digital campaigns provide robust measurement and analytics capabilities, allowing marketers to track metrics such as website traffic, engagement rates, and conversion rates in real-time. Traditional campaigns often rely on indirect measures of success, such as brand awareness surveys or sales figures.

Essential Tools for Setting Up Successful Campaigns

To set up a successful digital campaign, marketers can leverage a variety of tools and platforms:

1. Social Media Management Tools:

Platforms like Hootsuite, Buffer (*Buffer: All-You-Need Social Media Toolkit for Small Businesses*, n.d.), and Sprout Social (*Sprout Social: Social Media Management Solutions*, n.d.) enable marketers to schedule posts, monitor social media conversations, and analyse performance metrics across multiple social media channels.

2. Email Marketing Platforms:

Tools like Mailchimp (*Marketing, Automation & Email Platform | Mailchimp*, n.d.), Constant Contact (*Digital and Email Marketing Platform | Constant Contact*, n.d.), and HubSpot (*HubSpot | Software, Tools, Resources for Your Business*, n.d.) allow marketers to create, send, and track email campaigns, segment audiences, and automate personalised email sequences.

3. Digital Advertising Platforms:

Platforms such as Google Ads (*Google Ads - Get Customers and Increase Your Sales with Online Advertising*, n.d.), Facebook Ads (*Meta Ads – Reach Customers Online with Ads on Facebook, Instagram, Messenger and WhatsApp*, n.d.), and LinkedIn Ads (*LinkedIn Ads*, n.d.) provide marketers with tools to create and optimise digital advertising campaigns, target specific audience segments, and track ad performance in real-time.

4. Content Management Systems (CMS):

CMS platforms like WordPress (*Blog Tool, Publishing Platform, and CMS*, 2024), Joomla (*Joomla! Documentation*, n.d.), and Drupal (*Drupal User Guide*, 2016) enable marketers to create and manage website content, optimise for search engines, and analyse website performance.

Ensuring Campaign Success

To ensure the success of a digital campaign, marketers can follow these strategies:

1. Clearly Define Objectives and Key Performance Indicators (KPIs):

Clearly define the goals of the campaign, whether it's to increase website traffic, generate leads, or boost sales. Identify relevant KPIs to measure success and track progress towards achieving objectives.

2. Know Your Audience:

Conduct thorough audience research to understand the demographics, interests, and preferences of your target audience. Tailor your messages and content to resonate with your audience's needs and motivations.

3. Create Compelling Content:

Develop high-quality, engaging content that captures the attention of your audience and inspires action. Utilise a mix of formats such as blog posts, videos, infographics, and interactive content to keep your audience engaged.

4. Optimise Across Channels:

Implement a multi-channel approach to reach your audience wherever they are online. Optimise your content and messaging for different channels and devices to maximise reach and engagement.

Overcoming Challenges from Unsuccessful Campaigns

Despite careful planning and execution, digital campaigns may sometimes fall short of expectations. Here are some ways to overcome challenges and learn from unsuccessful campaigns:

1. Conduct Post-Campaign Analysis:

Analyse campaign performance data to identify areas of strength and weakness. Determine what worked well and what could be improved for future campaigns.

2. Seek Feedback and Insights:

Solicit feedback from stakeholders, team members, and target audience members to gain insights into their perceptions and experiences with the campaign. Use this feedback to inform future strategies and tactics.

3. Iterate and Experiment:

Take an iterative approach to campaign planning and execution. Experiment with different messaging, targeting strategies, and content formats to identify what resonates best with your audience.

4. Stay Agile and Adaptive:

Stay agile and adaptive in response to changing market conditions, audience preferences, and industry trends. Be prepared to adjust your strategies and tactics based on real-time data and feedback.

Digital campaigns offer marketers and project managers who want to leverage marketing in their projects, a powerful toolkit for engaging audiences, driving conversions, and achieving



marketing objectives.

Unit 11. Activity: Crossword

Lumi File: M4_L5_Unit 11 (The following text has been added in the Lumi File).

Complete the following crossword puzzle by filling in the correct answers based on your understanding of the previous theoretical chapters.

1. Platform for creating, sending, and tracking email campaigns (8 letters).
2. Measure of success used to track campaign performance in real-time (3 letters, abbreviation).
3. Essential tool for scheduling posts and monitoring social media conversations (9 letters).
4. Online platform for managing website content and optimizing for search engines (9 letters).
5. Key factor to consider when trying to engage audiences in digital campaigns (10 letters).
6. Process used to identify areas of strength and weakness in a campaign (8 letters).
7. The convergence point of creativity and technology in digital campaigns. (13 letters)
8. Understanding this aspect is crucial for ensuring successful campaign targeting. (9 letters)
9. Method of measuring the effectiveness of digital campaigns. (9 letters)
10. Platforms utilised for creating and managing website content in digital campaigns. (3 letters, abbreviation)
11. The process of continuously adjusting and refining digital campaign elements for better performance. (12 letters)

Unit 12. Theoretical Chapter: Copywriting and licensing

Copywriting and licensing play crucial roles in protecting intellectual property rights and ensuring compliance with copyright regulations. This unit explores the differences between licenses, strategies to avoid copyright violations, methods to protect one's own work, and important tools for ensuring compliance with licensing regulations.

Understanding Licenses

Licenses are legal instruments that govern the permissions and restrictions associated with the use of creative works. Common types of licenses include:

1. **Direct Licensing:** This is the most surefire way to use copyrighted material without



infringement. In this case, the user either finds existing general licensing terms to follow or contacts the owner with a request for permission (Fhima, 2019). The copyright owner maintains copyright no matter what licenses they grant (generally or otherwise) and can base permission on certain conditions, including payment.

2. **Public Domain:** Works in the public domain (Fhima, 2019; Okediji, 2019; Rittenberg & Main, 2022) are not protected by copyright and can be freely used by anyone for any purpose.
3. **Creative Commons:** Creative Commons licenses (Fhima, 2019; *Licenses List | Creative Commons*, n.d.) provide a flexible range of permissions for creators to grant others regarding the use of their work, while still retaining copyright. Creative commons have taken the protection of intellectual work one step further by providing a [licence chooser](#) through which the owner can follow a number of steps to choose the appropriate licence for their work.
4. **All Rights Reserved:** This traditional copyright license ('All Rights Reserved', 2024) grants exclusive rights to the copyright holder and restricts others from using the work without permission.

Avoiding Copyright Violations

Figure 4.72

Copyright declaration icon



Note. From Pixabay [Photograph], by TheDigitalArtist, 2022, Pixabay. (<https://pixabay.com/photos/copyright-legal-protection-symbol-5267127/>). CC BY 2.0.

To avoid copyright violations and legal consequences, creators should conform to the following guidelines:

1. Obtain Proper Permissions:

If using copyrighted material owned by others, obtain permission or license to use the work legally.

2. Use Public Domain or Licensed Material:

Utilise works that are in the public domain or licensed under Creative Commons with appropriate permissions.

3. Provide Proper Attribution:

When using copyrighted material under a license, provide proper attribution to the original creator as specified in the license terms.

4. Understand Fair Use:

Familiarise yourself with the concept of fair use, which allows for limited use of copyrighted material without permission for purposes such as criticism, commentary, or education.

Protecting Your Work

To protect one's own creative work from unauthorised use or infringement, consider the following measures:

1. Copyright Registration:

Register your work with the relevant copyright office to establish a public record of ownership and obtain additional legal protections.

2. Watermarking:

Add visible or invisible watermarks to your digital assets to deter unauthorized use and identify the original creator.

3. Terms of Use/Service:

Clearly outline the terms of use or service for your work, specifying the permissions and restrictions for others to follow.

4. Digital Rights Management (DRM):

Implement DRM technologies to control access to your digital content and prevent unauthorized copying or distribution.

Copyright infringement is defined as the use, production, reproduction, distribution or creation of derivative work of copyrighted material without the permission of the copyright holder (Kenton, 2024; Zeya IP, 2023).

Some common examples of copyright infringement (Rittenberg & Main, 2022; Zeya IP, 2023) are:

1. Unauthorized copying and sharing of music or movies:

Sharing or downloading copyrighted songs, albums, movies, or TV shows without the appropriate licenses or permissions constitutes copyright infringement. This also includes recording a movie in a theatre without having permissions to do so.

2. Plagiarism:

Using someone else's written work, such as articles, essays, or books, without proper attribution or permission is a form of copyright infringement.

3. Software piracy:

Illegally copying or distributing software programmes, including games, applications, or operating systems, without authorisation from the copyright holder is a violation of copyright law.

4. Unauthorised use of images or artwork:

Using copyrighted images, photographs, illustrations, or artwork without obtaining the necessary permissions from the copyright owner constitutes copyright infringement (e.g. uploading someone else's copyrighted material to an accessible web page).

5. Counterfeit goods:

Manufacturing, distributing, or selling counterfeit products, such as fake designer clothing, accessories, or electronics, is a violation of copyright law.

6. Unauthorised use of copyrighted content:

Copying and publishing copyrighted written content, such as books, articles, or blog posts, without permission from the copyright owner is an infringement of their rights. Publishing or posting a video with a copyrighted song to a company website or selling merchandise that includes copyrighted images, text or logos also constitute copyright infringement.

7. Sampling without permission:

Sampling portions of copyrighted music or sound recordings and using them in another song without obtaining proper licenses or permissions is copyright infringement.

8. Unauthorized use of software code:

Copying or using parts of copyrighted software code without permission from the copyright owner is a violation of copyright law.

9. Public performance without permission:

Performing copyrighted works, such as plays, musicals, or concerts, in public without obtaining the necessary licenses or permissions is copyright infringement.

10. Adaptation without permission:

Creating derivative works based on copyrighted material, such as making a movie based on a book, without obtaining permission from the copyright owner, is a violation of copyright law.

Important Tools for Ensuring Compliance

Several tools and resources are available to help creators ensure compliance with copyright regulations and licensing terms:

1. Creative Commons Search:

A [tool](#) that allows users to search for content that is licensed under Creative Commons, making it easier to find copyright-friendly material for reuse.

2. TinEye Reverse Image Search:

A [tool](#) that enables users to search for instances of their images online, helping to identify unauthorized use or infringement.

3. Plagiarism Checkers:

Tools like [Turnitin](#) (*About Us | About Turnitin, Our Mission & Values | Turnitin, n.d.*) and [Copyscape](#) can help detect instances of plagiarism and ensure originality in written content.

4. Rights Management Platforms:

Platforms such as [Rightsline](#) (*Rights & Royalties Solutions • Rightsline, n.d.*) offer solutions for managing and protecting digital rights across various media formats.

As far as copywriting and licensing are concerned, understanding the nuances of copyright law, licensing agreements, and protective measures is essential for creators to safeguard their intellectual property rights and maintain compliance with legal regulations. By following best practices, utilising appropriate licenses, and using available tools, creators can navigate the complexities of copyright and licensing in the digital era.



Copyright in the Tourism Industry

With the increasing popularity of social media and networking, the relevance of copyright has grown significantly. The tourism industry stakeholders are increasingly turning to social media and digital platforms to market and promote their products and services.

Copyright laws encompass various materials utilised within the tourism sector. This includes a wide range of content, from content featured on the websites of tourism ministries from different countries, as well as content found on online reservation and booking platforms ('The Implications of Intellectual Property Laws in the Tourism Industry', 2022). Additionally, copyright protection extends to photographs and audiovisual works depicting a region's history, culture, and heritage, which are typically produced by the respective ministries. Assets held by organisations such as museums are also safeguarded by copyright law. Access to images of these works, displayed and stored within these institutions, is typically facilitated through licensing and similar methods.

Nowadays, tourism businesses are highly promoted and advertised for their uniqueness by establishing their own brand. They have distinct logos, dedicated websites, their own social media accounts and often they go as far as creating their own merchandise. Therefore, it is important to know how to protect their rights and how not to violate the rights of others.

Unit 13. Activity: Fill in the blanks

Lumi File: M4_L5_Unit 13 (The following text has been added in the Lumi File).

Fill in the blanks with the appropriate words or phrases based on your understanding of the previous theoretical chapter.

* _____ * are legal instruments that govern the permissions and restrictions associated with the use of creative works.

Licenses such as * _____ * provide a flexible range of * _____ * for creators to grant others regarding the use of their work, while still retaining copyright.

Tools Turnitin and Copyscape used to detect * _____ * and ensure the content's originality.

The Digital Millennium Copyright Act (DMCA) provides legal protections for online service providers against * _____ * infringement by their users.

* _____ * is a technique used to add visible or invisible marks to digital assets to deter * _____ * use and identify the original creator.

Uploading images found online to a website without proper attribution could lead to copyright



* _____ *.

* _____ * * _____ * allows for limited use of copyrighted material without
permission for purposes such as criticism, commentary, or education.



Lesson 6: New and emerging technologies' impact on Project Management

Unit 1. Introduction to Lesson 6

Welcome to Lesson 6 "New and Emerging Technologies' Impact on Project Management" of HyPro4ST Module 4.

In this session, we explore the profound influence of new and emerging technologies, such as Artificial Intelligence and Extended Reality on traditional project methodologies. Our journey will unfold through theoretical insights and practical applications, offering a comprehensive understanding of how innovative tools can transform project management paradigms.

What knowledge you will gain from this lesson:

1. **Overview of Emerging Technologies:** Gain insights into the latest technological trends that are reshaping the project management landscape.
2. **Understanding the Role of Artificial Intelligence (AI):** Understand how Artificial Intelligence can significantly enhance project management in various ways.
3. **Understanding the Role of Extended Reality (XR):** Explore the transformative potential of Extended Reality and how it intersects with project management practices.
4. **Applications in Sustainable Tourism:** Examine specific use cases within the sustainable tourism sector, such as gamification and virtual tours, to understand how XR is making an impact.
5. **Practical Integration:** Learn how to utilise XR tools effectively in project management scenarios, enhancing collaboration, visualisation, and decision-making processes.

As we navigate through the theoretical chapters and engaging activities, you will broaden your knowledge and also acquire practical skills to adapt to the evolving demands of the project management landscape.

Unit 2. Theoretical Chapter: Understanding AI and XR basics

In order to understand the impact of new technological developments on Project Management, first we need to understand the fundamental principles of Artificial Intelligence (AI) and Extended Reality (XR). These technologies are vital in reshaping project management, and a solid understanding of their basics is essential.

Figure 4.73

AI and XR has changed how we process technology intervention



Note. From Pexels [Photograph], by Ali Pazani, 2019, Pexels. (<https://www.pexels.com/photo/photo-of-woman-wearing-turtleneck-top-2777898/>). CC0 1.0 DEED.

Artificial Intelligence, aka AI.

Artificial Intelligence (AI) refers to the simulation of human intelligence processes by machines, primarily computer systems. It encompasses a broad range of techniques and approaches aimed at enabling computers to perform tasks that typically require human intelligence. At its core, AI seeks to replicate human cognitive functions such as learning, reasoning, problem-solving, perception, and decision-making.

One of the fundamental components of AI is machine learning, a subset that focuses on the development of algorithms that allow computers to learn from and make predictions or decisions based on data. Machine learning algorithms enable systems to identify patterns

within datasets, make predictions, and adapt their behaviour without being explicitly programmed to do so. This capability is particularly valuable in scenarios where traditional rule-based programming approaches are insufficient or impractical.

Within machine learning, neural networks have an important role. Inspired by the structure and functioning of the human brain, neural networks are computational models composed of interconnected nodes, or neurons, organised in layers. These layers process input data through a series of weighted connections, performing tasks such as classification, regression, pattern recognition, and sequence generation.

Neural networks are characterized by their ability to learn from examples, adjusting the weights of connections between neurons through a process known as training. During training, the network receives input data along with corresponding labels or targets, and it adjusts its parameters iteratively to minimize the difference between predicted and actual outputs. This iterative learning process allows neural networks to generalize from training data and make accurate predictions or classifications on new, unseen data.

Neural networks can vary in complexity and architecture, ranging from simple feedforward networks to more complex architectures like convolutional neural networks (CNNs) (*What Are Convolutional Neural Networks?* | IBM, n.d.) for image processing and recurrent neural networks (RNNs) (*What Are Recurrent Neural Networks?* | IBM, n.d.) for sequential data analysis. The versatility and scalability of neural networks make them indispensable tools in various AI applications, including image and speech recognition, natural language processing, autonomous vehicles, recommendation systems, and many others.

AI finds application in various fields of project management. Automation streamlines repetitive tasks, while predictive analytics enhances decision-making by forecasting future trends. Additionally, AI-driven decision support systems provide valuable insights for project managers.

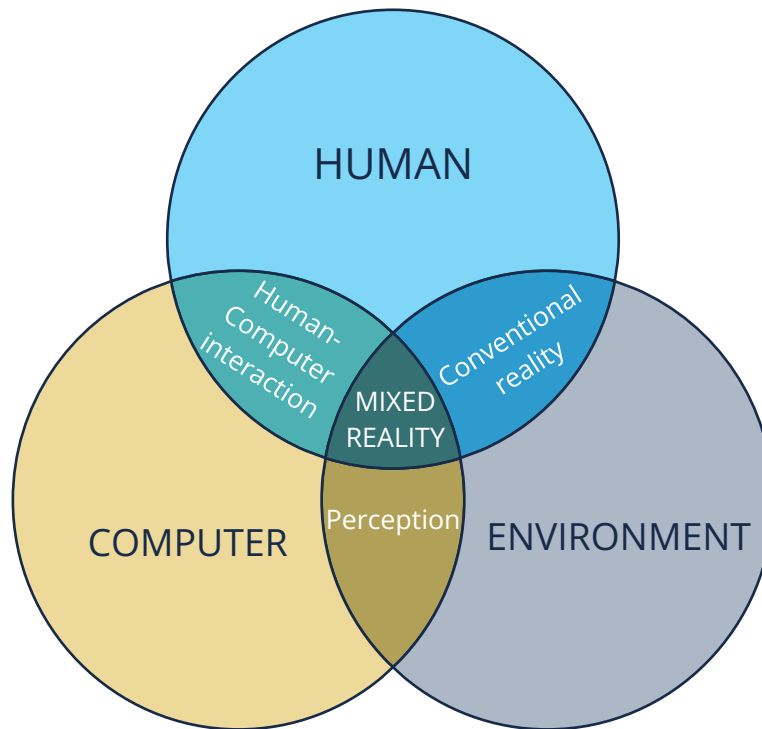
Extended Reality, aka XR.

Extended Reality (XR) is a term used to describe a spectrum of immersive technologies that blend the physical and digital worlds (Microsoft, 2023; Tremosa, 2023; Extended Reality (XR), n.d.). It encompasses three main categories: Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) (Guo et al., 2021). Each of these technologies offers unique experiences and applications, contributing to the diverse landscape of XR.



Figure 4.74

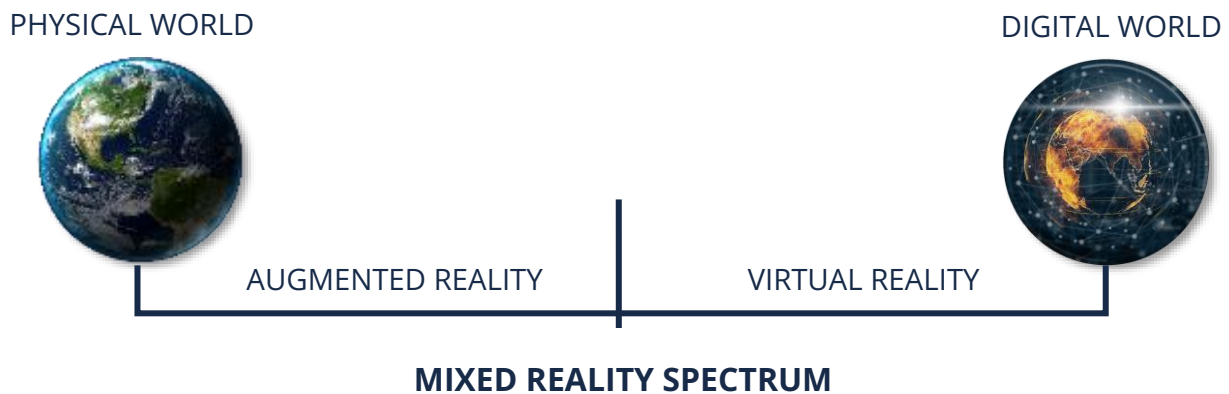
The interaction between computers, humans, and environments set the basis for XR



Note. Microsoft. (2023, January 25). *What is mixed reality?*. Learn.microsoft.com. (<https://learn.microsoft.com/en-us/windows/mixed-reality/discover/mixed-reality>)

Virtual Reality (VR) transports users to entirely digital environments, immersing them in a simulated reality through specialized headsets or goggles (Rauschnabel, Felix, Hinsch, Shahab, & Alt, 2022). VR technology creates a sense of presence, allowing users to interact with and navigate through computer-generated worlds in a highly immersive manner (Virtual Reality, n.d.; Singh, 2022). VR experiences can range from gaming and entertainment to training simulations and virtual tours, offering users the opportunity to explore environments that may be inaccessible or impractical in the real world.

Augmented Reality (AR) overlays digital content onto the user's view of the physical world, enhancing or augmenting their perception of reality (Rauschnabel, Felix, Hinsch, Shahab, & Alt, 2022). AR technology typically utilises mobile devices such as smartphones or tablets equipped with cameras and sensors to superimpose virtual elements, such as text, images, or 3D objects, onto the real-world environment (Augmented Reality (AR), n.d.; Singh, 2022). AR applications span a wide range of industries, including education, marketing, retail, and navigation, offering users contextual information and interactive experiences that blend seamlessly with their surroundings.

Figure 4.75**The mixed reality spectrum**

Note. Microsoft. (2023, January 25). *What is mixed reality?*. Learn.microsoft.com. (<https://learn.microsoft.com/en-us/windows/mixed-reality/discover/mixed-reality>)

Mixed Reality (MR) represents the convergence of VR and AR, where digital and physical elements coexist and interact in real-time (Microsoft, 2023; Tremosa, 2023; Singh, 2022; Rauschnabel, Felix, Hinsch, Shahab, & Alt, 2022). MR technology combines virtual and augmented experiences within the same environment, enabling users to interact with virtual objects while maintaining awareness of their physical surroundings (Tremosa, 2023). Unlike VR, which completely replaces the real world, MR integrates virtual content into the user's environment, creating a hybrid experience that bridges the gap between the digital and physical realms (Rauschnabel, Felix, Hinsch, Shahab, & Alt, 2022). MR has applications in areas such as remote assistance, design prototyping, and immersive gaming, offering users the benefits of both VR and AR technologies (Tremosa, 2023; Rauschnabel, Felix, Hinsch, Shahab, & Alt, 2022; Moore, 2024).

Understanding the components of XR is essential for comprehending the diverse applications and potential of these immersive technologies. VR relies on specialized headsets or goggles to create immersive digital environments, while AR makes use of mobile devices to overlay virtual content onto the real world. MR, on the other hand, combines hardware components such as headsets or glasses with spatial mapping and tracking technologies to seamlessly integrate virtual and physical elements. By grasping these components, users can explore the myriad possibilities of XR, from immersive entertainment experiences to practical applications in education, healthcare, architecture, and beyond.

Ethical Considerations in using AI

Ethical concerns related to the use of AI in project management are crucial for ensuring responsible and fair practices. The most prominent concerns are listed below:

Bias in Algorithms and over-trusting technology

Bias in algorithms refers to systematic errors or unfairness in the outcomes produced by AI systems, often as a result of skewed training data or biased model design (Mittelstadt et al., 2016). For instance, facial recognition algorithms have been found to exhibit racial and gender biases, leading to inaccurate or discriminatory results (Buolamwini & Gebru, 2018).

To mitigate bias in algorithms, it's essential to conduct comprehensive audits of AI systems to identify and address any biases present. This will involve ensuring diverse and representative training datasets, implementing fairness-aware algorithms, and promoting transparency in model development (Privacy International, 2020).

Even though AI has repeatedly been proven that is liable to error, people tend to trust and sometimes over-trust technology without questioning the results or the practices used (Sample, 2024). Trusting machines and programmes so much to not knowing how to fix issues that arise or even traumatic events following people from the virtual to the physical world (Sample, 2024).

Data Privacy Issues

Data privacy concerns arise from the collection, storage, and use of sensitive data in AI-driven project management processes. Project managers must navigate regulatory requirements such as the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA) to ensure compliance and protect user privacy (European Union Agency for Fundamental Rights, 2020).

Transparency in Decision-Making

Transparency in AI-driven decision-making is essential for building trust and accountability among stakeholders. Project managers should strive to provide clear explanations of how AI algorithms work and how their outputs influence project decisions (Mittelstadt et al., 2016).

This may involve documenting the entire AI lifecycle, including data collection, model training, validation, and deployment, to ensure transparency and traceability in decision-making processes.

Emerging Trends in XR Technology

Exploring recent advancements and emerging trends in XR technology provides valuable insights into the future of immersive experiences and their impact on project management practices.

Spatial Computing

Spatial computing refers to the ability of XR systems to understand and interact with the physical environment in real-time, enabling more immersive and natural user experiences (Singh et al., 2020). Advancements in spatial computing, such as simultaneous localization and mapping (SLAM) and depth sensing technologies, have expanded the possibilities for spatially-aware XR applications.

Spatial computing has the potential to revolutionize project management practices by enabling more intuitive interaction with digital project data in physical space. For example, spatially-aware collaboration tools allow project teams to visualize and manipulate project plans and data in a shared physical environment, enhancing communication and decision-making (Azuma et al., 2001).

Haptic Feedback

Haptic feedback technology simulates tactile sensations, such as touch and texture, to enhance user experiences in XR environments (Pascoe, 2019). Recent advancements in haptic feedback systems have led to the development of more immersive and realistic haptic interfaces, including wearable haptic devices and tactile feedback controllers.

In project management, haptic feedback can provide users with tactile cues and feedback in XR-based training simulations and virtual prototyping environments. For example, architects and designers can physically feel the texture and properties of virtual materials while designing and testing architectural models, enhancing the realism and effectiveness of design iterations (Biocca & Levy, 1995).

Photorealistic Rendering

Photorealistic rendering techniques aim to create virtual environments and objects that closely resemble their real-world counterparts (Broll et al., 2004). Recent advancements in rendering algorithms, such as ray tracing and global illumination, have enabled the generation of highly realistic visuals with lifelike lighting, shadows, and reflections.

Photorealistic rendering has significant implications for project management, particularly in architectural visualization, construction planning, and marketing presentations. By creating photorealistic 3D models and visualizations of project designs, stakeholders can gain a better understanding of project concepts and make more informed decisions (Singh et al., 2020).

Unit 3. Activity: Single Choice Set Questions

Lumi File: M4_L6_Unit 3 (The following text has been added in the Lumi File).

How do Artificial Intelligence (AI) and Extended Reality (XR) technologies impact project management?

- They streamline workflows, enhance collaboration, and optimise project outcomes
- They have no effect on project management practices
- They only increase project costs without adding any value

Which of the following is NOT a potential impact of AI and XR technologies on project management?

- Increasing project costs without adding value
- Streamlining workflows and enhancing collaboration
- Optimising project outcomes and decision-making processes

What role do AI-powered virtual assistants play in project management?

- They automate routine tasks and provide real-time assistance
- They serve as project managers overseeing all project tasks
- They are solely responsible for budget management in projects

How do XR technologies contribute to project management practices?

- They provide immersive visualisation capabilities for project environments.
- They only serve as communication tools for project stakeholders.



- They have no impact on project management methodologies.

Which of the following is NOT an ethical consideration while using AI?

- Profitability: Maximising financial gains and business objectives without regard for potential negative impacts on society or individuals.
- Data Privacy: Respecting and protecting individuals' privacy rights by securely handling their personal data.
- Bias and Fairness: Mitigating algorithmic biases and avoiding over-reliance on technology in critical decision-making to ensure fairness across demographic groups.

Which of the following is an example of a mixed-reality practice applied in the sustainable tourism sector?

- Using augmented reality (AR) to display real-time information about eco-friendly attractions at tourist destinations during guided tours.
- Creating a virtual reality (VR) simulation to educate stakeholders about the impacts of tourism on local ecosystems.
- Hosting virtual meetings with stakeholders to plan sustainable tourism initiatives.

Unit 4. Theoretical Chapter: Artificial Intelligence and Extended Reality's effect in Project Management

Artificial Intelligence (AI) and Extended Reality (XR) are driving significant transformations in project management practices. As organisations strive for efficiency and innovation, understanding the impact of these technologies is crucial for project managers. Therefore, exploring how AI and XR are reshaping project management methodologies and practices is the key to becoming the project manager of the new digital age.

Figure 4.76

AI and Human Interaction



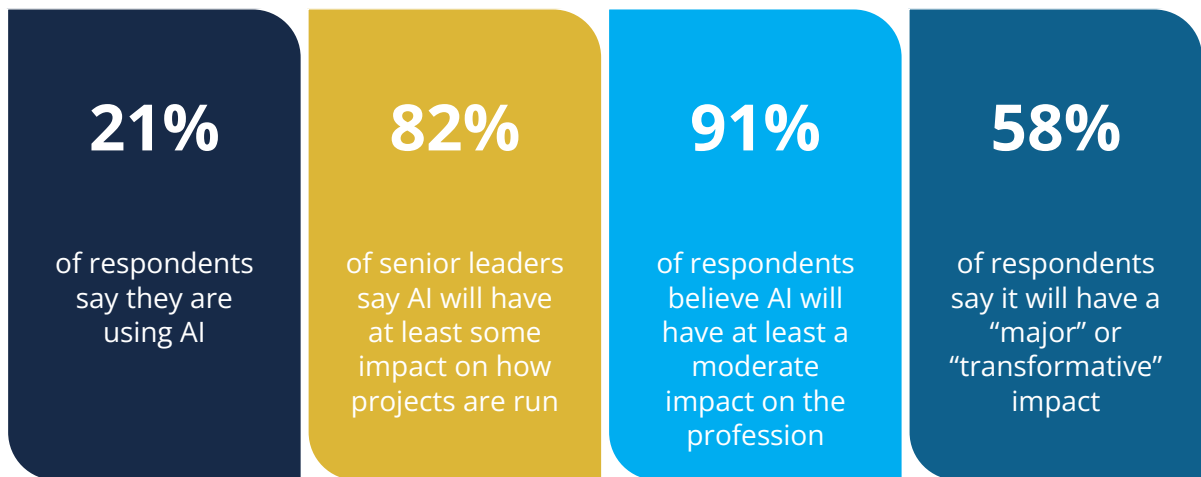
Note. From Pexels [Photograph], by cottonbro studio, 2020, Pexels. (<https://www.pexels.com/photo/bionic-hand-and-human-hand-finger-pointing-6153354/>). CC0 1.0 DEED.

Introduction to AI in Project Management

AI is reforming project management by automating tasks, predicting outcomes, and optimising processes (Taylor, n.d.). From automating routine tasks to enabling predictive analytics, AI is upgrading project workflows and enhancing decision-making capabilities (5 Ways AI and Automation Will Change Project Management, n.d.; Effective ICT Project Management, 2023; Russell & Norvig, 2010).

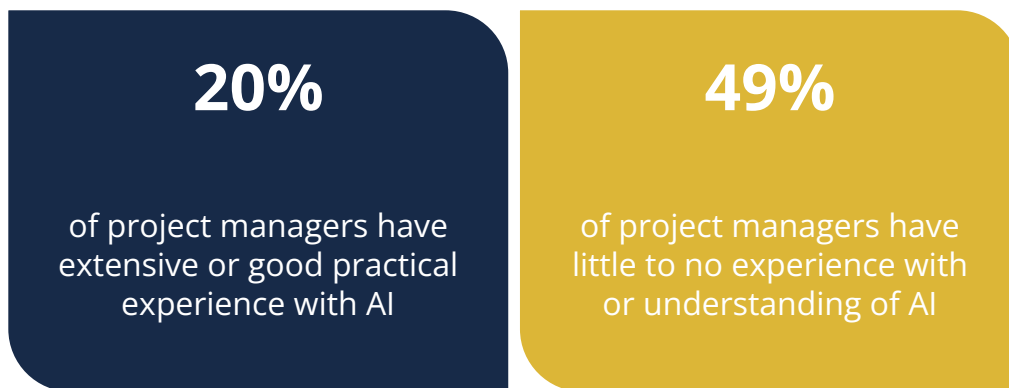
The introduction of Generative AI (GenAI) with the public release of OpenAI's ChatGPT (Jalan, 2023; PMI, 2023) in November 2022 has accelerated the impact of AI on the project manager's profession. Project managers need to explore and leverage the opportunities that AI offers, using AI to increase productivity, efficiency and project success in their organisations (Harrin, n.d.). In fact, at the very least, fluency in the basics of AI is non-negotiable: it must be in the DNA of project managers.

In the 2023 PMI Annual Global Survey on Project Management (PMI, 2023):



- 21% of respondents say they are using AI always or often while managing their projects;
- 82% of senior leaders say AI will have at least some impact on how projects are run at their organisation over the next five years;
- 91% of respondents of an unpublished PMI Customer Experience (CX) survey believe AI will have at least a moderate impact on the profession, and 58% say it will have a "major" or "transformative" impact.

At the same time, an Unpublished PMI Customer Experience (CX) research (PMI, 2023) highlights that there is an urgent need for upskilling, since:



- Only about 20% of project managers report having extensive or good practical experience with AI tools and technologies;
- 49% of project managers have little to no experience with or understanding of AI in the context of project management.

Insight

GenAI has the potential to support project management tasks and activities in many ways. The complexity of the task, however, results in increased human intervention to result in high-quality outcomes (PMI, 2023). Even though the tourism industry is considered human-centric (focusing on the travellers' experience) and human-oriented (interaction with real people plays an important role), that fact does not exclude it from benefitting from the technological advancements of AI (McCartney & McCartney, 2020; Ivanov & Webster, 2020; Berezina, Ciftci, & Cobanoglu, 2019).

Applications of AI in Project Management

AI is changing project management methodologies in various ways. It facilitates accurate resource allocation, risk assessment, and schedule optimisation, leading to improved project outcomes. Moreover, AI-powered tools enhance communication and collaboration among team members, driving efficiency and productivity.

Impact of XR in Project Management



XR, including Virtual Reality (VR) and Augmented Reality (AR), offers immersive experiences that revolutionise project visualisation, collaboration, and training. VR enables stakeholders to explore project environments virtually, facilitating better decision-making and stakeholder engagement. AR overlays digital information onto the physical world, aiding in real-time data visualisation and project monitoring.

Integration of AI and XR in Project Management



The convergence of AI and XR presents exciting opportunities for project managers. AI-powered analytics enhance the insights derived from XR experiences, enabling data-driven decision-making and predictive modelling. Additionally, AI-driven personalisation enhances user experiences in XR environments, tailoring content and interactions based on individual preferences and behaviour.

Figure 4.77

VR technology has been widely used in simulations, education and games



Note. From Pexels [Photograph], by Michelangelo Buonarroti, 2021, Pexels. (<https://www.pexels.com/photo/man-and-woman-in-vr-goggles-and-headphone-standing-in-studio-in-purple-lighting-8728562/>) . CC0 1.0 DEED.

Challenges and Considerations

Despite their potential benefits, the adoption of AI and XR in project management comes with challenges such as data privacy concerns, technological limitations, and skill gaps. Project managers must navigate these challenges while leveraging the opportunities presented by AI and XR to drive project success.

AI and XR are revolutionising project management practices, offering new capabilities for visualisation, collaboration, and decision-making. By embracing these technologies and addressing associated challenges, project managers can unlock new possibilities and drive greater efficiency and innovation in their projects.

XR in Project Management

In project management, XR revolutionizes processes. It enhances visualisation, allowing teams to collaboratively explore 3D models. Virtual prototyping aids in early testing, and remote collaboration becomes seamless, overcoming geographical barriers.

AI's effect in Project Management

In the near future several key areas where AI technologies are poised to revolutionize project

management methodologies are:

Automated Task Management

AI-powered tools will automate routine project management tasks, such as scheduling, resource allocation, and progress tracking. This automation will save time for project managers and enable them to focus on more strategic aspects of project planning and execution.

Predictive Analytics

AI algorithms will analyse vast amounts of project data to identify patterns, trends, and potential risks. By leveraging predictive analytics, project managers can anticipate issues before they arise and proactively adjust project plans to mitigate risks and ensure project success.

Enhanced Decision-Making

AI-driven decision support systems will provide project managers with real-time insights and recommendations based on data analysis. These insights will enable project managers to make informed decisions quickly and effectively, improving project outcomes and stakeholder satisfaction.

Improved Collaboration

AI-powered collaboration tools will facilitate communication and collaboration among project teams, stakeholders, and partners. These tools will streamline communication channels, provide personalised recommendations, and foster a more collaborative work environment, leading to increased productivity and efficiency.

Experts estimate that in the near future almost 80% of today's projects managers tasks can be eliminated because AI can perform them more effectively and efficiently, while 80% of their tasks will be automated (Yasa, 2023; Gartner Inc., 2019; Boudreau, 2019; Nieto-Rodriguez & Viana Vargas, 2023; Taylor, n.d.).

Trust the emerging technology that offers solutions. [...] Project manager and AI in beautiful rhythm.

- Peter Taylor -

XR's effect in Project Management

XR represents a paradigm shift in project management, offering a spectrum of opportunities for innovation and efficiency.

Enhanced Visualisation and Collaboration

XR's immersive environments empower project teams to transcend the limitations of traditional planning. Visualizing projects in 3D fosters unparalleled collaboration, breaking down silos and facilitating a shared understanding of complex project components.

Virtual Prototyping and Simulation

The power of XR for creating virtual prototypes and simulations is of high importance. Early testing in VR and AR environments, not only enhances the quality of deliverables but also mitigates risks by identifying and addressing potential issues before they escalate.

Remote Project Monitoring:

Remote Project Monitoring is game-changing aspect of XR in real-time project monitoring. Geographical constraints are no longer barriers as project managers virtually traverse construction sites, ensuring progress is on track and making informed decisions from anywhere in the world.

Training and Onboarding

XR's impact extends to the training and onboarding procedures. In the case of project teams undergoing immersive training sessions, gaining hands-on experience in virtual environments could not only reduce the learning curve but also enhances overall project efficiency.

Client Engagement and Communication

XR has transformative role in client engagement. Interactive presentations and virtual walkthroughs enable clients to experience project developments realistically, fostering improved communication and understanding.

Unit 5. Activity: Find the words

Lumi File: M4_L6_Unit 5 (The following text has been added in the Lumi File).

REGRESSION, NEURAL, ARTIFICIAL, VIRTUAL, SECURITY, HAPTIC, RENDERING, DATA, PRIVACY, INTELLIGENCE, ALGORITHMS, MACHINELEARNING, TRAINING

Unit 6. Theoretical Chapter: AI and XR's impact on the sustainable tourism sector

In recent years, the sustainable tourism sector has witnessed a significant transformation due to the integration of Artificial Intelligence (AI) and Extended Reality (XR) technologies. These innovations have revolutionized the way travellers explore destinations, engage with local cultures, and contribute to environmental conservation efforts. In this unit, we will explore the profound impact of AI and XR on sustainable tourism through examples and best practices from the industry.

Introduction to AI and XR in Sustainable Tourism

AI and XR technologies are reshaping the sustainable tourism sector (Ghanekar, 2023; Madzík et al., 2023), offering immersive experiences and innovative solutions to enhance traveller engagement and environmental sustainability. By leveraging these technologies, stakeholders in the tourism industry can create more personalised, immersive, and environmentally responsible experiences for travellers.



Examples and Best Practices

Gamification: AI-powered gamification platforms (Abou Kamar et al., 2023; Pasca et al., 2021; Stylos & Vassiliadis, 2023) are transforming the way tourists interact with destinations. For example, apps like "Explore!" (*Adventure Holidays & Tours From The Adventure Travel Experts - Explore*, n.d.) use AI algorithms to create personalised gamified experiences that encourage tourists to explore sustainable attractions, participate in eco-friendly activities, and learn about local conservation efforts.

Virtual Tours: XR technologies, such as Virtual Reality (VR) and Augmented Reality (AR), offer virtual tour experiences that enable travellers to explore destinations from the comfort of their homes. Organisations like the Vatican Museums provide immersive VR tours, allowing users to virtually visit iconic landmarks and cultural sites while promoting sustainable travel practices.

Interactive Travel Planning: AI-driven travel planning platforms analyse user preferences, travel history, and sustainability criteria to recommend eco-friendly destinations, accommodations, and activities. By integrating AI algorithms, platforms like "GreenTraveller" (*Green Traveller – Eco Holidays & Low Carbon Travel*, n.d.) help travellers make informed decisions that align with their sustainability values.

Environmental Monitoring: XR technologies enable real-time environmental monitoring and conservation efforts in tourist destinations. For instance, drones equipped with XR cameras and AI analytics are used to monitor wildlife habitats, detect illegal activities, and assess the impact of tourism on fragile ecosystems, facilitating proactive conservation measures.

AI is expected to be increasingly used in the hotel and travel industry, creating more seamless travel experiences and supporting new innovations (Pajorska, 2023) to meet higher guest expectations.

AI chatbot technology has gone a long way in the last couple of years. It can also play a significant role in the development of the travel and tourism industry. AI chatbots stimulates human conversation, mostly using text interactions on various websites and services. Their main objective is to alleviate some congestion in call centres by providing at least basic help for customers 24/7.

When it comes to their usage in the travel and tourism industry, AirAsia is a good example of the use of a successful chatbot. Their advanced chatbot, AVA is able to do a multitude of things from helping travellers to choose seats and book flights to answering more difficult questions about current COVID-19 restrictions.

Importance of Keeping Up with AI and XR Technologies

These days, almost everyone has a smartphone or other mobile device, granting access to an immense choice of online services. It is thus crucial for travel companies to allow their



customers to book their trips, check-in for their flights, and find information about their destinations online. Even though we are taking all of these modern utilities for granted, they are still a key factor for improving user experience in the travel industry. As a result, they have to be improved and optimised consistently.

Staying abreast of AI and XR technologies is crucial for sustainable tourism stakeholders for several reasons:

Enhanced Visitor Experiences

AI and XR technologies offer immersive, interactive, and personalised experiences that enhance visitor engagement and satisfaction. AI and XR technologies are enhancing visitor experiences in sustainable tourism and tourism overall (Scholz & Friends Agenda Berlin GmbH European Office, 2023). By using AI-driven personalisation and XR immersion, destinations can offer tailored, interactive experiences that captivate and engage travellers. For example, AI-powered recommendation systems analyse traveller preferences and behaviour to suggest personalised itineraries, accommodations, and activities. XR technologies, such as Virtual Reality (VR) and Augmented Reality (AR), provide immersive storytelling experiences, enabling travellers to virtually explore destinations, cultural sites, and natural wonders from anywhere in the world.

Environmental Conservation

By exploiting AI for predictive analytics and XR for virtual monitoring, stakeholders can proactively manage and mitigate the environmental impact of tourism. As far as conservation and environmental sustainability are concerned, AI and XR technologies offer innovative solutions for protecting natural habitats, preserving biodiversity, and mitigating the adverse effects of tourism on fragile ecosystems. AI-powered drones equipped with XR cameras monitor wildlife populations, detect illegal poaching activities, and assess habitat degradation in real-time, enabling conservationists to implement timely interventions. XR simulations provide immersive educational experiences, raising awareness about environmental issues and fostering a sense of stewardship among travellers.

Competitive Advantage

Embracing AI and XR technologies allows sustainable tourism destinations and businesses to differentiate themselves in a competitive market, attracting environmentally conscious travellers and fostering long-term sustainability.

Sustainable Destination Management

AI and XR technologies play a crucial role in sustainable destination management, empowering stakeholders to make data-driven decisions and implement proactive conservation measures. AI algorithms analyse environmental data, tourist behaviour patterns, and socio-economic factors to optimise resource allocation, mitigate overtourism, and minimize the ecological footprint of tourism activities. XR technologies facilitate virtual monitoring and immersive training simulations, enabling destination managers to assess environmental impacts, educate stakeholders, and develop sustainable tourism strategies.

Community Engagement and Empowerment

AI and XR technologies facilitate community engagement and empowerment in sustainable tourism initiatives, empowering local communities to participate in decision-making processes, preserve cultural heritage, and benefit economically from tourism development. AI-driven platforms enable community-based tourism enterprises to reach a global audience, market authentic cultural experiences, and generate sustainable livelihoods for local inhabitants. XR technologies support immersive storytelling and cultural heritage preservation, enabling communities to share their unique traditions, histories, and perspectives with visitors.

Facilitating Accessible and Inclusive Tourism Experiences

AI and XR technologies play an important role in democratizing access to tourism experiences and promoting inclusivity for diverse audiences. By leveraging AI-driven personalisation and XR immersion, destinations can create accessible and inclusive experiences that cater to the needs of travellers with disabilities, mobility challenges, or language barriers. AI-powered translation tools enable real-time language interpretation, allowing travellers to engage with local cultures and communities more effectively. XR technologies, such as virtual tours and immersive experiences, provide alternative ways for individuals with physical disabilities or travel

limitations to explore destinations and cultural sites remotely. By embracing AI and XR technologies, destinations can break down barriers to travel and foster a more inclusive tourism industry that welcomes travellers from all backgrounds and abilities.

Figure 4.78

XR technologies promote inclusivity since people can try activities excluding physical limitations



Note. From Pexels [Photograph], by RDNE Stock project, 2021, Pexels. (<https://www.pexels.com/photo/man-paddling-while-wearing-virtual-reality-glasses-8098272/>). CC0 1.0 DEED.

Virtual Tourism vs Regular Tourism

By exploiting XR technology, a new type of tourism is born. Virtual tourism is a digital experience where individuals can virtually explore and metaphorically travel to destinations or enjoy tourist attractions from the comfort of their homes. This immersive experience utilises various technical elements, including virtual reality software, audio, video, images, and narration (Barzey, 2022).

Virtual tourism aims to replicate a near-life touring experience of specific destinations or tourist attractions. It offers a “preview” of the features and attractions of a destination, serving as a tool for both exploration and future trip planning (Barzey, 2022).

The goal of this tourism is not to replace in-person travel, but to allow visitors to see their destinations beforehand or allow people that do not have the ability to travel to see places and destinations they otherwise could not.

Virtual tourism can take many forms (Barzey, 2022; Phil, 2023), such as:

1. Virtual reality (VR) experiences:

VR technology generates a completely immersive computer-generated environment, enabling users to virtually explore a destination as if they were physically there.

2. 360-degree videos:

These videos are created using multiple cameras that capture footage from all angles, allowing users to look around and experience a destination from different perspectives.

3. Interactive maps and panoramic images:

These tools allow users to explore a destination by navigating through high-resolution photos or maps.

4. Augmented reality (AR) experiences:

AR technology can be used to add digital elements to a real-world environment, providing an enhanced view of a destination.

5. Live streaming events:

Some destinations offer live streams of popular attractions and events, allowing users to experience them in real time from wherever they are.

6. Virtual tours with a guide:

Virtual tours with a guide are a type of virtual tourism in which a real-life tour guide gives an online presentation or interactive workshop showcasing destinations or tourist attractions using video conferencing platforms.

Advantages and Disadvantages of Virtual Tourism

Virtual Tourism has several advantages when compared to regular tourism (Barzey, 2022; Liu et al., 2023; Phil, 2023; Zhao & Huang, 2022):

Convenience

Virtual tourism offers the opportunity to discover and explore new destinations without the inconvenience of physical travel, which can often be time-consuming, stressful, and costly.

Freedom and Flexibility

Virtual tourism provides customers with unparalleled freedom. For example, you can virtually ascend Mount Everest while comfortably wearing flip-flops. Additionally, it offers flexibility in scheduling, allowing users to plan their tours according to their own timetable

Accessibility

Virtual tourism enables individuals with mobility issues or other physical limitations to visit and experience places that may otherwise be inaccessible to them.

Affordability

Virtual tourism enables individuals with mobility issues or other physical limitations to visit and experience places that may otherwise be inaccessible to them.

Eco-friendliness

Virtual tourism contributes to environmental sustainability by reducing or eliminating the need for international travel, thereby decreasing carbon emissions associated with transportation.

Extension of tourism season

Virtual tourism extends the tourism season for tour guides, allowing them to offer customised virtual tours during the off-season when physical tours may not be feasible.

Stimulation of in-person tourism

Virtual tourism serves as a promotional tool for actual tourist destinations, encouraging tourists to book flights and accommodations based on their virtual experiences. Virtual tours can be an integral part of trip planning and research.

Personalised experience

Virtual tourism allows viewers to select specific locations and explore them at their own pace, catering to individual interests and preferences. This personalized approach is particularly valuable for individuals interested in specific attractions or destinations.

It also has several disadvantages that should be considered (Barzey, 2022; Liu et al., 2023; Phil, 2023; Zhao & Huang, 2022):

Absence of Physical Interaction

Virtual tourism falls short in replicating the immersive experience of physically being in a destination and engaging with its environment and inhabitants.

Restricted Immersion

Despite advancements in virtual reality technology, it remains unable to fully capture the multisensory experience of being present at a location. For instance, virtual tours lack the ability to convey the authentic smells, sounds, and tactile sensations of a destination.

Accuracy Concerns

While virtual tours offer a semblance of real-world presence, their fidelity to the actual destination can be inconsistent. Pre-recorded videos may fail to reflect the current state of a location, and live streaming might not provide a comprehensive portrayal.

Technical Constraints

The reliance on technology exposes virtual tourism to potential technical glitches and limitations, impacting the overall quality of the experience.

Limited Social Interaction

Virtual tours typically lack meaningful social engagement and personal connections. While this aspect may suit some individuals, others may find the experience unsatisfying due to the absence of interpersonal interactions.

Accessibility Challenges

Successful participation in virtual tourism necessitates a reliable internet connection, posing accessibility barriers, particularly in remote regions with limited connectivity.

Limited Economic Impact

Compared to traditional tourism, virtual tours generate fewer economic benefits as they require minimal investment. Consequently, they contribute less to local economies and tourism sectors.

Undertourism Implications

While virtual tourism offers an affordable alternative for travellers, its prevalence may lead to reduced foot traffic at physical destinations, resulting in adverse economic ramifications for local communities and tourism industries.

Even though, it could be implied that virtual tourism could act as a trigger for negative expectation (e.g. someone participated in a virtual tour and did not like it, therefore they do not intend to visit the actual destination), there are several authors (Barzey, 2022; Liu et al., 2023; Suprpto et al., n.d.; Zhao & Huang, 2022) who argue that virtual tourism is more likely to act as an accelerator for wanting to actually visit the destination in real-life than the other way around.

Unit 7. Activity: True/False Questions

Lumi File: M4_L6_Unit 7.1 (The following text has been added to the Lumi file)

AI and XR technologies have had a minimal impact on the sustainable tourism sector.

True or False

Lumi File: M4_L6_Unit 7.2 (The following text has been added to the Lumi file)

Gamification platforms powered by AI algorithms encourage tourists to engage in eco-friendly activities.

True or False

Lumi File: M4_L6_Unit 7.3 (The following text has been added to the Lumi file)

Virtual Reality (VR) and Augmented Reality (AR) are not used in sustainable tourism initiatives.

True or False

Lumi File: M4_L6_Unit 7.4 (The following text has been added to the Lumi file)

XR technologies cannot be used for environmental monitoring and conservation efforts in tourist destinations.

True or False

Lumi File: M4_L6_Unit 7.5 (The following text has been added to the Lumi file)

AI-powered translation tools enable real-time language interpretation, facilitating communication with local communities.

True or False



Lumi File: M4_L6_Unit 7.6 (The following text has been added to the Lumi file)

XR technologies, such as virtual tours, provide limited accessibility options for individuals with disabilities.

True or False

Unit 8. Theoretical Chapter: Utilising AI and XR tools in Project Management

In the field of project management, the integration of Artificial Intelligence (AI) and Extended Reality (XR) tools has become increasingly prevalent, offering innovative solutions to streamline workflows, enhance collaboration, and optimise project outcomes. This chapter explores the most useful AI and XR tools for project management, delving into their functionalities, utilisation methods, and potential impact on project management practices.

Introduction to AI and XR Tools in Project Management

Artificial Intelligence (AI) and Extended Reality (XR) tools are revolutionising project management by automating routine tasks, enhancing decision-making processes, and providing immersive visualisation capabilities. From AI-powered analytics platforms to XR-enabled collaboration tools, these technologies offer a wide range of functionalities that can significantly impact the way projects are managed.

AI Tools for Project Management

AI-Powered Project Planning Tools: AI-driven project planning tools (García-Madurga & Grilló-Méndez, 2023; Sibley, 2023) leverage predictive analytics and machine learning algorithms to optimise resource allocation, schedule management, and risk assessment. These tools analyse historical project data, identify patterns, and generate accurate forecasts, enabling project managers to make informed decisions and mitigate potential risks.

Natural Language Processing (NLP) Tools: NLP tools (*8 Best Tools for Natural Language Processing in 2024 | Classes Near Me Blog*, n.d.) enable project managers to extract valuable insights from unstructured data sources, such as project documents, emails, and communication logs. By analysing text data, NLP algorithms can identify key trends, sentiment patterns, and communication bottlenecks, facilitating effective communication and knowledge sharing among project stakeholders.

AI-Powered Virtual Assistants: AI-powered virtual assistants (*Key Technologies to Drive Artificial Intelligence Virtual Assistants (IVAs) | Insights | NITCO Inc*, n.d.), such as chatbots and voice assistants, streamline project communication and task management by providing real-time assistance and automating routine inquiries. These virtual assistants can answer questions,



schedule meetings, assign tasks, and provide status updates, freeing up valuable time for project managers and team members to focus on high-priority tasks.

Predictive Analytics Platforms: Predictive analytics platforms utilise AI algorithms to forecast project outcomes, identify potential roadblocks, and optimise project performance. By analysing historical data and project metrics, these platforms can predict project delays, budget overruns, and resource constraints, enabling project managers to proactively address issues and adjust project plans accordingly.

Figure 4.79

AI Chatbot



Note. From Adobe Stock [Photograph], by Golden Sikorka, 2021, stock.adobe.com. (https://stock.adobe.com/gr_en/images/isometric-chat-bot-and-online-survey-online-exam-questionnaire-form-online-education-internet-quiz-artificial-intelligence-ai-and-business-iot-concept/259968719). Standard License.

XR Tools for Project Management

Virtual Reality (VR) Visualisation Platforms: VR visualisation platforms provide immersive project visualisation capabilities, allowing stakeholders to explore project environments, simulate scenarios, and identify potential design flaws. By experiencing projects in virtual reality, stakeholders can gain a deeper understanding of project scope, spatial relationships, and design intent, facilitating more informed decision-making and stakeholder engagement.

Augmented Reality (AR) Collaboration Tools: AR collaboration tools overlay digital information

onto the physical environment, enabling real-time data visualisation and collaboration among project teams. These tools allow stakeholders to annotate physical spaces, visualise design changes, and share feedback in a contextualized manner, enhancing communication and coordination throughout the project lifecycle.

Mixed Reality (MR) Remote Assistance Solutions: MR remote assistance solutions enable remote collaboration and troubleshooting in project management scenarios. By blending virtual and physical realities, these solutions allow experts to provide real-time guidance and support to onsite teams, reducing the need for travel and minimizing downtime in project execution.

XR Training Simulations: XR training simulations offer immersive learning experiences for project teams, enabling them to practice complex tasks, simulate emergency scenarios, and develop critical skills in a risk-free environment. By providing hands-on training in virtual reality, XR simulations enhance team competency and preparedness, ultimately improving project performance and safety.

Impact on Project Management Practices

The utilisation of AI and XR tools in project management has the potential to significantly impact project management practices in several ways:

- **Streamlined Workflows:** AI-driven automation and XR visualisation streamline project workflows, reducing manual effort and improving efficiency.
- **Enhanced Collaboration:** AI-powered communication tools and XR collaboration platforms foster real-time collaboration and knowledge sharing among project stakeholders.
- **Informed Decision-Making:** AI analytics and XR visualisation provide actionable insights and immersive experiences that support informed decision-making and risk management.
- **Improved Project Outcomes:** By leveraging AI and XR technologies, project managers can optimise resource allocation, mitigate risks, and deliver projects on time and within budget, ultimately improving project outcomes and stakeholder satisfaction.

Case Studies and Success Stories

Case Study 1: Construction Industry

Organisation: Balfour Beatty

Challenges:

Balfour Beatty (*Case Study 3*, n.d.), a leading international infrastructure group, faced challenges related to project delays, cost overruns, and safety concerns in its construction projects. The



complexity of managing large-scale infrastructure projects across multiple sites and stakeholders posed significant coordination and communication challenges, leading to inefficiencies and suboptimal outcomes.

Solutions:

To address these challenges, Balfour Beatty implemented AI-driven project management solutions that used predictive analytics and machine learning algorithms to optimise project planning, scheduling, and resource allocation. Additionally, XR visualisation tools were utilised to create immersive 3D models of construction sites, enabling stakeholders to visualise project progress, identify potential design clashes, and mitigate safety risks proactively.

Benefits:

- Improved project planning and scheduling accuracy, leading to reduced delays and cost overruns.
- Enhanced stakeholder communication and collaboration through immersive XR visualisation experiences.
- Increased safety awareness and risk mitigation through proactive identification of safety hazards and design clashes.

Case Study 2: Healthcare Industry

Organisation: Mayo Clinic

Challenges:

Mayo Clinic (*Top-Ranked Hospital in the Nation*, n.d.), a nonprofit academic medical centre, faced challenges related to patient care coordination, medical staff scheduling, and resource allocation across its healthcare facilities. The increasing demand for healthcare services, coupled with limited resources and staffing constraints, posed significant challenges in delivering high-quality patient care efficiently and effectively.

Solutions:

To address these challenges, Mayo Clinic adopted AI-powered project management solutions that utilised predictive analytics and natural language processing (NLP) algorithms to optimise patient scheduling, predict patient demand, and allocate resources effectively. XR training simulations were also implemented to train medical staff and simulate emergency scenarios, ensuring preparedness and proficiency in delivering patient care.

Benefits:

- Enhanced patient care coordination and scheduling accuracy, leading to improved patient outcomes and satisfaction.
- Optimised resource allocation and utilisation, resulting in cost savings and operational



efficiencies.

- Increased staff competency and preparedness through immersive XR training simulations, reducing errors and improving patient safety.

Integration with Existing Project Management Systems

Strategy 1: Seamless Integration with Project Management Software

To integrate AI and XR tools with existing project management software, organisations can utilise APIs (Application Programming Interfaces) and middleware solutions to establish seamless communication and data exchange between systems. By integrating AI-driven analytics and XR visualisation capabilities directly into project management software platforms such as Asana, Trello, and Jira, organisations can enhance decision-making, streamline workflows, and improve collaboration among project teams.

Strategy 2: Interoperability and Data Integration

Interoperability and data integration are crucial aspects of integrating AI and XR tools with existing project management systems. Organisations should prioritize selecting AI and XR tools that offer compatibility with industry-standard data formats and protocols, ensuring seamless interoperability with existing systems. Additionally, establishing robust data integration processes and protocols is essential to facilitate the exchange of data between AI and XR tools and existing project management systems, enabling real-time data synchronization and workflow automation.

Strategy 3: Customisation and Configuration

When integrating AI and XR tools with existing project management systems, organisations should prioritize customization and configuration options to tailor the integration to their specific needs and requirements. By working closely with vendors and leveraging customization capabilities offered by AI and XR tools, organisations can adapt the integration to align with their existing infrastructure, workflows, and project management processes. This ensures that the integrated solution effectively addresses the organisation's unique challenges and objectives, maximising the value of AI and XR technologies in project management.

Training and Upskilling Initiatives

Addressing the Skills Gap

To empower project managers and team members to effectively utilise AI and XR tools in project management, organisations need to address the skills gap through targeted training and upskilling initiatives. This involves identifying the specific skills and competencies required to leverage AI-driven analytics and XR visualisation platforms effectively, such as data analysis, problem-solving, and digital literacy.



Recommendations for Training Programmes

- **AI and Machine Learning Training:** Training programmes and workshops focused on AI and machine learning fundamentals, algorithms, and applications in project management.
- **XR Visualisation Training:** hands-on training sessions and immersive XR experiences to familiarize project managers and team members with XR visualisation tools and techniques.
- **Data Analytics and Visualisation Workshops:** Workshops and seminars on data analytics and visualisation tools, techniques, and best practices for leveraging AI-driven analytics platforms in project management.
- **Project Management Certification Programs:** Certification programmes and courses that integrate AI and XR technologies into project management curricula, enabling project managers to obtain credentials that validate their proficiency in these areas.
- **Continuous Learning and Development:** Establishing a culture of continuous learning and development within the organisation, encouraging project managers and team members to pursue ongoing training and certification opportunities to stay abreast of advancements in AI and XR technologies and their applications in project management.

The utilisation of AI and XR tools in project management offers transformative opportunities to improve processes and collaboration and optimise project outcomes. With the usage of AI-driven analytics and XR visualisation capabilities, project managers can make informed decisions, mitigate risks, and deliver successful projects in an increasingly complex and dynamic environment.

Unit 9. Activity: Single Choice Set Questions

Lumi File: M4_L6_Unit 9 (The following text has been added in the Lumi File).

Which of the following is NOT a potential benefit of integrating AI and XR tools in project management?

- Increased project delays and cost overruns.
- Streamlined workflows and reduced manual effort.
- Enhanced collaboration and knowledge sharing among stakeholders.

Which type of XR tool provides immersive project visualisation capabilities?

- Virtual Reality (VR)
- Mixed Reality (MR)
- Augmented Reality (AR)

What is one of the functionalities of AI-powered virtual assistants in project management?

- Assigning tasks to team members
- Physical project monitoring
- Generating project reports

What is the primary purpose of XR training simulations in project management?

- Providing hands-on training in a risk-free environment
- Optimising resource allocation
- Enhancing stakeholder communication

How can organisations ensure seamless integration of AI and XR tools with existing project management systems?

- By prioritising customisation and configuration options
- By avoiding the use of APIs and middleware solutions
- By ignoring interoperability and data integration

Module 4 Closing Video

Congratulations on successfully completing Module 4, “Digital Skills for the Sustainable Tourism Sector”. Your dedication and commitment have brought you this far, guiding you through the extensive learning of digital skills and their applications in project management and the sustainable tourism sector.

Now, as you have reached this point, equipped with knowledge and skills, a world of new opportunities awaits. As an aspiring hybrid sustainable project manager in the tourism sector, you are also called to pioneer change, spark innovation, and drive the industry forward.

That’s why it is imperative for you to continue your learning journey by enrolling in Module 5, “The Resilient Sustainable Hybrid Project Management”.

Don't hesitate—take the next step now!



Module 4 Assessment Exam Questions

Welcome to Module 4 exams designed to evaluate your comprehension and mastery of the content presented in this module. Please read the following instructions carefully before you begin the assessment.

This exam consists of two types of questions:

- Multiple Choice: Each multiple-choice question is followed by three to four possible answers. Read each question carefully and select the one best answer that is correct or most accurately responds to the question.
- True or False: For true or false questions, read each statement carefully. Decide whether it is true or false based on your knowledge of the subject material and indicate your choice accordingly.

1. _____ is a cornerstone for achieving project success as it refers to shared values and practices in exchanging information inside a team or an organisation.
 - a. Communication Culture
 - b. Hybrid communication
 - c. Project management
 - d. Netiquette
2. The integration of digital technologies into all areas of business, fundamentally changing how organisations operate and deliver value. This is widely known as _____.
 - a. Analogous Transformation
 - b. Digital Transformation
 - c. Traditional Shift
 - d. Digital Modernisation
3. During the planning phase of the eco-tourism initiative, you need to outline its goals and objectives and decide your first move. What will that be?
 - a. Create a project charter to define the project scope, objectives, and deliverables.
 - b. Use a project management tool to create a Gantt chart and schedule tasks for each phase of the project.
 - c. Conduct a stakeholder analysis to identify key stakeholders and their interests.
4. During the planning phase of an eco-tourism initiative, you as the Project Manager need to develop a comprehensive project plan outlining goals, timelines, and resources needed and present them to your team. The options to continue are:
 - a. Conduct stakeholder interviews and workshops to gather input and create a project charter outlining the project scope, objectives, and deliverables.
 - b. Utilise a project management software such as Microsoft Project or Asana to create a detailed project plan with tasks, timelines, and resource allocation.



- c. Use a collaboration platform such as Slack or Microsoft Teams to facilitate communication and collaboration among project team members.
- 5. The process of managing the availability, usability, integrity, and security of the data in enterprise systems, based on internal standards and policies that also control data usage is called _____.
 - a. Data governance
 - b. Data analysis
 - c. Data mining
 - d. Data analytics
- 6. The practice of dividing a company's customers into groups that reflect similarity among the members in each group is called _____.
 - a. Customer governance
 - b. Customer personalisation
 - c. Customer segmentation
- 7. _____ are defined as large volumes of data that grow rapidly and can be analysed to extract valuable insights.
 - a. Big data
 - b. Data analytics
 - c. Customer data
- 8. Your team is tasked with launching a new marketing campaign for a product, and you need to determine the most effective marketing channel to reach your target audience. What's your approach to this issue?
 - a. Conduct A/B testing across multiple marketing channels to gather data on engagement, conversion rates, and return on investment (ROI) before making a decision.
 - b. Choose the marketing channel that has the highest engagement rates based on evidence and past experiences.
 - c. Choose the marketing channel that did not work in a previous campaign attempting to utilise it this time.
- 9. You're evaluating potential tour operators for a partnership to offer specialised cultural tours, and you need to select the operator that offers the best value proposition for your clients. What's your approach?
 - a. Choose the tour operator with the lowest upfront costs without considering factors such as tour quality, guide expertise, and customer reviews.
 - b. Evaluate tour operators based on criteria such as reputation, tour offerings, customer feedback, and alignment with your brand values to ensure a positive experience for travellers.



- c. Choose the tour operator with the highest upfront costs because based on experience it is known that the higher the price the higher the quality.
- 10.** Data accuracy can be compromised if collected from unreliable sources or without proper validation processes.
 - a. True
 - b. False
- 11.** Consulting with subject matter experts, such as local chefs and tourism professionals, is essential to ensure that data evaluation methods align with industry expertise in tourism projects.
 - a. True
 - b. False
- 12.** What is the primary objective of social media marketing for tourism businesses?
 - a. To limit customer interaction
 - b. To increase the cost of products
 - c. To decrease brand visibility
 - d. To connect with the target audience and drive engagement
- 13.** What is one of the key advantages of e-tourism platforms?
 - a. They provide a decentralised and complex interface for travellers.
 - b. They offer a centralised and user-friendly interface for travellers.
 - c. They offer limited information about destinations and travel services.
- 14.** What is the purpose of monitoring and measuring the performance of digital content?
 - a. To create more content
 - b. To know your competition
 - c. To evaluate effectiveness and make informed decisions
 - d. To design content formats
- 15.** Which of the following is not an ethical consideration while using AI?
 - a. Respecting and protecting individuals' privacy rights
 - b. Maximising financial gains
 - c. Mitigating algorithmic biases and avoiding over-reliance on technology
- 16.** Which of the following is an example of a mixed-reality practice applied in the sustainable tourism sector?
 - a. Creating a virtual reality (VR) simulation to educate stakeholders about the impacts of tourism on local ecosystems.
 - b. Hosting virtual meetings with stakeholders to plan sustainable tourism initiatives.
 - c. Using augmented reality (AR) to display real-time information about eco-friendly attractions at tourist destinations during guided tours.
- 17.** Which of the following is not a potential benefit of integrating AI and XR tools in project management?



- a. Increased project delays and cost overruns.
 - b. Streamlined workflows and reduced manual effort.
 - c. Enhanced collaboration and knowledge sharing among stakeholders.
- 18.** XR technologies, such as virtual tours, provide limited accessibility options for individuals with disabilities.
- a. True
 - b. False
- 19.** Gamification platforms powered by AI algorithms encourage tourists to engage in eco-friendly activities.
- a. True
 - b. False
- 20.** XR technologies cannot be used for environmental monitoring and conservation efforts in tourist destinations.
- a. True
 - b. False



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Module 5: The Resilient Sustainable Hybrid Project Manager

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Module 5: The Resilient Sustainable Hybrid Project Manager

Introductory video script/ scenario

Welcome to Module 5 of the HyPro4ST project!

This module entitled The Resilient Sustainable Hybrid Project Manager aims to support project managers to become not only skilled in the technical aspects of Hybrid Project Management but also well-rounded leaders capable of guiding projects with resilience, empathy, adaptability, and an emphasis on diversity and inclusion in today's dynamic and rapidly changing work environments of the sustainable tourism sector.

Throughout this module you will be encouraged and assisted by means of practical activities in the format of case studies, quizzes, interactive videos etc. to actively engage in the application of the theory introduced. This is the element of fun that we have added to make this learning process a game!

The dedication of 30hours will be required in order to study the module. We recognize that this is not easy but we hope it will be worth it.

Consider that the training is planned so that upon its completion you will be able to

- ✓ Define what project leadership is,
- ✓ Understand the concepts of centralized and distributed leadership,
- ✓ Describe the Situational Leadership Model in Project Management.
- ✓ Practice agile, servant and coaching leadership practices
- ✓ Explain the importance of Emotional Intelligence in managing projects.
- ✓ List the types and models of communication in Project Management
- ✓ Apply conflict management and negotiation strategies for resolving issues while managing projects
- ✓ Prepare a Project Communication Plan
- ✓ Demonstrate confidence in communicating decisively, productively, and smoothly with all projects' stakeholders

Welcome again and enjoy the learning journey!



Lesson 1: The Agile Leader

Unit 1: Introduction to Lesson 1 “The Agile Leader”

We often listen to the terms Agile or agility in relation to management or agile leadership and agile leader. But what do we mean when referring to these terms - agile leader or agile leadership?

Now let's see where we all stand in terms of understanding of the term Agile leader. Please provide your answer to the following question:

By definition **agile** means to move about **quickly** and **easily** and **agility** describes **the ability to think and act quickly and clearly**.

Similarly, the **Agile Leader** embodies a dynamic and adaptive approach to leadership, steering teams through rapidly changing environments with resilience and foresight. How? By being focused on collaboration, flexibility, and continuous improvement. The Agile Leader empowers their team to respond swiftly to evolving challenges, promoting innovation and fostering a culture of learning.

All these sound ideal but one must keep in mind that embracing an iterative mindset is not an easy choice. It requires

- ✓ prioritizing communication,
- ✓ providing feedback in a timely manner, and
- ✓ transparency.

This leadership style emphasizes responsiveness, quick decision-making, and a commitment to embracing change as a catalyst for growth and success. However, it is at the same time a process enabling the organization to navigate uncertainty while staying aligned with strategic goals.

Especially in tourism, the Agile Leader embodies a dynamic and adaptive approach to navigating the rapidly changing landscape of the industry. Faced with unpredictable challenges, these leaders prioritize flexibility, collaboration, and continuous improvement. They seamlessly integrate technology, customer feedback, and market trends to swiftly adjust strategies, ensuring their teams remain resilient and responsive.

This is the profile that we will try to analyze in the current lesson.



Unit 2 Multiple Choice Question (LUMI)

What is a defining characteristic of an Agile Leader?

- a. Maintaining less rigid processes and structures
- b. Resisting change and innovation
- c. Embracing flexibility and adaptability**
- d. Micromanaging team member

Unit 3 What is Project Leadership

Project leadership is essentially the art of guiding a team to successfully complete a project. It involves a mix of skills and knowledge to achieve this. According to Northouse (2006) leadership is a process that entails influence, is realized within a team and concerns the attainment of goals; while Shackleton (1995) defines leadership as the process that one person affects other team members in a positive way in order to achieve group or organizational goals.

Figure5.1

Leadership



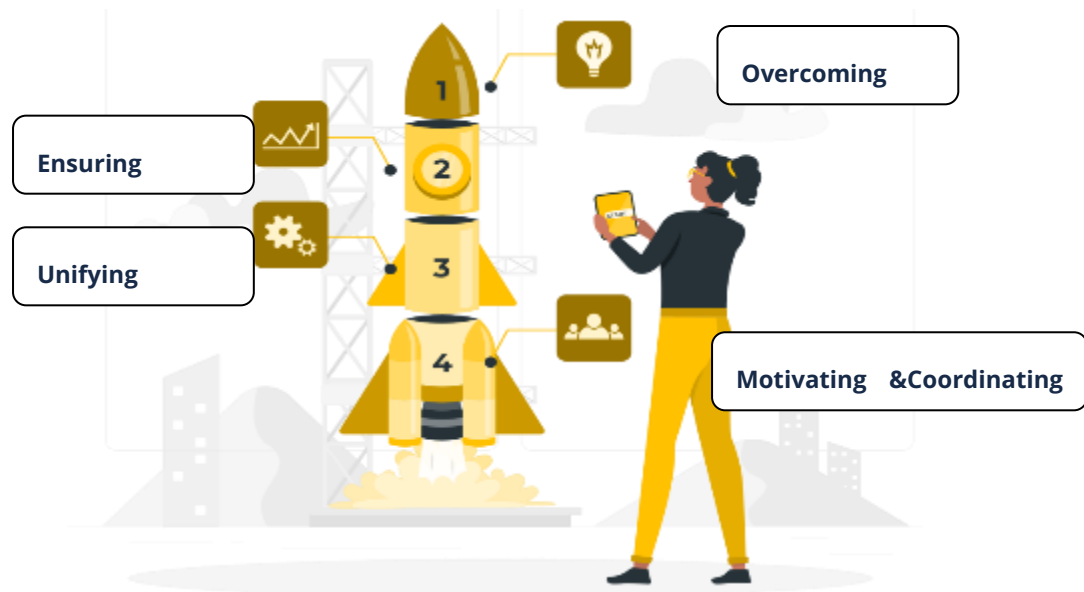
Note. From unsplash.com [photography] people riding boat on body of water, by Matteo Vistocco (2017) <https://unsplash.com/photos/people-riding-boat-on-body-of-water-Dph00R2SwFo>

Here's a breakdown of key aspects of project leadership:

- ✓ **Motivating and Coordinating the Team:** A project leader rallies the team around the project goals, fostering a collaborative environment where everyone works together effectively.
- ✓ **Unifying Diverse Talents:** Project teams often have people with various skillsets. The leader needs to recognize these strengths and leverage them for the project's benefit.
- ✓ **Ensuring Contribution:** An effective leader assigns tasks that utilize each team member's strengths and keeps everyone engaged in achieving the project's objectives.
- ✓ **Overcoming Challenges:** Projects rarely go according to the exact plan. The leader needs to be adept at problem-solving and navigating unexpected hurdles.

Figure 5.2

Key aspects of project leadership



Note. Figure developed using Project stages by Storyset storyset.com

In short, project leadership is about bringing people together with a shared vision and guiding them towards a successful outcome

But how can one lead?

Effective leadership combines characteristics and the ability to adapt to different situations so as to manage a project.

Analyzing the methods of successful leaders reveals a set of recurring traits. Here are the 10 most common attributes shared by these leaders according to Project manager.com:

1. They are grounded and centered
2. They are aware and mindful
3. They create solutions
4. They are analytical
5. They can evaluate risk
6. They can generate a sense of urgency
7. They are insightful
8. They build cohesion
9. They motivate people
10. They achieve results

Delve into the management styles of any project leader, and you'll discover a kaleidoscope of approaches to achieving goals and fostering leadership. These differences often stem from the leader's unique personality and their natural inclination towards a particular leadership style. This because there isn't a single, universally perfect theory on project leadership that could serve as a manual to respond to this question. Here's a glimpse into some prominent theories:

- **Trait theory:** with focus on the type of persons that make good leaders, associates their innate qualities with the leadership traits they have.
- **Behavioural theory:** identifies what good leaders do effectively how they 'lead well'.
- **Situational and contingency theory:** looks at the leader in the context of where they lead.
- **Transactional theories** focus on the leader getting results by using process and structures while applying reward and penalty in response.

From what is mentioned until now, one might notice that it is not defined **who the leader is**. This is on purpose not defined, as the leader may or may not be the person assigned to lead the team!

Indeed the leader may or may not be the project manager. Every person can act as an executive one day and as a leader the next depending on the situation. Leadership and management may vary in terms of focus, skills or analogy. While the management places the focus on tasks and processes implementation with efficiency and according to established procedures, by means of schedules and plans to be followed; the leadership places the focus on people and vision with the aim to inspire and motivate teams towards a specific direction with clearly articulated common goals.

In short

Figure 5.3

Leader VS Manager



Note Figure developed using Business illustrations by Storyset [storyset.com](https://www.storyset.com/)

Although project management and project leadership are by nature distinct concepts, there is some commonality between the two. The performance of a project manager and the effectiveness of a leader are both measured in terms of the performance of the team and the performance of the followers respectively. Successful implementation of strategic goals hinges on project managers with both leadership capabilities and strong project management skills.

Hence, leadership skills are essential for the project manager in order to be competent to motivate and inspire teams and individuals—negotiate and communicate, listen and influence the team with emphasis on improving team performance.

Tip!

Do you wonder how your team perceives your role as leader? You may ask them

"At the end of this project when we are successful, what will you say that I did?"

Listen carefully and you will hear many of the raw ingredients of high performance teams. Take notes. These define the raw content of your job description as project leader.

Unit 4 Activity “Drag the word” [LUMI]

Leadership skills *___* the same as management skills. There is a *___* between project management and leadership. *___* is focused on the implementation of tasks and processes through clear procedures which addresses the project *___*. *___* is more focused on creating a shared vision by the *___* for the future. Simultaneously, there is some *___* between project management and leadership: their effectiveness is measured in terms of group performance.

Words:

Project management; Leadership; are not; are; team; followers; common ground; difference.

Unit 5 Centralised vs. Distributed Leadership [LUMI Interactive video]



Co-funded by
the European Union

MODULE 5

THE RESILIENT SUSTAINABLE HYBRID PROJECT MANAGER

LESSON 1

The Agile leader

UNIT 5

CENTRALISED VS. DISTRIBUTED LEADERSHIP



Centralized Leadership

A centralized leadership approach involves a hierarchical structure where **decision-making authority and control are concentrated at the top levels** of the organization or team, with **little autonomy** or empowerment given **to lower-level members**.



Distributed Leadership



Distributed leadership is a model that moves away from the traditional view of a single leader at the helm. It promotes and recognizes

- ✓ the **delegation** of responsibilities, decision making and influence and
- ✓ **Expertise in individuals**

as conditions **for achieving shared goals**



Figure developed using People illustrations by Storyset [storyset.com](https://www.storyset.com/)

Focus

Two prevailing approaches of Distributed leadership

The agile leadership



Figure developed using People illustrations by Storyset [storyset.com](https://www.storyset.com/)

and the

Servant leadership



Figure developed using People illustrations by Storyset [storyset.com](https://www.storyset.com/)

In Agile leadership, emphasis is placed on fostering collaboration, empowering teams, enabling quick decision-making, adapting to change, and delivering value to customers iteratively and incrementally.



PMI recognized Servant Leader as an effective leadership style.

This theory emphasizes the leader's role in supporting and empowering the team. Servant leaders prioritize the team's needs and growth, fostering a collaborative and trusting environment.

In terms of **Focus**



- focuses on the iterative and incremental delivery of high-quality products or services.
- emphasizes adaptability, flexibility, and responsiveness to change.



- focuses on serving the team, facilitating their growth and development, and enabling them to perform at their best
- prioritizes the needs of the team members

In terms of **Role**



- involve self-organizing, cross-functional teams that collaborate closely to deliver value
- Leadership is often distributed among team members, with less emphasis on traditional hierarchical structures.



- a strong emphasis is placed on the role of the leader as a servant to the team.
- The leader fulfills his/her role by removing obstacles, providing support and resources, and fostering a culture of trust and collaboration

In terms of Decision-Making



Agile
leadership

- decision-making is often decentralized, with teams empowered to make decisions at the level where the information and expertise reside.
- promotes quick adaptation and response to changing requirements.



Servant
leadership

- Servant leaders facilitate decision-making by providing guidance, coaching, and support to the team.
- The Servant leader also ensures that decisions align with the overall vision and goals of the organization.

In terms of Scope of application



Agile
leadership

- Originates in software development projects
- Is adopted in various industries and domains where there is a need for flexibility, collaboration, and rapid delivery of value



Servant
leadership

- can be applied in various contexts beyond project management, including organizational leadership, community leadership, and personal leadership.

In terms of measurement of Success



Agile leadership

- the ability to deliver working products or services that meet customer needs
- the team's ability to adapt to change and continuously improve



Servant leadership

- the growth, development, and well-being of team members
- the achievement of collective goals and
- the establishment of a supportive and empowering work culture.

When team members are self-sufficient, Servant & Agile Leadership Styles can optimize workflows and enhance output.





Unit 6 Activity “A tale of two Approaches” [LUMI Essay with instant feedback]

The case study

Isabella is fuming. Her dream island vacation booked through Sunshine Tours, (you are the manager of Sunshine Tours), has hit a snag. Due to a miscommunication between your team in Sunshine Tours and the island resort, her overwater bungalow reservation vanished. While your team found her alternate accommodation, it wasn't the beachfront villa she'd specifically requested and paid extra for. The new room is decent, but the location is less desirable, and rather disappointing.

She is so upset that she came to the office to complain! You listen to her while talking to Julie with whom she exchanged e-mail. Julie acknowledges Sunshine Tours' mistake and understand Isabella's frustration. The alternative room isn't ideal, but rebooking her at the beachfront villa would mean changing rooms mid-trip, further disrupting her vacation. Isabella is asking for a partial refund and some additional perks at the resort to compensate for the inconvenience.

You can acknowledge her requests as reasonable, but now it's time to decide who can find a solution that keeps both Isabella and Sunshine Tours happy.

How would you handle it:

- using a centralized leadership model for the resolution of the case and
- a distributed leadership model for the resolution of the case?

What approach do you consider more efficient and why?

Can you further discern between an agile and a servant leadership approach?

Each question should be answered in a short paragraph.

Instant Feedback

*In an organization you can have authority and decision-making ability centralized in top management or you can have it distributed among all the staff. **Distributed leadership** is when your employees are empowered to make decisions that benefit the customer and accelerate the operations of the company. Distributed leadership is a characteristic of high performance teams. When people are given the latitude to make their own decisions, they try new things. Initiative increases, productivity increases, and morale increases because people feel trusted. Shifting your company from a centralized leadership model to a distributed leadership model is difficult because of the ingrained habits that need to be changed but the benefits can outweigh the challenge.*

**It is important to write down your answers/thoughts in order to be at a later stage able to review them by checking the compatibility of each response with the descriptions, definitions and explanations provided in Unit 5. In your check ask yourself which is the right/ best response? Why was I /wasn't I right? What parts of the theory were confusing or not clear/less clear while trying to respond? These are the parts that should be further studied!*

Activity inspired by [jfdperfsolutions.com](https://www.jfdperfsolutions.com/distributed-vs-centralized-leadership/)(<https://www.jfdperfsolutions.com/distributed-vs-centralized-leadership/>)

Unit 7 The Situational Leadership Model in Project Management

The Situational Leadership Theory in a Nutshell

This theory developed by Hersey (1988) proposes that leaders should adjust their style based on the followers' development level and maturity to execute a given task. For instance, a new team might need more directive leadership, while a seasoned team thrives with a more delegative approach. The model is built under the hypothesis that leaders may adapt their leadership style so as to adjust to the needs of their environment (Torrington et al, 2014).

Why is this theory relevant to Project management?

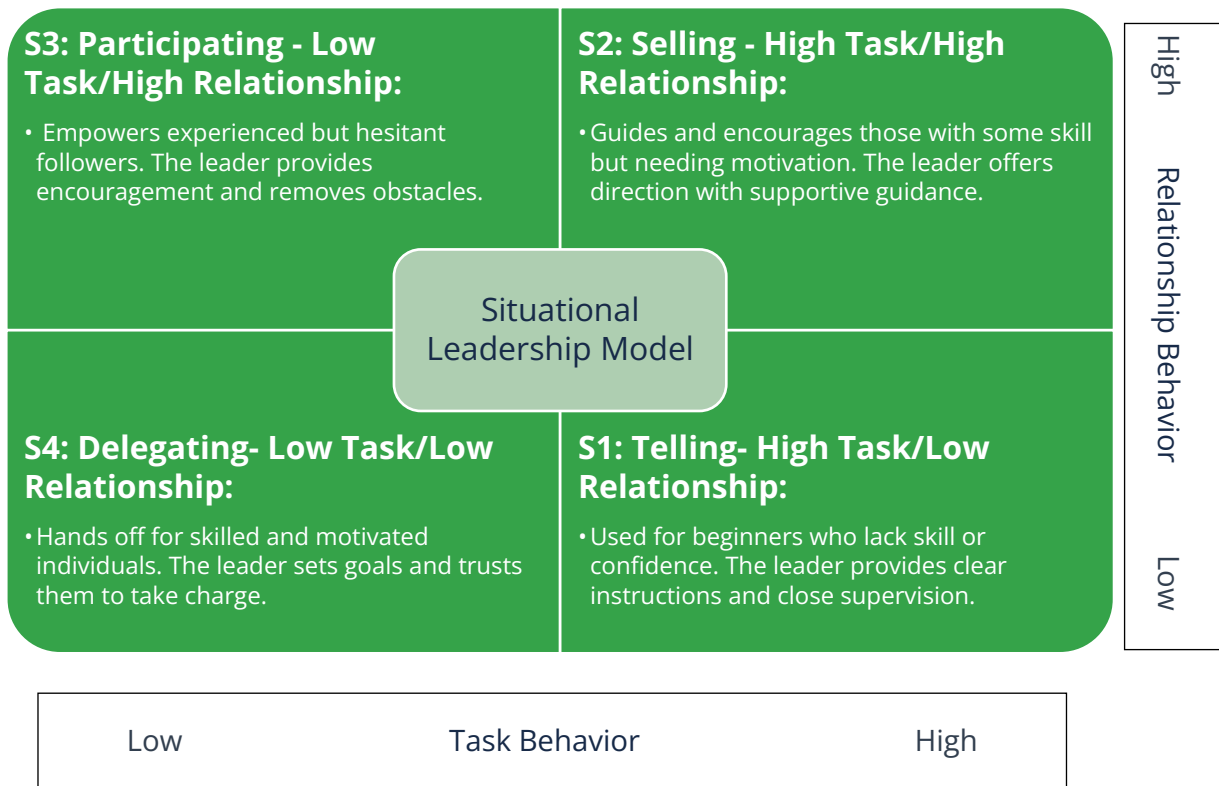
As highlighted in the [ProjectManagement.com techniques wiki](#), **Situational Leadership Theory is like a toolbox with two key settings:**

1. **Development Mode:** This is for long-term situations where a Project Manager/Leader will be working with someone over time. The goal here is to help the later grow their skills and motivation, becoming from a simple follower a confident, capable and independent associate.
2. **Project Mode:** This is for shorter-term situations where the focus is on getting a specific project done on time and to the right standard, while cooperating with people only for this short period

The Development mode is highly relevant to the needs of the tourism sector , especially in the current context as defined by the [European Skills Agenda for sustainable competitiveness, social fairness and resilience](#), while a combination of both styles is also great for the leader.

Its basic assumption/ premise is that there is no one best way to lead a team. The selection is only based on the maturity of the follower/s that are to be influenced. These maturity levels may range between 4 levels from low maturity to high maturity.

Situational Leadership adapts in two key ways based on the follower's development level as depicted in the following figure:

Figure 5.4*Situational Leadership Model Adaptation*

Note Figure adapted from <https://www.project-management-skills.com/situational-leadership-model.html>

The leader constantly assesses the follower's development and adjusts their style to best support their growth.

Before abiding with the Situational leadership model one should evaluate its pros against its cons!

Figure 5.5

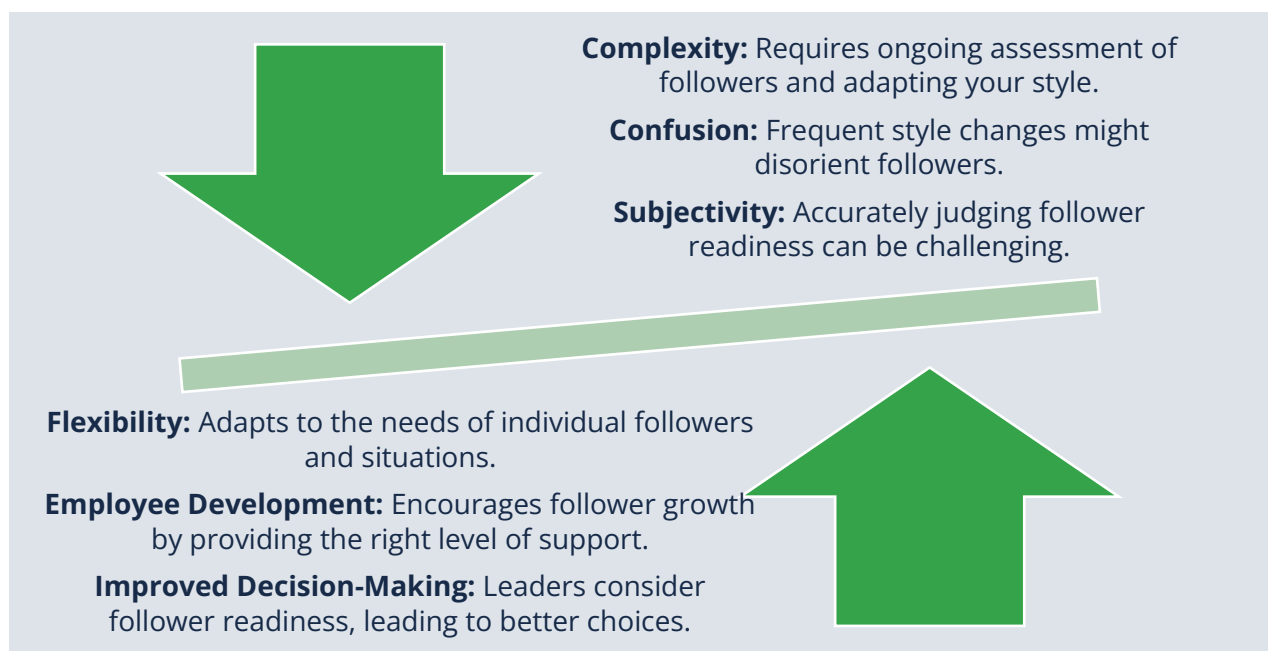
Evaluating pros against cons



Note Figure developed using Work illustrations by Storyset [storyset.com](https://www.storyset.com)

Figure 5.6

Rundown of Pros and Cons of the Situational Leadership Model



Unit 8 Implementing Situational Leadership Theory in Project Management

<i>Case Study 1: Project – Upgrading of the travel agency services</i> Imagine a travel agency looking to revamp its online booking platform. The project manager, Sarah, utilizes Situational Leadership Theory to manage her team, which includes a mix of experienced travel consultants and recent IT graduates. Sarah assesses each team member's competence (knowledge and skills) and commitment (confidence and motivation) regarding building online platforms. • Experienced consultants might have high commitment (excited about the project's impact) but lower competence (lack of technical skills). • Recent graduates might have high competence (strong technical skills) but lower initial commitment (unfamiliar with the tourism industry). Based on these assessments, Sarah knows she must now tailor her leadership style for each team member but might need a little help from you. Questions: 1. Can you identify the maturity levels of the team members? 2. Can you now select and describe the leadership style that Sara should select for each team member?	Feedback Maturity levels • consultants High Task/Low Relationship • graduates High Task/High Relationship Fit leadership styles • Telling (S1): For consultants with lower technical skills, Sarah might provide clear instructions and demonstrations on using the platform development tools. • Selling (S2): With recent graduates, Sarah might use a more collaborative approach, explaining the project's goals and working together to develop solutions, leveraging their technical expertise. Positive Outcomes: By adapting her leadership style, Sarah achieves: • Increased Collaboration: Consultants and graduates learn from each other, fostering a more collaborative environment. • Improved Skills: Consultants gain technical skills, and graduates gain industry knowledge, leading to overall team growth. • Higher Motivation: Team members feel valued for their strengths and empowered to contribute, increasing motivation. Result: The online booking platform is successfully launched within the timeframe, exceeding expectations due to the team's combined expertise and strong



	work ethic cultivated through Situational Leadership.
<i>Case Study 2: Project – the Greatest Adventure</i> Imagine an adventure travel company launching a new eco-tourism expedition in the Amazon rainforest “the Greatest Adventure”. The trip leader, Maria, utilizes Situational Leadership Theory to manage her team, which includes seasoned guides with extensive jungle experience and a group of enthusiastic but less experienced nature enthusiasts volunteering as trip assistants. Maria assesses each team member's competence (knowledge and skills) and commitment (confidence and motivation) for various expedition tasks: - Seasoned guides will be highly competent (skilled in navigation, survival techniques) and confident in their abilities. - Volunteer assistants might be less competent (some are unfamiliar with first-aid procedures while others with limited jungle experience) but highly motivated to learn and contribute. Based on these assessments, Maria must tailor her leadership style for each team member with your help! Your Tasks are as follows: 1. <i>Identify the Maturity Levels of the teams</i> 2. <i>Suggest Adapted Leadership Styles</i>	Feedback Maturity levels - experienced guides: Low Task/High Relationship - volunteer assistants unfamiliar with first-aid: High Task/Low Relationship - volunteer assistants with limited jungle experience: High Task/High Relationship Adapted leadership Participating (S3): With experienced guides on tasks they excel at (setting up camp), Maria provides support and resources as needed, allowing them to use their expertise. Telling (S1): For volunteer assistants unfamiliar with first-aid procedures, Maria provides clear instructions and demonstrations, ensuring they understand proper techniques. Selling (S2): For assistants eager to learn jungle navigation, Maria offers guidance and explanations while encouraging them to practice skills and ask questions. Positive Outcomes: By adapting her leadership style, Maria achieves: Clarity on Roles: Everyone understands their duties, leading to efficient task allocation and a smooth expedition. Positive Team Environment: Experienced guides feel valued and empowered, while assistants feel supported in their development, fostering teamwork and trust.



	• Increased Efficiency: Clear instructions and motivated team members minimize confusion and delays, ensuring a smooth and successful trip. Result: The “the Greatest Adventure” expedition launches successfully, exceeding expectations due to the team's combined expertise and strong work ethic cultivated through Situational Leadership. The trip is not only well-organized but also fosters a sense of accomplishment and learning for all participants.



Unit 9 The Project Manager as Coach

Coaching, in a general sense, is a collaborative process where a **trained professional (coach)** supports an **individual (coachee)** in achieving their goals. The coach acts as a guide and sounding board, helping the coachee develop Self awareness, skills and personal strategies.

Figure 5.7

Skills & competences developed through coaching



Coaching is not about giving advice or telling someone what to do. Instead, it's about empowering the coachee to find their own solutions and unlock their full potential. It can be applied in various settings, including:

- **Life Coaching:** Personal development goals like career changes, relationships, or stress management.
- **Executive Coaching:** Leadership development and performance improvement for executives.
- **Business Coaching:** Helping businesses and teams achieve strategic goals.
- **Sports Coaching:** Training and motivating athletes to perform at their best.

The core of coaching lies in creating a safe space for exploration, asking powerful questions, and providing constructive feedback. This partnership helps the coachee gain clarity, build confidence, and take action towards their goals.

Coaching is very often confused or mistaken with mentoring or even counseling. But there are discrete differences between these three. Though all three (coaching, mentoring, counselling) involve helping others develop, but they differ in focus, approach, and typical timeframe. Here's a breakdown:

Table 5.1

Highlights of the discreet features of Coaching, Mentoring and Counselling

Coaching	Mentoring	Counselling
Context: Business Focus: Unlocking potential and achieving specific goals. Requested by: Individual or company Approach: Collaborative, future-oriented. The coach uses questions and strategies to help the coachee find their own solutions. Timeframe: Varies depending on the goal, but typically shorter-term.	Context: Business Focus: Career and professional development. Requested by: company Approach: Relationship-based. The mentor shares knowledge and experience, guiding and advising the mentee. Timeframe: Often longer-term, with an ongoing relationship	Context: personal Focus: Mental health and well-being. Requested by: Individual Approach: Therapeutic, addressing past experiences and emotional challenges. The counsellor provides support and guidance for personal growth. Timeframe: Varies depending on the issue, but can be short or long-term.
a coach is like a personal trainer <i>They help you define</i>	a mentor like a seasoned traveler	a counsellor like a therapist

<i>your fitness goals and develop a plan to achieve them</i>	<i>shares knowledge and experiences to guide you on your professional journey</i>	<i>offers support and guidance to navigate emotional challenges and improve overall well-being</i>

Content Inspired by (Patrese, M. & Granchi, G. 2010)

Why is coaching important in project management?

Coaching is crucial in project management as a tool to:

- **Releases an empowered project manager:** being conscious of the available resources and confident about own
- **Supports the integration of multiple aspects in the project :** the project manager is supported in recognizing his/her crucial role in integrating the overall goal of the organization into the implemented project
- **Boost Team Performance:** By developing individual skills and fostering confidence, coaching empowers team members to contribute more effectively. This leads to a stronger overall team performance and a higher chance of project success.
- **Unlock Potential through better mental flexibility:** Coaching helps project managers identify and nurture own potential and the potential within their team. This allows them to delegate tasks more effectively and empower individuals to take ownership of their work and feel confident in solving problems.
- **Improve Communication and negotiation:** Coaching fosters open communication within the team and with the external environment of the project. Team members feel comfortable asking questions, seeking help, and collaborating effectively. This leads to fewer misunderstandings and smoother project execution.
- **Enhance Motivation:** Through coaching, project managers can identify and address individual concerns and roadblocks. This helps keep team members motivated and engaged throughout the project lifecycle.
- **Develop Future Leaders:** Coaching creates a learning environment where team members can grow their leadership skills. This prepares them to take on more responsibility and potentially lead future projects.



In essence, coaching transforms project managers from mere task-masters into facilitators of development. This fosters a more positive and productive work environment, ultimately leading to a higher chance of project success.

Benefits Of Coaching

Coaching offers a wide range of benefits for both individuals and organizations. Here's a breakdown of some key advantages:

Table 5.2

Individual and organizational benefits

Individual Benefits	Organizational Benefits
Increased Self-Awareness: Coaching helps individuals gain a deeper understanding of their strengths, weaknesses, values, and motivations. This self-knowledge is essential for setting goals, making decisions, and navigating challenges. Enhanced Skills and Performance: Through coaching, individuals can develop new skills, refine existing ones, and improve their overall performance in their personal or professional lives. Boosted Confidence: The supportive and encouraging nature of coaching helps individuals build confidence and overcome self-doubt. This allows them to take on new challenges and achieve their full potential. Improved Goal Setting and Achievement: Coaching provides a	Increased Employee Engagement: Coaching fosters a culture of learning and development, which can lead to higher employee engagement and motivation. Improved Employee Retention: By investing in employee growth, organizations can create a more attractive workplace and reduce employee turnover. Enhanced Leadership Skills: Coaching programs can equip leaders with the skills necessary to motivate, inspire, and develop their teams. Stronger Teamwork and Collaboration: Coaching can help teams build trust, improve communication, and work more effectively together towards shared goals.



framework for setting clear, achievable goals and developing effective strategies to reach them. Greater Work-Life Balance: Coaching can help individuals identify and address areas that create stress or imbalance in their lives. This empowers them to create a more fulfilling and sustainable work-life balance.	Boosted Productivity and Performance: By developing employee skills and fostering a positive work environment, coaching can lead to increased productivity and improved organizational performance.

Overall, coaching can be a powerful tool for unlocking individual and organizational potential. It creates a supportive space for growth, learning, and achieving goals, leading to a more successful and fulfilling experience for everyone involved.

Unit 10 Activity The OSCAR Coaching and Mentoring Model [LUMI]

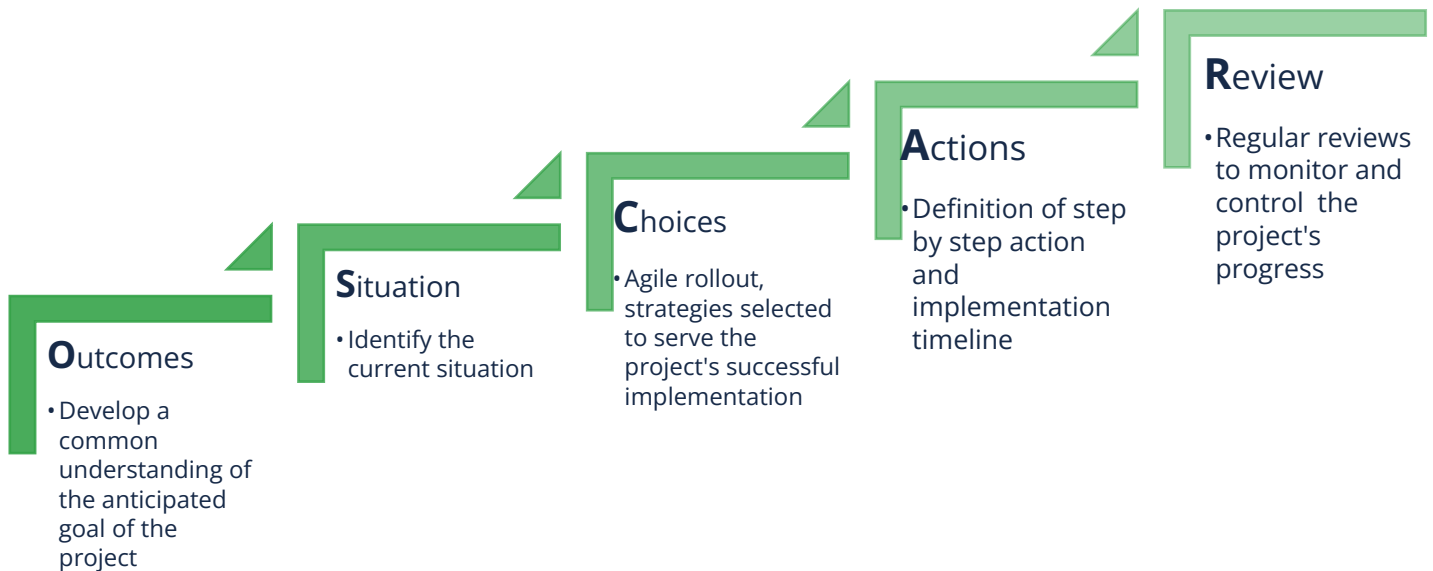
Are you familiar with the OSCAR model?

If yes this activity will be a piece of cake if no, we will make it!

[[LUMI Accordion](#)] The OSCAR model was originally developed in 2002 to support managers in adopting developmental Coaching Styles in their teams. It is really effective in the pursuit of long term outcomes as its action approach enhances the implementation of attainable milestones. The name of the model is actually the acronym of the words Outcome-Situation – Choices- Actions – Review.

If you are not sure if you are familiar with the OSCAR model, does this figure remind you of something?



Figure 5.8*The OSCAR Model*

Now it's time to apply the OSCAR model!

Case Study: Rejuvenating the Alkistis Coastal Resort

Alkistis Coastal Resort is a family-run resort located on a beautiful but aging coastline of Western Greece. Alkistis has seen a decline in bookings in recent years, facing competition from newer resorts with modern amenities and a focus on guest experience. The resort owners, Giorgos and Maria, want to revitalize their business and attract a new generation of travelers, so they decide to share their concerns with their daughter Sophia that currently studies Business management at the University and hence could be of aid. Here is an overview of what they have shared: they wish to take action in order to increase the occupancy rates of Alkistis Resort by 20% within the next year by attracting younger clients. They acknowledge that Alkistis boasts a prime location, loyal existing clientele, and a strong reputation for family hospitality. However their outdated facilities, limited digital presence, lack of unique guest experiences restrict their capacities in terms of outreach. They see that there is a growing interest in wellness tourism and a rise of eco-conscious travelers as well as an untapped potential for online marketing. But things are not that easy as the competition from modern resorts, changing travel trends, potential economic downturn are important aspects for consideration.

Giorgos and Maria are thinking about various actions that they could implement such as modernizing rooms and common areas, incorporating sustainable practices; offering yoga retreats, nature walks, and local cultural immersion activities; developing a user-friendly website and increase social media presence; training staff on guest experience best practices but they are also open to other ideas. They are not sure what the right path to follow is or what actions are required in order to effectively pursue the implementation of their ideas.

Sophia suggests the use of the OSCAR Model to define the anticipated outcomes, milestones and course of action. Help her develop the model by providing the answers to the following questions per step of the model!

O – Outcome (Your destination)

- What is your long term outcome?
- What would success look like?

S – Situation (Your starting point)

- What is the current situation?
- What's actually happening?
- Describe the current situation.

C – Choices and Consequences (Your route options)

- What choices do you have?
- What options can you choose from?
- What are the consequences of each choice?
- Which choices have the best consequences?

A – Actions (Your detailed plan)

- What actions will you take?
- What will you do next?
- How will you do it?
- When will you do it, with whom?

R – Review (Making sure you are on track)

- What steps will you take to review your progress?
- With whom will you review your progress and when?
- Are the actions being taken?
- Are the actions moving you towards your outcome?

Feedback

Evaluate yourself ★★★★★

How close are you to the following identification of potential OSCAR Steps?

O - Objectives:



- Increase occupancy rate by 20% within the next year.
- Attract a younger demographic (25-45 years old) interested in wellness and eco-friendly experiences.
- Improve guest satisfaction scores by 15%.

S - Situational Analysis:

- **Strengths:** Alkistis boasts a prime location, loyal existing clientele, and a strong reputation for family hospitality.
- **Weaknesses:** Outdated facilities, limited digital presence, lack of unique guest experiences.
- **Opportunities:** Growing interest in wellness tourism, rise of eco-conscious travelers, untapped potential for online marketing.
- **Threats:** Competition from modern resorts, changing travel trends, potential economic downturn.

C - Choice of Strategies:

- **Renovation:** Modernize rooms and common areas, incorporating sustainable practices.
- **Experience Development:** Offer yoga retreats, nature walks, and local cultural immersion activities.
- **Digital Transformation:** Develop a user-friendly website, increase social media presence, launch targeted online marketing campaigns.
- **Customer Service Enhancement:** Train staff on guest experience best practices, implement personalized guest interaction strategies.

A - Action Plan:

- Secure funding for renovations and marketing initiatives.
- Partner with local wellness professionals and tour guides.
- Develop a social media strategy and launch targeted campaigns.
- Implement guest feedback surveys and training programs for staff.

R - Results:

- Track key metrics like occupancy rate, guest demographics, and satisfaction scores.
- Measure the success of online marketing campaigns.
- Conduct regular performance reviews and make adjustments as needed.

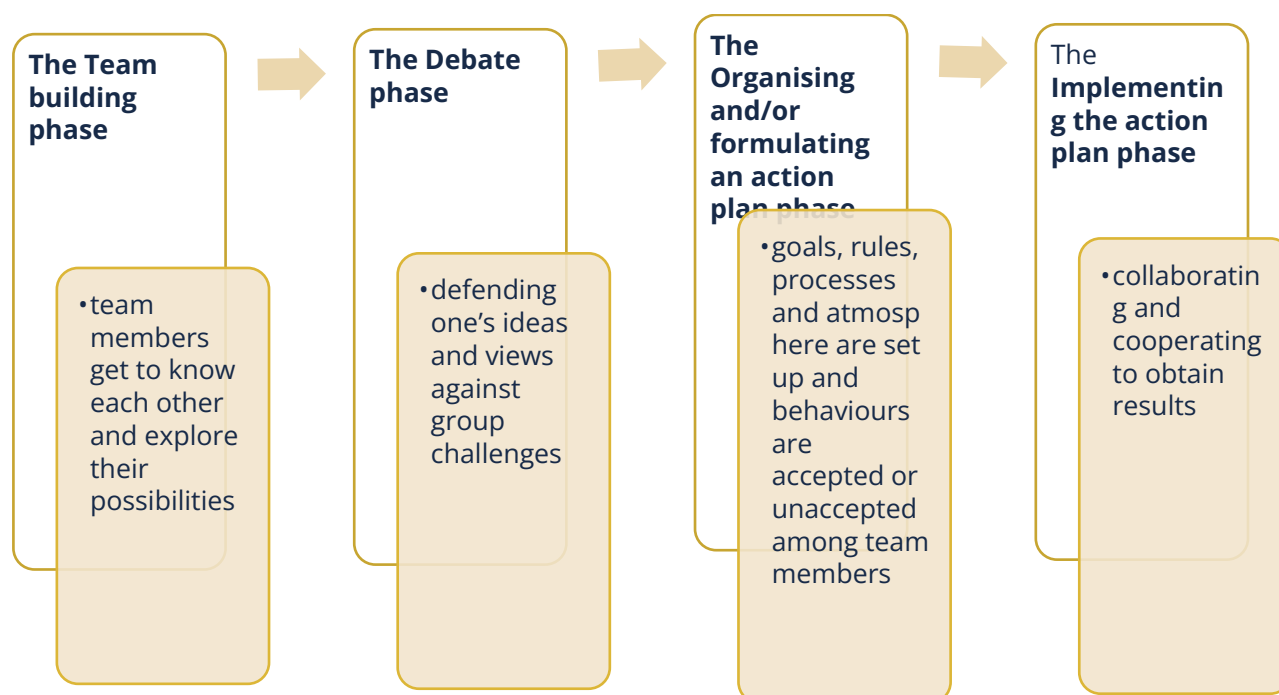
Unit 11 Developing Effective Project Teams

Working in teams means 'to work together in an organised manner to achieve a common goal' (Cardona & Wilkinson, 2006). Generally speaking, all humans differentiate in skills, knowledge, and competences, behaviours, attributes and personalities. It is apparent that these differences bring an added value to the team and, therefore, they should be seen as creative elements of it.



When managing a team, a project manager should keep in mind the basic elements that construct an effective team. As mentioned above, team members have different skills, capabilities and potentials. By getting to know their strengths and weaknesses, the project manager has the opportunity to exploit each member's potential in the most effective way for achieving the desired results. In addition, he/she should ensure that all team members have common goals and are oriented towards the achievement of a common vision and goal.

For this to be feasible, it is mandatory to build a 'friendly' environment where elements such as loyalty, unity and trust prevail. Whether group/team work is done in person or digitally, it is critical that team members spend time getting to know one another. Simple tactics like informal talks before or after meetings can help build trust, which is crucial for efficient teamwork. Teams should also follow specific and common rules for communication, feedback provision and reception, time management and adaptability. Furthermore, each team is characterised by uniqueness, which in principle means that it has its own pace in accomplishing things at the same time in different phases. According to Cardona and Wilkinson (2006), the main phases that a team experience are:

Figure 5.9*Phases experienced by a team*

It becomes clear that assembling a team, working in a team, and improving collaborative skills is a time-consuming process. In 1965 Tuckman proposed a five-stage model of group growth which is depicted in the following table.

Table 5.3*Tuckman's Linear Model of Group Development.*

Stages	Activities
Forming	Members come together, learn about each other and determine the purpose of the group.
Storming	Members engage in more direct communication and get to know each other. Conflicts between group members will often arise during this stage.
Norming	Members establish spoken or unspoken rules about how they communicate and work. Status, rank, and roles in the group are established.

Performing	Members fulfil their purpose and reach their goal.
Adjourning	Members leave the group.

Source: McLean, 2012.

Setting the Stage for an effective project team leading starts with Team building which can only occur when relevant and timely activities that address specific needs are part of your culture in project management. One-off exercises can help with this, but they are not a shortcut to success.

The purpose of team building activities is to motivate your people to work together, to develop their strengths and to address any weaknesses. So, any team building exercise should encourage collaboration rather than competition.

Be sure to incorporate team building into your workplace routines and practises. For example, get to know your people better, work toward common goals, develop their skills and make the extra effort to connect with your virtual team members.

In this way, you will build a firm foundation of purpose, trust and rapport that you can add challenging events to, appropriately and effectively.

The figure below shows the fundamental characteristics of effective teams:



Figure 5.10

The fundamental characteristics of effective teams



Note Figure Inspired by careercliff.com (source)

Do you know the Ikea Effect?

The IKEA Effect is a psychological phenomenon where people tend to place a higher value on something they've contributed to building. In a team, it's peculiar how setting common goals can trigger this effect, as team members become more committed to achieving the goals they've had a hand in defining.

Of course setting common goals is only one condition that promotes team motivation. Equally important is the trifecta **Purpose- Autonomy – Mastery** (Pink, 2009). These three elements fuel intrinsic motivation in the workplace (MacKay, 2020)

- ⇒ Autonomy refers to the desire for freedom, control, and self-directedness. Team members who feel trusted to make decisions about their work, manage their time, and choose their approach are more likely to be engaged and motivated. Micromanagement and overly rigid processes can stifle autonomy.
- ⇒ Mastery is the drive to improve and become skilled at something. When team members have opportunities to learn, grow, and develop their skills, they feel a sense of progress and

accomplishment. This can involve providing training, opportunities for tackling challenging tasks, and feedback mechanisms.

- ⇒ Purpose is the feeling that the executed work has meaning and contributes to something bigger than oneself. When team members understand how their work connects to the overall mission of the organization and makes a positive impact, they're more likely to be invested and motivated. This can involve clearly communicating the organization's purpose and showcasing the impact of individual contributions.

By fostering these three elements, leaders can create an environment where team members are **intrinsically motivated** to do their best work. This leads to higher engagement, productivity, and creativity compared to relying solely on **extrinsic motivators** like money or rewards.



Watch this YouTube [video](#) *Trust vs Performance (Sinek, 2023)* on the importance of trustworthiness for a team to be effective.

Watch this YouTube video *Collaborating at work: The collaboration skills you need to succeed (HultAshridge, 2014)*

Unit 12 Activity Building an Effective Project Team [LUMI – Image Hotspots]

You are invited to read the following two articles

- How To Build an Effective Project Team? 10 Essential Tips for Project Success
- Top 10 Project Team Motivation Techniques for Better Performance

and then suggest a plan on how to build and motivate their project team in an effective way.



Figure 5.11

Identifying the hotspots



Note Figure developed using User illustrations by Storyset storyset.com

The guidelines for the learners to implement the activity will be given in the form of a text, while the essential tips in the form of an image hotspot.

Lesson 2: The Emotional Literate Project Manager

Unit 1: Introduction

In the dynamic landscape of project management, technical expertise alone is no longer sufficient for success. As projects become increasingly complex and team dynamics play a pivotal role, the ability to understand and navigate emotions, known as emotional intelligence, becomes a critical skill for project managers. Emotional intelligence is the capability to identify, know, control and efficiently use one's emotions while adapting to the other's emotions. It includes social skills, self-awareness, self-control, motivation, and empathy.

This lesson aims to introduce the concept of emotional intelligence in the context of project management and how it can significantly impact project outcomes. As we delve into the intricacies of emotional literacy, we will explore how project managers can enhance their leadership skills, foster a positive team culture, and ultimately drive project success.

Unit 2: Multiple Choice Question

Lumi File: The Emotional Literate Project Manager Industry

(The following text is embedded in the Lumi File M5L2U2_The Emotional Literate Project Manager_MCT)

1. What role does emotional literacy play in a project manager's decision-making process?
 - a) It is irrelevant, decisions should be based solely on facts and data
 - b) It is important for understanding team dynamics and considering the emotional impact
 - c) It hinders effective decision-making
 - d) It delays the decision-making process
2. How might an Emotional Literate Project Manager approach resolving conflicts within a project team?
 - a) Ignoring conflicts and letting team members resolve it themselves
 - b) Addressing conflicts openly, using empathy and communication skills
 - c) Punishing those involved to set an example
 - d) Avoiding conflicts altogether to maintain a positive team atmosphere



3. An Emotional Literate Project Manager is likely to:

- a) Communicate strictly through written documentation
- b) Use a variety of communication channels and adapt their style to the emotional needs of the team
- c) Rely solely on verbal communication without considering emotional aspects
- d) Delegate all communication tasks to a team member

4. How might an Emotional Literate Project Manager provide feedback and recognition to team members?

- a) Publicly criticize underperforming team members to motivate improvement
- b) Provide constructive feedback in private and publicly acknowledge achievements
- c) Withhold feedback to avoid emotional reactions
- d) Only recognize achievements of high-performing team members

5. An Emotional Literate Project Manager is likely to excel in:

- a) Resisting change to maintain stability
- b) Adapting to changes and supporting the team emotionally through transitions
- c) Micromanaging every aspect to control the impact of change
- d) Blaming the team for any challenges during project changes

Unit 3: The Importance of Emotional Intelligence in the Workplace

Daniel Goleman, a psychologist and science journalist, introduced the concept of emotional intelligence (EQ). With his 1995 book 'Emotional Intelligence' introduced a whole new perspective on predicting and analysing employee performance. The author suggested that there is far more to being successful than high levels of cognitive intelligence. Goleman suggested 'emotional intelligence', a term developed by Salovey and Mayer (1989), is twice as important as cognitive intelligence for predicting career success and there was currently far too much emphasis on traditional predictors of employee performance. He suggested high levels of emotional intelligence improve working relationships, help to develop problem solving skills, increase efficiency and effectiveness and catalyse the development of new strategies. Rather than influencing exam scores or report writing, emotional intelligence influences how we control our own emotions and deal with relationships. Goleman defines it as "the ability to identify, assess and control one's own emotions, the emotion of others and that of groups."



Goleman developed a performance-based model of EQ to assess employee levels of emotional intelligence, as well as to identify areas of improvement. The model consists of five components, also known as Goleman's Five Components of Emotional Intelligence, stated below.

1. Self-awareness

Individuals with high levels of emotional intelligence are comfortable with their own thoughts and emotions and understand how they impact on others. Understanding and accepting the way you feel is often the first step to overcoming it.

2. Self-regulation (or self-management)

It is also important to be able to control and manage your impulses and emotions. Acting rashly or without caution can lead to mistakes being made and can often damage relationships with clients or colleagues.

3. Internal Motivation

Being driven by only money or material rewards is not a beneficial characteristic, according to Goleman. A passion for what you do is far better for your emotional intelligence. This leads to sustained motivation, clear decision making and a better understanding of the organisation's aims.

4. Empathy

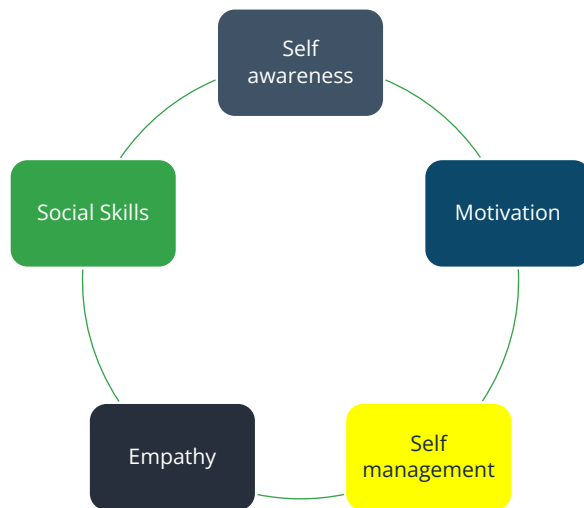
Not only must you understand your own emotions, but understanding and reacting to the emotions of others is also important. Identifying a certain mood or emotion from a colleague or client and reacting to it can go a long way in developing your relationship.

5. Social Skills

Social skills are more than just being friendly. Goleman describes them as "friendliness with a purpose", meaning everyone is treated politely and with respect, yet healthy relationships are then also used for personal and organisational benefit.

Figure 5.12

Components of EMOTIONAL INTELLIGENCE



Goleman argues that individuals that adopt these characteristics give themselves a far greater chance of being successful than individuals that do not. However, individuals are not simply born with these skills and they can be learned. They also work in synergy with each other and therefore developing each one of them has exponential returns. The author has also emphasised that cognitive and emotional intelligence are not opposing attitudes, but simply different disciplines that should be developed. He is certainly not suggesting cognitive intelligence is irrelevant, but that interest should be shifted to focus on them both equally.

In 2000 Goleman developed this model further, focusing on four key categories and various sub-categories within them. These categories are self-awareness, social awareness, self-management and relationship management with connected competences as listed below:

Self-Awareness: Emotional self-awareness, Accurate self-assessment, Self-confidence

Self-Management: Emotional Self-Control, Transparency, Adaptability, Achievement, Initiative, Optimism

Social Awareness: Empathy, Organizational, Awareness Service

Relationship Management: Influence, Inspirational, Leadership, Developing Others, Change catalyst, Building bonds, Conflict Management, Teamwork & Collaboration

Figure 5.13

Benefits of Emotional Intelligence



Note From istockphoto.com [image], by syahrir maulana, 2019, Emotional Intelligence text with keywords isolated on white board background. Chart or mechanism concept, <https://www.istockphoto.com/photo/emotional-intelligence-text-with-keywords-isolated-on-white-board-background-chart-gm1176545187-328070939?searchscope=image%2Cfilm>

Unit 4: Activity “Improving Team Relationships Using an Emotional Intelligence Lens”

In a well known resort hotel in Crete, Creta Palace, the need for effective collaboration and communication became evident as the high season approached. The team was skilled but struggled with interpersonal dynamics and communication breakdowns. The leadership decided to focus on enhancing emotional intelligence (EI) among team members, drawing inspiration from Daniel Goleman's five elements of Emotional Intelligence (EI).

Assessing the emotional intelligence of the personnel was essential to understand their EQ level. A simple and effective way to assess this is to take a self-assessment test. Several online tools are available to help gauge your EQ level, like the Emotional Quotient Inventory (EQi), the Trait Emotional Intelligence Questionnaire (TEIQue)* and the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), among others. Taking EQ assessments regularly helps track personal progress and identify areas that need further development.

By applying the Trait Emotional Intelligence Questionnaire (TEIQue)* to its personnel the team manager concluded as below:



***Trait Emotional Intelligence Questionnaire**

The TEIQue comprises 153 items rated on a 7-point Likert scale ranging from 1 ("Strongly disagree") to 7 ("Strongly agree"). It yields scores on 15 facets, 4 factors, and global trait EI. The Well-being factor includes the facets of Self-esteem (indicating self-confidence), Trait happiness (satisfaction with life), and Trait optimism (hopefulness). The Sociability factor includes the facets of Social awareness (social skills), Emotion management (influencing other people's feelings), and Assertiveness (standing up for one's rights). The Emotionality factor includes the facets of Emotion perception (including self and others), Emotion expression (communication of feelings), Relationships (interpersonal skills), and

Self-Awareness:

Situation: Team members lacked awareness of their own emotions and how they affected their work.

Intervention: Conducted a workshop on self-awareness, encouraging team members to reflect on their emotions and understand their impact on work performance.

Outcome: Team members started recognizing and acknowledging their emotions, leading to improved self-awareness.

Self-Regulation:

Situation: Emotional outbursts and tension were affecting the team's ability to collaborate effectively.

Intervention: Implemented mindfulness sessions and training on emotional regulation techniques.

Outcome: Team members developed better control over their emotions, resulting in a more positive and collaborative work environment.

Motivation:

Situation: The team struggled with motivation and engagement, affecting productivity.

Intervention: Introduced goal-setting workshops and connected individual tasks to the broader project objectives.

Outcome: Team members found renewed motivation, understanding the significance of their work in the larger context.

Empathy:

Situation: Communication gaps and misunderstandings hindered collaboration.

Intervention: Conducted empathy-building exercises and emphasized active listening during team meetings.

Outcome: Team members started understanding and appreciating each other's perspectives, fostering a more supportive environment.

Social Skills:

Situation: Poor communication and lack of effective teamwork.

Intervention: Organized team-building activities and communication workshops.

Outcome: Team members developed better communication skills and built stronger professional relationships.

Reflective Questions:

How did the team respond to the concept of self-awareness, self-regulation, motivation, empathy and social skills?

How did individual motivations align with the team's goals?

What specific social skills were identified as needing improvement?

How did the team dynamics change after the implementation of activities?

Unit 5: The Role of Emotional Intelligence in Project Management

Emotional Intelligence is a valuable asset for project success as it positively influences communication, teamwork, leadership, adaptability, and overall team dynamics. Teams and leaders with high EI are better equipped to navigate challenges, build strong relationships, and ultimately achieve project goals.

Emotional Intelligence (EI) plays a crucial role in the success of projects for various reasons. Here are some key aspects highlighting its importance:

✓ Team Collaboration and Communication

Relationship Building: EI helps project managers and team members build strong relationships, fostering trust and collaboration within the team.

Effective Communication: Individuals with high EI can navigate through conflicts, communicate clearly, and understand the emotional nuances in a project environment.

✓ Leadership Effectiveness

Influence and Motivation: Leaders with high EI can inspire and motivate their team members effectively, leading to increased engagement and commitment to project goals.

Adaptability: EI enables leaders to adapt to changing project conditions and make informed decisions while considering the emotional impact on team members.

✓ **Conflict Resolution**

Understanding Perspectives: EI allows individuals to understand different perspectives and navigate conflicts with empathy, leading to quicker and more constructive resolution of issues.

Negotiation Skills: Emotionally intelligent individuals can negotiate effectively, finding win-win solutions that consider the needs and emotions of all parties involved.

✓ **Stress Management**

Resilience: EI helps individuals and teams bounce back from setbacks and navigate stress, contributing to a healthier work environment and sustained productivity.

Emotional Regulation: Being able to manage one's own emotions and help others manage theirs is crucial during high-pressure situations common in project environments.

✓ **Decision-Making**

Judgment and Objectivity: EI contributes to better judgment and objectivity in decision-making by considering not only logical factors but also the emotional implications of choices.

Risk Management: Emotionally intelligent individuals are better equipped to assess and manage risks, considering both the rational and emotional aspects of potential outcomes.

✓ **Client and Stakeholder Relationships**

Empathy: EI facilitates understanding and empathizing with the needs and concerns of clients and stakeholders, fostering positive relationships and increasing the likelihood of project success.

Effective Communication: Emotional intelligence is key to communicating project progress, setbacks, and expectations to stakeholders in a way that maintains trust and transparency.

✓ **Team Morale and Productivity**

Motivation and Engagement: A leader with high EI can create a positive and motivating work environment, leading to increased team morale and productivity.

Recognition and Feedback: EI enables leaders to provide constructive feedback and recognize the efforts of team members in a way that enhances their emotional well-being.

In summary, Emotional Intelligence enhances interpersonal skills, communication, leadership, decision-making, and overall team dynamics, making it a critical factor for the success of projects in various industries and contexts.

Unit 6: Improving my Emotional Intelligence as a Project Manager

Activity Title: Enhancing Emotional Intelligence for Project Managers

Objective: The objective of this activity is to empower project managers to improve their Emotional Intelligence (EI) by addressing the five components of EI: self-awareness, self-regulation, motivation, empathy, and social skills.

You are becoming the project manager in a new five-star hotels in the Peloponnese which aims in a great working environment in order to provide the best services to its customers. The hotel is ranking high in the Emotional Intelligence skills of the managers and is investing a lot in this.

Below you can find the steps for a self-assessment test in order to assess your Emotional Intelligence and thus being able to enhance it.

Steps:

1. Self-Awareness:

Reflect on personal strengths and weaknesses as a project manager.

Identify emotions experienced in various work situations.

Ask yourself: How do your emotions influence your decision-making and interactions with team members?

2. Self-Regulation:

Develop a list of stressors commonly encountered in project management.

Formulate strategies for effectively managing stress and maintaining composure.

In challenging situations, ask: How can you control impulsive reactions and maintain focus on the task at hand?

3. Motivation:

Define your professional and personal goals as a project manager.

Evaluate the alignment of these goals with the overall project and team objectives.

Ask: How do your goals contribute to your motivation and the success of the project?

4. Empathy:

Practice active listening in team interactions.

Develop an understanding of the emotions and perspectives of team members.

Consider: How can you demonstrate empathy in your communication and decision-making?

5. Social Skills:



Identify opportunities to enhance communication within the project team.

Foster a positive and collaborative team environment.

Reflect on: How can you improve your ability to influence, inspire, and lead your team effectively?

Reflection and Application:

Encourage participants to keep a journal throughout the activity, recording insights, challenges, and successes.

Share experiences within the group to foster a collaborative learning environment.

Develop an action plan for integrating improved emotional intelligence into daily project management practices.

Feedback

Enhancing Emotional Intelligence is a continuous process that can significantly improve project managers' effectiveness in leading teams, managing stakeholders, and achieving project goals. By addressing the five components of EI—self-awareness, self-regulation, motivation, empathy, and social skills—project managers can cultivate a positive work environment, foster collaboration, and drive project success.

Unit 7: Applying Emotional Intelligence as a Project Manager



Scenario I: Disengaged Team Member

During a daily standup meeting, you notice that one team member appears disengaged and gives unhelpful updates on their tasks, hindering the team from collaborating as needed to finish the work. When you ask questions trying to get them to open up, they withdraw from the discussion.

Instead of probing the issue in front of the team, reach out to them after the standup with this high-EQ approach:

Start by expressing appreciation for their work they've been putting into the project and, if possible, assure them that this conversation is a safe space for them to share their concerns.



Ask open-ended questions to understand the root cause of their stress and actively listen without judgment. It can help to summarize what you're hearing back to them after they're done sharing, giving them the opportunity to provide clarification.

Offer reassurance and support that together you can come up with a plan to help alleviate the pressure. Depending on the nature of their issue, whether perhaps they're struggling in their personal life or don't respect the project work for a myriad of reasons, your response here needs to be measured and tailored. Be sure to follow your company's policies on performance management at all times.

Collaboratively develop strategies to address those challenges, fostering a supportive team environment and ensuring everyone's well-being and productivity during the project.

When you're able to accurately perceive the emotions of others and respond appropriately, you can encourage and influence the team member to collaborate with the project team.

Reflective Questions on Scenario: Disengaged Team Member

Self-Awareness:

- ✓ How did you feel when you first noticed the disengagement of the team member during the standup meeting?
- ✓ Were there any initial assumptions or judgments you made about the team member's behavior?

Self-Regulation:

- ✓ How did you manage your own emotions and reactions during the standup meeting to ensure a positive and supportive approach afterward?
- ✓ Did you experience any challenges in refraining from probing the issue in front of the team?

Motivation:

- ✓ What motivated you to express appreciation for the team member's work before delving into the conversation about their disengagement?
- ✓ How does addressing the well-being of team members align with your broader goals as a project manager?

Empathy:

- ✓ How did you demonstrate empathy during the conversation with the disengaged team member?
- ✓ In what ways did you try to understand the emotions and concerns they might be

experiencing?

Social Skills:

- ✓ How did you ensure that the conversation provided a safe space for the team member to open up?
- ✓ Were there specific communication techniques or skills that you employed to foster collaboration and trust?

Overall Reflection:

- ✓ What did you learn about the importance of addressing emotional issues privately, especially in a team setting?
- ✓ How might this experience influence your approach to handling similar situations in the future?

Continuous Improvement:

- ✓ What steps could be taken to further enhance your emotional intelligence in dealing with team members facing challenges?
- ✓ How can you proactively create an open and supportive team environment to prevent similar issues from arising in the future?
- ✓

Feedback

Addressing disengaged team members requires proactive communication, empathy, and a commitment to creating a supportive work environment. By identifying root causes, setting clear expectations, providing support, and fostering a positive team culture, project managers can effectively re-engage team members and drive project success.



Scenario II: Conflict amongst the team

During a team meeting, two team members start a heated argument regarding the allocation of hours for a task. A high-EQ PM would recognize the escalating tension and intervene using emotional intelligence tactics such as:

De-escalate immediately by lowering the volume of your voice and calmly addressing both individuals, acknowledging their emotions and the value of their perspectives. This shift can often be enough to reduce the tension and allow for calm discussion.

Ask both team members if they'd like to discuss the issue now or schedule time separately. If they decide to discuss now, give each person time, uninterrupted, to express their concern.

Summarize the key points of each person's shared opinion to ensure understanding and agreement on what the issue is.

Decide how to find a resolution together, being open to their ideas about what to do. One option can be to schedule a brainstorming session with the other team members to find a resolution.

Through your emotional intelligence, you can help de-escalate the conflict, promote understanding, and guide the team toward a resolution that respects everyone's needs.

Reflective Questions on Scenario: Conflict Amongst the Team

Self-Awareness:

- ✓ How did you personally feel when the conflict arose during the team meeting?
- ✓ Were there any biases or assumptions that you needed to manage within yourself while intervening in the conflict?

Self-Regulation:

- ✓ How did you control your own emotions and reactions to create a calm atmosphere during the conflict intervention?
- ✓ Were there any challenges in maintaining composure while addressing both individuals?

Motivation:

- ✓ What motivated you to acknowledge the emotions of both team members and value their perspectives, even in the midst of a heated argument?
- ✓ How does addressing conflicts align with your motivation to foster a positive team environment?

Empathy:

- ✓ How did you demonstrate empathy in your approach to de-escalating the conflict?
- ✓ In what ways did you consider the emotions and perspectives of both individuals involved in the argument?

Social Skills:

- ✓ How did your communication style contribute to creating an atmosphere conducive to resolution?
- ✓ Were there specific social skills or techniques you used to guide the team toward a resolution?

Overall Reflection:

- ✓ What did you learn about the impact of your intervention on the team dynamics and conflict resolution?
- ✓ How might the use of emotional intelligence tactics differ in various conflict scenarios within a team setting?

Continuous Improvement:

- ✓ What steps can you take to further enhance your emotional intelligence skills in managing conflicts among team members?
- ✓ How can you proactively contribute to a team culture that prevents conflicts from escalating in the future?

Feedback

Conflict is an inevitable part of teamwork, but with effective communication, empathy, and conflict resolution skills, project managers can turn conflicts into opportunities for growth and collaboration. By fostering open dialogue, promoting understanding, and seeking win-win solutions, teams can overcome challenges and achieve their project goals successfully. By reflecting on your actions and decisions in the face of team conflict, you can continuously refine your emotional intelligence skills and contribute to a more collaborative and harmonious work environment.

Lesson 3 Communicating Effectively as a Project Manager

Unit 1 Introduction to Lesson 3 Communicating Effectively as a Project Manager

Strong communication is key to a project's success. But between deadlines, team dynamics, and ever-changing priorities, fostering clear and consistent communication can be a challenge.

As the term communication declares - deriving from communis – the aim of communication is the establishment of common ground, of common understanding by means of speech, writing, body movement or signals. It entails the exchange of information in an efficient manner.

The current lesson, except for the discussion around basic aspects of communication and optimization approaches, will also present the types and models of communication in Project Management; elements that promote the confidence in communicating decisively, productively, and smoothly with all project's stakeholders; conflict management and negotiation strategies for resolving issues while managing projects

By investing in better communication practices, we can ensure everyone is on the same page, motivated, and ultimately, delivering successful results within the context of any given project.

Let's get started with a quiz!

Unit 2 Quiz [LUMI]

Effective communication is the exchange of information, ideas, thoughts, and feelings between individuals, occurring within the context of personal relationships, whether they are professional or personal in nature.

☐ True

☐ False

Feedback

Actually this is the definition of Interpersonal communication which is a related but different concept that is often used interchangeably with effective communication.

Unit 3 The Importance of Communication in the Workplace

Effective communication can be defined as the process of conveying information, ideas, thoughts, and feelings in a **clear, concise, and understandable manner**, such that the intended **message** is **accurately received and comprehended by the recipient(s)**. It involves not only the



transmission of information but also active listening, feedback, and mutual understanding between the sender and the receiver(s). Effective communication is characterized by clarity, openness, respect, empathy, and timeliness, and it plays a vital role in fostering positive relationships, facilitating cooperation, and achieving shared goals within personal, professional, and organizational contexts. (Academics Hub, 2022).

Figure 5.14

Effective communication



Note Figure developed using Work illustrations by Storyset [storyset.com](https://www.storyset.com)

In the workplace, communication is a dynamic exchange of ideas and information (Indeed, 2023). It goes beyond simply passing messages and as means it involves:

Verbal interaction

- ✓ oral - face-to-face conversations, video or phone calls
- ✓ written - emails, chats, etc

Non-verbal interaction

- ✓ facial expressions
- ✓ body language
- ✓ eye contact
- ✓ silence

Hence doing all these in an effective manner is really important so as to achieve

- ✓ Increased productivity by eliminating inefficiencies
- ✓ Stronger relations within the team and collaboration by building a positive work environment
- ✓ Enhanced Innovation
- ✓ Improved moral and trust

Did you know?

Only **7%** of our communication is verbal – in terms of content that we communicate.

38% is conveyed through the quality of voice – tone, volume, speed, pitch;

55% is conveyed through posture, movements, gestures, facial expressions, breathing and skin-color changes.

In a nutshell

Ensuring effective workplace communication has a pivotal role in exercising effective project leadership simply because communication is like the grease that keeps the wheels of a project turning smoothly throughout its implementation.

It strengthens all aspects of working together, from individual tasks to team projects and client interactions.

Effective workplace communication can be achieved by means of clarity and conciseness enhancement; openness and transparency promotion; selection and utilization of different communication channels accordingly (Coursera, 2023). More specifically

Enhancing Clarity and Conciseness is about keeping in mind the importance of:

- ✓ **Active listening:** Pay close attention to what others are saying and ask clarifying questions.
- ✓ **Tailored communication:** Consider your audience and adjust your communication style accordingly (formal vs informal, written vs verbal).
- ✓ **Clear and concise messages:** Focus on the key points you want to convey and avoid unnecessary jargon or ambiguity.

Promoting Openness and Transparency concerns:

- ✓ **Encouraging open communication:** Create a safe space for employees to share ideas, concerns, and feedback.
- ✓ **Keeping Regular communication:** Hold regular meetings or team huddles to keep everyone informed.
- ✓ **Promoting Transparency from leadership:** Be open and honest with employees about company goals, strategies, and challenges.

Utilizing Different Communication Channels as a skill to:

- ✓ **Choose the right channel:** Use email, instant messaging, video conferencing, or in-person meetings depending on the situation and urgency.
- ✓ **Use Effectively technology:** Utilize collaboration tools and platforms to facilitate communication and information sharing.
- ✓ **Place Emphasis on non-verbal communication:** Be mindful of body language and tone of voice in face-to-face interactions.



Unit 4 Activity Fill in the Blanks [LUMI]

Effective ***__*** refers to the ability to convey a ***__*** in a clear, concise, and impactful manner, with the intended meaning accurately ***__*** by the ***__***. While information and ideas are frequently ***__*** in a workplace setting, they aren't also sent and received in an ***__*** way. The most common forms of communication in the workplace include ***__*** interaction (like when addressing the team members), and ***__*** interaction (like when nodding instead of responding to a question).

Unit 5 The Importance of Communication in Project Management

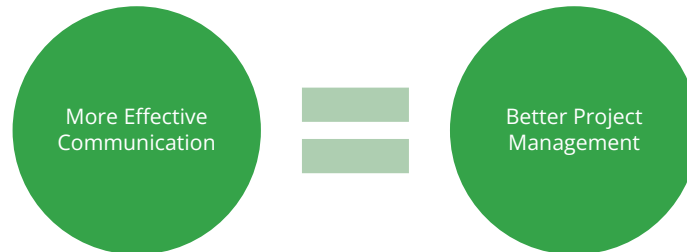
Communication in project management is the cornerstone function that integrates cost, scope and time to achieve a quality product (Zulch, 2014).

As vital element for the implementation and delivery of a well-managed project should be a priority of the project leader (Indeed, 2022). There are two main groups of people with whom the project manager/leader needs to ensure clear and effective communication:

1. the stakeholders – that need to be engaged in the project and
2. the project team.

Throughout the project lifetime, both of the groups need to be communicated by the project manager on a regular basis with updates about the project progress providing clear and complete information.

In order to achieve that the Project Manager needs to consider all the factors like the different realities, the space the communication takes place in, verbal as well as non-verbal messages, and the intended meaning versus the perceived meaning, as well as the potential difficulties due to various factors like the nature of the project, structure of the organization etc (Rajkumar, 2010).

Figure 5.15*Effective communication for Project Management*

Note Figure depicting the interdependence between communication and project management adapted from: PMI.org ([source](#))

Communication is absolutely crucial in project management for several reasons:

1. **Keeps Everyone on the Same Page:** Clear communication ensures all stakeholders involved in the project, from team members to clients, understand the project goals, deadlines, expectations, and roles. This reduces confusion and misalignment, keeping everyone working towards the same objectives.
2. **Facilitates Collaboration and Coordination:** Projects often involve multiple people with different tasks. Effective communication allows team members to share information, updates, and progress efficiently. This fosters collaboration and ensures everyone's efforts are coordinated, leading to a smoother workflow.
3. **Reduces Errors and Rework:** Misunderstandings due to poor communication can lead to errors and rework, causing delays and increased costs. Clear communication minimizes these issues by ensuring everyone has the right information.
4. **Identifies and Manages Risks:** Projects are inherently risky. Effective communication allows for open discussion about potential roadblocks and challenges. This enables proactive risk management strategies to be developed and implemented.
5. **Improves Decision-Making:** Good communication ensures all relevant information is shared and considered when making decisions. This leads to more informed and well-rounded choices throughout the project lifecycle.
6. **Manages Stakeholder Expectations:** Regular communication with stakeholders keeps them informed about progress, potential issues, and any changes to the project plan. This helps manage expectations and fosters trust and buy-in from stakeholders.
7. **Boosts Team Morale and Motivation:** When team members feel informed, involved, and heard, morale tends to be higher. Effective communication fosters a sense of ownership and purpose, leading to a more motivated and engaged team.

*Especially in the case of **stakeholders' engagement** in a project there are special features to be considered in the communication process.*

The Australian Institute of Project Management, (2021), emphasizes the following for effective stakeholder engagement:

Identify Stakeholders: *The first step is understanding who your stakeholders are. This includes anyone who can be affected by the project's outcome, both positively and negatively. It can include executives, managers, team members, customers, suppliers, and even the general public.*

Develop a Communication Plan: *Create a plan outlining how you will communicate with different stakeholders throughout the project lifecycle. This plan should consider factors like frequency of communication, preferred communication channels (email, meetings, reports), and the level of detail needed for each stakeholder group.*

Tailored Communication: *Adapt your communication style and content to each stakeholder group. Executives might need high-level summaries, while technical teams might require detailed reports.*

Transparency and Openness: *Be transparent with stakeholders about project progress, challenges, and changes. Provide regular updates and address concerns promptly.*

Active Listening: *Don't just transmit information; actively listen to stakeholder feedback and concerns. This demonstrates value for their input and helps build trust.*

Use the Right Channels: *Choose the most appropriate communication channel based on the situation and the stakeholder group. Formal presentations might be suitable for senior management, while instant messaging could work well for quick updates to team members.*

Proactive Communication: *Don't wait for stakeholders to come to you with questions or concerns. Be proactive in keeping them informed and addressing potential issues before they escalate. By following these suggestions, project managers can build strong relationships with stakeholders, ensure everyone is on the same page, and ultimately increase project success.*

Figure 5.16

10 key principles of stakeholder engagement from the Association for Project Management



Note. From 10 key principles of stakeholder engagement [Photograph], by APM.org.uk, n.d., APM. (<https://www.apm.org.uk/resources/find-a-resource/stakeholder-engagement/key-principles/>).

Understanding the communication process

Based on Shannon's and Weaver's model of communication, the process of communication (Fig. 2) can be defined as the process by which ideas, information, opinions, attitudes and feelings are conveyed from one person to another in a specific context.

The **sender** is the person who initiates communication by sending a message, here with encoding the message (using symbols that will make sense to the receiver).

The **receiver** is the person who completes the communication by receiving the message, decoding and responding to it (McLean, 2012).

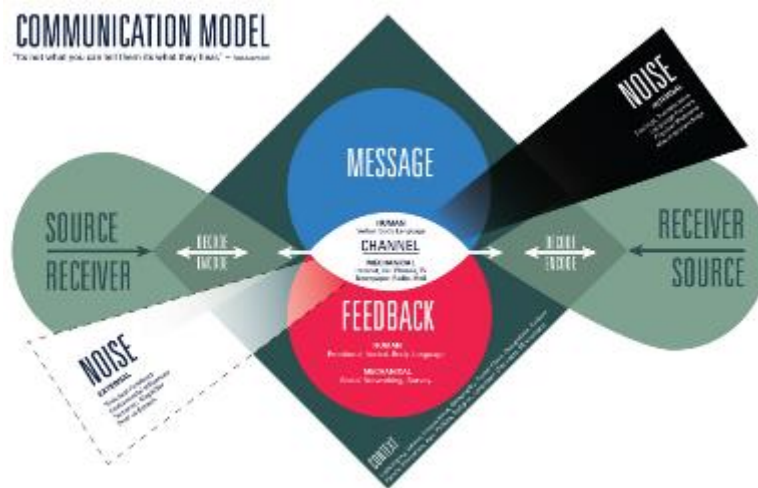
We are normally involved in human communication - mostly 2-way communication (sender and receiver dynamic). Traditional theory considered that communication was a linear process from the sender to the receiver and that the message was the core inflicting factor (McLean, 2012). Modern theory indicates that the process is more complex with many components that interact simultaneously, e.g. message, channel/media, context, noise, etc. (McLean, 2012).

Feedback is a critical part of the communication process where the receiver responds to the sender's message. Feedback can be positive / negative and verbal / non-verbal and will normally result in a further round of communication processes being initiated. The context in which the message is sent and received will always influence the communication process (e.g. time and place can impact on outcomes).

Noise can be related with physical or/and psychological interference in the communications process.

Figure 5.17

The key elements of the communication process.



Note From elibrumbaugh.blogspot.com, Updated Communication Model(2011), by Eli Sebastian Brumbaugh Michael Armstrong and Anika Ruflimage elibrumbaugh.blogspot.com

Effective communication takes place when source and receiver minimize noise and ensure each step in the process is clear, well-considered and respected.

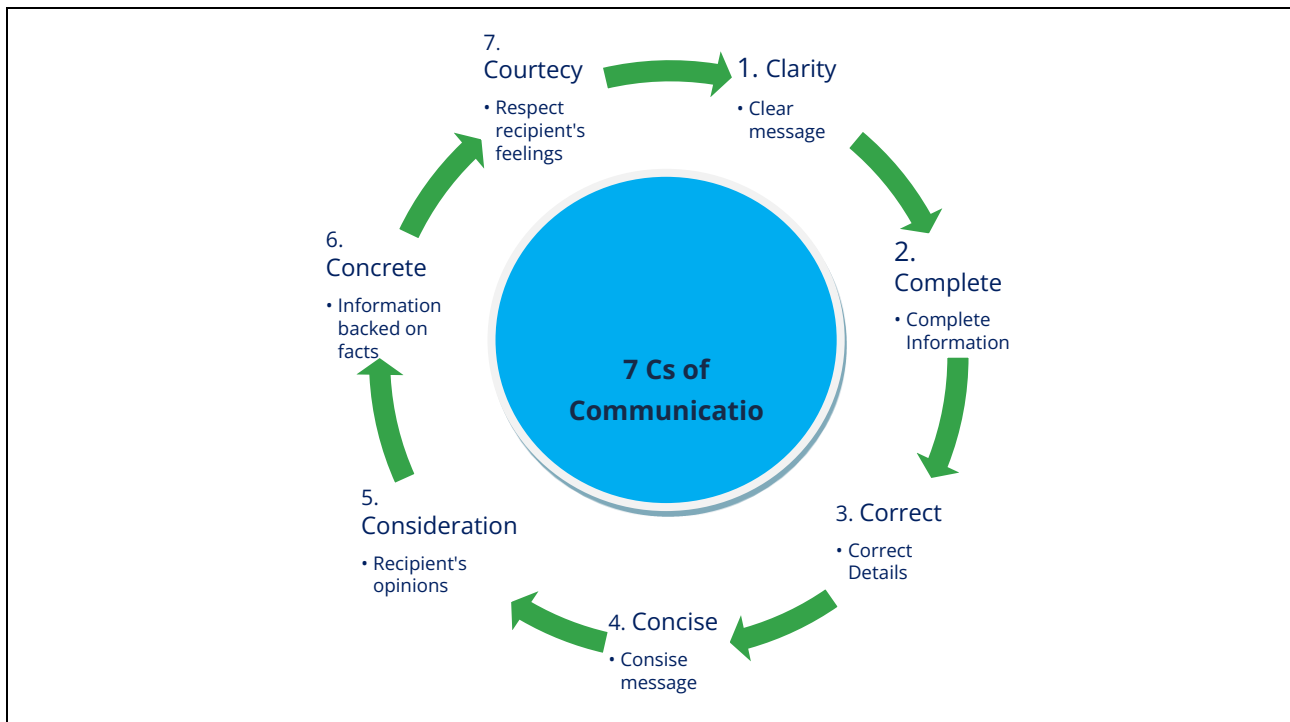
The Importance of Active Listening

Speaking and **listening** constitute core **elements** of **communication**, facilitating the exchange of thoughts, information, emotions, and personal encounters. Speaking involves articulating thoughts, concepts, and messages verbally, marked by precision, cohesion, and the capacity to effectively captivate and engage audiences. Employing diverse strategies and methods, speakers aim to sustain interest, capture attention, and convey their message convincingly. (Tuhovsky, 2017). As already mentioned multiple times, in order to guarantee accurate outcomes

in communication, it's crucial to prioritize clarity and effectiveness. For this purpose, referencing the provided checklist containing the **7 Cs of Communication** can be beneficial.

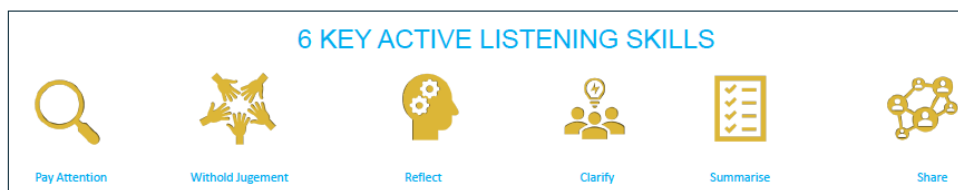
Figure 5.18

The 7 Cs for effective communication



Note figure depicting in the format of a cycle the 7 components of effective communication - Content adapted from: [Crowjack](#)

Active Listening is a fundamental skill that plays a crucial role in effective communication. It **involves** not only **hearing** what someone is saying but also **understanding, interpreting, and responding appropriately to the message** being conveyed (Rogers & Farson, 1987). **Active** listening requires focus, attention, empathy, and the ability to suspend judgment or preconceived notions and hence may be considered as a skill encompassing various components which are in short depicted in the following figure.

Figure 5.19*Main active listening skills*

Note Figure listing the 6 main active listening skills in a row Source: Firstpracticemanagement

For the promotion of active listening skills in the workplace, a project manager could consider

Encouraging Focused Attention:

- ✓ **Minimize distractions:** Create an environment conducive to active listening by limiting interruptions and distractions like phones or multitasking.
- ✓ **Nonverbal cues:** Encourage good eye contact, open posture, and leaning in slightly to show attentiveness.

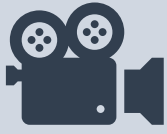
Demonstrating Empathy and Understanding:

- ✓ **Summarize and paraphrase:** Restate what you've heard to show you're paying attention and to confirm understanding.
- ✓ **Ask clarifying questions:** Seek clarification on unclear points to ensure you grasp the speaker's message fully.
- ✓ **Acknowledge emotions:** Recognize and acknowledge the speaker's feelings to demonstrate empathy and build rapport.

Providing Feedback and Encouragement:

- ✓ **Positive reinforcement:** Acknowledge and appreciate instances of active listening from colleagues.
- ✓ **Offer opportunities for practice:** Role-playing scenarios or group discussions can help hone active listening skills.
- ✓ **Provide constructive feedback:** If someone struggles with active listening, offer constructive feedback in a private setting.

By fostering a culture of active listening, which constitutes one of the fundamental considerations for inclusive leadership and workplace (Mason School of Business, 2023), organizations enhance the motivation and satisfaction levels of employees and develop a sense of being heard and understood. This leads to better communication, collaboration, and problem-solving in the workplace.



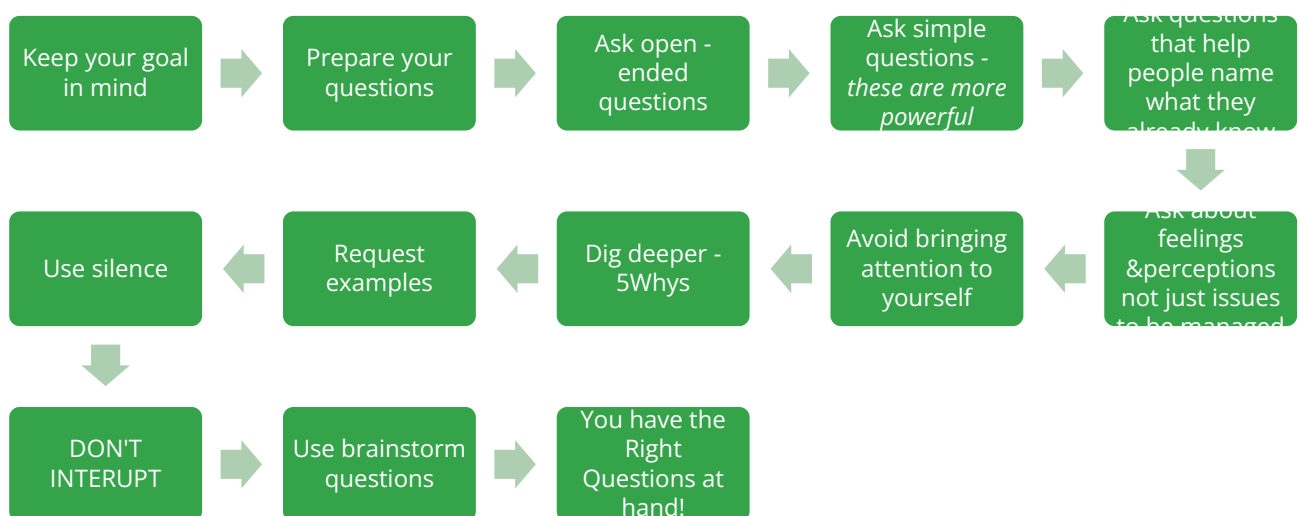
To know more on active listening skills, watch on youtube the **TED Talk: How Body Language and MicroExpressions Predict Success** [video](#) by Patryk and KasiaWezowski.

Asking the right questions

Project management involves overseeing various aspects of a project, including planning, execution, monitoring, and completion. Asking the right questions is essential. But how can one control beforehand if the selected questions are the right questions? In the following figure some tips are provided!

Figure 5.20

Tips for posing the right questions



Note Figure Inspired by (Franca, 2020)

Unit 6 Activity Matching Project managers' communication types [LUMI]

There are four different communication styles, each equally important to understand for successful project management. It's important to note that none of us use one type of communication all the time but it is equally important to be able to identify them or identify the behaviors in order to effectively manage them.

In the current activity you are provided in one column the titles of the 4 communication types project managers encounter and in the other column their definitions.

You should correctly match terms from one list with definitions for the other list.

Table 5.4

Match the 4 communication types with the right characteristics

Passive Communication	Combines elements of styles. Individuals may express their dissatisfaction or resentment indirectly, through subtle sarcasm, backhanded compliments, or sabotage. Those communicators often avoid direct confrontation but may still harbor underlying anger or resentment, leading to tension and confusion in interpersonal relationships.
Aggressive Communication	involves expressing thoughts, feelings, or needs in a forceful, hostile, or confrontational manner. These communicators may disregard the feelings or rights of others, seek to dominate conversations, and use intimidation or coercion to achieve their goals. This style of communication can lead to conflict, hurt feelings, and damaged relationships
Passive Aggressive Communication	Involves expressing thoughts, feelings, and needs in a direct, honest, and respectful manner, while also respecting the rights thoughts and feelings of others. Those communicators advocate for themselves, set clear boundaries, and claim their needs without becoming aggressive or manipulative. This style of communication promotes open dialogue, mutual understanding, and healthy relationships.
Assertive Communication	Individuals tend to avoid expressing their thoughts, feelings, or needs. They may be hesitant to speak up, assert themselves, or advocate for their interests. They often prioritize maintaining harmony and avoiding conflict, but this can lead to unmet needs, resentment, and misunderstanding.

Inspired by (Holloway, 2023)

Feedback



Table 5.5*Tips to improve communication with every type*

Different situations call for different styles of communication.	
<i>Passive Type</i>	If a team member repeatedly shows signs of passive communication, you can remind them that their views and voice matter. Then create a safe environment for them to speak up!
<i>Aggressive Type</i>	As a manager, you'll be able to identify these communicators very easily. And it's up to you to keep the situation under control and create a space where others can speak up.
<i>Passive Aggressive Type</i>	Someone with a passive communication style may hit this point if they're frustrated and haven't developed the tools to manage this frustration constructively.
<i>Assertive Type</i>	Creating a safe and open environment for your team members to communicate feedback, questions and any obstacles that may arise is essential for project success.

Inspired by (Holloway, 2023)

Unit 7 Types of Communication in Project Management

By considering different perspectives even on communication in project management, project managers can develop more comprehensive plans, strategies, and practices to facilitate effective communication throughout the project lifecycle (Joubert, 2020). Here we provide an overview of 4 different perspectives for consideration



Table 5.6*Four types of Communication in PM*

The Project Perspective	In this perspective, communication is categorized based on its relevance to the project's goals, objectives, and tasks. It includes Internal communication related to project planning, progress tracking, task assignments, problem-solving, decision-making, which usually entails detailed discussion and External communication related to stakeholder engagement which usually is rather more formal and polished. Effective communication within the project perspective ensures that all project team members are aligned, informed, and working towards the project's success.
The Organizational Perspective	Communication from the organizational perspective focuses on interactions between the project team and the broader organizational context which may be structured as follows Vertical communication: Occurs among individuals occupying distinct hierarchical positions within an organization and is occasionally referred as "upward" or "downward" communication. Horizontal communication: Occurs among peers-individuals that operate on the same level of hierarchy within the organization, same functional departments and support teams. Diagonal communication: Can be encountered in institutions or projects with more complex structure and refers to the communication of individuals from different divisions or departments or other projects within the organization.
The Formality Perspective	Communication can also be categorized based on its level of formality. Formal communication includes official reports, project documentation, status updates, and formal meetings with predefined agendas and protocols. Informal communication, on the other hand, encompasses casual conversations, ad-hoc discussions, emails, instant messages, and informal meetings.



	<i>Balancing formal and informal communication channels ensures that information flows efficiently while maintaining appropriate levels of professionalism and flexibility.</i>
The Channel Perspective	Communication channels refer to the mediums or methods through which information is exchanged within a project. This perspective categorizes communication based on the channels used, such as face-to-face meetings, emails, phone calls, video conferences, project management software, collaboration platforms, and written documents. Each communication channel has its advantages and limitations in terms of speed, accessibility, richness of information, and suitability for different types of messages. <i>Effective project communication requires choosing the right channels for the specific context and audience, ensuring that information is conveyed accurately and efficiently.</i>

Adaptation of (Joubert, 2020)

Unit 8 Communication Models in Project Management

We have already referred to verbal and non verbal communication. In the present unit the focus will be places on one mental processes, cultural aspects and behaviors as important components of effective communication through the introduction of 3 Communication models.

1. Cross-cultural communication model developed by Browaeys and Price,

The cross-cultural communication model developed by Browaeys and Price is a framework that helps individuals understand and navigate communication dynamics in multicultural contexts. It emphasizes the importance of cultural awareness, sensitivity, and adaptability in effectively communicating across different cultures. Browaeys and Price (2015) stated that there are eight cultural value dimensions that are considered to have a major influence on the way managers perform their duties. Those dimensions are:

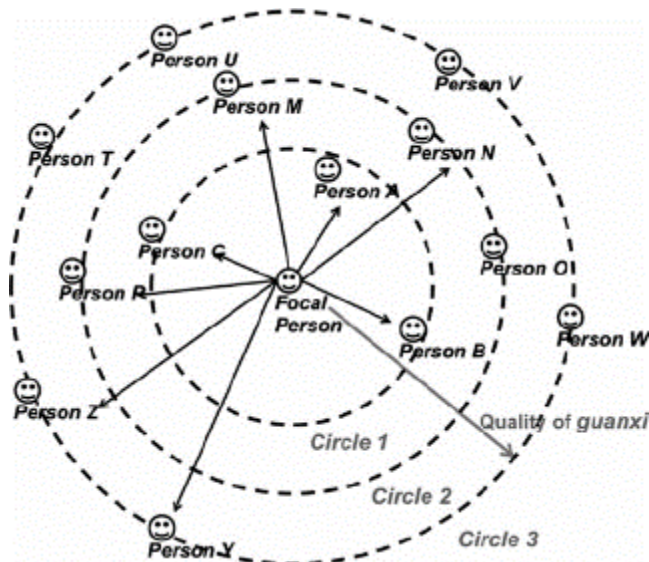
1. **Power Distance:** This dimension reflects how comfortable people are with power hierarchies. In high power distance cultures, managers tend to be more directive and employees are less likely to question their decisions. Conversely, in low power distance cultures, managers may adopt a more consultative approach and encourage employee participation.



2. **Individualism vs. Collectivism:** This dimension focuses on the emphasis placed on individual achievement versus group well-being. Individualistic cultures prioritize personal goals and managers may delegate tasks more readily. Collectivistic cultures value group harmony and managers might prioritize building consensus and team spirit.
3. **Uncertainty Avoidance:** This dimension reflects how comfortable people are with ambiguity and unpredictability. In high uncertainty avoidance cultures, managers might create detailed plans and procedures to minimize risk. Low uncertainty avoidance cultures might be more flexible and adaptable to change.
4. **Masculinity vs. Femininity:** This dimension contrasts assertiveness and achievement with nurturing and cooperation. In masculine cultures, managers may emphasize competition and decisiveness. In feminine cultures, managers might prioritize collaboration and building relationships.
5. **Long-Term Orientation vs. Short-Term Orientation:** This dimension highlights the focus on future versus present goals. In long-term oriented cultures, managers may take a strategic approach and invest in long-term benefits. Short-term oriented cultures might prioritize immediate results and efficiency.
6. **Indulgence vs. Restraint:** This dimension contrasts a society's enjoyment of leisure and gratification with its emphasis on self-discipline and control. In indulgent cultures, managers may be more flexible with work-life balance. In restrained cultures, managers and employees might prioritize work ethic and dedication.
7. **Human Orientation vs. In-Group Orientation:** This dimension contrasts a focus on universalism and concern for others with a preference for loyalty to one's own group. In human-oriented cultures, managers may prioritize fairness and social welfare. In-group oriented cultures might emphasize loyalty to the company or team over external concerns.
8. **Assertiveness vs. Diffused:** This dimension reflects how openly people express themselves. In assertive cultures, managers might communicate directly and be comfortable with open conflict. In diffused cultures, managers may use more indirect communication styles to maintain harmony.

Figure 5.21

Illustration of the intercultural Communication ability of a random person



Note From Strategies of Business Relationship Management [image in the format of a spider graph], by Ingmar Geiger, 2015, https://www.researchgate.net/figure/fig3_267499971

The model typically involves four dimensions: cultural awareness, cultural knowledge, cultural sensitivity, and cultural adaptability. It encourages individuals to develop a deeper understanding of cultural differences, recognize their own cultural biases, and adjust their communication styles accordingly to foster mutual understanding and respect in diverse cultural settings (Tirpitz & Zhu, 2015).

2. Alistair Cockburn's Effectiveness of Communication Channels Model,

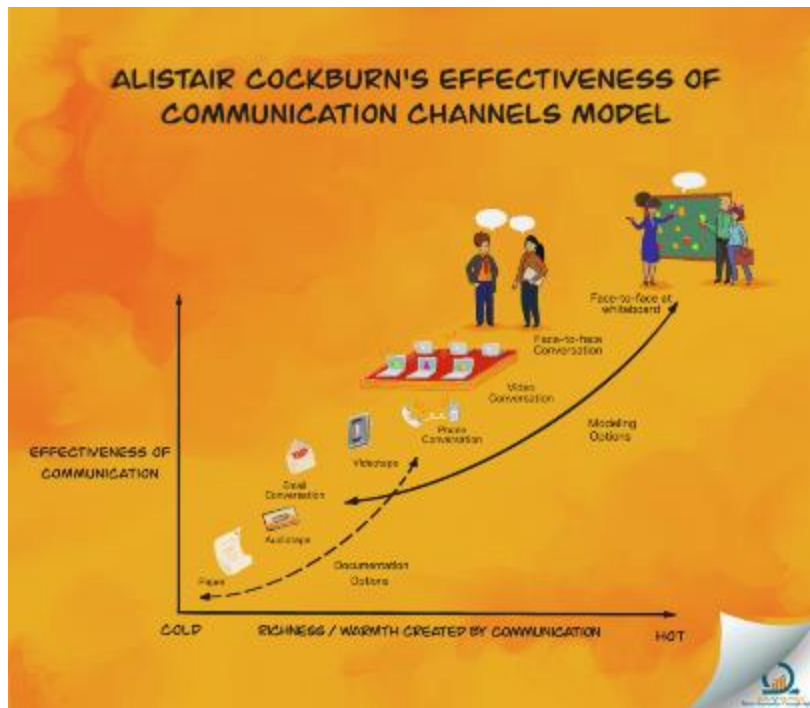
Alistair Cockburn's Effectiveness of Communication Channels Model proposes that the effectiveness of communication depends on the **richness** of the communication channel. Richness refers to the amount of information a channel can convey beyond just words (Project Analysis, 2022).

Here's the gist:

- **Rich Channels (High Effectiveness):** These channels allow for a lot of information exchange, including tone of voice, body language, and visual aids. Examples include face-to-face meetings, video conferencing, and phone calls.
- **Lean Channels (Lower Effectiveness):** These channels convey less information beyond words. Examples include email, text messages, and instant messaging.

The model suggests that richer channels, like face-to-face communication, are generally more effective for complex messages or those requiring nuance. Leaner channels, like email, can be suitable for simpler messages or quick updates.

It's a simple but powerful model that helps us choose the best communication channel for a particular situation.

Figure 5.22*Alistair Cockburn's Effectiveness of Communication Channels Model*

Note From Alistair Cockburn's Effectiveness of Communication [image with a graph], by Amit Sinha, 2023, <https://agilonomics.com/alistair-cockburns-effectiveness-of-communication/>

The model suggests that richer channels, like face-to-face communication, are generally more effective for complex messages or those requiring nuance. Leaner channels, like email, can be suitable for simpler messages or quick updates.

It's a simple but powerful model that helps us choose the best communication channel for a particular situation.

3. Gulf of execution and evaluation developed by Donald Norman

Interesting for the purposes of communication within a project, especially nowadays that the human-AI interaction is becoming a reality, are also the Donald Norman's Gulf of Execution and Evaluation concepts that describe the mental gap users/people experience when interacting with a system (Whitenton, 2018).

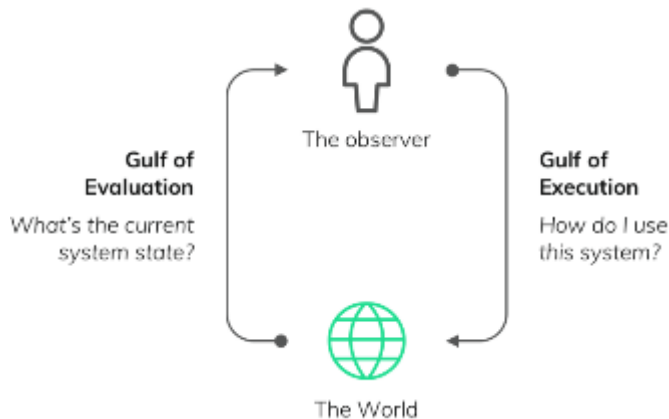
They highlight potential areas for frustration:

- **Gulf of Execution:** This refers to the difficulty a user has in figuring out how to perform an action within the system. Is the interface clear and intuitive? Are the steps to achieve a goal well-defined and easy to follow? A large gulf of execution means the user struggles to translate their intentions into actions within the system.

- **Gulf of Evaluation:** This refers to the difficulty a user has in understanding the system's response to their actions. Does the system provide clear feedback on what's happening? Can the user easily tell if their actions were successful or not? A large gulf of evaluation leaves the user confused about the system's state and unsure of how to proceed.

Figure 5.23

The Gulf of Evaluation & Execution



Note from The Human Action Cycle by Don Norman [image with a graph], by Whantley Simon, 2010, The gulf of evaluation and the gulf of execution describe two major challenges that users must overcome to successfully interact with any device, <https://www.simonwhatley.co.uk/writing/human-action-cycle-don-norman/>

By minimizing both the gulf of execution and evaluation, project managers can create user-friendly systems that are easier to learn and use by all team members.

Unit 9 Quiz [LUMI]

True/False: The function of the cultural value orientation model is to understand the differences in international business.

True/False: Cultural norms and ways run so deep within people that it is not easy to find the words to express the problem in a cultural issue.

True/False: Employees leave their national culture behind a the company entrance

True/False: Alistair Cockburn's Effectiveness of Communication Channels model suggests that the richer the channels are the more effective they are for complex messages or messages that require subtlety

True/False: According to the Donald Norman's Gulf of Execution and Evaluation concepts that describe the mental gap users/people experience when interacting with a system, a large gulf

of execution means the user is confident that he/she may correctly translate their intentions into actions within the system

Unit 10 Implementing Effective Project Meetings



How often does your team meet?
What is the purpose of your regular meetings?
How do you feel about your team meetings?

Effective project management hinges on meetings, even though many teams do not understand their importance. Actually, when meetings are not well planned or structured, they can feel unproductive, be source of frustration or even tiring.

However, when meetings are effective and efficient, they increase the engagement of the team members and achieve their target i.e. foster collaboration and communication; facilitate decision making; solve problems; track progress in a transparent way; improve the moral of the team; and build resilient teams through the development of relationships.

Though this is the second time we refer to project meetings (this subject has also been covered in Lesson 5 of module 2), it is important to remind the types of project meetings, the importance of conducting effective and efficient meetings and ex -post evaluation of meetings.

Types of project meetings

Gerschel & Polsky suggest separating the meetings into three types

- **HHAY Meetings**—Short “hello, how are you?” unscripted meetings (seven minutes or less) to check in with fellow project team members and see how each person is doing.
- **Queue Meetings**—The meetings to discuss specific issues you have at hand, focused on key decisions that need to be made.
- **Innovation Meetings**—This is time set aside to discuss ways to improve strategy, teamwork, communication or other areas, and/or develop new ideas or processes

Of course, there is a more conventional **breakdown** of project meetings as those suggested by Schwartz B. on ProjectManager.com follows:

1. Kick-off meeting
2. Project Status meeting
3. Project review meeting
4. All hands meeting
5. Sprint Planning meeting
6. Steering Committee Meeting
7. Stakeholders Meeting



8. Contingency planning Meeting
9. Change control Board Meeting
10. Daily Scrum meeting

The **benefit** of developing the custom to name the meetings is that all participants are informed about the general context of the meeting and hence better prepared. Combining both approaches makes the meetings even better contextualized, resulting in better informed participants.

Of course, naming the meetings is not the only parameter a project manager can set to implement meaningful meetings that foster communication, collaboration and drive project success. There are additional key elements that contribute to effective project team meetings:

Planning and Preparation:

- ☑ **The Right People:** Invite only those who directly contribute to the discussion or need to be informed. A smaller, focused group allows for more participation and efficient use of time.
- ☑ **Preparation Materials:** Distribute any reports, presentations, or data relevant to the agenda topics in advance. This allows participants to come informed and ready to engage.

Facilitation and Structure:

- ☑ **Start and End on Time:** Respect everyone's time by adhering to the designated start and end times.
- ☑ **Effective Facilitation:** Assign a facilitator who keeps the discussion on track, ensures everyone has a chance to contribute, and addresses any tangents or disruptions.
- ☑ **Active Participation:** Encourage active participation from all attendees. Techniques like brainstorming or round-robin discussions can help ensure everyone's voice is heard.

Communication & Follow-up:

- ☑ **Clear and Concise Communication:** Everyone should communicate clearly and concisely, avoiding jargon and technical terms that some might not understand.
- ☑ **Action Items and Decisions:** Document clear action items with assigned owners and deadlines. Summarize key decisions made during the meeting for future reference.
- ☑ **Meeting Minutes and Follow-up:** Distribute clear and concise meeting minutes after the session, outlining key points, decisions, and action items. Follow up on action items after the meeting to ensure accountability and progress.

Additional Tips:

- ☑ **Set the Right Tone:** Maintain a professional yet collaborative atmosphere that encourages open communication and exchange of ideas.
- ☑ **Technology Integration:** Utilize online collaboration tools or presentation software to enhance the meeting experience. However, ensure proper tech functioning to avoid wasting time.
- ☑ **Regular Feedback:** Periodically solicit feedback from team members on the effectiveness of meetings. This allows for continuous improvement and ensures meetings are valuable for everyone.

In order to achieve continuous improvement in meetings too, the **evaluation** should not be neglected. Upon the completion of every meeting, it is a good practice to be evaluated by the participants against specific criteria in terms of

- 1.Productivity**
- Were objectives met?
 - Did we use our time well?
 - Did everyone prepare appropriately?
 - Were decisions made, with a good process?
 - Do we have clear commitments and action items?

and

- 2.Happines**
- Could and did everybody participate?
 - Were people concise?
 - Were achievement and progress acknowledged?
 - Did we follow our rules of staying off devices (laptop, phone, etc.)?

Unit 11 Developing a Project Communication Plan

	Struggling to get clear information across to your project team? A communication plan can be your secret weapon! It ensures everyone receives the right information, in a way they can understand and take action on. Do you know what a project communication plan is? A project communication plan is a roadmap that outlines how information will be shared throughout a project.

A well informed and structured project communication plan outlines several key elements such as:

- ⇒ **What to Communicate:** This defines the specific information stakeholders require, including the level of detail (e.g., project reports vs. quick updates) and the expected format (e.g., email, presentation).
- ⇒ **Communication Flow:** This establishes how information travels within the project. It details who originates the information, who receives it, and the preferred communication method (e.g., email, meeting).
- ⇒ **Communication Methods:** This specifies the different channels used to communicate, such as emails, reports, or meetings.
- ⇒ **Communication Schedule:** This defines the frequency of various communications. Regular updates might be needed for certain topics, while others may be triggered by specific project situations.
- ⇒ **Escalation Process:** This outlines the steps to follow when issues arise that can't be resolved at a lower level. It clarifies timeframes for escalating these issues to higher management.
- ⇒ **Information Retrieval:** This explains how stakeholders can access information they need.
- ⇒ **Plan Updates:** This describes how the communication plan will be adapted as the project progresses.
- ⇒ A **project glossary**.

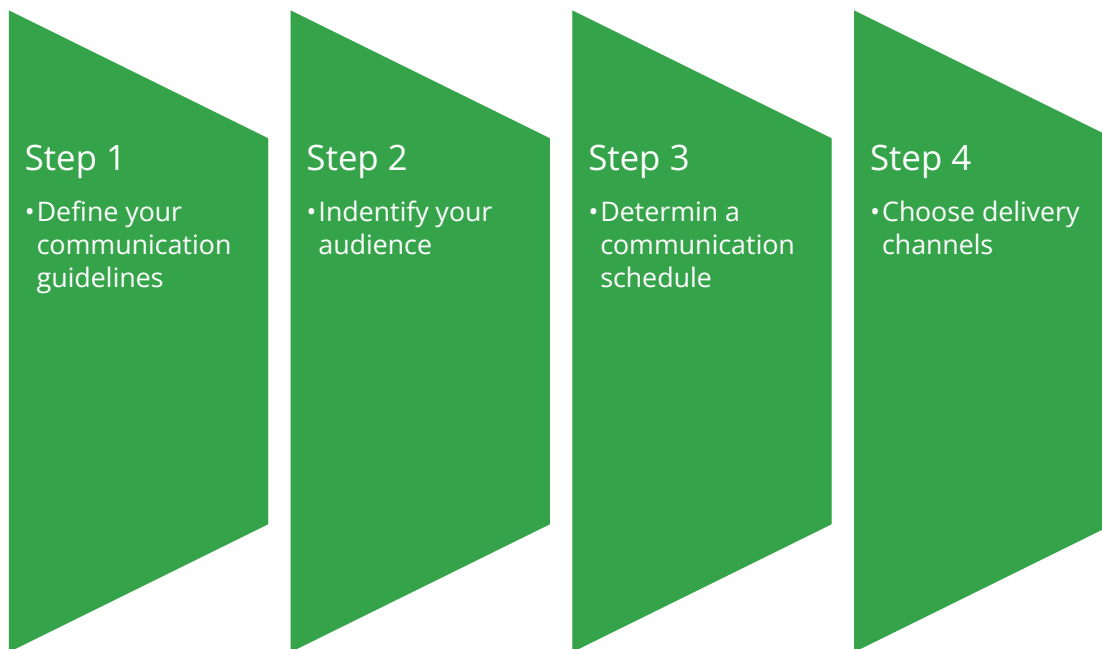
The communications plan may also include information and guidelines for project status meetings, team meetings, e-meetings (that's electronic meetings, not meetings about the letter e), and even e-mail. Setting expectations for communications and meetings early in the project establishes guidelines for the project team and stakeholders. (Rajkumar, 2010)

Let's start developing a communication plan!

We will use the template and instructions provided on [Project Manager](#) following the steps suggested by Tristancho.

Figure 5.24

Steps to develop a Communication Plan



Unit 12 Conflicts and Negotiation Handling in Project Management

Clashes in personalities, working style mismatches or competing project priorities may lead a project team into conflicts. Conflict can arise from anywhere, from the very senior level of the company right down to individual people working on the project, and this can be a hard thing to manage (Prince2.com, 2014). There are indeed many reasons for workplace conflicts. Here are some of the main causes of disagreement that may lead to conflicts:

1. Scarcity of resources
2. Scheduling preferences
3. Administrative procedures
4. Technical options and solutions
5. Budgetary allocations
6. Project changes
7. Personal differences

Conflict resolution Resolving conflicts is pivotal for effective project management, as it tackles the inevitable differences and tensions arising from diverse perspectives, backgrounds, and priorities within a team. However, it's not the existence of conflict that determines a team's fate; rather, it's the approach taken to address and resolve these conflicts that holds significance. Conflict resolution serves as the cornerstone for the success and unity of a project team. Its

importance extends far beyond the mere act of resolving disputes, serving as a potent driver for growth, enhancement, and the nurturing of a resilient team spirit.

Effective conflict resolution is an art that involves structured steps, active listening, empathy, and a focus on finding solutions that benefit all parties involved. It requires a commitment to open communication, an understanding of the root causes of conflicts, and the willingness to learn and grow from each experience (Behfar et al., 2008).

According to the **PMBOK Guide (A Guide to Project Management Body of Knowledge) 7th edition**, there are 6 conflict management strategies. These are:

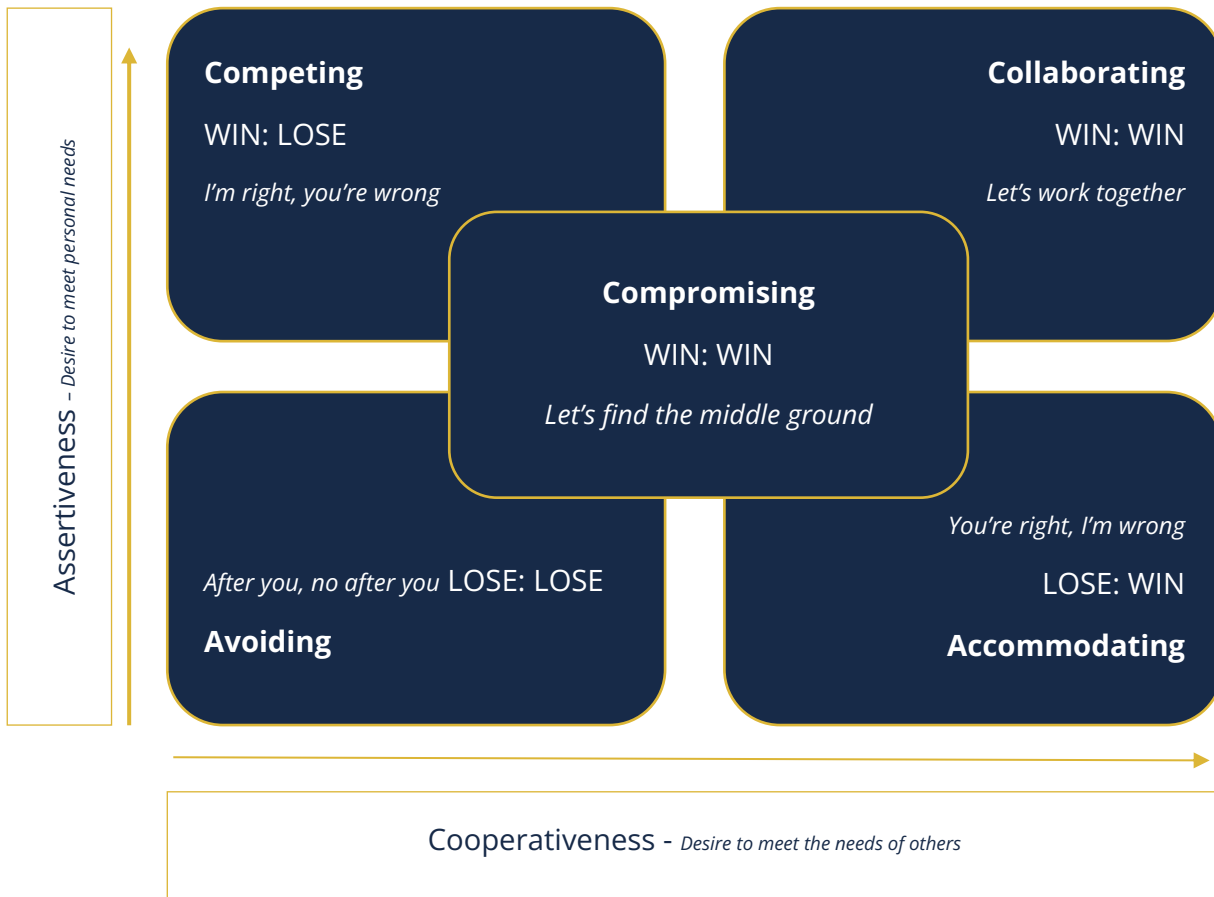
1. Confronting/Problem Solving
2. Collaborating
3. Compromising
4. Smoothing/accommodating
5. Forcing
6. Withdrawal/avoiding

There is also another interesting approach to how teams manage their conflicts developed by Thomas Kilmann. As shown in the Figure below, there are 5 different conflict resolution approaches.

Figure 5.25

The 5 conflict models by Thomas Kilmann (Source: human)





1. **Collaborating**: This approach involves a high degree of assertiveness and cooperation. In a collaborating style, individuals work together to find a mutually beneficial solution. This approach is effective when long-term relationships and the quality of the solution are important.
2. **Competing**: In a competing approach, individuals are highly assertive but uncooperative. They seek to win the conflict, often at the expense of the other party's interests. This style can be useful in situations where quick decisions or tough actions are necessary, but it may damage relationships.
3. **Compromising**: Compromising is a balanced approach that combines a moderate level of assertiveness and cooperation. In this style, both parties give up something to reach a middle-ground solution. Compromising can be useful when time is limited, and maintaining a working relationship is essential.
4. **Accommodating**: Accommodating involves being unassertive and highly cooperative. Individuals who accommodate tend to yield to the other party's needs and preferences. This approach can be helpful when preserving harmony and goodwill is a top priority, but it may lead to one party feeling taken advantage of.

5. **Avoiding:** In an avoiding approach, individuals are both unassertive and uncooperative. They seek to sidestep or postpone the conflict, which can be useful when the issue is not significant or when emotions need time to cool down. However, avoiding can also allow issues to fester and potentially worsen (Guzowski, 2022).

Negotiation plays a pivotal role in project management, influencing different phases of the project's journey. From delineating project scope and timelines to procuring essential resources and handling alterations, negotiations are omnipresent. These negotiations encompass interactions with team members, clients, vendors, and various stakeholders. Understanding the importance of negotiation in both project planning and execution is imperative for project managers to adeptly maneuver through intricate situations.

Lesson 4: Embracing Complexity, Adaptability & Resilience

Unit 1. Introduction

In Lesson 4, participants will delve into the essential concepts of embracing complexity, adaptability, and resilience in the context of project management. This session aims to equip learners with the mindset and skills necessary to navigate the intricate challenges that arise during project execution. Key learning objectives include understanding the nature of complexity in projects, cultivating adaptability to respond to changing circumstances, and fostering resilience to overcome setbacks. Participants will explore real-world case studies, engage in interactive discussions, and gain practical strategies to enhance their ability to thrive in dynamic project environments.

Unit 2: Crossword [LUMI]

Lumi File: Embracing Complexity, Adaptability Resilience

M5L4U2_Embracing Complexity, Adaptability Resilience_CROSSWORD

Adaptability: The ability to adjust to new conditions or changes.

Resilience: Bouncing back from challenges and setbacks.

Complexity: The state of being intricate or complicated.

Flexibility: The quality of being easily modified.

Diversity: Embracing it in perspectives enhances adaptability

Unit 3: Resilience in project management

Resilience in project management refers to the ability of project managers and project teams to withstand and overcome setbacks, challenges, and adversities encountered during the project lifecycle. It involves maintaining focus, adaptability, and problem-solving skills in the face of difficulties to ensure project success. Here's an exploration of resilience in project management:

Adaptability to Change: Resilient project managers and teams can quickly adapt to changes in project scope, requirements, or external factors such as market conditions or stakeholder priorities.



Risk Management: Resilience in project management involves proactive risk management practices to identify potential threats to the project's success and develop mitigation strategies to address them.

Problem-Solving Skills: Resilient project managers possess strong problem-solving skills and the ability to think creatively to overcome obstacles and find alternative solutions.

Effective Communication: Resilient project teams maintain open and transparent communication channels, which facilitate the sharing of information, concerns, and solutions among team members.

Leadership and Motivation: Resilient project managers provide strong leadership and motivation to their teams, fostering a sense of purpose, commitment, and teamwork even in challenging circumstances.

Learning and Continuous Improvement: Resilient project teams engage in continuous learning and improvement, reflecting on past experiences, identifying lessons learned, and applying them to future projects.

Emotional Intelligence: Resilient project managers leverage emotional intelligence to manage their own emotions and those of team members effectively, fostering a positive and supportive team environment.

By cultivating resilience in project management practices, project managers and teams can navigate challenges more effectively, minimize project disruptions, and ultimately achieve project success. These references provide a deeper understanding of resilience and its application in the context of project management.

Unit 4: Activity Quiz [LUMI]

Lumi File: M5L4U4_Embracing Complexity, Adaptability Resilience

Question 1: What is resilience in the context of project management?

- a) The ability to complete a project ahead of schedule
- b) The ability to adapt to unexpected challenges and setbacks
- c) The ability to allocate resources efficiently
- d) The ability to minimize project costs

Question 2: Which of the following is an example of a resilient project management strategy?

- a) Ignoring changes in project scope
- b) Sticking strictly to the original project plan

- c) Creating contingency plans for potential risks
- d) Avoiding communication with the project team

Question 3: Which of the following is NOT a characteristic of a resilient project manager?

- a) Flexibility and adaptability
- b) Openness to feedback and continuous improvement
- c) Rigid adherence to the original project plan
- d) Ability to learn from past mistakes

Unit 5: Adaptability & Resilience: embracing change

The level of people's responsiveness and reaction towards adversity lies upon an inherent element of human's nature: Resilience. Based on Garmezy and Masten (1991), resilience is defined as:

the process of, capacity for, or outcome of successful adaptation despite challenging circumstances

- Garmezy and Masten -

In other words, it constitutes the ability of people to "bounce back" from several challenges that may be faced with during their lifetime. Moreover, Abiola and Udofia (2011) highlight that Resilience:

- is associated with inner strength, competence and flexibility
- enables people to cope with adversity
- minimizes the impact of risk factors (stressful life events)
- enhances the supportive factors (optimism, social support, active coping)

It should be noted that Resilience is not a trait. On the contrary, is associated with behaviours, beliefs, thoughts, and actions and therefore, it can be learned and developed by anyone (McDonald et al., 2012), whilst it derives from four principal factors, as the following graph depicts.

Adaptability to change is part of a palette of intertwined skills that are strongly connected in a sense that when one of them is applied then it is likely that the rest of them will be cultivated as well. In fact, all of them fall under the umbrella of “Resilience”. According to the New Skills Agenda of the EC (2020) resilience constitutes a fundamental skill set that enables citizens to reduce “dependence on market conditions and increase their potential to navigate through life and professional transitions”.

But how is this achieved?

Research has revealed that people react differently to life events where some of them can withstand – or even thrive on – difficult situations, whilst others struggle to handle such situations. The difference between these two general groups derives from their level of resilience. Psychologically speaking, resilience is defined as “a dynamic process encompassing positive adaptation within the context of significant adversity” (Luthar, Cicchetti, & Becker, 2000).

According to Abiola and Udofia (2011), resilience is closely associated with a person’s inner strength, competence and level of flexibility; it enables people to cope with adversity minimizing at the same time the impact of risk factors that arise during stressful life events; whilst enhancing the supportive factors such as optimism, social support and active coping.

In this sense, resilience is mainly connected to behaviours, beliefs, thoughts, and actions and therefore it is not something that someone has it inherently or not. On the contrary, as a skill set it can be learned and developed by anyone (McDonald et al., 2012) as long as they follow the four essential elements from which resilience derives as illustrated in the graph below.

Figure 5.26

Key principles of Resilience



Note Graphic representation of the 4 key principles connected with resilience, as depicted on [backuphr.com](https://www.backuphr.com/developing-resilience-a-managers-guide/), 2018, <https://www.backuphr.com/developing-resilience-a-managers-guide/>

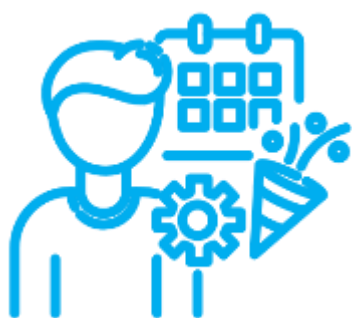
Adaptability is closely related to the ability to easily adjust in changing circumstances where Adaptability to change involves the capacity to embrace new circumstances and adjust effectively in response swiftly and successfully. It encompasses the ability to be flexible and adjust to evolving factors, conditions, or environments (Herrity, 2023). To successfully integrate this skill into both personal and professional spheres, certain preliminary steps are essential, including the identification of factors leading to change and recognizing critical elements that initially trigger resistance.

Yet, merely advocating for "anticipating change" may seem overly broad, lacking specificity in both concept and actionable steps. A more effective approach involves understanding the benefits associated with this ability. Psychologists suggest that adapting to change contributes to personal growth, enhanced performance, improved problem-solving, reduced anxiety and stress, and development of a competitive advantage (Modern Recovery Editorial Team, 2023).

It is worth mentioning that key components for becoming someone resilient are the elements of Adaptability and Optimism, in a sense that resilience a) is closely related to the ability to easily adjust in changing circumstances (Adaptability), b) requires remaining positive during these changing challenges and putting emphasis on the good aspects of a given situation (Optimism). Both elements are considered as human strength and virtue (Santilli et al, 2017) providing to people qualities that enable them to overcome critical barriers during their lifetime in their personal and /or professional spheres. Especially in the case of farmers and professionals in the agricultural sector, the development of these soft skills is mandatory due to the numerous

challenges that the sector is constantly experiencing (climate change, covid outbreak, new EU directives, policies and regulations for a greener future, new technologies) that pose the need to quickly adapt but in a smoother possible manner.

Here are some tips on how you can develop your adaptability skills:



- Be aware of changes in your environment: Remain aware of policies, procedures and other operational processes to stay abreast of changes to various company/ business practices.
- Develop a growth mindset: be willing to learn and try new things.
- Set goals for yourself: if you feel you might be weaker for example in your communicational competence, you might set a goal to work on each aspect of your skills so you can improve your overall ability to adapt to changes in the workplace.

- Ask for feedback: request feedback or constructive criticism from your managers to help you improve on your weaker skills.
- Learn to acknowledge and accept change: This can help you prepare yourself and adapt to differing circumstances by recognizing when you need to make adjustments to make transitions smoother for yourself.

Unit 6: Fill in the blanks [LUMI]

Effective communication is essential for fostering _____ among team members, enabling them to navigate uncertainties and collaborate effectively

Developing a culture of _____ within the project team encourages innovation and creative problem-solving, allowing for the exploration of new opportunities in the tourism industry.

Building strong relationships with stakeholders, including local communities and government authorities, enhances the project's _____ and facilitates collaborative efforts in overcoming challenges.

Unit 7: Resilience and Complexity

Complexity in projects often requires adaptability, and resilience is the capacity to adapt and bounce back in the face of adversity. Resilience enables individuals and teams to effectively manage the challenges and uncertainties introduced by complexity, fostering the ability to thrive and succeed in intricate project environments.

Complexity and resilience are closely interconnected in the context of various systems, including project management with resilience playing a crucial role in enabling systems to navigate and adapt to the complexities of their environments. This connection underscores the importance of adopting resilience-based approaches in managing and governing complex systems across various domains. Here's how they are related:

Dynamic Environments

Complexity: In project management, complexity often arises from the interplay of various factors such as diverse stakeholder interests, technological intricacies, and unpredictable external influences.

Resilience: Resilience is crucial in dynamic and complex environments. Teams and project managers must be resilient to adapt to unforeseen challenges and changes that complexity may introduce.



Adaptability

Complexity: Complex projects often require adaptability to navigate through intricate processes, changing requirements, and unexpected obstacles.

Resilience: Resilience involves the ability to bounce back from setbacks. When facing the complexities of a project, teams and individuals need to adapt and recover quickly to maintain progress.

Figure 5.27

Mind map



Note From istockphoto.com [image], by AndreyPopov, 2018, Human Hand With Mind Map Concept stock photo - Elevated View Of A Human Hand With Mind Map Concept On Notebook. <https://www.istockphoto.com/photo/human-hand-with-mind-map-concept-gm928088304-254567722>

Uncertainty and Ambiguity

Complexity: Complexity introduces uncertainty and ambiguity, making it challenging to predict every aspect of a project with certainty.

Resilience: Resilience involves coping with uncertainty. Teams and individuals must be resilient in the face of ambiguity, accepting that not all variables can be controlled or predicted.

Learning from Failure

Complexity: Complex projects may involve experimentation and innovation, which can sometimes lead to failures or unexpected outcomes.

Resilience: Resilience encourages a positive response to failure. Instead of being discouraged by setbacks, resilient individuals and teams learn from failures, adapt their strategies, and continue moving forward in the face of complexity.

Risk Management

Complexity: Complex projects often come with inherent risks that need to be identified, assessed, and managed.

Resilience: Resilience plays a role in effective risk management. Being resilient means being prepared for potential risks, having contingency plans, and responding resourcefully when risks materialize.

Team Dynamics

Complexity: Complex projects involve diverse teams with varying skill sets, perspectives, and roles, adding a layer of complexity to interpersonal dynamics.

Resilience: Resilient teams can navigate the complexity of interpersonal relationships, handle conflicts, and maintain a positive and collaborative atmosphere even in challenging situations.

Resilience and complexity are closely intertwined in tourism project management too, with resilient approaches emphasizing adaptive capacity, flexibility, collaboration, and learning to navigate the dynamic and multifaceted nature of the tourism industry effectively. By integrating resilience principles into project planning, implementation, and evaluation processes, tourism projects can enhance their capacity to thrive in diverse and uncertain environments while promoting sustainable development and positive outcomes for all stakeholders involved.

Unit 8: Activity Multiple choice questions [LUMI]

Lumi file: M5L4U8_Resilience in project management

Why is resilience important in project management?

- a. To eliminate all project risks
- b. To ensure the project is always on schedule
- c. To bounce back from challenges and adapt to unexpected changes
- d. To assign blame when things go wrong

How does resilience contribute to project success?

- a. By avoiding all project risks
- b. By maintaining a rigid project plan
- c. By adapting to unexpected challenges and setbacks
- d. By ignoring changes in project scope

Which of the following is a key characteristic of a resilient project manager?

- a. Avoiding all risks
- b. Sticking strictly to the project plan
- c. Being adaptable and flexible in the face of challenges
- d. Blaming team members for project issues

Unit 9: Activity Case study

A tourism company is undertaking a project to develop a new eco-tourism destination in a remote, environmentally sensitive area. The project involves building infrastructure such as lodges, trails, and visitor centers while ensuring minimal impact on the surrounding ecosystem. Additionally, the project aims to involve local communities in its development to promote sustainable tourism practices and provide economic benefits to the region.

Challenges:

- ✓ Environmental Complexity: The project team faces challenges in navigating complex environmental regulations and ensuring compliance with conservation standards while developing tourism infrastructure in a delicate ecosystem.
- ✓ Stakeholder Management: Managing relationships with diverse stakeholders, including local communities, environmental groups, government agencies, and investors, presents a significant challenge. Balancing their competing interests and expectations adds layers of complexity to the project.
- ✓ Infrastructure Development: Building infrastructure in a remote area with limited access to resources and skilled labor increases the complexity of project planning and execution. Unforeseen logistical challenges may arise, such as inclement weather or supply chain disruptions.
- ✓ Cultural Sensitivity: The project must respect and preserve the cultural heritage of indigenous communities in the area, requiring careful consultation and collaboration with local leaders and cultural experts.

Navigation and Lessons Learned:



- ✓ **Comprehensive Risk Management:** The project team conducts thorough risk assessments to identify potential challenges and develop mitigation strategies. They anticipate environmental, logistical, and stakeholder-related risks and incorporate contingency plans into their project management approach.
- ✓ **Collaborative Stakeholder Engagement:** Recognizing the importance of stakeholder buy-in, the project team adopts a collaborative approach to engage with diverse stakeholders. Regular communication, consultation, and transparency help build trust and foster a sense of ownership among stakeholders.
- ✓ **Adaptive Planning and Flexibility:** Given the dynamic nature of the project environment, the team embraces adaptive planning principles. They remain flexible and responsive to changing conditions, adjusting project timelines, resource allocations, and strategies as needed to address emerging complexities.
- ✓ **Sustainable Practices and Innovation:** The project team prioritizes sustainable development principles and explores innovative solutions to minimize environmental impact and enhance community benefits. They incorporate green building techniques, renewable energy sources, and eco-friendly technologies into the project design and construction processes.
- ✓ **Continuous Learning and Improvement:** Throughout the project lifecycle, the team fosters a culture of continuous learning and improvement. They regularly reflect on project performance, gather feedback from stakeholders, and capture lessons learned to inform future projects in similar contexts.

By navigating through complexity with a strategic and adaptive approach, the project team successfully delivers the eco-tourism destination, achieving its objectives while minimizing adverse impacts and maximizing long-term sustainability. Their experiences provide valuable insights into effective complexity management strategies for future projects in the tourism sector.

Reflective questions:

How did the project team initially identify and assess the various complexities associated with the development of the eco-tourism destination?

Reflecting on the project's outcomes, what were the most significant lessons learned in terms of managing complexity in the tourism sector? How can these insights inform future project planning and execution?

Looking ahead, what additional challenges or complexities do you foresee in sustaining the eco-tourism destination over the long term, and how can proactive measures be taken to address them?

Indicative responses



How did the project team initially identify and assess the various complexities associated with the development of the eco-tourism destination?

By employing a multidisciplinary approach and engaging with diverse stakeholders, conducting thorough assessments, and considering various factors such as environmental, social, economic, and regulatory aspects, the project team was able to identify and assess the complexities associated with the development of the eco-tourism destination comprehensively. This systematic approach laid the foundation for designing resilient and sustainable solutions that balance environmental conservation, socio-economic development, and visitor experience.

Reflecting on the project's outcomes, what were the most significant lessons learned in terms of managing complexity in the tourism sector? How can these insights inform future project planning and execution?

The project's outcomes underscored the importance of taking a holistic, inclusive, and adaptive approach to managing complexity in the tourism sector. By prioritizing community engagement, sustainability, risk management, stakeholder collaboration, and continuous learning, future projects can navigate complexities effectively, maximize benefits, and minimize negative impacts, ultimately contributing to the long-term resilience and sustainability of tourism destinations.

Looking ahead, what additional challenges or complexities do you foresee in sustaining the eco-tourism destination over the long term, and how can proactive measures be taken to address them?

Sustaining the eco-tourism destination over the long term will require proactive measures to address emerging challenges and complexities, including environmental degradation, overtourism, socio-economic vulnerability, and external shocks. By adopting adaptive management approaches, promoting sustainable tourism practices, empowering local communities, and fostering collaboration among stakeholders, the eco-tourism destination can enhance its resilience and ensure the continued enjoyment and stewardship of its natural and cultural treasures for future generations.

Unit 10: Systems and critical thinking

There are two main schools of thought when it comes to problem solving: design thinking and systems thinking. Critical thinking and systems thinking are both cognitive processes that involve analyzing and evaluating information, but they focus on different aspects and operate in distinct ways. Let's explore the key characteristics of each:

Critical thinking is a cognitive skill that involves a combination of analysis, interpretation, evaluation, problem-solving, and decision-making. It refers to the ability to analyze, evaluate,



and synthesize information, ideas, or arguments in a systematic and logical manner, by involving actively and objectively the assessment of strengths and weaknesses of different perspectives, making informed judgments, and arriving at well-reasoned conclusions (Faccione, 2020).

Figure 5.28

Intellectual discipline



Note From istockphoto.com [image], by Radachynskiy, 2017, Heads of two people with colourful shapes of abstract brain stock photo - The concept of rational and irrational thinking of two people. Heads of two people with colourful shapes of abstract brain for concept of idea and teamwork. Two people with different thinking. <https://www.istockphoto.com/photo/heads-of-two-people-with-colourful-shapes-of-abstract-brain-gm882484258-245576062>

The Critical Thinking Community defined critical thinking as “the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action” (Snyder & Snyder, 2008)

As it derives from the definition of critical thinking itself, there are some core skills that illustrate how critical thinking works, which are provided in the graph given below:

Interpretation

- Recognising a problem and describing it without bias
- Distinguishing the main idea from the text
- Constructing a tentative categorisation or organisation structure
- Clarifying the meaning of a sign, chart or graph

Analysis

- Identifying similarities and differences between two approaches to a solution
- Isolating the main claim made in an editorial or statement and tracing it back to the supporting reasons for that claim

Evaluation

- Judging an author or a speaker's credibility
- Determining whether the evidence at hand supports the conclusion being drawn
- Recognising whether an argument's conclusion follows with certainty or confidence from its premises

Inference

- Identifying the implication of the position someone is advocating
- Predicting what will happen next in a given situation
- Developing a workable plan to gather information to resolve an uncertainty

Explanation

- Constructing a chart or graph to organise your findings
- Stating research results and describing the required methods and criteria
- Citing the evidence that led you to accept or reject another person's position on an issue

Self regulation

- Checking for understanding of an author or a speaker without injecting your own views and ideas
- Reminding yourself to separate personal opinions and assumptions from those of the author or a text
- Reconsidering your interpretation in view of new analyses or facts or errors discovered in your work

Now let's move to the concept of systems thinking.



What do you think a system is?

- A system is a set of entities with relations between them
- A system is a bounded region in space-time in which the component parts are associated in (functional) relationships (Ryan, ...)

What are elements of a system?

- Idealization / abstraction of reality
- Multiple components
- Components are interdependent
- Organized
- Emergent properties
- Have a boundary
- Enduring
- Effect and effected by environment
- Exhibit feedback
- Non-trivial behavior

Systems thinking is an approach to understanding, analyzing, and solving complex problems by examining the interactions and relationships among the various components within a system. It views a system as an interconnected and interdependent set of elements or components that work together to achieve a common purpose.

Systems thinking is about seeing the bigger picture

Systems thinking involves understanding how individual components within a larger system interact with and influence each other. It looks at the system as a whole rather than just the sum of its parts. It emphasizes the relationships, interconnections, and feedback loops within a system, considering the dynamic nature of complex systems. Systems thinking is often applied to complex and dynamic situations where multiple variables and feedback mechanisms play a role. The goal of systems thinking is to gain a holistic understanding of a system, identify patterns, and anticipate the consequences of changes within the system.

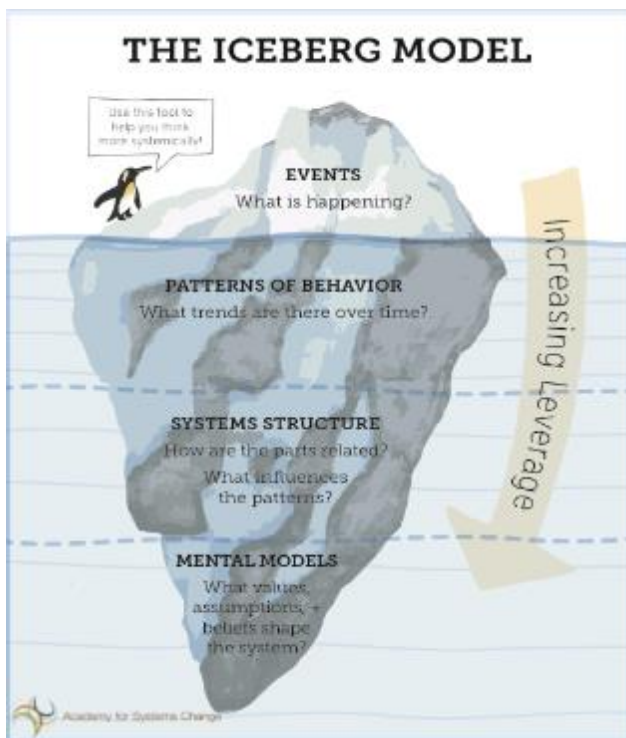
"System thinking is a way of thinking that sees how everything is interconnected, and that all parts of a system can affect every other part."

The Iceberg

Systems thinking has the concept of 'the iceberg'. This uses the metaphor of an iceberg to highlight that a large part of a problem is probably hidden from plain sight – 'below the waterline'. And the path an iceberg follows is not dictated by the wind on the part we can see, but by the hidden ocean currents working on the bits we cannot. This is also true of complex systems. The drivers for visible outcomes are often hidden in the complexity.

Figure 5.29

The Iceberg Model



Note From the Donella Meadows Project [Photograph] The Iceberg Model. Academy for Systems Change. (n.d.),<https://donellameadows.org/systems-thinking-resources/>

Think of a problem like an iceberg. Most of what's causing the issue (like 90% of an iceberg!) is hidden beneath the surface, just like the underlying reasons for a problem are often unseen. The iceberg model prompts you to look beyond the immediate event (the tip of the iceberg) and explore the bigger picture.

The systems view sees organizations, communities, economies, projects, operations, families, selves, bodies, as intersecting systems within an overriding system of systems. Systems change as they are influenced by changes in conditions and actions anywhere within or around them. Systems are activated and changed by processes – complexes of performers acting to make change. Processes are the way systems and parts of systems interrelate.

⇒ Simple rules of individual behavior can lead to coherent system level results.

- ⇒ Small changes in rules or in the way they are applied can have significant impact on the system level results.
- ⇒ Intuition can be a particularly poor guide to prediction of the behavior of complex systems above a few levels of complexity (here we have only 3).
- ⇒ Simulation is a powerful tool for understanding the dynamics of complex systems.

Having a sense of the interplay among the systems' parts (including ourselves), you can more effectively influence change and promote effective performance and quality of life. While being part of the system, assessing it analytically and objectively, as if you were outside of it, promotes objectivity and clarity.

Key components of Systems thinking

Holism

- Systems thinking emphasizes the interconnectedness of elements within a system. It encourages looking at the system as a whole rather than breaking it down into isolated parts.

Feedback Loops

- Systems often involve feedback loops, where the outputs of a system influence its own operation. Feedback loops can be either reinforcing (positive feedback) or balancing (negative feedback), and they play a crucial role in system behavior

Emergence

- Systems thinking recognizes that the behavior of a system can exhibit emergent properties—characteristics that arise from the interactions of system components and are not present in the individual components themselves

Boundaries

- Defining the boundaries of a system is essential in systems thinking. Understanding what is inside and outside the system helps in identifying relevant factors and relationships.

Causality

- Systems thinking explores the cause-and-effect relationships within a system. It recognizes that actions in one part of the system can have repercussions throughout the entire system

Multiple Perspectives

- Systems thinking encourages the consideration of multiple perspectives and viewpoints. It recognizes that different stakeholders, lived experts, policy makers and practitioners may have different mental models and perceptions of the system

Dynamic Complexity

- Systems are dynamic and can change over time. Understanding the dynamic nature of systems is critical for effective systems thinking

Systems thinking is the right approach when

- ☑ We are not really sure we understand the problem, let alone the solution
- ☑ There is a significant diversity of opinion and even conflict among stakeholders and experts about what to do.
- ☑ There are many diverse and dynamic interconnections between the problem and the broader environment which itself is unstable and dynamic
- ☑ We are aiming to make sustained change at a broad scale
- ☑ A team needs to grapple with one or more messy problems

In summary, critical thinking is more focused on analyzing and evaluating information within a specific context, emphasizing logic and evidence. Systems thinking, on the other hand, takes a broader perspective, considering the interconnectedness of elements within a system and how they contribute to the overall behavior of that system. Both approaches are valuable and can complement each other in problem-solving and decision-making processes, depending on the nature of the challenge at hand.

Unit 11 Activity case study

This case study explores the application of systems and critical thinking in the context of sustainable tourism development. It focuses on a hypothetical scenario where a small island community, "Green Island," is facing challenges related to tourism growth and environmental conservation.

Case Study Scenario:

Green Island, located in the heart of a pristine marine ecosystem, has experienced a surge in tourism in recent years due to its breathtaking beaches, vibrant marine life, and cultural attractions. While tourism has brought economic opportunities to the island, it has also led to environmental degradation, strained infrastructure, and social tensions within the community.

Key stakeholders include:

- Local Residents: Concerned about the impact of tourism on their way of life, access to resources, and cultural heritage.
- Tourists: Attracted to Paradise Island for its natural beauty and recreational activities but unaware of their environmental footprint.
- Business Owners: Seeking profit from tourism-related ventures but facing challenges such as waste management, resource scarcity, and workforce issues.
- Government Authorities: Responsible for regulating tourism activities, managing natural resources, and balancing economic development with environmental



conservation.

- Environmental NGOs: Advocating for sustainable practices, conservation efforts, and community engagement to mitigate the negative impacts of tourism.

Activity Instructions

Systems Mapping:

- ✓ Identify and map the interconnected systems, components, and feedback loops related to tourism on Paradise Island. Encourage them to consider social, economic, environmental, and cultural factors.
- ✓ Stakeholder Analysis: Analyse the interests, concerns, and power dynamics of key stakeholders on Green Island. Identify potential conflicts of interest and areas of collaboration among stakeholders.

Critical Thinking Exercise:

- ✓ Consider a series of different scenarios or dilemmas related to sustainable tourism development on Green Island.
- ✓ Critically evaluate each scenario, considering its short-term and long-term implications for the island's ecosystem, economy, and community well-being.

Solution Proposal:

- ✓ Develop a comprehensive solution proposal for sustainable tourism development on Green Island.
- ✓ Integrate insights from systems thinking and critical analysis into the proposed strategies, considering the needs and perspectives of all stakeholders.

Key take outs and model answers

Root Causes of Environmental Degradation: The root causes of environmental degradation on Green Island include unregulated tourism activities such as coastal development, waste generation, overfishing, and pollution from boats. Addressing these root causes requires implementing sustainable tourism practices, such as marine conservation measures and waste management initiatives, to minimize negative impacts on the marine ecosystem.

Impact on Infrastructure: The surge in tourism has strained the island's infrastructure, leading to congestion, overcrowding, and environmental pollution. To cope with increased tourism demand, investments are needed in upgrading transportation systems, expanding accommodation options, and improving waste management facilities. Sustainable infrastructure development is essential to support the island's tourism growth while minimizing environmental impacts.



Emerging Social Tensions: Social tensions within the community may arise from unequal distribution of tourism benefits, competition for resources, and conflicts between residents and tourists. Addressing these tensions requires promoting social cohesion, inclusivity, and equitable sharing of tourism benefits. Community engagement programs, capacity-building initiatives, and cultural preservation efforts can help foster a sense of ownership and pride among residents.

Implementing Sustainable Tourism Practices: Sustainable tourism practices such as coastal zone management, waste reduction programs, and responsible snorkeling and diving guidelines are essential to mitigate environmental degradation on Green Island. By implementing these practices, the island can protect its natural assets and promote responsible tourism that benefits both visitors and the environment.

Enhancing Infrastructure: Enhancing the island's infrastructure to cope with increased tourism demand requires investments in transportation upgrades, accommodation facilities, waste management services, and water and sanitation infrastructure. Sustainable infrastructure development, including eco-friendly lodging options and renewable energy initiatives, is essential to support the island's tourism growth while minimizing environmental impacts.

Addressing Social Tensions: Addressing social tensions within the community requires fostering dialogue, promoting inclusivity, and empowering marginalized groups. Community engagement programs, participatory decision-making processes, and income-generating projects can help address inequalities and promote social cohesion on Green Island.

Role of Stakeholders: Stakeholders such as government agencies, businesses, NGOs, and local communities play a crucial role in promoting sustainable tourism on Green Island. By collaborating on initiatives such as environmental conservation, community development, and responsible tourism marketing, stakeholders can work together to address complex challenges and achieve shared goals for the island's sustainable development.

Reflective questions – Indicative answers

1. *What are the root causes of the environmental degradation on Green Island?*



Answer: The root causes of environmental degradation on Green Island likely include unregulated tourism activities such as coastal development, snorkeling and diving, waste generation, overfishing, pollution from boats, and habitat destruction. These activities, if not managed sustainably, can harm marine ecosystems, coral reefs, and terrestrial habitats.

2. *How can sustainable tourism practices be implemented to mitigate environmental degradation on Green Island?*

Answer: Sustainable tourism practices such as coastal zone management, marine protected areas, waste reduction and recycling programs, responsible snorkeling and diving guidelines, eco-friendly accommodation and transportation options, and community-based conservation initiatives can help mitigate environmental degradation and preserve Green Island's natural assets.

3. *What role can stakeholders such as government agencies, businesses, NGOs, and local communities play in promoting sustainable tourism on Green Island?*

Answer: Stakeholders can play a crucial role in promoting sustainable tourism by collaborating on initiatives such as environmental conservation, community development, capacity-building, policy advocacy, and responsible tourism marketing. Engaging stakeholders in a coordinated effort can help address complex challenges and achieve shared goals for the island's sustainable development.



Lesson 5: Promoting Diversity, Equity and Inclusion in Project Teams

Unit 1. Introduction to Lesson 5 “Promoting Diversity, Equity and Inclusion in Project Teams”

This lesson provides a comprehensive framework for promoting diversity, equity, and inclusion in project teams, covering various aspects from foundational concepts to practical strategies and case studies. The goal is to empower participants with the knowledge and skills needed to contribute to inclusive project environments.

Unit 2: Activity Multiple choice questions [LUMI]

Lumi File: M5L5U2_Promoting Diversity, Equity and Inclusion in Project Teams

Diversity:

- a. Refers only to race and ethnicity.
- b. Encompasses a variety of differences including race, gender, age, sexual orientation, and more.
- c. Is not relevant in a workplace setting.

Equity:

- a. Is the same as equality.
- b. Focuses on ensuring everyone gets the same resources and opportunities.
- c. Recognizes and addresses the unique needs of individuals to achieve fairness.

Inclusion:

- a. Means treating everyone the same way.
- b. Involves creating an environment where everyone feels valued and respected.
- c. Is not necessary if diversity is already present.

Unit 3 Understanding Diversity, Equity and Inclusion

Diversity is the presence of differences that enrich our workplace. Some examples of diversity may include race, gender, religion, sexual orientation, ethnicity, nationality, socioeconomic status, language, (dis) ability, age, religious commitment, or political perspective in our workplace. There are many more. It acknowledges the uniqueness of individuals and the value of diverse perspectives, experiences, and identities within organizations.



Equity is ensuring that access, resources, and opportunities are provided for all to succeed and grow, especially for those who are underrepresented and have been historically disadvantaged. It recognizes that different individuals may require different levels of support or resources to achieve equitable outcomes and addresses systemic barriers to equality.

Inclusion is a workplace culture that is welcoming to all people regardless of race, ethnicity, sex, gender identity, age, abilities, and religion and everyone is valued, respected and able to reach their full potential. It goes beyond mere representation to foster a sense of belonging and community, where diverse voices are heard, valued, and included in decision-making processes.

Diversity, equity, and inclusion are fundamental principles for creating thriving and sustainable organizations. By understanding the concepts of DEI, recognizing the challenges involved, and implementing best practices, organizations can cultivate inclusive cultures where all individuals feel valued, respected, and empowered.

Last but not least, belonging is an integral component of Diversity, Equity, and Inclusion initiatives, encompassing the sense of acceptance, validation, and inclusion that individuals experience within their organizations. DEIB (diversity, equity, inclusion, and belonging) aims to take the DEI framework a step further to make the workplace a more welcoming space. By prioritizing belonging, organizations can create environments where all individuals feel valued, respected, and empowered to contribute their best, ultimately leading to more diverse, equitable, and inclusive workplaces.

Challenges in Fostering Diversity, Equity, and Inclusion:

Implicit Bias:

- ✓ Implicit biases are unconscious attitudes or stereotypes that affect our understanding, actions, and decisions towards individuals or groups.
- ✓ They can lead to unintentional discrimination and hinder efforts to create inclusive environments.

Systemic Inequities:

- ✓ Systemic inequities refer to structural barriers and institutional practices that perpetuate inequality and marginalization based on social identities.
- ✓ They include disparities in hiring, promotion, pay, and access to resources or opportunities, which disproportionately affect marginalized groups.

Resistance to Change:

- ✓ Resistance to change may arise from individuals or organizational cultures that are resistant to acknowledging privilege, addressing bias, or challenging existing power

dynamics.

- ✓ Overcoming resistance requires proactive leadership, education, and ongoing commitment to DEI principles.

Unit 4: Activity True/False

True/False: Unconscious bias can impact decision-making and contribute to inequities.

True/False: Diversity is only about visible differences such as race and gender.

True/False: Equity means treating everyone exactly the same.

True/False: Inclusion is the responsibility of certain individuals or departments within an organization.

Unit 5: How Inclusive am I? Consider the different scenarios below

Scenario 1: Job Interview

You are part of an interview panel for a new team member. A candidate from a different cultural background than yours presents excellent qualifications, but you notice they have an accent. Reflect on how your cultural biases might unconsciously affect your perception of their suitability for the role.

Scenario 2: Team Collaboration

During a team project, a colleague from a different ethnicity suggests an approach that is unfamiliar to you. Reflect on how open you are to considering diverse perspectives and whether you default to methods that align with your cultural background.



Figure 5.30

Building blocks



Note From [istockphoto.com](https://www.istockphoto.com/photo/geometric-shapes-on-a-wooden-background-gm1140166411-305011854) [Image] depicting The concept of logical thinking. Geometric shapes on a gray background. Business building concept, by [Radachynskyi](#), 2019, <https://www.istockphoto.com/photo/geometric-shapes-on-a-wooden-background-gm1140166411-305011854>

Scenario 3: Social Gathering

At a company social event, you notice that employees tend to form groups based on shared cultural backgrounds. Reflect on your own choices during such events and consider if you unintentionally contribute to the formation of exclusive groups.

Scenario 4: Decision-Making

In a team decision-making process, there is a disagreement about a course of action. Reflect on whether diverse voices are given equal weight, or if certain opinions are dismissed based on cultural differences.

Scenario 5: Office Communication

You receive an email from a colleague who uses a more indirect communication style. Reflect on how your cultural expectations might influence your interpretation of the message and whether you appreciate diverse communication styles.

Scenario 6: Project Allocation

When assigning roles for a project, you notice that certain individuals are consistently given more visible or challenging tasks, while others are assigned routine or less critical

responsibilities. Reflect on whether this pattern aligns with any unconscious biases related to cultural differences.

Scenario 7: Performance Evaluation

During a performance review, you find it challenging to provide constructive feedback to a team member from a different cultural background. Reflect on how your cultural biases might affect your ability to assess performance objectively.

Scenario 8: Workplace Celebrations

Reflect on how your workplace celebrates holidays and cultural events. Consider whether the practices are inclusive or if they primarily cater to the dominant cultural norms within the organization.

Unit 6 Activity Case study The Inclusive Workplace Challenge: A Case Study in Diversity and Inclusion

Title: "The Inclusive Workplace Challenge: A Case Study in Diversity and Inclusion"

Overview:

This case study focuses on exploring the concept of inclusivity in the workplace and challenges participants to reflect on their own behaviors and attitudes towards diversity. Through interactive exercises and discussions, participants will gain insights into the importance of inclusivity, identify potential biases or barriers to inclusion, and develop strategies for creating a more inclusive work environment.

Case Study Scenario:

Sarah is a manager at a medium-sized rural tourism organisation, "Mother Nature." Despite the company's commitment to diversity and inclusion, Sarah notices that there are still instances where certain employees feel marginalized or excluded in the workplace. She realizes that fostering a truly inclusive environment requires active participation and commitment from everyone in the organization, including herself.

Key Characters:

Sarah (Manager): Recognizes the importance of inclusivity and is committed to promoting diversity in the workplace.

6 Employees: Receptionist, Gardener, 2 cleaners, Cooker, manager assistant that represent a diverse range of backgrounds, including race, gender, ethnicity, age, sexual orientation, and abilities.



Human Resources (HR) Department: Responsible for developing policies and initiatives related to diversity and inclusion within the organization.

Self-Reflection questions:

How do I perceive diversity in the workplace?

Do I actively seek out diverse perspectives and value different viewpoints?

Have I ever witnessed or participated in behaviors that may have excluded or marginalized others?

Develop an action plan for promoting inclusivity in the workplace of “Mother Nature” organisation. Consider different scenarios and think about the dynamics of the team.

Learning Outcomes:

Gain awareness of personal biases and attitudes towards diversity and inclusion.

Develop empathy and understanding for the experiences of marginalized or underrepresented groups in the workplace.

Identify practical strategies for promoting inclusivity and diversity within their own teams or organizations.

Strengthen commitment to fostering an inclusive work environment where all employees feel valued, respected, and empowered to contribute their unique perspectives and talents.

Unit 7 Diversity, Equity and Inclusion in project management: From theoretical to practice

In recent years, there has been growing recognition of the importance of diversity, equity, and inclusion (DEI) in various organizational contexts, including project management. This theoretical chapter explores the conceptual underpinnings of DEI in project management and provides insights into practical strategies for promoting diversity, equity, and inclusion within project teams. Drawing upon theoretical frameworks and empirical evidence, this chapter aims to bridge the gap between theory and practice, offering guidance for project managers and stakeholders seeking to create more inclusive project environments.

Theoretical Foundations of Diversity, Equity, and Inclusion in Project Management:

Conceptual Frameworks:

Social Identity Theory: Understanding how individuals' social identities influence their perceptions, behaviors, and interactions within project teams.

- Intersectionality Theory: Recognizing the complex interplay of multiple social identities

(e.g., race, gender, ethnicity, age, sexual orientation) and their impact on experiences of privilege and marginalization in project management contexts.

- Critical Race Theory: Examining systemic inequalities and power dynamics that perpetuate racial disparities in project management practices and outcomes.

The Business Case for Diversity and Inclusion:

- Research evidence highlighting the positive correlation between diversity, equity, and inclusion and various organizational outcomes, including innovation, performance, and employee engagement.
- Case studies illustrating how diverse project teams can leverage different perspectives and expertise to drive project success and achieve strategic objectives.

Practical Strategies for Promoting Diversity, Equity, and Inclusion in Project Management:

Recruitment and Talent Management:

- Implementing inclusive recruitment practices to attract a diverse pool of candidates for project roles.
- Establishing mentorship and professional development programs to support the career advancement of underrepresented groups within project teams.

Inclusive Team Dynamics:

- Facilitating open communication and fostering a culture of respect and psychological safety within project teams.
- Providing diversity and unconscious bias training to enhance awareness and mitigate the impact of implicit biases on decision-making processes.

Equitable Resource Allocation:

- Ensuring equitable distribution of resources, opportunities, and responsibilities among project team members.
- Addressing disparities in access to training, development opportunities, and project assignments based on individual needs and capabilities.

Stakeholder Engagement and Community Outreach:

- Engaging diverse stakeholders, including clients, end-users, and community members, in project planning and decision-making processes.
- Incorporating principles of equity and social justice into project design and implementation to address the needs and priorities of marginalized communities.

Diversity, equity, and inclusion are not just moral imperatives but essential elements of effective project management. By integrating theoretical insights with practical strategies, project managers can create environments where individuals from diverse backgrounds feel valued,



respected, and empowered to contribute their unique perspectives and talents. Embracing diversity, equity, and inclusion is not only the right thing to do but also a strategic imperative for driving innovation, collaboration, and project success in an increasingly complex and interconnected world.

Unit 8 Embracing the difference

Integrating and promoting Diversity, Equity, and Inclusion (DEI) in project management is crucial for fostering an inclusive work environment and maximizing team performance.

Here's a guide on how to do so:

Figure 5.31

DEI and team performance



Note From [istockphoto.com](https://www.istockphoto.com/vector/online-meeting-gm1412778148-462079118) Image depicting People putting their hands together. window frame. flat design style vector illustration, by MINIWIDE, 2022, <https://www.istockphoto.com/vector/online-meeting-gm1412778148-462079118>

Educate Yourself and Your Team: Start by educating yourself and your team about DEI concepts, issues, and best practices. Understanding the importance of DEI is the first step towards integrating it into project management effectively. You can utilize online resources, workshops, seminars, or invite DEI experts to conduct training sessions.

Set DEI Goals: Incorporate DEI goals into your project management plan. These goals could include increasing diversity in hiring, creating an inclusive team culture, ensuring equitable opportunities for all team members, etc. Make sure these goals align with the organization's overall DEI strategy.

Diverse Hiring Practices: Actively promote diversity in your project team by implementing inclusive hiring practices. Use diverse sourcing channels, ensure diverse interview panels, and eliminate biases from the hiring process. Focus on hiring candidates from underrepresented groups and creating an inclusive environment where they can thrive.

Inclusive Communication: Foster open and inclusive communication within the project team. Encourage team members to share their perspectives, ideas, and concerns freely. Ensure that everyone's voice is heard and respected during meetings and decision-making processes.

Address Bias and Discrimination: Take proactive steps to address bias and discrimination within the team. Implement policies and procedures to prevent discrimination and harassment. Encourage reporting mechanisms for any incidents of bias or discrimination and take swift and appropriate action to address them.

Promote Equity: Ensure equitable opportunities for career advancement and professional development within the project team. Provide training, mentorship, and support to all team members, regardless of their background or identity. Address any disparities in workload, resources, or recognition promptly.

Regular DEI Assessments: Conduct regular assessments to measure the effectiveness of your DEI efforts within the project team. Collect feedback from team members, track key metrics related to diversity and inclusion, and identify areas for improvement. Use this information to adjust your strategies and initiatives accordingly.

Celebrate Diversity: Celebrate diversity within the project team and recognize the unique contributions of each team member. Organize events, activities, or initiatives that highlight different cultures, backgrounds, and perspectives. Foster a sense of belonging and community among team members.

Lead by Example: As a project manager, lead by example when it comes to promoting DEI. Demonstrate inclusive behaviors, challenge biases, and advocate for diversity and inclusion in all aspects of project management. Your actions will set the tone for the rest of the team.

Stay Informed and Evolve: Stay informed about emerging DEI trends, research, and best practices in project management. Continuously evolve your DEI strategies and initiatives to keep pace with changing dynamics and ensure ongoing improvement.

Best Practices for Promoting Diversity, Equity, and Inclusion:

Leadership Commitment:

- ✓ Strong leadership commitment and accountability are essential for driving DEI initiatives and fostering a culture of inclusivity throughout the organization.
- ✓ Leaders should articulate a clear vision for DEI, allocate resources, and hold themselves and others accountable for progress.

Education and Training:

- ✓ Providing diversity, equity, and inclusion training for employees at all levels can increase awareness, empathy, and cultural competence.
- ✓ Training should address unconscious bias, microaggressions, and inclusive communication strategies to create a more inclusive workplace culture.

Recruitment and Hiring Practices:

- ✓ Implementing inclusive recruitment and hiring practices, such as diverse candidate sourcing, unbiased job descriptions, and structured interview processes, can help attract and retain diverse talent.
- ✓ Organizations should prioritize diversity in candidate selection and create pathways for advancement and leadership development for underrepresented groups.

Inclusive Policies and Practices:

- ✓ Reviewing and revising organizational policies and practices to ensure they are equitable and inclusive can help address systemic inequities.
- ✓ Policies should promote equal opportunity, flexible work arrangements, parental leave, accommodations for individuals with disabilities, and support for marginalized employees.

Unit 9 Activity Image choice [LUMI]

From the images below please select the ones that represent diversity, inclusion and equity in project management and discuss why.

By engaging participants in reflective discussions based on the images below, this activity encourages deeper exploration and understanding of DEIB principles and their practical implications in the workplace. It aims to facilitate meaningful dialogue, to promote empathy and awareness, and to empower participants to become advocates for diversity, equity, inclusion, and belonging in their organizations.



<https://www.pexels.com/photo/photo-of-people-near-wooden-table-3184418/>

Unit 10 Activity Case study: DEI in your organisation

Analyse the current state of DEI in your organisation (demographics, top positions, feelings) and explore the avenues of improvement from your viewpoint.

Opportunities and barriers

Develop a detailed analysis of the primary barriers to increasing diversity in your current organisation, including both individual and organisational barriers.

Reflective questions

Assessment of Current State:

What is the current demographic makeup of our workforce, and how does it compare to the broader community or industry standards?

Are there any noticeable patterns or trends in terms of representation across different groups within the organization?

How well do employees feel represented and included in decision-making processes?

Leadership and Accountability:

How visibly and actively are leaders involved in promoting and fostering a diverse and inclusive culture?

Are there clear systems of accountability for DEI goals and initiatives within the organization?

How are leaders addressing and challenging any unconscious biases that may exist within the leadership team?

Workplace Culture:

What initiatives or programs are in place to promote an inclusive and welcoming workplace culture?



Figure 5.32

Equity-Diversity-Inclusion



Note From istockphoto.com [photograph], by Dzmitry Dzemidovich, 2021, Diversity equity inclusion symbol. Concept words 'Diversity equity inclusion' on wooden blocks on beautiful grey background. Diversity, business, inclusion and equity concept. <https://www.istockphoto.com/photo/diversity-equity-inclusion-symbol-concept-words-diversity-equity-inclusion-on-wooden-gm1357522666-431400781>

How do employees perceive the organizational culture in terms of diversity, equity, and inclusion?

Are there any specific challenges or successes related to fostering an inclusive culture?

Policies and Practices:

How well are existing policies and practices aligned with DEI goals?

Are there any unintentional barriers within existing policies that may hinder diversity or inclusion?

What steps are being taken to ensure equitable opportunities for career advancement and professional development?

Employee Engagement:

How are employees engaged in DEI initiatives, and what feedback mechanisms are in place?

Are there employee resource groups or networks that contribute to a sense of belonging and community?

How does the organization encourage open dialogue and communication around DEI topics?

Training and Development:

What training programs exist to educate employees about diversity, equity, and inclusion?

How effective are these programs in promoting awareness and behavioral change?

Are there ongoing learning opportunities to address evolving DEI issues and trends?

Measuring Success:

What key performance indicators (KPIs) are being used to measure the success of DEI initiatives?

How regularly is the organization assessing progress and making adjustments based on feedback and data?

What success stories or positive outcomes can be highlighted as a result of DEI efforts?

Lesson 6: Becoming an Independent Lifelong Learner

Unit 1. Introduction to lesson 6 Becoming an independent lifelong learner

Solon, an ancient Greek philosopher captured the essence of lifelong learning in a simple sentence:

"I grow old learning something new every day"

Learning can happen **everywhere** – with or without fixed context and **always** – with or without fixed timeframe. Learning happens all around us and people engage in learning processes **consciously** or **unconsciously**.

The ability to take the control and guide this learning process towards a specific direction is what makes people independent learners.

Becoming an **independent lifelong learner** involves developing certain habits, skills, and attitudes that empower individuals to be conscious and take ownership of their own learning journey, which is a lifetime journey. This never-ending quest of knowledge and intellectual growth is the study subject of the present lesson as deeply intertwined with resilience building. **Lifelong learning strengthens resilience** while **resilience fuels lifelong learning**.

Lifelong learning is also a supporting tool for effective project management. Lifelong learning may serve as a foundation for continuous improvement, adaptation to change, professional development, problem-solving, innovation, staying competitive, and leadership development in the field of project management.

Unit 2 Activity Cross words [LUMI]

Across:

1. Continual pursuit of knowledge and skills through learning
2. A systematic process of acquiring knowledge or information
3. Ability to adapt and learn new things as one ages
4. Formal education received in childhood
5. The process of gaining knowledge or skills through experience and practice

Down:

2. The process of learning for the acquisition of knowledge or skills outside of traditional educational institutions
3. The mindset describing the willingness to explore new ideas and perspectives
4. A program or course of study taken later in life
5. Learning that occurs spontaneously or incidentally in everyday life
6. The belief that learning should be a continuous endeavor



Unit 3 Lifelong learning

Lifelong learning refers to the continuous acquisition of knowledge, skills, and competencies throughout one's life, beyond formal education.

It encompasses both **formal** and **informal learning** experiences, including **self-directed learning**, **professional development** activities, workshops, seminars, online courses, and informal skill-building activities.

Lifelong learning is driven by **personal** and **professional development goals**, **curiosity**, and a **desire to adapt to the changing environment** and demands in the world.

It fosters intellectual growth, personal fulfillment, and professional advancement, enabling individuals to stay relevant, competitive, and engaged in an ever-evolving society and economy.

Despite the large disparities in the characteristics of **adult learners**, it is possible to identify **common characteristics** between them. Rogers identifies 7 common characteristics:

1. They are all adults
2. They are in an evolving process of development, not at the beginning of a process,
3. they bring with them a set of experiences or values,
4. they come to education with given intentions,
5. they come with expectations regarding the learning process,
6. they have competing interests,
7. they have already formed their own learning models

Except for these common characteristics adult learners that engage in lifelong learning processes have one more characteristic: the awareness that they need to be agile and adaptable!

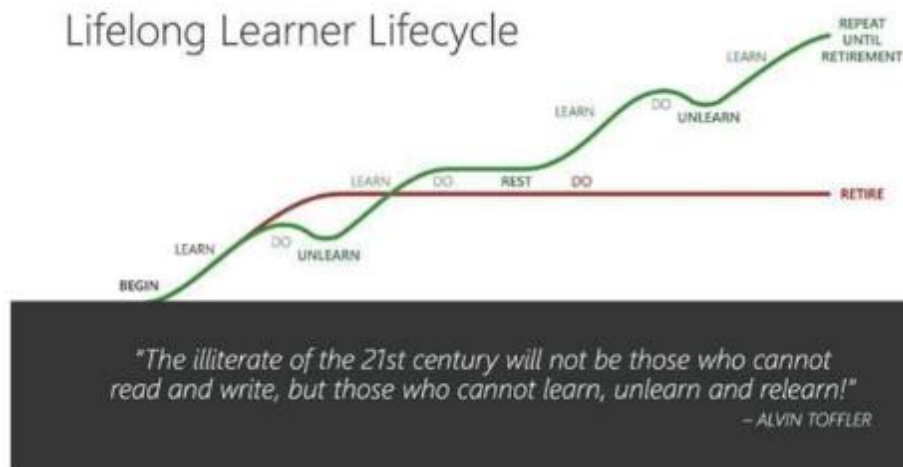
In the following figure is depicted in green the cycle of lifelong learner in contrast to the red line which depicts the older concept of a conventional learner. In **the lifelong learning mindset**, the **growth mindset**, the learning process is an ongoing, never-ending process of **learn, do, unlearn — learn, do, rest — learn, do, unlearn — repeat**. In the fixed mindset (depicted with the red line), people assume that learning happens only in schooling and from that point on, it is intelligence and creativity (which are considered as static attributes) that lead peoples way (Keating, 2020).

Put simply, a lifelong learner is an individual who continues to acquire new skills and knowledge long after completing their formal education. This encompasses not only learning new subjects but also fostering an open-minded, optimistic outlook toward the ever-changing world. Personal growth occurs in tandem with professional advancement.



Figure 5.33

The Conventional VS Lifelong Learner Mindset

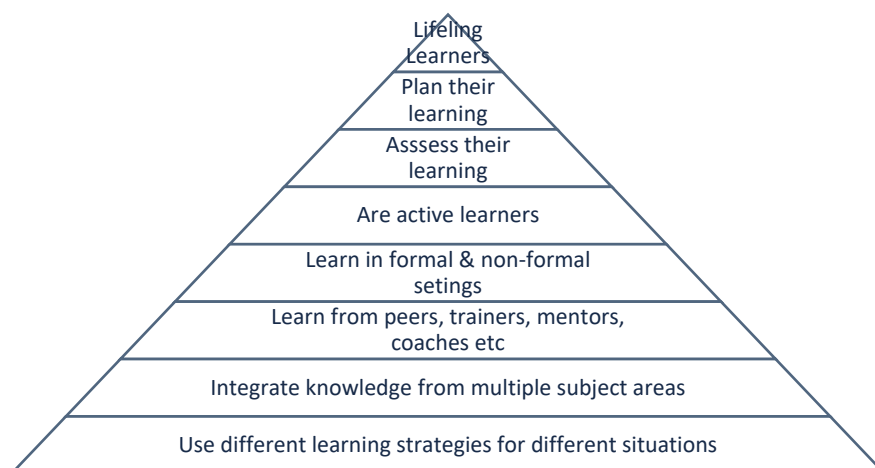


Note Graph from www.chieflearningofficer.com depicting the lifelong learning cycle (n.d.) <https://www.chieflearningofficer.com/2020/05/26/the-mindset-of-a-lifelong-learner/>

Knapper & Cropley have focused on the characteristics that make someone more likely to engage in lifelong learning. These characteristics are depicted in the following figure:

Figure 5.34

Lifelong Learner's Characteristics according to (Knapper& Cropley, 2020)



Note Figure depicting in the format of a pyramid the lifelong learner's characteristics, adapted from Terziev, 2020

How a project manager may benefit from a lifelong learning mindset?

Project managers can reap numerous benefits from a commitment to lifelong learning. Those benefits may be discerned between personal benefits and team benefits. The personal benefits focus on the improvement of the dexterity of the Project Manager while team benefits highlight the output of the activities undertaken by a Project manager that foster a culture of continuous development. Here are some key ways:

Personal benefits	Team benefits
Staying Relevant: The project management landscape is constantly evolving, with new methodologies, tools, and technologies emerging. Lifelong learning ensures project managers stay current with these advancements, allowing them to optimize project processes and deliver better results. Adaptability and Versatility: The ability to adapt to changing situations is crucial for project managers. By continuously learning, they can develop a broader skillset encompassing leadership, communication, problem-solving, and technical expertise. This versatility equips them to handle diverse project scenarios effectively. Enhanced Competence: Lifelong learning fosters ongoing development of project management skills and knowledge. This continual honing ensures project managers remain effective and proficient in their roles, leading to smoother project execution and increased success rates. Problem-Solving Mastery: Project managers encounter unforeseen challenges regularly. Lifelong learning	Enhanced Skillset and Expertise: Team members continuously develop new skills and refine existing ones through ongoing learning. This broader and deeper knowledge base allows them to tackle project challenges more effectively and efficiently. Increased Innovation: A culture of lifelong learning fosters an environment where new ideas are encouraged. Team members are more likely to experiment with different methods and technologies, leading to potential breakthroughs and improved project outcomes. Stronger Collaboration and Knowledge Sharing: Lifelong learning fosters a culture of open communication and knowledge exchange. Team members readily share their expertise and learnings, leading to a more cohesive and efficient unit. Improved Problem-Solving: Exposure to diverse perspectives and approaches through learning equips teams to solve problems more creatively and collaboratively. They can brainstorm innovative solutions and adapt to unforeseen



exposes them to various perspectives and approaches, refining their problem-solving abilities and enabling them to tackle complex situations with greater confidence and effectiveness. Career Advancement: The project management field values continuous learning. Certifications, online courses, and participation in workshops demonstrate a project manager's commitment to professional development, enhancing their credibility and marketability, and potentially opening doors to career advancement opportunities.	circumstances with greater confidence. Boosted Team Morale and Engagement: When project managers prioritize lifelong learning, it demonstrates a commitment to team development. This investment in their growth can boost morale, increase engagement, and foster a sense of accomplishment within the team. Improved Project Quality and Efficiency: With a more skilled and adaptable team, project quality is likely to improve. Teams can optimize project workflows, identify and address potential roadblocks more effectively, leading to faster and more efficient project execution. Competitive Advantage: In today's dynamic business landscape, staying ahead of the curve is crucial. A team committed to lifelong learning possesses a wider range of skills and knowledge, making them better equipped to handle complex projects and contribute to the organization's competitive edge.

Here are some strategies a Project Manager may implement in order to foster a culture of continuous improvement (Keaten, 2020) to the team members:

- 1. Lead by Example:** Demonstrate your own commitment to lifelong learning. Share your learnings from conferences, courses, or articles with your team.
- 2. Facilitate Learning Opportunities:** Identify knowledge gaps within the team and source relevant training resources, workshops, or online courses to address them.
- 3. Encourage Knowledge Sharing:** Organize brown bag lunches or team presentations where team members can share their expertise and learnings with each other.



4. Provide Time and Budget: Allocate dedicated time for team members to pursue professional development activities and consider budgeting for relevant training or certifications.

5. Recognize and Reward Learning: Acknowledge and celebrate team members' efforts toward continuous learning. This can be through verbal praise, performance reviews, or even small incentives.

6. Create a Safe Space for Learning: Encourage open communication where team members feel comfortable asking questions, admitting mistakes, and learning from them.

7. Utilize Project Work for Learning: Integrate new learning opportunities into project work whenever possible. For example, assign tasks that require learning a new tool or approach.

8. Offer Mentorship or Coaching: Provide guidance and support to team members who are actively pursuing professional development.

9. Promote Collaboration and Learning Networks: Encourage team members to connect with colleagues from other departments or organizations to share knowledge and best practices.

By implementing these strategies, project managers can foster a growth mindset within their teams, where learning is seen as a valuable and ongoing process that contributes to both individual and project success.

Unit 4 Activity Fill in the blanks [LUMI]

The terms **___* mindset* and **___* mindset* describe the underlying beliefs people have about **___** and intelligence. If a **___* mindset* leads people to assume that intelligence and creativity are **___** attributes that **___** be modified, a **___* mindset* leads people to believe that these **___** be cultivated through effort and deliberated practice.

*Taken from **LifeComp** –*

The European Framework for Personal, Social and Learning to Learn Key Competence

Unit 5 Build lifelong learning skills

Self-awareness can be understood in a few ways, but generally refers to having a conscious understanding of oneself and own feelings. In greater detail:

- ⇒ **It's about your inner world:** Self-awareness involves recognizing your thoughts, feelings, motivations, strengths, and weaknesses.
- ⇒ **It goes beyond just existing:** It's not simply being aware of your surroundings. It concerns understanding how you fit into the bigger picture and how you impact others.
- ⇒ **It's a two-part process:** There's the internal aspect of understanding yourself, and then there's the external aspect of how you perceive yourself compared to how others see you.



Self-awareness is one of the incremental components that **navigate people's life**; as when acquired, it gives a sense of **power, peace** and **prosperity**. Self awareness **fuels confidence** and sets the foundation of **self-regulation** which in turn *nurtures optimism, hope resilience, self-efficacy and a sense of purpose* (Sala et al., 2020) and determines own choices, relationships, and personal goals.

Digitization is changing the way people live, interact, study and work (EC, 2018). We live in a world of constantly increasing flows of data which brings with novel social phenomena. People are expected to navigate in unknown waters while simultaneously, digital technologies have an offering for people: they have facilitated and actually enhance learning (EC, 2017).

So it is up to each individual to choose: either to be driven or drive their own way and stay relevant to this ever-evolving era. The level of self-awareness and self-regulation that each person has along with the selected mind set (fixed or growth), are determinants of this individual path.

As the complexities of our world unfold, revealing both unforeseen threats and unexpected possibilities, **lifelong learning and relevant skills, become essential** for people to navigate and seize these emerging opportunities.

Learning to Learn is the ability to pursue and persist in learning, and to organise one's learning, including effective management of time and information, both individually and in groups

Here are some key ways to build lifelong learning skills:

Figure 5.35

Lifelong learning skills



Unit 6 Activity True/False [LUMI]

True/False: *Lifelong learning* is a form of self-initiated education that is focused exclusively on personal development in a formal educational institute.

True/False: Lifelong learning recognizes that all of our learning comes from a classroom

True/False: Taking a self-interest course via online education or classroom-based course is an initiative within the context of lifelong learning

True/False: Learning to learn is all about becoming a self-directed learner. This means you can keep yourself motivated to learn, manage your time well, and find good information sources – on your own or by working with others.

True/False: Utilizing online platforms, educational apps, and podcasts to access learning materials conveniently does not constitute a form of lifelong learning

Unit 7 Lifelong learning new paradigm

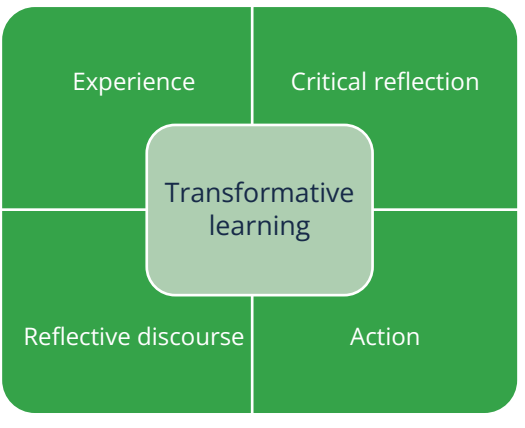
The changes we currently experience in the learning and working processes is not only non-linear and unpredictable, but also inevitable. Technology is being integrated into all professions and industries and is transforming traditional occupational profiles. In parallel, new models for work-based and community-based learning are being applied, which can promote transformative lifelong learning. Technology has already a role within these models and though her future role is certain, it cannot yet be predicted.

Learning more and faster is a competitive advantage so as to remain relevant/ resilient in a modern labor market with permanent innovations (Belasco & Stayer, 1995). Hence, *'the requirement for lifelong learning, the ability to self-learn in a team approach is equally or even more important than having a broad range of technical and vocational know-how learned from theoretical coursework and imitation of skills by learners'*(ILO,2010). In addition to preparing people for the world of work, TVET (Technical and Vocational Education and Training) is expected to be an instrument of social cohesion and integration Promoting flexible access to lifelong learning and training (Kanwar eta al, 2019).

Lifelong learning, transformative learning, and TVET are all interconnected concepts that play a vital role in an individual's development and ability to thrive in a constantly changing world.

If you are still not familiar with the terms (lifelong learning- transformative learning- TVET), herewith is provided a short description of the terms along with indicative suggestions of ways (the alternative pathways that they provide) they may support the continuous improvement of adult learners.

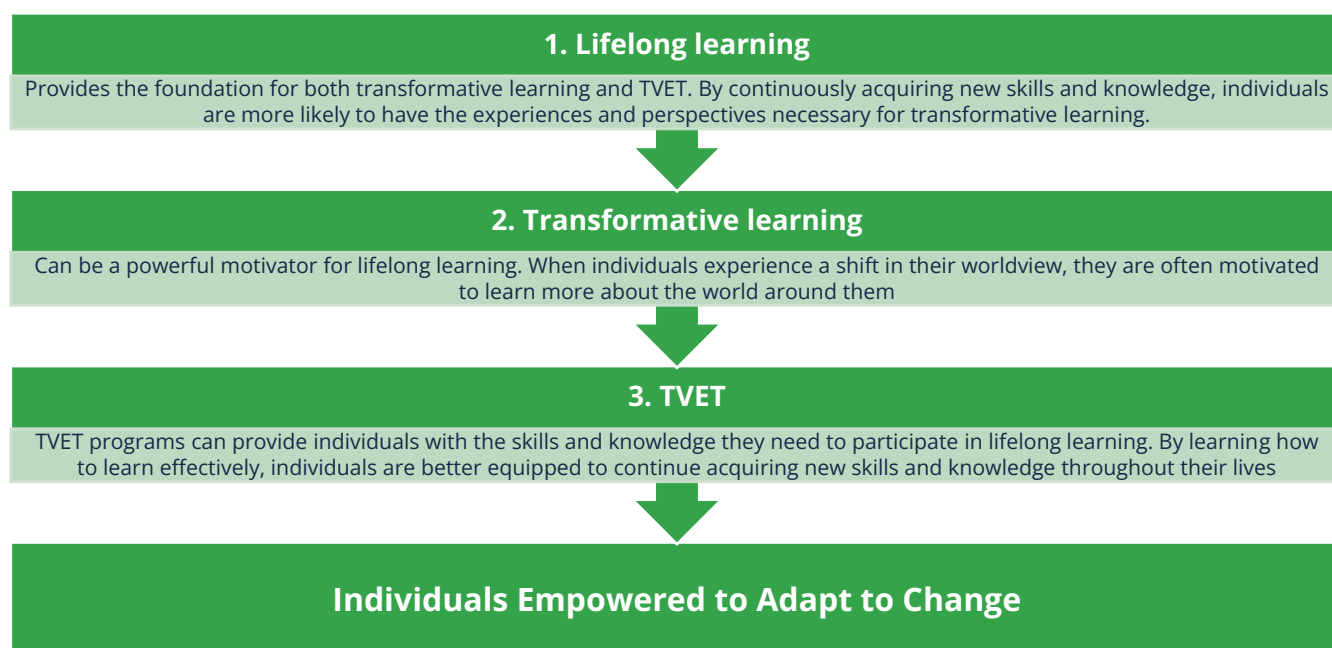
Table 5.7*Discerning between Lifelong learning - Transformative learning - TVET*

 Source Education illustrations by Storyset storyset.com	Lifelong learning refers to the ongoing process of acquiring new skills and knowledge throughout one's life. This can take place through ⇒ formal education (such as attending school or taking courses), ⇒ informal learning (such as reading books or watching educational videos), and ⇒ non-formal learning (such as participating in workshops or training programs)
	Transformative learning is a deeper level of learning that involves a shift in one's worldview or perspective. It can be triggered by a challenging experience, new information, or a change in circumstances. Transformative learning can lead to increased self-awareness, critical thinking skills, and a greater sense of personal agency.
 Source working illustrations by Storyset storyset.com	TVET focuses on preparing individuals for specific occupations or trades. It combines classroom learning with practical skills training, and can lead to certificates, diplomas, or degrees. TVET programs can be a great way to gain the skills and knowledge needed to enter the workforce or to advance in one's career.

Lifelong learning, TVET (Technical and Vocational Education and Training), and transformative learning are powerful tools for adapting to change. Lifelong learning is the broad umbrella of selected trainings in order to be up-to-date with the latest skills and knowledge. TVET provides concrete abilities for specific jobs or industries that may evolve. Transformative learning goes deeper, helping to question assumptions and develop new perspectives. This combination allows lifelong learners to be flexible, learn new things quickly, and adjust to new situations or career paths as the world around changes.

Figure 5.36

Tools in support of adapting to Change



Hence, in order to focus this empowerment to adapt to change explicitly in the context of project management, considering that Project managers and their teams face a dynamic world with evolving technologies and project demands

- ☑ Lifelong learning equips them with the latest skills and knowledge.
- ☑ TVET provides concrete abilities for specific project types.
- ☑ Transformative learning fosters critical thinking and adaptability.

This trifecta allows project managers to tackle new challenges, approach problems from fresh angles, and continuously improve their project management capabilities – both individually and collaboratively.

As already mentioned lifelong learning leads to the acquisition of new knowledge and skills; empowers people to make informed decisions and develop innovative solutions. The more one learn on a subject the better equipped one is. So, when we look at lifelong learning from a

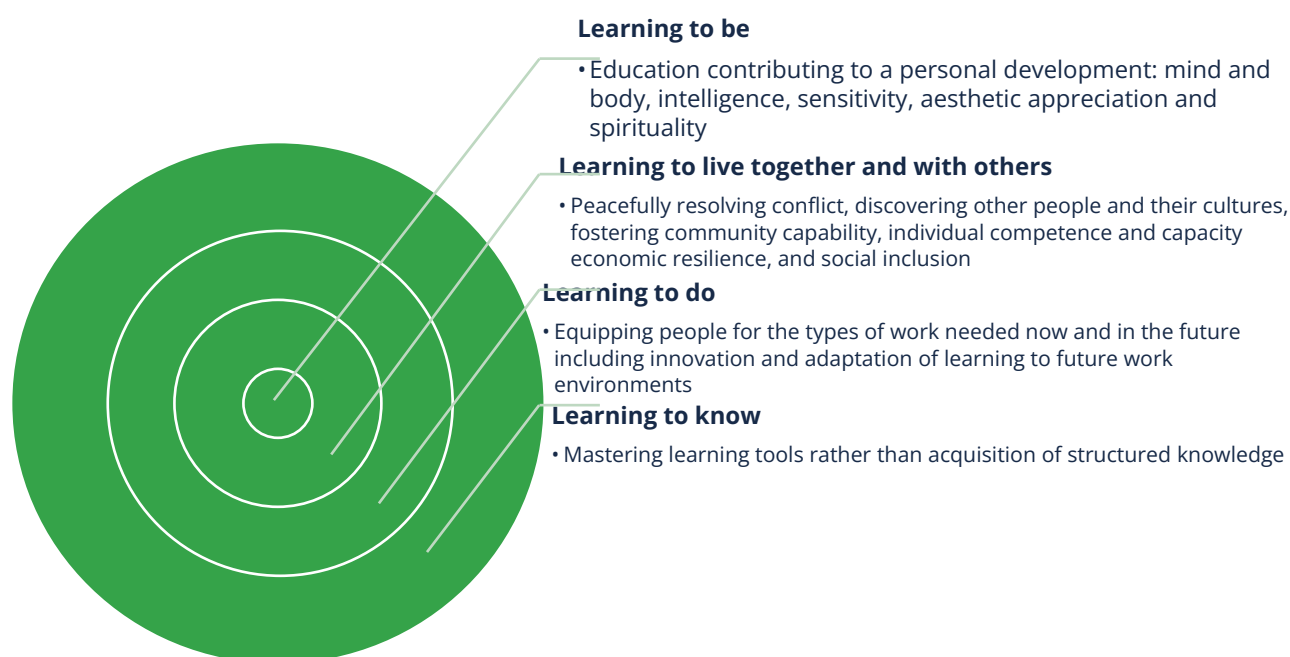
sustainability perspective, it goes beyond just personal development. It becomes a crucial tool for building a more sustainable future. Here are some key aspects to consider while forming a training pathway so as to make sustainable choices:

	Future-proofing skills: The world is constantly evolving, with new technologies and challenges emerging. Lifelong learning allows individuals to stay relevant in the job market and adapt their skills to meet these changes. This contributes to a more sustainable workforce that can address future challenges.
	Sustainability literacy: Lifelong learning can be used to raise awareness about environmental, social, and economic sustainability issues. By learning about these issues, individuals can make more informed decisions in their daily lives, reducing their impact and promoting sustainable practices.
	Innovation and problem-solving: Sustainability requires creative solutions to complex problems. Lifelong learning fosters critical thinking and problem-solving skills, which are essential for developing innovative solutions for a sustainable future.
	Collaboration and knowledge sharing: Sustainability challenges are global and require collective action. Lifelong learning encourages collaboration and knowledge sharing between individuals from different backgrounds. This fosters a more interconnected and knowledgeable society, enabling better collaboration for sustainable development.
	Lifelong learning for all: Sustainable development requires a global shift in mindsets and practices. Making lifelong learning opportunities accessible and inclusive for all, regardless of age, background, or location, is crucial for achieving a critical mass of informed and engaged citizens working towards sustainability.

In parallel, along the way of adapting to a world where continuous learning is essential, there are not just opportunities that this trend presents, but also some challenges, that need to be managed. In order to effectively cope with the challenges a person or a team should not just pursue the mastery of knowledge but also the mastery to perform, to cooperate, to position oneself in the cycle as depicted in the following figure.

Figure 5.37

The four pillars of education in the future (Chitiba, 2012)



Note Figure depicting the four pillars of (adult) education in the future as adapted from (Terziev,2019)



Follow the video [Lifelong Learning: a new paradigm for education with Michelle Wise](#) to learn more on the shifting in professional environments and suggestions on how to move towards change using the benefits of LLL.

Unit 8 Activity Drag the words [LUMI]

In the current activity you are provided in one column the core terms related with lifelong learning and in the other their definitions.

You should correctly match terms from one list with definitions in the other list.

Lifelong learning	The ongoing, voluntary, and self-motivated pursuit of knowledge and skills throughout a person's life.
Formal education	Attending courses, workshops, or degree programs
Informal learning	Reading books, articles, or blogs; watching documentaries or educational videos; participating in online forums or discussions
Non-formal learning	Taking part in training programs, attending conferences, or volunteering in your community
Transformative learning	A deeper learning experience that fundamentally changes a person's understanding of the world and oneself
Technical Vocational Education and Training	a type of education program focused on preparing individuals for specific careers or trades

Unit 9 Activity Case study Essay [LUMI]

Project Learning pathway

How are all these concepts connected with the identity of the Resilient Sustainable Project Manager in Tourism?

Experience: We invite you to study the **Toolkit of Indicators for Projects in Achieving the SDG Goals through tourism** of ONWTO.

Critical Reflection: Select one SDG description that you find highly relevant to your projects and work perspective.

Reflective discourse: Consider a learning project to enhance own or team readiness to adapt to the requirements of this SDG in terms of new job roles or organizational changes. Present your initial thoughts/ plan in no more than 500 words.

By the end of this activity we hope that you will feel more confident in terms of fulfilling the Identity of the Resilient Project manager.



Unit 10 Module Completion - Video

Explore more interesting bits of insight for every lesson of the module by following the additional resources.

These supplementary materials offer invaluable insights, perspectives, and tools that will enrich your understanding and application of sustainable tourism innovation through hybrid project management. By delving deeper into the recommended books, research papers, videos, articles, and other resources, you'll uncover hidden gems of wisdom and practical strategies that can elevate your skills to new heights.

Remember, the journey to mastering knowledge and skills is ongoing, and every resource you explore brings you one step closer to becoming the best hybrid tourism manager you can be. So don't hesitate to take advantage of these additional learning opportunities—they may just hold the key to unlocking your full potential.

Happy learning!



Module 5 Closing Video

Thank you for having followed the module! We hope that it lived up to your expectations and that by now you feel more familiarized with aspects and characteristics that are distinctive in Resilient, Sustainable and Hybrid Project managers; Inspired and Confident to apply the acquired knowledge and suggested approaches to your professional environment and motivated to discuss with your peers and team mates about the ideas! We hope that your engagement with this module initiates the start of your personal journey towards more Resilient and Sustainable Hybrid Project Management Practices!

Keep up with the HyPro4ST training and continue with module on the Projectized Tourism Business!



Module 5 Assessment Exams

1. What is a defining characteristic of an Agile Leader?
 - a. Maintaining less rigid processes and structures
 - b. Resisting change and innovation
 - c. Embracing flexibility and adaptability
 - d. Micromanaging team member

2. How might an Emotional Literate Project Manager approach resolving conflicts within a project team?
 - a) Ignoring conflicts and letting team members resolve it themselves
 - b) Addressing conflicts openly, using empathy and communication skills
 - c) Punishing those involved to set an example
 - d) Avoiding conflicts altogether to maintain a positive team atmosphere

3. An Emotional Literate Project Manager is likely to:
 - a) Communicate strictly through written documentation
 - b) Use a variety of communication channels and adapt their style to the emotional needs of the team
 - c) Rely solely on verbal communication without considering emotional aspects
 - d) Delegate all communication tasks to a team member

4. Effective communication is the exchange of information, ideas, thoughts, and feelings between individuals, occurring within the context of personal relationships, whether they are professional or personal in nature.
☐ True
☐ False

5. Cultural norms and ways run so deep within people that it is not easy to find the words to express the problem in a cultural issue.
☐ True



☐ False

6. According to the Donald Norman's Gulf of Execution and Evaluation concepts that describe the mental gap users/people experience when interacting with a system, a large gulf of execution means the user may not translate their intentions into actions within the system

☐ True

☐ False

7. Adaptability is

- a) The ability to adjust to new conditions or changes
- b) The ability to bounce back from challenges and setbacks
- c) The state of being intricate or complicated
- d) The quality of being easily modified

8. Which of the following is an example of a resilient project management strategy?

- a) Ignoring changes in project scope
- b) Sticking strictly to the original project plan
- c) Creating contingency plans for potential risks
- d) Avoiding communication with the project team

9. Which of the following is NOT a characteristic of a resilient project manager?

- a) Flexibility and adaptability
- b) Openness to feedback and continuous improvement
- c) Rigid adherence to the original project plan
- d) Ability to learn from past mistakes

10. Why is resilience important in project management?

- a. To eliminate all project risks
- b. To ensure the project is always on schedule
- c. To bounce back from challenges and adapt to unexpected changes
- d. To assign blame when things go wrong

11. Which of the following is a key characteristic of a resilient project manager?

- a. Avoiding all risks

- b. Sticking strictly to the project plan
- c. Being adaptable and flexible in the face of challenges
- d. Blaming team members for project issues

12. Select the right references that relate to Diversity:

- a. Refers only to race and ethnicity.
- b. Focuses on ensuring everyone gets the same resources and opportunities
- c. Encompasses a variety of differences including race, gender, age, sexual orientation, and more.
- d. Is not relevant in a workplace setting.
- e. Is the same as equality and equality

13. Equity means treating everyone exactly the same.

- ☐ True
- ☐ False

14. Experiential learning is the process of gaining knowledge or skills through experience and practice

- ☐ True
- ☐ False

15. Learning to learn is all about becoming a self-directed learner. This means you can keep yourself motivated to learn, manage your time well, and find good information sources – on your own or by working with others.

- ☐ True
- ☐ False



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Module 6: The Projectized Tourism Business

Introductory Video

Welcome to the module “The Projectized Tourism Business” designed for tourism professionals aiming to become pioneers of sustainable hybrid project management.

The globalization of the tourism industry has brought both opportunities and challenges. While tourism can bring economic benefits to destinations, it can also lead to cultural homogenization and the loss of traditional ways of life. Our mission? To prepare you to respond appropriately to all challenges from the external and internal environment.

This module provides examples and activities for learners to familiarize themselves with the theoretical underpinnings of projectized organizational structures and the organizational approach to project management. Along with understanding the general strengths and weaknesses of projectized approach to organizational design, this module will provide important understanding of specific advantages and disadvantages of three most commonly used project organizational structures.

Accompanied by various examples and assignments for the learner, this lesson will focus on providing key concepts and terms related to the Project Management Office.

Delve into the essence of change management, gaining knowledge of the structured procedures, processes, and methods used to help individuals, teams, and organizations manage and adapt to significant change. Through this journey, you will gain additional knowledge about planning, implementing and managing initiatives designed to ensure that people in an organization are ready, willing and able to adopt and successfully integrate new processes, systems, structures or cultural changes.

At the end of this module, you'll be able to identify, elaborate and take concrete steps in the projectization of the tourism business, creating your own project management office and taking into account most of the challenges that surround it.

Be part of shaping the future of tourism, where sustainability and hybrid project management excellence meet.

Are you ready to be at the forefront of sustainable tourism development?



Lesson 1: What is projectized organization?

Unit 1 Introduction

"Projectification" is a term coined about 25 years ago by Christophe Midler in the analysis of the Renault business processes. His focus was on **projectification as a way to manage the project portfolio in a way that would be coherent with the global strategy of the firm** (Midler, 1995).

Throughout the years, the phenomena of projectification spread beyond industrial organizations to cover also non-profit organizations, public sector and a society as a whole (Jacobsson & Jalocha, 2021). Additional information on projectification process can be found in Module 2.

Also, very significant contribution to projectification of different types of organizations in the European territory was given by European Union through massive project-based funding (Fred, 2019).

In order to understand the complexity of that process and its' implications for tourism sector, the first lesson of this Module starts with introducing the general characteristics and types of organizational structures, then progresses towards projectized organizational structures and provides examples and activities for learners to get themselves familiar with theoretical basis of organizational approach to project management. Lesson ends with the presentation of results of the research on well-being and work satisfaction of employees in projectized organizations, emphasizing the importance of human component as a driver of success in any organization.

Unit 2 Activity – Quiz

Lumi file: M6L1_Unit 2 Quiz (The following text is embedded in the Lumi File.)

Which of the following terms/adjectives you recognize as a type of organizational structure: (multiple-choice question- you should choose more than one answer):

Organic

Functional

Matrix

Square

Mechanistic



Curvy

Circular

Unit 3 Theoretical chapter - Overview of definition and types of organizational structures

Organizing as a function of management

“Organizing is the process of assembling and assigning the human, financial, physical, informational, and other resources needed to achieve goals (Bateman & Snell, 2013).”

Therefore, the purpose of organizing is to put resources towards that plan. Organizing can be considered structuring for efficiency and it should flow naturally from the planning process as (chronologically) first function of management.

In order to understand the importance of organization for business success as well as efficient achievement of any set objective, it is important to understand key organizational theories and their paradigms. Originating in the early 20th century, organizational theories began as principles for maximizing task efficiency. Over time, they evolved to consider how human behavior impacts organizational success. Today, they encompass a broad spectrum, from market changes to technological advances.

Figure 6.1

Overview of selected organizational theories



Source: adapted from English, 2006

Organization theories are focused on understanding how organizations work, why they come to be structured in particular ways, and why some organizations are more successful than others. Understanding key concepts of different organizational theories can help in finding the most suitable framework for particular organization or business, speeding-up the time for decision making and more successful adaptation to the challenges from the environment.

Organizational structure

Word structure in general refers to the relations between the components of an organized whole and some examples include a building as a structure of the relationship between foundation, skeleton, ceiling and wall or human body as a structure consisting of specific relations between bones, organs, blood and tissues (Hatch, 2018).



Organizational structure is the formal system of task and reporting relationships that determines how employees use resources to achieve organizational goals. (Jones, 2004)

An organization structure can also be considered as a set of planned relationships between groups of related functions and between physical factors and personnel required for the performance of the functions. The organization structure is generally shown on the organizational chart. In classic organizational theory, organizational structure is focused on the authority and responsibility between various positions in the organizations by showing who reports to whom. Organization structure also lays down the pattern of communication and coordination within organization.

Elements affecting organizational structure

Organizational structure choice and success is largely affected by (Van Vulpen, 2023):

Goals and the strategy of the organization: Probably the most important influencing factor of organizational structure and design. As stated by Peter Drucker, structure is only a tool to achieve short and long-term goals of organization, because “Organization is not an end itself, but a means to end of business performances and results. Organization structure is an indispensable means; and the wrong structure will seriously impair business performance and may even destroy it. Organization structure must be designed so as to make possible the attainment of the objectives of the business for five, ten, fifteen years hence.” Consequently, if top management makes a significant change in its strategy, the structure will need to be modified to accommodate and support such change.

Environment: Beyond the boundaries of organization as a system, there exists external environment which includes economic, social, cultural, political, legal and technological factors which directly or indirectly affect the functioning of the organization. Environment affects not only the formation and functioning of the organization but also its structure. The structure of the organization is to be designed in view of changes likely to take place in environment. In a rapidly-changing environment, the organization has to design for more flexibility, or adaptability, while in a stable environment, the organization can optimize for efficiency.

Technology: Technological aspect in organization usually refers to the manner in which various activities will be performed, and is an important part of organizational structure. As the activities are related to objectives, they are also related to technology and the type of technology being used in the organization for performing different activities affects the structure of the organization directly and indirectly. For example, information technology (IT) can be a key enabler for decision-making and the state of IT impacts organizational design form highly hierarchical organizational structures where only top management has access to all the relevant information to more democratic organizational systems where decision-making on all levels is facilitated by availability of systemized information

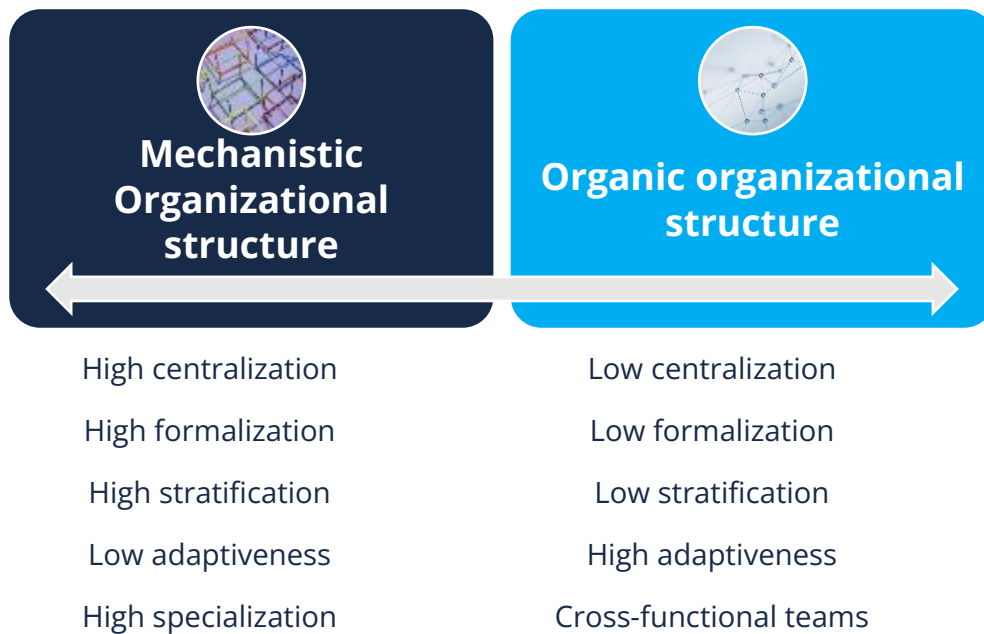
Organization size: Size of organization can be determined by the number of persons employed, amount of capital invested, volume of turnover, and/or physical capacity. However, in considering organizational structure, 'size' has generally been used to refer to the number of employees or members of an organization. An increase in size of the organization directly influences its structure. It naturally becomes more complex or complicated, some jobs split, while others can group and often new layers of supervision are implemented between the top executive and other employees. In such situations, organization is often forced to realign duties and responsibilities and sometimes also to add new integrating units.

Mechanistic vs. organic organizational structures

In order to begin with familiarization with most important types of organizational structures and their characteristics in theory and practice, first the explanation and comparison of mechanistic and organic organizational structures will be provided. They are chosen as a representation of opposite ends of a continuum of organizational structure possibilities and represent pure types not necessarily found in real life (Lunenburg, 2012). Still, understanding these "ideal types" will contribute to the recognition and identification of key elements of other organizational structures.

Figure 6.2

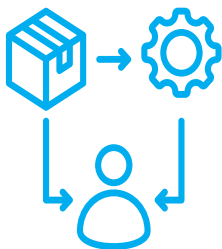


Comparison of mechanistic and organic organizational structure

Adapted from Lunenburg, 2012

The mechanistic structure represents “classical” traditional form of organizational structure that has a rigid structure, centralized decision-making, greater formality, and standardized control systems. Mechanistic organizational structural stresses on centralization of management authority. It provides centralized power to the top-level management in terms of decision-making, as well as information.

Some of the key characteristics of a mechanistic structure include:



- Views an organization as a machine that converts the input into output with certain processes.
- Assumes organizations operate in stable, simple, and predictable environments.
- Focus on increasing efficiency through specialization and standardization of work.
- Formal hierarchy of authority.
- It assumes that there can be one best way of doing jobs and solving each problem with greater uniformity.

Mechanistic organizational structure seems outdated in terms of adaptability to new challenges as well as responding to the interests and motivation of modern employees especially regarding

lack of individual approach, flexibility and empowerment. Still, it provides a clear hierarchy of authority, clear path for communication and precise definition of workplaces and responsibilities, which can be less stressful for employees and more oriented on improving their efficiency and in-depth specialization in assigned tasks.

On the other hand, organic organizational structure stresses on decentralization of management authority. This structure is more flexible, less formal, flatter, less hierarchal, and [more decentralized](#). The communication flows horizontally and employees are given autonomy to make decisions at their work levels. It means the employees also have an opportunity to participate in decision making and the development with their unique and innovative ideas. The organic structure developers assume that a rigid structure and more formality does not well work in a dynamic environment and the best way to do tasks in a modern business setting is by being flexible enough to adapt to the changes.

Characteristics of organic structure include:

- Assumption that human interactions in the workplace are important to satisfy employees.
- Situational changes are acceptable and can be managed effectively
- Jobs are designed to empower employees
- The structure is lean, flat, and less hierarchal

Organic organizational structure enables employees to focus more on problem-solving than on rigid efficiency of their work. Rather than relying on procedures, responsibilities and properly hierarchically placed people, it focuses on utilizing two key ingredients: people and knowledge. Employees are entitled to perform their specific jobs individually, but team work is needed for facing the unpredictable challenges and situations where there is no prescribed procedure nor official responsible person to assign.

While it is abundant with qualities and very appropriate for modern business, organic organizational structure can suffer from lack of clear line of decision-making and communication issues, if employees are not expert enough to deal with challenging situations and adapt to the changing environment. Also, on the outside, organic organizational structure sometimes can seem as not “serious” enough, especially in corporate setting.

Most common types of organizational structures



In this part of the chapter, some of the most common types of organizational structures will be presented, along with their main characteristics and positive and negative sides in terms of achieving goals of organization as well as employee's satisfaction. While reading on different organizational types it is important to keep in mind that particular core activities, business setting, environment and, in the greatest part, strategy and goal of particular organization impact the choice and overall success of particular organizational structure. Also, presented types represent "ideals" and in practice various merged solutions are designed in order to meet specific needs of companies.

Functional organizational structure

A functional structure of the organization groups people together who perform similar tasks. It is often known as a bureaucratic or centralized organizational structure, which divides a corporation into departments based on the specialization of its employees. Some examples of departments in a functional organization structure include a sales department, a marketing department, a production department, a human resources department, Research& Development, etc. This organizational structure is very common in large, as well as medium-size and even small organizations and it is best suited for companies that focus on single product or service (having single "production" functional department). Generally, all functional heads report directly to the top management.

Figure 6.3

Functional organizational structure



Adapted from Ionos, 2023

Functional organizational structure is one of the most widely used basis for organizing activities and is present in most of the enterprises, at some level in the organization structure (Wehrich & Koontz, 2005)

Having in mind it somewhat resembles to mechanistic organizational structure, **key advantages** of the functional organizational structure are (Wehrich & Koontz, 2005; Vaughan, 2022):

- Employees are **clearly informed** on their tasks and responsibilities and their required set of skills is limited which makes training and specialization easier as well as coordination within particular functions
- **Higher productivity levels** – if implemented properly and if the efficiency is regularly monitored, employees within a functional organization structure can perform to a high standard within their individual departments because they can carry out their tasks effectively, with little supervision from their superiors-Functions are very specific and employees working under same function are (ideally) part of a small and coherent team, therefore the **knowledge is easily passed** along by experienced managers to their team members, resulting in an enhanced skill set for all members involved

Still, functional organizational structure also has certain disadvantages, such as (Vaughan,2022):

- **Segregation** - Having departments populated by employees specializing in specific areas means members of different teams do not get the opportunity to meet face to face. This lack of communication and sharing of perspectives can be harmful for the progression of the business eventually.
- **Delay in decision-making** - With a lack of communication and coordination between separate departments, there can be major delays in the decision-making process when a dilemma requires the involvement of more than one specialist.
- **Conflict of interest** - Each department has different and sometimes conflicting targets, and these contradictions can often lead to disharmony and conflict within the company.
- **Decreased morale** - In the long run, employees tend to feel bored and lose morale when their work becomes monotonous. Furthermore, morale can be affected when management changes procedures and modifies the work environment without taking input from employees on the ground.
- **Narrow scope** – although, sometimes advantage, narrow scope can also be a potential problem: without experienced guidance and quality communication from managers, employees from individual departments may possess little knowledge of how their roles relate to the business's overall goals and objectives

Functional organizational structure works well in a stable environment without many strategic changes and updates, because it is not designed to change rapidly. Also, this form of structure is particularly effective where there is large volume of standardized product or sales; reduced level of change within the industry; large fixed asset base and minimal amount of entirely new product line introductions (Awa, 2016).

Divisional organizational structure

Divisional organizational structures, also known as “business area organizations” become relevant whenever a company grows and must be structured in a more differentiated way. The subdivision then usually takes place according to the following work areas:

- Products/services
- Target groups/markets
- Strategic business units
- Geography: Regions/sales areas

These structural elements, also known as “divisions,” each have separate functional areas, i.e., their own production, marketing, and sales departments. In other words, each division tends to adopt a functional structure. However, functions may vary across divisions in accordance to their product line or some other criteria for division.

Figure 6.4

Divisional: product organizational structure



Source: https://mybsclassxii.blogspot.com/2009/08/types-of-organizational-structure_15.html

Similar to product organizational structures are divisional structures based on geographical area, more precisely sales regions of the company.

Figure 6.5

Divisional geographic organizational structure



Adapted from Ionos, 2023

In this **highly adaptable structure**, each department can concentrate on its respective field of activity and thus work faster, more strategically, and in a more coordinated fashion. The resulting autonomy leads to **greater employee motivation**. At the same time, the more differentiated allocation makes it possible to make individual business activities more transparent and to measure and **evaluate their performance precisely**.

The fact that divisional structures are more differentiated and therefore require more specialized managers is one of the reasons why implementation is associated with higher costs and **greater coordination effort**. If the individual departments work autonomously or if they are far apart geographically, there is also the threat of divisional selfishness and the duplication of business activities. In the worst case, this can lead to a discrepancy between the goals of the divisions and the actual core goals of the company.

Table 6.1

Main advantages and disadvantages of divisional organizational structure

Advantages	Disadvantages
Faster reaction to unstable environment	Fewer economies of scale
High coordination across functions	Poor coordination across product lines or regions
Adaptable to differences in products, regions, clients	Reduced specialization
Decentralized decision-making	Harder to integrate across divisions

Adapted from Bauer, & Erdogan, 2015

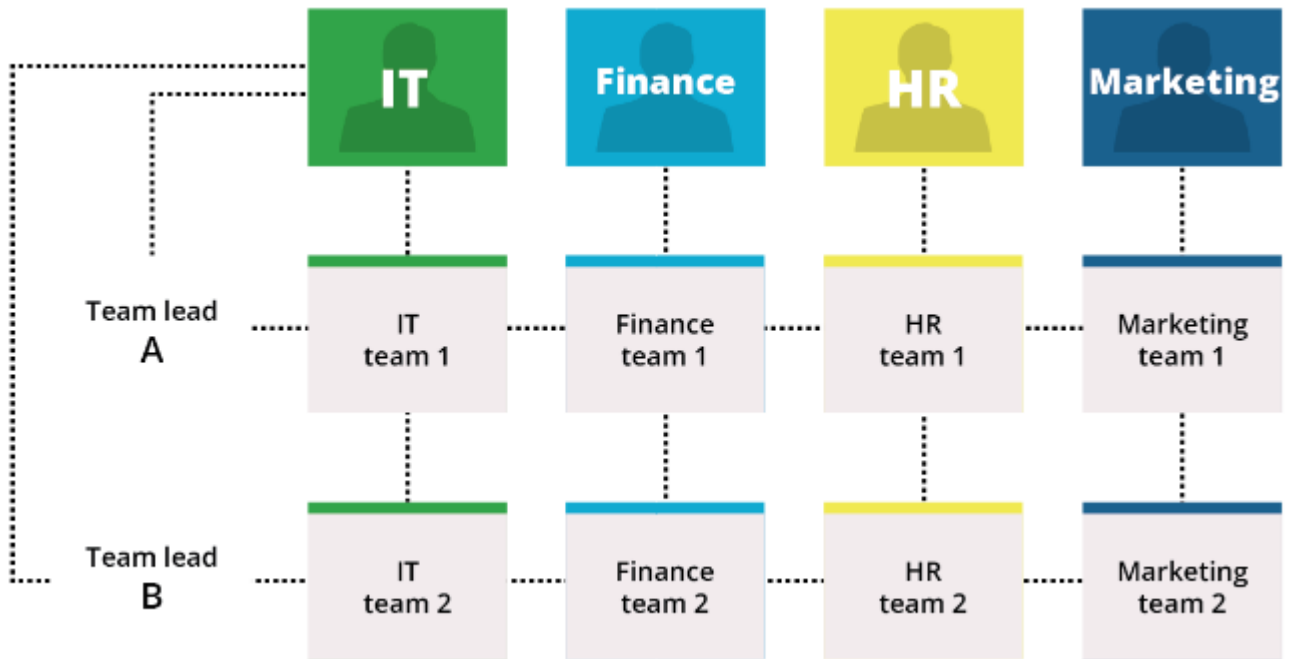
Divisional structures of management are more intended for use at the large diversified enterprises, usually those that offer a wide range of specialized products and services for various sales markets. A subdivision according to regions is particularly suitable for internationally active companies. In these cases, decision-making is usually decentralized.

Matrix organizational structure

Matrix organizational structure is part of the hierarchical, centralized organizational structures, but it is not among classic ones, such as functional and divisional organizational structures. It is an attempt to combine the advantages of the pure functional structure and the product organizational structure. Matrix implies dual or multiple managerial accountability and responsibility. In a matrix there are usually two chains of command, one along functional line and the other along project, product, or client lines.

Figure 6.6

Overview of matrix organizational structure



Adapted from Asana, 2024

In terms of operational functioning, in matrix organization employees are reporting to a department manager, similarly to a traditional functional organizational structure. For example, team members working in marketing report to the marketing department manager, HR employees to HR head, etc. Heads of functional departments report directly to CEO/top management of the organization. Apart from having departmental manager, each employee also reports to manager/team lead of the project or products he is assigned to. Each project or product (horizontal line of reporting in the organizational structure) has assigned members from different departments like IT, marketing, and finance, which is why having a separate manager for individual projects/ products makes sense.

The project environment and functional environment cannot be separated; they must interact. Depending on the balance between departmental manager and project/product manager, there are three types of matrix organizational structure, visible in Figure X.

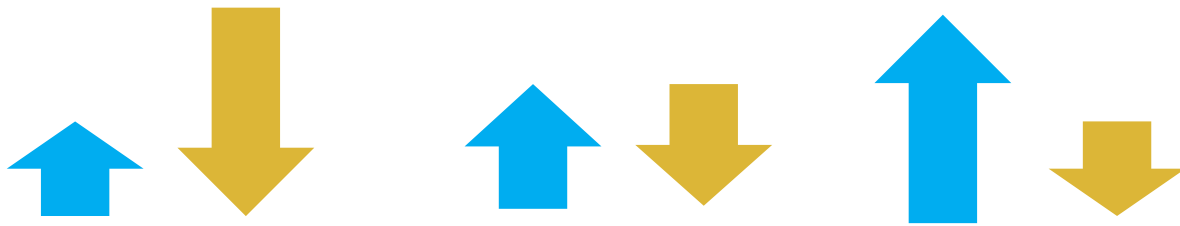
Figure 6.7

Types of matrix organizational structure

Weak matrix

Balanced matrix

Strong matrix



The functional manager supervises all project management areas. They are the highest authority in the project's decision-making process.

The project manager has more authority in a balanced matrix organization than in a weak matrix organization- equal do functional manager

The project manager shares equal or more power than a functional manager.

Adapted using information from Kerzner, 2009

In a situation of a **weak matrix**, the project/product manager has the least amount of decision-making power compared to the other matrix management types. When the project manager has limited authority over the project, the matrix becomes weak because the project budget and timeline much lies in the hands of the department head.

In a **balanced matrix**, the department head and the project manager have equal authority and team members report to both of them. This keeps communication open between everyone in leadership roles and allows the project to move forward smoothly.

In a **strong matrix**, the project manager has most of the decision-making power over the project, while the department head has more limited authority. This creates a strong organizational structure because the project manager has full ownership over the project. The department head can oversee the project but doesn't make key decisions.

Table 6.2

Advantages and disadvantages of matrix organizational structure

Advantages	Disadvantages

Fosters interdepartmental Communication and collaboration	Potentially unclear integration of managerial and team roles and need for systemized conflict guidance
Contributes to the development of new skills	Complex reporting style and slow(er) decision making process
Managers and Team Members Retain Their Functional Roles	Potential power struggles and need for juggling priorities – can lead to work overload
Efficient use of resources	

Adapted based on Kerzner, 2009

In terms of the [advantages of matrix organizational structure](#), it is important to notice that dual nature of the workplaces enables employees to parallelly communicate and collaborate with their departmental colleagues with similar expertise and tasks, but also with employees of other departments where they can achieve synergy in solving problems and jointly perform tasks for the purposes of joint product/project they are assigned on. This fosters development of new skills as well as improving existing ones, along with efficient use of individual talents and strengths across the organization's different projects or products. Also, employees are given chance to participate in different projects/products development, while retaining their functional positions in the organization.

Disadvantages of matrix organizational structure arise from its unique “dual-bosses” feature which can make reporting quite complex and roles and responsibilities somewhat confusing, in case of lack of quality communication flows between functional manager, project/product managers and top management. Also, it can happen that in certain periods of time there is a great need for additional efforts on performing particular project, while at the same time also additional workload regarding function-.related activities of employees. This constant juggling of priorities can lead to work overload as well as additional amount of stress among employees, even leading to potential burn-out. On the other hand, extensive number of tasks and responsibilities for a single employee is not uncommon in other types of organizational structures either.

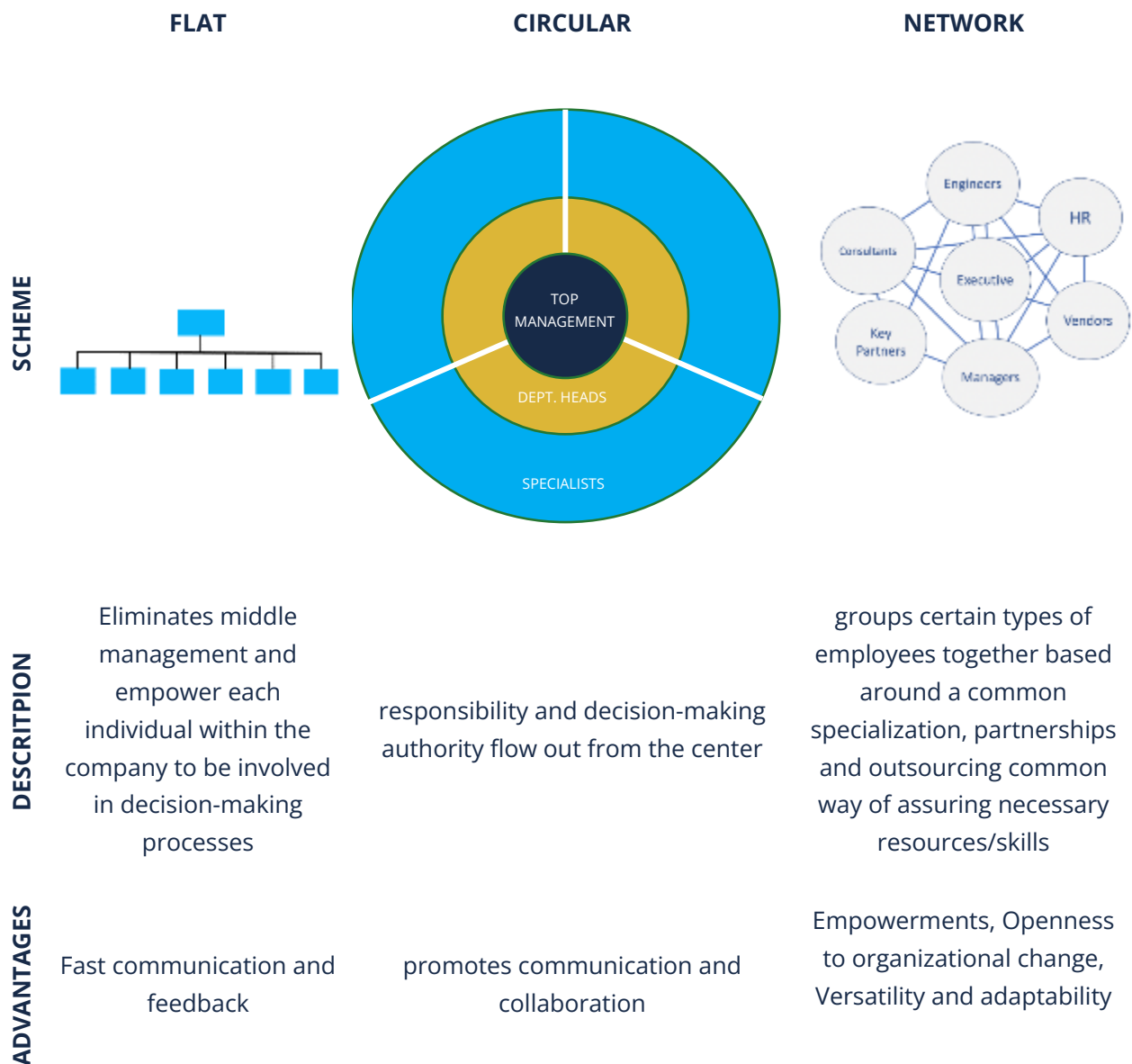
Depending on the quality of communication and the type of matrix organizational structure, issues with power distribution and decision making between two responsible managers can vary from minor misunderstandings to extremely difficult situations and overall inefficiency on organizational level.

Flat, circular and network organizational structures

Flat, circular and network organizational structures represent modern organic-based types of organizational structures, highly adaptable to changes in the environment.

Figure 6.8

Representations and key characteristics of flat, circular and network organizational structures



DISADVANTAGES

Challenges in terms of more personal relationship between workers and managers, difficult to maintain as companies

confusing, especially for new employees, because there is no clear chain of command

Fits only for specific core activities of organizations, relatively weak leadership, potentially unbalanced workloads:

Source: work of authors, based on information from
<https://www.forbes.com/advisor/business/organizational-structure/>

Choice of organizational structure should rely upon understanding the strategy, mission and objectives of the organization and understanding key characteristics, advantages and disadvantages of each organizational structure type. Once decided, choice of organizational structure can be changed, but it is important that before such decision all structural implications and influences on the effectiveness of organization's overall performance are carefully examined.

Unit 4 Quiz on theoretical elements of UNIT 3

Lumi file: M6L1_Unit 4 Quiz on theoretical elements of UNIT 3 (The following text is embedded in the Lumi File.)

1. Low centralization, low formalization, low stratification and high adaptiveness are characteristics of:
 - a) Organic organizational structure
 - b) Divisional organizational structure
 - c) Functional organizational structure
 - d) Matrix organizational structure
 - e) Mechanistic organizational structure
2. Which type of organizational structure from the list is most often present in small family business?
 - a) Functional organizational structure
 - b) Divisional organizational structure
 - c) Circular organizational structure
 - d) Flat organizational structure
3. Weak, balanced and strong are sub-types of which organizational structure?
 - a) Functional organizational structure
 - b) Divisional organizational structure



- c) Matrix
- d) Circular organizational structure
- 4. Which of the following organizational structures has “two bosses” rule?
 - a) Organic organizational structure
 - b) Divisional organizational structure
 - c) Functional organizational structure
 - d) Circular organizational structure
 - e) Matrix organizational structure

Unit 5 - Theoretical chapter: Projectized organizational structure: definition and types

Concept of projectization

In the introduction to this lesson was described term “projectification”, but in the core of the concept of “projectized organizational structure” is similar but not the same term of **projectization**.

In line with the discussion initiated by Kuura (2020), projectification is much wider concept and it encompasses different organizational changes needed for the alignment and harmonization of projects’ objectives with organizations’ strategy. On the other hand, **projectization refers to the degree of organizing activities through projects and the (level of) projectization indicates the extent to which a business is based on projects and the project way of working pervades (Müller, 2009)**. Therefore, it can be argued that projectification embraces projectization as a higher-order concept.

Projectized organizations

In projectized (or project-based) organizations, projects are at the heart of the structure and teams are organized around projects and dedicated solely to the project, ensuring a clear focus on project objectives (Priyanka, 2023).

While the extensive usage of project principles and one of the first implementation of project management offices (see Leeson 3) is within military industry, heavily projectized organizations are commonly found in the following industries (Priyanka, 2023):

- ✓ **Construction:** In the construction industry, each project must follow certain principles but is unique and complex, making the projectized structure ideal.
- ✓ **Software Development:** Software development projects vary in scope, and this structure allows for quick adaptability to meet project requirements.
- ✓ **Consulting:** Consulting firms often adopt the projectized structure to align teams with client projects.

- ✓ **Entertainment:** In the film and entertainment industry, each production is essentially a project with dedicated teams.

In all of these industries, project work is the primary function and adaptability and rapid decision-making are essential.

Besides the aforementioned, many other industries and sectors also (at least partially) embraces project management and make significant steps towards projectization.

Projectized organizational structures

Projectization enforced in the terms of organizational change positively impacts the process of how resources are allocated to projects and how much influence will project manager have within the organization.



Project based organization structures are those in which an organization's individuals and departments are structured around projects

The decision on type of the organizational structure most suitable to support project-oriented management within the organization, depends on different factors. The form of the structure will define the relationships among the members of the project, the relationships with other projects, or even with the external environment. It will also define the authority, where each member of the project is located, and the lines of communication, supervision, coordination and collaboration among its members.

Table 6.3

Main factors affecting the form of a project organizational structure

Factor	Description
Division of labor	Labour should be divided among departments to ensure specialization. Dividing labour into distinct tasks and coordinating these tasks will define the structure of an organization
Background and experience	Previous experience with project organizational forms

Interdependence and interactive management	The number of systems and subsystems that integrate the project, the different methodological and philosophical assumptions across these systems, the cross-organizational and schedule interdependencies between activities.
Concurrent Engineering	Concurrent Engineering breaks down functional and departmental barriers by integrating team members with different discipline backgrounds often known as cross-functional teams
Authority, responsibility, and leadership	Authority, responsibility, and leadership should correspond with responsibility. Vision, strategy, and a cohesive team are also considered key factors
Unity of command	It should be clear who the upper-level managers are with a well-established line of commands. Every member of the project must also know what his obligations are
Personnel	Good selection of personnel with adequate skills and talents, which can lead to objectives accomplishment
Stakeholders	The number of project participants and how the information flows between them can affect the form of the structure
Spans of control	Work processes and systems should be efficient and effective with adequate levels of control
Flexibility	Structures should be flexible and dynamic with the ability to adapt to changing conditions of the external environment
Culture values	Loyalty of workers and commitment to the project
Other factors	Project size and duration, environment and territory, technology

Adapted from San Cristobal et al., 2018

Extant literature and insights from practice differ three common organizational structures for projectized organizations: **functional, project, and matrix organizational structure**. Usage of each of these structures depends on the preferable size, authority division, reporting style, etc. and it is important also to choose and adjust the organizational structure taking project(s) needs into account. Due to the uniqueness of each project, different organizational approaches

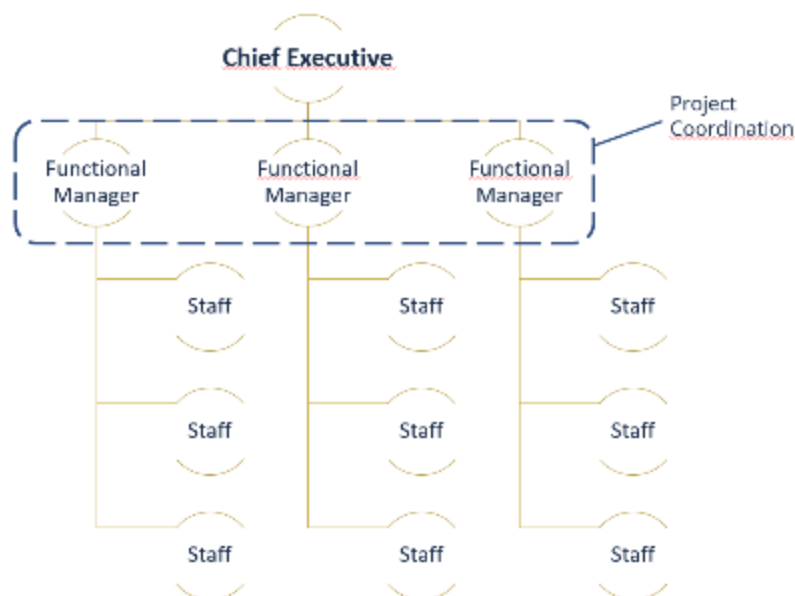
are needed and there is no way of saying that there is only one fit-for-all in terms of structures to be employed for projectizing organization.

Functional project organizational structure

In a functional organization structure, the project manager and all the resources work in the same company division, such as the sales and marketing department. Generally, the functional manager has more authority than the project manager and various temporary teams coexist with a stable hierarchical form. Project managers can be located on various organizational levels and there is no clear subordination. Organizational hierarchy is replaced by heterarchy, a situation where there are numerous temporary authority centers on different levels of the organization and they can change as tasks are completed.

Figure 6.9

Presentation of project coordination within functional organizational structure



Source: Project Management Institute, 2013, p 22

This type of structure is not suitable for projects that require a diverse mix of people with different expertise, however it works well for small projects that require a great deal of technical expertise (San Cristobal et al., 2018).

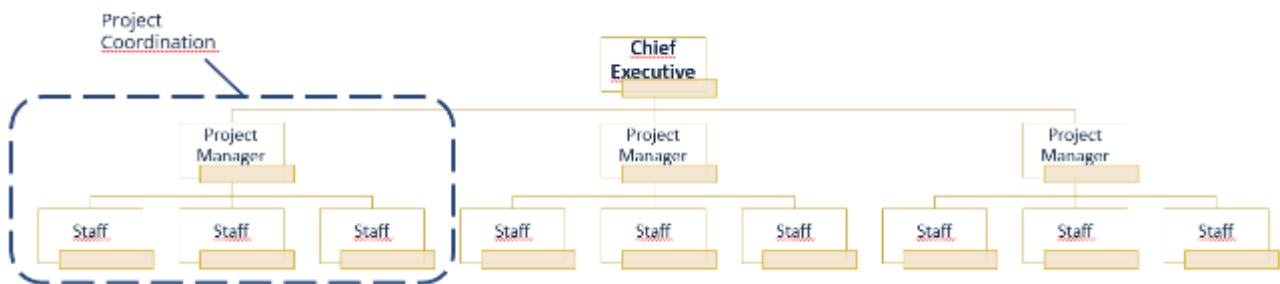
Pure project organizational structure

In this type of structure project managers have a high level of authority which affords them strong project control but also the full responsibility for the performance of the project (San Cristobal, et al, 2018). Personnel are specifically assigned to the project and departmentalized

by task similarity, usually on an exclusive or full-time basis developing a strong sense of project identification and a good understanding of the project goals. Pure project-based structures are more common in large organizations that realize huge valuable and long-term projects and that can absorb the cost of maintain this type of structure.

Figure 6.10

Typical pure project structure



Adapted from Project Management Institute, 2013, p 22

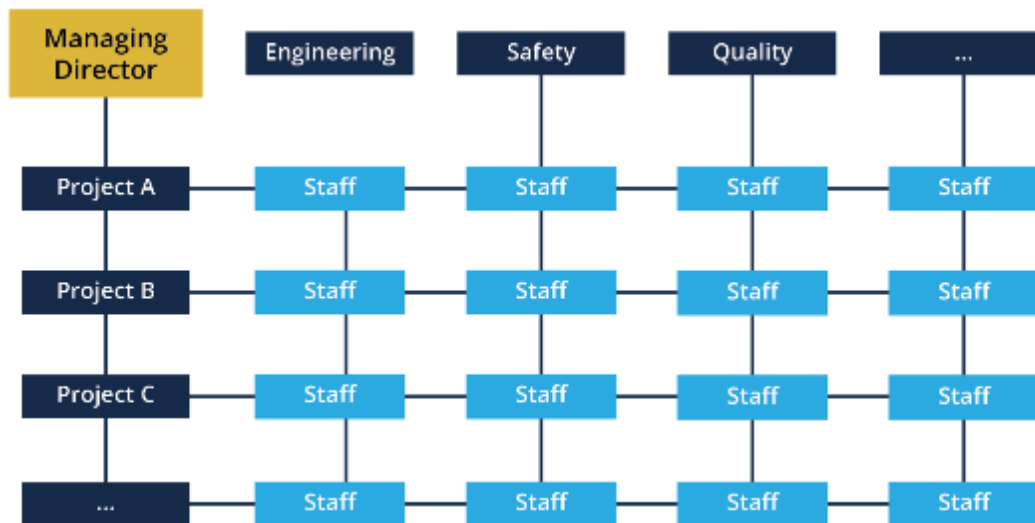
In pure project organizational structure dedicated teams are put together to work on projects. Examples of this would include large construction builds, but also corporate initiatives that require a dedicated team. The project manager has ultimate authority, reporting to the project sponsor and the project board. The individuals on the team work directly for the project manager.

Project matrix organizational structure

The matrix organizational structure is already described in previous unit of this lesson. The difference is that here the second line of hierarchy is related to the projects and project manager is authority along with functional manager (not the product nor product manager).

As mentioned before, in this type of structure there are several functional areas that set up along the horizontal axis and several projects along the vertical axis that use the resources from the functional areas in order to complete project activities. It is usually used in large organizations which exist in a complex and dynamic environment or in a global market and in highly innovative organizations connected with advanced technologies data and information and sophisticated knowledge, where the results of the projects are completely new products or technologies.

Figure 6.11

Matrix project organizational structure

Adapted from San Cristobal et al., 2018

In this type of organizational structure, project managers share responsibility with program unit managers and must work closely with other team members, sometimes competing for the same resources. Thus, a high level of communication and cooperation is required between programmatic unit managers and project managers. As described in previous unit, matrix organizational structure has 3 sub-types, based on the authority of project manager vs. functional manager: weak, balanced and strong matrix.

After description of each type of projectized organizational structure, systematic overview of project manager's authority, resource availability, control over project budget, project manager's role and project management administrative staff in each of those structures is given in Table X.

Table 6.4

Overall systematization and comparison of three common projectized organizational structures

		Org. structure				
		Functional	Matrix			Pure project
			weak	balanced	strong	
Project characteristics	Project Manager's authority	Little or none	Limited	Low to moderate	Moderate to high	High to almost total
	Resource availability	Little or none	Limited	Low to moderate	Moderate to high	High to almost total
	Control over project budget	Functional manager	Functional manager	Mixed	Project manager	Project manager
	Project manager's role	Part-time	Part-time	Full-time	Full-time	Full-time
	Project Management Administrative Staff	Part-time	Part-time	Part-time	Full-time	Full-time

Adapted from Project Management Institute, 2013, p 22 Table 2

There is no ideal structure and each form has its benefits and drawbacks. In complex projects, the performance of certain tasks may require composite memberships creating overlapping and shared responsibilities as well as dual roles, making both the project and the functional organizational structure inadequate for handling this type of problems. The matrix organization form, for example, enables good disciplinary work together with project integration and focus, but it involves conflict and fuzzy authority definitions. It is something like a compromise between functional and project organization and it is not as staff demanding as the projectized organization



Projectized organization has its particular strengths and weaknesses, and each type of organizational structure design to perform it has certain advantages and disadvantages, which is the topic of the following lesson.

Lesson 2: Strengths and Weaknesses of a Projectized Organization

Unit 1 Introduction

As described in Lesson 1, projectized organizations have certain key features that differ them from other organizations and give them competitive advantages. Firstly, they are project-centric, meaning that core function of their activities are projects. Team members are fully committed to the projects they participate in and the organizational structure of such organizations should enable quick decision-making and adaptation to the dynamic environment of numerous and diverse projects.

Along with understanding of the general strengths and weaknesses of projectized approach to organizational design, it is important to understand also specific advantages and disadvantages of three most often used project organizational structures described in the last part of the lesson 1. Therefore, this lesson will encompass also comparison of those advantages and disadvantages and presentation of results of the research on the well-being of employees in projectized organizations. All the knowledge related to the projectized organizations and their structures will be further developed and tested on the scenario-based activity for learners which is also the final unit of this short lesson.

Unit 2 Activity – Quiz – Multiple-choice question

Lumi file: M6_L2_Unit 2 Multiple choice question (The following text is embedded in the Lumi File.)

Can you identify one project organizational structure that is best fit for all organizations aiming to projectize their business?

- a) Yes, it is a functional project organizational structure
- b) Yes, it is a matrix project organizational structure
- c) Yes, it is pure project organizational structure
- d) No, each organizational structure has its own advantages and disadvantages



Unit 3 Theoretical chapter - Elaborating main strengths and weaknesses of projectized organizational structures - ppt format

Slide 1

Even though projectized organization has many advantages, it can also decrease efficiency of organization, due to the following factors (Priyanka, 2023):

1. **Resource Overallocation:** Team members may be overworked if they work on multiple projects simultaneously.
2. **Limited Functional Expertise:** Functional expertise might be neglected in favor of project work.
3. **High Operational Costs:** Dedicated teams can result in higher operational costs.

Slide 2

Therefore, is projectized organizational structure necessary and improvement for every organization?

NO:

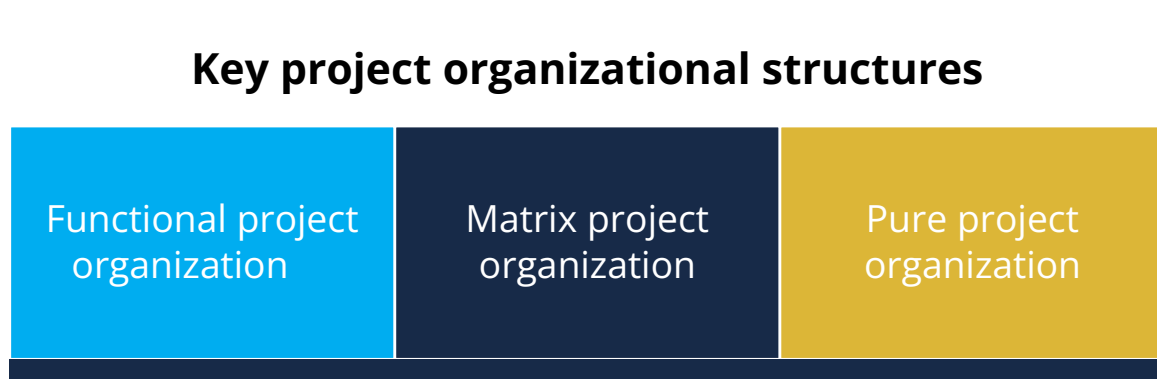
If your organization predominantly deals with routine tasks or values functional expertise over projects, a different organizational structure may be more suitable!



Slide 3

Figure 6.12

Key project organizational structures



Slide 4

Table 6.5

Advantages of each project organizational structure

Advantages of each project organizational structure		
Functional project organization	Matrix project organization	Pure project organization
-No need to negotiate and compete with other areas for resources. -Team members are familiar with each other -quick mechanism of getting all members together to resolve problems related to the project	- Efficient allocations of specialists -Employees can change from one unit to another without making the change permanent - Effective information flow -Strong project coordination and better control.	-The project manager maintains authority over the entire project, which -Strong project control and sense of identification -Centralized lines of communication

Adapted from San Cristobal, 2018; Kerzner, 2009

Slide 5

Table 6.6*Disadvantages of each project organizational structure*

Disadvantages of each project organizational structure		
Functional project organization	Matrix project organization	Pure project organization
-Program areas may not have all of the specialists needed to work on the project	-High administrative costs -Shared authority between line managers and project managers may be cause -conflict	-Costly and inefficient use of resources: several resources may be duplicated on different projects



-Team members may have other responsibilities (if they are not full-time on the project) -Team members might be more loyal to their department than to their work on the project	-Reporting relations may be complex.	-Limited opportunities for knowledge sharing and professional growth (one project at a time)

Slide 6

Specific issues with reporting on a large number of projects

In situations when organizational structure foresees that all functional or project managers report only to one general manager:

As companies grow in size and the number of projects, the general manager will find it increasingly difficult to act as the focal point for all projects

Slide 7

Example

Based on Kerzner, 2009:

Company X currently has 15 projects going on at once. There are three projects over 5 million EUR, seven are between 1 and 3 million EUR, and five projects are under 700,000 EUR. Each project has a full-time project manager, but there is only one general manager (GM) they all have to report to.

Slide 8

Example (2)

Potential solution: Creation of deputy director of project management in charge of all projects under 1 million EUR. While all projects over that amount are still reported directly to GM, all seven of smaller projects report to deputy director.

Slide 9

Example (3)

Potential new challenge: projects with smaller budgets can also have shorter total duration and can be without any flexibility in time, cost and performance. Therefore, overseeing those projects can sometimes demand more experience and skills, therefore also potentially more attention from GM

LESSON LEARNED: projects need to be analyzed case-by-case rather than categorizing based on simple elements such as budget

Unit 4 Activity: Drag & drop quiz

Lumi file M6_L2_Unit 4 Drag & drop quiz (The following text is embedded in the Lumi File)

When having a small start-up company with very limited number of experienced employees capable of managing projects, you probably would not choose to immediately create _____.

Authority over entire project situated in the hands of the project manager and the strong control over projects are characteristics of: _____

High operational costs are potential _____ in projectized organizations.

_____ is project organizational structure with most complex reporting relations.

Team members who know each other is one of the _____ of functional project organizational structure.

Words to drag:

-Pure project organizational structure

-projectized organization

Disadvantage

Advantage

- matrix project organizational structure

Unit 5 Theoretical chapter: presentation of the results of the research on well-being and work satisfaction of employees in projectized organizations

Slide 1

Introduction

This chapter is entirely based on the research study of Alvi Usman on the effect of psychological wellbeing on employee job performance where he compared psychological well-being of employees working in projectized and those working in non-projectized organizations. The study is published in Journal of Entrepreneurship & Organization Management in 2017.

Slide 2



Psychological wellbeing =state of mental health

Six dimensions of psychological wellbeing:

- self-acceptance,
- purpose in life
- environmental mastery
- positive relations with others
- autonomy and
- personal growth.

Slide 3

Studies conducted so far linked psychological wellbeing with organizational outcomes such as creativity, innovation, engagement in job, sense of accomplishment, etc.

But is there a link with job performance and does it make difference if employees work in projectized or non-projectized organizations?

YES !

Some research implies that there is significant bivariate correlation between psychological wellbeing and job performance ratings

According to Wright (2010), 25% of the variance in job performance is related to changes in psychological wellbeing!

Slide 4

Project based organization structures =those in which an organization's individuals and departments are structured around each specific project

In non-projectized organizations an owner or manager manages numerous different department heads, each of whom manages one department in which a particular role is executed.

Slide 5

Presumed benefits of projectized organizational structures

- benefit of using project management techniques and tools in order to cut costs and time working on projects can raise the awareness level of organization's employees project effort could be perceived as higher in reward and having advanced level of psychological wellbeing as compare to the non-projectized organizational structure

Slide 6

Research questions:

Does the psychological wellbeing affect the employee job performance in the organizations?

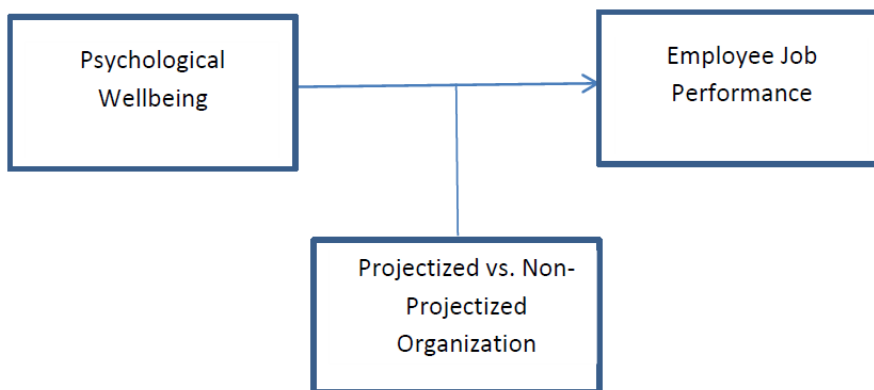
Does the psychological wellbeing effect upon employee job performance; is it higher in projectized organizations as compare to non-projectized organizations?

Does the psychological wellbeing and employee job performance vary among the employees of projectized and non-projectized organizations?

Slide 6

Figure 6.13

Research model



Slide 7

The respondents of this study and the procedure

- Questionnaire distributed to the respondents
- Respondents: employees of 17 IT companies (both types of structures)
- various positions and departments
- 220 questionnaires were distributed
- Respondents self-assessed their psychological wellbeing while supervisors filled in the second part of questionnaire (job performance)

Slide 8

Results: key findings

- relationship between psychological wellbeing and job performance exists and is positively correlated

- there is no statistically significant difference in the strength of the relationships of psychological wellbeing and job performance with the change in their organizational structures.

Slide 9

Results: indirect findings

- employees perceive work on projects as awarding: accuracy of goals, development opportunities, self-importance in group accomplishments and cohesiveness

BUT

- Employees in projectized organizational structures (especially project managers) work intensely, and feel overworked and stressed.
- The dynamics of project work setting lead employees to uncertain future plans and unbalanced life-work
- Because of the temporary and changeable working environment in projectized organizations employees might feel uncertain and at risky

Unit 6 Activity: Scenario-based exercise

Learners should read the scenarios page by page and build their decisions based on previously-made choice, without "turning back" to change their initial choices.

Scenario:

Tourism board of region X got funding for large 5-years project for developing and implementing scheme for "sustainable host" certification of accommodation in for that area.

The main project results include:

- **development of criteria for certification of accommodation facilities, including separate criteria for ecological, economic and environmental elements**
- **Development of transparent calculation method including the minimum threshold and final score for each facility (based on the measuring and rating previously chosen elements)**
- **Implementation of trainings and educations for accommodation owners and managers in order to introduce them to the certification system and its benefits**
- **Implement process of evaluation based on the chosen criteria for at least 50 accommodation facilities, and award at least 20 of them with certificate of sustainable hosts**



Budget for this project covers all operational costs, as well as salaries for (in total) 7 people working on the project.

Existing organizational structure of tourism board is classic functional organizational structure including management board as top decision-making body, director of tourism board as CEO, functional departments including Marketing (3 employees and manager) Event organization (3 employees and Manager), New product development (2 employees and the manager) and Finance (3 employees and the manager).

The tourism board did not have any previous experience with managing projects and has no employees with such skills. Still, they are entitled (and are seriously rethinking) the possibility to change their existing organizational structure in order to adapt to the implementation of this strategic project.

Task 1. Which project organizational structure would you recommend for tourism board to implement?

Draw the organizational structure you are proposing, highlight employees who will be in charge of project implementation and think about how many people in that structure will be newly-hired (and in which positions) and how many of them would be existing employees of the board.

Continuation of the scenario:

Tourism board is deeply in the project implementation process and significant problem arised: employees in charge of training and education of accommodation owners are very dissatisfied with working conditions, communication and reporting process within the project, and they are thinking of leaving the project.

Task 2. What could be the response from the project manager and steps he could do to deal with this problem? Explain the proposed solution.

Continuation of the scenario:

The project is it its last stage of implementation and accommodation owners as one of the key stakeholders are not satisfied with the communication regarding the project results, they are not receiving enough information on the criteria of the certification scheme, benefits of involving in it and especially, they are lacking understanding of the methods of measuring and calculating the final score for their facilities.

Task 3. What can tourism board and/or project manager do in terms of organizational intervention, in order to contribute to the solving of this issue

Lesson 3: Creating a Project Management Office (PMO)

Unit 1 Introduction

Having in mind overall importance of organizational structure for success of every organization and with the focus on different organizational structures existing within business, public and civil sector organizations (see more in Lesson 2), developing efficient and effective project management office is an absolute must for all organizations with projects as part of their business process.

Definition, tasks and responsibilities of PMO are essential elements to understand the importance of PMO in modern businesses oriented on project approach and choosing appropriate PMO type is essential for ensuring long-term sustainability of implemented projects, as well as better coping with new challenges in the environment.

This lesson will be focused on delivering key concepts and terms related to the PMOs, accompanied by different examples and tasks for learners.

Unit 2 What is PMO

According to the unofficial estimates provided by the PMI nearly seven in ten organizations globally have a PMO, which underlines importance and benefits of appropriately designed and implemented PMO for successful business.

Definition



As defined by PMI, "PMO is an organizational structure that standardizes the project-related governance processes and facilitates the sharing of resources, methodologies, tools, and techniques." (PMI, 2013, p. 10).

As the oversight body for an organization's projects, PMOs have a broad scope and are usually staffed by people from many disciplines. The office typically comprises a mix of professionals from IT, planning, finance and risk management who collaborate to ensure that all projects meet the defined organizational outcomes (Shein, 2023).

It is important to notice that official PMI definition describes PMO as an organizational structure, in practice, it can be anything from group of people to the department within an organization, or even external organization. Whether internal or outsourced, PMOs should embody the organization's culture and strategy to be most effective.

Origin of PMO

The origins of the PMO can be linked to the implementation of the scientific management method, first introduced by Frederick Taylor, in combination with the significant increase in the number and complexity of projects managed by single organizations (Giraudo & Monaldi, 2015).

Some of the first examples of creating and using project office in developing and managing projects can be found in the U.S. military projects, more precisely in developing weapon systems. In the 1980s the project office concept was exported to construction, followed by IT sector and around ten years later, professional project management associations and certifications made project management approach recognizable industry-wide (Giraudo & Monaldi, 2015).

Task and responsibilities of PMO

Modern literature and one of the most applied methodology for project management emphasize as a primary function of a PMO to support project managers in a variety of ways which may include, but are not limited to: (PMI, 2013, p. 11):

- ✓ *Managing shared resources across all projects administered by the PMO;*
- ✓ *Identifying and developing project management methodology, best practices, and standards;*
- ✓ *Coaching, mentoring, training, and oversight;*
- ✓ *Monitoring compliance with project management standards, policies, procedures, and templates by means of project audits;*
- ✓ *Developing and managing project policies, procedures, templates, and other shared documentation*
- ✓ *Coordinating communication across projects.*

Above listed elements, identified by PMI are in a significant level focused on PMO as entity generally responsible for guidance, documentation and metrics related to the practices surrounding the management and implementation of projects within the organization. Still, it is also possible for PMO to get involved in project-related tasks and follow up on project activities through completion.

The PMO might report on project activities, problems and requirements to executive management and serving as a strategic tool in keeping implementers and decision-makers moving toward consistent, business- or mission-focused goals and objectives. Still, the task and responsibilities of PMO significantly differ, based on the chosen type of PMO (see more in UNIT 4).



Figure 6.14*Key tasks of PMO depending on the management level*

Adapted from Monteiro et al. (2016)

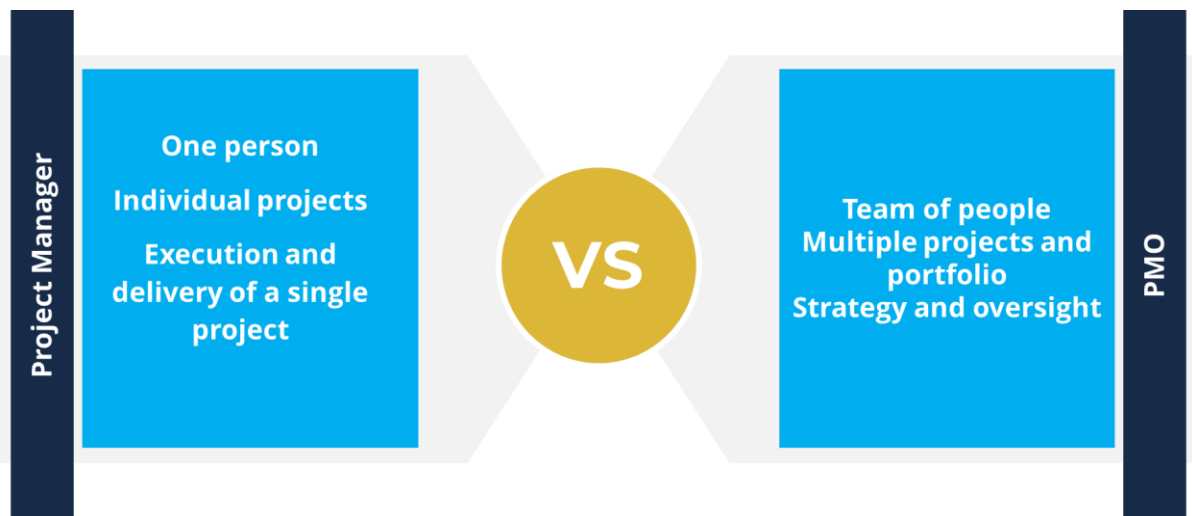
According to Monteiro and associates (2016) at an operational level, a PMO provides basic centralized support to individual projects and ensures professionalism and excellence in applying widely accepted principles and preferred project management practices to each project [15].

At a tactical level PMO services provide further added value through multi-project coordination and the management of cross-project dependencies. This may include resource integration across projects and ensuring that project management disciplines are adhered to.

Finally, the strategic PMO involves all aspects of an operational and tactical PMO and is also equipped with the authority to prioritize projects in relation to corporate objectives and strategies and advise senior management on the viability of project investments.

PMO vs PM

Some organizations choose not to have PMO, or to rely on one person, project manager, for all project-related coordination and procedures, but there are important differences between having PM or having PMO as part of the organization.

Figure 6.15*Difference between PM and PMO*

Adapted from Marks (2023)

PM is essential for the success of individual project and takes care of all the elements and challenges related to the single implemented project. While a project manager is assigned to a specific project they oversee from start to finish, a PMO continually engages with multiple project managers to ensure that every project is on track to meet its objectives. PMOs are continuously evaluating and allocating organizational resources. So, while a project manager will focus on making their project succeed, a PMO makes sure that all active projects succeed as a whole. (Project Management Academy, 2023).

In some organizations, due to the specific situations regarding new and complex project(s), there might be overlapping of these two functions in the case the organization decides to establish individual PMO for certain project (see more in Unit 3).

Based on the comparison of the key roles of PM and PMO it is visible that PMO ensures strategic overview of projects as well as possibility for capitalizing individual project experiences and practices into standardized tailor-made procedures for the particular organization. Moreover, careful choice of PMO employees also contributes to the wider set of available knowledge and skills for coordinating projects and making decisions on their development, timing, resourcing, etc.

Benefits of PMO

Having a PMO ensures that projects align with an organization's goals and add value. The office also acts as the central repository of different types of knowledge. For example, the PMO can

flag any similarities among projects and provide information and resources to different teams to facilitate completion -- and avoid having to reinvent the wheel (Shein, 2023).

Overall benefits of creating PMO include creation of the platform for standardizing methods and procedures within particular organization, achieving clarity and consistent project results through centralized approach, and (sometimes) decreasing project costs because the PMO is responsible for setting accurate time, cost and resource estimates, which reduces the number of project revisions. A PMO is typically tasked with identifying and training project managers and providing professional support. This produces staff who are better trained, which helps ensure project success and can lead to employee retention.

PMI's PMBOK 7th edition focuses on value delivery approach in terms of projects in general, but also in terms of PMO. According to them, effective PMOs should make three key contributions that support value delivery, as visible in Figure X.

Figure 6.16

Key contributions of PMO that support overall value delivery



Adapted from PMI (2021), p 213.

Same source (PMBOK 7th edition) elaborates on the key contributions of PMO in following manner (PMI, 2021):

1. Fostering delivery and outcomes-oriented capabilities – Task of the PMO is to ensure that employees, contractors, partners, etc., who are within and outside of the PMO, understand, develop, apply, and value a range of project management skills and competencies. They focus on right-sizing processes and governance, based on the unique characteristics of each project to produce high-quality results efficiently, quickly, and effectively.

2. Keeping the “big picture” perspective – PMO should constantly monitor projects, taking into account that scope creep and new priorities not aligned to strategic or business goals of the organization can allow projects to drift off course, Therefore, evaluating the work on projects in the context of the organization’s overall success, rather than maximizing a specific project’s results is one of the key tasks of strong PMO.
3. Continuous improvement, knowledge transfer, and change management – successful PMOs regularly share project results across the organization to transfer valuable knowledge gained from each project. Learning and sharing activities inform strategic and business objectives while improving activities that strengthen future project delivery. Effective organizational change management builds and sustains alignment with process updates, capability enhancements, and new skills that support project management (for more information on change management see Lesson 4).

Challenges in dealing with PMOs

Establishing and managing successful PMO is challenging process and there are different elements to be considered in creating PMO in terms of giving it an appropriate level of authority and support from top management, as well as clearly defining its areas of scope.

Some of the significant challenges in PMO management are following (Shein,2023):

- ✓ lack of communication between the PMO and team members;
- ✓ forming teams that lack the right skill sets;
- ✓ lack of visibility into a team's work; and
- ✓ failing to anticipate or adequately resolve team conflicts.

Having that in mind, it is essential to understand different types of PMOs and choosing appropriate one for the specific characteristics, nature of activities and the needs of each organization. In case the PMO already exists and there are limited or no possibilities for changing it, there are certain tips& tricks on how to deal with existing imperfections.

Louttit (2024) recommends following:

- ✓ Work with the system and make best of it!
- ✓ Generic project management methodologies, although rarely represent a perfect fit for any given project, also have important advantage:
- ✓ Their generic nature makes them quite flexible and provide certain level of control for project manager

In organizations where the PMO is ‘mature’, there are lots of very detailed procedures and processes that need to be followed. They might have a certain format regarding reports, project development, internal communication procedures etc. Complying with those procedures might create a bit of administration overhead, especially if you are parallelly implementing some

additional tools and techniques in order to ensure project quality and effectiveness of its results. In such cases, it is important to include all those efforts in project plans and to make sure all the stakeholders are aware of that administrative work- with emphasize on senior management. If the organization's senior management don't realize the cost of maintaining a large body of documentation and hefty administrative processes, they will keep adding to it!

Unit 3 Models of PMO's -ppt format

Choosing appropriate model of PMO is a key question for all organizations currently considering implementing a PMO, or redesigning an existing one.

Understanding PMO types and models of functioning facilitates the successful creation of PMO

Approach to the PMO types and their description

- Monteiro and associates identified 47 models in the literature review (Monteiro et al., 2016)!
- This presentation contains only most common PMO types, systematized and described in consistent manner
- All PMO types presented are potentially suitable for implementation in tourism-related project management

Why not having universal model of PMO?

- Each organization has quite different:
 - ✓ *environment the organization operates in as well as existing*
 - ✓ *internal organizational structure (see Lesson 1)*
 - ✓ *goals set for the organization as well as for the PMO*
 - ✓ *nature of work that needs to be done within the organization*
- PMO needs to be created in line with the specific needs of each organization

and deliver added value to its business and project activities!

- Therefore, tailor-made solution is necessary, having in mind characteristics of different types of PMO's

Criteria for differing PMO types

1. Level of control and influence on projects (supportive, controlling, directive PMO)
2. Position within organizational structure (project, departmental, or enterprise level PMO)
3. Mixed approach to differing PMO types (Gartner's 4 types of PMOs)
4. Project management Center of Excellence

5. Agile PMO – concept oriented on using agile principles and practices to help organizations manage their projects more effectively

1. PMO types based on the level of control and influence on projects (based on PMI,2023)

1.1 Supportive PMO: Consultative role to projects by supplying templates, access to information and lessons learned from other projects; more of a „project repository” with a low level of control provided

1.2. Controlling PMO: Provides support and requires compliance in terms of adoption of project management frameworks or methodologies, use of specific templates, forms and tools and conformance to governance frameworks

1.3. Directive PMO: Directly manages projects; project managers are assigned by and report to the PMO (highest level of control)

Supportive PMO

- Represents project support for when team members ask for more guidance (consultant role). Also used for helping to onboard and train staff, arrange shared templates and common analysis metrics.
- An effective supportive PMO is focused on constant evaluation of the needs of a project team and reinforcement of weak spots—whether it's granular knowledge or administrative support.

Controlling PMO

- Focused on ensuring that the organization's projects follow the approved standards and processes
- Has the authority to intervene in the project decision-making process, if necessary
- The objective for this type of PMO is to adopt project management frameworks or approaches and designate specific templates, forms and tools.
- It might conduct regular audits and require project teams to follow rigid processes- often considered as a „PMO police”
- In some industries controlling PMO is also in charge of ensuring that project team complies with regulatory and industry standards, not just internal project management procedures and frameworks

Directive PMO

- Directly runs projects - full control over aspects of projects
- Has a pool of highly trained and effective project managers, ready to be assigned to projects as they are commissioned since each of the project managers originates and

reports back to the directive PMO, it guarantees a high level of consistency of practice across all projects

- On organizational level has already developed common, standard and easily repeatable methodology for project processes

Table 6.7

Recommendations when to implement supporting, controlling and directing PMO

Degree of control over projects	Type of PMO	When to use	When to avoid
Low	Supportive PMO	when having capable and mature project teams that can be trusted to deliver the goods. PMO is for them source of additional insights and resources gleaned from other successful projects	if you have inexperienced project teams who need a heavier hand to guide them. Supportive PMOs exist primarily to fill gaps in mature teams that are stretched too thin.
Medium	Controlling PMO	In heavily regulated industries, such as finance or construction, where a failure to adhere to standards can lead to catastrophic results.	if you run projects that require innovation or have a constant need to pivot.
High	Directive PMO	For large organizations running standardized projects and having projectized organizational structure or strong matrix (See Lesson 1)	When you do not have available sufficient talent pool of project managers sitting within the office

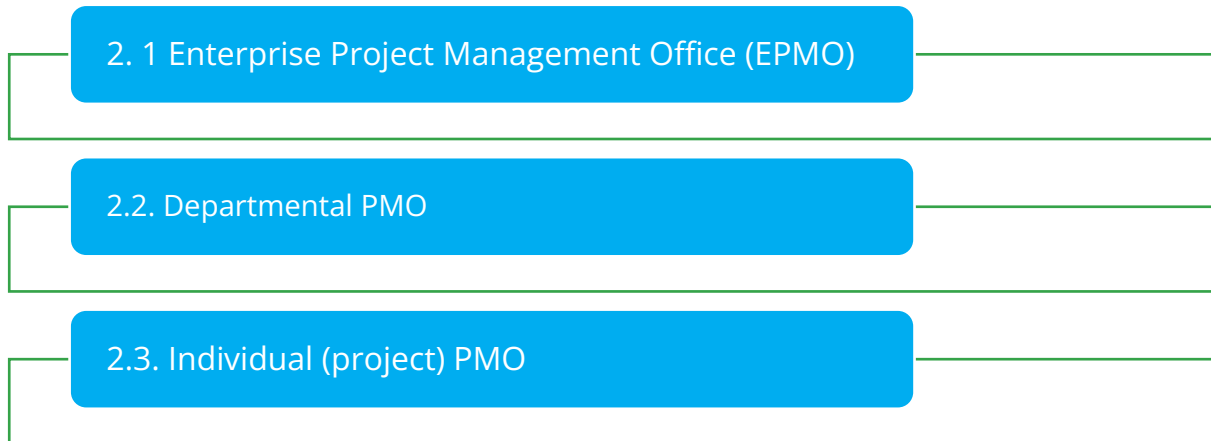
Adapted from PMI (2013)



2.Types of PMO based on the position within organizational structure

Figure 6.17

Types of PMO based on the position within organizational structure



2.1. Enterprise Project Management Office (EPMO)

- Creates standards, processes and delivery approaches to improve project performance across the organization
- The „go-to” authority for allocating resources to different projects
- Operates at the corporate level and ensures that the portfolio aligns with strategic priorities and that each project follows organizational standards
- Holds maximum strategic influence and ensure that projects are aligned objectives and priorities.
- EPMOs usually drive mission-critical initiatives, accelerate change across an organization and report to the highest levels of the organization
- Essential for success of the EPMO is quality coordination with organization’s top management

2.2. Departmental PMO

- Supports multiple projects at a department or business unit level
- Its primary role is to integrate initiatives of different sizes within same division, such as IT or finance— from small, short-term initiatives to multiyear programs with multiple resources and complex integration of technologies
- Supports departments while reporting to the department manager and/or to the enterprise PMO
- If implemented properly, PMO allows flexibility to match initiative complexity with individual skill sets and also amplifies knowledge-sharing and ensures alignment across all functions

2.3. Individual (project) PMO

- Designed to develop a framework for infrastructure, document management and training for a single complex project or program, individual PMOs set basic standards and oversee planning and control activities for a single project.
- Short lifespans because they are designed to support specific initiatives- sometimes lasting no more than a year or two. As a result, oversight needs to reflect that sharp focus
- Suitable for complex projects with unique structure and/or requirements where direct EPMO oversight doesn't make sense and departmental PMO does not appoint enough attention nor resources to follow the project implementation
- Less concerned about enforcing common tools and practices and consistent methods, more focused on specific characteristics of the project delivery

Table 6.8

When to use different types of PMO based on their position within organizational structure

Level of management	Type of PMO	When to use	When to avoid
Top	EPMO	When competing projects and priorities threaten organizational cohesion	Project teams that need day-to-day support are often better served by PMO models with a more granular focus. Beyond that, smaller and less mature companies often lack the talent and resources to justify investing in an EPMO.
Middle	Departmental PMO	A departmental PMO adds value when there's a need to ensure that all relevant projects stay within scope and on schedule— and that the teams are equipped with the resources and support they need	with a narrow focus, departmental PMOs won't provide value unless additional organizational structures are in place to help adequately connect it to other departments and initiatives—as well as to the C-suite.



Lower	Individual (project) PMO	When a particular project is so big, vital or unprecedented, it can benefit from added attention that a departmental PMO isn't suited to provide—	unless the project or initiative is an exception to the portfolio or enterprise norms, other PMOs are better suited because they retain an org-wide perspective.

Gartner's 4 types of PMOs

About Gartner

- Multinational advisory, consulting and research team
- Member of S&P 500
- Among top management consulting firm in 2023 (according to Forbes)
- According to Gartner:

*"There is no standard or template for determining the type of PMO project leaders should set up. The best type of PMO is one that is tailored to support organizational **needs at a level the organization can embrace and from which it can realize benefit.**"*

Types of PMO according to Gartner

- Gartner's classification of the types of PMO are based on the following aspects of PMO functioning (PM Vidya, 2024):
 - a) Degree of controlling/Enabling that a PMO can exercise
 - b) Broad view and Actions or the limited view and informing that a PMO can do



Figure 6.18*Graphical model of Gartner's PMO types*

Adapted from PM Vidya, 2024

Activist PMO

- Aims to make sure project delivery is always aligned with the organization's long-term mission
- Has a broad view and enabling approach as opposed to a controlling approach
- Supports decision makers by analyzing business cases for alignment and risk
- Does not so much direct the project themselves, but reviews all the project plans and business proposals in order to support the other main decision-makers in the project, like the project manager.
- Common in very large businesses and enterprises with many offices and distributed workforces.

Delivery PMO

- Gartner estimates that at least 40% of PMOs are mainly Delivery PMOs charged with planning and controlling the tactical execution of projects to business expectations.
- Project managers are empowered to oversee their projects, actively make decisions, and escalate issues as needed
- Delivery PMO strives to cultivate repeatable processes and methodologies that foster a results-driven culture within the organization

Compliance PMO

- Often established in companies without a mature project management methodology or consistent set of practices, guidelines and shared software and templates
- Compliance PMO tends to be tasked with establishing standard practices for measuring project performance and the development of a capability for understanding the status of key initiative

Centralized PMO

- Suitable for large organizations that demand very consistent business practices and standards.
- Also present in companies with delicate resource management concerns, especially when it comes to materials (e.g. construction industry) and large workforces but relatively small management teams
- Centralized PMO gathers key experienced and skilled managers along with representatives from the various project support organizations in order to together share their practices
- Formed as a place where new hires can be quickly brought up to speed on project activities

Additional PMO models: Project Management Center of Excellence and Agile PMO

Project Management Center of Excellence (PMCOE)

- Similar to EPMO in regards to the position within the organization- can even function within it as a working group
- Often comprising a collection of internal project experts who work to ensure that teams across the organization put those standards into practice.
- its primary focus is on strategic forecast planning and the establishment of corporate standards that include the effective use of a common project management methodology, processes, tools, templates, education, training, and project management competency
- 2 models for establishing PMCOE:
 - ✓ *result of the growth and expansion of a lower-stage PMO (usually the case in a small-to-medium sized organization)*
 - ✓ *established independent of any other existing PMOs, with the objective of providing strategic business guidance and direction to those subordinate PMOs (case in a large, global organizations)*

Agile PMO

- For understanding transformation from standard „traditional“ PMO to agile PMO it is important to understand key agile project management principles (lessons within Module 2 and Module 5 of HyPro4ST education)

How is Agile PMO different from the traditional PMO?

- focus on delivering value to customers rather than on following processes and procedures. More flexible and adaptable to change than a traditional PMO.
- More collaborative, working closely with project teams and stakeholders
- Agile PMO replaces “command and control” management style, with emphasis on self-organization and decentralized decision-making (empowerment)

Shift from traditional to agile PMO

- Shift from „traditional“ to agile PMO is usually accompanied with overall transformation towards agile project management on organizational level – agile PMO also becomes „training center“ for employees
- If it is most appropriate to strategic and tactical goals of the organization, traditional PMO can stay as a support for agile project management teams OR agile PMO can be valuable and complementary support for traditional project management teams
- When it agile PMO is not a right choice: if the project teams lack the necessary skills or resources to implement the agile methodology effectively

Unit 4 Quiz on choosing the appropriate PMO model depending on characteristics of different sectors and companies

Lumi file: M6_L3_Unit_5_Quiz on choosing the appropriate PMO model depending on characteristics of different sectors and companies (The following text is embedded in the Lumi File.)

Questions:

1. In a middle-size construction company running standardized projects without much need for innovation which PMO would you choose to establish:
 - a) Supportive PMO
 - b) Controlling PMO
 - c) Directive PMO
2. In a company without a mature project management methodology or consistent set of practices, guidelines and shared software and templates, it is advisable to establish:
 - a) Delivery PMO
 - b) Activist PMO
 - c) Compliance PMO



3. Which of the following types of PMOs is associated with top level of management and maximum strategic influence in terms of alignment of projects with organizational objectives and priorities:
 - a) Individual PMO
 - b) Agile PMO
 - c) EPMO
 - d) Departmental PMO
4. If you in your organization have a significant number of inexperienced project teams who need extensive guidance and monitoring it is not advisable to choose:
 - a) Supportive PMO
 - b) Controlling PMO
 - c) Directive PMO

Unit 5 Video: Steps in creating PMO

The following text will be provided to the learners in the format of a video

Before creating PMO

Does every organization need a PMO?

NO – PMO is (if appropriately implemented and managed) helpful for those organizations running complex projects or in need for harmonization and coordination of multiple project activities.

Additionally, creating PMO might be a good choice for organization if (Diddi, 2021):

- Projects again and again end later than deliberate or over budget
- Projects aren't successfully aligned with commercial or strategic enterprise goals
- Organization's stakeholders do now no longer have visibility into undertaking progress
- There is no standardized method for beginning and executing tasks
- There is a need for a centralized go-to place when new projects arrive and/or there are issues with the management of existing ones

Overview of PMO creation and management process

PMO creation process, it should be treated as a project in itself, including planning, execution, monitoring, and control phases.

Figure 6.19

Overview of the phases of establishing a project management office

Adapted from Salameh, 2014, p 21

How long does it take to build a PMO?

According to Project Management Academy, generally, it takes about 12 months to build a PMO, from project planning to implementing your first PMO tools and processes.

The exact timeline for building a PMO depends on the specific situation and individual characteristics of each organization, as well as the amount of resources assigned to the PMO creation process

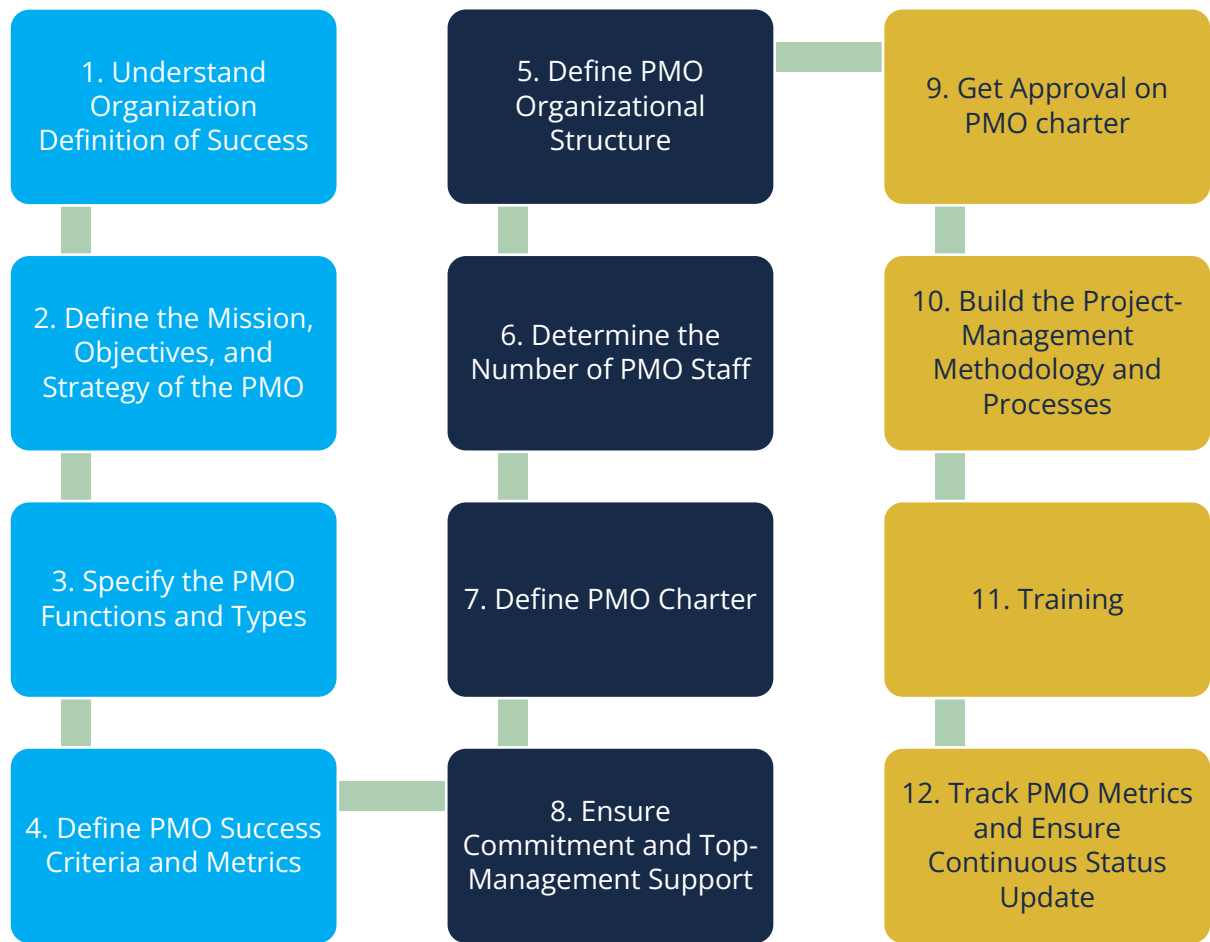
Step-by-step guide for establishing PMO

Extensive guide on how to establish a PMO with all required functionalities, processes and plans can be introduced

Guide is taken and adapted from the work of Hanadi Salameh titled "A Framework to Establish a Project Management Office" published in 2014 in European Journal of Business and Management, from pages 22-25.

Figure 6.20

Overview of 12 steps in creating PMO



Adapted from Salameh, 2014

1. Understand Organization Definition of Success

- Each organization has unique vision strategic goals, business objectives, culture, and departmental interdependencies and relationships (Millhollan, 2009)
- PMO needs to be tailored to the organization strategy and objectives, therefore understanding organization's long-term orientation is essential for the successful alignment project-management methodologies and processes to organizational strategic objectives
- It also facilitates ensuring senior-management support for developed PMO policies and procedures

2. Define the Strategy, Mission and Objectives of the PMO

- prior to the defining the PMO mission, the alignment of PMO with the organizational vision and strategy should be completed (step 1)
- **mission** is a reason why an organization exists, dealing with what it does, and why it does

- in the context of PMO, mission statement should align the value that PMO provides to the organization
- An example of a PMO mission statement could be: "The PMO will enable the organization to deliver projects on budget, on time, and with higher quality, leading to more organizational efficiency and higher customer satisfaction." or: "PMO will define and monitor implementation of common methodology and project management procedures suitable for effective and efficient management of organization's projects"
- **Objectives** of PMO can be short-term tactical objectives and long-term strategic objectives
- Example of short-term objective: to create unified and common project management methodology for all projects implemented within the organization
- Example of long-term objective: to change current approach to talent management and introduce new practices in hiring, training and maintaining project managers and project team members
- The choice of objectives of PMO needs to take into account their achievability as well as strive for long-term success.

3. Specify the PMO Functions and Types

- PMOs can vary based on their organizational context, structural characteristics and roles or functions- therefore, it is necessary to define the type of service and objectives expected of the PMO
- Types of PMO are described in the UNIT 3
- As the scope of the PMO function increases in the organization, the more strategic and enterprising role it takes (e.g. from departmental to EPMO)
- As the maturity of project management practices increase in the organization, managers can navigate from delivery- oriented to a more mature and sophisticated type of PMO such as PMOCOE

4. Define PMO Success Criteria and Metrics

- Defining a set of metrics that measures PMO performance and provides an indication of its performance
- Metrics should be driven by the type of the PMO as well as its mission and strategic objectives, aligned with the organization's mission and objectives
- The metrics should be accompanied by reporting mechanisms, tools, and frequency
- Some of the most common measurements include:
 - ✓ project delivery vs. schedule evaluation;
 - ✓ customer feedback evaluations;
 - ✓ performance against financial goals;
 - ✓ project cost vs. budget evaluations;
 - ✓ formal evaluations of project managers and PMO staff;

- ✓ stakeholders feedback evaluations;
- ✓ project owner feedback evaluations (depending on a PMO type)

5. Define PMO Organizational Structure

- Building a logical organization is critical to the success of the PMO – it determines how people interact and communicate with those in other divisions
- The PMO must define transitional activities needed to integrate the PMO into the existing organization
- Organizational structure is under influence of the type of PMO established as well as the extent of authority and responsibility top management is prepared to delegate to project managers
- Hence, before establishing the PMO, the organization must define specific aspects of the project manager's job, degree of authority, and relationship to project staff and other units in the organization
- It is equally important to define and specify communication channels and methods of conflict resolution especially in matrix project-management organization (see UNIT 1)

6. Determine the Number of PMO Staff

- The type and number of staff needed for the PMO depends on the type of PMO to be established as well as the number and complexity of projects or portfolios to be serviced by the PMO.
- The type of PMO staff ranges from project managers, managers, administrative assistants, IT support and other profiles, depending on the nature of work in the organization
- As the scope and role of PMO functions expands, the number of PMO staff needed increases, e.g. the number of PMO staff for a PMOCOE is expected to be higher than in a departmental PMO

7. Define PMO Charter

- Establishing a PMO should be treated as a project and PMO objectives, vision, type, success criteria, scope, budget, timeline, and integration processes should be documented in a PMO charter
- The PMO charter must include a comprehensive understanding of organizational norms
- Charter should be communicated to key stakeholders, and approved to avoid any misunderstanding or ambiguity in the organization about what will happen, when, and how.
- formal approval on the PMO charter should be obtained from the PMO executive sponsor

8. Ensure Commitment and Top-Management Support

- As already stated, crucial factor for ensuring PMO success is proper alignment and collaboration among the organization's teams and functions

- The PMO should encourage collaboration between project professionals and various functional departments in the organization.
- Focus on collaboration rather than policing is always preferred to improve support and longevity (PMI, 2012)
- After defining the PMO project charter, with objectives, business case, mission, and scope, it is imperative to ensure key stakeholders and top management commit to and support the PMO
- Enforcing methodology and procedures without first understanding how things are done may lead to resistance, or worse, passive noncompliance (Millhollan, 2009)
- Understanding the organizational culture and norms will help establish better communication and advance project-management methodologies
- If a defined project-management methodology already exists, it should be integrated into new PMO processes
- In most cases, the initiative of having a PMO stems from a need to enhance efficiency and address existing problems in delivering projects successfully within scope, budget, and time
- Having that in mind, newly established PMOs are viewed as a business partner rather than as police or an auditor
- Peer-level reviews are important to gain the necessary support and alliances to buoy the approach and level of control of the PMO
- All of those elements influence final **approval of PMO charter (step 9)**



10. Build the Project-Management Methodology and Processes

- Using a project-management methodology, managers define the processes, procedures, templates, best practices, standards, guidelines, and policies that are used to manage projects (PMI, 2004)
- The PMO must define the project-management methodology to be used and adopted. The methodology and its processes may not be strict, but must be adaptable to meet the changing demands and needs of the business and the organization
- The methodology should add value to the projects that use it rather than hindering them
- According to Daptive (2012), implementing a methodology without a framework that defines how to integrate with existing processes and methods is one of the main pitfalls of PMOs
- the PMO defines a flexible and adaptable methodology, yet simultaneously continues to support and update it to ensure it is relevant to the organization

11. Training

- Training should be provided to all members of the organization to ensure the PMO mission, objectives, processes, templates, and framework integrate
- Training should be provided at all levels spanning from executives, project managers and staff, to functional managers and all levels of employees.
- Even the most qualified project managers should be trained on the specific aspects of the organization's project-management methodology and processes, as each organizations has its own specific culture to be considered
- In addition, the PMO managers should ensure the establishment of project-management professionalism in the organization by providing mentorship, training, and guidance to project teams as they learn and adopt project-management processes and best practices, encouraging employees to attend training and apply and follow the newly applied project-management methodology
- Employees should provide needed feedback, encouraged by tying feedback to employees' annual appraisal, employee's reorganization, and career advancement in the organization.

12.Track PMO Metrics and Ensure Continuous Status Update

- Once execution and implementation are underway, it is important to track, monitor, report, and enhance PMO activities
- To avoid failure, PMO managers should perform a number of assessments over time to provide insights into whether project-management processes are being successfully integrated in the organization
- It provides the opportunity for enhancement of PMO processes and methods, if necessary



- Reporting PMO performance status should focus on reporting the current status or challenges related to the metrics chosen to track PMO success. Performance reporting can be performed weekly, monthly, or quarterly, depending on the type of the PMO and the stakeholders
- For instance, an EPMO might report on performance against financial goals quarterly, whereas a project-specific PMO might report on project delivery versus schedule on a weekly basis
- This process presents the opportunity to cultivate the organization to become a culture built on the best project-management practices, gearing the PMO to encompass a more mature scope and influence, perhaps moving toward an PMOCOE in the organization

Establishing PMO is complex process and it is highly dependent on the context and the environment of each organization. Therefore, it is important to observe and analyze each organization and its PMO taking into consideration a number of elements impacting the project management processes on organizational level. In the next unit several examples of PMOs will be presented along with the framework for their analysis.

Unit 6 Example of analyzing different PMOs using same framework

As a source for reading on PMO examples and methodology how to analyze them, please read following paper:

Rincon, I. (2014). Building a PMO from the ground up: Three stories, one result. Paper presented at PMI® Global Congress 2014—North America, Phoenix, AZ. Newtown Square, PA: Project Management Institute.

Available at: <https://www.pmi.org/learning/library/building-pmo-ground-up-9305>

Then, having in mind the framework outlined in the paper, read the following example from tourism sector:

Case study: Creating PMO for the purpose of building Hotel Heaven

A regional hotel company, comprising portfolio of hotels along the coast, has a goal of developing an eco-hotel in hinterland in order to diversify its offer. The idea is to buy land and build a 20-rooms hotel from scratch, focusing on high level of quality and implementing sustainability principles already in the planning and building phase of the hotel (renewable sources of energy, “passive-house” construction, garden with organically grown vegetables as a part of the hotel offer, etc.

The company decided to create individual PMO just for the purpose of managing this particular project. It comprises newly hired project manager, external team of architects, project assistant,

marketing manager, financial manager and legal advisor. Due to the significantly different visions of hotel by each of the PMO employees and lack of clear hierarchy and weak embeddedness of the PMO within the company's organizational structure, project faced drastic challenges and the company decided to re-design PMO.

Analyze the example using the framework of Rincon (2014):

1. Scope of the PMO: What are the services that the new PMO is supposed to provide?
2. Stakeholders: Who are the benefited parties of the new structure being created?
3. Business value: How much value is added to the organization via the creation of the PMO?

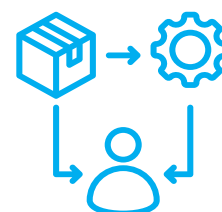
Additionally, think about the changes that could have contributed to the better success of the envisaged individual PMO.

Unit 7 Activity: Create your own PMO

Dear learners,

Based on previous theoretical units and activities, try to plan establishment of your own PMO.

You can take as a hypothetical example the organization you work in, or any other organization you are familiar enough with and create a plan for PMO implementation using template and guidance questions provided.



Name of the organization you are creating a PMO plan for:
Core activities of the organization:
What are key strategic and medium-term objectives of the organization?



Describe current organizational structure.

Outline the need for establishing PMO?

Maybe the project management processes are not consistent throughout teams, or currently implemented projects are not aligned with organization's business strategy. Another potential group of reasons for establishing PMO might be related to the lack of project management knowledge base, or insufficient human resources for project management, accompanied by objectives to apply for and implement more projects. Also, some organizations realize the need for PMO only when new and complex projects already start with implementation.



Establish essential PMO mission and objectives.

- *State the mission of your PMO*
- *What will be the main function(s) of your PMO?*
- *How will your PMO improve organization's activities (e.g. save money or reduce project risk, contribute to knowledge management, etc. ..)*



In line with previous questions, please identify and describe the scope of your PMO.

Will it be in charge of a single project, or a group of projects?

Will it be in charge of training employees, developing and standardizing project processes?

Is it going to directly implement projects or oversee existing project teams and guide them?

Based on the latter, try to identify appropriate PMO type for your chosen organization. Describe why you chose particular type of PMO and how it will fit within the existing organizational structure.



Describe PMO staffing and initiation process

Who will staff your PMO?

Will you hire new people, use the existing professionals, or create a combination of those two?

Describe how many people will work in your PMO, their responsibilities and required knowledge area and expertise.

This is also the place for making timeline for creating PMO. How many months do you think will take to create operational PMO for your organization?



Try to define some basic procedures for PMO functioning in terms of day-to-day management, communication and reporting.

The tools and procedures you choose will depend on your selected PMO model, the size of your PMO and the project resources already available in your organization.

Please think about several KPI (key performance indicators) that would be useful to evaluate the work of PMO and its efficiency? Each KPI should be accompanied by appropriate source of information.

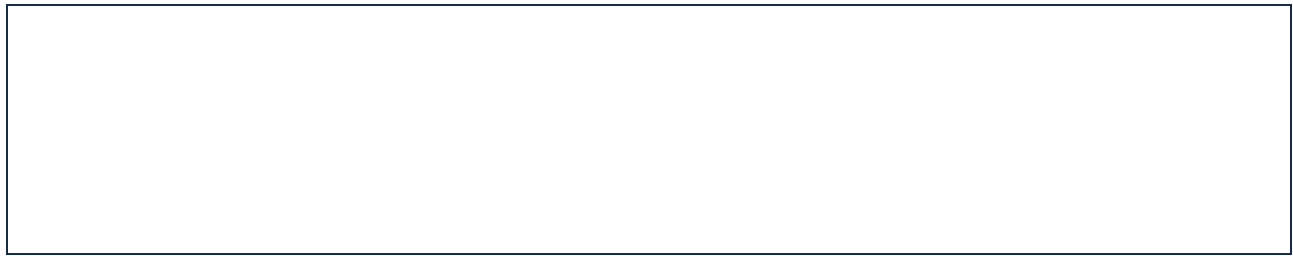
When choosing KPIs to track, always take into consideration their informative value for decision-making



Finally, can you think of some risks associated with your PMO and its establishment and performance within the organization?

Risks are inevitable part of every process and PMO establishment is highly dependent on the specific context of the organization and its interaction with the environment





Lesson 4: Business Transformation towards projectized structures – The change management process

Unit 1 Introduction

Change management is crucial in the sustainable tourism industry, as implementing sustainable practises often requires significant changes in the way businesses and destinations operate. Change management in the sustainable tourism industry involves implementing and managing the transition to more environmentally friendly and socially responsible practises. Sustainable tourism on the other side aims to minimise the negative impacts of tourism on the environment, local communities and cultures while promoting economic benefits. Finally, change management in sustainable tourism is an ongoing process that requires collaboration, commitment and continuous improvement to ensure the long-term viability of tourism destinations and the well-being of communities and ecosystems.

If you have been asked to lead a change initiative in your organization, or if you want to put yourself in a position to oversee such projects in the future, it is important that you lay the foundations for success by developing the skills you need for the task. Change is the new constant. The typical organization has implemented five major organization-wide changes in the last three years — and nearly 75% expect to implement many times more major change initiatives in the next three years. Yet half of change initiatives fail, and only 34% are a clear success (https://www.gartner.com/en/human-resources/insights/organizational-change-management, accessed 22.2.2024.).

By definition, change management refers to the structured approach, processes and methods used to help individuals, teams and organizations manage and adapt to significant change. It encompasses the planning, implementation and management of initiatives designed to ensure that people in an zare ready, willing and able to adopt and successfully integrate new processes, systems, structures or cultural changes. Change management is important in a variety of contexts, e.g., organizational restructuring, process redesign, technology implementation and cultural change. The aim is to minimise resistance, increase the likelihood of success and create a positive environment that facilitates the sustainable integration of change within the company. Project planning and change management play a decisive role in the transformation

of companies. The transformation process is often associated with significant changes in the organizational structure, culture, processes and technology.



Unit 2 Change management

Definition of Change management

Change management is one of the most important management topics of our time. As a leader, it's essential to understand the change management process to ensure your entire organization can navigate transitions smoothly. Doing so can determine the potential impact of any organizational changes and prepare your teams accordingly. When your team is prepared, you can ensure everyone is on the same page, create a safe environment, and engage the entire team toward a common goal (<https://online.hbs.edu/blog/post/change-management-process>).

Change should take place before it is absolutely necessary, or in other words, proactive change is usually more appropriate than reactive change. If a company waits until the market absolutely demands a change, such as a retailer that only creates online offerings when online competition becomes overwhelming, it is usually already too late. Well-known examples such as Kodak, the world market leader for analogue photographic materials, which only took the switch to digital photography seriously when it was too late, or the delayed reaction of mobile phone manufacturer Nokia to smartphones may serve as a warning here. However, this does not mean that every forward-looking change is the right one. What is almost certain in this day and age, however, is that standing still means going backwards. Unfortunately, people and organizations tend to misjudge the signs of the times and initiate necessary changes too late. However, there are also organizations in which managers exaggerate the pace of change and thus overburden the organization (Lewin, 1963) or which are rather 'actionistically' motivated to constantly launch new initiatives (Bruch, 2006). In these cases, the goal of change may well be the wrong one. However, change management is not so much concerned with evaluating the objectives of change, but rather with managing the change process in order to move from the current status quo to a defined target state. The aim is to involve those affected by the change and, in the best case, to turn them into active and productive, but by no means uncritical, supporters (Lauer, 2023)



Change management refers to the management of change combined with the goal of ensuring that it runs as smoothly as possible and that those affected become productive supporters (Lauer, 2023).

We live in a world whose speed of change is constantly increasing. In the meantime, the term VUCA world has become commonplace.

World VUCA is an acronym and refers to a world characterized by the simultaneous presence



Volatility: A rapid change of things.

Uncertainty: The uncertainty about the future direction of development.

Complexity: The complexity and thus lack of transparency in relation to the interaction of the environmental components involved in change.

Ambiguity: The ambiguity of information with regard to its interpretability.

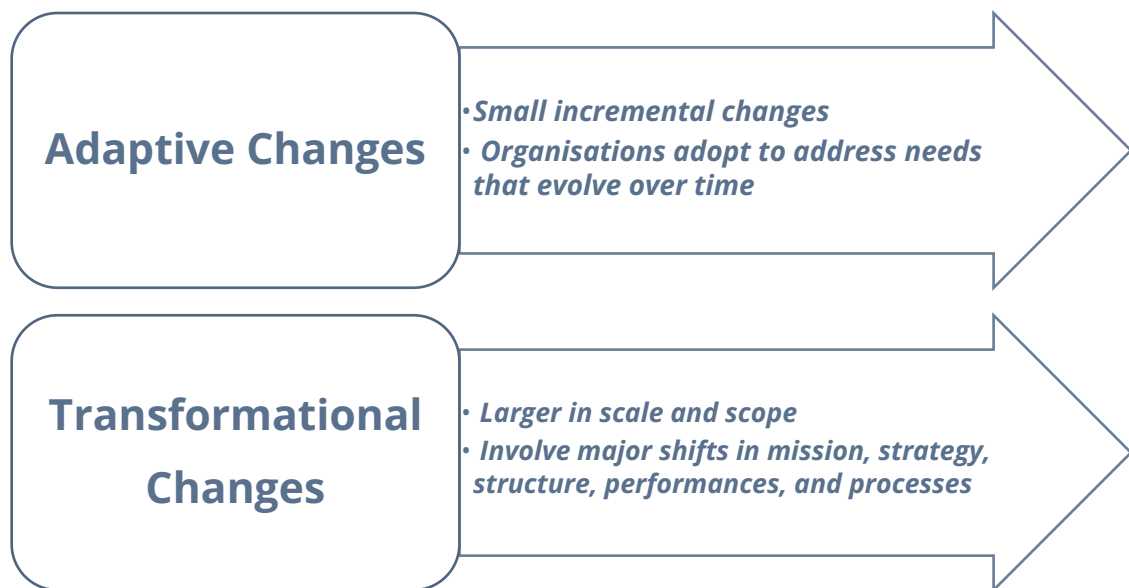
of the following characteristics (Mack & Khare, 2016):

In order for companies to survive in such a VUCA world, they have to adapt to changing environmental conditions, to increasing digitalisation, to demographic change with more and more older people and fewer and fewer young people, to changing social values or to threats from climate change, to name just a few examples. This automatically increases the importance of change management. According to German consultancy Kienbaum, change management accordingly ranks first among the topics for personnel development of top executives (Kienbaum, 2017).

So, change management is the process of guiding organizational change to fruition, from the earliest stages of conception and preparation, through implementation and, finally, to resolution. Organizational change refers in the broadest sense to the measures that a company takes to change or adapt an important component of its organization. This may involve the corporate culture, internal processes, the underlying technology or infrastructure, the corporate hierarchy or some other important aspect.

Organizational change can be **adaptive** or **transformational**:

- ✓ **Adaptive changes** are small, incremental, iterative changes that an organization makes to evolve its products, processes, workflows and strategies over time. Hiring a new team member to meet increased demand or introducing a new work-from-home policy to attract more qualified applicants are both examples of adaptive change.
- ✓ **Transformational changes** are larger in scale and scope and often involve a dramatic and sometimes sudden departure from the status quo. The introduction of a new product or business area or the decision to expand internationally are examples of transformational changes.

Figure 6.21*2 Types of organizational change***Typical cases of change on a small scale (Lauer, 2023):**

- ✓ *The introduction of new software for a specific sub-functionality (such as new software for travel expense reporting)*
- ✓ *The redistribution of tasks and responsibilities within an organizational area, such as within a department or work group.*
- ✓ *The change of a manager at the head of an organizational unit*
- ✓ *The exact definition or modification of a process step*

Of course, the focus is primarily on cases in which entire companies or organizations are practically turned upside down. Here, a particularly intensive examination of the challenges of change is required in advance. Above all, in such cases you should have a clear plan in advance as to how the change can be managed. It is important to deal with all the problems that may arise, especially the resistance of those affected.

Typical cases of change on a large scale (Lauer, 2023):

- ✓ *Mergers & Acquisitions (M&A), that is, the purchase or merger of companies*
- ✓ *The large-scale digitization of companies, in which entire business processes change or are completely digitized*

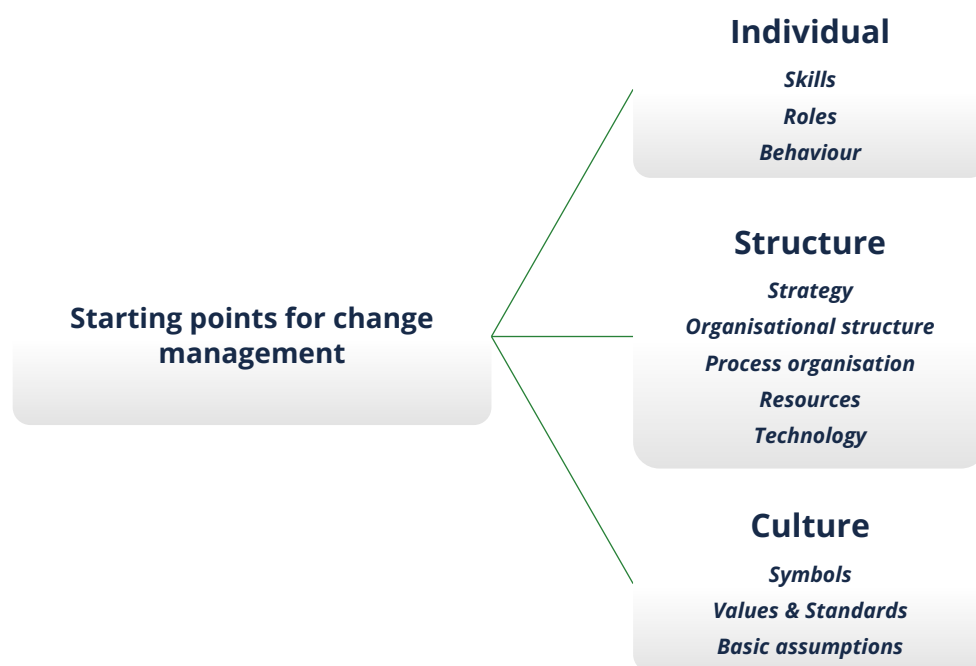
- ✓ *External or internal company succession, especially for medium-sized (family owned) companies*
- ✓ *Strong growth of companies, which forces a professionalization of processes and organizational structures*
- ✓ *The complete reorganization of companies, such as their decentralization through the creation of independent divisions*

What types of change are there in organizations?

As change management primarily refers to the management of change with consideration of the human factor, the associated methods can be applied to three main points (see Fig. 1):

Figure 6.22

Starting points for change management



Adapted from Lauer, 2021

1. **Individuals:** They form the smallest social elements of organizations. Without their active participation, change in organizations is not possible. Change management in relation to individuals means not only adapting their skills to new challenges, but also fostering the necessary positive attitude towards the goals of change and participation in it.

2. **Corporate structures:** They comprise the formal organizational and operational structure as well as strategies and resources. Changing them is basically easy on paper, but the informal structures, which usually develop over the long term and through evolution, often resist these changes.
3. **Corporate culture:** These permanent, rather informal structures, which are responsible for attitudes, values and informal rules of behaviour, are referred to as corporate culture and are largely independent of the individual. A change only on an individual and structural level without the inclusion of the corporate culture is often fraught with considerable problems or even doomed to complete failure (Lauer, 2021). Work in organizations is subject to constant change, because the organizations themselves must constantly adapt to change. Triggers for change are, for example, changing framework conditions, globalised markets and the associated international competition, changing legal situations, economic, social or climatic crises or far-reaching innovations such as digitalisation.

When we talk about change management, we mean the planning and implementation of all activities that prepare the affected managers and employees for the future situation and enable them to implement the changed requirements in the best possible way. Change management focuses on the emotional side of change and can be divided into four core topics (Stolzenberg and Heberle, 2022):

- ✓ development, communication, and implementation of a **vision** or target image,
- ✓ continuous **communication** with those concerned,
- ✓ intensive **participation of** those affected and
- ✓ needs-based **qualification of** the persons concerned.

When to start with change management process?

Ideally as early as possible, even before a solution is created. Some organizations only start when problems and resistance arise. Far too late. More and more organizations are realising that they need to deal with change as early as the preparation stage of project implementation. That is better. But it still carries the risk of forcing a solution into the organization, which leads to resistance. In order to better assess the need for change management or change support, changes can be mapped in a classification system (Fig. 2). The change is assessed according to the following criteria:

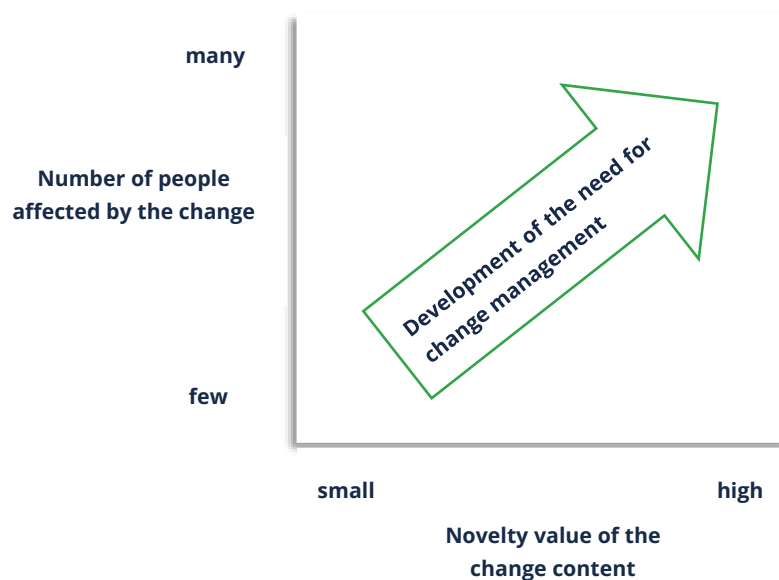
- ✓ ***Number of employees and managers affected by the change***
- ✓ ***The novelty value of the change content***



The intensity and scope of change management increases as the number of people affected and/or the degree of novelty increases. To name two examples: A regular update of a computerised accounting programme "only" requires "brief information or training for the employees concerned. The teams are then prepared and can work with the updated version of the software. In contrast, the merger of two companies affects the entire workforce of both companies and entails countless changes, such as the introduction of new IT systems, the integration of different production processes, staff reductions or the development of a common value system. This requires intensive and comprehensive change management with supporting activities.

Figure 6.23

Development of the need for change support



From Stolzenberg and Heberle, 2022

The core roles in change management

There is a growing body of data that shows that the success of a change initiative depends heavily on how well people are managed. Change projects with excellent change management are six times more likely to achieve their objectives and outcomes. Dedicated change management resources ensure that change management activities are focussed and tracked. They act as accountable and responsible parties. When budgets and timelines are tight, change management activities are easily pushed to the bottom of the priority list if there are no dedicated resources.

“Gartner surveyed more than 6,500 employees and over 100 CHROs around the globe, and found that the best organizations rely on their workforce, not executives, to lead transformational change (<https://www.gartner.com/en/human-resources/trends/changing-change-management>).

From the highest levels of leadership to front-line employees, an entire system of people within the organization must support employees through the transition. The core roles in change management are (<https://www.prosci.com/blog/core-roles-in-change-management>):

✓ **Change practitioners**

Apply a structured change management methodology, formulate the strategy, develop role-based and activity plans and support other roles.

✓ **Sponsors**

Participate actively and visibly throughout the life of the project, build a coalition of support and communicate directly with employees.

✓ **People managers**

Communicator, liaison, advocate, resistance manager, and coach.

✓ **Project manager**

Design the actual change, manage the "technical side", engage with the change practitioner, and integrate the change management plans into the project plan.

✓ **People (impacted employees)**

Participate in the change, understand their emotional reactions to the change and identify the support they need

Figure 6.24

Core roles in change management Development of the need for change support



Note: From <https://www.prosci.com/blog/core-roles-in-change-management>

The more volatile the market requirements are, the more flexibly organizations have to react to them. And as different as the requirements may be, they trigger different change processes. Every change process takes a different course and has its own focal points.

Despite all the differences in the change processes, there are also fundamental similarities. Changes can always be assigned to at least one of the following three levels (Stolzenberg and Heberle, 2022):

- ✓ ***Changes in the organizational structure***
- ✓ ***Changes in the process organization***
- ✓ ***Changes in cooperation and personal work behaviour***

Changes can have a significant impact on the existing “core” of an organization, e.g., on its organization/structures and processes (Fig. 4). New departments are created and existing teams are merged. Existing workflows are made more efficient or automated and new processes are introduced. Additional tasks are introduced and existing tasks are given a different focus. Additional expectations are placed on employees or existing expectations are changed. Changes not only affect structures and processes; they also influence the level of social structures or the working behaviour of employees. Changed framework conditions such as flexible working, detached from fixed locations and times, performance-related remuneration models and self-organized working play an important role here. However, management tools — such as the introduction of 360° feedback — and new forms of work — such as Scrum — also require managers to manage their employees differently and even redefine their own role in this process (Stolzenberg and Heberle, 2022).

In most cases, the changes take place on several of the three levels at the same time, but affect them to varying degrees. The introduction of a new appraisal tool, for example, affects all managers and employees. In this case, the change primarily affects the work behaviour level,

where managers give their employees a new quality of feedback on their performance or receive feedback from their employees on their leadership behaviour. Note that the organizational structure and processes within the company are less affected (Stolzenberg and Heberle, 2022).



Figure 6.25*Three levels on which changes can act*

Note: From Stolzenberg and Heberle, 2022

When planning changes, the question inevitably arises as to which levels should be emphasised more and which less. Successful planning therefore requires an appropriate analysis, which is only possible if the objectives for the development of the change and the associated effects have been discussed intensively and sufficiently. In most cases, the structural and procedural consequences are discussed in this context, but too little attention is often paid in advance to the consequences for cooperation. It is not only important to recognise the extent to which the three levels are affected, but also to understand that changes take place according to different laws or logics. Change therefore has different sides — a professional and an emotional side (Stolzenberg and Heberle, 2022).

Professional Side of a Change

On the professional side, changes are subject to a strict process. For example, a team of experts and management representatives is appointed for a change project, which plans the change on the basis of a quality review of existing processes or analyses structures and products for improvement potential. In this way, it drafts objectives and solutions, translates these approaches into activities and then initiates a change process. The same procedure applies to changes at the level of cooperation and behaviour. When developing a new value system, the

existing value system in the organization is first surveyed and then incorporated into a concept that contains proposals for a target scenario. A change project team then initiates and supports the implementation. Change processes are traditionally planned and designed objectively and analytically. The objectives are to be achieved through the use of certain methods and formats, and the results are evaluated afterwards. The approach is usually sequential and divided into individual phases. In an iterative approach such as the use of Scum, the process steps of planning, implementation and evaluation also take place but in shorter and repetitive sprints and supported by the use of agile methods. The distinction between the technical and emotional aspects of a change applies to both professional and agile project processes (Stolzenberg and Heberle, 2022).

Emotional Side of a Change

The emotional side of a change describes the individual reactions and feelings that are triggered in employees and managers by every professional change. Behind this are the success factors of a change that cannot be planned and implemented from a technical perspective, such as (Stolzenberg and Heberle, 2022):

- ✓ *the conviction of the necessity and correctness of the change,*
- ✓ *acceptance of the technical content of the change*
- ✓ *the willingness to support the change, and*
- ✓ *support in the actual implementation of the change.*

For change to be successful, it must not only be well planned and implemented from a technical perspective, but also accepted and supported by the company's employees. The mood of employees in times of change is rarely constant; it is subject to fluctuations and can change quickly and repeatedly. It is problematic if the mood deteriorates due to a change without a need for action having been recognised or addressed. Furthermore, not all employees react in the same way. Everyone develops their own attitude, which decisively characterises their attitude towards the planned change and their willingness to implement it. In order to successfully organize the change on the emotional side, it is essential to deal intensively with the needs of those affected and to respond to them individually. Although they are directly affected by the change, most employees are rarely involved in the development or even the decision. They are often confronted with decisions. As a result, they react with incomprehension and resentment to the fact that they were not informed or consulted and are now faced with having to implement impracticable concepts that significantly change their previous working day or even jeopardise their job (Stolzenberg and Heberle, 2022).

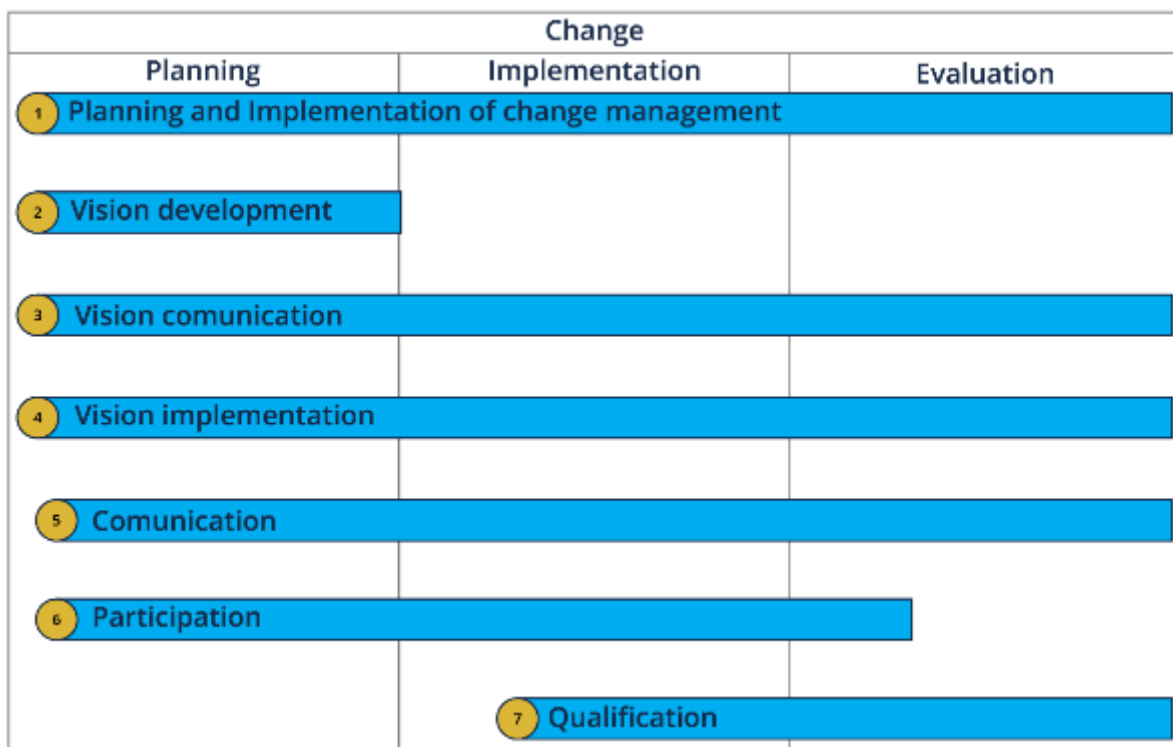
The core themes of change management are always touched upon whenever an organization initiates professional changes. Change management is thus, embedded in the phases of professional change (Stolzenberg and Heberle, 2022):

- ✓ **planning**
- ✓ **implementation**
- ✓ **evaluation**

Figure 5 shows the embedding of change management in professional change over time. The white areas symbolise the underlying professional change, the grey areas the topics of change management.

Figure 6.26

Interaction of the professional side of change and change management in the context of time and content



Adapted from Stolzenberg and Heberle, 2022

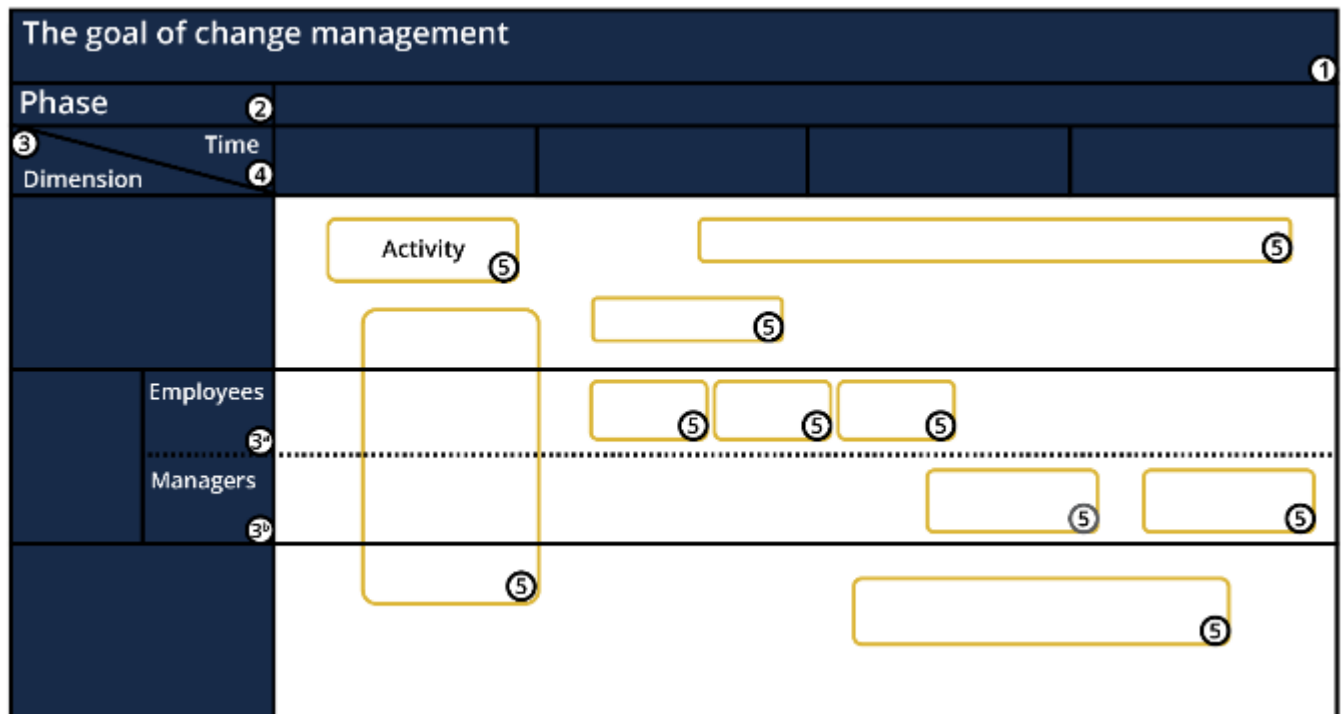
The development of a vision is the common starting signal for the professional and emotional process. Communication about the content of the vision and the content of the change in general, as well as the implementation of the vision and thus the involvement of managers and employees, begin somewhat later. In the implementation phase of the professional change, the training of managers and employees for their new or changed tasks begins.

The content and timing of change management always depend on the progress of the professional change. However, the greatest influence is the willingness of the organization to

invest time and money in the emotional elements of the change and the importance that the change manager themselves attaches to change management (Stolzenberg and Heberle, 2022).

Figure 6.27

Basic structure of a change architecture



Legend

1. The goal of change management sets the framework for the dimensions and activities of the change architecture.
2. The phases describe the basic orientation of the activities in a certain period of time. e.g., analysis phase, planning phase, activation phase, implementation phase.
3. Dimensions are subject areas derived from the goal of change support. The 4 key areas vision, communication, participation, qualification can be used as a dimension grid.

It is also possible to derive goal-specific dimensions, such as "leadership" or "monitoring" (to check the effectiveness of the activities). For better understanding, it may be helpful to provide a short description alongside the dimension:

"Promote Cooperation - to foster a collaborative partnership among the leadership team."

"Support exchange – to optimize collaboration with the agile project team and enable a better understanding of the new software."

- 3.a. For some dimensions or topics, target groups can be distinguished. Classic target groups are employees and managers, but they can also be different areas or departments as well as project teams and line employees.
- 3.b. Depending on the needs, the timeline can be defined: in months, quarters, years.
4. Activities are those tools, formats, or events that are selected per dimension to achieve the goal of change support. Diverse inspirations and suggestions for different activities can be found in this book.

Note: From Stolzenberg and Heberle, 2022

If the company strives to become more innovative and believes that innovations should not only arise in the research and development teams, but that ideas should be contributed by all employees and managers throughout the company in order to ensure small and large improvements, the technical side of the change will clarify whether, for example, a company suggestion scheme should be introduced, Creative Fridays should be introduced into everyday company life, bar camps should be organized or teams should use design thinking in the future. When planning the emotional side of change, the focus is on topics such as “How can innovation be perceived as something positive and not just associated with more work?”, “How can managers motivate their teams to think about improvements every day?”, “How can we master the courage to fail?”, “How can innovations be initiated that cannot be implemented by the team alone?”

The aim of the change manager is to develop the clearest possible picture of support so that impulses from change management ensure the overall success of the change (Stolzenberg and Heberle, 2022).

CRITICAL STEPS IN THE CHANGE MANAGEMENT PROCESS

Businesses must constantly evolve and adapt to meet a variety of challenges—from changes in technology, to the rise of new competitors, to a shift in laws, regulations, or underlying economic trends. Failure to do so could lead to stagnation or, worse, failure.



Approximately 50 percent of all organizational change initiatives are unsuccessful, highlighting why knowing how to plan for, coordinate, and carry out change is a valuable skill for managers and business leaders alike (Miller, 2020).

Change processes have a series of initial conditions and a functional end point. The process in between is dynamic and takes place in several phases. Here you will find a summary of the most important steps in the change process:

1. Recognise the need for change and prepare the organization

This involves recognizing a gap between the organization's current state and its desired future state. This recognition can come from internal analysis, new market trends, competitor activity, or stakeholder feedback.

For an organization to successfully pursue and implement change, it must be prepared both logistically and culturally. Before delving into logistics, cultural preparation must first take place to achieve the best business outcome. In the preparation phase, the manager is focused on helping employees recognize and understand the need for change. They raise awareness of the various challenges or problems facing the organization that are acting as forces of change and generating dissatisfaction with the status quo. Gaining this initial buy-in from employees who will help implement the change can remove friction and resistance later on.

2. Develop a vision and plan for change

This stage involves creating a clear vision for the desired future state, outlining the rationale for the change, and establishing a comprehensive plan for implementation. Once the organization is ready to embrace change, managers need to develop a thorough, realistic and strategic plan to make it happen. While a structured approach is important, the plan should also take into account any unknowns or obstacles that may arise during the implementation process that require agility and flexibility to overcome. The plan should be detailed in its elements:



Figure 6.28*Elements of effective plans for change*

Note: From <https://online.hbs.edu/blog/post/change-management-process>)

3. Communicate the change effectively

Clear and consistent communication throughout the process is crucial. This involves:

- ✓ *Sharing the vision and rationale for change:* Help employees understand the "why" behind the change and how it aligns with the organization's goals.
- ✓ *Being transparent and addressing concerns:* Acknowledge potential challenges and answer employee questions openly and honestly.
- ✓ *Utilizing various communication channels:* Employ different channels like town halls, presentations, emails, and internal communication platforms to reach all stakeholders effectively.

4. Empower and engage employees

Actively involving employees in the change process can increase buy-in and commitment. This might involve:

- ✓ *Creating opportunities for feedback:* Seek employee input on the proposed changes and implementation plans.
- ✓ *Providing training and support:* Equip employees with the knowledge and skills they need to adapt to the new way of working.
- ✓ *Recognizing and rewarding positive contributions:* Acknowledge and celebrate employee efforts and successes in implementing the changes.

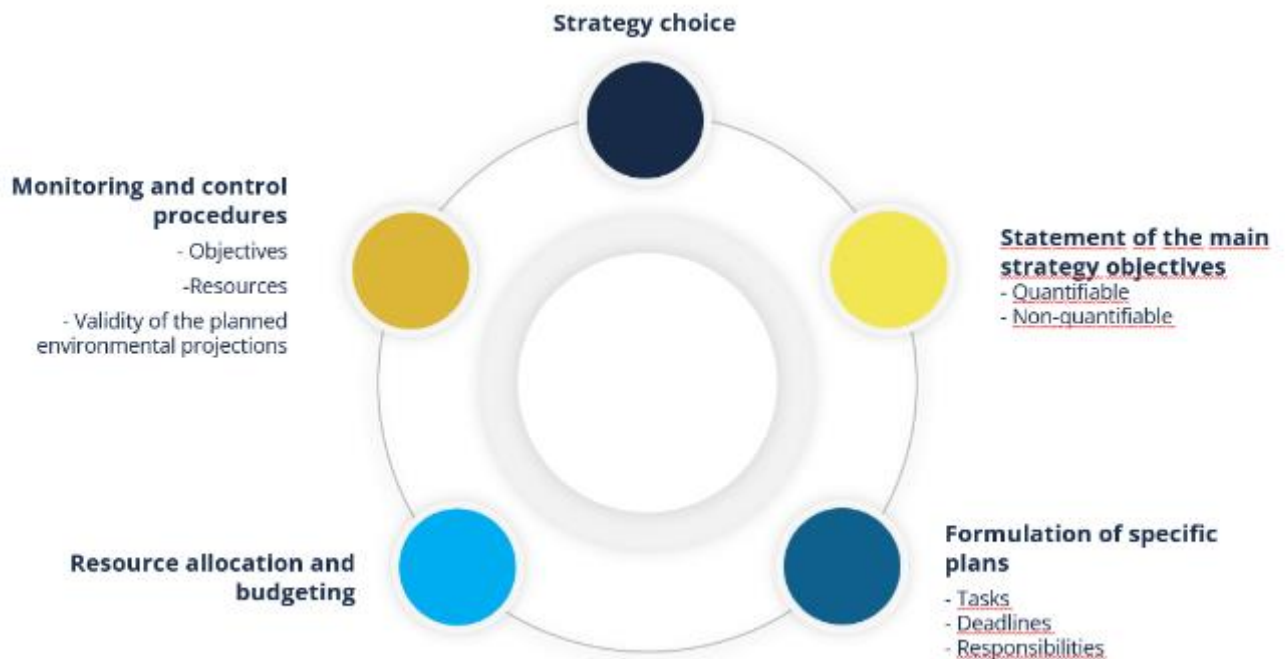
5. Implement the changes

After the plan has been created, all that remains is to follow the steps outlined within it to implement the required change. Whether that involves changes to the company's structure, strategy, systems, processes, employee behaviors, or other aspects will depend on the specifics of the initiative.

During the implementation process, change managers must be focused on empowering their employees to take the necessary steps to achieve the goals of the initiative and celebrate any short-term wins. They should also do their best to anticipate roadblocks and prevent, remove, or mitigate them once identified. Repeated communication of the organization's vision is critical throughout the implementation process to remind team members why change is being pursued.

The translation of general strategies into concrete implementation plans comprises four basic elements:

- ✓ Identification of general strategic objectives
- ✓ Formulation of specific plans
- ✓ Resource allocation and budgeting
- ✓ Monitoring and control procedures

Figure 6.29*The basic implementation process*

Adapted from Lynch, 2015

Implementation programmes vary according to the nature of the strategic problems facing the organization. These problems range from extreme and urgent need for change to more continuous strategic development processes. The two main reasons for the differences in implementation programmes are (Lynch, 2021):

- ✓ **The degree of uncertainty in predicting changes in the environment;**
- ✓ **The degree of strategic change required.**

In response to these questions, different types of basic implementation programmes can be carried out (Lynch, 2021):

- ✓ **Comprehensive implementation programme** - fundamental (radical) changes in strategic direction.
- ✓ **Incremental implementation programme** - characterised by small changes and short periods of time within the general direction set by the strategy.
- ✓ **Selective implementation programmes** - can be used if none of the above-mentioned options represent the optimal path – a large programme that is only developed in selected areas



6. Anchor the changes in the corporate culture and practises

Once the change initiative is complete, change managers must prevent a reversion to the previous state or status quo. This is particularly important for organizational changes related to business processes such as workflows, culture and strategy formulation. Without an adequate plan, employees could fall back into the “old way” of doing things, especially during the transition phase.

Embedding the changes in the organizational culture and practises makes it more difficult to relapse. New organizational structures, controls and reward systems should be considered as a means of enforcing change.

7. Review progress, analyse results and maintain change

Just because a change initiative has been completed does not mean it has been successful. Conducting an analysis and review or “project post-mortem” can help leaders understand whether a change initiative was a success, a failure or a mixed result. You can also gain valuable insights and lessons learnt that you can use in future change initiatives.

Embedding the new practices and behaviours into the organizational culture is crucial for long-term success. This might involve:

- ✓ Reinforcing the vision and benefits of change: Continuously remind employees of the purpose and positive outcomes associated with the change.
- ✓ Providing ongoing support: Offer ongoing coaching, mentoring, or training to ensure employees feel confident in the new way of working.
- ✓ Celebrating milestones and successes: Recognizing achievements throughout the process can help maintain motivation and commitment.

Unit 3 Quiz

Lumi File: M6L4_Unit 3_Single choice_Change Management (The following text is embedded in the Lumi File.)

1. Small, incremental, iterative changes that an organization makes to evolve its products, processes, workflows and strategies over time are called:
 - A) Transformational changes
 - B) Adaptive changes
 - C) Hybrid changes
 - D) Radical changes

Lumi File: M6L4_Unit 3_Single choice_Change Management (The following text is embedded in the Lumi File.)

2. Changes larger in scale and scope often involving a dramatic and sometimes sudden departure from the status quo are called:
- A) Transformational changes
 - B) Adaptive changes
 - C) Hybrid changes
 - D) Radical changes

Lumi File: M6L4_Unit 3_Drag the Words_Change Management (The following text is embedded in the Lumi File.)

3. Drag the words into the correct boxes to form the Change Management Statement

*Change management refers to the * ____ * combined with the goal of * ____ * and that those affected become* ____ *.*

Lumi File: M6L4_Unit 3_Single choice_Change Management (The following text is embedded in the Lumi File.)

4. Change management primarily refers to the management of change with consideration of which three main points?
- A) Individuals, project scope, and corporate culture
 - B) KPI, corporate strategy, and corporate culture
 - C) Individuals, corporate structures, and corporate culture
 - D) Corporate strategy, corporate vision, and corporate culture

Lumi File: M6L4_Unit 3_Drag the Words_Change Management (The following text is embedded in the Lumi File.)

5. Change management focuses on the emotional side of change and can be divided into four core topics:
- Development, communication, and implementation of a _____ or target image,
 - Continuous _____ with those concerned,
 - Intensive _____ of those affected and
 - Needs-based _____ of the persons concerned.

Unit 4 Case studies on change management

Here you will find three case studies that show how different tourism organizations have implemented successful change management initiatives. These case studies show how effective change management can help tourism organizations adapt to different challenges, take advantage of new opportunities and achieve their strategic goals. By following key principles



such as clear communication, employee engagement and step-by-step implementation, tourism organizations can successfully manage change and ensure long-term sustainability.

1. AccorHotels: Embracing Sustainability and talent



Challenge: AccorHotels, a multinational hospitality chain, faced increasing pressure to adopt sustainable practices. However, implementing significant changes across their vast network of hotels required overcoming employee resistance and ensuring operational efficiency. What are travellers' new expectations? How to find the right balance between digital and human in the guest experience? How are loyalty programs transforming to better serve and engage clients? What does it take today to attract, engage, and retain talent? How can we become sustainably local? All these questions need an answer and a proactive response to change.

About Accor

Accor is a world-leading hospitality group, offering experiences in more than 110 countries through 5,400 properties, 10,000 food and beverage outlets, wellness centres and flexible workspaces. The group has one of the most diverse hospitality ecosystems in the industry, comprising more than 40 hotel brands from luxury to economy and Lifestyle with Ennismore. Accor is committed to taking positive action in the areas of business ethics and integrity, responsible tourism, sustainable development, community engagement, diversity and inclusion. Accor SA was founded in 1967 and is headquartered in France.

Solution: AccorHotels adopted a structured change management approach:

- **Building a strong case for change:** They clearly communicated the environmental and economic benefits of sustainability to all stakeholders.
- **Engaging employees:** Comprehensive training programs and communication channels were established to address concerns and encourage employee participation.
- **Phased implementation:** The changes were rolled out gradually, starting with pilot programs and allowing for adjustments based on feedback.
- **Celebrating successes:** Milestones and achievements were acknowledged to maintain employee motivation and showcase the positive impact of the changes.

Accor insightful innovative report ***From Change To Opportunity*** explores the ongoing changes impacting the hospitality industry at large, provides insights and perspectives on how to address these shifts, and offers examples and recommendations for inventive ways to leverage

these transformations into actionable and profitable business opportunities which satisfy these new needs.

The report highlights three key themes: the changing expectations of travellers, the relationship with guests in terms of digital touchpoints and loyalty programmes, and finally hospitality management addressing the new mindset of talent and the increasing need to think sustainably local by shifting the focus to resources, people and sourcing from the local community and ecosystem around the hotel. Below are the 9 key takeaways from the report on transforming the way Accor welcomes, engages and manages guests:

1. **Meet my needs** – An Increasingly sophisticated approach to decision-making: A consumer viewpoint reflective of intertwined rational and emotional criteria as well as new desires for the types of experiences they want from a hotel
2. **The desire to seek & savour** – Discovering differently and seeking enriching experiences: Across generations and in different ways, travellers are looking for new ways to discover a destination and live new experiences. It is the top-ranking criteria in traveller emotional needs and choice.
3. **The desire for self-fulfilment** – Looking to reconnect with self, recharge and enjoy: Another top growing driver for why people travel, this desire to pause the pace, recharge, and indulge means people are seeking options for well-being and more life-enriching moments.
4. **Cool community** – Wanting to connect in style and be social: The desire to live stylish social experiences, connect, and belong in a trendy way is a solid and growing part of the market which crosses segments and moves beyond lifestyle brands.
5. **It's all about the tribe** – The growing movement for quality moments together: As individuals increasingly focus on seeking community and connection, there is a growing travel aspiration and need to experience special moments together with their loved ones — whether friends or extended families across generations.
6. **The right digital-human balance** – Seamlessly optimizing the client experience: The human touch and digital interaction, when blended in the right way, empowers teams to enhance service and client experience, improve personalization, and ultimately drive client engagement and greater brand love.
7. **Expanding loyalty's impact** – Adding value every day: Loyalty programs are transforming to appeal to what guests want and need — becoming simpler, more personalized, more rewarding, and functioning as lifestyle enhancers – enabling clients to do and experience more, drive deeper engagement, and forge stronger client relationships.



8. **The new talent mindset** – Fulfilling the desire for purpose and self-expression: The evolution of Talent expectations and priorities drives the need to create a more attractive and engaging workplace with greater flexibility, work/life balance, avenues for self-expression and finding purpose, and ensuring teams feel valued.
9. **Thinking sustainably local** – Shifting focus to people, resources and sourcing closer to home: Changing perspective and focusing on the local ecosystem by managing more purposefully, locally, and efficiently is key to building a more sustainable hospitality model, while reducing risk, bringing numerous operational benefits, and offering a more authentic guest experience.

These findings draw on exclusive Accor research, interviews with experts, and examples by leading brands both within and outside of the industry to provide hospitality professionals with fresh perspectives and opportunities as we navigate the way forward in this new consumer, travel, Talent, and operations landscape.

Results: AccorHotels successfully implemented various sustainability initiatives, including reducing energy and water consumption, minimizing waste, and sourcing local products. This not only enhanced their environmental footprint but also improved brand reputation and attracted eco-conscious customers. AccorHotels saw an opportunity to rethink the vision and priorities of its team members. In the report “From Change to Opportunity”, published in 2023, it was stated that the company needed to change its way of thinking about hotel management and improve in two key areas: Sustainability and Talent.

Questions

Lumi File: M6L4_Unit 4_Multiple choice_Change Management (The following text is embedded in the Lumi File.)

1. What challenges did AccorHotels face?
 - A) Sustainability practices
 - B) Insufficient resources and budgets
 - C) Unclear goals and objectives
 - D) Attracting, engaging, and retaining talent
2. AccorHotels adopted a structured change management approach through:
 - A) Clear communication of the environmental and economic benefits for all stakeholders
 - B) Comprehensive training programs
 - C) Employee cost savings
 - D) Recognizing milestones and achievements to maintain employee motivation
3. What insightful innovative themes did Accor's report “From Change to Opportunity” highlight?



- A) Online marketplace for short- and long-term accommodation
- B) Changing expectations of travelers
- C) Hospitality management as a response to the new mentality of talent and the increasing need to think sustainably and locally
- D) Relationship with guests in terms of digital touchpoints and loyalty programmes

2. Airbnb: Adapting to Regulatory Challenges



Challenge: Airbnb, a platform for the hospitality industry, has encountered regulatory hurdles in various cities over the course of its history due to concerns that short-term rentals could affect the availability of housing. Today, Airbnb faces growing obstacles as more cities introduce regulations for short-term rentals. New York City recently passed Law No. 18, which requires hosts to register with the city and be present in the rented space during guests' stays. Several other cities, including Dallas, Memphis, Quebec, San Francisco, Paris and Barcelona, have also implemented rental restrictions. However, Airbnb often works with local authorities to modify its operations while addressing their concerns.

As a result of these regulatory changes, Airbnb hosts are facing increased scrutiny and potential penalties for non-compliance, prompting some to re-evaluate their participation on the platform. In response, Airbnb has been actively developing new strategies and partnerships to ease the transition for hosts and maintain the attractiveness of the platform for both travellers and property owners.

About Airbnb

Airbnb, Inc. is an American company that operates an online marketplace for short- and long-term accommodation and experiences. The company acts as a broker and charges a commission on every booking. The company was founded in 2008 by Brian Chesky, Nathan Blecharczyk and Joe Gebbia. Airbnb is a shortened version of its original name, AirBedandBreakfast.com. Airbnb is the best-known company for short-term rentals.

Solution: Airbnb made some adaptive changes and implemented a multi-pronged change management strategy:

- **Collaboration with stakeholders:** They actively engaged with policymakers, local communities, and hosts to understand concerns and develop solutions.
- **Policy adjustments:** Airbnb introduced self-regulation measures like registration requirements and responsible hosting guidelines.

- **Data-driven approach:** They utilized data analysis to identify areas for improvement and demonstrate the positive economic impact of short-term rentals.
- **Communication and transparency:** Airbnb maintained open communication with all stakeholders, addressing concerns and providing regular updates on progress.

Cottage communities and worldwide advertising campaigns

The company's main business is centred on cottage communities" rather than large metropolitan areas. It seems that the appeal of staying in a quaint, secluded location is the reason for Airbnb's success in these country home communities. As city dwellers increasingly seek to escape the hustle and bustle of urban life, they are turning to these quaint rural retreats, ultimately fuelling Airbnb's success in this niche market.

Furthermore, the pandemic has accelerated this trend as people look for remote and spacious accommodation. As a result, many have turned to private holiday accommodation such as cabins and cottages to satisfy their need for personal space while still enjoying a holiday. This new preference for remote accommodation is expected to continue to grow even as the world begins to recover and adapt to the post-pandemic era.

In response to the growing demand and to increase its reach, Airbnb has launched a global advertising campaign highlighting the unique benefits of Airbnb accommodation compared to traditional hotels. The campaign highlights unique features such as a homely atmosphere, personalised experiences and diverse accommodation options that cater to a wide range of budgets and preferences.

Results: Through proactive change management, Airbnb navigated regulatory challenges and established itself as a responsible player in the hospitality industry. This allowed them to continue operating in various cities while fostering positive relationships with stakeholders. By focusing on niche markets like cottage communities and offering a wide range of accommodation, Airbnb has managed to maintain its appeal to both hosts and travellers. Through its marketing efforts, Airbnb aims to create a greater sense of trust and familiarity among potential users while reinforcing its commitment to authentic and customised travel experiences. By showcasing the appeal of private homes and more extensive accommodation options, Airbnb aims to continue to thrive despite increasing regulation in cities. The platform is constantly adapting to changes in the market and the needs of its users, offering unique rental experiences and promoting more authentic local experiences. Airbnb has taken active steps to address regulatory concerns by working closely with city authorities and ensuring transparency to maintain its exponential growth in the tourism industry.

Questions

Lumi File: M6L4_Unit 4_Single choice_Change Management (The following text is embedded in the Lumi File.)

1. What challenge did Airbnb have to face in 2023?

- A) Changing traveller expectations
- B) Insufficient resources and budgets
- C) Cost efficiency
- D) Regulations for short-term rentals

Lumi File: M6L4_Unit 4_Drag the Words_Change Management (The following text is embedded in the Lumi File.)

2. Airbnb made some adaptive changes and implemented a multi-pronged change management strategy through:

policymakers, local communities, and hosts; self-regulation measures; data analysis; open communication;

- They actively engaged with _____ to understand concerns and develop solutions.
- Airbnb introduced _____ like registration requirements and responsible hosting guidelines.
- They utilized _____ to identify areas for improvement and demonstrate the positive economic impact of short-term rentals.
- Airbnb maintained _____ with all stakeholders, addressing concerns and providing regular updates on progress.

Lumi File: M6L4_Unit 4_True False_Change Management (The following text is embedded in the Lumi File.)

3. The company's main business is centred on cottage communities" rather than large metropolitan areas.

- A) TRUE
- B) FALSE





3. TUI Group: Digital Transformation



Challenge: TUI Group, a travel and tourism company, recognized the need to adapt to the evolving digital landscape and enhance customer experience. In March 2020, as the pandemic spread, European tour operator TUI's operations came to a standstill. TUI lost all developers working on a contract basis - a third of our entire development workforce. All ongoing projects were halted and many systems were shut down completely. But the crisis also brought the IT and business teams closer together and forced TUI to reassess the situation. With this newfound focus, TUI was able to accelerate the ongoing digital transformation and reduce operating costs by 70% in just three months.

About TUI

TUI is one of the world's leading global tourism platforms. Under the umbrella of the Group, we unite over 400 of our own hotels, 16 cruise ships, a digital platform for more than 160,000 tours, activities and experiences, strong tour operators, 1,200 travel agencies and leading online portals, five airlines with around 130 aircraft and destination services in all major holiday destinations around the globe. It covers the entire tourism value chain under one roof.

Solution: TUI embarked on a comprehensive digital transformation journey:

- **Vision and leadership:** A clear vision for the digital future was established, with strong leadership commitment to drive the change.
- **Investing in technology:** TUI invested in new technologies, including online booking platforms, mobile apps, and data analytics tools.
- **Upskilling employees:** Extensive training programs were provided to equip employees with the necessary digital skills and adapt to new workflows.
- **Agile approach:** A flexible and iterative approach was adopted to continuously improve digital offerings based on customer feedback and market trends.

Results: TUI was able to turn an initially existential crisis into an opportunity to drive digital transformation. TUI's digital transformation resulted in a more user-friendly online booking experience, improved operational efficiency, and increased customer satisfaction. Additionally, the company gained a competitive edge in the digital travel market.

Questions

Lumi File: M6L4_Unit 4_Single choice_Change Management (The following text is embedded in the Lumi File.)

1. What challenge did TUI Group have to face during pandemic?

- A) Digital Transformation
- B) Insufficient resources and budgets
- C) Sustainability practices
- D) Regulations for short-term rentals

Lumi File: M6L4_Unit 4_True False_Change Management (The following text is embedded in the Lumi File.)

2.No comprehensive training programmes were offered to equip employees with the necessary digital skills and adapt them to the new work processes.

- A) TRUE
- B) FALSE

Lumi File: M6L4_Unit 4_True False_Change Management (The following text is embedded in the Lumi File.)

3.An agile approach was chosen to continuously improve the digital offerings based on customer feedback and market trends.

- A) TRUE
- B) FALSE

4. Transformational Change: Legacy Hotel embraces Eco-Tourism

Scenario: Imagine a large, established hotel chain known for its luxurious, traditional resorts across the globe. Facing declining bookings and a growing market for sustainable travel, the company decides to undergo a transformational change, shifting its focus towards eco-tourism.

Challenges:

- **Overhaul of brand identity:** The existing brand image is at odds with eco-friendly practices.
- **Shifting company culture:** Employees accustomed to traditional operations need to adapt to new sustainability practices.
- **Renovations and infrastructure changes:** Upgrading facilities for energy efficiency, water conservation, and responsible waste management.

- **Supply chain adjustments:** Sourcing sustainable materials and partnering with eco-conscious suppliers.
- **Guest experience redesign:** Catering to guests seeking nature-based experiences and cultural immersion.

Change Management Strategies:

1. Vision and Leadership:

- The CEO spearheads the change, clearly communicating the vision for a sustainable future and its benefits (environmental responsibility, cost savings, attracting a new customer base).
- A dedicated sustainability team is formed to lead the transformation.

2. Employee Engagement:

- Extensive training programs educate staff on eco-friendly practices, new guest expectations, and responsible tourism principles.
- Incentives and recognition programs reward employees for embracing the change and exceeding sustainability goals.
- Open communication channels address concerns and encourage employee participation in the transition.

3. Phased Implementation:

- Pilot programs are launched at select resorts to test new sustainability initiatives and guest experiences.
- Renovation projects are rolled out gradually, minimizing disruption to ongoing operations.
- Feedback from pilots and guests is incorporated to refine the eco-tourism approach.

4. Marketing and Communication:

- Rebranding efforts showcase the company's commitment to eco-tourism, highlighting sustainable practices and partnerships.
- Targeted marketing campaigns attract environmentally conscious travelers seeking 'nature-immersive experiences.'
- Transparency through sustainability reports and guest education materials builds trust and reinforces the brand's commitment.

5. Monitoring and Evaluation:

- Key performance indicators (KPIs) track progress on sustainability goals (energy consumption, waste reduction, water conservation).
- Guest satisfaction surveys measure the effectiveness of the new eco-tourism experience.
- Regular reviews identify areas for improvement and ensure the transformation remains on track.

Expected Outcomes:

- **Environmental benefits:** Reduced carbon footprint, water conservation, responsible waste management.
- **Enhanced brand image:** Positioning as a leader in sustainable tourism attracts a new generation of eco-conscious travellers.
- **Increased profitability:** Cost savings from energy efficiency and attracting a wider customer base.
- **Employee satisfaction:** Employees empowered to contribute to a positive environmental impact.

This example illustrates how a transformational change, in this case, the shift towards eco-tourism, can be achieved through a well-defined change management strategy. By focusing on clear vision, employee engagement, phased implementation, and continuous improvement, the hotel chain can successfully navigate the transformation and secure its future in the evolving tourism landscape.

Questions:

Lumi File: M6L4_Unit 4_Single choice_Change Management (The following text is embedded in the Lumi File.)

1.What changes was the Legacy Hotel exposed to?

- A) Adaptive changes
- B) Radical changes
- C) Transformational changes
- D) Hybrid changes

Lumi File: M6L4_Unit 4_Drag the Words_Change Management (The following text is embedded in the Lumi File.)

2. Legacy Hotels has applied some change management strategies where:

clearly communicating the vision; Training programs; Feedback from pilots and guests; Key performance indicators (KPIs);

- The CEO spearheads the change, _____ for a sustainable future and its benefits
- _____ educate staff on eco-friendly practices, new guest expectations, and responsible tourism principles.
- _____ is incorporated to refine the eco-tourism approach.
- _____ track progress on sustainability goals (energy consumption, waste reduction, water conservation).

3. A lower carbon footprint, water saving, responsible waste management is one of the expected outcomes.

A) TRUE

B) FALSE

Unit 5: Projectization and change management in transformation of companies

Interview with **Jelena Kljaić Šebrek, PhD, director of Wyg Consulting**



Jelena Kljaić Šebrek has more than 15 years of general working experience. She has been working as a project manager of grant projects in the field of local and regional development, employment and social inclusion, sustainable tourism and innovations where she was responsible for the coordination of the project teams, monitoring and evaluation of project activities and procurement processes. Jelena has in depth understanding of the EU funds management system of management and control as she worked as a grant project manager within the Central financing and contracting agency (CFCA) with a portfolio of several grant schemes (SME development, Business related infrastructure, Research and innovation). At this job, she participated in the evaluation of the project proposals and was responsible for the monitoring of the project implementation, verification of project expenditures and monitoring and control of the procurement procedures carried by the project beneficiaries. Jelena is a certified public procurement expert and holds a PhD in the field of quantitative economics. Jelena is certified IPMA and GPM project manager and a project management trainer.

1. Can you tell us something about your experiences in helping organizations implement project management practises on a single-project as well as on a strategic level? What kind of challenges did you face during that process?

The intensive process of projectivisation made organizations implement project management practices on all levels including single projects, portfolios, and strategic level. For long time, projects in organizations were considered to be separated from core business. Such perception created many difficulties for project management from project preparation to integration of project results into regular business. Implementing project practice on a single level project is mostly operative process and is defined by the specific contract requirements. On the other hand, implementing project practices on strategic level is something completely different. It is impossible to initiate any project practice on strategic level if there is no understanding and support of the top management. And sometimes can be a very long process. Some of the other challenges include building capacities of project managers, recognising project managers as professionals within organizations, adopting project culture and transition of organizational structure.

2. Are companies generally aware of the need to systematically projectize their organizational structures in order to respond to the challenges of managing complex projects or do they still implement ad hoc solutions?

This changed a lot during the last decade. Ad hoc solutions aren't enough anymore. Projects are recognised as change drivers for the companies and ad hoc solutions would be too risky for the project success. The growing number of projects being prepared and implemented at the same time forced companies to rethink the project management organizations. Many companies changed their organizational structures from traditional functional organizations to matrix and various hybrid types of project organizations. Also, companies see PMOs as an adequate response for multi project organizational issues.

Anyhow, no matter what project organization structure company adopts, it is important that the organizational dynamics enable agility.

3. What were the individual reactions and feelings triggered in employees and managers by the change in their organization (e.g., *conviction of the necessity and correctness of the change, acceptance of the technical content of the change, willingness to support the change and support in the concrete implementation of the change*)?

Introducing organizational change is not always an easy task. Especially when the change is triggered by projects. As expected, many employees resist to change procedures and routine they are used to. Sometimes, employees that are only indirectly involved in projects find the projects to be just temporarily activities and see no reason to change the whole organization for something that will finish soon. On the other hand, project managers are more likely to

adopt organizational changes. It is of no surprise as we know that project managers are seen as change agents. Or, maybe they are only under great level of stress and look for better solutions to handle multiple tasks, deadlines, stakeholders, and risks.

4. In your practical experience, at what level were the most changes necessary in your projects (*changes in the organizational structure, changes in the process organization or changes in cooperation and personal working behaviour*)?

Well, organizational structure can be changed, processes and standards can be changed but the most important change that must happen is personal communication and behaviour of people. And that is something that is always the greatest challenge when introducing project organization. The project organization changes the way we get work done, the way we interact, the way we manage payments and administration. The management should clearly communicate the reasons and benefits of such change. Trainings and transition period can ease the change process.

5. How to identify potential roadblocks on time? Whilst it is impossible to predict everything that could go wrong with a project, from your experience, how can you best anticipate potential obstacles and develop strategies?

In last few years so many things happened that we could not predict, or we couldn't predict all the ways it could affect the projects. Earthquakes, wars, COVID, inflation brought many difficulties for the projects in terms of delays, extra costs and in some cases termination of project contracts. As we are facing rapid pace of changes it will be impossible to anticipate all the potential obstacles. What we can do is to learn more from our previous projects and build lessons learned into new projects. It would be good to have a register of risks and solutions from previous projects and what is more important to share knowledge between different project teams. This should be one of the tasks of PMO. Consulting different stakeholders and experts in preparatory project phase can also bring some insights on potential obstacles and mitigation measures.

6. In your vast project management experience, is implementing tourism-related projects somewhat different than working on projects related to other areas?

Tourism related projects are some of the most beautiful projects I've worked on but at the same time some of the most difficult ones. These projects often involve broad range of sectors and activities from infrastructure and construction, energy, nature protection, culture, transport etc. making them complex in terms of expertise and stakeholders involved. On the other hand, tourism projects are more than other sectors influenced by external factors such as natural disasters, political situation and security, economic crises, wars and pandemics making them riskier and challenging to implement.

7. Since you are also certified Green Project Manager and trainer for GPM Global, what is your opinion on implementing GPM principles in project management in the field of tourism?

Green and digital transition is recognized as one of the key objectives of EU. Sometimes it seems impossible to reconcile tourism activity and nature preservation, but tourism has no future if it doesn't practice sustainability.

Green project management enables project managers to think and act sustainable in all phases of project life cycle. GPM is well aligned with sustainable tourism as both support nature protection, preservation of cultural heritage, social responsibility and creation of long-term benefits for the community. GPM provides tools and techniques that promote sustainability of both, the project management procedures as well as creating sustainable tourism products.



Lesson 5: Projectizing tourism organizations: when, how and why?

Unit 1 Introduction

The globalisation of the tourism industry has brought both opportunities and challenges. While tourism can bring economic benefits to destinations, it can also lead to cultural homogenisation and the loss of traditional ways of life. The tourism industry faces various challenges, which can vary depending on the region, economic conditions and global events. One of the biggest challenges is undoubtedly the promotion of sustainable tourism practises.

Weather patterns and rising temperatures can affect tourism behaviour and influence destination choice and seasonal travel. Concerns about climate change and environmental degradation are growing and tourists are increasingly looking for destinations that prioritise sustainability and minimise their impact on the environment. The environmental footprint of tourism, including issues such as overtourism, habitat destruction, waste management and pollution, can have negative consequences for local ecosystems and communities. Changing consumer preferences and behaviours, influenced by factors such as sustainability and ethical tourism, can therefore have an impact on demand for certain types of travel experiences.

Tourists are also concerned about safety when travelling, especially after terrorist attacks and other security threats. Tourism businesses need to take steps to ensure the safety of their guests while balancing the need for security with the desire for a welcoming and open environment.

Today, rapid technological change is also impacting the tourism industry. Innovations such as online booking platforms, mobile apps and virtual reality experiences are changing the way tourists plan and experience their trips. Tourism organizations must keep pace with these changes and adapt in order to remain competitive.

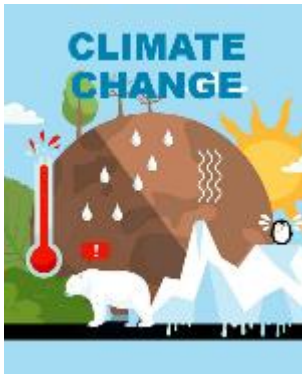
Addressing these challenges requires a collaborative effort from various stakeholders, including tourism businesses, governments, local communities and environmental organizations. By adopting sustainable practises, promoting innovation and prioritizing responsible tourism development, the industry can overcome these challenges and ensure its long-term viability while minimizing its environmental and social footprint.

Unit 2 Theoretical chapter: Key challenges in modern tourism – ppt format

Modern tourism itself faces a number of complex challenges. From the long shadow of pandemics to the pressures of climate change and technological disruption, here's a quick look at some of the biggest hurdles modern tourism must overcome.

Slide 1 - Climate change, global warming - challenges to tourism

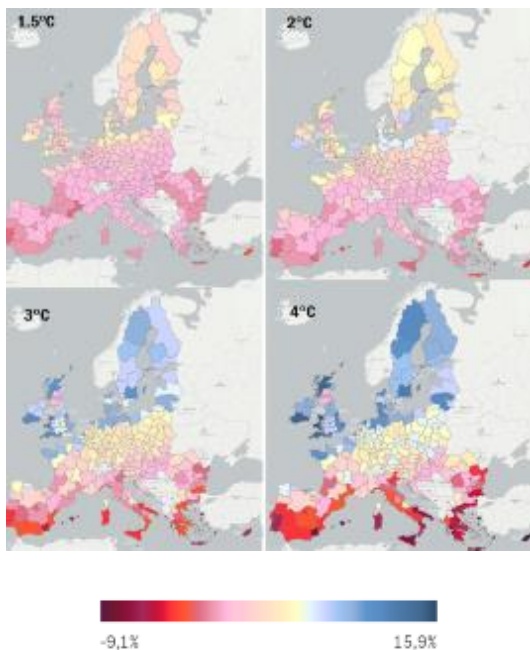
- ✓ Rising temperatures
- ✓ Extreme weather events
- ✓ A study by the World Economic Forum (WEF) from 2023 emphasises the negative impact of extreme heat on tourists. Examples such as forest fires in Greece, heatwaves in Italy and flight cancellations in the USA illustrate this point.



Note: From <https://www.weforum.org/agenda/2023/07/europe-wildfires-nature-climate-crisis/>

Slide 2 - Reshuffling of tourism demand

- ✓ European Commission suggests that if global warming continues, tourism activities in Europe could shift from the south to the north
- ✓ The study is the first regional assessment to analyse the historical and potential future impact of climate on European tourism demand
- ✓ Based on data from 269 European regions over a monthly period of 20 years, the study shows the impact of current climate conditions on tourism and simulates future impacts up to the year 2100, using 10 climate models and considering four levels of warming (1.5°C, 2°C, 3°C and 4°C).



Note: From https://joint-research-centre.ec.europa.eu/jrc-news-and-updates/global-warming-reshuffle-europes-tourism-demand-particularly-coastal-areas-2023-07-28_en

Slide 3 - Specific tourist destinations in danger

- ✓ The Maldives faces the threat of a large part of its landmass being submerged due to rising sea levels (77% of the country by 2100, according to the country's Ministry of Tourism)
- ✓ The Caribbean - witnessing the bleaching of coral reefs and rising sea levels.
- ✓ The Alps are struggling with insufficient snowfall, which is affecting winter tourism.
- ✓ Venice is facing rising sea levels and extreme weather events that threaten its historic sites.



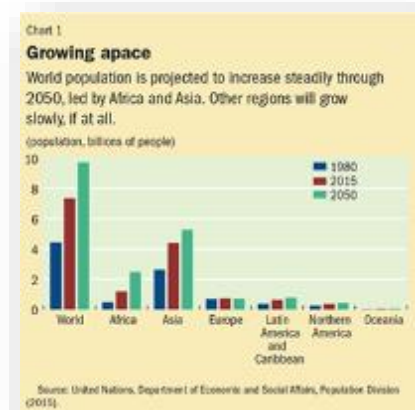
Note: From <https://www.aa.com.tr/en/environment/climate-change-global-warming-posing-serious-challenges-to-global-tourism/3148372>

Slide 4 - World population

- ✓ The world population is expected to reach 8.6 billion in 2030, 9.8 billion in 2050 and 11.2 billion in 2100
- ✓ 2017 - 2050, half of the world's population growth is expected to be concentrated in just nine countries

Figure 6.30

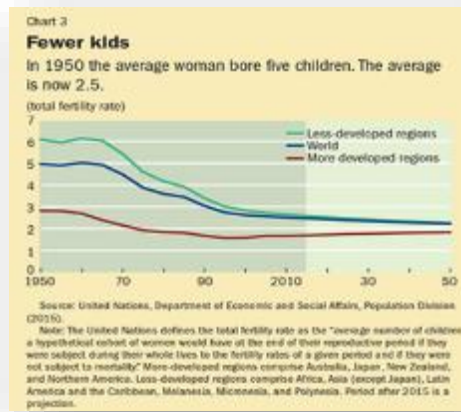
Growing space



Note: From <https://www.un.org/en/desa/world-population-projected-reach-98-billion-2050-and-112-billion-2100>

Slide 5 - Fewer kids

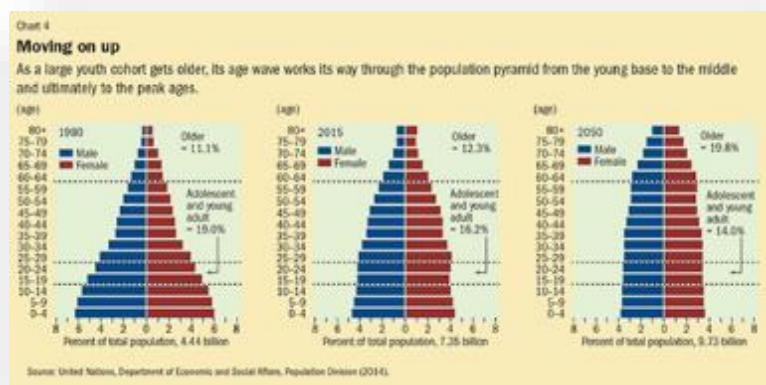
- ✓ In recent years, fertility has declined in nearly all regions of the world
- ✓ In more and more countries, the fertility rate is below the level required to replace subsequent generations (around 2.1 births per woman), and in some countries this has already been the case for several decades

Figure 6.31*Fewer kids*

Note: From <https://www.un.org/en/desa/world-population-projected-reach-98-billion-2050-and-112-billion-2100>

Slide 6 - Ageing population

- ✓ Lower fertility leads also to ageing populations
- ✓ Compared to 2017, the number of persons aged 60 or above is expected to more than double by 2050 and to more than triple by 2100

Figure 6.32*Moving on up*

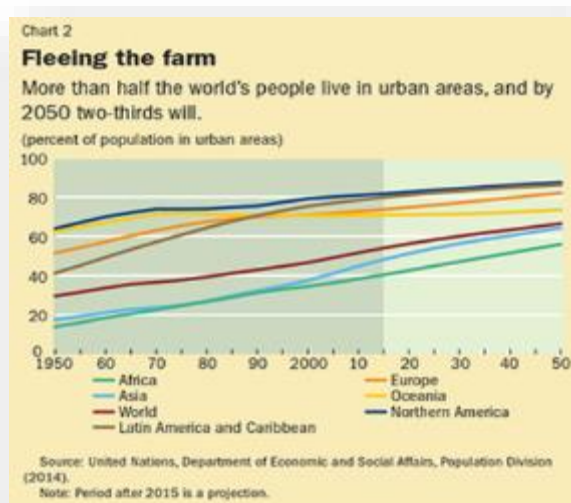
Note: From <https://www.imf.org/external/pubs/ft/fandd/2016/03/bloom.htm>

Slide 7 - Urbanisation

- ✓ Urbanisation is a 'major force' that contributes to the development of towns and cities (Page & Connell, 2009)
- ✓ For many years one of the most significant tourist destinations (Edwards et al., 2008).
- ✓ The constantly increasing level of urbanisation has influenced the phenomenon of urban tourism

Figure 6.33

Fleeing the farm



Slide 8- Overtourism

- ✓ The increasing volume of tourists
- ✓ A strain on local resources, leading to environmental degradation
- ✓ Pollution, and negative impacts on local communities

Figure 6. 34

Mass tourism



Note: From <https://pixabay.com/photos/crowd-fitzroy-melbourne-urban-city-5076714/>



Figure 6.35*The Most "Over-Touristed" Cities in Europe*

Note: From <https://www.weforum.org/agenda/2023/09/destinations-overtourism-amsterdam-almalfi-tax/>

Slide 9 - Potential contributors of overtourism

- ✓ sharing economy and peer-to-peer platforms
- ✓ local and national governments and tourist boards – ***"more is NOT better"***
- ✓ availability of low-cost flights
- ✓ giant cruise ship

Slide 10 - Inadequate infrastructure

Many destinations lack the necessary infrastructure to cope effectively with the influx of tourists:

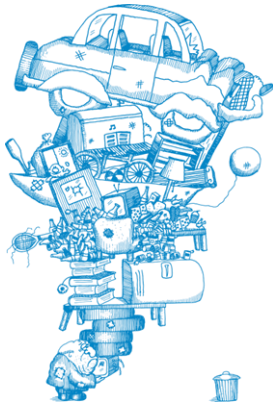
- ✓ transport networks
- ✓ sanitation facilities
- ✓ waste disposal systems,

Slide 11 - Waste management

- ✓ The tourism industry generates significant waste
- ✓ Plastic pollution
- ✓ Wastewater
- ✓ Posing challenges for proper disposal and environmental impact

Figure 6.36

Waste



Note: From <https://pixabay.com/vectors/garbage-recycling-environment-waste-7881581/>

Slide 12 - Food waste

"Food waste on the other hand, refers to edible food that is intended for human consumption but is instead gets discarded or expires"

30% of food is lost or wasted worldwide

The hospitality sector, including hotels, restaurants, and cruise lines, contributes significantly to this figure, with estimates suggesting **a wastage rate between 30-50%.**

As a result, between 2010 and 2016, food loss and waste accounted for **8-10% of global greenhouse gas emissions** from human activities

Figure 6.37



Note: From <https://pixabay.com/photos/vegetables-basket-vegetable-basket-752153/>

Slide 13 - Strategies for addressing food waste in tourism:

- ✓ Introduce portion control
- ✓ Rethink buffet systems
- ✓ Improve inventory management
- ✓ Composting and food donation programmes
- ✓ Raise awareness

Slide 14 - Seasonality: A Persistent Challenge in Tourism

- ✓ Uneven revenue flow
- ✓ Limited employment opportunities
- ✓ Underutilised resources

Seasonality remains a significant challenge for the tourism industry, requiring creativity and strategic planning to mitigate its negative effects. By diversifying offerings, implementing targeted marketing strategies, and promoting sustainable practices, tourism businesses and destinations can work towards achieving a more balanced and resilient model for the future.

Slide 15 - Seasonality - Operational Challenges

- ✓ Capacity management: Businesses struggle to manage resources effectively, often needing to scale up staff and supplies during peak seasons, only to downsize later.
- ✓ Pricing strategies: Setting appropriate prices that balance profitability during peak seasons with attracting customers during off-seasons can be difficult.
- ✓ Marketing and promotion: Tailoring marketing strategies to attract tourists during different seasons necessitates continuous adaptation and targeted campaigns.

Slide 16 - Geopolitical instability

- ✓ Political conflicts
- ✓ Geopolitical risks have a significant negative impact on inbound tourism (Wujie, 2023)
- ✓ civil unrest
- ✓ Safety concerns can deter tourists from visiting certain destinations, impacting local economies and businesses.

Note: From Wujie, X. (2023) The impact of geopolitical risks and international relations on inbound tourism - evidence from China and key source countries, *Cogent Social Sciences*, 9:2, DOI: 10.1080/23311886.2023.2285244

Slide 17 - Shifting consumer preferences

- ✓ Tourists are increasingly looking for authentic, sustainable and personalised travel experiences

- ✓ Driven by factors such as technological advances, the influence of social media and a growing emphasis on sustainability and authenticity
- ✓ Companies need to adapt their offerings to meet these evolving preferences



Slide 18 - Labour shortages

- ✓ The tourism industry often faces challenges in attracting and retaining qualified staff
- ✓ Impacts on service quality and operational efficiency.

Figure 6.38

Shortfall as share of labour demand, Q3 2022 (peak impact)

Shortfall as share of labour demand, Q3 2022 (peak impact)

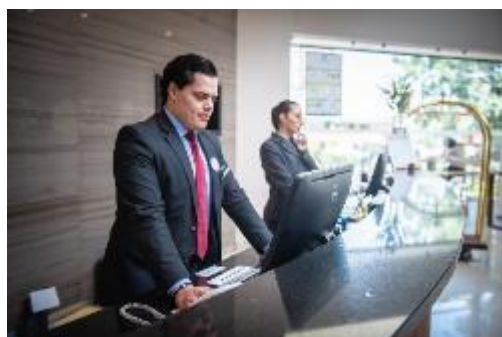
	Labour demand (000s)	Gross Shortfall (000s)	%	Ratio
EU	11,236	-1,192	11%	1 in 9
USA	6,274	-412	7%	1 in 15
UK	1,792	-128	7%	1 in 14
Italy	1,524	-250	16%	1 in 6
France	1,362	-71	5%	1 in 19
Spain	1,084	-137	13%	1 in 8
Portugal	505	-49	10%	1 in 10

Note: From WTTC, 2022 (<https://wtcc.org/Portals/0/Documents/Reports/2022/WTTC-Staff%20Shortages-August22.pdf>)

Lack of skilled workforce: The industry requires a skilled and knowledgeable workforce to provide excellent customer service and manage complex operations. Addressing this gap is crucial for maintaining competitiveness and ensuring a positive tourism experience.

Figure 6.39

Workforce



Note: From <https://pixabay.com/photos/receptionist-man-hotel-work-5975961/>

Slide 19 - Technology disruption

- ✓ The rapid advancement of technology can create both opportunities and challenges for tourism businesses
- ✓ While online platforms, mobile apps and various virtual reality experiences can enhance accessibility and efficiency, they can also disrupt traditional business models and increase competition

Figure 6.40

New technology



Note: From <https://pixabay.com/illustrations/technology-city-glowing-business-6701504/>

Slide 20 - Disruptive business models

The rise of online travel agencies (OTAs), peer-to-peer accommodation platforms, and sharing economy services like ride-sharing apps challenge traditional tourism businesses to compete in an increasingly dynamic landscape.

- ✓ **Data privacy concerns:** As technology gathers more user data, concerns regarding privacy and security become paramount. Businesses must ensure responsible data collection and usage practices to build trust with customers.
- ✓ **Evolving skillsets:** Keeping pace with technological advancements requires tourism businesses to invest in training their workforce to adapt to new tools and platforms.
- ✓ **The risk of becoming obsolete:** Businesses that fail to adapt to technological changes risk becoming obsolete and losing market share to more innovative competitors.

Unit 3 Activity - Fill in the Blanks

Lumi File: M6L5_Unit 2_Fill in the blanks (The following text is embedded in the Lumi File.)

The modern tourism industry faces a variety of challenges that affect its environmental, _____ and economic sustainability. Rising temperatures, extreme weather events and rising sea levels are threatening popular destinations, affecting infrastructure, _____ and overall attractiveness. Some popular destinations are facing problems related to _____, strain on local resources and degradation of cultural and natural heritage. On the other hand, _____, i.e., the significant fluctuations in tourist arrivals and related activities throughout the year, is still one of the biggest challenges for the tourism industry. While some destinations are used for tourism all year round, many others struggle with peak periods followed by a slump in visitor numbers and revenue. Increasing numbers of tourists in certain locations can put pressure on local resources and lead to environmental degradation, pollution and _____ on local communities. This can manifest as: (1) increased _____ and pollution; (2) strain on water resources and sanitation; (3) damage to local ecosystems and cultural heritage. In addition, many destinations lack the necessary _____ to effectively meet tourism demand, e.g., transport networks, sanitation facilities and waste disposal systems.

Global economic downturns, _____, civil unrest and safety concerns can lead to reduced travel spending and discourage tourists from visiting certain destinations, impacting local economies and businesses. The tourism industry often faces challenges in _____ qualified staff, which affects the quality of services and operational efficiency. Coupled with rapid technological advances, which present both _____ for the tourism industry, tourists are increasingly looking for authentic, sustainable and personalised approach, so businesses need to adapt their offerings to these new preferences. The changing preferences and behaviours of the new generation of travellers, influenced by factors such as _____, may have an impact on the demand for certain types of travel experiences.

Unit 4 Theoretical chapter: Destination management models and DMOs – definition and characteristics - ppt format

Slide 1

Tourism destination definition

- ✓ physical space with or without administrative and/or analytical boundaries in which a visitor can spend an overnight.
- ✓ It is the cluster (co-location) of products and services, and of activities and experiences along the tourism value chain and a basic unit of analysis of tourism.
- ✓ A destination incorporates various stakeholders and can network to form larger destinations.



- ✓ It is also intangible with its image and identity which may influence its market competitiveness



Slide 2

Destination management

- ✓ the coordinated and thoughtful planning of all elements that make up a tourism destination
- ✓ calls for a coalition of many organizations and interests working towards a common goal, ultimately being the assurance of the competitiveness and sustainability of the tourism destination
- ✓ strategic destination management with all relevant stakeholders included can contribute to developing sustainable and competitive destination and help to avoid overlapping functions and duplication of effort with regards to promotion, visitor services, training and business support

Slide 3

Destination management organization (DMO)

- often referred to also as destination marketing organizations (although marketing strategy can be only a part of the responsibilities of DMO)
- the leading organizational entity which may encompass various stakeholders and facilitate tourism partnerships towards a collective destination vision

Slide 4

Traditional vs. modern DMO

- "Traditional" DMO: focus on promotion and marketing
- Modern DMO:
 - ✓ strategic planning, coordination and management of a full range of activities within an adequate governance structure, with the integration of different stakeholders operating in the destination under common goals
 - ✓ tries to engage the residents and the local community in the tourism policy and decision-making process in order to implement a truly Public (P) – Private (P) – Community (C) approach



Slide 5

Functions of DMO

Strategic planning	Tourism product and business development
Formulation (or participation in the formulation process) and implementation of the destination's tourism policy	Digitalization and innovation
Market intelligence (data gathering and analysis, market research, etc.)	Monitoring
Training and capacity building (not only of its human resources but also facilitate training and capacity building activities for local tourism professionals)	Crisis management
Promotion, marketing and branding	Funding and fostering investments

Slide 6

Benefits of effective destination management coordinated and led by a DMO

- ✓ higher capacity to keep pace with tourism trends, to innovate and to adapt to consumer patterns and be more resilient to challenges,
- ✓ increasing **competitiveness of the destination**



"ability of the destination to use its natural, cultural, human, man-made and capital resources efficiently to develop and deliver quality, innovative, ethical and attractive tourism products and services in order to achieve a sustainable growth within its overall vision and strategic goals, increase the added value of the tourism sector, improve and diversify its market components and optimize its attractiveness and benefits both for visitors and the local community in a sustainable perspective."

Slide 7

DMO and sustainability of the destination

- ✓ One of the key responsibilities of DMO is to ensure sustainable tourism development within the destination
- ✓ Sustainability of the destination: achieving economic viability and its environmental, social and cultural integrity, while the authenticity, resources and character of the destination that made it attractive in the first place are protected

Slide 8

DMO governance models

- ✓ Not every tourism destination has a DMO
- ✓ The functions of the DMOs may vary from national to regional and local levels depending on the current and potential needs as well as on the decentralization level of public administration
- ✓ As the leading organizational entity in the destination, the DMO needs to get the support of all acting stakeholders and be considered as the legitimized entity – institutionally, legally and operationally
- ✓ For this to happen, an appropriate **governance model** is a key element.

Slide 9

Destination governance

- ✓ refers to the rules and mechanism for developing policies and business strategies which could combine all the organizations and individuals.
- ✓ DMOs models and structures significantly differ from country to country based on the different legal frameworks and particular characteristics of tourism destinations



Slide 10**Figure 6.41**

4 groups of classifications of DMO



Adapted from Reinhold et al., 2019

Slide 10**Instead of conclusion**

- ✓ Great importance of the role of the DMO in tourism development
- ✓ DMOs often struggle for resources and legitimacy
- ✓ Success of DMO business models in developing competitive, resilient and sustainable tourist destination relies in many complex factor, including recognition and cooperation with all destination stakeholders, supportive legal framework and continuous efforts

Unit 5 Activity: Applying criteria and indicators for effective DMOs on chosen DMO

Learners should read the description of the criteria and indicators for effective DMOs provided by UNWTO, available at: <https://www.e-unwto.org/doi/epdf/10.18111/9789284420841> (pages 21-24).

After careful reading, learners should choose 3 criteria for each of the three key areas and fill in the following table using the example of their local/regional DMO:

Selected criteria from each of the key performance areas:	Description of the state of the accomplishment of criteria in the chosen DMO
Key performance area: 1. Strategic leadership	
1.	
2.	
3.	
Key performance area: 2. Effective execution	
1.	
2.	
3.	
Key performance area: 3. Efficient governance	
1.	
2.	
3.	

Unit 6 Theoretical chapter: Projectization in DMOs: is public sector willing to change?- ppt format

Slide 1

Information on projectification in tourism

- ✓ Lack of extant research and statistics
- ✓ Comparative research on projectification implied that in Germany and Norway the level of projectification in tourism/hospitality significantly increased, but the retail was also in the same analytical group

- ✓ complex and multidisciplinary nature of tourism – e.g. highly projectized construction sector is directly involved in tourism development through building accommodation facilities and other infrastructure

Slide 2

Public sector organizations in tourism

- DMOs as most prominent
- in tourism development also participate a number of other public organizations including:
 - ✓ development agencies
 - ✓ culture institutions
 - ✓ sport institutions
 - ✓ local and regional authorities
 - ✓ organizations in charge of communal and public infrastructure
 - ✓ etc.

Slide 3

Potentials for project approach in public sector for dealing with tourism challenges

- key challenges in modern tourism described in detail in Unit 3
- examples of potential application of project management approach in public sector for dealing with those challenges

Slide 4

Example of dealing with dangers and threats to specific tourist destinations

- for destinations in danger of climate changes or other tourism-related threats, long-term publicly-financed projects could be developed and launched with the task of analysing situation and providing practical short and long term solutions
- applying project principles in addressing those challenges could enable better monitoring of the efficiency of work done and put more focus on the awareness raising on the situation





Slide 5

Using project management for dealing with overtourism

- phenomena of overtourism is present in many destinations worldwide and each of those destinations has different contextual factors to be considered
- potential solution: tailor-made projects dealing with the prevention of overtourism or at least decreasing its impacts, led by the local or regional DMOs
- powerful message towards achieving practical sustainability in tourism

Slide 6

Examples of public sector tourism projects dealing with overtourism:

- *Awareness-raising campaign #EnjoyRespectVenezia (see more in Unit 7)*
- *Project Respect the city implemented by local authorities in Dubrovnik*
- *"Putting Prague first" – strategy and project implementation plan led by local authorities and DMO*

and many others...

Slide 7

Challenges in projectization of DMOs

- legal framework and rather limited options for organizational transformation
- inertia present in public sector systems
- need for specific project management knowledge and skills
- combining projects implementation and continuous activities and operations



Slide 8

Projectization of European public sector institutions

- phenomena of „euro-projectification“ : projectification caused by large and continuous numbers of projects funded by the EU.
- Public sector institutions are almost always eligible to be part of the project consortium
- Sustainable tourism is present as identified challenge for financing in many EU funding programs, including Horizon Europe programme, Single market programme, Interreg and Erasmus+ programmes

Slide 9

Benefits of “euro-projectification” for tourism public sector

- Public sector organizations get chance to gain experience of working on projects
- Available amounts of funding are motivating for organizations to engage in project application and implementation: especially for new public tourism infrastructure
- Public sector organizations can also fund new employees in charge of project implementation- potential for growth and gaining people with new skills and knowledge

Slide 10

Challenges and potential downsides of “euro-projectification”

- temporary nature of projects causes different challenges for organizations, including losing employees after project ends (sometimes workers on projects)
- end of EU funding at the end of the project implementation often also causes issues with the use and management of results of project, e.g. new tourism infrastructure obtained
- creation of the “project class” – due to the professionalization of project work, there is a significant number of people with skills and knowledge on project management benefiting from continuous work on different EU projects (consultants, project assistants, project managers)

Slide 11**Challenges and potential downsides of “euro-projectification” (2)**

- *innovation paradox*: instead of expected boosting of innovations, added value of most projects is very small – sometimes just workplaces for involved people until there is funding, but with minimal long-term effects, or ‘sustainability’ in Euro-terms.
- *Renewal paradox*: due to the repeating of the same project partnerships and similar project goals and results, projects in public sector are sometimes treated as repetitive, and even mistakes are repeated
- renewal paradox can also be considered through the tendency to stick to established procedures (based on EU demands for project reporting) that tends to kill creativity and innovativeness in projects

Unit 7 What not to do - Case studies of non-sustainable tourism destination**1. Case Study: Maya Bay, Thailand****Introduction:**

Maya Bay, located in Thailand’s Hat Noppharat Thara-Mu Ko Phi Phi National Park, Maya Bay is part of the uninhabited Phi Phi Leh, one of the two main Phi Phi islands, in Krabi province. Maya Bay gained international fame after being featured in the movie "The Beach" (starring Leonardo DiCaprio) in 2000. Following the film's release, tourist arrivals skyrocketed, exceeding the bay's carrying capacity and leading to significant environmental and social issues. This case serves as a stark example of the negative consequences of unsustainable tourism practices. Prior to the pandemic, tourism contributed about 20% to Thailand’s GDP.

Pre-Tourism:

Before the movie's release, Maya Bay was a relatively secluded beach known for its pristine natural beauty, clear waters, and healthy coral reefs. The local community primarily relied on fishing and subsistence farming for their livelihood. Yet at only 15 meters-wide and 250 meters-long, the relatively small bay had become a victim of its own popularity. Around 40 years ago, Maya Bay was already a tourism destination, but (mainly) only for Thai tourists – and not so many because you didn't have speed boats at that time.

Impacts of Mass Tourism:

Over the years, the number of tourists rose from less than 1,000 to up to 7,000 or 8,000 visitors per day at peak times. Many of them were day trippers coming from nearby Phuket. On average, around 5,000 people came to the bay every day. There were also many boats coming into the bay, sometimes almost 100 boats at a time. As a result, when tourists tried to take photos, all they saw was the bay flooded with anchored boats. The view was not nice and the beach was also full of tourists.

The boats' propellers kicked up sand on the coral and their anchors hit the fragile seabed. The arriving tourists also entered the reef, usually without realising the damage they were causing.

Compared to the state of the coral about 30 years ago, 70-80% of the bay's reef was intact. Years later, less than 8% remained

Environmental Degradation

The surge in tourists resulted in:

- ✓ **Increased waste generation:** Plastic pollution, overflowing bins, and improper waste disposal severely impacted the ecosystem.
- ✓ **Coral reef damage:** Anchoring boats, tourist activities like snorkelling and diving, and increased sedimentation from boat traffic damaged the delicate coral reefs.
- ✓ **Loss of biodiversity:** The altered ecosystem and disruption of marine life harmed various fish populations and other marine species.

Social and Cultural Impacts

- ✓ **Strain on local resources:** The influx of tourists placed a strain on the island's limited water supply and sanitation facilities.
- ✓ **Livelihood changes:** The local community shifted focus from traditional fishing and farming to catering to tourists, leading to potential cultural homogenization and loss of traditional practices.
- ✓ **Overtourism:** The once serene beach became overcrowded, negatively impacting the tourist experience and local residents' quality of life.

Response and Recovery

In 2018, Thai authorities recognized the unsustainable situation and took action:

- ✓ **Closure of Maya Bay:** The bay was closed indefinitely to allow for ecological recovery.
- ✓ **Restoration efforts:** Coral reef restoration programs and initiatives to address waste management were implemented. A team of marine experts and volunteers have

replanted more than 30,000 pieces of coral, much of which has grown off the coast of nearby Koh Yung Island. About 50 per cent of the replanted corals have survived – there has been some bleaching – and they are starting to grow and spread on their own. Without the replanting, it would take 30-50 years for the reef to regenerate naturally. In the meantime, the wildlife has also returned and is thriving. Animals currently living in the bay include clownfish, lobsters and blacktip sharks, which are harmless to humans.

Additionally, the swimming ban is activated and boats can no longer enter the bay. Instead, drivers have to drop their passengers off at a newly built jetty at the back of the island away from the famous bay – all part of the rejuvenation programme designed to avoid the problems of the past. A new promenade leading from the jetty through the forest offers a pleasant five-minute walk through the woods to the beach on the other side of the narrow island.

- ✓ **Limited access:** Reopening in 2021, access to the bay is now strictly controlled, with limited daily visitor numbers and regulations on tourist behaviour. The Park has decided to cap the number of visitors to Maya Bay. The Department of National Parks has limited the number of visitors to not more 4,125 persons per day, allocated into one-hour slots to spread them out. The first slot is at 7 a.m. and each slot cannot exceed 375 people.
- ✓ **"Reminding" closure:** Seven months after reopening, the Thai authorities closed Maya Bay again. This time, however, the closure lasted two months, from 1 August to 30 September, during the monsoon season. The authorities want to further improve the island's infrastructure and give the protected area a break from the masses of tourists who have already returned to its stunning shores. The closure is a reminder that much effort has been put into restoring this battered attraction, and the authorities want to ensure that these efforts have not been in vain.

Lessons Learned:

The case of Maya Bay highlights the crucial need for:

1. **Sustainable tourism planning:** Implementing carrying capacity assessments, responsible waste management strategies, and environmental preservation measures.
2. **Community involvement:** Engaging local communities in tourism development to ensure they benefit from tourism while preserving their cultural heritage and traditions.
3. **Education and awareness:** Educating tourists about responsible practices and the importance of respecting the environment and local cultures.

As for the criticism levelled at the government when it closed the bay four years ago, a move that hit the pockets of the many tour operators who arranged trips to the bay, park chief says



most have since come to their senses. "The businessmen's only thought was to have as many tourists as possible," he recalls. "But after the closure, they sent representatives to visit the area. It was very surprising for them. They said that if they had known it was going to happen, we should have done it a long time ago. They have been co-operative."

While Maya Bay's closure and ongoing recovery efforts offer a chance for ecological restoration, the case serves as a cautionary tale against the pitfalls of uncontrolled tourism development. Continuous monitoring, responsible practices, and a commitment to sustainability are essential to ensure tourism benefits both visitors and destinations in the long term.

Reflective questions:

Lumi File: M6L5_Unit 7_Open Questions_Non-sustainable tourism destination (The following text is embedded in the Lumi File.)

What were the biggest challenges for the authorities in Maya Bay?

What negative effects has mass tourism caused?

What was the reaction of the authorities?

What lessons have we learnt?

By answering to the reflective questions, better understanding of the complexity of the interaction of the tourism and nature protection is ensured and learners are also invited to think about the example of similar projects in their immediate surroundings.

2. Case study: Mandalika tourism special economic zone, Indonesia

Note: Case study is based on the work of Loupias et al. (2023).

Introduction

The tourism sector is the mainstay of the Indonesian national economy which ranks second in foreign exchange after palm oil.

The contribution of tourism gross domestic product (GDP) namely 4.05% (2020) and 4.2% (2021) and the Indonesian government intends to develop the industrial potential even more in terms of heavily investment in new tourism special economic zones (KEKs). The strategic project of KEKs is expected to accelerate the development of the tourism industry sector, increase economic competitiveness as well as create added value for the local community. One of the designated areas for KEK that are already developed is Mandalika KEK in Lombok, West Nusa Tenggara Province.

Construction of the Mandalika KEK in Central Lombok Regency, West Nusa Tenggara Province began in mid-2019 with an area of $\pm 1,250$ ha, while first plans were already published in 2017. The idea was to create mega-resort with specific attractions and presence of international hotel accommodation brands in order to boost international recognition of the area as a quality tourist destination.

The business concept developed at KEK Mandalika includes public realm and private realm. Public realm is a business concept that develops facilities that support the sustainability of the area such as transportation infrastructure, electricity, water, gas, communications, parks, sports and entertainment facilities. In addition, public service programs such as trade, health, security, agro-tourism and religious facilities. Meanwhile, private realm is a business concept that develops independent development packages such as hotels, spas, conference venues, and museums as well as craft industry venues (Muhammad, 2020). For the public realm is responsible Indonesia Tourism Development Corporation (ITDC): Indonesia state-owned firm working on tourism development. Private realm is being implemented by consortium of international private companies.

Plans and foreseen sustainability

ITDC in 2017 presented plans for developing sustainable tourism in KEK Mandalika through following environmental and social aspects: (<https://www.invest-islands.com/news/sustainable-development>):

- ✓ equipping Mandalika KEK with solar power plants, water treatment facilities and 51% dedicated 'green space'. According to ITDC, the solar power plant will utilize land under the solar panels as a greenhouse to grow crops organically. The company will develop the solar power plant in stages and expects it to reach full capacity by 2019.

- ✓ In addition, an electric train network will be set up to provide an eco-friendly mode of transportation. In synergy with the natural settings, the project will also feature a cable car for public recreational transport. Such hybrid energy technology is projected to provide half of the resort's power demand, projected to reach 110 megawatts by 2025.
- ✓ plan to involve and empower the local people of Lombok, creating around 5,000 new jobs and offering various empowerment programs, especially for those who lived in the Mandalika area. These include English language courses and hospitality training.
- ✓ Construction of the Mandalika Grand Mosque aims at helping to make the KEK Mandalika a Muslim-friendly destination and contribute further to the local community.

As for private sector, the investments in Mandalika included building of large high-quality and branded hotel capacities, golf courses, integrated sports and entertainment facilities and building of MotoGP race circuit.

Present state

The Pertamina Mandalika International Circuit, spans a track length of 4.31 kilometers, featuring 17 turns and expansive run-off areas. It was inaugurated by President Joko Widodo in 2021 and already hosted several MotoGP races, attracting huge numbers of visitors and positioning Mandalika, Lombok and entire Indonesia on a world sports tourism map.

Figure 6.42

Pertamina Mandalika International circuit



Note: From Pertamina Mandalika International circuit; photo by Arya Krisdyantara on Unsplash, <https://unsplash.com/photos/a-couple-of-people-that-are-running-down-a-hill-btj8-tWigkY>

Tourist success is undeniable: In 2019 the number of tourists coming to West Nusa Tenggara Province was 3.7 million people. In addition, in recent years the tourism sector has had a major impact on Central Lombok Regency's Original Revenue (PAD) of 200 billion. Previously the PAD was around 35 billion. Along with recognition of being halal destination with rich natural and cultural heritage, Mandalika and Lombok area also economically significantly profited from Mandalika Moto GP events which contribute to the boost for Indonesian tourism.

The other side of the coin: social (un)sustainability of the project

This project of government-led strategic tourism development, apart from success in achieving economic sustainability, causes various social problems in the community. According to De Schutter, the UN Special Rapporteur on Extreme Poverty and Human Rights, the Indonesia Tourism Development Corporation (ITDC) as the person in charge of developing Mandalika has not yet accommodated land disputes with people who were displaced from their homes and land for the purpose of the building of mega-resort. According to the report, Mandalika tourism development has ignored human rights (HAM) and is not in line with the concept of sustainable development. Apart from compensations for displaced residents, there were also significant negative impacts on the

indigenous communities who depend on natural products for their livelihoods, including farming. Just as a simple example: Farmers and cultivators have to go around the circuit if they are going to their rice fields, gardens and forests Because they can't cross the circuit. So that their work productivity decreases and they have to pay extra costs. Even fishermen are no longer allowed to take fish on the beach along the circuit. This is a significant change, having in mind that for many years the activities of planting rice, farming, fishing were the main livelihoods of the most Mandalika people.

Although strategic project of Mandalika sufficiently delivered economic gains (for investors, as well as on the national level), for large proportion of the local people, especially residents of demolished villages and local farmers. For them it resulted in social and economic disruptions, loss of cultural heritage, and inequality in benefit distribution.

Apart from social costs, there is also additional twist to the planned environmental sustainability of the project. Previously, the location of the circuit was a free agricultural area where people could cultivate crops under the government's permission. At that moment, the community activities were not massive and relatively safe for the environment: communities cultivate the land and had livestock without putting much pressure on the land. After the construction of the circuit and accompanying facilities, surrounding villages are suffering from stronger floods during the rain season and there is a drop in shrimp production due to the pollution of the river and the hill grinding for the development of hotels.

Lessons (not) learned

In the concept of sustainable tourism, local residents must be empowered to participate in the decision-making on the tourism development.

They are important stakeholders in developing sustainable tourism projects and their interests and needs should be taken into consideration, especially in mega tourism projects which drastically change entire areas.

Project of Mandalika tourism development significantly neglected the social component of the sustainability, in terms of ensuring information flow, rightful compensations and the distribution of benefits for the residents negatively affected by the project. Also, environmental impacts were severely underestimated and not much is being done in terms of trying to stop or mitigate the negative changes that tourism and new sport infrastructure leaves on the nature and environment of Mandalika and surrounding areas. Currently, those negative social and environmental changes affect local community and might not be very visible to tourists and visitors, which probably also contributes to the hesitation of decision-makers and investors for solving those problems.

Reflective questions

Which elements of the project management do you recognize while reading the description of the development of Mandalika?

Can you describe in more detail potential economic gains from this type of mega tourism projects in general?

What activities could be performed now by the Indonesian public sector in order to mitigate negative effects of Mandalika tourism project?

Do you think that negative reputation regarding violating social sustainability could decrease tourism demand for Mandalika and Lombok as “artificially” created resort destinations?



Developing potential alternatives for Mandalika case through responding on the reflective questions implies also exercise of problem solving and incorporates knowledge obtained in previous lessons.

3. Case study: Venice, Italy

Venice is the only city of its type in the world and a UNESCO World Heritage Site representing a cultural and natural asset of exceptional value, demanding its preservation and transmission to future generations.

Venice, city, important seaport and capital of the province of Venezia and the Veneto region in northern Italy. As an island city, it was once the centre of a maritime republic. It was the largest seaport in late mediaeval Europe and the continent's commercial and cultural link to Asia. Venice is unique from an ecological, architectural and historical point of view. In its time as a republic, the city was known as la serenissima ("the most serene" or "sublime"). It is still an important Italian port on the northern Adriatic and one of the oldest tourist and cultural centres in the world.

Renowned for its canals and historical landmarks, Venice struggles with issues related to:

- ✓ **Overtourism:** The city receives millions of tourists annually, placing a strain on infrastructure, resources, and the local population's quality of life. Overtourism simply means that too many people visit the same place at the same time, and Venice is unfortunately a prime example of this. Every year, around 20 million visitors flock to the city, which is visited by around 120,000 people on its busiest days, while only 50,000 people live there permanently. Many of these tourists stick to the famous landmarks – the Rialto Bridge, St Mark's Square – concentrating visitor numbers in a tiny area. This damages Venice's fragile buildings, puts a strain on the infrastructure, prevents locals from going about their business and, frankly, also makes for a miserable visitor experience. No one is served by this, not even the tourists.
- ✓ **Environmental concerns:** Rising sea levels due to climate change threaten the city's foundations and cultural heritage. Additionally, the constant flow of tourist boats contributes to water pollution.
- ✓ **Economic dependence on tourism:** The city's economy heavily relies on tourism, making it vulnerable to external factors like economic downturns and pandemics. This dependence can lead to neglecting the needs of residents and prioritizing tourism



interests over local well-being. Venice is the second busiest harbour in Italy and the fifth largest in the Mediterranean. According to data from the port available to CNN, around 4,200 jobs are linked to the cruise industry, of which over 1,700 work directly with passengers. Figures for 2018 - the last year of normal cruise traffic as Venice was hit by devastating floods in 2019 - show that 1.8 million passengers passed through Venice, spending an estimated 55 million euros (\$67 million). Short-stay tourists make up around 73 per cent of visitors to Venice, but they only contribute to 18 per cent of the tourist economy (those who stay at least one night in a hotel account for almost 50 per cent).

- ✓ **Depopulation:** The high cost of living and the challenges associated with overtourism have driven residents away and affected the social fabric and cultural vitality of the city. In 1951, the city of Venice had almost 175,000 inhabitants. This is a figure that corresponds to the historical population figures for many centuries. In 2022, the population of Venice was below 50,000 for the first time since the Middle Ages, a decrease of seventy per cent in seventy years.

Response

To preserve the city's unique cultural and historical significance, the authorities are taking initiatives to address these issues, such as implementing measures to protect against flooding, exploring sustainable transport options and promoting responsible tourism practises.

- ✓ **Sustainable tourism** - which does not alter the natural and artistic environment and does not hinder the development of other social and economic activities in harmony with the daily life of the inhabitants - is necessary to preserve the extraordinary beauty and uniqueness of Venice.

#EnjoyRespectVenezia is the City of Venice's awareness-raising campaign launched in the International Year of Sustainable Tourism for Development (2017), which aims to encourage visitors to treat the environment, the landscape, the artistic beauties and the identity of Venice and its inhabitants responsibly and respectfully.

12 good rules for the responsible visitor make up a sort of **handbook sharing tips and advice** on how to become a more **aware and respectful traveller** towards Venice's landscape, environment, artistic beauties and identity.

- 1. Discover the hidden treasures of Venice in **the least visited places** to appreciate Venice's exceptional beauty.
- 2. Explore the **islands in the lagoon** and **Mainland Venice**, participate in events spread throughout the Metropolitan City.
- 3. Taste the **local products** and typical Venetian cuisine.

- 4. Visit the **artisans' workshops** and learn about the ancient trades that still exist today in Venice. Choose only **original products** and do not buy any goods from illegal vendors.
- 5. Book tours with **qualified tourist guides** able to recount Venice's thousand-year-old history.
- 6. Walk on the right, do not stand at any time on bridges, **do not even lead bikes** by hand.
- 7. Steps of churches, bridges, wells, monuments and banks of streams, canals etc. are not picnic areas. Please use the public gardens for this necessity. Consult the map.
- 8. St. Mark's Square is a monumental site and excluding pertinent bars and restaurants, it is forbidden to stand at any time in order to consume food or drink.
- 9. Venice is a **city of art**: it is forbidden to camp, walk about in swimwear, dive and swim. The **beaches at Lido and Pellestrina can be easily reached**.
- 10. Respect the environment and artistic wealth: do not litter, do not vandalize with graffiti, or padlocks. Do not give food to the pigeons.
- 11. If you are staying in an apartment or flat, please get informed about the garbage recycling collection.
- 12. Plan your trip and choose to visit Venice when it is **less crowded**. Find out more about Venice entry fee.

Figure 6.43

#EnjoyRespectVenezia



Note: From <https://imagesofvenice.com/enjoyrespectvenezia/>

- ✓ Venice and its coastal area are known to be vulnerable to the effects of climate change, such as rising sea levels, extreme waves and storm surges. Using an innovative approach that combines regional and global climate models with machine learning and satellite data, a team of researchers including scientists from the CMCC and Ca' Foscari University in Venice has analysed coastline erosion and water quality degradation, providing important insights into future climate scenarios that are essential for effective coastal risk management.
The results of the study show that the decisive factor for the increasing frequency of extreme events in the Venetian lagoon is the change in mean sea level. Furthermore, the speed of the sea water is the most influential factor for the water quality parameters, while the height of the sea surface and the wind direction are the most important factors for the change in the coastline.
- ✓ The effort on behalf of the Roman government is MOSE, or Modulo Spertimentabile Electtromeccanico (Electtromechanical Experimental Module in English). MOSE is a 6-billion-euro barrier system designed to prevent massive waves from driving up flood levels. Venice still suffers from high tides, but MOSE helps to reduce the impact of rising sea levels.



Note: From <https://wordlesstech.com/mose-flood-barrier-protecting-venice/>

- ✓ Venice is trialling a new tax for day trippers, which will vary depending on how busy the city is. At "normal" times, visitors will pay €6 to enter Venice, €3 at quieter times and up to €10 in the event of "overwhelming" visitor numbers.

The city also charges an accommodation tax, the amount of which depends on the number of overnight stays and the number of stars the accommodation has.

- ✓ In 2021, large ships were banned from entering Venice, but the ban has yet to be enforced. Two years after the ban, there is still no definitive plan for a new harbour in Venice.

Ships weighing over 25,000 tonnes have been banned from entering the lagoon through the Giudecca Canal. This canal runs directly in front of St Mark's Square and leads to the port of Marittima on the western edge of the historic centre of Venice.

Although the ban on cruise ships is enshrined in legislation, the reality is not so simple. Just a few months after the ban, a 92,000-tonne MSC Orchestra ship moored in the harbour of the historic city. The reason for this? The city authorities have yet to build a suitable cruise harbour outside the lagoon.

The harbour in the industrial area of Marghera has been proposed as a temporary solution, but it lacks the infrastructure to become a permanent passenger terminal. However, Marghera is still inside the lagoon, so the cruise ships diverted here continue to be an ecological disaster for Venice.

Many cruise companies have therefore abandoned the lagoon altogether and now dock in Ravenna. The coastal city is about a two-hour drive from Venice and the transfer time has frustrated passengers who were sold an itinerary that included the canal city.

In addition, the Italian government had to pay 22.5 million euros in compensation to the operator of the terminal in Venice and associated companies because of the ban in 2022.

Reflective questions:

Lumi File: M6L5_Unit 7_Open Questions_Non-sustainable tourism destination (The following text is embedded in the Lumi File.)

What are the biggest challenges still facing the authorities in Venice?

What negative effects has overtourism caused?

How do you think the Venice authorities have reacted?

What lessons can be learnt?

Unit 8 Tourism businesses towards sustainability: project-based approach as a necessity?- ppt format

A project-based approach can be an effective tool for tourism businesses striving for sustainability for several reasons. This approach can provide a framework for tourism businesses to break down the sustainability challenge into manageable steps, encouraging innovation, collaboration and continuous learning towards a more sustainable future.

Slide 1

Projectization of Private Tourism Businesses - *Potential and Addressing the Challenges*

Explore the concept of projectization and its potential benefits for private tourism businesses. We will also discuss the challenges that arise due to the complex nature of tourism activities and how to address them for a successful implementation.

Slide 2

What is Projectization?

- A management approach that breaks down complex endeavours into more manageable projects.



- Each project has a defined scope, timeline, budget, and objectives.
- Enables focused resource allocation, improved planning and control, and increased efficiency.

Slide 3

Implementation of Sustainability

- European tourism companies must implement sustainability in their businesses as part of the European Green Deal legislation in order to fulfil the commitment to reduce carbon emissions to zero by 2050.
- European travellers are keen to embrace sustainability.
- Tourism SMEs can improve their competitive position by investing in embedding sustainability in their business.
- Opportunity to save the planet and help local communities while offering meaningful and authentic experiences to the growing number of responsible travellers.

Slide 4

Focusing Targets - *Specific and Measurable Objectives*

- Projects allow tourism businesses to focus on specific sustainability goals or challenges
- Setting clear and measurable sustainability goals within defined project scopes
- Targeted approach allows for a more meaningful and measurable impact.
- Goals related to, e.g., *reducing carbon emissions, preserving local ecosystems or promoting responsible tourism practises, reducing energy consumption, implementing waste management systems, or sourcing sustainable materials*

Slide 6

Efficient Resource Allocation

"Resource allocation helps resource managers schedule the best team for the job and streamline how work is assigned, based on resource availability"

- Sustainability project can have its own budget, timeline and resource allocation
- Splitting sustainability initiatives into projects, companies can utilise their resources more efficiently
- Includes people, time, money and equipment— for projects, taking into account the availability, skills and interests of the team

- Easier to track and manage progress when efforts are focussed on a specific set of goals

Slide 7

Engage Stakeholders

- **Stakeholder mapping** - develop a plan to work with each group in a way that works best for them
- **Encourage collaboration** with different stakeholders, such as local communities, government agencies, non-governmental organizations and customers
- **Involving stakeholders** in specific projects helps build partnerships, share expertise and gain support for broader sustainability efforts

Slide 8

Transparency

- Inform stakeholders regularly about the progress of the project, sustainability efforts and successes
- Transparency creates trust and demonstrates commitment to sustainability.

Slide 9

Integrating Sustainability into Projectization

- **Sustainability Impact Assessments** (SIA; OECD, 2010): Consider the potential environmental and social impacts as early as the planning phase of any project.
- **Sustainable procurement**: Criteria for the selection of sustainable suppliers and materials can be included in the project plans. This could include the use of recycled content, local sourcing or energy efficient equipment.
- **Waste management strategies** (UN, 2013): Develop project-specific waste management plans to minimise waste generation, encourage recycling and ensure proper disposal.

Slide 10

Benefits of Projectization for Tourism Businesses

- ✓ Tourism industry - dynamic and the challenges can change over time
- ✓ Projectization - allows businesses to adapt to changing circumstances and emerging sustainability issues by initiating new projects or adapting existing projects to solve current problems.

Slide 11

Benefits of Projectization for Tourism Businesses

Projectization offers a multitude of benefits for private tourism businesses:

- **Enhanced project management:** Improved planning, execution, and control of tourism-related activities.
- **Increased efficiency:** Focused resource allocation and streamlined processes lead to cost savings and improved resource utilization.
- **Innovation and agility:** Projectization foster a culture of innovation and allows businesses to adapt quickly to changing market demands.
- **Improved risk management:** Proactive identification and mitigation of potential risks associated with tourism projects.
- **Enhanced customer satisfaction:** Delivering high-quality experiences through well-managed projects leads to increased customer satisfaction and loyalty.

Slide 12

Benefit - Compliance and Certification

- Many tourism businesses aim to achieve sustainability certifications or compliance with industry standards
- Projects can be designed to ensure compliance with local and international sustainability regulations.
- ✓ *Projectization facilitates the systematic implementation of measures required to fulfil these criteria and makes the certification process easier to achieve.*
- ✓ *It reduces the risk of legal issues and ensures that the business operates within the framework of applicable laws.*

Slide 13

Benefit - Communicating Progress

- Clear project goals and results make it easier for companies to communicate their sustainability efforts to customers, investors and other stakeholders
- ✓ *Transparency strengthens the company's reputation and helps to build trust.*

Slide 14

Challenges of Projectization in Tourism

- **Complexity of tourism activities:** Tourism involves a multitude of interconnected elements, making it challenging to define clear project scope and boundaries.

- **Seasonality and fluctuations in demand:** Tourism businesses experience seasonal fluctuations in demand, requiring flexible project planning and resource allocation.
- **Reliance on external factors:** Tourism projects often depend on external factors like weather conditions, political stability, and global economic trends, posing challenges for risk management.

Slide 15

Challenges of Projectization in Tourism

- **Stakeholder management:** Coordinating and managing the expectations of diverse stakeholders, such as customers, suppliers, and local communities, can be complex.
- **Lack of project management expertise:** SMEs in tourism businesses may lack the necessary expertise and resources to effectively implement projectization.

Slide 16

Conclusion

It is a strategic and practical necessity for tourism businesses striving for sustainability.

Projectization provides a structured framework for tourism businesses to:

- ✓ converge with sustainability issues.
- ✓ address specific challenges, measuring progress, engaging stakeholders and adapting to the dynamics of the industry

By defining clear goals, integrating sustainability throughout the project lifecycle and encouraging continuous improvement, tourism businesses can make significant progress towards a more sustainable future.

Unit 9 Module Completion - Video

Congratulations on completing this transformative journey through the areas of projectized tourism businesses. You have explored the key concepts of business transformation into projectized structures that are tailored to the needs of the sustainable tourism industry.

But your journey doesn't end here. The world of projectized tourism businesses is constantly evolving. There is always more to learn, more to explore, and more to implement.

With an additional 10 hours of training material, you can delve deeper into the topics you just discovered. There is so much more out there to learn. If you want to learn more about communications in a project-driven organization, explore how a PMO works in a tourism company, or see how a campaign can contribute to a company's sustainability strategy, you have come to the right place.

These advanced materials are designed to deepen your understanding, sharpen your skills and empower you to manage hybrid sustainable projects with greater impact.
Are you ready to take the final step?



Module 6 Closing Video

You did it! Congratulations on completing this course! We hope the knowledge you gained will be a valuable asset in your future endeavors.

This concludes your online training course to become a *Sustainable Hybrid Project Manager*.

Thank you for your dedication and hard work throughout the program.

Now go out there and make a difference! This is just the beginning! Keep exploring and expanding your newfound knowledge.



Module 6 Assessment Exams

Welcome to the Module 6 exam, designed to assess your understanding and mastery of the material presented in this module. Please read the following instructions carefully before you begin. Answering Questions: The exam consists of two types of questions:

- Multiple Choice: Each multiple-choice question is followed by four possible answers. Read each question carefully and select the one best answer that is correct or most accurately responds to the question.
 - True or False: For true or false questions, read each statement carefully. Decide whether it is true or false based on your knowledge of the subject material and indicate your choice accordingly.
1. Low centralization, low formalization, low stratification and high adaptiveness are characteristics of:
 - a) Organic organizational structure
 - b) Divisional organizational structure
 - c) Functional organizational structure
 - d) Matrix organizational structure
 - e) Mechanistic organizational structure
 2. Which type of organizational structure from the list is most often present in small family business?
 - a) Functional organizational structure
 - b) Divisional organizational structure
 - c) Circular organizational structure
 - d) Flat organizational structure
 3. Weak, balanced and strong are sub-types of which organizational structure?
 - a) Functional organizational structure
 - b) Divisional organizational structure
 - c) Matrix
 - d) Circular organizational structure
 4. Which of the following organizational structures has “two bosses” rule?
 - a) Organic organizational structure
 - b) Divisional organizational structure
 - c) Functional organizational structure
 - d) Circular organizational structure
 - e) Matrix organizational structure
 5. Can you identify one project organizational structure that is best fit for all organizations aiming to projectize their business?



- a) Yes, it is a functional project organizational structure
 - b) Yes, it is a matrix project organizational structure
 - c) Yes, it is pure project organizational structure
 - d) No, each organizational structure has its own advantages and disadvantages
6. Projectization enforced in the terms of organizational change positively impacts the process of how resources are allocated to projects and how much influence will project manager have within the organization.
- c) True
 - d) False
7. In a middle-size construction company running standardized projects without much need for innovation which PMO would you choose to establish:
- a) Supportive PMO
 - b) Controlling PMO
 - c) Directive PMO
8. In a company without a mature project management methodology or consistent set of practices, guidelines and shared software and templates, it is advisable to establish:
- a) Delivery PMO
 - b) Activist PMO
 - c) Compliance PMO
9. Which of the following types of PMOs is associated with top level of management and maximum strategic influence in terms of alignment of projects with organizational objectives and priorities:
- a) Individual PMO
 - b) Agile PMO
 - c) EPMO
 - d) Departmental PMO
10. If you in your organization have a significant number of inexperienced project teams who need extensive guidance and monitoring it is not advisable to choose:
- a) Supportive PMO
 - b) Controlling PMO
 - c) Directive PMO
11. The intensity and scope of change management decreases as the number of people affected increases.
- e) True
 - f) False

12. Small, incremental, iterative changes that an organization makes to evolve its products, processes, workflows and strategies over time are called:
- a) Transformational changes
 - b) Adaptive changes
 - c) Hybrid changes
 - d) Radical changes
13. Changes larger in scale and scope often involving a dramatic and sometimes sudden departure from the status quo are called:
- a) Transformational changes
 - b) Adaptive changes
 - c) Hybrid changes
 - d) Radical changes
14. Change management primarily refers to the management of change with consideration of which three main points?
- a) Individuals, project scope, and corporate culture
 - b) KPI, corporate strategy, and corporate culture
 - c) Individuals, corporate structures, and corporate culture
 - d) Corporate strategy, corporate vision, and corporate culture
15. Projectization facilitates the systematic implementation of measures and makes the certification process easier to achieve.
- a) True
 - b) False



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HYPRO4ST

**WP3 Design And Development of the HyPro4ST
Online training Course and Practical Guide**

Module 1 – Additional material



Univerza v Ljubljani



DEPARTAMENTO DE TURISMO E GESTÃO DE TURISMO
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Lesson 1: Eco-certification in tourism industry

Unit 1: Introduction (adapted from Pičuljan and Težak Damijanić, 2022)

“Tourism is one of the most significant economic and social phenomena. However, despite the fact that it has positive effect on economy, tourism also contributes to environmental degradation of tourism destination (Constantin et al., 2014). Tourism sector is aware of the negative impact that it has on the tourism destination environment (Yilmaz et al., 2019), so they try to implement the sustainability concept through different policies and development strategies focusing primarily on environmental sustainability (Băltescu & Boşcor, 2015; Novelli et al., 2017). More precisely, their efforts in reducing negative impact on the environment is evident mostly through the implementation of green practices and participation in environmental certification programs (possession of eco-labels) (Iorgulescu, 2020).

Tourist accommodation sector is important stakeholder in tourist destinations and important part of tourism development but requires a huge infrastructure which leads to the natural environment resources depletion or affecting the architectural character of the destination (Salem, 2021). Consequently, these types of facilities are increasingly implementing eco-labels and green practices in their business. Some of the reasons are financial benefits, customer demand and stakeholder relations (Kim et al., 2017). Eco-certification in tourism settings has been studied extensively (Karlsson & Dolnicar, 2016) for more than 30 years (Ajani et al., 2019).

Eco-certification programs can be considered as a relatively effective tool to achieve environmental sustainability in the tourism industry. They refer to a formalized method to codify standards representing efficient environmental protection and identify businesses living up to these standards (Park & Boo, 2010). Eco-certification programs are voluntary-based tools intended to reduce tourism environmental impacts (Preziosi et al., 2019). Its practices are promoted to the public through the graphic symbol or/and a descriptive text, i.e., eco-label (Rabontu & Babucea, 2015). Therefore, eco-labels provide information regarding the environmental criteria of the products supplied by the market (Rabontu & Babucea, 2015).”

Source: Pičuljan, M., Težak Damijanić, A. (2021). Identification of eco-labels and green practices in hotel groups settings - content analysis approach. In: *Interdisziplinäre Managementforschung*. Erceg, A., Požega, Ž. (ed.). pp. 468-486.

Unit 2: Additional reading resources on eco-labelling

For more information about eco-labelling programs and eco-labels in tourism, check the following papers:

Ajani, F., Omobuwa, B. & Ajayi, O. (2019). Managements and Tourists Knowledge and Appreciation of Eco-Labeling and Eco-Certification at Selected Coastal Tourist Destinations in Lagos, Nigeria. *Journal of Tourism Management Research*, 6 (2), 119–133. <https://doi.org/10.18488/journal.31.2019.62.119.133>

Băltescu, C.A. & Boşcor, D. (2015). The online potential for the development of eco-certified accommodation units in Romania. *Bulletin of the Transilvania University of Brasov. Series V: Economic Sciences*, 8 (2), 149–156. http://webbut2.unitbv.ro/BU2015/Series%20V/BILETIN%20I/20_Baltescu.Boscor.pdf

Constantin, C. P., Ispas, A., & Candrea, A. N. (2014). Identifying Tourists Interested in Eco-Certified Accommodation Units from Brasov, Romania. *Management Dynamics in the Knowledge Economy*, 1(3), 521–542. Retrieved from <https://www.managementdynamics.ro/index.php/journal/article/view/27>.

Iorgulescu, M.C. (2020). An Insight Into Green Practices and Eco-Labels in the Hotel Industry. In: R. Pamfilie, V. Dinu, L. Tăchiciu, D. Pleşea, C. Vasiliu eds. *6th BASIQ International Conference on New Trends in Sustainable Business and Consumption*. Messina, Italy, 4-6 June 2020. Bucharest: ASE, pp. 1164-1171. https://www.researchgate.net/profile/Dracea-Lacramioara-Alina/publication/363917386_Eco-Friendly_Pest_Control_Alternatives_to_SyntheticChemical_Pesticides/links/644d7e7b5762c95ac3609eef/Eco-Friendly-Pest-Control-Alternatives-to-Synthetic-Chemical-Pesticides.pdf#page=1164

Karlsson, L. & Dolnicar, S. (2016). Does eco certification sell tourism services? Evidence from a quasi-experimental observation study in Iceland. *Journal of Sustainable Tourism*, 24 (5), 694–714. <https://doi.org/10.1080/09669582.2015.1088859>

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- Salem, A.S. (2021). Applying Green Practices in Hotels Sector to Ensure Sustainable Development-Case Study of The Hotels in Siwa Oasis. *Alexandria Science Exchange Journal*, 42 (2), 381–393. <https://doi.org/10.21608/asejaiqjsae.2021.170151>
- Spenceley, A., 2019. Sustainable tourism certification in the African hotel sector. *Tourism Review*, 74 (2), 186–200. <https://doi.org/10.1108/TR-09-2017-0145>
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Unit 3 Case study: Development of eco-certification program

Read this case study and answer the questions:

Lumi file 1 Question and answers

Program description

EcoDomus is a marking programme carried out by the Istrian Region Administrative Department for Tourism to increase social and environmental awareness in tourism. The programme aligns well with the global sustainability goals and guarantees environmental and health safety. Through this program, the Istrian Region Administrative Department for Tourism wants to facilitate diversification and raise the quality of accommodation. It is intended for home-based accommodation, registered as a holiday home or apartment with up to 20 beds open throughout the year. Participants are encouraged to comply with social and environmental responsibility principles, wholesome environmental and health protection, use eco-certified washing and cleaning products, use eco-certified toilet products, use natural materials, save water and energy, and do waste sorting and recycling.

Interested participants get a certification. To get this certification, they must apply by filling out an online form and submitting it before the end of October. There are 75 criteria for getting such a certification, divided into 12 categories. There are 50 basic criteria and 25 additional criteria. Facilities bearing the EcoDomus mark must comply with at least 50 basic criteria, while those bearing the Eco Domus Premium mark must adhere to all the basic criteria and at least 20 additional criteria.

Participants get different benefits like being a part of EcoDomus promotion materials, getting support regarding the implementation of different additional criteria, being invited to different education workshops on sustainable tourism, getting information about different financial options and legal support needed to improve the current state, being listed in an online available database available to tourists who are interested in staying in an accommodation that supports sustainability.

On the other hand, they must adhere to criteria, place the mark on a visible place, provide feedback annually designed to control the implementation of the criteria, participate in specific education workshops, promote this program, forward questionnaires to guest if requested, and promote this program on their web sites, social media pages and printed materials.

Figure 1.1

Certification criteria by category



Elaboration of categories

Management and communication

All the staff managing this facility need to be educated and trained per EcoDomus rules, and the facility sustainability policy has to be clearly outlined. All criteria in this field are defined as basic.

Table 1.1

Management and communication criteria

Basic	Additional
• Appointment and training of facility manager, • Staff training on the rules of the Eco Domus program, • reporting on the implementation of the Eco Domus program, • Informing guests about inclusion in the Eco Domus program, • Drafting of the Sustainability Policy, • Monitoring guest satisfaction.	N/A

Local values

This program promotes local culture, nature, way of life, customs, mores, and traditions to preserve Istrian heritage and authenticity. All criteria in this field are defined as basic.

Table 1.2

Local values criteria

Basic	Additional
• Informing guests about the local cultural and historical heritage • Informing guests about local natural values, contents and events • Landscaping with autochthonous plant species • Promotion of traditional products and souvenirs • Informing guests about opportunities to learn and/or participate in traditional customs	• N/A

Food and drink

Promotion of local cuisine and agricultural food products and beverages is a must. All criteria in this field are defined as basic.



Table 1.3

Food and drink criteria

Basic	Additional
• Informing guests about local and eco-certified food and beverage producers • Promotion of local cuisine and typical food products • Informing guests about the healthiness of tap water and the desirability of avoiding buying drinks in plastic packaging	N/A

Water management

The program highly encourages water usage monitoring and water usage reduction. There are seven basic and two additional criteria.

Table 1.4

Water management criteria

Basic	Additional
• Water consumption monitoring • Informing guests about the desirability of saving water • Use of water-saving taps and showers and regular maintenance • Limiting the volume of the cistern and regular maintenance • System control and prevention of water losses • Watering plants early in the morning or late in the evening in the summer months • Disposal of wastewater per regulations	• Rainwater collection and use in the facility • Own purification of waste

Hygiene

The program aims to protect guests' health and avoid soil contamination through these indicators. There are two basic and one additional criterion.



Table 1.5

Hygiene criteria

Basic	Additional
• Procurement of personal hygiene products with an eco-label or made from natural ingredients • Procurement of eco-labelled toilet products	• Procurement of 100% recycled toilet products

Maintenance, cleaning and disinfection

The emphasis is on protecting the staff's health, guests' well-being, the environment, and the overall community. There are three basic and three additional criteria.

Table 1.6

Maintenance, cleaning and disinfection criteria

Basic	Additional
• Rational use of detergents and disinfectants • Using detergents with eco-certification or made from natural ingredients • Using reusable cloths and microfiber cloths	• Using an electrolysis system to disinfect pool water • Automated dosing of water disinfectants in the pool • The possibility of measuring the pH level and chlorine level in the pool by guests

Waste management

The aim is to reduce as much waste generated by tourism in tourist destinations as possible. There are six basic and three additional criteria.

Table 1.7

Waste management criteria

Basic	Additional
• Waste generation monitoring • Separate collection of recyclable waste • Separate collection of hazardous waste • Informing guests about ways how they can reduce waste generation	• Use of 100% recycled and biodegradable materials for advertising purposes • Organic waste composting • Waste cooking oil collection



and do proper waste separation • Reuse or donation of used furniture, textiles and other valuable items • Avoiding small packages	

Energy management

The intention is to save energy and reduce seasonal energy consumption during summer. There are eight basic and ten additional criteria.

Table 1.8

Energy management criteria

Basic	Additional
• Energy consumption monitoring • Informing guests about energy savings • Ensure that windows and doors are sealed good • Air conditioning rules (maximum of 22oC in winter and at least 26oC in summer) and illuminance levels control • Electrical devices maintenance • Disconnection of all devices from the power supply outside the tourist season • Use of energy-saving bulbs in at least 80% of lighting fixtures • Switching to "A" or higher energy class devices	• Use of energy-saving bulbs in 100% of lighting fixtures • Use of at least 80% of "A" or higher energy class devices • The energy class of the facility "A" • Energy class of the building "B" • The energy class of the object "C" • Obtaining at least 10% of electricity from renewable sources • Obtaining at least 50% of electricity from renewable sources • Obtaining hot water using a system based on renewable energy sources • Solar charging stations for electric bicycles and other devices • Passive energy saving

Mobility

Mobility takes into account different sustainable types of transportation. There are three basic and one additional criterion.

Table 1.9

Mobility criteria

Basic	Additional
• Encouraging guests to use public transport • Provide information about bicycle rental options	• Offering bicycle renting service



• Encourage guests to buy bicycles or walk	

Interior and exterior

Focus is placed on natural and eco-friendly materials. There are four basic and two additional criteria.

Table 1.10

Interior and exterior criteria

Basic	Additional
• Transition from conventional to eco-certified paints and varnishes for interior spaces • Transition from mixed textiles, materials and equipment to those made of natural materials • Avoiding the use of plastic • Avoiding conventional protective products in horticulture	• Procurement of furniture with a responsible sourcing certificate • Procurement of textiles with an eco-certificate

Noise and light pollution

Silence is essential for the health of people and other living beings. The alternation of day and night, light and darkness, is significant for normal biological processes. Therefore, efforts are made to remove sources of noise and light pollution. There are four basic and no additional criteria.

Table 1.11

Noise and light pollution criteria

Basic	Additional
• Informing guests and staff about the importance of preserving peace in the accommodation facility • An active approach to limiting all sources of noise • Prevention of light pollution when using outdoor and ambient lighting	• N/A

Social commitment

Social engagement in the local community is one of the key elements of sustainable tourism development. However, all three criteria are optional.

Table 1.12

Social commitment criteria

Basic	Additional
N/A	- Support for local initiatives aimed at increasing social cooperation and integration - Active advocacy of the principles of sustainable development on the broader community - Implementation of additional measures for nature conservation and environmental protection

For more information about this program, see <https://www.istra.hr/hr/business-information/projekti/eco-domus>

Unit 4 Activity: Question and answers

Lumi files

Answer the following questions (correct answers in bold)

Answer the following questions.

Who is the primary beneficiary of this program?

- home-based accommodation
- local community
- public authorities
- tourism companies

What principle of the circular economy model does this program comply with?

- Production
- Distribution
- Waste management**
- Raw materials

Usage of what type of renewable energy source is encouraged in this program?

- Solar Energy**
- Wind Energy
- Hydropower



- Geothermal energy
- Tidal Energy
- Hydrogen Energy
- Biomass

Does this program support sustainable transportation?

- **Yes**
- No

Who are the main program stakeholders?

- **Tourists**
- Local community
- Tourism companies
- Water providers
- Electricity providers

2016 the UN launched the 2030 Agenda for Sustainable Development, which world leaders adopted. The new Agenda calls on countries to make efforts to achieve 17 Sustainable Development Goals (SDGs) over the next 15 years. Which of the 17 goals does this program support the most?

- No poverty
- Zero hunger
- **Good health and well-being**
- Quality education
- Gender equality
- Clean water and sanitation
- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation and infrastructure
- Reduce inequalities
- Sustainable cities and communities
- Responsible consumption and production
- Climate action
- Life below water
- Life on land
- Peace, justice and strong institutions
- Partnership for the goals



Does EcoDomus program support Doughnuts Economics?

- The program supports Doughnuts Economics completely.
- **EcoDomus program supports Circular economy which is complementary with Doughnuts Economics in their common goal of creating a more resilient and equitable economy.**
- No, the program does not support Doughnuts Economics.



Lesson 2: Project development and policies

Unit 1: Introduction

To successfully develop a project that will be financed, it is important to align it with different policies. This lesson will tackle this issue.

Unit 2: Additional reading

Project Proposal Writing: How To Write A Winning Project Proposal:
<https://www.youtube.com/watch?v=jsGBuu88WE0>

How to Write a Project Proposal: <https://www.youtube.com/watch?v=IfiEviiuSvA>

EU funding for your project? <https://www.youtube.com/watch?v=P62sjnHL59w>

A journey through EU Cohesion Policy <https://www.euractiv.com/section/economy-jobs/video/what-is-cohesion-policy/>

Unit 3 Activity: What strategies/policies/actions does this project support?

PDF file: Explain how EcoDomus program supports the following strategies/policies/actions in sustainability. You should use not more than 100 words per policy.

Strategies/policies/actions:

European Green Deal

Climate Action (SDG 13)

Circular Economy

Circular Economy Action Plan



Possible solution:

- European Green Deal

The whole EcoDomus program is designed in a way to promote sustainability in tourism, keeping in mind that most of the categories support greenhouse gas emissions reduction in a direct or indirect way. However, the EcoDomus program promotes sustainable transportation and the use of clean and sustainable energy obtained from renewable resources, which are areas stress out as important in European Green Deal. Furthermore, EcoDomus program encourages its beneficiaries to use more efficient energy-saving devices.

- Climate Action (SDG 13)

EcoDomus program supports Climate Action by including low-carbon transportation options, namely the usage of bicycles as an additional criterion, thus supporting Climate Action (SDG 13) that aims to mitigate the carbon footprint of tourism activities by promoting low-carbon transportation options, supporting reforestation and conservation projects, and advocating for climate-friendly policies within the tourism industry.

- Circular Economy

EcoDomus program advocates the reduction, reuse, recovery and recycling of materials and energy, which are the fundamental assumptions of the Circular Economy. Different EcoDomus program criteria are centred on achieving resource efficiency, waste reduction, cost savings, and social benefits. Namely, this program promotes recycling and refurbishment, as well as the re-usage of resources advocated by the circular economy concept.

- Circular Economy Action Plan

EcoDomus program promotes sustainable consumption and waste reduction, which are the main areas promoted by Circular Economy Action Plan.

- EU Biodiversity Strategy for 2030

EcoDomus program indirectly supports biodiversity and nature conservation by providing information about local natural heritage. The support is also evident in the promotion of sustainable transportation, and waste, water and energy management. Consequently these measures indirectly foster biodiversity that supports tourist destination ecosystems.

- Sustainable Agriculture

EcoDomus program indirectly supports Sustainable Agriculture by promoting the consumption and usage of eco-friendly and organically produced products. Furthermore, the program advocates the avoidance of conventional protective products in horticulture.



Lesson 3: Project transferability

Unit 1 Introduction

Transferability of a good practice can be broadly defined as the extent to which a practice can be easily adapted and used in other contexts. It refers to how a policy or practice can be transferred from one country or region to another context and to the elements that should be considered during transfer (Yilmaz). However, one cannot always “copy and paste” a good practice. This lesson deals with an answer of how to transfer a good practice to use it in your context.

Unit 2 Additional reading material

Yilmaz, S. (n.d.). *How can Good Practices be Transferred/Upscaled? Trends and Key Features of Transferability.* https://integrationpractices.eu/wp-content/uploads/2022/11/How-can-Good-Practices-be-Transferred_Upscaled_-Trends-and-Key-Features-of-Transferability.-FINAL.pdf

Morfoulaki, M., Chatziathanasiou, M., Chrysostomou, K., Giarandoni, A., Tu, E., Crowther, M., Dolce, C., Beentjes, R. (2018). *Manual on “Transferability of good practices, policies and experiences from the REFORM Project to other European Regions”*, https://projects2014-2020.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1564061549.pdf

Unit 3 Activity: Develop a project based on the EcoDomus program

Pdf

Use EcoDomus program case study as an example to prepare a new project where you will implement the program’s main concepts to your tourist destination. You want to create an eco-labelling program for catering facilities. The EcoDomus program provides a nice variety of categories and criteria that you can apply. However, there are certain differences between home-based accommodation and catering facilities. It would be best to start by identifying all the elements that will be easily transferred, continue with those elements that need to be modified first, and finish by identifying those unsuitable for your case.

Answer the following questions:

What criteria can I easily transfer and implement through my project?

What criteria needs to be modified to be successfully implemented in my case?



What criteria is non-transferable?

Possible solution:

- **What can I easily transfer and implement through my project?**

Management and communication

1. Appointment and training of facility manager,
2. Staff training on the rules of the Eco Domus program,
3. Reporting on the implementation of the Eco Domus program,
4. Informing guests about inclusion in the Eco Domus program,
5. Drafting of the Sustainability Policy,
6. Monitoring guest satisfaction.

Local values:

1. Informing guests about the local cultural and historical heritage
2. Informing guests about local natural values, contents and events

Food and drink

1. Informing guests about the healthiness of tap water and the desirability of avoiding buying drinks in plastic packaging

Water management

1. Water consumption monitoring
2. Informing guests about the desirability of saving water
3. System control and prevention of water losses

Hygiene

1. Procurement of eco-labelled toilet products
2. Procurement of 100% recycled toilet products

Maintenance, cleaning and disinfection

1. Rational use of detergents and disinfectants
2. Using detergents with eco-certification or made from natural ingredients
3. Using reusable cloths and microfiber cloths

Waste management

1. Waste generation monitoring
2. Separate collection of recyclable waste
3. Separate collection of hazardous waste
4. Use of 100% recycled and biodegradable materials for advertising purposes
5. Waste cooking oil collection
6. Avoiding small packages

Energy management

1. Energy consumption monitoring
2. Ensure that windows and doors are sealed good
3. Electrical devices maintenance
4. Disconnection of all devices from the power supply outside the tourist season
5. Switching to "A" or higher energy class devices
6. Use of energy-saving bulbs in at least 80% of lighting fixtures
7. Use of energy-saving bulbs in 100% of lighting fixtures
8. Use of at least 80% of "A" or higher energy class devices
- 9.

Mobility

1. Provide information about bicycle rental options

Interior and exterior

1. Transition from conventional to eco-certified paints and varnishes for interior spaces
2. Transition from mixed textiles, materials and equipment to those made of natural materials
3. Avoiding the use of plastic
4. Procurement of furniture with a responsible sourcing certificate
5. Procurement of textiles with an eco-certificate

Noise and light pollution

1. Prevention of light pollution when using outdoor and ambient lighting

Social commitment

1. Support for local initiatives aimed at increasing social cooperation and integration
2. Active advocacy of the principles of sustainable development on the broader community
3. Implementation of additional measures for nature conservation and environmental protection

- **What needs to be modified to be successfully implemented in my case?**

Local values:

1. Landscaping with autochthonous plant species
2. Promotion of traditional products and souvenirs
3. Informing guests about opportunities to learn and/or participate in traditional customs

Food and drink

1. Informing guests about local and eco-certified food and beverage producers
2. Promotion of local cuisine and typical food products

Water management

1. Use of water-saving taps and showers and regular maintenance
2. Watering plants early in the morning or late in the evening in the summer months
3. Disposal of wastewater per regulations

Hygiene

1. Procurement of personal hygiene products with an eco-label or made from natural ingredients

Waste management

1. Reuse or donation of used furniture, textiles and other valuable items

Energy management

1. The energy class of the building "A"
2. Energy class of the building "B"
3. The energy class of the building "C"
4. Obtaining at least 10% of electricity from renewable sources
5. Solar charging stations for electric bicycles and other devices
6. Passive energy saving

Mobility

1. Encourage guests to buy bicycles or walk

- **What is non-transferable?**

Water management

1. Limiting the volume of the cistern and regular maintenance
2. Own purification of waste
3. Rainwater collection and use in the facility



Waste management

1. Informing guests about ways how they can reduce waste generation and do proper waste separation

Energy management

1. Informing guests about energy savings
2. Air conditioning rules (maximum of 22oC in winter and at least 26oC in summer) and illuminance levels control
3. Obtaining at least 50% of electricity from renewable sources
4. Obtaining hot water using a system based on renewable energy sources

Maintenance, cleaning and disinfection

1. Using an electrolysis system to disinfect pool water
2. Automated dosing of water disinfectants in the pool
3. The possibility of measuring the pH level and chlorine level in the pool by guests
4. Organic waste composting

Interior and exterior

1. Avoiding conventional protective products in horticulture

Mobility

1. Encouraging guests to use public transport
2. Offering bicycle renting service

Noise and light pollution

1. Informing guests and staff about the importance of preserving peace in the accommodation facility
2. An active approach to limiting all sources of noise







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WP3 Design And Development of the HyPro4ST Online training Course and Practical Guide

Module 2 – Additional material

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Lesson 1: Project Management in the Sustainable Tourism Industry

Unit 1: Introduction

Projects operate within dynamic environments encompassing internal and external factors, significantly influencing their outcomes. PESTLE and SWOT analyses are valuable tools that help identify those factors.

Unit 2: Case study 1 – performance of PESTLE and SWOT analyses

Read the following case study and answer the questions that follow.

Lumi file 1: Identify appropriate factors using PESTLE analysis as a framework

Lumi file 2: Identify appropriate factors using SWOT analysis as a framework

Background:

Local tourism catering facilities offer cheap and low-quality food products to tourists, mostly imported from different countries. Due to changing trends, tourists are becoming more interested in trying locally produced agricultural products that are autochthonous to the tourist destination. These freshly picked products offer higher quality that results from a shortened supply chain, and they also assure the production process because buyers can see the farms where the agricultural products are grown.

Local agricultural producers are interested in providing these products. However, many smaller producers offer limited quantities of different seasonal agricultural products. An additional problem is that they are scattered throughout the destination.

Idea:

Information and communication technology is becoming increasingly important in shortening supply chains, and it represents an excellent opportunity to connect to the local tourism market and agricultural producers. Therefore, we want to develop a project using different digital tools to link the local tourism market and agricultural producers.

Project concept:

The project envisions the creation of a web application that will instantaneously offer information about different locally produced agricultural products and the possibility of buying them and having them delivered to the end customers.



Task:

Before proceeding with project development, you must perform SWOT and PESTLE Analysis to decide if this idea is viable. Through a SWOT analysis, you will identify Strengths, Weaknesses, Opportunities, and Threats that this project could face. By applying PESTLE analysis, you will determine different external influences that can hinder or facilitate the development of this web application.

Check additional materials on how to do PESTLE and SWOT analyses.

PESTLE Analysis: <https://www.youtube.com/watch?v=Gv5fza6wHE4>

SWOT Analysis: <https://www.youtube.com/watch?v=WGxHaHgvhno>

Combining SWOT and PESTLE Analysis: <https://www.youtube.com/watch?v=PuEX8XjThaw>

Lumi file 1: Identify appropriate factors using PESTLE analysis as a framework

Using the PESTLE analysis as a framework, you need to identify and place the factors listed below in one of the six factors:

- Complex food production and distribution legislation in the catering industry
- The Internet is becoming a vital tool for gathering information about tourist destinations
- Lack of agricultural products' quality control and traceability
- Lack of trust in ICT (like safety issues)
- Local agricultural producers offer a limited number of seasonal products
- Schengen Area and Euro make travelling within the EU easier
- Short supply chains produce fewer CO2 emissions and result in less waste
- Tourists are becoming more aware of the benefits that locally produced agricultural food products have on their health

Solution:**Political Factors**

- Schengen Area and Euro makes travelling within the EU easier
- Lack of agricultural products' quality control and traceability

Economic Factors

- Local agricultural producers offer a limited number of seasonal products

Social Factors

- Tourists are becoming more aware of the benefits of locally produced agricultural food products on their health

Technological Factors

- The Internet is becoming a vital tool for gathering information about tourist destinations
- Lack of trust in ICT (like safety issues)

Legal Factors

- Complex food production and distribution legislation in the catering industry

Environmental Factors

- Short supply chains produce fewer CO2 emissions and result in less waste

Lumi file 2: Identify appropriate factors using SWOT analysis as a framework

Using the SWOT analysis as a framework, you need to identify and place the factors listed below in one of the four categories:

- Complex food production and distribution legislation in the catering industry
- End users can get fresh, local, and seasonal agricultural food products
- Inability to see product declaration
- Lack of agricultural products' quality control and traceability
- Lack of trust in ICT (like safety issues)
- Lack of trust in online payment methods
- Language barrier (local agricultural producers need to talk to tourists)
- Local agricultural producers can gain higher income
- Local agricultural producers must be able to use ICT tools (knowledge, time, etc.)
- Local agricultural producers offer a limited number of seasonal products
- Schengen Area and Euro make travelling within the EU easier
- Short supply chains produce fewer CO2 emissions and result in less waste
- Source of information about the local way of living
- The application facilitates direct contact tourists – local agricultural producer
- The Internet is becoming a vital tool for researching about tourist destinations
- Tourists are becoming more aware of the benefits that locally produced agricultural food products have on their health

Solution:

Strengths

- Local agricultural producers can gain higher income
- The application facilitates direct contact tourist – local agricultural producer
- Source of information about the local way of living
- End users can get fresh, local, and seasonal agricultural food products

Weaknesses

- Local agricultural producers need to be able to use ICT tools (knowledge, time, etc.)
- Language barrier (local agricultural producers need to talk to tourists)
- Lack of trust in online payment methods
- Inability to see product declaration

Opportunities

- Schengen Area and Euro make travelling within the EU easier
- Tourists are becoming more aware of the benefits that locally produced agricultural food products have on their health
- The Internet is becoming a vital tool for researching about tourist destinations
- Short supply chains produce fewer CO2 emissions and result in less waste

Threats

- Lack of agricultural products' quality control and traceability
- Local agricultural producers offer a limited number of seasonal products
- Complex food production and distribution legislation in the catering industry
- Lack of trust in ICT (like safety issues)

Unit 3: Case study 2 – Why did the project fail?

Read the following case study and answer the questions that follow.

Lumi file 3: Select the appropriate answers

Background:

A project that resulted in creating a web application that instantaneously offered information about different locally produced agricultural products and the possibility of buying them and having them delivered to the end customers was successfully implemented. There were some issues regarding the delivery of goods, but that was handled in a way that each agricultural producer defined delivery methods. The web application is free for users because different public authorities finance it. However, a few enthusiasts manage this application, and the financial situation is challenging.

Project idea:

You want to develop this project further. Considering that information and communication technology is becoming crucial in shaping the future tourism industry and agribusiness, your idea is to expand this application so that users from other nearby regions are also included and that their products are offered to customers in their area. The area in question is the Adriatic region. However, not all regions need to be included at once.

Area characteristics:

Adriatic agricultural producers offer various agricultural food products, and their supply is limited. Additionally, short supply chains work perfectly within 50 km radios. They also offer locally produced autochthonous food products. These products are well-liked by locals; however, they may not be up to tourists' tastes. Furthermore, local tourism businesses find buying different agricultural foods in supermarkets easier.

Task: This project idea failed. It was not selected for further elaboration and financing. Using the knowledge you have obtained so far, you need to identify why this project failed. Start by identifying the main reason.

Lumi file 3: Select the appropriate answers

What are the main reasons why this project failed?

- Lack of funding
- Issues regarding delivery
- Tourists do not like the taste of local food products
- Lack of stakeholders' interest
- Organising this type of short supply chain in such a large area was challenging
- No product branding options

Solution: Organising this type of short supply chain in such a large area was challenging.

Lesson 2: Project Management Approaches

Unit 1 Introduction

The key to successful implementation of projects is efficient management according to established principles, regardless of the industry and sector involved. Furthermore, people are crucial to project delivery because they fulfil different functions. Topics in this lesson deal with these issues.

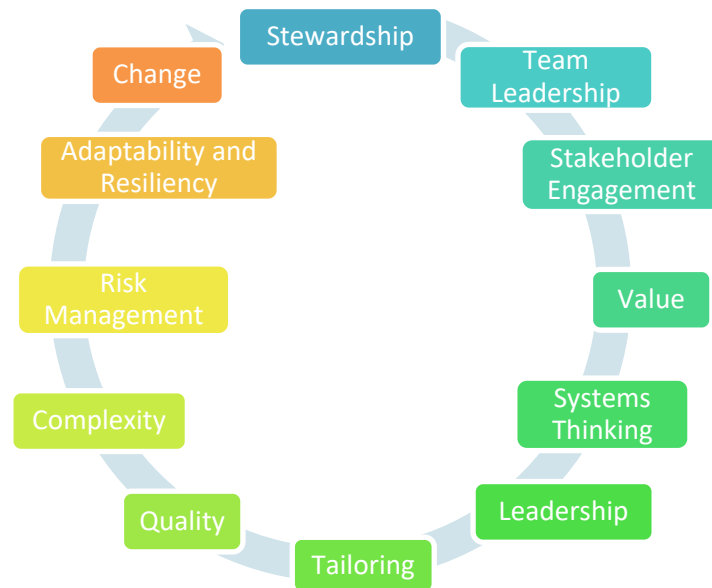
Unit 2 Theoretical chapters: The Principles of Project Management

Introduction

The principles of project management "are intended to guide the behaviour of people involved in projects "(PMBOK, 2021). Project Management Institute (PMBOK, 2021) suggested 12 principles that serve as guiding concepts for project management and were developed by engaging a global community of project practitioners from different industries, cultural backgrounds, and organisations in different roles and with experience in various types of projects.

Figure 2.2

12 Principles of project management



Stewardship

In business, **stewardship** is responsible for planning, managing, and using resources to ensure sustainability (Oboloo.com).

Stewardship takes care of reliable behaviour in project activities, simultaneously making sure that the activities are carried out following the following :

- Guidelines from the internal and external environment, and
- Principles of sustainable development in the economic, social and environmental context

Stewards also adhere to both implicit and explicit duties (PMBOK, 2021):

- Integrity - honest and ethical behaviour of managers in all engagements and communications
- Care - managers are fiduciaries of organizational issues that are under their competence
- Trustworthiness - presenting team members and themselves as well as the roles they have within the project - inside and outside of their organization
- Compliance - governance that includes compliance with rules, regulations, and laws

Team project environment

Project teams consist of individuals with different skills, knowledge, and experience, and collaborative project teams effectively achieve common goals.

In business, **team leadership** refers to successfully managing and guiding a team of employees (Indeed.com). Team leaders are often responsible for projects or operations within a company and achieving any related objectives.

Team leadership must (Praizion Media, 2021):

- Create an environment that will result in good cooperation of the project team
- Encourage individual and team learning and development to achieve the desired results
- Ensure compliance with organizational culture and guidelines

Stakeholder engagement

Stakeholders are individuals, specific groups, or organizations with different desires and needs that may affect, be affected by, or perceive themselves to be affected by a decision, activity, or outcome of the organization. A stakeholder is anyone who has a stake in your organization, either through interest, influence, or both. Stakeholders can range from shareholders to staff, board members, volunteers, funders, government, customers and beyond. Engaging stakeholders is crucial for successful strategic planning. It involves identifying, understanding and involving people who have a stake in the plan's outcome.

Successful management also involves effective collaboration with stakeholders due to (Praizion Media, 2021):

- The positive impact of stakeholders on project performance, results obtained and user satisfaction
- Proactive improvement of value delivery through stakeholder engagement
- A positive effect on delivered values resulting from the cooperation of project team members and stakeholders

Value

It is essential to make value creation and innovation part of company culture.

First, you need to define what value means to the organization and how it will be measured. Then, create new ways to enhance customer perceived value and produce products and services that improve their lives.

Value monitoring is the ultimate indicator of project success, and the work product is the primary measure of progress.

Value can be realized throughout the project, at its completion, or after completion.

Successful management must focus on (Praizion Media, 2021):

- Continuous evaluation and adjustment of project compliance with business goals and with planned benefits and ultimate values
- To quantitative and qualitative measures of progress and results

System interactions

A system is a set of interacting and interdependent components that function as a unified.

Whole (PMBOK, 2021). System thinking is an approach to problem-solving, which considers the overall system and its parts (APM Association for Project Management).

System thinking enables managers to analyze systems' components and handle their interactions.

System thinking can be applied not only to technical systems but also to projects. In this sense, projects can be considered as complex and complicated systems, where tasks and activities are the equivalent of subsystems.

The manager is expected to (Praizion Media, 2021):

- Recognize, assess and respond to dynamic project circumstances within and around the project holistically to positively influence each phase of the project, as well as the last performance of the project
- Take a holistic position when assessing the interaction of individual project phases and the operation of external systems subject to constant changes

Leadership

Leadership refers to guiding a team or individual to achieve a particular goal through direction and motivation (Indeed).

Leaders encourage others to take the actions they need to succeed. A successful leader must learn and cultivate the skills necessary to be effective. Fortunately, anyone can develop these skills with time and practice.

The accurate measure of leadership is influence; however, leadership is much more than just authority (PMBOK, 2021).

Effective leadership behaviours include (Praizion Media, 2021):

- Promoting the success of the project and contributing to the positive achievements of the project
- Adaptation of leadership style according to the needs of each situation
- Recognizing the difference in motivation among project team members
- Demonstrating the desired behaviour in terms of honesty, integrity, and ethics

Tailoring

Tailoring is the job of the project manager and the team working together. It includes designing a project development approach based on the project context and objectives (PMBOK, 2021; Praizion Media, 2021). Tailoring considers the unique circumstances of each project because of the different time frames in which the projects take place and considers the organization and stakeholders participating in the projects.

The project manager, in tailoring, must strive to achieve (Praizion Media, 2021):

- Maximum value, managing costs and increasing speed
- Continuous tailoring process during the life cycle of the project
- Adaptation to the unique context of each project to determine the most appropriate methods to achieve the desired results

Quality

Quality refers to meeting stakeholder expectations and fulfilling project and product requirements (PMBOK, 2021). The qualities of something are its distinguishing features, and those can be good or bad (Vocabulary.com). The most important thing for a project manager is quality.

In the context of quality principles, managers must (Praizion Media, 2021):

- Take care of technical excellence and good design
- Fulfil the acceptance criteria of delivered results
- Ensure appropriate and effective project processes
- Have the ability to adapt the team's behaviour to the current situation and needs
- Fulfil the needs of stakeholders'

Complexity

Complexity is the state of having many parts connected or related to each other in a complicated way; namely, it is the state of having many parts connected or associated with each other in a complicated way (PMBOK, 2021). Complexity results from human behaviour,

system interaction, uncertainty, and ambiguity, and it can appear at any time during the project's duration.

It can arise due to events or conditions that affect the values of communication, stakeholders, risk, and technological innovation (Praizion Media, 2021). Project teams must be careful when identifying elements of complexity and use different models and methods that will reduce aspects of complexity.

Risk management

Risk management is the process of identifying, assessing and controlling financial, legal, strategic and security risks to an organization's capital and earnings (Praizion Media, 2021). Individual and overall risks can affect projects.

If the risk is accepted, it must be:

- Profitable
- Realistic and
- Agreed by the relevant stakeholders and by the responsible person

If the managers want to respond to the risk successfully, they must take into account (Praizion Media, 2021):

- The continuous risk assessment during the entire life of the project
- That the organization has an attitude and its extent, and how much risk it is ready to accept
- The existence of an appropriate, cost-effective and realistic reaction to risk

Adaptability & Resiliency

Adaptability refers to the ability to respond to changing conditions, while resiliency is the ability to absorb the impact of a quick recovery from a setback or failure (PMBOK, 2021). It is vital to include adaptability and resilience in the organizations and approaches of the project team so that the project can more easily adapt to changes, recover from stagnation, and improve its work (Praizion Media, 2021).

Change

A structured approach to change helps individuals, groups, and the entire organization move from the current state to the desired future state (PMBOK, 2021). It can come from internal influences or external sources, and it is vital to approach changes gradually because too many changes in a short time can lead to fatigue and resistance to change.



Not all stakeholders will accept changes, and to minimize this problem, it is necessary to engage stakeholders and motivate them to introduce and accept changes.

Integration of sustainability in project management principles

In recent years, sustainable development has been cited more and more often as one of the critical goals of the company's operations. Still, to apply the sustainability concept in practice, it is necessary to integrate sustainability into management principles.

The involvement of stakeholders and open communication with them is essential for successfully implementing set goals, visions and strategies.

Sustainable project (six) principles (Green Project Management):

1. Commitment & Accountability

Recognize the essential rights of all to healthy, clean and safe environments, equal opportunity, fair remuneration, ethical procurement, and adherence to the rule of law.

2. Ethics & Decision Making

Support organizational ethics and decision-making with respect for universal principles through identification, mitigation, and prevention of adverse short and long-term impacts on society and the environment.

3. Integrated & Transparent

Foster the interdependence of economic development, social integrity, and environmental protection in governance, practice and reporting.

4. Principles & Values-Based

Conserve and enhance our natural resource base by improving how we develop and use technologies and resources.

5. Social & Ecological Equity

Assess human vulnerability in ecologically sensitive areas and centres of population through demographic dynamics.

6. Economic Prosperity

Adhere to fiscal strategies, objectives, and targets that balance the needs of stakeholders, including immediate needs and those of future generations.



Unit 3 Theoretical chapters: Functions Associated with Projects

Introduction

People drive project delivery, and they do so by fulfilling functions necessary for the project to run effectively and efficiently. Functions related to the project can be fulfilled by one person, by a group of people, or combined into defined roles (PMBOK, 2021). Coordination is crucial for a project to be successful; therefore, coordinating a collective work effort is extremely important to accomplish this success.

Types of coordination (PMBOK, 2021)

There are different types of coordination suitable for different contexts.

Some projects benefit from decentralized coordination in which project team members self-organize and self-manage.

Other projects benefit from centralized coordination with the leadership and guidance of a designated project manager or similar role.

Some projects with centralized coordination can also benefit from including self-organized project teams for portions of the work.

Regardless of how coordination takes place, supportive leadership models and meaningful, continuous engagements between project teams and other stakeholders underpin successful outcomes.

Type of functions (PMBOK, 2021)

The collective effort of the project team delivers the outcomes, benefits, and value.

The project team may be supported by additional functions depending on the deliverables, industry, organization, and other variables. These additional functions may include functions that¹:

- Provide oversight and coordination
- Present objectives and feedback
- Facilitate and support
- Perform work and contribute insights
- Apply expertise
- Provide business direction and insight

¹ Further elaboration of functions was adapted from PMBOK (2021)

- Provide resources and direction
- Maintain governance

Functions that provide oversight and coordination

People in this function help the project team achieve the project objectives, typically by orchestrating the project's work.

The specifics can include leading the planning, monitoring, and controlling activities.

In some organizations, this function may involve some evaluation and analysis activities as part of pre-project activities.

Functions that present objectives and feedback

People in this function contribute perspectives, insights, and clear direction from customers and end users.

Projects need clear direction from customers and end users regarding project requirements, outcomes, and expectations.

In adaptive and hybrid project environments, the need for ongoing feedback is more significant because the project teams explore and develop product elements within specific increments.

Functions that facilitate and support

The function of facilitation and support may be closely related to providing oversight and coordination, depending on the nature of the project.

The work involves encouraging project team member participation, collaboration, and a shared sense of responsibility for the work output.

Facilitation helps the project team create consensus around solutions, resolve conflicts, and make decisions.

Functions that perform work and contribute insights

This group provides the knowledge, skills, and experience necessary to produce the products and realize the project's outcomes.

Work can be full-time or part-time for the entire project duration or a limited period.



Some work can be highly specialized, while others can be done by project team members with broad skill sets.

Functions that apply expertise

People in this function provide the knowledge, vision, and expertise for a project's specific subject.

They offer advice and support throughout the organization, and contribute to the project team's learning process and work accuracy.

These people can be external to the organization or can be internal project team members.

Functions that provide business direction and insight

People in this function guide and clarify the direction of the project or product outcome.

People in this function provide feedback to project teams and set direction for the next increment or element to be developed or delivered.

The function involves interacting with other stakeholders, customers, and their project teams to define the product direction. The goal is to maximize the value of the project deliverable.

In adaptive and hybrid environments, a specific cadence can provide direction and insight.

Functions that provide resources and direction

People in this function promote the project and communicate the organization's vision, goals, and expectations to the project team and broader stakeholder community.

They advocate for the project and the project team by helping to secure the decisions, resources, and authority that allow project activities to progress.

People in this function serve as liaisons between senior management and the project team, play a supporting role in keeping projects aligned to business objectives, remove obstacles, and address issues outside the bounds of the project team's decision authority.

People in this function provide an escalation path for problems, issues, or risks that project teams cannot resolve or manage independently, such as a shortage of funding or other resources, or deadlines that cannot be met.

Functions that maintain governance



People who fill a governance function approve and support recommendations made by the project team and monitor project progress in achieving the desired outcomes.

They maintain linkages between project teams and strategic or business objectives that can change throughout the project.

Unit 4 Activity: Drag the words

People drive project delivery. They do so by fulfilling functions necessary for the project to run effectively and efficiently. Functions related to the project can be fulfilled by one person, by a group of people, or combined into defined roles. Match the term for each definition, i.e., drag the words into the correct boxes.

Lumi file 1: Drag the Words Connecting Functions Associated with Project with the Project Manager Role

Provide Oversight and Coordination These people help the project team achieve the project objectives, typically by orchestrating the project's work. This can include consulting with executive and business unit leaders on various project functions.

Present Objectives and Feedback People who contribute perspectives, insights, and clear direction from customer and end users.

Facilitate and Support Closely related to providing oversight and coordinator, this helps the project team create consensus around solutions, resolve conflicts, and make decisions.

Perform work and contribute insights A group of people that provide knowledge, skills, and experience necessary to produce the products and realize the project's outcomes. Gaining insights from this group can provide a mix of internal perspectives and establish alliances with key business units.

Apply Expertise These people offer advice and support throughout the organization and contribute to the project team's learning process and work accuracy. Can be internal or external to the organization or project team members.

Provide Business Direction and Insight These people guide and clarify the direction of the project or product outcome. It involves prioritizing the requirements or backlog items based on business value, dependencies, and technical or operational risk.

Provide Resources and Direction Promote the project and communicate the organization's vision, goals, and expectations to the project team and broader stakeholder community.

Maintain Governance Approve and support recommendations made by the project team and monitor project progress in achieving the desired outcomes.

Lesson 3: Project Management Frameworks and Methodologies

Unit 1 Introduction

The most widely adopted agile practices (Lean, Kanban and Scrum) were not always appropriate. Therefore, other Agile frameworks and methodologies were developed.

Unit 2 Theoretical chapters: Agile Frameworks/Methodologies

Introduction

This presentation will elaborate on the following Agile Frameworks/ Methodologies:

- Scrumban²
- Six Sigma³
- Extreme Programming⁴

Introduction to the Scrumban framework

Scrumban is a project management framework that combines important features of two popular agile methodologies: Scrum and Kanban.

The Scrumban framework merges Scrum's structure and predictable routines with Kanban's flexibility to make teams more agile, efficient, and productive.

This approach can help teams focus on the correct strategic tasks while at the same time improving their processes.

How does Scrumban work?

Scrumban involves applying Kanban principles, namely workflow visualisation, and flexible processes to a team's Scrum framework.

However, Scrumban removed some of the more rigid aspects of Scrum and left each team to create a custom approach to development.

² Scrumban methodology description was adapted from <https://www.productplan.com/glossary/scrumban/>

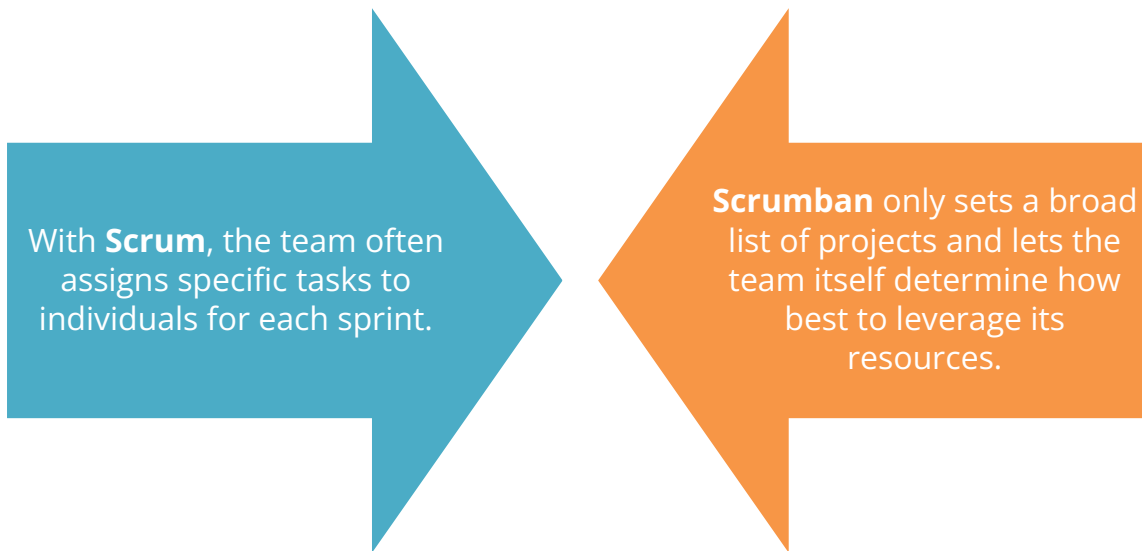
³ Six Sigma methodology description was adapted from Kumar (2024)

⁴ Extreme Programming methodology description was adapted from Raeburn (2024)



Figure 2.3

Scrum vs. Scrumban concepts



Scrumban enhances teamwork and enables individuals in the company to find the projects best suited to their skills and interests.

Figure 2.4

Scrumban Steps-by-step guide



Step 1: Develop a Scrumban board

A Scrumban board is similar to a Kanban board.

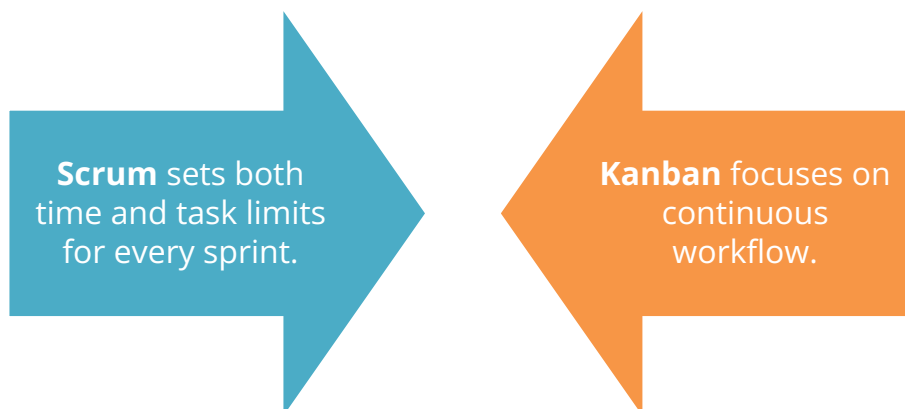
You will be using it as your primary workflow tool; therefore, add as many columns to your Scrumban board as your team needs to mark each discrete phase of progress.

Be careful not to create so many columns that the board becomes cluttered and difficult to view.

Step 2: Set your work-in-progress limits

Figure 2.5

Scrum vs. Kanban – work-in-progress



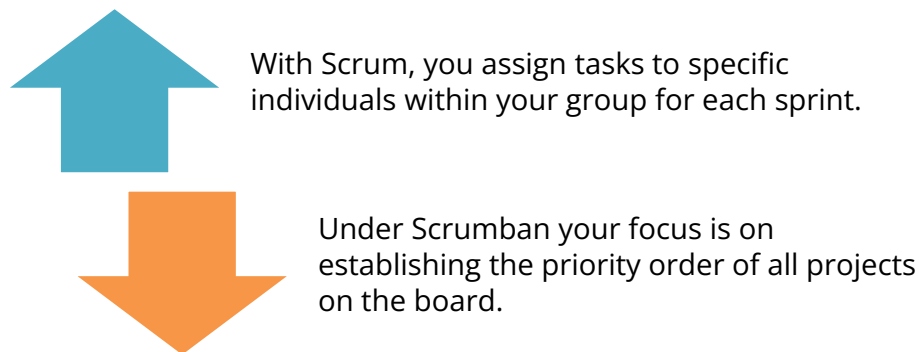
You need to establish a limit on how much work your team can take on at anyone point. For Scrumban, that limit will be the number of total cards on the board at any time. Set a realistic limit to keep your team from becoming overwhelmed and frustrated.

Step 3: Order the team's priorities on the board

This step illustrates another major difference between Scrum and Kanban (and Scrumban).

Figure 2.6

Scrum vs. Scrumban team's priorities

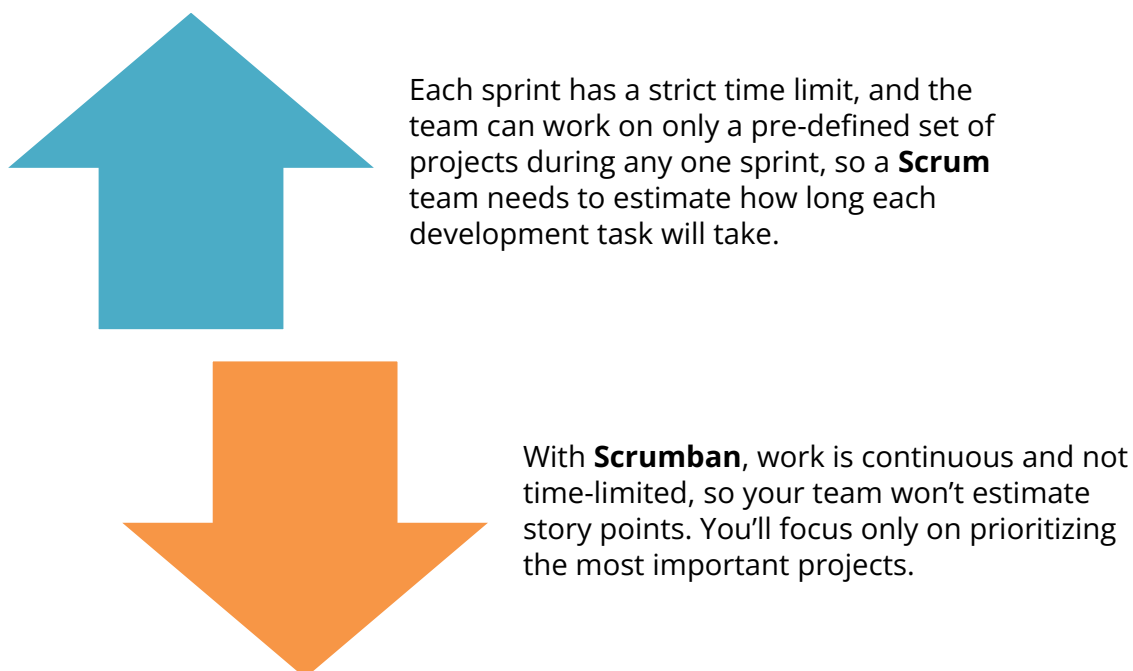


Your team will decide which person will tackle which tasks.

Step 4: Throw out your planning-poker cards

Figure 2.7

Scrum vs. Scrumban planning work



Step 5: Set your daily meetings

There will not be most of the meetings typical of the Scrum framework—sprint planning, sprint review, and retrospective.

Scrumban meetings can include short stand-ups for the team to discuss their plans and challenges for the upcoming day.

These short meetings are also a good way to encourage team bonding and cohesion because team members will spend a lot of time working individually on their tasks and might otherwise not have much time for interaction.

When Should a Team Use Scrumban?

A team can benefit from the Scrumban approach under several circumstances:

1. For maintenance of ongoing projects.

These could include projects for which there is no definitive completion date.

2. For a team having trouble with Scrum.

It can happen for several reasons, like insufficient resources to support a Scrum environment or the team finding Scrum's requirements too rigid.

3. When a company wants to give its team more flexibility in how it works.

Introduction to Six Sigma methodology

Six Sigma is a set of methodologies that provides organizations with tools to improve the capability of their business processes by reducing defects and errors, minimizing variation, and increasing quality and efficiency.

The goal of Six Sigma is to achieve a level of quality that is nearly perfect, with only 3.4 defects per million opportunities.

This is achieved by using a structured approach called DMAIC to identify and eliminate causes of variation and improve processes.

Logic behind Six Sigma methodology

The etymology is based on the Greek symbol "sigma" or " σ ," a statistical term for measuring process deviation from the process mean or target.

"Six Sigma" comes from the bell curve used in statistics, where one Sigma symbolizes a single standard deviation from the mean.

If the process has six Sigmas, three above and three below the mean, the defect rate is classified as "extremely low."



Six Sigma process

The Six Sigma expert uses qualitative and quantitative techniques or tools to drive process improvement.

Such tools include statistical process control (SPC), control charts, failure mode and effects analysis (FMEA), and process mapping.

Six Sigma professionals do not totally agree on which tools constitute the set.

What is lean Six Sigma?

Lean Six Sigma is a methodology that combines two powerful process improvement techniques: Lean and Six Sigma.

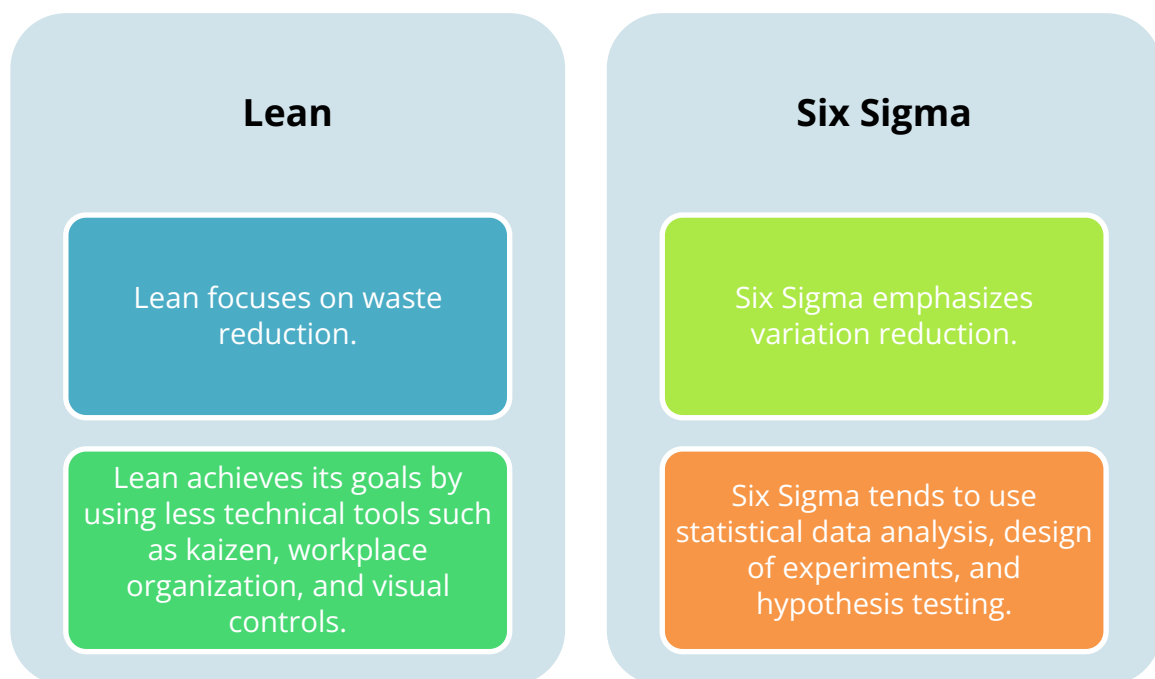
Lean Six Sigma is a fact-based, data-driven philosophy of improvement that values defect prevention over defect detection.

It drives customer satisfaction and bottom-line results by reducing variation, waste, and cycle time, while promoting the use of work standardization and flow, thereby creating a competitive advantage.

By combining the strengths of these two methodologies, Lean Six Sigma provides a comprehensive approach to process improvement that can be applied to any industry or sector.

Figure 2.8

Lean vs. Six Sigma



Often, successful implementations begin with the lean approach, making the workplace as efficient and effective as possible, reducing waste, and using value stream maps to improve understanding and throughput.

If process problems remain, more technical Six Sigma statistical tools may be applied.

The 5 Key Principles of Six Sigma

Six Sigma has its foundations in five key principles:

- Focus on the Customer
- Measure the Value Stream and Find Your Problem
- Get Rid of the Junk
- Keep the Ball Rolling
- Ensure a Flexible and Responsive Ecosystem

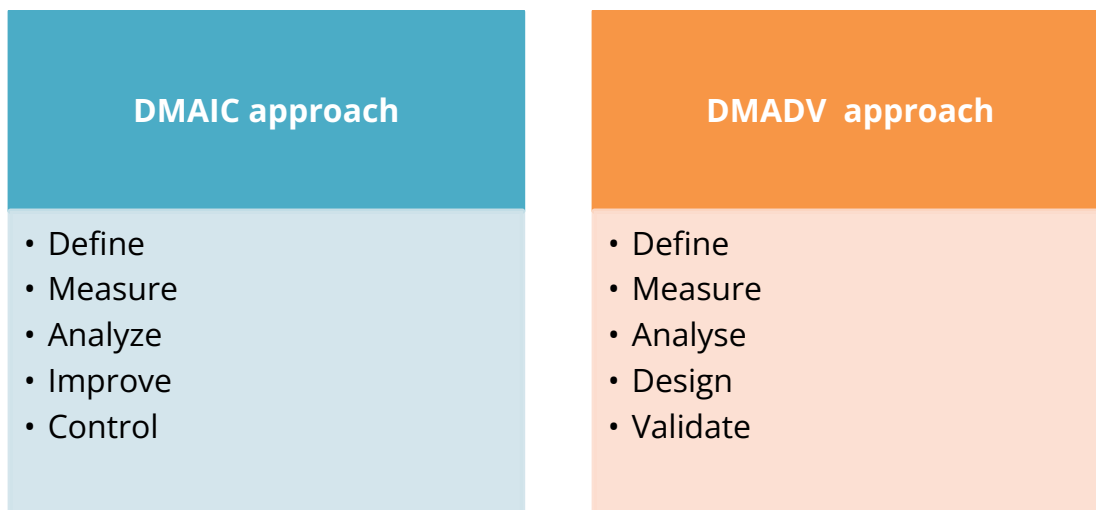
The Six Sigma methodology

The two primary Six Sigma methodologies are DMAIC and DMADV.

Each has its own set of recommended procedures for business transformation.

Figure 2.9

DMAIC vs. DMADV approach



DMAIC defines the steps a Six Sigma practitioner is expected to follow, starting with identifying the problem and ending with implementing long-lasting solutions. It is the most widely adopted and recognized.

DMADV is part of the Design for Six Sigma (DFSS) process used to design or re-design different product manufacturing or service delivery processes. DMADV is employed when existing processes do not meet customer conditions, even after optimization, or when new methods are required to be developed. It is executed by Six Sigma Green Belts and Six Sigma Black Belts and under the supervision of Six Sigma Master Black Belts.

Six Sigma Techniques

The Six Sigma methodology also uses a mix of statistical and data analysis tools such as process mapping and design and proven qualitative and quantitative techniques, to achieve the desired outcome.



Figure 2.10

Six Sigma Techniques

Brainstorming

- Brainstorming involves bouncing ideas and generating creative ways to approach a problem through intensive freewheeling group discussions.
- A facilitator, who is typically the lead Black Belt or Green Belt, moderates the open session among a group of participants.

Root Cause Analysis/The 5 Whys

- In the 5 Whys technique, the question "why" is asked, again and again, finally leading up to the core issue.
- Although "five" is a rule of thumb, the actual number of questions can be greater or fewer, whatever it takes to gain clarity.

Voice of the Customer

- This is the process used to capture the "voice of the customer" or customer feedback by either internal or external means.

The 5S System

- The 5S System is aimed at removing waste and eliminating bottlenecks from inefficient tools, equipment, or resources in the workplace.
- The five steps used are Seiri (Sort), Seiton (Set In Order), Seiso (Shine), Seiketsu (Standardize), and Shitsuke (Sustain).

Kaizen (Continuous Improvement)

- The Kaizen is the practice continuously monitoring, identifying, and executing improvements.

Benchmarking

- Benchmarking involves making comparisons with other businesses to gain an independent appraisal of the given situation.
- Benchmarking may involve comparing important processes or departments within a business (internal benchmarking), comparing similar work areas or functions with industry leaders (functional benchmarking), or comparing similar products and services with that of competitors (competitive benchmarking).

Poka-yoke (Mistake Proofing)

- In the poka-yoke technique, employees spot and remove inefficiencies and human errors during the manufacturing process.

Value Stream Mapping

- The value stream mapping technique charts the current flow of materials and information to design a future project.
- The objective is to remove waste and inefficiencies in the value stream and create leaner operations.

Introduction to Extreme Programming (XP)

Extreme programming is an Agile project management methodology that targets speed and simplicity with short development cycles and less documentation. The process structure is determined by five guiding values, five rules, and 12 XP practices. The structure is rigid, but the result of these highly focused sprints and continuous integrations can result in a much higher quality product. XP features short work sprints, frequent iterations, and constant collaboration with stakeholders.

When should extreme programming be used?

It is typically only used by engineering teams. Even in software teams, it only works in certain settings. To get the most value out of extreme programming, it is best to use it when you:

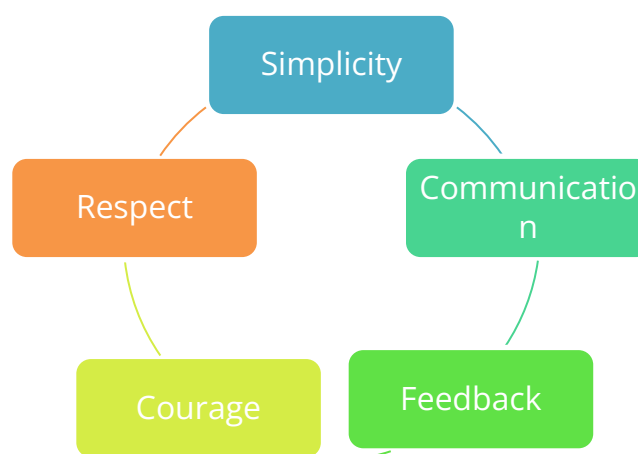
- Manage a smaller team
- Are in constant contact with your customers
- Have an adaptable team that can embrace change (without hard feelings)
- Are well-versed in the technical aspects of coding.

5 values of Extreme Programming

Extreme programming is value-driven. Instead of using external motivators, XP allows your team to work in a less complicated way (focusing on simplicity and collaboration over complex designs), all based on these five values.

Figure 2.11

What are the five values of XP?



Simplicity

Before starting any extreme programming work, first ask yourself:

- What is the simplest thing that also works?
- The "that works" part is a key differentiator—the simplest thing is not always practical or effective.

In XP, you focus on getting the most important work done first. This means you are looking for a simple project you know you can accomplish.

Communication

XP relies on quick reactivity and effective communication. In order to work, the team needs to be open and honest with one another.

When problems arise, you are expected to speak up.

The reason for this is that other team members will often already have a solution. And if they do not, you will come up with one faster as a group than you would alone.

Feedback

Like other Agile methodologies, XP directly incorporates user stories and feedback into the process.

XP focuses on producing work quickly and simply, then sharing it to get almost immediate feedback. As such, developers are constantly in contact with customers throughout the process.

In XP, you launch frequent releases to gain insights early and often. When you receive feedback, you will adapt the process to incorporate it (instead of the project). For example, if the feedback relieves unnecessary lag time, you would adjust your process to have a pair of developers improve the lag time instead of adjusting the project as a whole.

Courage

XP requires a certain amount of courage.

You are always expected to give honest updates on your progress, which can get pretty vulnerable. If you miss a deadline in XP, your team lead likely will not want to discuss why. Instead, you would tell them you missed the deadline, hold yourself accountable, and get back to work.



If you are a team lead, your responsibility at the beginning of the XP process is to set the expectation for success and define "done." There is often little planning for failure because the team focuses on success. However, this can be scary, because things will not always go as planned. But if things change during the XP process, your team is expected to adapt and change with it.

Respect

Considering how highly XP prioritizes communication and honesty, it makes sense that respect would be important.

For teams to communicate and collaborate effectively, they need to be able to disagree. But there are ways to do that kindly.

Respect is a good foundation that leads to kindness and trust; even in the presence of a whole lot of honesty.

For extreme programming, the expectations are:

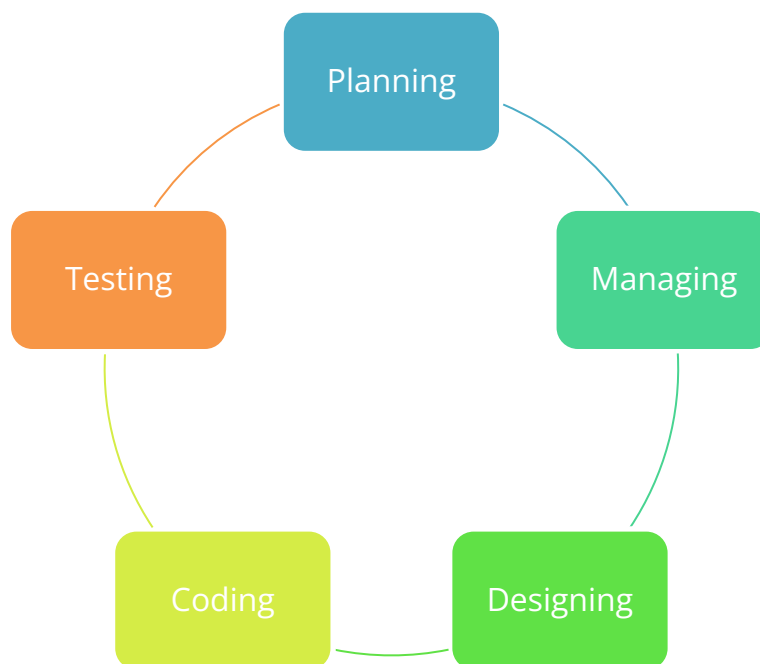
- Mutual respect between customers and the development team;
- Mutual respect between team members;
- A recognition that everyone on the team brings something valuable to the project.

5 rules of the Extreme Programming Methodology

The values of extreme programming are more philosophical. The rules are the practical uses for how the work gets done. You will need both to run an effective XP team.

Figure 2.12

What are the five roles of XP methodology?



Planning

In the planning stages of XP, you are determining if the project is viable and the best fit for XP. Once you have confirmed the project is viable for XP, create a release schedule; however, keep in mind that you should be releasing early and often to gain feedback.

Managing

One of the key elements of XP is the physical space. XP purists recommend using an open workspace where all team members work in one open room. If you work on a remote team, consider using a platform that encourages asynchronous work for remote collaboration.

As in other Agile methods, use daily stand-up meetings to check-in and encourage constant, open communication.

As a manager or team lead, you will focus on maintaining work progress, measuring the pace, shifting team members around to address bugs or issues as they arise, or changing the XP process to fit your current project and iteration. Remember, the goal of XP is to be flexible and take action, so your work will be highly focused on the team's current work and reactive to any changes.

Designing

When you are just starting out with extreme programming, begin with the simplest possible design, knowing that later iterations will make them more complex. Do not add in early functionality at this stage to keep it as bare-bones as possible.

XP methodology teams will often use class-responsibility-collaboration (CRC) cards to show how each object in the design interacts. By filling out each field in the card, you will get a visual interaction of all the functions as they relate and interact. CRC cards include:

- Class (collection of similar objects)
- Responsibilities (related to the class)
- Collaborators (class that interacts with this one)

CRCs are useful for stimulating the process and spotting potential problems.

Coding

One of the more unique aspects of XP is that you will stay in constant contact with the customer throughout the coding process. This partnership allows you to test and incorporate feedback within each iteration, instead of waiting until the end of a sprint. But coding rules are fairly strict in XP. Some of these rules include:

- All code must meet coding standards.
- Using a unit test to nail down requirements and develop all aspects of the project.
- Programming as a pair: Two developers work together simultaneously on the same computer. This doesn't add any time but rather uses double the focus to produce the highest-quality results.
- Use continuous integrations to add new code and immediately test it.
- Only one pair can update code at any given time to reduce errors.
- Collective code ownership—any team member can change your code at any time.

Testing

You should test throughout the extreme programming process. All code must pass unit tests before it's released.

If you discover bugs during these tests, you will create new, additional tests to fix them. During this test, the customer reviews the results to see how well you translated the user story into the product.

What are the 12 extreme programming practices?

To further hone the process, XP also uses a set of 12 practices throughout the process. They are based on the Agile manifesto, but adapted to fit XP needs:

1. **The planning game:** XP planning is used to guide the work. The results of planning should be what you are hoping to accomplish and by when, and what you'll do next.
2. **Customer tests:** When you finish a new feature, the customer will develop an acceptance test to determine how close it is to their original user story.
3. **Small releases:** XP uses small, routine releases to gain insights throughout the process. Often, releases go straight to the customers, though they can happen in-house.
4. **Simple design:** The XP system is designed for simplicity—you will produce only what is necessary and nothing more.
5. **Pair programming:** All programming comes from a pair of developers who sit side by side. There is no solo work in extreme programming.
6. **Test-driven development (TDD):** XP's reliance on feedback requires heavy testing. Through short cycles, programmers release automated tests and then immediately react.
7. **Refactoring:** This is where you will pay attention to the finer details of the codebase, removing duplicates and making sure that the code is cohesive. This results in good, simple designs.
8. **Collective ownership:** Any coding pair can change the code at any time, whether or not they developed it. XP produces code as a team, and everyone's work is held to the higher collective standards.
9. **Continuous integration:** XP teams do not wait for completed iterations, they integrate constantly. Often, an XP team will integrate multiple times a day.
10. **Sustainable pace:** The intensity of XP works requires you to set a sustainable pace. Teams should decide how much work they can produce in this way per day and per week, and use that to set work deadlines.
11. **Metaphor:** The metaphor is, quite literally, a metaphor. It is decided as a team, and uses language to describe how the team should function. For example, we're ants working as a collective to build up the anthill.
12. **Coding standard:** XP teams follow one standard. In the same way that writers need to take on a brand's voice to sound like the same person is always writing, XP developers code in the same, unified way so that it reads like one developer.

Unit 3 Activity: Fill in the appropriate word

Lumi file 2: Scrumban

Arrange the activities in a logical sequence.

- Set your daily meetings
- Order the team's priorities on the board
- Throw out your planning "poker cards "
- Set your work-in-progress limits
- Develop a Scrumban board

Solution:

- Develop a Scrumban board
- Set your work-in-progress limits
- Order the team's priorities on the board
- Throw out your planning "poker cards "
- Set your daily meetings

Lumi file 3: Six Sigma

Why is the term "sigma / Q" used? (Correct answer in bold)

- It is used because there are six sigma processes in decision-making
- **It is used due to a statistical expression for measuring the deviation of a process from the process mean or target.**

Lumi file 4: Extreme programming

Fill in the appropriate words. (Correct answer in brackets)

- Extreme programming is an _____ that targets speed and simplicity with short _____ and less documentation. (Agile project management methodology; development cycles)
- Extreme programming is only used by _____. (engineering teams)
- The _____ extreme _____ methodology _____ element _____ are _____ (planning, managing, designing, coding, testing)



Unit 4 Additional reading materials

How 49 processes are organized into Process groups and Knowledge areas:
<https://mudassiriqbal.net/how-49-processes-are-organized-into-process-groups-and-knowledge-areas/>

Kanban vs. Scrum – identification of the main differences:
<https://www.productplan.com/learn/kanban-scrum/>

Application of Kanban to Create a Hybrid Agile Waterfall Methodology:
<https://kanbanzone.com/2019/using-kanban-to-create-a-hybrid-agile-waterfall-methodology/>

What is PM² Project Management Methodology?: <https://www.pm2alliance.eu/publications/>

Sustainability and Circular Economy Resource Guide: <https://majorprojects.org/sustainability/>

The Global Standard for Sustainable Project Management Version 3.0:
<https://greenprojectmanagement.org/gpm-standards/the-p5-standard-for-sustainability-in-project-management>



Lesson 4: Initiating a Hybrid Project

Unit 1 Introduction

If an organization has many project ideas and limited funds, it can only finance some of them. They need to make a decision and it has to be based on certain indicators. There are two principal methods that can be used for this purpose: financial and non-financial based methods.

Unit 2 Theoretical chapters: Financial and non-financial based methods for selecting a project

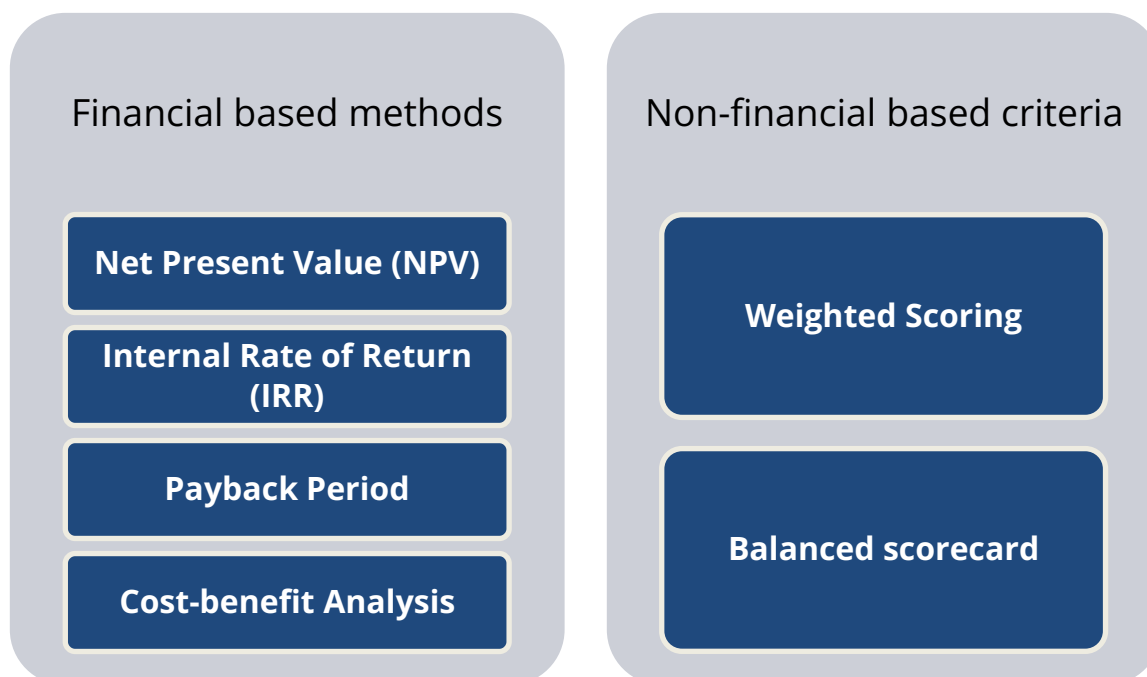
PowerPoint presentation

Introduction

Knowing financial and non-financial evaluation methods is vital during the project preparation phase. Calculation of the four (4) most commonly used methods linked with financial considerations for selecting a project will be presented along with two well-known non-financial criteria.

Figure 2.13

Financial and non-financial based methods



Net Present Value (NPV)

The net present value of a project represents the difference between the project's current value of cash inflow and the current value of cash outflow. It is determined by the equation:

$$NPV_0 = \sum_{n=0}^t \frac{NV_n}{\left(1 + \frac{p}{100}\right)^n}$$

NV_n = Net cash inflow-outflows during a single period n

p = Discount rate

n = Number of time periods

The net present value is the sum of the present value of cash flows (both positive and negative) for each year associated with the investment, which is then adjusted (the terminology used is "discounted") so that it's expressed in today's currency.

The discount rate should be equal to the real interest rate at which a loan for the project is planned to be obtained, or if the project does not use loans for financing, the discount rate is determined according to the interest rate that banks apply to similar projects.

Net present value is a quality and useful indicator of the economic success of a project because it considers the loss in the money's value throughout the project's lifespan. A project is considered acceptable if its net present value is positive or equal to zero and unacceptable if it is negative.

Internal Rate of Return (IRR)

The internal rate of return represents the discount rate that reduces the project's net present value to zero. It is determined by the expression:

$$0 = \sum_{n=0}^t \frac{NV_n}{\left(1 + \frac{p^r}{100}\right)^n}$$

Where:

p^r = internal rate of return

NV_n = net cash receipt in the n -th year

n = year in the project's life

This strategy enables firms to evaluate and compare the potential profitability of projects by determining the point at which the present value of outflows equals the present value of

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inflows (Sharma, 2023). It is used to select the project with the best profitability. The one with the higher IRR should be chosen when picking a project.

Payback Period

The Payback Period refers to the time necessary to recover the cost invested in the project. It considers the payback period of an investment, namely, the time frame required for the return on an investment to repay the original cost.

The equation for determining the payback period is:

$$\sum_{n=0}^t TI_n^e = \sum_{n=0}^t NV_n^{ep}$$

where:

TI^e = total investment costs in all years of the project's preparation

NV^{ep} = total annual cash inflows in all years of the project's operation

PB = year in which the return on investment is achieved

n = year in the program's life in the period from 0 to t .

Example:

There are a few limitations to this method:

- It does not consider the time value of money.
- Benefits accrued after the payback period are not considered; the approach focuses more on liquidity while neglecting profitability.
- Risks involved in individual projects are neglected.

Cost-benefit Analysis

Cost-benefit Analysis is an essential analytical tool for evaluating investment projects, making correct investment decisions, and modifying projects. It consists of three main parts: financial and economic analysis and risk assessment. The financial Analysis should provide information about the financial sustainability and profitability of the project, while the economic Analysis should provide answers about the project's impact on society as a whole. A challenging aspect of CBA is the need to express all project effects in monetary terms regardless of whether they

can be directly valued or if only a numerical assessment of their impact is necessary (Hayes, 2024).

Cost/Benefit Ratio = Present Value of Inflow or the cost invested in a project/ Present Value of Outflow, which is the value of return from the project

Steps to perform to calculate this ratio (Hayes, 2024):

- Determine all future operating expenses, which involves defining the quantities of all inputs and their procurement prices and calculating the total costs. Costs should be analysed dynamically over the years since the consumption of some inputs increases over time while others decrease. It is also necessary to consider whether any costs will persist after the project's completion.
- Define and calculate all benefits from the project. This is often the total revenue determined based on the structure and quantity of outputs achieved and their selling prices. Besides market revenues, it is essential to include all other receipts that can be obtained from premiums, subsidies, donations, compensation, etc. Determining the total benefits of a project can be more challenging than determining costs because some benefits are difficult to monetize, such as the impact of the project on the environment, employee satisfaction, or health and safety, i.e., how to define the monetary value of that impact.
- Calculate the difference between the value of total benefits and total expenses.

How to select the project based on the financial methods (Gaur, 2019)

- While evaluating two or more projects, select the project with greater NPV.
- When using the IRR as the project selection criteria, organizations should remember not to use this exclusively to judge the worth of a project; a project with a lower IRR might have a higher NPV and, assuming there is no capital constraint, the project with the higher NPV should be chosen as this increases the shareholders' profits.
- When the Payback period is used as the Project Selection Method, the project with the shortest Payback period is preferred since the organization can regain the original investment faster.
- Projects with a higher Benefit-Cost Ratio or lower Cost-Benefit Ratio are generally chosen over others.

How do you apply financial-based methods to a project?

- Olive oil production facility with tasting facility intended mostly for tourists –

Background

Olive oil production is gaining importance in your country's agricultural production; however, you want to focus your business not only on local consumers but also on the tourism market, which has excellent potential. Different factors support this project, including political support through various programs that offer financing of tasting facilities to encourage sustainable tourism development, tourists' rising interest in olive oil consumption due to them becoming aware of different benefits that olive oil has on human health, and promotion of short supply chains that emphasizes locally produced agricultural products.

Before this project is selected for financing, you need to determine its viability. For that purpose, you must calculate the Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period and perform a Cost-benefit Analysis.

Starting point

The project focuses on developing a tasting facility for olive oil production. An existing facility will be renovated for this purpose.

Characteristics:

- A traditional type of building (stone walls, wooden roof)
- The total surface is 160 m² (50 m² processing facility, 80 m² tasting facility, and 30 m² other space, including restroom, dressing room, and entrance hall)
- The tasting facility capacity will be up to 60 visitors.

What to consider?

Table 2.13

List of costs and revenue of olive oil production tasting facility

Costs	Revenue
• Investment costs • Material costs • Labour costs • Depreciation • Other costs	• Tasting services • Olive oil sale • Olive fruit processing (other producers)

Investment costs

- Building reconstruction costs include masonry, plumbing, and electrical works, as well as carpentry and other finishing activities.
- Olive oil production equipment costs include machines and equipment used to process olive fruits into olive oil.

- Olive oil tasting facility equipment costs include different equipment needed to cater to visitors interested in tasting olive oil (like furniture, glassware and other utensils)
- Permanent working capital is the amount of resources the business entity will always need to operate without interruption.

Table 2.14

Estimated investment costs of olive oil production tasting facility

No.	Cost description	Value in €
1	Building reconstruction works costs	150.000
2	Olive oil production equipment costs	100.000
3	Olive oil tasting facility equipment costs	20.000
4	Permanent Working Capital	30.000
	Total	300.000

Material costs

- Material costs include the cost of olive oil tastings, olive fruit processing and olive oil bottling.
- The tasting facility will be open all year round. At this point, we estimate that it will cater to a total of 200 group visitors. Each group will have around 40 visitors (cca. 8.000 visitors per year).
- Three (3) olive oil samples will be used for olive oil tastings; average consumption per visitor will be 0,1 litre (in total 800 litres annually).
- Additionally, it is estimated that visitors will be interested in buying olive oil (we need to consider packaging and olive oils).

Table 2.15

Estimated material costs of olive oil production tasting facility

No.	Cost description	Annual amount	Value in €
1	Olive oil production and olive oil tastings	3.5000	70.000
2	Olive fruit processing	535.000	7.200
3	Olive oil bottles and packaging (for visitors)	9.100	13.000
	Total		90.200

Labor costs

- This category includes labor costs needed to prepare olive oils and perform tastings.

Table 2.16

Estimated labor costs of olive oil production tasting facility

No.	Cost description	Annual amount	Value in €
1	Guided olive oil tastings	800	12.000
2	Olive fruit processing	2.400	28.800
3	Olive oil bottling	600	7.200
4	Management and administration	1.500	22.500
5	Advertising, promotion and sales	1.000	14.000
	Total	6.300	84.500

Depreciation costs

- Depreciation is the process of allocating a tangible asset's cost throughout its useful life.
- An asset's useful life is the duration it adds value to your business.
- Because an asset's usefulness spans multiple accounting periods, recording depreciation monthly, quarterly or annually allows you to record a portion of that expense in each accounting period.

Table 2.17

Estimated depreciation costs of olive oil production tasting facility

No.	Asset description	Purchase cost	Discount rate	Depreciation amount in €
1	Building	150.000	5%	6.340
2	Olive oil production equipment	100.000	10%	17.320
3	Olive oil tasting facility equipment	20.000	10%	2.000
	Total	270.000		25.660

Other costs

- This category includes all other costs that can occur in this type of business. They are estimated on an annual base.
- These costs may include different maintenance, service and intangible costs.
- Facility and equipment maintenance costs are estimated to be cca. 10% of material costs.
- Service costs include costs of laboratory analyses and control, accounting services etc.
- Intangible costs include bank fees, insurance premiums, etc.

Table 2.18

Estimated other type costs of olive oil production tasting facility

No.	Cost description	Amount in €
1	Facility and equipment maintenance	10.000
2	Service costs	14.000
3	Intangible costs	16.000
	Total	40.000

Revenue estimation

- Revenue is estimated taking into account incomes generated from guided olive oil tasting services, olive oil sales (0,25 l, 0,375 l and 0,5 l bottles), and olive oil processing services.

Table 2.19

Estimated revenue of olive oil production tasting facility

Service/product	Unit	Amount	Price in €	Revenue in €
Guided tastings	Visitors	8.000	12,00	96.000
Olive oil	0,25 l	3.500	9,00	31.500
Olive oil	0,375 l	1.400	20,00	28.000
Olive oil	0,5 l	4.200	15,00	63.000
Olive fruit processing	kg	250.000	0,20	50.000
				268.500

Profit and loss statement

- Profit and loss accounts show your total income and expenses and whether your business has earned more than it has spent on its running costs.

Table 2.20

Estimated Profit and loss account estimation of olive oil production tasting facility

Description	Year							
	1.	2.	3.	4.	5.	6.	7.	8.
1. Total revenue	268.500	268.500	268.500	268.500	268.500	268.500	268.500	268.500
2. Total costs	248.460	247.549	246.611	245.645	244.649	243.624	242.568	241.481
- material costs	90.200	90.200	90.200	90.200	90.200	90.200	90.200	90.200

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- labour costs	84.500	84.500	84.500	84.500	84.500	84.500	84.500	84.500
- depreciation	25.660	25.660	25.660	25.660	25.660	25.660	25.660	25.660
- other costs	40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000
- interests	8.100	7.189	6.251	5.285	4.289	3.264	2.208	1.120
3. Gross profits	20.040	20.951	21.889	22.855	23.851	24.876	25.932	27.019
- taxes	3.006	3.143	3.283	3.428	3.578	3.731	3.890	4.053
4. Net profits	17.034	17.808	18.605	19.427	20.273	21.144	22.042	22.966

Table 2.21

Estimated Project economic flow of olive oil production tasting facility

Description	Year							
	1.	2.	3.	4.	5.	6.	7.	8.
Cash inflow	268.500	268.500	268.500	268.500	268.500	268.500	268.500	328.500
1. Total revenue	268.500	268.500	268.500	268.500	268.500	268.500	268.500	268.500
2. Residual Value	0	0	0	0	0	0	0	60.000
Cash outflow	517.706	217.843	217.984	218.129	218.278	218.432	218.590	218.753
1. Investment costs	300.000	0	0	0	0	0	0	0
2. Material costs	90.200	90.200	90.200	90.200	90.200	90.200	90.200	90.200
3. Labour costs	84.500	84.500	84.500	84.500	84.500	84.500	84.500	84.500
4. Other costs	40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000
6. Taxes	3.006	3.143	3.283	3.428	3.578	3.731	3.890	4.053
Net cash inflow	-249.206	50.657	50.516	50.371	50.222	50.068	49.910	109.747

The payback period

- The payback period is the period of time in which a particular project is expected to recover its initial investment.

- It is expressed in years.

Table 2.22

Estimated Payback period of olive oil production tasting facility

Year	Investment	Net cash inflow (annual)	Uncovered amount of initial investment
1.	300.000	-249.206	-249.206
2.	0	50.657	-198.549
3.	0	50.516	-148.033
4.	0	50.371	-97.661
5.	0	50.222	-47.439
6.	0	50.068	2.629
7.	0	49.910	52.539
8.	0	109.747	162.286

- The payback period for this project is six years.

Net present value and internal rate of return

This table shows how to calculate net present value and determine internal rate of return.

To understand the logic behind internal rate calculation, watch the following video <https://www.youtube.com/watch?v=aS8XHZ6NM3U>, and to see how to calculate internal rate of return, watch this video <https://www.youtube.com/watch?v=L0JCg5TXudc>.

Table 2.23

Estimated Net present value and internal rate of return of olive oil production tasting facility

Year	Net cash flow	Discount rate (3%)	Net present value	internal rate of return calculation
1.	-249.206	0,98039216	-244.320	-220.836
2.	50.657	0,96116878	48.690	39.780
3.	50.516	0,94232233	47.603	35.153
4.	50.371	0,92384543	46.535	31.062
5.	50.222	0,90573081	45.488	27.444
6.	50.068	0,88797138	44.459	24.246
7.	49.910	0,87056018	43.450	21.417
8.	109.747	0,85349037	93.668	41.733
Total	162.286		125.572	0

- The project's Net present value is 125.572 €.
- The internal rate of return is 12,8%.

Cost-benefit Analysis

- Cost/Benefit Ratio = Present Value of Inflow or the cost invested in a project / Present Value of Outflow, which is the value of return from the project

Table 2.24

Estimated Cost/Benefit Ratio of olive oil production tasting facility

Year	Cash inflow	Cash outflow	Present Value of Inflow	Present Value of Outflow
1.	268.500	517.706	263.235	507.555
2.	268.500	217.843	258.074	209.384
3.	268.500	217.984	253.014	205.411
4.	268.500	218.129	248.052	201.517
5.	268.500	218.278	243.189	197.701
6.	268.500	218.432	238.420	193.961
7.	268.500	218.590	233.745	190.296
8.	328.500	218.753	280.372	186.704
Total			2.018.101	1.892.529

Cost/Benefit Ratio = 2.018.101 / 1.892.529 = 106 %

Non-financial methods

There are two important non-financial methods that may be used to analyse project viability. They are:

- **Weighted Scoring**
- **Balanced scorecard**

For more information about what these methods are and how to perform them, see additional material.

Unit 3 Activity: How to select a project using financial methods?

Lumi file 5: Select the best project using financial methods

Your organization is interested in extending your business scope, and three potential project leaders have prepared suggestions for the projects you might be interested in. You must judge those projects and select the best one using financial methods. You should choose the most viable project based on the financial parameters below.

Table 2.25

Estimated financial-based indicators for three potential projects

	Olive oil production facility with tasting facility	Winery with tasting facility	Agritourism accommodation facility
Net Present Value (NPV)	125.572 €	658.190 €	640.133
Internal Rate of Return (IRR)	12,8 %	29,5 %	14,9%
Payback Period	6 years	5 years	6 years
Cost-benefit ratio	106 %	120 %	111%

Solution: Winery with tasting facility

Unit 4 Activity: Project charter

Pdf file

Based on the olive oil production facility with the tasting facility project description, prepare a project charter. Since this project was not selected for financing, identify the problem areas of this project. The table below presents fundamental element that each project charter must contain. For more details on how project charters look like, see:

<https://pmstudycircle.com/project-charter/>

<https://monday.com/blog/project-management/project-charter-example/>

<https://projectmanagement.ie/blog/successful-project-manager-iii-the-project-charter-and-its-creation/>

<https://everhour.com/blog/project-charter/>

Table 2.26

Project charter fundamental elements

Project Name:

Project Description:

Business Case: Supports our company-wide goals of:

Project Deliverables:

Project Benefits:

Project Risks:

Project Budget:

Project Milestones:

Table 2.27

Olive oil production facility with tasting facility Project charter solution

Project Name:

Olive oil production facility with tasting facility

Project Description:



The aim of this project is to develop an olive oil tasting facility for an already existent olive oil production company. This project will contribute to promotion of olive oil to tourists, enabling them to obtain knowledge about olive oil and taste different types of olive oils at the same time.

Business Case:

To increase olive oil sales on tourist market.

Project Deliverables:

Olive oil tasting facility, fully constructed and furnished.

Project Benefits:

- Number of visitors
- Revenue generated from guided olive oil tasting services
- Number of sold olive oil bottles to visitors

Project Risks:

No team members have experience working with tourists and providing olive oil tasting experience.

Project Budget:

Estimated investment costs: 300.000 €

Project Milestones:

- Building reconstruction completed.
- Olive oil production equipment purchased.
- Olive oil tasting facility equipment purchased.

Unit 5 Additional reading materials

How to perform weighted scoring model: <https://www.youtube.com/watch?v=jwZw4PN01fs>

What is balanced scorecard and how to use it:

<https://www.youtube.com/watch?v=C0JZdyb6hZE>

Tailoring: a case study on the application of the seventh principle of PMBOK 7 in a public institution: <https://www.sciencedirect.com/science/article/pii/S1877050923004805>

How to Write a Project Charter: <https://www.youtube.com/watch?v=xMEWgSpe83A>

How do you incorporate project constraints and assumptions into your project scope and schedule?: <https://www.linkedin.com/advice/0/how-do-you-incorporate-project-constraints-assumptions>

How to create a project charter: <https://www.wrike.com/project-management-guide/faq/what-is-a-project-charter-in-project-management/>



Lesson 5: Planning a Hybrid Project

Unit 1 Introduction

Quality and procurement management, along with stakeholders' engagement, have a vital role in planning a hybrid project.

Unit 2 Theoretical chapters: Quality management

Introduction

Project management must be in accordance with the anticipated time, scope and cost. Also, quality is the fourth category that divides projects into successful or unsuccessful (Malsam, 2022).

What is quality?

Quality is a complex concept because the experience of quality is individual that is, each person experiences quality differently (Sallis, 2014). In addition, quality is difficult to define universally due to the different viewpoints of many stakeholders. The third problem is the multidimensionality of quality as a concept, and the fourth challenge of defining quality is the fact that quality is dynamic, not static (Schindler et al., 2015).

There are several definitions of quality:

- "The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs." (ISO 8402)
- "The quality is conformance to the (customers') requirements." (PMI)

What makes quality complex is the lack of a clear definition of quality (Rose, 2014). However, if the expected level of quality is promised but not delivered, it can have short-term and long-term negative consequences for the project manager and the project organization (Rose, 2014).

How to determine what quality is?

Some important questions to ask team members and stakeholders in order to determine the definition of quality in the context of the current project (Indeed, 2022):

- What are the most critical aspects of the product?
- How important is the performance of the product?
- How does the team measure product success?
- Who is the target audience?

- Are the results or details more important?"

What is quality management?

Project Quality Management includes the processes for incorporating the organization's quality policy regarding planning, managing, and controlling project and product quality requirements in order to meet stakeholders' objectives (PMBOK, 2017).

Project Quality Management also supports continuous process improvement activities as undertaken on behalf of the performing organization.

The Project Quality Management processes are (PMBOK, 2017):

- Plan Quality Management

The process of identifying quality requirements and/or standards for the project and its deliverables and documenting how the project will demonstrate compliance with quality requirements and/or standards.

- Manage Quality

The process of translating the quality management plan into executable quality activities that incorporate the organization's quality policies into the project.

- Control Quality

The process of monitoring and recording the results of executing the quality management activities to assess performance and ensure the project outputs are complete, correct, and meet customer expectations.

Quality management and agile/adaptive environments (PMBOK, 2017)

In order to navigate changes, agile methods call for frequent quality and review steps built in throughout the project rather than toward the end of the project.

Recurring retrospectives regularly check on the effectiveness of the quality processes. They look for the root cause of issues then suggest trials of new approaches to improve quality. Subsequent retrospectives evaluate any trial processes to determine if they are working and should be continued or new adjusting or should be dropped from use.

In order to facilitate frequent, incremental delivery, agile methods focus on small batches of work, incorporating as many elements of project deliverables as possible. Small batch systems aim to uncover inconsistencies and quality issues earlier in the project life cycle when the overall costs of change are lower.

How to plan quality in project management?

Plan Quality Management is a process that provides guidance and direction on how quality will be managed and verified throughout the project.

Quality planning should be performed in parallel with the other planning processes.

Quality management plan

Given that it is an individual understanding of the concept of quality, it is important that the project manager, together with his project team, develop a quality management plan. For the quality management plan to answer expectations, it is necessary to develop an individual plan for each project in accordance with project characteristics (Rose, 2014).

Quality management plans are based on four elements (Rose, 2014):

- Quality policy
- Who is in charge?
- Where are we going?
- How are we going to get there?

Project teams' roles in creating quality management plan

Each member of the project team has a certain role in the process of creating a quality management plan (Malsam, 2022):

- The Project Manager: The PM develops the quality management process in order to make sure all deliverables meet quality expectations.
- Team Members: The team is responsible for meeting the quality expectations of the plan as they execute their tasks by following the standards designed by the project manager.
- The Organization: The organisation standardizes quality controls across all projects and makes sure that its staff is trained with the skills needed to deliver quality products or services.
- Stakeholders: Stakeholders need to explain clearly what their quality expectations are and they are responsible for approving the delivery of that product or service.
- Customers: Customers and users should be consulted like stakeholders if the project is designed to create a product or service for customers."

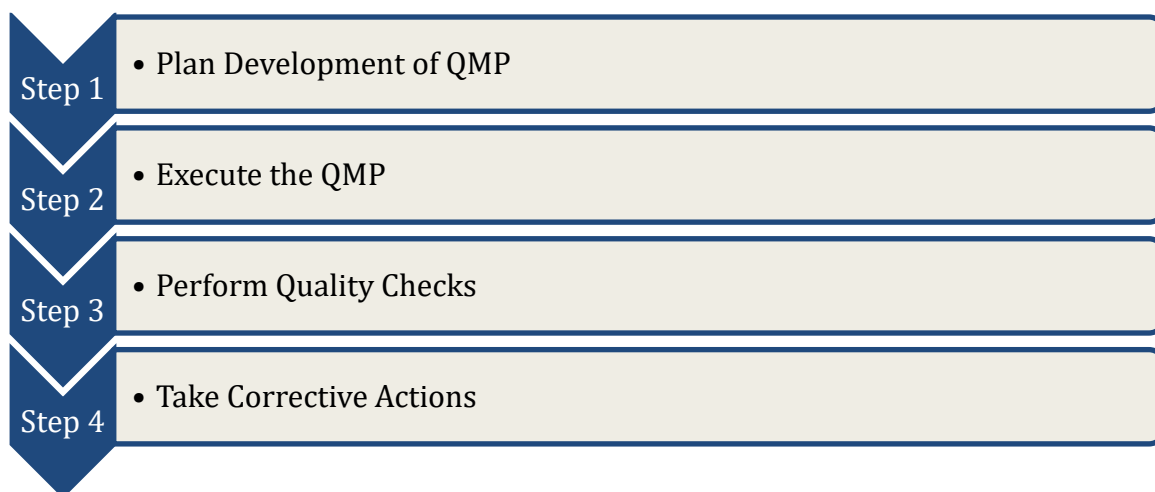
"A Quality Management Plan (QMP) helps guide the Program Manager (PM) and project personnel to execute quality management and quality assurance activities for a project or program. The QMP is usually developed by a contractor and reviewed by the customer. Quality is the degree to which the project fulfils requirements." (Acqnotes, 2024)

Quality management plan development steps

During the development of the Quality Management Plan, it is important to determine the steps of the procedure (Figure 3).

Figure 2.14

Example of steps of a Quality Management Plan (QMP) – Methodology



Source: Acqnotes (2024)

Each organization must create its methodology, to be as consistent as possible with its business rules and meet the anticipated needs.

"Step 1: Plan the Development of the QMP

Identify the customer's Quality Objectives. Help customers express quality expectations in objective, quantitative terms. Identify professional standards, including legal, environmental, economic, code, life safety, and health. Balance needs and expectations of customers and stakeholders with cost, schedule, and professional standards. Evaluate the costs and benefits of selected quality objectives and the processes to be used to achieve objectives.

To achieve objectives, develop an effective plan and processes, including quality assurance and quality control procedures. Consider risk/hazard factors and complexity of the project and adapt processes to provide the requisite level of quality. Document any project variations from the local QMP requirements in the risk management plan. Develop performance measure thresholds to ensure agreement on the definition of success relative to Quality Objectives. Ensure customer endorsement of all quality objectives included in the Quality Management Plan.

Step 2: Execute the QMP

Do the work according to the approved Program Management Plan (PMP) and standard operating procedures. Project execution is a dynamic process. The program management team must communicate, meet regularly, and adapt to changing conditions. The Quality Management Plan and PMP may require modification to meet project objectives. Document in Lessons Learned.

Step 3: Perform Quality Checks

Perform independent technical review, management oversight, and verification to meet quality objectives with District Quality Management Plans consistently. Check performance against the PMP and Customer Quality Objectives performance measures thresholds to verify that performance will accomplish Quality Objectives and to verify the sufficiency of the plan. Share findings with all project stakeholders to facilitate continuous improvement.

Step 4: Take Corrective Action if Necessary

If performance measure thresholds are exceeded, take specific corrective actions to fix the systemic cause of any non-conformance, deficiency, or other unwanted effects.

Document quality improvements that could include appropriate revisions to the quality management plan, alteration of quality assurance and control procedures, and adjustments to resource allocations. "(Acqnotes, 2024)

Unit 3 Theoretical chapters: Stakeholder management and engagement, and stakeholder registry

Introduction

Stakeholder is an individual, group, or organization that may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project, program, or portfolio. Projects are performed by people and for people. A project can have a small group of stakeholders or potentially millions of stakeholders. There may be different stakeholders in different phases of the project, and the influence, power, or interests of stakeholders may change as the project unfolds (PMBOK, 2017). Their inclusion can hinder the project implementation, therefore, effective stakeholder identification, analysis, and engagement will result in a determination of who are internal and external stakeholder to the organisation, and who are supportive of the project, who may not be supportive or are neutral.

Stakeholder engagement

Stakeholder engagement includes implementing strategies and actions to promote the productive involvement of stakeholders (PMBOK, 2017). These activities can start before or when the project starts and continue throughout the project.

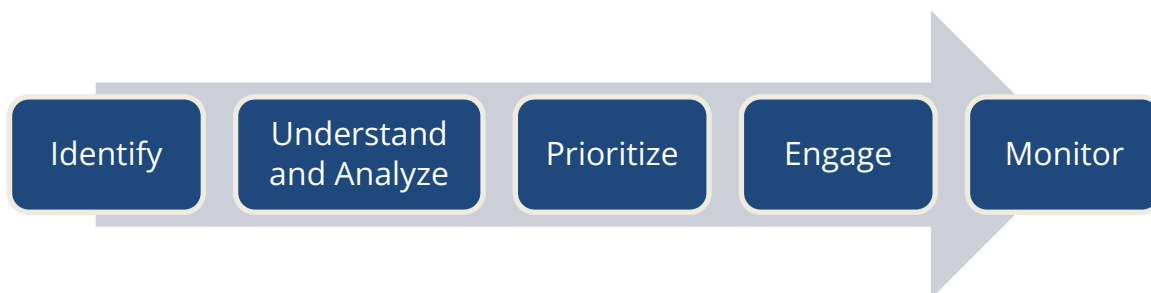
Defining and sharing a clear vision at the start of the project can enable good relationships and alignment throughout the project. Establishing a clear vision that key stakeholders agree on can entail some challenging negotiations, especially with stakeholders who are not necessarily in favour of the project or its intended outcomes.

How to engage stakeholders effectively?

There are several steps to engage stakeholders effectively (PMBOK, 2017)⁵

Figure 2.15

How to engage stakeholders effectively



Stakeholder identification

Some stakeholders are easy to identify, such as the customer, sponsor, project team, end users, and so forth, but others can be difficult to identify when they are not directly connected to the project. High-level stakeholder identification may be carried out prior to forming the project team.

Stakeholder identification progressively elaborates the initial work and is a continuous activity throughout the project.

Understand and Analyse stakeholders

⁵ Elaboration of these steps were adopted from PMBOK (2017)

Once stakeholders are identified, the project manager and the project team should seek to understand stakeholders' feelings, emotions, beliefs, and values.

These elements can lead to additional threats or opportunities for the project outcomes.

They can also change quickly, and as such, understanding and analysing stakeholders is an ongoing action.

Analysing stakeholders considers several stakeholder aspects, such as:

- Power,
- Impact,
- Attitude,
- Beliefs,
- Expectations,
- Degree of influence,
- Proximity to the project,
- Interest in the project, and
- Other aspects surrounding stakeholder interaction with the project.

Prioritize stakeholders

If there are too many stakeholders involved for the project team to engage directly or effectively with all of them, the project team can complete an initial prioritization of stakeholders based on its analysis.

It is common to focus on stakeholders with the most power and interest as one way to prioritize engagement.

As events unfold throughout the project, the project team may need to reprioritize based on new stakeholders or evolving changes in the stakeholder landscape.

Engage stakeholders

Stakeholder engagement entails working collaboratively with stakeholders to introduce the project, elicit their requirements, manage expectations, resolve issues, negotiate, prioritize, problem solve, and make decisions.

Engaging stakeholders requires the application of soft skills, such as active listening, interpersonal skills, and conflict management, as well as leadership skills, such as establishing the vision and critical thinking.

Communication with stakeholders can take place via written or verbal means, and it can be formal or informal.

Engagement is interactive. It includes an exchange of information with one or more stakeholders, such as conversations, phone calls, meetings, brainstorming, product demos, and the like.

Monitor stakeholders

Throughout the project, stakeholders will change as new stakeholders are identified, and others cease to be stakeholders.

As the project progresses, the attitude, or power of some stakeholders may change. Besides identifying and analyzing new stakeholders, there is an opportunity to assess whether the current engagement strategy is effective or if it needs to be adjusted.

Therefore, the amount and effectiveness of stakeholder engagement is monitored throughout the project.

Stakeholders and agile/adaptive environments

Projects experiencing a high degree of change require active engagement and participation with project stakeholders.

To facilitate timely, productive discussion and decision-making, adaptive teams engage with stakeholders directly rather than going through layers of management.

Often the client, user, and developer exchange information in a dynamic co-creative process that leads to more stakeholder involvement and higher satisfaction.

Regular interactions with the stakeholder community throughout the project mitigate risk, build trust, and support adjustments earlier in the project cycle, thus reducing costs and increasing the likelihood of success for the project.

In order to accelerate the sharing of information within and across the organization, agile methods promote aggressive transparency.

The intent of inviting any stakeholders to project meetings and reviews or posting project artefacts in public spaces is to surface as quickly as possible any misalignment, dependency, or other issue related to the changing project.

What is stakeholder registry?



The main output of the Identify Stakeholders process is the stakeholder register. This document contains information about identified stakeholders that includes, but is not limited to (PMBOK, 2017):

- Identification information: Name, organizational position, location, and contact details, and role on the project.
- Assessment information: Major requirements, expectations, potential for influencing project outcomes, and the phase of the project life cycle where the stakeholder has the most influence or impact.
- Stakeholder classification: Internal/external, impact/influence/power/interest, upward/downward/outward/sideward, or any other classification model chosen by the project manager.

Unit 4 Theoretical chapters: Procurement management

Introduction

Any organization that wants to minimize its procurement costs while maintaining its standard quality and necessary stock of goods must include procurement planning in its operations. Project Procurement Management includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team (PMBOK, 2017). It includes the management and control processes required to develop and administer agreements such as contracts, purchase orders, memoranda of agreements (MOAs), or internal service level agreements (SLAs).

Project Procurement Management processes include the following (PMBOK, 2017):

- Plan Procurement Management—The process of documenting project procurement decisions, specifying the approach, and identifying potential sellers.
- Conduct Procurements—The process of obtaining seller responses, selecting a seller, and awarding a contract.
- Control Procurements—The process of managing procurement relationships, monitoring contract performance, making changes and corrections as appropriate, and closing out contracts.

What to be aware of when managing procurement (adapted from PMBOK, 2017)?

There can be significant legal obligations and penalties tied to the procurement process.

The project manager does not have to be a trained expert in procurement management laws and regulations but should be familiar enough with the procurement process to make intelligent decisions regarding contracts and contractual relationships.

The Project Procurement Management processes involve agreements that describe the relationship between two parties—a buyer and a seller. Agreements can be as simple as the purchase of a defined quantity of labor hours at a specified labor rate, or they can be as complex as multiyear international construction contracts.

Most organizations document policies and procedures specifically defining procurement rules and specifying who has authority to sign and administer such agreements on behalf of the organization.

A complex project may involve managing multiple contracts simultaneously or in sequence.

Procurement management in agile/adaptive environments (adapted from PMBOK, 2017)

In agile environments, specific sellers may be used to extend the team. This collaborative working relationship can lead to a shared risk procurement model where both the buyer and the seller share in the risk and rewards associated with a project.

Larger projects may use an adaptive approach for some deliverables and a more stable approach for other parts. In these cases, a governing agreement such as a master services agreement (MSA) may be used for the overall engagement, with the adaptive work being placed in an appendix or supplement. This allows changes to occur on the adaptive scope without impacting the overall contract.

What is a Procurement plan

The procurement plan defines what needs to be procured, from whom, in what time frame, the cost and the expected quality of the product (Aavenir). If the procurement plan is quality made, it will ensure the "efficiency, effectiveness and transparency of the procurement process." (Brush, 2023)

"A procurement plan - also called a procurement management plan - is a document that is used to manage the process of finding and selecting a vendor. The plan justifies the need for an external supplier and explains how the process of finding a supplier will be performed, from identifying the project requirements to closing the contract." (Brush, 2023).

Why should you develop a Procurement plan?

"Procurement planning is the process of identifying and consolidating requirements and determining the timeframes for their procurement with the aim of having them as and when they are required. A good procurement plan will describe the process of the identification and selection of suppliers/contractors/consultants." (Aavenir)

The benefits of a good procurement plan: (Overvest, 2024)

- "provide documentation for the whole procurement process (as a reference or guide),
- helps consolidate similar requirements under one contract,
- divide complex requirements into multiple contract packages,
- assess additional staffing needs,
- optimize cost savings,
- facilitate stakeholder collaboration,
- estimate procurement timelines."

Procurement planning is important for the following reasons: (ZPPA)

- "it is one of the pre-requisites for successful implementation of projects,
- limits scope on non-compliance with agreed procurement procedures,
- enhances transparency and predictability,
- provides a good basis for monitoring,
- facilitates efficient and effective treasury management by spreading out annual procurement activities consistent with the needs and resources available."

Component of a procurement plan

An effective procurement plan consists of 10 components (Brush, 2023):

- Explain the procurement process
- Identify the different roles and responsibilities
- Identify the procurement needs
- Determine your project timeline
- Describe how changes can be made and approved
- Explain how vendors will be managed
- Identify relevant legal jurisdiction
- Define the payment methods
- Explain your risk management processes
- Identify project constraints and limitations

It begins with a description of the procurement process, followed by the division of roles and responsibilities between employees. Then it is necessary to identify the real needs and requirements of the specific procurement, the time frame in which the identified procurement needs to be carried out. After that, the way to proceed with changes if they are

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necessary for the procurement process is described and the way to manage suppliers after signing the contract is defined. Furthermore, the relevant legal jurisdiction should be ensured as well as payment methods. The last two elements of the procurement plan are defining risk management processes and identification of potential constraints and how to deal with them (Brush, 2023).

How to Create a Procurement Plan?

Step 1: Describe the Procurement Process

This is the first step that involves looking at each phase of the procurement plan individually, starting from the first phase to the last. It is necessary to formalize and agree with every step with the project team in order for the procurement to be successful (Frevvo, 2022).

Step 2: Outline Roles and Responsibilities

"Establish the parties involved in the purchasing process, along with their roles and responsibilities. The purchasing team will consist of various professionals who are responsible for overseeing these tasks. These include a purchasing manager supervising procurement-related activities, purchasing agents evaluating suppliers, and a contract manager preparing contracts. Make sure that you outline the roles and responsibilities of your purchasing team. Specify who can make and approve changes to any procurement documentation." (Frevvo, 2022).

Step 3: Determine Needs and Requirements

List and describe the necessary goods and services (tangible or intangible). It is necessary to define all the most important characteristics of the goods or services being procured (Frevvo, 2022).

Step 4: Define a Project Timeline

When defining the procurement time frame, it is important to consider the availability of storage space, if the goods arrive too early, or the delay in further activities if the goods arrive too late (Frevvo, 2022). (Figure 2)

Step 5: Determine Project Constraints

When developing the procurement plan, it is necessary to consider all the limitations that occur within the project.

Restrictions can be in the form of:

- limited budget,
- quality specifications,
- schedule restrictions,
- scope and results,
- security requirements,
- industrial regulations.

Step 6: Define Vendor Selection Criteria

In this step, the process of collecting bids begins. When choosing a supplier, with the aim of narrowing down the choice of suppliers, selection criteria can be defined, which can be:

- "Costs: If a proposal doesn't fit within your budget, you could either move on to the next one or enter into negotiations with the vendor.
- Delivery: If a vendor can't deliver goods or services within your desired timeline, then look for one that can.
- Quality: Vendors must be able to meet certain quality standards before you can consider their proposals." (Frevvo, 2022).

Step 7: Select a Contract Type

Contracts with suppliers or agreements represent a legal obligation, and there are several types of contracts: (Frevvo, 2022)

- Fixed price contract
- Fixed price plus incentive contract
- Cost-reimbursable contract
- Time and materials (T&M) contract

Step 8: Determine Payment Terms and Methods

This step defines the specific payment terms agreed with the supplier. This step involves defining:

- Total costs
- Expected deliveries
- Due dates
- Payment methods

Step 9: Identify Potential Risks

In this step, it is desirable to identify potential risks and predict the ways in which the risks can be mitigated.

The participation of stakeholders in the procurement process must follow the principles of ethical behaviour, which includes the terms "honesty, integrity, probity, diligence, fairness, trust and respect" (Guyana, 2010). Namely, compliance with ethical principles results in business operations without conflicts of interest and exploitation of individuals' positions (Guyana, 2010).

Unit 5: Additional reading materials

Quality Management Plan (QMP) Tutorial: https://www.youtube.com/watch?v=deAw_27UJbM

Procurement Management Plan: <https://www.youtube.com/watch?v=4USmuKqhJCK>

The Stakeholder Communication Plan: <https://filestage.io/blog/stakeholder-communication-plan/>

Project Scheduling with Critical Path Method:
<https://www.youtube.com/watch?v=U1Yqpeu9IBY>

Project Schedule Compression Techniques:
<https://www.youtube.com/watch?v=HUP39ZoCaTQ>

Plan and manage schedule: <https://www.pmillustrated.com/2-6-plan-and-manage-schedule/>

What is a gantt chart?: <https://www.youtube.com/watch?v=fB0wsdmV3Sw>



Lesson 6: Executing, Monitoring, Controlling and Closing a Hybrid Project

Unit 1 Introduction

Project Management presents many tools and techniques for the management of the successful project. One of the most regarded of these tools would be Earned Value Analysis.

Unit 2 Theoretical chapter: Earned value management systems

Introduction: Earned Value Management Foundational Concepts

Earned Value Management Systems allow the project manager to answer the following three questions, as they relate to the project (Reichel, 2006):

- Where have we been?
- Where are we now?
- Where are we going?

In Earned Value Management, unlike in traditional management, there are three data sources:

- the budget (or planned) value of work scheduled
- the actual value of work completed
- the "earned value" of the physical work completed

Earned Value takes these three data sources and is able to compare the budgeted value of work scheduled with the "earned value of physical work completed" and the actual value of work completed.

For more details regarding the Earned Value Management see Reichel, C. W. (2006). Earned value management systems (EVMS): "you too can do earned value management" Paper presented at PMI® Global Congress 2006—North America, Seattle, WA. Newtown Square, PA: Project Management Institute, available at: <https://www.pmi.org/learning/library/earned-value-management-systems-analysis-8026>

How to compute Earned Value and other performance indices (Lepage, 2024)

Earned Value (EV)

Earned Value is a measure of the work performed expressed in terms of the budget authorized for that work. It helps to understand project progress and performance.

Formula: $EV = (\text{Percentage of work completed}) \times (\text{Project Budget})$



Example Calculation: If you have completed 30% of a project with a budget of \$100,000, the EV would be $0.30 \times \$100,000 = \$30,000$.

Schedule Performance Index (SPI)

Schedule Performance Index is a measure of schedule efficiency, calculated by comparing the earned value with the planned value.

$$\text{Formula: } SPI = EV / \text{Planned Value (PV)}$$

Example Calculation: If the EV is \$30,000 and the PV is \$40,000, then $SPI = \$30,000 / \$40,000 = 0.75$.

Cost Performance Index (CPI)

Cost Performance Index is a measure of cost efficiency, calculated by comparing the earned value with the actual cost.

$$\text{Formula: } CPI = EV / \text{Actual Cost (AC)}$$

Example Calculation: If the EV is \$30,000 and the actual cost is \$35,000, then $CPI = \$30,000 / \$35,000 = 0.857$.

Estimate to Complete (ETC)

Estimate to Complete is a forecast of how much more money will be needed to be spent to complete the project.

$$\text{Formula: } ETC = (\text{Total Budget at Completion}) - EV$$

Example Calculation: If the total budget is \$100,000 and the EV is \$30,000, then $ETC = \$100,000 - \$30,000 = \$70,000$.

Estimate at Completion (EAC)

Estimate at Completion is a forecast of the total cost of the project at completion, calculated in a few different ways depending on the circumstances.

$$\text{Formula: } EAC = BAC / CPI \text{ (if you assume that what has been seen in terms of CPI will continue for the duration of the project)}$$

Example Calculation: If the budget at completion (BAC) is \$100,000 and the CPI is 0.857, then $EAC = \$100,000 / 0.857 = \$116,688$.

Estimating Velocity (Agile Methodology)

Velocity is an agile project management metric that measures the amount of work a team can complete in a single iteration or sprint.

Formula: Velocity = Total Story Points Completed / Number of Sprints

Example Calculation: If a team has completed 50 story points over 2 sprints, then Velocity = 50 / 2 = 25 story points per sprint.

Unit 3 Additional material: How to do project report, and what are Burndown and Burnup charts and how to create a Cumulative Flow Diagram for adaptive measurement

What is project reporting? <https://www.projectmanager.com/blog/4-types-of-project-reports>

How to use a software to create project report (Software for Hybrid Project and Portfolio Management) <https://www.youtube.com/watch?v=vk49kCNDZjk>

How to write a Project Report - Guide & Templates <https://slite.com/learn/project-report>

What is a Burndown? <https://www.youtube.com/watch?v=BVTZxAe-8Wc>

What is a Burnup charts? <https://www.youtube.com/watch?v=o-DoeXeNjVE>

What are a Burndown Chart, a Burnup Chart, and Velocity?
<https://www.youtube.com/watch?v=2K84aZn9AY8>

What is a Cumulative Flow Diagram and how to create it?
<https://www.youtube.com/watch?v=t8zUD6UrzXU>

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WP3 Design And Development of the HyPro4ST Online training Course and Practical Guide Module 3 – Additional material

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Lesson 1 – Theoretical chapter

Unit 1 6 Examples of Process Innovation that Changed the Game

for Lesson 1. Creativity and innovation

Task: Read this study and answer the questions:

Lumi file 6file Question and answers (correct answers in bold)

What is Process Innovation?

On this blog we've already talked about examples of Product Innovation and Workplace Innovation. Now, it's time to turn our attention to "the least sexy form of innovation" – Process Innovation and look at a few examples of process innovation that seriously changed the game.

"Process" means the technologies, skills, labour, supply chains, and facilities that go into the production, delivery and support of a good or service. Process Innovation can mean updates to the technology and equipment used in manufacturing. It can mean improvements to the tools, techniques and software used in the supply chain and delivery system. It can also mean changing the way you sell your product to customers, to make that process more streamlined and effective. Process is the engine under the hood of your value-adding vehicle. And Process Innovation means tuning that engine, replacing parts to make it run faster and smoother.

Henry Ford – the Father of Process Innovation

While we're on the subject of engines and vehicles, it feels like a good time to mention the "father" of process innovation – Henry Ford. In the 1910s, Ford had the goal of bringing the automobile to the multitudes. He achieved this through a combination of Product and Process Innovation. First, he made his product, the Model T, robust and affordable. Then, Mr Ford was inspired by conveyor belt systems used in grain warehouses. He implemented a gradual series of innovations that culminated in the assembly line.

The new assembly line cut production time for each car from about 12 hours to 1 ½ hours. It also allowed Ford's workers to work shorter shifts for more pay. This became the central paradigm of industrial manufacture. As ThoughtCo observe, "this 100-year old innovation by a car manufacturer in Michigan changed the way we live and work forever."

This is the classical example of Process Innovation, and it is a good one. Ford utterly transformed the production element of his business process. This in turn had dramatic effects on the whole of society.



Taking Control of The Supply Chain: Tesla's Gigafactory

How about a more modern example of a car company with a charismatic tycoon at the helm? Each Tesla electric vehicle requires huge EV batteries, made of thousands of lithium-ion cells. When electric cars were new on the market, the manufacturing capacity for these batteries was limited. Companies had not invested in battery technology development, and the high cost of batteries was making the final Tesla product expensive. To reduce costs and meet their projected demand, Tesla began construction of the Gigafactory in 2014. Already, it is the highest-volume battery plant in the world. The Gigafactory is proving so effective due to economies of scale, innovative manufacturing processes, reduction of waste, and the simple optimization of locating most manufacturing processes under one roof.

This is a great example of process innovation within the supply chain – by taking control of battery production and concentrating it in one place, Tesla is able to work towards affordable vehicles, a transition to sustainable energy, and profit.

Closing the Loop on Waste: MBA Polymers

In an ideal world, once a product has reached the end of its lifespan, valuable raw materials used in its construction are extracted and used in the creation of something new, with minimal waste and emissions. This is easily done with metals, as it's simple to separate copper from steel from magnesium – they have different densities. Plastic presents a much greater challenge, as polymers have very similar densities, and very similar electrical and magnetic properties. This makes separating them difficult. So, used plastics end up in landfills and heaps in third world countries, and more fossil fuels are used to create more new plastic.

But, by applying technological recycling innovations, Mike Biddle and MBA polymers are challenging the Procurement and Processing steps of the plastic production paradigm. (that's a lot of Ps!).

Currently, procurement involves large scale oil extraction, and as we all know, that has to go. So, MBA mine from landfills instead, where there is a plentiful and growing supply of raw materials. Their processing plants involve lower capital outlay, use 80-90% less energy, and can produce whatever type of plastic they are fed, in contrast with traditional plants that only produce one or two polymers. At an MBA plant, waste is shredded into very small bits, non-plastic waste is extracted, the remainder is sieved, magnets are used, air classification is applied. Biddle likens this stage of the process to "Willy Wonka's factory". This produces a mixed plastic composite of many different types and grades. Then comes the more sophisticated part. Plastic is ground down to the size of a small fingernail. Then a highly complex process sorts the plastic into flakes. This process is the innovation that supports the



larger paradigmatic shift. Optical sorting is used, its blended in 50,000 lb blending silos, melted and extruded into plastic spaghetti strands, and cut into small pellets. These pellets are the same material that you would get from oil.

By innovating to improve the efficacy of the plastic recycling process, MBA polymers have been able to move towards a circular economy. This is a superlative example of process innovation because it challenges the wider processes of which it is a part.

More Examples of Game-Changing Process Innovation

Process Innovation does not have to mean changing the way a product is manufactured, as in those examples. It can also mean changing the way a product is delivered to the consumer, or innovating market processes:

- AliExpress: One of the world's largest eCommerce sites, AliExpress along with others applied a disruptive innovation to the process of online selling – dropshipping. Vendors are able to set up their own online storefront and sell the products of a manufacturer. The manufacturer sends the product to the customer. The product never goes through the hands of the vendor.
- Amazon: Way back, a new company called Amazon introduced an innovation to the process of buying books. Instead of visiting a bricks-and-mortar retailer, the consumer could buy literature from the comfort of their home. A few more process innovations later, Amazon became the dystopian behemoth we know and love today.
- eBay: eBay did not invent the auctioneering process. Their innovation was to present the auction in an intuitive online marketplace. This attracted buyers and sellers to the platform. And eBay introduced a new several-day purchasing process dynamic to millions of consumers.

Unit 2 ICT 8 Types of Innovation (With Examples and Integration Tips)

for Lesson 1: Creativity and innovation

Task: Read this case study and answer the questions:

Lumi file 7file Question and answers (correct answers in bold)

There are several types of innovation. Here are eight different types a company may adopt to improve its business practices:

1. Product innovation



Product innovation involves visibly improving a product's performance and updating or upgrading its characteristics. It may include creating a new product or enhancing or adding features to an existing one. As a product designer or manufacturing and production manager, you may consider using product innovation to meet evolving customer requirements or help the company to access an entirely new market. A business may adopt this form of innovation as a preemptive measure to become more competitive or reduce costs to help maintain its current market position and profitability.

An example of product innovation may be a manufacturer of party supplies transitioning from offering customers plastic disposable cups and plates to offering ones made from recyclable paper. The manufacturer may decide to do this after undertaking a customer survey and market research and discovering that many customers prioritise shopping from businesses that offer more environmentally friendly product choices.

2. Service innovation

As a service manager or supervisor, you can integrate service innovation into a business by improving or launching a service concept in a new market. This may also involve delivering an existing product or service in a more convenient, efficient and affordable way to customers or integrating value-added services into an existing service. This form of innovation may provide a valuable way to differentiate a business from its competitors. An example is a ride-sharing service that offers affordable transportation, adding a delivery service option for customers to send packages to different locations.

3. Process innovation

A business process analyst or specialist can create or adopt a range of processes that help transform a business's raw materials and use different skills, equipment and technology. A company may consider using process innovation to improve its product or service production and delivery to make them more efficient and cost-effective. This innovation may relate to product manufacturing or include improving secondary or supporting business processes. A company may facilitate process innovation by integrating innovative technologies or methods of operation.

An example of process innovation in action is a coffee roaster selling bulk packages of roasted coffee beans to various cafés. The roaster can integrate product and sales management software that automatically reorders a client's usual volume of coffee every month. This innovation doesn't directly impact the coffee's quality but affects how clients receive it by ensuring they never run out of coffee.

4. Technological innovation

Technological innovation is relevant to business analysts, project managers or systems experts. Integrating new and improved automated technology, software or machinery or enabling more affordable and efficient processes can reduce product variability and improve quality. Technological innovations may produce a more efficient or connected customer or client experience. An example of this is a gym that installs treadmills that record a person's performance and store the information in a cloud. The gym may also consider creating a mobile phone application where the person can review their performance.

5. Business model innovation

Someone who oversees the operation of a business may benefit from business model innovation to address specific challenges. Business model innovation involves changing how a business functions and makes money and changing what customers it targets, how it targets them and what it uses to target them. This type of innovation also involves changing how a company adds value and what type of decisions it makes. Integrating business model innovation can involve taking calculated risks. It's also a good way to keep up with trends, manage market saturation or address fluctuating profit margins.

An example of this is an online makeup retailer experiencing poor sales as it faces increased competition from other online beauty retailers. The retailer may revisit its business model and switch to offering monthly subscription boxes of curated and themed makeup products. This business model allows the business to better plan its product demand and helps it secure a more stable income.

6. Marketing innovation

Marketing innovation can expose a product or service to a new market or increase current market share by alerting more customers to what a company offers. It may help a business better connect and engage with new customers by finding new uses for an existing product or highlighting qualities customers might not be aware of.

An example of this is a menswear boutique that specialises in designing and creating bespoke tuxedos for male grooms. The boutique may expand its market base by advertising its services to women or non-binary individuals who may prefer to wear a suit to their wedding.

7. Architectural innovation

This innovation refers to how a business combines various system components to create or add value. It can also involve revisiting these combinations to determine areas that may benefit from improvement. This may include improving one of the core business systems, including existing networking, accounting, manufacturing or inventory systems. It does this without changing the fundamental components of the system itself or altering or changing these components. A common example of this is businesses that develop certain technologies for industrial use and rework how these components interact to create smaller versions of the product for a retail market.

8. Social innovation

Social innovation involves adopting or developing new practices or tools a business can use to meet its responsibilities. Non-profit and commercial companies often rely on social innovation and may use it to create improvements in a wide range of societal areas. Communicating these innovations to customers can help them view the business positively and help the company become more sustainable. An example is a business that manufactures certain products, switching to using less energy-intensive

Tips for integrating innovation

The following tips may help a business select the best form of innovation and integrate it effectively:

Adopt an integrated approach. It's potentially challenging to adopt an innovation in one part of a business without affecting how the rest of the business operates. Undertaking an integrated approach may help a company preview how proposed changes might impact other areas and allow it to adjust its integration accordingly.

Foster communication. If an innovation involves multiple individuals in a business, it may take some time to explain its benefits to them and answer any questions they have. Creating open communication channels and encouraging everyone involved to raise any concerns may improve the chances of success.

Encourage innovation. Cultivating a culture of innovation may encourage businesses to adopt major changes more easily. A business may encourage its employees to become more innovative by allowing them to suggest and integrate new and improved ways of undertaking their responsibilities.

Track your efforts. Tracking the cost, time and effort involved in integrating an innovation may help you determine if it has added value to the business and identify areas that may benefit from improvement. It may also help motivate further innovations with the business leaders.

Unit 3 8 Strategies To Boost Your Team's Creativity

for Lesson 1. Creativity and innovation

Task: Read this case study and answer the questions:

Lumi file 8file Question and answers (correct answers in bold)

What do you think about when you hear the word "creativity?" Problem solving? Or the mysterious mojo bestowed by the muses? While people probably thought something akin to the latter, creativity simply refers to using new and original ideas. It helps solve problems and is an indispensable asset in any workplace, whether you work in a traditionally creative field or not.

That's why encouraging creativity within your team can improve job performance, professional satisfaction and increased productivity. With that in mind, I've gathered eight simple strategies to boost your team's creativity, encourage collaboration and reward innovation. Let's dive in.

1. Encourage brainstorming sessions.

Encouraging brainstorming sessions allows the team to freely express their ideas without fear of being judged. It can lead to innovative solutions and ideas that would not have been possible otherwise. For teams operating in a remote environment, this can be done online. In fact, recent research indicates that virtual brainstorming is more conducive to innovation than in-person sessions.

For this practice to be effective, teams must not shy away from "dumb" ideas to focus on the "right" ones. Often, the best ideas will be either a combination of both or a "dumb" idea with some tweaks to turn it into a working project.

2. Provide space for creativity.

Creating an environment that fosters creativity is essential. This could be as simple as providing a dedicated space for brainstorming or working on creative projects. A separate area will allow your brain to switch from execution mode to creative mode.

Space can also mean allocating time to simply rest. Sometimes the best ideas will come when you're not racking your brain to develop the next great concept. It might come while walking, driving, showering or looking into oblivion. Creativity thrives when we take time to unplug and let our brain do its job on the backend.

3. Experiment with new ideas.

Fresh ideas are welcome, especially unconventional ones. It's important to take calculated risks and explore new avenues.

Ask for help from colleagues in different areas for diverse angles. Even if you don't consider their advice, it may spark new, creative thinking to get you where you need to go. You can leverage digital company tools to collect ideas or questions (even anonymously) in order to enhance participation.

When working with a team, try the "six thinking hats" strategy to shed new light on the issue. This way, you will guarantee at least six different perspectives on the same topic.

4. Promote cross-functional collaboration.

Collaboration between different departments can lead to a fresh perspective, empathy and innovative ideas.

Andrew Ng, co-founder of Coursera and Landing AI, once said: "In my own life, I found that whenever I wasn't sure what to do next, I would go and learn a lot, read a lot, talk to experts. I don't know how the human brain works, but it's almost magical: when you read enough or talk to enough experts, when you have enough inputs, new ideas start appearing."

5. Provide opportunities for professional development.

Offering professional development opportunities can help team members expand their skill sets and develop new perspectives.

At BairesDev, we offer internal workshops and masterclasses about programming languages, frameworks and other tech topics to all team members. We also partner with Udemy, an e-learning platform where everybody can be updated on their skills, obtain certifications or simply learn something new.

Professional development opportunities should encourage teams to be more imaginative. For example, if a director needs to improve their public speaking skills, instead of taking public speaking lessons, per se, why not enroll them in an improv comedy club? This way, they will learn to feel comfortable in front of an audience and be forced to think creatively.

6. Allow time for passion projects.



Allowing team members to pursue passion projects on company time can lead to creative breakthroughs and a more fulfilled workforce.

Passion and creativity are intertwined. Hobbies such as playing a musical instrument, playing sports, reading fiction or collecting something can help you relax and fight stress while boosting your creativity.

Taking a break from the sensory bombardment of the world gives your brain even more reason to wander. A report from the University of Utah showed that subjects performed 50% better on standard creativity tests after four days alone in nature. While it is unlikely that you have four days to spare before a brainstorming session, a simple walk can be helpful.

7. Embrace diversity.

Encouraging diversity in your team can lead to various perspectives and ideas. Different backgrounds and experiences can lead to innovative solutions and fresh ideas.

This applies to your sources of inspiration. Look for innovation in industries and niches other than yours. Research what they are doing differently from their competitors and how you can apply those ideas to your sector. The research and the process of adapting ideas will boost creativity.

Embracing diversity starts in the recruiting process. At BairesDev, we've invested in technology to help us match skills and potential with open positions, eliminating any background bias.

8. Recognize and reward creativity.

Recognizing and rewarding creative achievements can encourage team members to continue to think outside the box and innovate.

Offer intrinsic and extrinsic rewards. Intrinsic rewards are the internal feelings of satisfaction, enjoyment and fulfillment from doing a great job. Extrinsic rewards involve praise and recognition, which can be a public shoutout for a team member's excellent idea or performance. Adding bonuses might also help.

Final Thoughts

Even in nontraditional creative professions, creativity can be beneficial. Innovation and new ideas can streamline processes, increase efficiency and improve job performance. It leads to engaged and fulfilled professionals, higher retention rates and increased productivity.



Creativity is not something restricted to novelists, musicians and artists. It is an essential asset for any team in any industry, no matter the job description. By applying these strategies, you will see a boost in your team's creative output and be ready to adopt innovative solutions.

Unit 4 How to Improve Creativity in Your Team

for Lesson 1. Creativity and innovation

Task: Read this case study and answer the questions:

Lumi file 9file Question and answers (correct answers in bold)

Creativity is a vital ingredient for success in today's rapidly evolving and competitive business landscape. Teams that can think outside the box, generate innovative ideas, and problem-solve creatively are more likely to stay ahead of the curve and achieve stellar results. In this article, we will explore the importance of creativity in a team and discuss effective strategies to enhance creative thinking and foster a culture of innovation.

Understanding the Importance of Creativity in a Team

Working in a team setting is a complex and dynamic process that requires a range of skills and abilities. One of the most valuable qualities a team can possess is creativity. Creativity is not just about artistic expression; it is a mindset that allows individuals to think outside the box and come up with innovative solutions to problems. In fact, creativity plays a crucial role in problem-solving, enabling teams to approach challenges from various angles and find unique solutions.

When faced with obstacles, a team with a creative mindset can break free from conventional wisdom and explore new and innovative approaches. This ability to think differently can lead to breakthroughs and improved outcomes. By encouraging and fostering creativity within a team, organizations can tap into the collective intelligence of their members and unlock new possibilities.

The Role of Creativity in Problem-Solving

Problem-solving is an essential aspect of teamwork, and creativity is a key ingredient in this process. When teams are confronted with complex problems, a creative mindset allows them to think beyond the obvious solutions. It enables individuals to challenge assumptions, question established norms, and explore alternative perspectives.

Creative thinking empowers teams to approach problems with an open mind, encouraging them to consider multiple viewpoints and possibilities. This not only expands the range of



potential solutions but also promotes a more inclusive and collaborative environment. By embracing creativity, teams can harness the power of collective intelligence and find innovative ways to overcome challenges.

How Creativity Boosts Team Performance

Team performance is greatly enhanced by creativity. When individuals are encouraged to think creatively, they are more likely to contribute novel ideas and perspectives. This stimulates meaningful discussions and collaboration, as team members bring their unique insights to the table.

By embracing creativity, teams foster a positive team dynamic, where every member feels valued and empowered to contribute their ideas. This inclusive environment not only boosts engagement but also encourages individuals to take risks and explore new possibilities. As a result, team members become more motivated and invested in their work, leading to higher levels of productivity and achievement.

Moreover, creativity fosters a culture of continuous improvement within a team. By encouraging innovative thinking, teams are more likely to identify and address inefficiencies or areas for growth. This proactive approach to problem-solving ensures that teams are constantly evolving and adapting to new challenges, ultimately driving long-term success.

In conclusion, creativity is a vital component of effective teamwork. It enables teams to approach problems from various angles, find unique solutions, and foster a positive team dynamic. By embracing creativity, organizations can unlock the full potential of their teams and achieve greater levels of success.

Identifying Barriers to Creativity

When it comes to exploring the depths of creativity, it is crucial to recognize and address the barriers that may hinder its flow. By understanding these obstacles, we can create an environment that fosters innovation and allows individuals to reach their full creative potential. Let's delve into some common barriers and explore ways to overcome them.

Common Misconceptions About Creativity

One common barrier to creativity is the presence of misconceptions. Many people believe that creativity is solely the domain of artists or individuals with innate talent. However, creativity is not limited to a select few. It is a skill that can be nurtured and developed by anyone willing to explore and embrace it.



By debunking these misconceptions, we can encourage team members to recognize their own creative abilities. When individuals understand that creativity is not exclusive to a certain group, they become more open to exploring new ideas and approaches. Overcoming these misconceptions is essential in fostering a culture that values and encourages creativity.

Environmental Factors That Stifle Creativity

The environment in which a team operates plays a significant role in either fostering or stifling creativity. Factors such as excessive rules and regulations, a fear of failure, and a lack of openness to new ideas can create barriers that hinder creative thinking.

Organizations must recognize the importance of cultivating an environment that values experimentation, embraces risk-taking, and encourages out-of-the-box thinking. By doing so, they can break down the barriers that stifle creativity and create a space where individuals feel empowered to explore innovative solutions.

Excessive rules and regulations can limit creativity by confining individuals to predefined boundaries. When there is little room for exploration and experimentation, creativity is stifled. Organizations should strive to create an environment that allows for flexibility and encourages individuals to think beyond the constraints of established norms.

Fear of failure is another common barrier that can impede creative thinking. When individuals are afraid of making mistakes or facing criticism, they may shy away from taking risks or sharing their ideas. To overcome this barrier, organizations should foster a culture that views failure as an opportunity for growth and learning. By embracing the concept of "failing forward," individuals feel more comfortable taking risks and exploring new possibilities.

A lack of openness to new ideas can also hinder creativity. When individuals feel that their ideas will not be valued or heard, they may hesitate to share their unique perspectives. Organizations should create channels for open communication and actively seek input from all team members. By creating a safe and inclusive space for idea-sharing, organizations can tap into the diverse perspectives and experiences of their team, leading to more innovative solutions.

In conclusion, identifying and addressing barriers to creativity is essential in creating an environment that nurtures and encourages innovation. By debunking misconceptions and breaking down environmental barriers, organizations can unlock the full creative potential of their teams. Embracing creativity as a skill that can be developed and fostering an environment that values experimentation and risk-taking are key steps towards fostering a culture of innovation.

Fostering a Creative Environment



Creating a truly creative environment goes beyond just having a well-designed physical workspace. While the layout, furniture, and overall aesthetic of an office can certainly have an impact on creativity, there are other factors that come into play as well.

The Impact of Physical Space on Creativity

Designing an office that promotes collaboration and provides spaces for brainstorming and reflection is essential. But what about incorporating natural elements into the workspace? Research has shown that exposure to nature, whether through plants, natural light, or even nature-inspired artwork, can have a positive effect on creativity.

Imagine walking into an office that is filled with lush green plants, sunlight streaming through large windows, and artwork depicting serene landscapes. This kind of environment can instantly put team members in a more relaxed and open mindset, allowing their creative juices to flow more freely.

Furthermore, the layout of the office can also play a role in stimulating creativity. Open floor plans, for example, can encourage spontaneous interactions and idea sharing among team members. Having designated areas for brainstorming, such as comfortable seating areas or whiteboard walls, can also provide the space and tools needed for collaborative creative thinking.

The Role of Team Culture in Encouraging Creativity

While the physical workspace is important, it is the team culture that truly sets the stage for creativity to thrive. A positive and inclusive team culture can empower individuals to express their ideas and opinions without fear of judgment or ridicule.

Leaders have a crucial role to play in fostering a culture of psychological safety. This means creating an environment where team members feel comfortable taking risks and sharing their innovative ideas. One way to achieve this is by encouraging diverse perspectives and valuing the contributions of every team member.

Imagine a team meeting where everyone feels heard and respected, regardless of their position or background. This kind of inclusive culture not only boosts morale but also encourages individuals to think outside the box and come up with creative solutions to challenges.

Furthermore, leaders can also promote creativity by providing opportunities for professional development and growth. By investing in training programs, workshops, and conferences, team members can expand their knowledge and skills, which in turn can fuel their creative thinking abilities.



In conclusion, fostering a creative environment requires more than just a well-designed physical workspace. It involves incorporating natural elements, promoting collaboration, and creating a culture of psychological safety. By considering these factors, organizations can inspire their teams to think creatively, contribute innovative ideas, and ultimately drive success.

Implementing Creativity-Boosting Strategies

Brainstorming Techniques for Enhanced Creativity

Brainstorming is a powerful technique for generating creative ideas. Encouraging all team members to contribute their thoughts, suspending judgment, and building upon each other's ideas can lead to innovative solutions. Facilitators can employ various brainstorming methods such as mind mapping, free association, and role-playing to unleash the team's creative potential.

The Power of Diverse Perspectives in Sparking Creativity

Diversity in a team can significantly impact creativity. When individuals from different backgrounds, experiences, and skill sets come together, they bring a variety of perspectives and ideas to the table. Diversity sparks creativity by promoting out-of-the-box thinking and challenging the status quo, ultimately leading to more innovative outcomes.

Measuring Creativity in Your Team

Assessing the Level of Creativity in Your Team

Measuring creativity in a team can provide valuable insights for improvement. Tools such as creativity assessments, surveys, and performance metrics can help evaluate the team's creative thinking abilities and identify areas for development. By systematically assessing creativity, leaders can implement targeted strategies to enhance the team's overall creative potential.

Tools and Techniques for Measuring Creativity

Several tools and techniques are available for measuring creativity in a team. These include divergent thinking tests, observation and feedback, and self-assessment tools. By utilizing these resources, leaders can gain a comprehensive understanding of their team's creative strengths and weaknesses, enabling them to provide targeted support and nurture creativity effectively.



In conclusion, creativity is a powerful catalyst for success in a team. By understanding the importance of creativity, identifying barriers, fostering a creative environment, implementing creativity-boosting strategies, and measuring creativity, teams can unlock their full creative potential and achieve remarkable results. Embracing creativity is not only beneficial for the team but also for the organization as a whole, as it drives innovation and ensures a competitive edge in today's fast-paced business landscape.

Unit 5 What is Design Thinking & why is it important?

for Lesson 2. Design thinking essentials

Task: Read this case study and answer the questions:

Lumi file 10file Question and answers (correct answers in bold)

In an age when innovation is key to business success and growth, you've likely come across the term "design thinking." Perhaps you've heard it mentioned by a senior leader as something that needs to be utilized more, or maybe you've seen it on a prospective employee's resume.

While design thinking is an ideology based on designers' workflows for mapping out stages of design, its purpose is to provide all professionals with a standardized innovation process to develop creative solutions to problems—design-related or not.

Why is design thinking needed? Innovation is defined as a product, process, service, or business model featuring two critical characteristics: novel and useful. Yet, there's no use in creating something new and novel if people won't use it. Design thinking offers innovation the upgrade it needs to inspire meaningful and impactful solutions.

But what is design thinking, and how does it benefit working professionals?

What is Design Thinking?

Design thinking is a mindset and approach to problem-solving and innovation anchored around human-centered design. While it can be traced back centuries—and perhaps even longer—it gained traction in the modern business world after Tim Brown, CEO and president of design company IDEO, published an article about it in the Harvard Business Review.

Design thinking is different from other innovation and ideation processes in that it's solution-based and user-centric rather than problem-based. This means it focuses on the solution to a problem instead of the problem itself.



For example, if a team is struggling with transitioning to remote work, the design thinking methodology encourages them to consider how to increase employee engagement rather than focus on the problem (decreasing productivity).

The essence of design thinking is human-centric and user-specific. It's about the person behind the problem and solution, and requires asking questions such as "Who will be using this product?" and "How will this solution impact the user?"

The first, and arguably most important, step of design thinking is building empathy with users. By understanding the person affected by a problem, you can find a more impactful solution. On top of empathy, design thinking is centered on observing product interaction, drawing conclusions based on research, and ensuring the user remains the focus of the final implementation.

THE FOUR PHASES OF INNOVATION

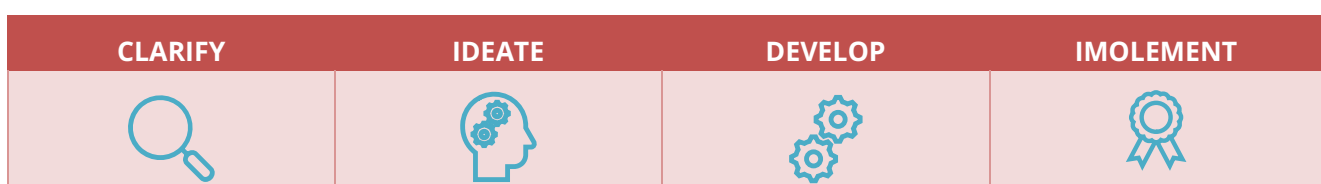
So, what does design thinking entail? There are many models of design thinking that range from three to seven steps.

In the online course Design Thinking and Innovation, Harvard Business School Dean Srikant Datar leverages a four-phase innovation framework. The phases venture from concrete to abstract thinking and back again as the process loops, reverses, and repeats. This is an important balance because abstract thinking increases the likelihood that an idea will be novel. It's essential, however, to anchor abstract ideas in concrete thinking to ensure the solution is valid and useful.

Here are the four phases for effective innovation and, by extension, design thinking.

Figure 3.1

Design thinking stage



1. Clarify

The first phase is about narrowing down the focus of the design thinking process. It involves identifying the problem statement to come up with the best outcome. This is done through observation and taking the time to determine the problem and the roadblocks that prevented a solution in the past.

Various tools and frameworks are available—and often needed—to make concrete observations about users and facts gathered through research. Regardless of which tools are implemented, the key is to observe without assumptions or biased expectations.

Once findings from your observations are collected, the next step is to shape insights by framing those observations. This is where you can venture into the abstract by reframing the problem in the form of a statement or question.

2. Ideate

Once the problem statement or question has been solidified—not finalized—the next step is ideation. You can use a tool such as systematic inventive thinking (SIT) in this stage, which is useful for creating an innovative process that can be replicated in the future.

The goal is to ultimately overcome cognitive fixedness and devise new and innovative ideas that solve the problems you identified. Continue to actively avoid assumptions and keep the user at the forefront of your mind during ideation sessions.

3. Develop

The third phase involves developing concepts by critiquing a range of possible solutions. This includes multiple rounds of prototyping, testing, and experimenting to answer critical questions about a concept's viability.

Remember: This step isn't about perfection, but rather, experimenting with different ideas and seeing which parts work and which don't.

4. Implement

The fourth and final phase, implementation, is when the entire process comes together. As an extension of the develop phase, implementation starts with testing, reflecting on results, reiterating, and testing again. This may require going back to a prior phase to iterate and refine until you find a successful solution. Such an approach is recommended because design thinking is often a nonlinear, iterative process.

In this phase, don't forget to share results with stakeholders and reflect on the innovation management strategies implemented during the design thinking process. Learning from experience is an innovation process and design thinking project all its own.

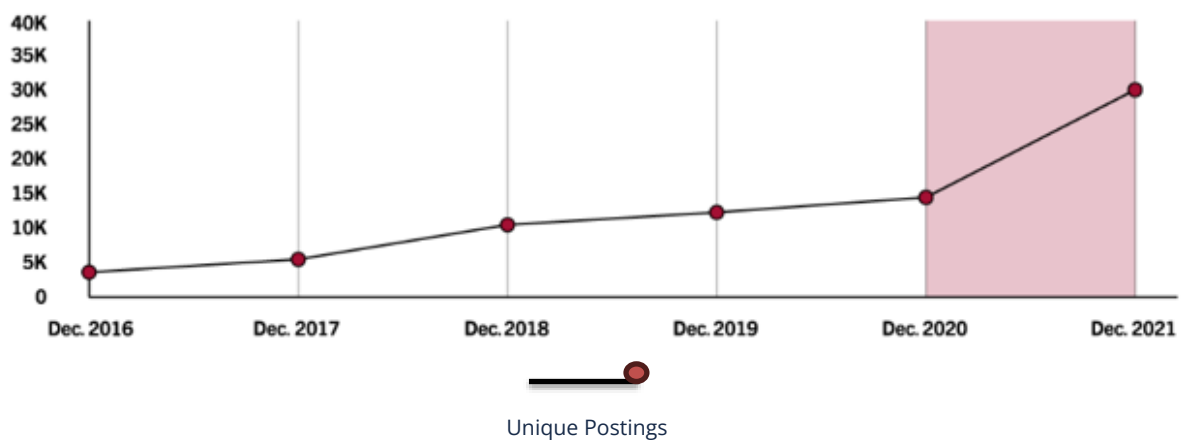
Why Design Thinking skills matter

The main value of design thinking is that it offers a defined process for innovation. While trial and error is a good way to test and experiment what works and what doesn't, it's often time-consuming, expensive, and ultimately ineffective. On the other hand, following the concrete steps of design thinking is an efficient way to develop new, innovative solutions.

On top of a clear, defined process that enables strategic innovation, design thinking can have immensely positive outcomes for your career—in terms of both advancement and salary.

Figure 3.2

Number of jobs requiring design thinking skills



As of December 2021, the most common occupations requiring design thinking skills were:

- Marketing managers
- Executives
- Industrial engineers
- Graphic designers
- Software developers
- General and operations managers
- Management analysts
- Personal service managers
- Architectural and engineering managers
- Computer and information systems managers

In addition, jobs that require design thinking statistically have higher salaries. Take a marketing manager position, for example. The median annual salary is \$107,900. Marketing manager job postings that require design thinking skills, however, have a median annual salary of \$133,900—a 24 percent increase.

Overall, businesses are looking for talent with design thinking skills. As of November 2021, there were 29,648 job postings in the United States advertising design thinking as a necessary skill—a 153 percent increase from November 2020, and a 637 percent increase from November 2017.

As businesses continue to recognize the need for design thinking and innovation, they'll likely create more demand for employees with those skills.

Learning Design Thinking

Design thinking is an extension of innovation that allows you to design solutions for end users with a single problem statement in mind. It not only imparts valuable skills but can help advance your career.

It's also a collaborative endeavor that can only be mastered through practice with peers. As Datar says in the introduction to *Design Thinking and Innovation*: "Just as with learning how to swim, the best way to practice is to jump in and try."

If you want to learn design thinking, take an active role in your education. Start polls, problem-solving exercises, and debates with peers to get a taste of the process. It's also important to seek out diverse viewpoints to prepare yourself for the business world.

In addition, if you're considering adding design thinking to your skill set, think about your goals and why you want to learn about it. What else might you need to be successful?

You might consider developing your communication, innovation, leadership, research, and management skills, as those are often listed alongside design thinking in job postings and professional profiles.

You may also notice skills like agile methodology, user experience, and prototyping in job postings, along with non-design skills, such as product management, strategic planning, and new product development.

Is Design Thinking right for you?

There are many ways to approach problem-solving and innovation. Design thinking is just one of them. While it's beneficial to learn how others have approached problems and evaluate if you have the same tools at your disposal, it can be more important to chart your own course to deliver what users and customers truly need.

You can also pursue an online course or workshop that dives deeper into design thinking methodology. This can be a practical path if you want to improve your design thinking skills or require a more collaborative environment.

Unit 6 The relationship between entrepreneurial mindset and entrepreneurial intention: an extended model of theory of planned behavior

for Lesson 3. Entrepreneurial mindset & starting your business

Task: Read this case study and answer the questions:

Lumi file 11file Question and answers (correct answers in bold)

Introduction

Entrepreneurship plays a crucial role in driving economic growth, and globalization, and enhancing a country's competitiveness. Moreover, it serves as a key catalyst for generating employment opportunities across all sectors of society. Researchers hold the belief that entrepreneurship is not only an essential component of a country's development but also a key driver of economic growth and progress (Baumol et al., 2007). The level of economic growth and development in any country is believed to be contingent upon on the number of entrepreneurs and the pace of business activities (Oosterbeek et al., 2010). Hence, researchers have been devoting significant attention to this aspect in recent years. Entrepreneurship holds immense significance in both developed and underdeveloped countries (Värlander et al., 2020) due to its crucial role in enhancing economic efficiency, facilitating the introduction of innovations into the market, creating new job opportunities, and ensuring the sustainability of employment levels (Shane & Venkataraman, 2000). In recent years, Mongolia has witnessed the emergence and development of startup companies that are focused on new technology and innovation. However, despite these positive developments, the employment of university graduates and the issue of youth unemployment remain significant challenges within the society. Out of the total unemployed population, 56.1 percent comprises individuals between the ages of 15 and 34. Within this age group, 19.5 percent represents individuals aged 20 to 24, who have recently entered the workforce. Furthermore, young people aged 15 to 24 account for 25.3 percent of all unemployed citizens (Erdenechuluun, 2020). Universities and colleges have recognized the importance of entrepreneurship education and have initiated programs to prepare graduates with an entrepreneurial spirit. Cultivating an entrepreneurial spirit and enhancing entrepreneurial skills is widely regarded as one of the key focal points within higher education Therefore, the objective of this study is to investigate the relationship between the entrepreneurial mindset and entrepreneurial intention among undergraduate students, utilizing the framework of the theory of planned behavior.

Literature research and hypothesis development

Theory of Planned Behavior In 1991, Ajzen proposed the Theory of Planned Behavior as an extension of Ajzen and Madden's Theory of Reasoned Action. The TPB asserts that an individual's intentions are influenced by their attitudes, social norms, and perceived behavioral control. The Theory of Reasoned Action (TRA) postulates that an individual's attitudes and beliefs are influential factors in determining their specific behavioral outcomes. The Theory of Planned Behavior expanded upon the Theory of Reasoned Action by incorporating the concept of "perceived behavioral control" alongside personal attitude and subjective norms. Thus, the Theory of Planned Behavior emphasizes that individuals' intentions and subsequent behaviors are influenced not only by their attitudes and subjective norms but also by their perceived control over the behavior in question. In Ajzen's Theory of Planned Behavior (TPB), a personal attitude refers to an individual's evaluation or assessment of a specific behavior. This evaluation is based on the person's belief about the behavior, which is defined as the subjective probability that performing the behavior will lead to a particular outcome or result. In other words, an individual's attitude is influenced by their perception of the likelihood that engaging in the behavior will result in a desired or undesired consequence. When individuals hold a positive attitude toward a specific behavior, they are more inclined to engage in that behavior (George & Ernest, 2017). The degree to which a person gives a positive or negative personal assessment of entrepreneurship can serve as a determinant of their attitude toward it. The personal assessment of entrepreneurship plays a crucial role in shaping individuals' attitudes and subsequent behaviors toward engaging in entrepreneurial activities (Fayolle et al., 2006). A unique personality can serve as a motivating factor for individuals to develop entrepreneurial ambitions (Cunningham & Lischeron, 1991). Cultivating entrepreneurial traits such as innovation, independence, and proactivity can have a positive impact on the development of an entrepreneurial mindset. When individuals embrace these qualities, they are more likely to exhibit characteristics such as creative problem-solving, taking initiative, and seizing opportunities. This, in turn, can significantly enhance their participation in entrepreneurial activities and increase their likelihood of success in entrepreneurial endeavors (Jung & Lee, 2020).

Subjective norm in the Theory of Planned Behavior refers to an individual's perception of social pressure or influence from others regarding a specific behavior. It is the belief that people hold about whether others will approve or disapprove of their engagement in that behavior. If an individual believes that others would approve of a particular behavior, it can positively influence their intention to perform that behavior. Conversely, if they perceive disapproval or negative social pressure, it may deter them from engaging in the behavior. Subjective norms refer to the perception of social norms and expectations related to entrepreneurship, including the beliefs about whether significant others (e.g., family, friends,

mentors) approve or disapprove of entrepreneurial pursuits (Fayolle et al., 2006; Hitka et al., 2021). Access to external knowledge through social networks indeed plays a crucial role in developing the ability to seek new business opportunities (Ramos-Rodríguez et al., 2019). An entrepreneurial mindset, characterized by traits such as opportunity awareness, risk acceptance, uncertainty tolerance, and optimism, can be enhanced through entrepreneurship education (Cui et al., 2021). By exposing students to the principles and practices of entrepreneurship, they can develop a mindset that is more attuned to recognizing opportunities, embracing risk, navigating uncertainty, and maintaining a positive outlook. Furthermore, students who possess entrepreneurial mindsets are likely to exhibit more positive attitudes toward entrepreneurship (Liñán & Fayolle, 2015).

Subjective norms of entrepreneurship exert a significant impact on students' entrepreneurial intentions. When students perceive that the prevailing social norms and influential individuals in their lives support and encourage entrepreneurship, it positively influences their entrepreneurial intentions (Reilly et al., 2000; Li et al., 2008).

Entrepreneurial Intention Entrepreneurial intention is a significant determinant of an individual's decision to start a business and it is an important concept that has garnered considerable attention in entrepreneurship research and practice. Entrepreneurial intention involves the process of identifying, creating, and developing a business opportunity. It is a crucial factor in understanding entrepreneurship and serves as a catalyst for the establishment of new businesses (Looi, 2019). According to Ajzen (1991), entrepreneurial intention is manifested through behavioral factors such as students' motivation, attitude toward taking action, and feasibility. Entrepreneurial intention refers to the cognitive state of individuals who aspire to start a business (Krueger Jr. et al., 2000). This intention plays a significant role in the decision-making process for individuals who are planning to embark on a new business venture (Nabi & et al, 2010). Recently, researchers have shown an increasing interest in studying the entrepreneurial intentions of students (Bae et al, 2014; Udhayanan, 2019; Lizbetinova et al., 2022). According to the theory of planned behavior, the entrepreneurial intention is influenced by three key factors: entrepreneurial attitudes, social norms, and perceived behavioral control (Ajzen, 1991). The dimensions of TPB have a significant impact on the entrepreneurial intentions of students (Bueckmann-Diegoli et al, 2021; Mingolla et al., 2019; Otache et al., 2019; Ramos- Rodríguez et al., 2019).

Entrepreneurial Mindset In today's fast-paced and dynamic world, the demand for individuals with an entrepreneurial mindset is constantly rising. An entrepreneurial mindset encompasses a range of behaviors, attitudes, and skills that are essential for recognizing and pursuing entrepreneurial opportunities. These qualities include a focus on innovation, creativity, risk-taking, and initiative, as well as a willingness to embrace change and uncertainty.

Entrepreneurial individuals often possess characteristics such as independence, a strong willingness to learn, problem-solving skills, and the ability to adapt to new situations. The entrepreneurial mindset is characterized by its sensitivity and an attitude that embraces creative and innovative thinking and is closely related to individual attitudes and entrepreneurial activities (Günzel-Jensen et al., 2017). By cultivating an entrepreneurial mindset, individuals enhance their ability to identify problems, devise solutions, and foster relationships through creative, critical, communicative, and collaborative thinking. The entrepreneurial mindset is known to be nurtured and reinforced through exposure to family entrepreneurship as well as higher education (Lindner, 2020). The entrepreneurial mindset plays a crucial role in shaping students' entrepreneurial intentions, and students who possess entrepreneurial mindset characteristics are more likely to have strong entrepreneurial intentions (Rustiana et al., 2022). Individuals who possess qualities such as creativity, innovation, and a willingness to take risks tend to have higher entrepreneurial intentions. This indicates the presence of a positive relationship between entrepreneurial mindsets and entrepreneurial intentions (Fini et al., 2012; Obschonka et al., 2019).

Methodology and Data

Data Collection and Sample Size

Data for this study were collected from students enrolled in the business administration programs at National University of Mongolia, University of the Humanities, and Mongolian University of Life Sciences. The survey was conducted online between February 27, 2023, and March 31, 2023. The study used data from 368 students, which was collected through the online survey platform Microsoft Forms.

Among the respondents, 45.9% were students from NUM, 26.4% were students from MULS, and 27.7% were students from UN. Regarding the profession of the respondents, 23.9% studied management, 23.4% studied marketing, 12% studied banking, and 7.6% studied commerce. The participation rate of the Human resource management students was lower compared to the others, accounting for 2.4%. Female students actively participated in the study, accounting for 70.1% of the participants, while male students constituted 29.6% of the respondents. Considering the level of study, the distribution among the respondents was as follows: 28.3% were 1st level students, 16.3% were 2nd level students, 23.9% were 3rd year level students, 26.4% were 4th level students, and the remaining 5.2% were 5th-level students.

Instruments and Data Analysis

In the study, a questionnaire developed by scholar Ajzen (1991) was used to assess the dimensions of the Theory of Planned Behavior namely personal attitudes toward entrepreneurship, social norms, and perceived behavioral control. Six questionnaires used in Wardana et al.'s (2020) study were utilized to evaluate the entrepreneurial mindset. Six questionnaires from Liñán et al.'s (2011) study were used to assess the entrepreneurial intentions of the students.

The questionnaire comprised 5 questions to measure personal attitudes, 3 questions to measure social norms, 6 questions to assess planned behavior control, 6 questions to evaluate entrepreneurial mindset, and 6 questions to gauge entrepreneurial intention. In total, there were 26 questions, each of which was evaluated on a Likert scale of 1-5. The study demographic indicators considered in this research include university affiliation, level of study, major of study, and gender.

The statistical data analysis tools such as SPSS 23.0 and Smart PLS 4.0 were used to analyze the research results. To ensure the reliability of the research results, several steps were taken. Firstly, the measurement variables were assessed for reliability. Descriptive statistics were then calculated for each variable to provide a summary of the data. Correlation analysis was conducted to examine the relationships between variables. Finally, structural equation modeling (SEM) was utilized to analyze the data and present the research results effectively.

Results

Reliability analysis of variable Factor loading analysis was conducted to determine the correlation coefficient between the measurement variables. Additionally, Cronbach's alpha, composite reliability (CR), and average variance (AVE) were calculated to assess the internal consistency and reliability of the measures. The findings of this analysis are presented in Figure 3.3.

Figure 3.3

Results of reliability analysis of variable

Variables	Code of item	Loadings	α	CR	AVE
Personal attitude (PA)	PA1-PA5	.832-.903	0.920	0.940	0.758
Subjective norms (SN)	SN1-SN3	.934-.942	0.931	0.956	0.878
Perceived behavioral control (PBC)	PBC1-PBC6	.796-.881	0.916	0.934	0.703

Entrepreneurial Mindset (EM)	EM1-EM6	.725-.814	0.866	0.900	0.600
Entrepreneurial Intention (EI)	EI1-EI6	.722-.877	0.901	0.924	0.671
Note: α, Cronbach's alpha; CR, the square of the summation of factor loadings; AVE, the summation of the square of the factor loadings					

According to the results of the analysis, the consistency values of the questions measuring the factors ranged from 0.722 to 0.942. These values indicate a good level of internal consistency for the respective factors. To assess the internal consistency of the factors, Cronbach's alpha was calculated, resulting in values ranging from 0.866 to 0.931. These values indicate adequate reliability for all factors, as they exceed the commonly accepted threshold of 0.70 (Nunnally, 1978). The composite reliability (CR) values of the variables ranged from 0.900 to 0.956, which surpasses the recommended minimum value of 0.70 (Hair et al., 2014). This indicates a high level of reliability for the factors. The average variance extracted (AVE) construct values ranged from 0.600 to 0.772. These AVE coefficients exceed the recommended threshold of 0.50 (Hair et al., 2014). This indicates the practical significance and discriminative ability, particularly when compared to other correlation values between the latent variables.

Correlation analysis

Correlation analysis was performed to examine the relationships between the factors. The descriptive statistics and correlation analysis results of the variables are presented in Table 2.

Figure 3.4

Result of descriptive statistics and correlation analysis

	Mean	SD	PA	SN
Personal attitude (PA)	3.7120	1.0575	1	
Subjective norms (SN)	3.7300	1.0798	0.798***	1
Perceived behavioral control (PBC)	3.3433	1.0602	0.655***	0.596***
Entrepreneurial Mindset (EM)	3.3581	1.0578	0.527***	0.470***
Entrepreneurial Intention (EI)	3.5217	1.0612	0.664***	0.596***

Figure 3.4

Table 2: Results of Descriptive Statistics and Correlation analysis – Part II.

	Mean	SD	PBC	EM	EI
Personal attitude (PA)	3.7120	1.0575			
Subjective norms (SN)	3.7300	1.0798			
Perceived behavioral control (PBC)	3.3433	1.0602	1		
Entrepreneurial Mindset (EM)	3.3581	1.0578	0.537***	1	
Entrepreneurial Intention (EI)	3.5217	1.0612	0.508***	0.628***	1
*** Significant at the 0.001 level; **significant at the 0.05 level					

According to the result of the analysis, there is a positive correlation between entrepreneurial intention and personal attitude ($r = 0.664$, $p < 0.01$), subjective norms ($r = 0.596$, $p < 0.01$), and perceived behavioral control ($r = 0.508$, $p < 0.01$) for the respondents. The determination coefficient (R square) of 0.555 presents that these factors can be explained by 55.5% and the remaining factors can be explained by other factors that are not included in the equation. The analysis revealed positive correlations between entrepreneurial mindset and perceived behavioral control ($r = 0.537$, $p < 0.01$), personal attitude ($r = 0.527$, $p < 0.01$), and subjective norms ($r = 0.470$, $p < 0.01$). The determination coefficient (R square) of 0.344 presents that these factors can be explained by 34.4% and the remaining factors can be explained by other factors that are not included in the equation. Furthermore, the results of the analysis indicated a positive and significant relationship between entrepreneurial mindset and entrepreneurial intention ($r = 0.628$, $p < 0.01$).

Structural Equation Modeling (SEM)

R-Square is estimated for PLS analysis to test the significance of the structural model and variables. During the analysis, the correlation between independent and dependent variables was examined. Table 3 presents the results of the survey.

Figure 3.5

Research result in PLS-SEM

Hypothesis	Path	Standardize beta	Standard error	T statistics	P value	Remarks
H1a	PA → EM	0.255***	0.035	9.211	.000	Supported
H1b	SN → EM	0.133***	0.011	8.095	.000	Supported
H1c	PBC → EM	0.325***	0,129	12.026	.000	Supported
H2a	PA → EI	0.363***	0,269	7.356	.002	Supported
H2b	SN → EI	0.142***	0,118	8.346	.000	Supported
H2c	PBC → EI	-0,033***	0,96	11.236	.000	Unsupported
H3	EM → EM	0,0380***	0,75	10.217	.000	Supported0
Note: ***: $p < 0.001$; **: $p < 0.01$; *: $p < 0.05$, significance levels are two-tailed Variable definition: PA, Personal Attitude; SN, Subjective norms; PBC, Perceived behavioral control; EM Entrepreneurial Mindset, EI Entrepreneurial Intention						

Having established the validity and reliability of the measurement model, the next step was to test the hypothesized relationship by running the PLS algorithm and Bootstrapping algorithm in PLS 4.0.

According to the research results, it was observed that perceived behavioral control ($\beta = 0.325$), personal attitude ($\beta = 0.255$), and subjective norms ($\beta = 0.113$) have a positive and weak influence on the entrepreneurial mindset. Additionally, the research results indicated that personal attitude ($\beta = 0.363$) has a positive moderate effect on entrepreneurial intention, while subjective norm ($\beta = 0.142$) has a positive yet weak effect on entrepreneurial intention. However, it was observed that perceived behavioral control ($\beta = -0.033$) had no significant influence on entrepreneurial intention. Therefore, hypothesis H2c was not supported by the research findings. The research findings indicate that the entrepreneurial mindset has a positive and moderate effect on entrepreneurial intention ($\beta = 0.308$).

Additionally, this study aimed to investigate whether the entrepreneurial mindset serves as a mediator in the relationship between personal attitudes, subjective norms, perceived behavioral control, and entrepreneurial intention. To achieve this goal, the Smart PLS methodology was employed in this study. The results presented in Table 4 demonstrate that an entrepreneurial mindset fully mediates the relationship between entrepreneurial intention and personal attitudes, subjective norms, and perceived behavioral control. This finding provides support for hypotheses H4a, H4b, and H4c.

Figure 3.6

The Mediating Effect of Entrepreneurial Mindset

Hypothesis	Path	Direct effects	Indirect effects	Total effects
H4a	Personal Attitude → Entrepreneurial mindset → Entrepreneurial intention	0.363	0.197	0.560
H4b	Subjective norm → Entrepreneurial mindset → Entrepreneurial intention	0.142	0.129	0.271
H4c	Perceived behavioral control → Entrepreneurial mindset → Entrepreneurial intention	-0.018	0.123	0.105
***:p<0.001; **:p>0.05				

All of the hypotheses in the study were confirmed, as the effects of the associated regulatory variables (beta coefficients) were all positive and statistically significant ($p < 0.01$), except for the direct effect of perceived behavioral control (PBC) on entrepreneurial intention (EI).

Discussion

The study aimed to examine the relationship between perceived behavioral control (PBC), personal attitude, subjective norms, entrepreneurial mindset, and entrepreneurial intention among the participating students. The results confirmed all research hypotheses, except for the direct effect of PBC on EI.

Our study's first finding showed that perceived behavioral control, personal attitude, and subjective norms had a positive and weak influence on the entrepreneurial mindset, supporting hypotheses H1a, H1b, and H1c. Our findings are consistent with the research conducted by Cui et al. (2021), indicating that the entrepreneurial mindset can indeed be developed through factors such as perceived behavioral control, personal attitudes, and subjective norms.

The second finding revealed that personal attitude had a positive moderate effect on entrepreneurial intention, while subjective norm had a positive yet weak effect on entrepreneurial intention, supporting hypotheses H2a and H2b. However, perceived behavioral control did not have a significant influence on entrepreneurial intention,

unsupporting hypothesis H2c. Our research findings indicate that personal attitude (PA) has the most significant influence on entrepreneurial intention (EI) compared to subjective norms (SN) and perceived behavioral control (PBC), as reported. This finding is consistent with the results found by Galvão et al. (2018) and Mingolla et al. (2019). The study's results, which suggest that perceived behavioral control (PBC) does not have a significant impact on entrepreneurial intention (EI), align with the findings of Otache et al. (2019) and Ramos et al. (2019), although it contradicts the results of certain other researchers.

The third major finding showed that there was a positive and significant correlation between students' entrepreneurial mindset and entrepreneurial intentions. The findings align with previous studies conducted by Fini et al. (2012), and Obschonka et al. (2019) suggesting a positive relationship between an entrepreneurial mindset and entrepreneurial intention.

Furthermore, our study explored the mediating role of the entrepreneurial mindset in the relationship between personal attitudes, subjective norms, perceived behavioral control, and entrepreneurial intention. The results indicated that the entrepreneurial mindset fully mediated the relationship between entrepreneurial intention and personal attitudes, subjective norms, and perceived behavioral control, supporting hypotheses H4a, H4b, and H4c.

Conclusion

In conclusion, this study provides insights into the factors influencing entrepreneurial intention among business.

administration students in Mongolia. It highlights the importance of personal attitudes and subjective norms in shaping entrepreneurial mindset and intention. However, perceived behavioral control did not directly impact entrepreneurial intention in this context. The findings also suggest that the entrepreneurial mindset plays a crucial mediating role in the relationship between the aforementioned factors and entrepreneurial intention. These findings contribute to the understanding of entrepreneurship education and the development of effective strategies to foster entrepreneurial intentions among students.

Limitations and Future Research

This study has certain limitations that should be acknowledged. Firstly, the sample size of the study was limited to 368 business administration students from three Mongolian universities. Secondly, the data for this study were collected through a self-reported survey, which may have introduced common method bias. Third, the study was constrained in terms of the questionnaire collection process. Only online questionnaires were utilized, and the data was collected during a fixed period. Future research could investigate the impact of

entrepreneurship education on entrepreneurial mindset and intention. Additionally, future research could investigate the potential moderating effects of individual differences, such as gender, prior experience, or personality traits, on the relationship between entrepreneurial mindset and intentions.

Unit 7 Entrepreneurial Skills and Human Capital

for Lesson 4. Entrepreneurial skills

Task: Read this case study and answer the questions:

Lumi file 12file Question and answers (correct answers in bold)

Introduction

General human capital

Researchers studying entrepreneurship have understood the importance of different forms of capital in creating and growing business and the effect that these businesses have on overall prosperity. Political decision-makers have also long recognized the role that businessmen play in a country's economic well-being. Historically, the emphasis for entrepreneurship researchers and policy makers has been on the "hard" assets of financial and physical capital. However, in the 1960s, the southern impulse began to move towards the knowledge and value of skills that people bring to their work, as well as the effect that these inputs have on the economic development and overall prosperity of a region. Pioneering researcher Theodore Schultz suggested that these skills represent a form of capital that is as important for economic growth as other forms of capital (Schultz). The stock of acquired knowledge, skills, and abilities of human beings has been labeled as human capital (Hornbeck and Salamon). This capital represents the accumulated human resources of education, training and experience (Leuenberger & Bartle) and is considered capital because it produces income and other useful results over long periods of time (Becker). The fundamental work comes from Nobel laureate Gary S. Becker, who crystallized and confirmed the importance of human capital for the economic well-being of individuals, as well as for the country in which they live. While its emphasis has been on formal education, its findings are relevant to the wider range of human capital inflows, especially training and experience, that it recognizes. He also distinguished between general human capital and specific human capital. General human capital is training that can be used to increase productivity between firms, where specific human capital is useful for increasing productivity in a specific firm, but would not be useful in other firms (Becker). He also notes that some training is relevant for groups of companies in industries, geographical areas or the like. Becker sees human capital as heterogeneous, being qualitatively different in the types of education, on-the-job training and informal learning, etc.

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Two researchers, Polachek and Siebert, in their UK data studies, confirm that human capital theory explains gains in terms of skills acquired in school and at work. Human capital investment does not always take place in full-time schooling. Educational investment opportunities often come in smaller units: you can go to part-time school, take an adult education course, or train "at work" while working simultaneously (Polachek and Siebert). It also confirms that the return on investment is not constant throughout a person's life cycle. Rather, earnings profiles show a concave curve, rising rapidly during the first years of work, then leveling and decreasing in subsequent years. Much of the discussion about general human capital involves details about the production and management of related political efforts. In the field of policy, one of the main questions in any field subject to potential public policy factors is the justification for the existence of public intervention. In the example of discussion, Juffras and Sawhill provide justification for political contributions to human capital. They argue that there are a number of imperfections in the human capital market which make reliance on market mechanisms unlikely to produce the best level of human capital for the economy. Their full argument follows well-known justifications for public intervention to improve the functioning of a market. Speaking about the aspect of managing human capital policies, in the second example of discussion, Fosler argues that the key components of a human capital strategy should contain three elements: the size and composition of the workforce, the capacity of workers and productivity. These two streams of thought adopt a macro vision that shows the orientation of a large part of human capital scholarships. Another topic of human capital research is the relationship between human capital and entrepreneurship.

Entrepreneurship and human capital In addition to improving the economic wealth of entire regions, increases in human capital measures have a positive influence on entrepreneurship. There are numerous studies on the relationship between human capital and business performance, which tend to show long-term business performance as being positively related to higher levels of human capital. We will present aspects of human capital associated with entrepreneurial success, regardless of the level of long-term performance of the business. The immediate problem is how to define "success" in entrepreneurship. There are a wide variety of values used in research to determine success. These include various business size indicators, various growth measures and many financial profitability measures (Unger, Rauch, Frese and Rosenbusch). Numerous studies combine starting a business with a number of financial performance used as a threshold to determine the "success" of a new business. We prefer to avoid a definition that uses such measures, given that there is no standardized or accepted level of financial "success" for small businesses, nor is there a small archetypal business against which to make such comparisons. There are also defining ambiguities with indicators such as net income, profit and the like. Establishing a level of financial "success" for a new business is a study in itself, the conclusions of which would fuel significant interpretive criticism. Consequently, the emphasis is on research focused on whether entrepreneurship



results in a business operating, regardless of the level of financial performance. Starting a business and staying in business are then the main indicators of "success". For start-up entrepreneurs, starting a business is a success, and for active entrepreneurs, staying in business is a success. Staying in business should not be seen as passive. Rather, according to the assumptions underlying the study of entrepreneurship, it means learning and adapting, overcoming obstacles and possibly growing a business. The question that needs to be asked is what specific entrepreneurial human capital (condensed into the word "skills") is needed for an entrepreneur to start a business and stay in business.

Entrepreneurship, education and experience

The researchers identified and tried to explain both general human capital and specific human capital. General human capital refers to broad and transferable measures, such as education and work experience, while specific human capital refers to more specialized skills, such as entrepreneurial, managerial and technical skills or previous experience in owning a business (Diochon et al.). Findings related to the link between general human capital and entrepreneurship are far from uniform, as the following examples demonstrate. Cooper et al., in their study of entrepreneurs, found that business performance in the early stages (survival and growth) seemed to be improved by the level of education of the entrepreneur. They assumed that education can lead to a higher level of problem-solving skills, as well as increased commitment, motivation and discipline, which contributed to both marginal survival and the growth of new projects. General human capital was also represented by gender and race. In their study, the racial minority was linked to lower odds of both marginal survival and growth, and gender was only significantly increasing. The researchers concluded that overall human capital is just as well rewarded in self-employment in new businesses with higher survival and growth rates as in employment. Adding to the rare literature on self-employment, Montgomery, Johnson, and Faisal found that when startup and survival are modelled simultaneously, human (general) capital seems to increase the likelihood of self-employment, but not the likelihood of self-employment. succeed (in contrast to the financial capital that positively affects both). A study by the US Small Business Administration shows that support for higher levels of education is associated with a faster growth in the number of self employed. Cheng considers that previous work experience (especially previous self employment) positively affects the transition to self-employment, and Rotefos and Kolvereid confirm that entrepreneurial experience is the only important factor in predicting the outcome of starting a business. A number of start-up and survival studies have produced varying results. DeClercq & Arenius showed a positive relationship between an individual's level of education and their likelihood of starting a business and a strong effect on entrepreneurially relevant knowledge. Cressy found that human capital is the true determinant of survival in the beginning. Taylor also observed a significant positive effect of



human capital experience on business longevity, and Bates found education to increase business longevity. However, a study by Diochon et al. of Canadian entrepreneurs did not disclose dimensions of overall human capital that would be associated with success in starting a business. This finding is

consistent with Davidsson and Honig who researched with Swedish entrepreneurs that education and professional experience are not related to the formation of companies. Despite this lack of uniformity in findings, a group of researchers managed to draw some generalized conclusions from the meta-analysis of 70 quantitative studies on the relationship between human capital and entrepreneurial success. It is recognized that the literature remains fragmented, with different studies regarding the conceptualization of human capital, the choice of success indicators and the study of contexts such as industry, country and age of business (Unger, Rauch, Frese and Rosenbusch). They also acknowledge that their study did not include qualitative studies or quantitative studies that did not meet certain criteria. Despite these limitations, a small but strong relationship has been found between human capital and entrepreneurial success. The relationship was greater for what they called the results of human capital investments (knowledge and skills) than for the investments themselves (education and experience). The human capital-success relationship was also stronger for the relationship with high human capital burdens compared to the low link with burdens and for young firms compared to old firms (Unger, Rauch, Frese and Rosenbusch). They recommend that future research investigate learning processes, the acquisition of knowledge and the transfer of knowledge to entrepreneurial tasks.

Entrepreneurial skills While many variables of entrepreneurial competence have not yet been formally operationalized in academic research, there are a number of skills mentioned in both academic and popular literature that are commonly accepted as having an influence on successful entrepreneurship. Skills are those personal assets of human capital that lead to successful entrepreneurship. These assets can be in the form of what the entrepreneur knows or understands or what he is able to do, both resulting from education and experience. To capture the whole concept of human capital under the term "skills", one can adopt the definition of skills offered by Boyatzis and Kolb, who define an ability as a combination of skills, knowledge and experience that allows a person to do "something". This definition is broad enough to include the various aspects of human capital. It also incorporates the idea of success into focusing on doing something good. Academic studies of entrepreneurship present a wide range of skill combinations that are associated with successful entrepreneurship. The authors rarely define success, but detail the types of activities, perspectives or guidelines that are at least necessary for entrepreneurship. In reviewing studies and literature on this topic, the motley nature of studies has made conceptualizing the whole a difficult task. Consequently, the easiest way to summarize existing skills literature was to reinforce the conclusions about skills in large groups, from a more general to a more



specific abstraction. Thus, we can distinguish three levels of skills, each of which serves as a composite of studies.

- 1) The first skill group was labeled Meta-Level skills, competencies, or other terms by different authors. These are the more abstract skills that interact with other conceptualizations of entrepreneurship. For example, they can be seen as a function of individual personality traits or the different roles that the entrepreneur plays in starting and developing the business. Many of the older skill-based studies began with assessments of the Meta-Level skills required for entrepreneurship. For example, Smilor identifies leadership, communication, listening, negotiation, and the creation and management of change as necessary "personal knowledge". Similarly, Chen et. al highlights the importance of being a risk taker, manager and innovator. Boyatzis and Kolb, using the executive skills profile in assessing entrepreneurial skills, show adaptation, helping and delegating, information collection and analysis, planning, technology management, goal setting and management, action, entrepreneurship, leadership and relationships, as appropriate for entrepreneurship. More recent studies have also focused on the abstract level of skills. Wickham sees industry knowledge, general management skills, people skills and personal motivation as factors of entrepreneurial performance. Duening conceptualizes this level as various entrepreneurial "minds" and details the five minds of the entrepreneur: recognition of opportunities, design, risk management, resilience and achievement. Pyysiainen et. al. use the term Meta-Level skills to distinguish innovation, risktaking, pursuit of opportunities and growth-oriented as necessary entrepreneurial skills at the meta-level. Plumly et. al. uses the term competencies and considers communication, creative thinking, leadership, analysis, strategic planning and teamwork to be necessary competencies. ehete et. al. calls this level of competence "entrepreneurial orientation" and sees autonomy, innovation, risk-taking, proactivity and competitive aggression as important entrepreneurial orientations.
- 2) The next grouping of skills used by researchers is more concrete and often oriented towards the functions of a business. The authors use a number of different terms for this skill level. They can be called organizational skills because they refer to the functions of the business organization. Smilor calls the necessary skills "organizational know-how" and distinguishes marketing, finance and accounting, as well as production and manufacturing. Chen et al. use the term tasks, showing marketing, management, innovation, risk-taking and financial control as necessary tasks (they also detail about 20 specific activities within these five task organizations). Gerber emphasizes finance, marketing, sales, management, enterprise management (business planning) and operations, while Plumly et. al. see the importance of negotiation, development of new products, technological innovation, recognition of opportunities, market entry, legal and creating a link from vision to action. Jusoh et. al. recognize marketing and

advertising, time management, finance and accounting, customer service, human resources, law, sales, supplier management, administrative planning and management as important or essential. Mariotti & Glackin identify marketing, finance, operations and leadership as fundamental organizational skills for entrepreneurs. Nehete et. al. differentiates entrepreneurial skills and business skills. Entrepreneurial skills occupy a kind of middle ground between meta-level and organizational skills. These include moving from an idea to a business, starting and developing a business, creativity, innovation, taking risks and identifying market opportunities. Business skills are more organizational in nature and include finance, legal, marketing, management, operations, human resources and the development of a business plan.

- 3) With the specific task of making a business plan, Nehete et al. provide a foray into the lightly covered territory of functional-level skills, the third skill group. This level is the first that is oriented towards the idea that the entrepreneur must undertake specific activities based on skills in the entrepreneurial process and the management of an entrepreneurial business. However, these functional skills are also combined with higher level skills and there is little consensus or consistency in the few studies on functional skills. Quite a number of studies detail the activities involved in starting a business, but very few academic studies provide details on the functional skills that are needed for positive entrepreneurial outcomes. Bharadwaj et. al. considers that certain skills are important and should be the subject of business advice. These include the development of business plans, marketing, e-commerce, financial projections and accounting. In Bharadwaj et. al., individual counseling was important, as was the degree of individualization of the entrepreneurial training program. Chen et al. al. focuses on sales and finance for the delimitation of functional level skills. These are associated with the self-efficacy of the entrepreneur, although the authors do not opine to what extent they are associated with real success. They present a market analysis, the establishment and fulfillment of market share objectives, sales objectives and profit objectives as marketing-oriented skills. In terms of funding, these include performing a financial analysis, developing a financial system and internal controls, and controlling costs. It also identifies the development of information systems, time management by setting goals and defining organizational roles, responsibilities and policies. One of the few studies available to the public for the operationalization of variables are made by Diochon et. al., which details the financial management capacity and confirms its importance. Financial management capacity involves tasks such as keeping formal records, using the accrual of accounting and establishing a separate business audit account. Unlike academic studies, entrepreneurship training programs and resources often include specific functional tasks, such as learning how to produce financial statements and use accounting software, how to develop a business plan, or prepare a marketing plan. This is the area in which the need for certain skills becomes

highly individualized depending on the type of business, industry and the size of the company. Trying to capture similarities across the entrepreneurial spectrum is an emerging field and one that has been largely in the field of popular publications and training programs, rather than academic research. Gerber finds seven disciplines essential to entrepreneurial success. These are described in terms of being a leader in important areas of business. Each of these areas has a significant number of segmentations, specific business activities or understandable perspectives. This detail is too voluminous to be reported, but can be summarized to some extent in terms of functional skills or a similar concept. Under the discipline of Enterprise Leader, Gerber recommends making a vision for the company, writing a business plan and developing key business indicators. Discipline of market leadership requires identifying target markets, understanding how customers think and make decisions, and establishing business from the rest. Financial Leader maximizes the company's value by minimizing operating expenses and optimizing operating revenues. The management leader develops a culture that embraces change and builds an authoritative guide to the company's operations. The Fulfillment Leader customer designs and builds performance systems by analyzing current customer performance status and innovating or improving performance systems. Lead Conversion Leader converts revenue opportunities into revenue, maximizing potential customer conversion and maximizing existing customers. Finally, Lead Generation Leader brings potential customers, reaching target markets with impact through different channels. Mariotti & Glackin provide more details for segmenting fundamental organizational skills in marketing, finance, operations and leadership. In marketing, more specific tasks include market research, developing a marketing mix and plan, pricing and credit strategies, and marketing and sales communication. Financing involves understanding the initial, fixed and variable costs, using financial statements and understanding cash flows, taxes and financing strategies. Operations include addressing legal issues and risk management, specific business operations, locations, facilities and arrangement, and human resource management. Leadership involves leadership, ethics, integrity, entrepreneurial opportunities and social responsibility. Lichtenstein and Lyons seem to be at the forefront of the skills-based analysis of entrepreneurs, both for theory and practice. I use a different grouping in the classification skills so far. Their grouping uses four dimensions: Technical Skills, Managerial Skills, Entrepreneurial Skills and Personal Maturity. These skill sizes are then separated into five levels, from low skill to high skill. Technical skills, according to Lichtenstein and Lyons, involve the ability to perform key business operations. Managerial skills involve the ability to effectively organize and manage operations. Entrepreneurial skills involve the ability to identify market opportunities and create solutions to capture those opportunities. Personal maturity

includes self-awareness, willingness and ability to take responsibility, emotional development and creative ability.

Conclusion

The general purpose of entrepreneurial development policies, including those involved in human capital development, is to facilitate the successful exploitation of available opportunities, the resulting public good being the enhancing the economic development. This facilitation is achieved by reducing the impediments to entrepreneurship and by reducing the risk for the parties involved, through public intervention taking into account the entrepreneurial education and business counselors.

Unit 8 Tourism Education: What about entrepreneurial skills?

for Lesson 4. Entrepreneurial skills

Task: Read this case study and answer the questions:

Lumi file 13file Question and answers (correct answers in bold)

Introduction

Over the course of time, tourism has become one of the largest and fastest-growing economic sectors in the world. Currently, tourism directly contributes to about 4.1% to GDP, 5.9% of employment and 21.3% of service exports of the OCDE economies (OECD., 2016). This sector has grown steadily since 2009, reaching in 2015 total earnings in the destinations of US\$ 1260 billion worldwide (euro 1136 billion) (UNWTO, 2016). According to the UNWTO's long-term forecast report Tourism Towards 2030, it is expected that international tourist arrivals worldwide will increase by 3.3% a year between 2010 and 2030, to eventually reach 1.8 billion by 2030 (UNWTO, 2011). The continuing growth of this sector has a significant impact on labour markets, since tourism is a significant source of employment, due to its high labour intensive nature. Although the tourism workforce is often associated with low levels of education and limited entrepreneurial and managerial skills, this scenario has been changing. One the one hand, there has been a massive increase in the number of educational programs offered by schools and higher education institutions in this field (Airey, 2005; Walmsley, 2012). Furthermore, due to the multi-faceted character of tourism industry, there is nowadays a broad range of courses to meet the demands of diverse functional areas. Thus, additionally to the traditional areas of lodging, food and beverage, there has been the development of courses in events management and cruise management, among others. On the other hand, tourism education as a research field has raised considerable interest over the last decades. Since the 1988 International Conference for Tourism Educators hosted by the University of

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Surrey, several research events were organised in the years that followed, and which had fostered the research on this field. The establishment of the Tourism Education Future Initiative (TEFI), in 2006, has also provided valuable inputs to curriculum design (Dredge et al., 2015). The majority of those studies focused on the curriculum-related matters (Tribe, 2005), which aimed at identifying key areas of knowledge that should be addressed in the curriculum (e.g. Fidgeon (2010), Holloway (1995), Koh (1995), McIntosh (1983)). Due to the wide variety of programs taught at different academic levels, as well as its sector-specific focus, an agreement about core tourism curriculum is far from having been reached. Moreover, as mentioned by Zehrer & Mössenlechner (2008, p. 73) “(...) there appears to be a considerable gap between what educational institutions offer as management level tourism education and the needs that are expressed by the tourism industry”. An interesting aspect is that soft competences, such as communication skills, problem solving abilities, reasoning, etc. are often considered more essential than hard ones by companies (Okeiyi, Finley, & Postel, 1994; Sisson & Adams, 2013; Tas, LaBrecque, & Clayton, 1996). Entrepreneurial skills are usually not considered in these studies, with only a existing a few and very recent exceptions (see Deale, 2016; Muñoz-Fernandez, Rodríguez-Gutierrez, & Santos-Roldan, 2016; Oktriono, 2015).

Nevertheless, due to the highly competitive environment of the tourism industry, entrepreneurship and innovation are crucial for dealing with current consumer, technological and environmental trends. The growing demand of customers for unusual and unique tourism experiences are contributing to the development of new business opportunities. Sharing economy platforms, for instance, is changing tourism marketplace and giving tourists new options for where to stay, what to do and how to get around (OECD., 2016). The rapid growth of the sharing economy is putting pressure on conventional tourism businesses, which need to innovate to maintain its competitiveness.

Environmental impact of tourism as well is also increasingly important as the number of tourists increases, and their distribution is often concentrated in major tourism destinations in ecologically vulnerable areas. Thus, new business models need to be developed to mitigate the impact of tourism and enable longterm sustainability of destinations and businesses. In this case, academics and entrepreneurs are key players to introduce innovative managerial and planning approaches that will provide the industry with intelligence, knowledge and tools that may have an impact on public and private tourism organizations competitive advantages (Buhalis & Costa, 2005).

Thus, according to Dredge et al. (2015, p. 340) “students entering the tourism sector, with its high levels of volatility and rapid globalization, are going to need different skills and understanding in order to achieve meaningful and successful professional lives”. The development of entrepreneurial skills within tourism education represents a challenge since it stresses the focus on the pedagogy of teaching, which should include how best to balance

vocational skills and liberal thinking in order to promote deep learning (Jamal, Taillon, & Dredge, 2011).

This paper aims at understanding the tourism students' perspective of the relevance of entrepreneurial education within their courses, as well as at identifying the best practices, and proposing guidelines for creating curricular spaces for the development of entrepreneurial skills.

The article highlights the growing need to prepare future graduates in the field of tourism for the exercise of various functions in multiple contexts. The paper proceeds by presenting concepts of both entrepreneurial education and skills, as well as the need to promote those skills with students of higher education level. Following this discussion, a case study of entrepreneurship education within tourism curriculum is presented, as are details on the basic curriculum, course structure, goals and objectives. The paper concludes with a consideration of the relevance of entrepreneurship education to tourism students.

The development of entrepreneurial skills

In the past decades entrepreneurship education programs have grown in number and today, those are run in most higher education institutions all over the world (Hannon, 2006; Katz, 2008). Their popularity is reinforced, on the one hand, by the acknowledged importance of new business creation for economic growth and innovation (Landström, Harirchi, & Åström, 2012), and, on the other hand, by the need to equip and empower young people with entrepreneurial capabilities needed for a successful professional life. As claimed by Gundry, Ofstein, and Kickul (2014), entrepreneurship programs and courses aim at providing the context to help students apply skills and behaviours intended to create value in entrepreneurial firms. Thus, entrepreneurship education programs seek to enhance individual characteristics, to promote a more entrepreneurial culture, preparing not only an entrepreneur, who may become self-employed and owner of an enterprise, but also someone who is able to chase entrepreneurship and innovation as an employee and become a person who displays enterprising behaviour (Gibb, 2002).

Several relevant political measures have highlighted the importance of promoting entrepreneurial skills, as well as enabling direct investment in the creation of structures to support entrepreneurship education. For instance, in 2006, the recommendation of the European Parliament and the Council on Key Competences for Lifelong Learning recognised “sense of initiative and entrepreneurship” as one of the eight key competences all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment (European Council, 2006, p. 1). It refers to an individual's ability to turn ideas into actions, and includes creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives. Also, the European Commission has

highlighted in the Entrepreneurship 2020 Action Plan (European Commission, 2013, pp. 1e33) and the Rethinking Education Communication (European Commission, 2012, p. 17) the need to embed entrepreneurial education in all sectors of education including non-formal learning, and to make it available to every pupil/student in every school and high education institution (HEI).

Despite this extraordinary proliferation of programs and courses, its content analysis reveal, at least, three different approaches to entrepreneurship named: 'About', 'For' and 'Through' (Gibb, 2002; Pittaway & Edwards, 2012). The 'education about entrepreneurship' approach tends to use more traditional and theoretical pedagogical forms of educational practice (Pittaway & Edwards, 2012), while the other approaches allow students, to some extent, to have contact with real entrepreneurial experiences. With the case of 'education for entrepreneurship's approach, it focuses on content and cognitive entrepreneurial skills, and the 'education through entrepreneurship' approach has a more pedagogical orientation and focuses on fostering non-cognitive entrepreneurial skills (Moberg, 2014). There is still much discussion regarding which form is most effective and provides better outcomes (Fayolle, 2013; Allan Gibb, 2002), but there is a growing consensus that the preferred entrepreneurial pedagogy is learner-centered, processbased, experiential and socially situated (Gibb, 1987; Kyr o, 2005; Mwasalwiba, 2010). Accordingly, several authors (see Allen, 1995; Draycott & Rae, 2011; K re Moberg, 2014; Silberman, 1996) have highlighted the benefits of active or experimental learning methods, such as meeting students' needs, improving students' retention capacity and interaction with information, increasing students responsibility towards their own learning process.



Lesson 2 – Activity

1.1 Activity for Unit 1

Lumi file 14file Question and answers (correct answers in bold)

Process Innovation only refers to updates to manufacturing technology and equipment.

A. True

B. False

2.1 Activity for Unit 2

Lumi file 15file Question and answers (correct answers in bold)

Product innovation only involves creating an entirely new product from scratch.

A. True

B. False

3.1 Activity for Unit 3

Lumi file 16file Question and answers (correct answers in bold)

The best ideas usually come from 'right' ideas that are fully developed from the start.

A. True

B. False

4.1 Activity for Unit 4

Lumi file 17file Question and answers (correct answers in bold)

Creativity plays a crucial role in problem-solving.

A. True

B. False

5.1 Activity for Unit 5

Lumi file 18file Question and answers (correct answers in bold)

Task: Read this article and answer whether the sentence is true or false?

A. True



B. False

6.1 Activity for Unit 6

Lumi file 19file Question and answers (correct answers in bold)

Entrepreneurship is not considered to play a significant role in driving economic growth.

A. True

B. False

7.1 Activity for Unit 7

Lumi file 20file Question and answers (correct answers in bold)

Taylor's study observed a significant negative effect of human capital experience on business longevity.

A. True

B. False

8.1 Activity for Unit 8

Lumi file 21file Question and answers (correct answers in bold)

The 'sense of initiative and entrepreneurship' competence is necessary for personal fulfilment, active citizenship, social inclusion and employment.

A. True

B. False



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HYPRO4ST

WP3 Design And Development of the HyPro4ST Online training Course and Practical Guide

Module 4 – Additional material

Page **146** of **307**



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Erasmus Plus Programme, KA 2: Cooperation Among
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Lesson 1 – Theoretical chapter

Unit 1 ICT Strategic Project Management

for Lesson 1. Information and Communication Technologies for Project Management

Task: Read this study and answer the questions:

Lumi file 22file Question and answers (correct answers in bold)

Information Communication Technology (ICT)

Information Communication Technologies (ICTs) are devices and tools used to create, store, exchange and use information (Pearlson & Saunders, 2009, p. 16). The mission and main concern of this chapter is to cultivate the reader's participation in planning for projects using ICTs. ICTs are key resources in the management processes of projects as they support wider project members' participation. According to Swinford, McIntosh, and Jeffrey (2008, p. 1) strategically managing ICTs in projects takes the central role as they effectively educate or support decision making. These technologies like computer hardware, software and networks have become a significant factor in many businesses and they continue to radically change the work environment (Schwalbe, 2014, p. 2).

There is a lot of research going on about Information Technology and Project Management disciplines, as it is believed that technology is the principal driver of social economic outcomes (United Nations Conference on Trade and Development, 2013, p. 12). This protracted research has given birth to emerging trends in the integration of ICTs with Project Management. This is mainly because of the high competitiveness in the knowledge society which is causing many scholars to carry out in-depth research on critical relationships between knowledge disciplines. Therefore this is a timely point of studying the relationship between ICT and Strategic Project Management and hopefully it will provide a stage of more innovations that will improve the management of Information Technology (IT) projects in the future.

Theoretical Approach to ICT Strategic Project Management

Strategic Management has emerged as one of the most active areas of current management research (Papadakis, Lioukas, & ChambersSource, 1998, p. 115). This area of research stems from the traditional behavioural decision theory which is recently gaining momentum (Schwenk, 1995). Project managers set up planning systems as a means through which personal decisions and views are made and communicated in consultations with the project owner's aspirations. Behavioural decision theories also cover the strategic choice model (decision-makers) and the strategic decision-making behaviour (Papadakis et al., 1998, p. 133).



The most striking aspect of Strategic Management is the dominant role of decision-specific characteristics in determining decision processes in a project. Characteristics of behavioural decisions, such as perceived magnitude of impact, problem-solving dissension, uncertainty of threat/crises and the discipline of planning systems which significantly influence the dimensions of planning for a project.

In the same vein, ICT strategic project management largely lends itself to the individual behaviour perspective. The individual behaviour perspective to some extent deals with the corporate development of strategic project Management (Riis & Neergaard, 1995, p. 515). The individual behaviour captures information about human behaviour, for instance how staff members in a project react in given situations and under specific conditions. This perspective further highlights the personal interactions among project members. The coming of ICT innovations has now introduced both formal and informal communication in project teams. ICTs facilitate collective learning through knowledge sharing, ease executive decision making, enhance problem solving skills among project teams which are all manifestations of the individual behaviour perspective.

It is the behaviourist theory on which Project management systems is used for formal planning, control processes, operating procedures and reward systems. When designing project management systems, programmers focus on social, informal relations, collective habits, behavioural patterns and attitudes of the organization in question. This Corporate culture is seen as an emerging collective learning processes and guides and shapes collective and individual behaviour in the project (Riis and Neergaard, 1995, p. 155). The project management systems are normally triggered by strategic planning and performance assessments using tools like SWOT (Strength, Weaknesses, Opportunities and Threats) and PEST (Political, Economical, Social and Technological).

Strategic planning and performing a SWOT analysis on an ICT based project always go hand in hand (Schwalbe, 2014, p. 144). Bensoussan and Fleisher (2008) assert that SWOT analysis is normally used to evaluate the project's internal resources and capabilities (the strengths and weaknesses) and external possibilities (opportunities and threats). A project has more practical control over its internal resources, culture, operating systems, staffing practices, and the personal values which are subject to the discretionary decision making and strategic management of the project manager. On the other hand, a project has less control over its external environment like market dynamics, government policies, economic conditions, social, cultural, ethical, ecological and technological developments, ecological developments.

The original groundwork of SWOT analysis was established by Kurt Lewin in 1951 in the Field Theory where he contended that the results to which a project aspires are influenced by various driving forces or enhancers and by limiting forces or inhibitors (Pershing, Stolovitch, & Keeps, 2006). Ken Andrews later coined the 'SWOT' acronym in 1971 as one of the strategy theorists to describe the concept of ICT Strategic Management (Bensoussan & Fleisher, 2008).

SWOT can be applied in many areas of a project, including products, divisions, and services. Its is a very easy model to use for determining a project's ability to deal with its environment though it is also often misused and poorly understood as a method of situational analysis.

This analysis provides strategic management which assists project managers to make informed choices about what actions to take to maintain a Project's comparative advantage. SWOT analysis generally allows a project manager to assess the performance through strategic planning and needs assessment. Strategic Planning is the process of identifying the direction the project should head, why and how it should progress that way, while needs assessment is the first step of preparing for strategic planning which involves; identifying gaps, selecting appropriate solutions to the gaps and optimizing the opportunities at hand (Kaufman, Oakley-Browne, Watkins, & Leigh, 2003).

Information derived from a SWOT analysis further assists in the identification of the project's ICT strategic issues such as new technologies, innovations, market trends, new competitors, and customer satisfaction trends. These in turn require interpretation and translation, as well as the formulation and execution of ICT strategies to address the project issues in question (Bensoussan & Fleisher, 2008). SWOT as a Project Performance Assessment serves to aid in the alignment of the project's products with the maintenance or improvement of the quality of the project services while not forgetting the factor of minimizing or eliminating the costs involved (Kaufman & Watkins, 1999).

After analysing the ICT project using the SWOT analysis, the project has to be aligned with the organisation's business strategy. This is an up hill task because some top managers don't appreciate the role ICTs play in a project. Projects are faced with thousands of technology possibilities and limitations and it is only aligning the project with the organisation's business strategy that the possibilities can be explored or limitations avoided. Aligning makes it easy for the project to use IT to solve problems or improve efficiency. Aligning should make clear the importance of ICT and how it supports business goals, eases project governance and maximizes the project's investments.

The project's IT strategy must align with the mother organization's strategic plans. Research has proven that aligning the project's IT strategy with the organisation plans increases the organisation's revenue, improving business processes, competitive advantage, stimulates business innovation and expansion (Schwalbe, 2014, p. 146). Today, there are software and tools that can help align projects with business strategy like Business Service Management (BSM) tools. They track the execution of business process flows and expose how the state of supporting IT systems and resources is impacting the project's end-to-end business process performance in real time (Schwalbe, 2014, p. 176).

Furthermore, to build a relevant and necessary link between the technology and Project management, organizations have to clearly spell out the process of adopting and use of the technology in the project. The potential of applying technology according to Riis and Neergaard (1995, p. 515) should be clear, it takes three phases of project development. The three phases are:-

- (i) Defining the need for technological and organizational development in view of strategic challenges;
- (ii) Development of solutions, including appropriate technological means; and
- (iii) The technological management of Project the implementation process

The roles and Responsibilities of key players in Strategic ICT project management

Developing a strategic ICT Project implies working simultaneously and integrating different technological and organizational means with the aim of increasing the project's competitiveness. The project directors and executives play an important role in ensuring that their key players master the basics of the project. They execute best practices and demonstrate results before moving them to the next stage of say tactical, strategic and the project's top enterprise initiatives (D'Amico, 2005, p. 252). Schwalbe (2014, p. 2) also concurs with this position that companies, governments, and non profit organizations are recognizing every day that to be successful, they need to use modern IT project management techniques, especially for IT projects. Project employees must develop skills to become good project team members and project managers as they work with people and technology on a day-to-day basis.

Schwalbe (2014) stipulates a number of roles and responsibilities of key players in an ICT Strategic Project. Under listed below are the key roles and responsibilities of a Project manager:

- Planning, scheduling and control project activities to meet identified project's objectives and goals.
- Applying technical, theoretical, and managerial skills that suit the project requirements.
- Coordinating and integrating team and individual efforts to build positive professional relationships with clients and associates.
- Managing, prioritizing, developing, and implementing IT solutions to meet business needs.
- Participating in vendor contract development and budget management.
- Monitor and evaluate project teams during implementation and closure of the project.
- Taking proactive, corrective action and giving appropriate feedback to the project stakeholders (Plessis, 2012, p. 265).

- Possession of professional and strong communication and social skills.
- Ability to nurture relationships and use empathic listening skills.
- Finally strategic ICT key stakeholders need competencies in programming, networking, Data centre, Business intelligence, technical support, web 2.0, security and telecommunications (Saia, 2011).

Below is the list of key roles and responsibilities of project members:

- Developing and managing the Project's Information system.
- Stimulating project support for cross-functional cooperation.
- Being committed and have a sense of ownership in the project.
- Providing post-implementation support to the project.
- Responsible for working with various resource providers to ensure that the project completed in a timely, high-quality, and cost-effective manner.
- Possession of professional and strong communication and social skills.

The main goal of strategically plan and manage the roles and responsibilities of the project manager and their team is to enhance project team development. It takes teamwork and proper project team development to successfully complete most an ICT based projects.

Specific characteristics of ICT compliant projects

In developing the project information management systems, the developers of the Project Information management system should design it to support decision making in the project. The system should be able to retrieve relevant information and serve it to the project managers for informed decision making. The systems should further plan and control the project's execution of actions related to production, distribution and quality (Riis & Neergaard, 1995, p. 518).

An ICT compliant project should be able to successfully transfer IT knowledge which would result into a drastic reduction in the cost of production (Riis & Neergaard, 1995, p. 519). This practice of project teams sharing documents enables them to learn from each other. This is all done through computerised databases. ICT compliant projects share knowledge and learning is shared across projects teams therefore avoiding reinvention (Newell, Bresnen, Edelman, Scarbrough, & Swan, 2006, p. 168).

ICT Strategic Project Team Members come from very diverse back grounds and should possess different characteristics. They should have skills in business analyst, programming, networking, database management, quality assurance, hardware maintenance, software engineering and system analyst (Schwalbe, 2014, p. 64). Strategic project teams further employ various types of software to assist in running and managing projects. Software helps



in word processing, preparing and giving presentations, tracking project information, developing and integrating project planning documents, executing the project management plan and related project plans, monitoring and controlling project activities, and performing integrated change control (Schwalbe, 2014, p. 175).

According to Peled (2000, pp. 11-13) there are nine (9) specific characteristics of ICT Strategic projects. These characteristics focus on project staff members, project structure, and the supervision of the project's IT systems. Below are the specific characteristics:

- a) Strategic ICT projects build workgroups and not individuals. IT experts share their expert knowledge with the project's high-performance teams with all necessary skills such that even when the experts leave the project, the work goes on uninterrupted.
- b) Strategic ICT projects periodically bring in new blood. These new staff members are always eager to learn and prove themselves, seek opportunities to fill gaps in the project's workgroup compared to the old guards.
- c) They provide a conducive environment for experimentation and innovation for both the 'experts and novices' in the project's workgroup. The environment allows information to freely flow in the project and constructive criticism which builds the project team together.
- d) Keeping the project workgroup small to permit each member to become a critical contributor to the project and actively involved.
- e) Issuance of specific tasks to project workgroups and ensuring of high quality products from workgroups.
- f) Equipping Project team members with all the necessary tools.
- g) Maintaining a positive attitude towards new technology and Innovation
- h) Developing a shared sense of project ownership
- i) Encouraging the development of an unique project workgroup spirit thus building a strategic project brand.

Finally, all project members should be involved or contribute to the ICT strategic planning process of the project. The project management should acknowledge this without questioning and all the necessary resources should be availed and also backed up in the project budget. There are many ICT strategic Planning ideas that can be generated from the members and such ideas can lead to the building of strong technological developments (Drucker, 1974, pp. 121-122). There are potential benefits which can arise from greater involvement of project members in ICT strategic planning which includes: attaining a better sense of the individuals' roles in the project, appreciating the interdependence of different areas of the project, sharing the sense of the project vision, improves communication, networking, helping project

members stay on course, clarify project objectives, informing resources allocation and utilization (Mapulanga, 2013, pp. 2-3).

Why ignoring ICTs may lead to project failures

Multiple studies have shown that 40% or more of projects fail because of poor quality IT. For application development projects, this failure rate can go even as high as 80% (D'Amico, 2005, p. 251). Also, Whittaker (1999, p. 23) slightly concurs that 31% of IT project are cancelled before completion, and more than half of the project budgets overshoot by an average of 189 % of the original project estimates. The three most common reasons for project failure are poor ICT project planning, a weak Strategic business case, and a lack of top management involvement and support. Scholars are continually agreeing that ICT based projects flop due to failure to capture essential requirements, poor user interfaces, system designs that are incompatible with the organizational culture, preoccupation with technical project issues rather than behavioral ones, poor data quality, and high operational costs (Peled, 2000, p. 7)

The odds are so heavily stacked against ICTs that Project managers in the world are wondering what is going on. Therefore, there is need to ensure a balance between a technology and project development and management. It is not just a matter of introducing technology as a problem of fashion but there should be a balance of applying it on any project means (Riis & Neergaard, 1995, p. 514). Actually, according to Schwalbe (2014, p. 2) The ICT market grows at 6 percent to almost \$3 trillion a year. Projects' expenditure on computer systems, peripherals, storage devices, mobile devices, and network equipment increase by 16 percent, a rate of growth that is faster than any hardware investment in any project.

Project managers wherever, appreciate that project risk exists and sometimes these risks may cause the whole project to fail (Hulett, 2009, p. 1). Project managers know it very well that they should identify and handle risks, and that doing so in advance would be a good idea only with the help of ICTs. They recognize that there is a discipline that includes processes, tools, techniques, a mind-set and organizational approach in successful project.

Failure to transfer knowledge in a Project is a very risky habit that can even fatally cost a project. Since knowledge is embedded in the routine practices of the project, direct knowledge transfer between projects should be done with high novelty. Project members with particular interests invested in knowledge transfer will always seek to sustain power and control within their own knowledge domains and over their own work practices (Newell et al., 2006, p. 168).

Project management information systems are developed to enhance the use and transfer of knowledge in a project. Repositories may be built with relational databases and document management systems. Repositories make a distinction between project staff members who



are knowledge possessors only from those who possess and practice their acquired knowledge (Newell et al., 2006, p. 169)

Project senior managers must actively promote project workgroups. They should furnish and equip the project teams with tools and resources to build the project cohesiveness. They also plan, design and oversee the teams through keeping their ears open to the concerns of the teams. Complex IT projects should not continue failing if project owners strategically build high-performance teams which acknowledge that critical role ICT plays in the project's success. Building public IT project workgroups can change these statistics from the high failure rate to high success on ICT based projects (Peled, 2000, p. 13).

Unit 2 ICT Project Management Framework

for Lesson 1: Information and Communication Technologies for Project Management

Task: Read this case study and answer the questions:

Lumi file 23file Question and answers (correct answers in bold)

Digital technology is changing the Northern Territory's business environment. It is opening up opportunities for growth and emerging sectors of our economy.

Investing in digital technologies helps make government services more accessible to the public. It enables more efficient government business.

Agency Chief Executives lead and initiate digital solutions. Every solution must align to their strategic plans and Northern Territory Government's Investment Lifecycle.

The NT Government uses an ICT Project Management Framework. This helps with oversight of digital programs and projects.

The project lifecycle stages draws on the PRINCE2® project management method. The aim is to provide a consistent approach that is industry standard.

The project lifecycle has 5 stages: concept, propose, initiate, deliver, and close.

All stages of a project have governance processes that ensure transparency and accountability.

Projects and programs

A project is a temporary structure created to deliver one (or more) business products. Each activity within this structure should align to an agreed business case.



A program is a temporary structure. A program organises and guides the implementation of a group of associated projects. Each program should be strategy driven, aiming to achieve specific outcomes and benefits.

Project management involves the planning, delegating, monitoring and controlling of all project activities. It covers elements such as: time, cost, quality, scope, benefits and risks.

Reference: <https://digitalterritory.nt.gov.au/digital-government/strategies-and-guidance/policies-standards-and-guidance/ict-project-management-framework>

Purpose

Digital transformation is a modern response to the challenges and expectations of the Territory's people.

Digital transformation is well recognised for having benefits to:

- Territorials by making government services more convenient
- Government by making service delivery more efficient.¹

Figure 4.1

The plan focuses on how technology can improve the quality and efficiency of NT Govern



Figure 4.2

The NT Government is seeking the following outcomes:

For customer	For staff	For government
Easy-to-use	Learn	Secure

Convenient Know me Quick Protect Customer-centred	Develop Robust Provide insights Effective	Solve Trusted Adaptive Reliable

Digital trends

The Northern Territory is on a journey of digital transformation with emerging new directions, challenges and opportunities. This journey is aligned to transformation underway in other parts of Australia and the world.

Figure 4.3

Digital trends

Digital opportunities are growing	4%	Increase in digital workers of 3.8% in the NT and 4.3% across Australia.
	10%	growth in annual ICT graduates nationally and in the NT.
	87%	of Australians surveyed by Deloitte require 1 or more ICT skills
Digital services have become normal	14%	ICT exports grew by 14% in 2019-20 across Australia.
	56%	of Australians prefer to access government information via digital channels.
	75%	of Insurance customers in Australia are willing to switch to a competitor if seamless digital channels are not available.
COVID-19 has accelerated transformation	2%	Australians 2 times as likely to work from home in 2021 compared with 2020.
	10%	Australia is exceeding telehealth adoption compared to global average by 10%.
		NT Government increased online meetings by 53% in 2021, and other collaboration tools by 72%.
Modern challenges require digital solutions	75%	of citizen delays to accessing government services relate to long hold times on the phone.
	9/10	Australians seek government information regularly.
	27%	only 27% of Australians seek government sources first for government information.

Benefits and challenges

Each of the priorities relate to one or more benefits or challenges. These have been developed from our research and review of our digital journey.

Our stakeholders provided views and insights to development of these parts of the plan.

Figure 4.4
Benefits and opportunities

	Reduce cost	Reduces costs for NT business to engage the NT Government and improves operational government expenditure over time
	Meet customer expectations	Meet the increased expectations of Territorials to access digital government
	Advances accessibility	Access to government services is easier for customers.
	Elevates customer needs	Better knowledge about our customers and their needs.
	Increases service engagement	Increased engagement lead by customers as services have improved
	Improves service quality	Reduce waiting times and improve service quality by enabling customer-self-service.
	Enhances data analysis	Better and faster data analysis by sharing and storing it securely

Figure 4.5
Challenges and lessons

	Changing technology	Maintain capacity and capability to keep with rapidly changing and growing technology.
	Managing change	Ensure appropriate skills and change management resources across the NT Government.
	Digital literacy and inclusion	Limited digital literacy and accessibility can reduce engagement with government digital services.
	Process frustration	Change NT Government forms and processes to prevent customers repeating simple actions causing frustration.
	Improve collaboration	Improve collaboration and service delivery across traditional boundaries.



Prioritise regulatory reform

Prioritise process and regulatory reforms prior to or as part of digitization.

Unit 3 Project Management Guide: What Are the Best Project Management Tools?

for Lesson 2. Project Management in the Digital Era

Task: Read this case study and answer the questions:

Lumi file 24file Question and answers (correct answers in bold)

What are project management tools?

Project management tools are specially designed to assist an individual or team in managing their projects and tasks effectively. The term “PM tools” usually refers to project management software you can either purchase or [use for free](#) online.

In today’s fast-paced business environment, project management has become a critical component for organizations to ensure success. Effective project management involves planning, organizing, and managing resources to achieve specific goals within a defined timeline. However, managing projects manually can be challenging, time-consuming, and lead to errors. Project management software has emerged as a solution to these challenges, providing a wide range of features and functionalities.

In this article, we’ll take an in-depth look at project management tools, exploring what they are, the different types available, and their benefits. Additionally, we will offer insights into how to choose the right tool for your business and tips for making the most out of your projects.

What are the 11 best project management tools?

1. Wrike

Wrike is an award-winning work management platform, used by more than 20,000 companies and 2.4m people in over 140 countries. With a suite of tools for everyone from project managers to marketing heads, Wrike is the first choice for teams, departments, and organizations in every industry and field.

Pros and cons

Wrike is packed with an unrivalled range of features, including built-in resource planning, time-tracking, and budgeting features that help modern teams do more with less. It has long

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pioneered the benefits of automation and AI, helping customers save time and resources as well as predict project risks, generate expansive reports, and prioritize automatically. There can be a learning curve to get the most out of the platform's higher layers of features and capabilities. However, most customers feel that it's worth the investment in terms of time, as these more nuanced and complex features allow companies to scale and grow exponentially, from within the same platform.

Key features

Kanban board task management: Access a real-time task management dashboard for quick and easy collaboration. The Kanban board will illuminate your pipeline and make all progress transparent. You can also plug in real-time updates for each individual card.

Customizable Gantt charts: One of Wrike's most popular features, the Gantt chart helps you visualize your due dates and monitor project progress in real time. Zoom out to get a broad overview of your projects' progress or zoom in so you can better manage team workloads.

Real-time analytics: It's more important than ever for organizations to analyze their health on an ongoing basis, allowing them to pivot fast when needed. Wrike's powerful analytics provide valuable insights into company-wide performance. Issue real-time reports in seconds.

Integrations

Wrike has more than 400 app integrations so customers can seamlessly move between the platform and their other favorite apps such as Google Drive, Google Calendar, Slack, and more. It also offers built-in Adobe CC and DAM integrations, so users can create, edit, and publish directly from Wrike.

Pricing plans

- Free - \$0
- Team - \$9.80 per user/month (billed annually)
- Business - \$24.80 per user/month (billed annually)
- Enterprise - Custom pricing for large teams (billed annually)
- Pinnacle - Custom pricing for teams with complex needs
- Customer ratings and reviews

Customers feel that Wrike's interface is intuitive, with natural workflows that allow them to visualize and manage their projects effectively. One of the biggest mentioned benefits is the

ability to update in real time, which allows for easy and enjoyable collaboration between teams.

It has a Capterra rating of 4.3/5 (2,400+ customers).

Support

Wrike offers an exceptional level of support, with award-winning assistance that scales with your business. Help is available 24/7 with upgradeable support packages to cater for organizations of varied needs. There is also a large library of in-depth guides, articles, and eBooks on how to maximize Wrike's wide range of features to deliver productivity, efficiency, and increased revenue for all.

To see the full range of Wrike features available, visit the website [here](#).

2. Asana

Asana is one of the more popular project management software platforms available. Built for businesses of many sizes, this multifaceted tool combines file storage, project roadmaps, dashboards, and more in one attractive interface.

Pros and cons

Asana is an all-in-one project management platform that offers various work organization features, resource management tools, and an attractive interface.

However, it does lack advanced proofing abilities, as well as the ability to easily set up strong governance across the account. Users with complex projects might find that the platform struggles to accommodate their needs.

Key features

Workflow Builder: Asana's Workflow Builder feature is a visual tool that allows users to create custom workflows and connect team members.

Strategic goals: With strategic goals in Asana, project managers can provide direction to teams and set up metrics to track performance along the way.

Gantt charts: These are among the most attractive ways to view resources, deadlines, and overall work progress.

Integrations

Asana has more than 200 app integrations for customers to continue using favorite apps such as Google Drive, Google Calendar, Slack, and more.

Pricing plans

- Basic - \$0
- Premium - \$13.49 per user/month (billed monthly)
- Business - \$30.49 per user/month (billed monthly)
- Enterprise - Custom
- Customer ratings and reviews

In various reviews, Asana customers are positive about the ease in which they can keep team members informed and up to date with project information. Some customers are unsure about the interface, which can be hard to read and understand at times.

It has a Capterra rating of 4.5/5 (12,000+ customers).

Support

While Asana does have a variety of support options, there is no phone support or live chat available, which makes it challenging to get fast answers. While training is provided, some users report that it's not as comprehensive as it could be, with slow responses to 'how-to' tickets.

Visit the website [here](#)

3. Monday

Monday.com is a popular project management software option that includes various templates and tools to optimize operations and help your teams work toward higher productivity levels. The software displays a lot of information for teams, but key data can get overlooked in long chains of events.

Pros and cons

Monday.com is among the top choices for project managers because it has an easy-to-use UX and a full suite of project management features including automations, customizable dashboards, and a library of templates.



However, the spreadsheet-like display can get quite cluttered, with important information at risk of getting overlooked. It also has no native proofing features, nor analytics advanced enough for many complex organizations.

Key features

Custom dashboards: Monday.com allows users to create custom dashboards and view project information from different angles. With these dashboards, project managers and team leaders can assess progress at a glance based on real-time data from timelines and budget information.

Automations: Monday.com offers powerful automation features to streamline work processes. Tasks can be set up with automatic reminders close to due dates, and team leaders can create 'if this, then that' scenarios to speed up progress.

Pre-built templates: Users can take advantage of Monday.com's library of 100 different templates to kick-start projects fast, ensure uniformity and high standards across the organization, and create repeatable processes for common tasks.

Integrations

While Monday.com has fewer integrations than some other competitors, it still syncs with the most commonly sought-after apps including Google, Slack, Salesforce, and more.

Pricing plans

- Individual - \$0
- Basic - \$30 per month (billed monthly)
- Standard - \$36 per month (billed monthly)
- Pro - \$60 per month (billed monthly)
- Enterprise - Custom
- Customer ratings and reviews

The reviews are largely positive, as customers appreciate how easy it is to navigate in Monday.com, as well as communicate and collaborate. Some spoke of finding the layouts challenging to follow, as information is difficult to track across multiple projects or tasks.

It has a Capterra rating of 4.6/5 (3,800+ customers).

Support

While Monday does offer support to its users, it's challenging to find a human to talk to; there is no inbound phone line, and callbacks are only available for billing-related questions or queries.

Visit the website [here](#)

4. Adobe Workfront

Adobe Workfront is generally favored by marketing teams as a project management solution. It still has a wide variety of features, though, which helps to justify its relatively expensive price tag. This is particularly true of enterprise-sized organizations that need more complex capabilities.

Pros and cons

Packed with all the major project management features the average team would need, Adobe Workfront offers Gantt charts, reporting functions, and advanced dashboards as well as the strong proofing and asset management capabilities you'd expect from an Adobe product.

Some users are reporting, however, that the latest UX isn't quite delivering on ease of use and enhanced collaboration. This can lead to limited adoption among new users, who might default to existing tools. In addition, their DAM function is buggy, which can cause a delay in publication.

Key features

Scenario Planner: Workfront's Scenario Planner is a good tool to help predict and prepare for various situations. You can create scenarios and run outcomes to evaluate potential responses.

Strategic goal-setting: This feature helps teams set distinct, measurable goals for teams to deliver. This helps to ensure alignment as work progresses.

Detailed dashboards: Stay in control with dashboards that allow instant access into the organization or team's workflow. Track overall goals or individual projects easily.

Integrations

Adobe Workfront is part of the very well-known and respected Adobe group. This means that it facilitates seamless integration with most of its sister platforms, including Creative Cloud. However, it does offer a very limited amount of other third-party integrations.

Pricing plans

- Select - Based on quote
- Prime - Based on quote
- Ultimate - Based on quote
- Customer ratings and reviews

While many customers are fans of Workfront's powerful analytics and collaboration tools, others feel that it lacks additional tools that can help with advanced project management.

It has a Capterra rating of 4.4/5 (1,300+ customers)

Support

Adobe Workfront has a standard support package, but it's only available five days a week, without any help on holidays. In addition, a lack of a free trial means that users can't experience and test the platform before they sign up.

Visit the website [here](#)

5. Smartsheet

Based on the traditional spreadsheet model, Smartsheet is one of the more visual project management platforms available. It draws on cloud-based spreadsheets and automated workflows to offer project and task management features and benefits.

Pros and cons

Smartsheet is rich in technical functionality, with advanced tools and complex capabilities that will serve larger organizations quite well.

A downside is that there might be a steep learning curve for users who don't have extensive familiarity or knowledge of spreadsheets. Its add-ons can also become quite expensive.

Key features

Automated workflows: With Smartsheet, you automate your workflows with repeatable blueprints to make delivery more streamlined, accurate, and fast.

Content management: Smartsheet offers content management tools such as progress dashboards, automated alerts, and resource management tools.



Detailed dashboards: Visualize all your project information, team workflow, and organizational goals via data-rich dashboards.

Integrations

Smartsheet has more than 100 integrations, as well as additional options via Zapier and Automate.io.

Pricing plans

- Free - \$0
- Pro - \$9 per user/month (billed monthly; max 10 users)
- Business - \$32 per user/month (billed monthly; minimum 3 users)
- Enterprise - Custom
- Customer ratings and reviews

For many customers, Smartsheet helps them create forms and apply workflows quickly and efficiently. However, others find that they're limited in many of the same ways they would be using Excel or Google Sheets — while paying more for the privilege.

It has a Capterra rating of 4.5/5 (2,900+ customers).

Support

Smartsheet does offer extensive training and detailed how-to guides for its more complex capabilities, but there is no phone chat or live chat function available.

Visit the website [here](#)

6. Jira

Jira is part of the Atlassian Group now, but it originated as a software development solution many years ago. Since then, it has developed into an umbrella platform that includes Jira Software, Jira Core, and Jira Work Management, all of which combine to offer work management assistance for teams of every size.

Pros and cons

If you're familiar with the Jira family, you'll be comfortable using the interface, as well as importing and exporting data with ease. It's also customizable, which helps teams to tailor their workspace to suit their business processes.



However, it can't support Waterfall methodology, only Agile. It also doesn't have built-in resource planning, proofing, and project reporting, which might be limiting for some teams. Its pricing also puts it among the more expensive options available.

Key features

Dashboard view: Jira's dashboards help users to plan projects, measure progress, and track due dates at a glance. They're also shareable, for updating colleagues.

Unique search functionality: Jira uses its Query Language and specific filters to make it easier and more efficient to search for tasks and projects.

Customizable work request forms: By tailoring request forms, teams can adapt their intake to make it more streamlined, with less over-and-back questions and faster delivery.

Integrations

Because of its multiple sister sites, Jira makes it easy to integrate with other parts of the Atlassian Group.

Pricing plans

- Free - \$0 per user/month
- Standard - \$7.75 per user/month (billed monthly; on average)
- Premium - \$15.25 per user/month (billed monthly; on average)
- Enterprise - Custom
- Customer ratings and reviews

Jira fans appreciate its wide range of integrations and report that it's great for issue management. However, these advanced functions can be difficult to learn for some users, particularly if they're not from IT backgrounds or aren't experienced with these tools.

It has a Capterra rating of 4.4/5 (13,200+ customers).

Support

Jira is strong on support because of its original ticket-based model. It also offers extensive training and additional resources for users to get to grips with the more complicated aspects of its platform.

Visit the website [here](#)

7. ClickUp

ClickUp is a well-known project management software solution that works well for most sized teams, including those operating in remote environments. It has all the standard management features that support the planning, organization, and management of various tasks.



Pros and cons

ClickUp is an all-in-one project management solution with accessible pricing and all the tools most teams need, including workflow automation, Gantt charts, and resource management features.

However, it's also quite buggy, with a relatively high level of downtime. This could frustrate teams working on tight deadlines. Its proofing and approval features are also limited when compared to other similar platforms.

Key features

Document hub: Centralize all your internal documents, wikis, and FAQs to build a knowledge base that can help to accelerate and smooth the onboarding process.

Checklists: Break down tasks into bite-size activities in a list to kick projects off faster, identify roadblocks quicker, and monitor progress more effectively.

Mind maps: Plot out projects and tasks visually, so that everyone can see the underlying strategy and understand their role in achieving the goal.

Integrations

ClickUp is strong on integrations, with connections between all the major third-party apps including Slack, Google Calendar, Outlook, HubSpot, and more.

Pricing plans

- Free Forever - \$0
- Unlimited - \$9 per user/month (billed monthly)
- Business - \$19 per user/month (billed monthly)
- Business Plus - \$29 per user/month (billed monthly)
- Enterprise - Custom
- Customer ratings and reviews

Customers appreciate how ClickUp allows them to capture client feedback and track various tasks and projects. However, a common issue raised is how notifications can sometimes flood users' dashboards and email.

It has a Capterra rating of 4.7/5 (3,600+ customers)

Support



ClickUp doesn't have any phone support, which might be challenging for some users. While email responses and other resources are available, it doesn't have a user community, which can be a helpful way for new customers to learn best practices.

Visit the website [here](#)

8. Microsoft Project

Microsoft Project is part of the ubiquitous Microsoft brand, trusted by millions around the world. It was designed to combine many of the project management functionality of other sister brands in one platform. It's well recognized as a strong performer for single projects, although not as popular when it comes to multiple ongoing projects.

Pros and cons

Microsoft Project offers a robust set of tools for modern teams, including Gantt charts, grid views, and boards as well as various resource management features that help to manage tasks and teams.

Microsoft Project works best alongside other MS products such as Outlook, Teams, and SharePoint to properly collaborate and work cross-functionally. This can be frustrating for people looking for an all-in-one single platform solution.

Key features

Interactive dashboards: It does require an integration with Power BI, but the ability to view overall project and individual progress status fast with interactive dashboards is a bonus.

Gantt timeline view: Scan for upcoming due dates, roadblocks, or progression with the ever-popular Gantt view.

Budget tracking: While only optimized for individual projects, this handy feature allows you to keep control of expenditure, staying on budget and on time.

Integrations

As you might expect, Microsoft Project is very strong on integrations with other parts of the Microsoft ecosystem, but less so with other third-party apps. It does, however, allow connections to Slack, Google Calendar, Outlook, HubSpot, and more.

Pricing plans

- Project Plan 1 - \$10 per user/month

- Project Plan 3 - \$30 per user/month
- Project Plan 5 - \$55 per user/month
- On-premises solutions are priced differently
- Customer ratings and reviews

Customers are happy with Microsoft Project's ability to help them manage even the most projects well. Others believe it to be costly, especially as it requires additional licenses to access other key tools, such as the Office suite.

It has a Capterra rating of 4.4/5 (1,700+ customers).

Support

Microsoft Project requires an investment in terms of time when onboarding, but help is at hand with training, FAQs, and a community resource hub. There is also the option to open a ticket with the Microsoft Admin center and larger accounts can upgrade to paid on-premises support.

Visit the website [here](#)

9. Basecamp

Basecamp is an easy-to-use platform particularly beneficial for small teams seeking project management functionality that includes scheduling, collaborating, and monitoring features.

Pros and cons

Basecamp is a very straightforward option, with pricing that's based on requirements, not users, which will attract some smaller teams or growing companies. Because of its simplicity, it's also relatively easy to navigate and learn, so it has a short learning curve.

At scale, Basecamp may lack the more complex features required for cross-functional collaboration between growing teams. While it does have a 'Line-Up' feature, there are limited ways to view work, unlike other products with customizable Gantt charts, Kanban boards, table views, and more.

Key features

To-do lists: Visualize your workloads quickly and break down complex projects with a to-do list for each project, complete with separate notes and attachments.

Message boards: Stay in constant communication in dedicated boards, helping teams to work together to progress a particular project.

Project scheduling: This function helps users to ensure they don't miss key deadlines. Create due dates, track progress, spot roadblocks, and integrate with calendars to stay up to date.

Integrations

While not offering as broad a range as some other software solutions available, Basecamp does allow for integrations with many third-party apps that have extra software development, project management, and reporting capabilities.

Pricing plans

- Basecamp - \$15 per user/month
- Basecamp Pro Unlimited - \$349 per month (billed monthly; unlimited users)
- Customer ratings and reviews

Customers enjoy Basecamp as a kind of digital hub for them and their teams to centralize their work and collaborate to complete projects. Some customers do report being confused by the interface though, with a failure to deliver key messages between teams.

It has a Capterra rating of 4.3/5 (14,100+ customers)

Support

While Basecamp has no phone support option, it does state that it will get back to enquiry-form questions within four minutes. It also has extra resources such as tutorials and help guides.

Visit the website [here](#)

10. Trello

Trello is one of the earliest Kanban-based tools. It still allows for simple project visualization and effective drag-and-drop task management. It's familiar to many people, allowing for easy sharing and collaboration, even among external users.

Pros and cons

Trello makes task management almost fun, with attractive boards and an easy-to-use interface that make it excellent for optimizing team-based productivity.

However, it's limited in terms of organization-wide project and portfolio management features, so if you need to strategize or plan from a high level, you might be better suited to a more comprehensive project management software option.

Key features

Kanban boards: Trello is one of the best-known Kanban board tools, with an attractive interface and easy drag-and-drop functionality.

Custom cards: Tailor task cards by customizing with due dates, comments, and more to make sure everyone on the team can see what's needed fast.

Workflow automation: Create automated flows between cards that help to streamline intake and accelerate delivery.

Integrations

Trello has more than 200 ready-to-go integrations with Google, Slack, and more of the most-mentioned work management tools available.

Pricing plans

- Free - \$0
- Standard - \$6 per user/month (billed monthly)
- Premium - \$12.50 per user/month (billed monthly)
- Enterprise - \$17.50 per user/month (billed annually)
- Customer ratings and reviews

Many customers praise Trello's straightforward Kanban task management and ease of use. For some customers, Trello can be awkward compared to other project management tools.

It has a Capterra rating of 4.5/5 (22,500+ customers)

Support

Trello does offer support via email, but it's only available during normal business hours (Monday to Friday). There is also a community forum, though, which may be helpful for new users to find common fixes and best practices.

Visit the website [here](#)

11. Zoho Projects

Zoho Projects is part of the Zoho suite of tools, which includes a CRM, recruitment system, and sales platform — all mainly targeted at the real estate industry. Ideal for current Zoho users, it provides a project management solution that allows data to be synced easily between the various tools.

Pros and cons

The software specializes in task management and automation, allowing project managers to oversee projects and team members to collaborate on individual tasks.

Adding data to multiple custom fields can prove difficult with the lack of a multi-select option, and code often appears alongside the data.

Key features

Blueprint: A popular function, blueprints let you map out complicated tasks and set them up to move along the pipeline, with automatic approval notifications.

Issue management: Easily identify and flag issues in your work with issue management features. Add custom views to highlight the most important or time-sensitive bugs to address.

Gantt charts: Create visual project management charts to identify and assign critical tasks with baselines to ensure consistent progress.

Integrations

While it doesn't allow for as many integrations as other options, Zoho does offer access to the most-needed software including Google and Microsoft.

Pricing plans

- Free - \$0 up to 3 users
- Premium - \$5 per user/month (billed monthly)
- Enterprise - \$10 per user/month (billed monthly)
- Customer ratings and reviews

Customers praise how the software helps teams break down tasks and its suitability for more technical projects. Some customers noted that adding data could be cumbersome, with no multi-select option and lines of code appearing alongside data.

It has a Capterra rating of 4.3/5 (320+ customers)

Support

While telephone support is not available for Zoho Projects, users can access help via an email-only function. There is also a wide range of resources including a knowledge base, FAQs, and tutorials.

Visit the website [here](#)

More digital tools for project management: [6 Essential Digital Tools for Every Project Manager \(psohub.com\)](#)

Unit 4 Use of Data Analytics in Project Management

for Lesson 3. Data Analytics in Project Management

Task: Read this case study and answer the questions:

Lumi file 25file Question and answers (correct answers in bold)

Use of Data Analytics in improving Project Management controls

As a certified Project Management Professional (PMP) from Project Management Institute (PMI) and a Data Science enthusiast, I have tried to share my understanding based on my experience in developing and managing Mission critical projects. In this article, you will learn how Data Analytics can be used in improving the Project Management controls in a development project.



Managing projects means making decisions. This process can be supported by data mining and machine learning techniques, based on selection and analysis of project data in order to make better decisions and resolve some typical project problems.

Data plays a significant role in any organization. Using analytics, managers and executives can watch for early signs of slippages in terms of budgets, costs, and timelines and take corrective action. Analytics also helps managers capture the rate of work, so they can easily predict whether the project will be completed on time. Managers can use a burn-down chart, for instance, which is a graphical representation of work left to do over time.

Moreover, deep and insightful analytics can help you improve resource utilization and better forecast revenue and costs. With analytics, organizations can take a broader view and combine unrelated data streams to offer deep insights into projections and early warning signs in complex projects. This role can be taken by Program Management Office (PMO) in an organization.

How can project managers make use of a data-driven approach to improve project outcomes?

Gartner says, 80% of today's Project Management tasks will be eliminated by 2030 as Artificial Intelligence takes over. Artificial Intelligence will not be replacing anyone's jobs just yet; however, AI will help make better decisions leading to improving the chances of delivering projects on time and on budget. Traditional project management functions like planning, data collection, tracking, and reporting will be taken over by machine learning algorithms.

The role of the project manager will gradually evolve into one that is more strategic as opposed to current tactical role. AI shall be a work augmentation tool, not a human replacement and AI cannot manage a project, so Project Manager's tedious status reports and messy resource scheduling could be greatly improved with AI, Machine learning and Robotics Process Automation (RPA), but it can't gather requirements or get stakeholder buy-in. However, Organizations will have to adopt the use of AI in projects and hence they have to merge the power of humans with that of machines learning for better managing their critical projects.

With applications of artificial intelligence already disrupting industries ranging from finance to healthcare, technical project managers have to grasp this opportunity and learn how AI project management is distinct and how they can best prepare for the changing landscape for use of AI in project management. AI and Machine Learning will help in enabling a fully digital program management office (PMO) in future.

Data Analytics techniques can enable project managers to use various analytical reports and drill-down charts to break down complex project data and predict their behaviour and

outcomes in real-time. Project managers can use this predictive information to make better decisions and keep projects on schedule and budget. A data-driven analytics approach enables project teams to analyse the defined data to understand specific patterns and trends. Executives can use this analysis to determine how projects and resources perform and what strategic decisions they can take to improve the success rate.

A report by global management consulting company McKinsey, discovered that US \$66 billion was “lost” across 5000 separate projects. This was due to them exceeding their lifecycle, poor planning, and the wasteful expenditure on the wrong kind of talent.

Data plays a significant role in any organization. Using analytics, managers and executives can watch for early signs of slippage in terms of budgets, costs, and timelines and take proactive action. Analytics also helps managers capture the rate of work, so they can easily predict whether the project will be completed on time. Managers can use a burn-down chart, for instance, which is a graphical representation of work left to do over time.

Moreover, deep and insightful analytics can help you improve resource utilization and better forecast revenue and costs. With analytics, organizations can take a broader view and combine unrelated data streams to offer deep insights into projections and early warning signs in complex projects.

Data Analytics in Project Management

A recent Project Management Institute survey confirms that artificial intelligence (AI) disruption is happening 81% of the 551 survey respondents report their organization is being impacted by AI technologies.

As we say that learnings from the past helps makes our future better. As a Project Manager we should always connect the dots looking backward & forecast the projected path to future using Earned Value Management. This will bring a prospective whether the current projected path & pace will take us to the desired destination. The past performance & remaining quantum of work in project will help us for the course correction. Project manager always does a balancing act among the various Constraints set at start of a project. To be in control of Project he always requires having check on project performance matrices. Project Performance Analysis is key for project manager to decide the revised rate of efforts to achieve desired goals.

The complexity of managing projects within the Triple constraints has been increasing day by day. Quick browsing through the changes over past one decade tells us how fast the “Complexity” of managing projects has been changing. Various factors contributing and will continue for next one decade to name few, as, shortening product development cycles,

changing customer expectations, exponentially increasing usage of internet as well as a greater number of millennials in the project teams.

One of the ways to manage this complexity and the need of changing world, is using digitization. The digitization of Project Development phases will provide all synchronized database available to each stakeholder appropriately and same can be used for Managerial decision making. Building Analytics on this database, Risks affecting Project Performance Parameters – Time, Cost, and Quality can be effectively predicted and controlled. In addition, status will be available for each project to individual project teams whereas Portfolio Dashboard will provide bigger picture for managerial decisions on Strategies & Organizational Priorities. Because of its real-time nature, it can be available across the world at the same time providing a common platform to network and common language to interact with team.

If you do not measure your data, how can you manage or optimize your business?

Project Management is no different. Effective management of projects entails efficient management of the uncertainties and risks on the project. It requires today's project managers to use analytical techniques to monitor and control the risks as well as to estimate project schedules and costs more accurately with analytics-driven prediction. Project-based data with analytics can enable project managers and executives to measure, observe, and analyse project performance objectively and make decisions and commitments based on facts.

Digitization of Project Management process and application of Analytics will provide strategic value creation on the part of organizations.

Project Analytics:

Analytics can be defined as the systematic quantitative analysis of data to obtain meaningful information for better decision making. It involves the collective use of various analytical methodologies such as statistical and operational research methodologies, Lean Six Sigma, and software programming. Though Analysis and Analytics terms sounds similar but they do have some differences.

Project analytics can help project managers handle complex projects and keep them on-schedule and on-budget. Using analytics, project managers have the ability to go beyond simply capturing data and completing tasks as they are completed. Now, they can find out a multitude of information, including exactly how projects are performing, and whether or not they are in line with the overall objectives. Analytics provides project managers the ability to make strategic decisions and improve project success rate.

Quality of Deliverable

Managing a new project can be an unnerving task. There are different stakeholders, approvers, teams, budgets, outcomes and high expectations to manage. To manage all of these, analytics have become a major part of modern-day project management.

In decision-making, biases effect the decision making and it means that it is likely that decision-makers will search, use and interpret only the type of information that supports their existing beliefs and will focus on only one alternative when making decisions, reducing the likelihood that it will be a good decision.

As a project manager, you need to understand how analytics can reduce your workload, improve processes and enhance the outcomes of your project. Quality is an ultimate measure of your project's success upon delivery. Analytics help you plan, monitor and review the quality throughout your project.

Assisting Strategic Decisions

Analytics helps organizations make decisions that are based on facts instead of gut feeling. Real-time project analytics reveals a wealth of information that helps organizations align with their strategic objectives. Analytics allow managers and executives to deepen their understanding of how ongoing and proposed projects fit into the overall portfolio and organization vision.

Lowers project costs

Big data analytics means collecting more and more data that you can use to predict future events and trends within your industry easily. This helps make your resource forecasting and planning process more efficient since you'll have a library of relevant data to determine the right budget, timetable, estimates, and more for cost-effective project implementation.

Insights from analysing big data can also make your output efficient because it allows you to identify and assign the tasks your team members are excellent at and provide them with accurate information to complete their jobs.

This reduces potential project errors and inaccuracies that could cost you a ton of your resources, and, if not corrected, could set back your operations for days, weeks, or months.

Improves resource management

Data analytics helps you extract the right information to understand your project needs. This allows you to see available resources and how these two matches up for efficient resource allocation and, in turn, seamless project operations.

For instance, the moving parts and changes in project management, such as your budget, can significantly impact your deadline and resources.

Using big data insights and resource management solutions equips you with the information and tools to uncover the right approach to handle project plan changes easily.

It will also help you predict project outcomes and make better strategic decisions to ensure the most cost-effective resource spending.

Enhances project risk management

Project management is dynamic and affected by many internal and external factors, leaving it open to various risks that could negatively impact your delivery outcome.

The key is to actively and regularly identify and manage your project management risks, which means you'll need to document all risk events and the troubleshooting and firefighting activities.

Data analytics allow you to analyse your project issues and risks to manage them better and minimize their impact on your processes and results.

This also helps you develop the right methods and use the right tools to identify, analyse, prioritize, monitor potential issues, and create solid risk response strategies.

Benefits of use of Artificial Intelligence in Project Management

- Automate repetitive, tedious tasks so you can spend more time on problem-solving.
- Create Project database and use historical data of completed previous projects to perform calculations and predictions, improving the accuracy of the results.
- Perform risk modelling and analysis based on any changes to scope, available resources, budget, etc.
- Optimize resource scheduling and allocation on projects.
- **AI and ML can be used to:**
- Assess the type of resources the project needs based on the tasks required, such as time to build a custom workflow and then perform quality assurance testing.
- Use historical data to calculate the length of time for tasks.
- Reference a database of people and their skills and select the best person for the tasks required.
- Review the work and time-off schedules of all the people available to work on a project.
- Estimate how many tasks an individual could complete when compared to their weekly report of productivity.

- Compare the proposed resource schedule against historical data to identify inconsistencies and improve the accuracy of the proposal.
- Propose the best possible schedule of resources with the team available.

Conclusion

Data Analytics provides plenty of opportunities to advance your team members' skills and optimize your project management implementation process. After all, regardless of your objective, you can always find data to influence your project results.

Leverage data to analyse past, real-time, and future information to model the probability of your project outcomes and use it to make data-based decisions and improve your efficiencies.

The market for data analytics and the business intelligence is predicted to grow to \$22.8 Billion. According to the Project Management Institute, there will be a demand for 87.7 million project managers by 2027. With both these disciplines growing at an explosive rate, it only makes sense to use powerful tools interwoven into the organization's fabric to create a more sustainable competitive advantage.

Unit 5 Project Management in Digital Disruption: Emergence of Digital Project Management Office

for Lesson 4. Digital Project Management

Task: Read this case study and answer the questions:

Lumi file 26file Question and answers (correct answers in bold)

Introduction

Digital transformation (DT) as a social, business, organizational and technological phenomenon is multidimensional and has many implications for organizations seeking to implement it. By implementing various emerging information and communication technologies in business, such as artificial intelligence, big data analysis, IoT, cloud computing, etc., organizations are simultaneously establishing digital strategies (Bharadwaj et al., 2013; Matt et al., 2015), developing new business models (Berman, 2012), (Schallmo et al., 2017), changing their culture and structure (Fabac, 2021; Fuchs et al., 2019; Hartl & Hess, 2017).

Compared to the existing business models and standard business processes, DT and its disruptive nature affect organizations. Organisations must be more agile, innovative, and ready to change radically. DT implies many aspects of change, but this paper will focus on



developing DT through a project model and prerequisites of organizational entities in design responsible for implementing changes.

Although other perspectives and approaches are cited in the literature, DT, as a radical organizational transformation, is usually implemented as a group of related projects, programs, or a portfolio of corporate projects. According to recent research, most organizations have an established project management function through the PMO – a project management office (Project Management Institute, 2017), especially when aligning with strategic objectives (Project Management Institute, 2013).

As an element of organizational structure and design, PMO is also an essential entity of organizational project management (Monique Aubry et al., 2007). The role of PMO in contemporary organizations has been researched by many scholars (Monique Aubry & Lavoie-Tremblay, 2017), (Müller et al., 2013), (Darling & Whitty, 2016) or (B. P. Hobbs & Aubry, 2010), to name a few. The relationship between DT and the role of PMO during implementation has not been researched so far, at least not directly. The initial assumption is that DT influences organizational design and, consequently, PMO design. Additionally, PMO can play a crucial role in the success of a digital transformation venture.

This paper considers what needs to be done to make the organizational PMO cope with the requirements of DT, i.e., how to make PMO more "digital". A survey was conducted in selected Croatian companies to gain insight into the relationship between DT and PMO.

Previous research

Digital Transformation

Various digital transformation perspectives have attracted scholars' attention for more than a decade: strategic, organizational, social, managerial, educational, etc. Although DT affects various levels of the presence and upcoming future, starting from the whole society to the story of the individuals, the primary focus to serve the purpose of this paper will be DT at the level of an organization, business, or public.

DT as a strategy represents a paradigm shift from the traditional approach of having separate business and IT strategies. Some scholars addressed the subject of DT strategy (Bharadwaj et al., 2013), (Matt et al., 2015) or (Kane et al., 2015), paving the path for successive research in the area.

DT as a phenomenon requiring a multidisciplinary approach was researched by scholars like Vial (2019) and Verhoef et al. (2021), proposing a future research agenda on DT. Both the former and the latter sources suggested the introduction of organizational design concepts into the research agenda of DT. As an example of well-known organizational design concepts, McKinsey's 7s models can be used for this paper. One of its key components respects



employees' skills, which are then related to the capabilities and competencies of the organization. Vial (2019) sees dynamic capabilities as one of the elements of the research plan, while Verhoef et al. (2021) introduce the organizational structure as a constituent element of the plan. The latter proposes ways of coping with the demands of DT by considering aspects of the organizational structure having separate business units, agile organizational forms, and digital functional areas (Verhoef et al., 2021).

Some scholars like Fabac argue that “major organizational changes are traditionally seen through design changes, so by analogy, effects of DT can be expected in the domain of (organizational - auth. note) design” (Fabac, 2021).

The data about digital transformation initiatives that are always astonishing is that, according to research by McKinsey, as many as 70 percent of “large-scale complex change programs do not reach the set goals” (Bucy et al., 2016). Other sources state several reasons why digital transformation projects and programs fail (Westerman & Davenport, 2018; Zobell, 2018).

Following all the above, in the continuation of the paper, we analyze three key research topics: a) possible approaches to the development and implementation of digital transformation; b) organizational design that can support the requirements of DT, and c) project management as a discipline that explores methods, models and structures that enable the implementation of DT in different perspectives.

Approaches to the Development and Implementation of Digital Transformation

Some authors discuss digital transformation as a process (Verina & Titko, 2019; Vial, 2019; Zaoui & Souissi, 2020). Such classification is justified by organizational changes (transformation) and, to some extent, from the perspective of defining specific DT processes. Thus, in his paper, Ulas (2019) suggests the existence of adaptation processes for the circumstances of DT development where the adjustment of organizational institutional and operational systems is performed concerning new businesses marked by digitalization. According to Sousa and Rocha (2019), learning processes and innovative activities are the dominant processes in digital transformation.

However, one should keep in mind the limitation of the paradigm: “DT as a process” due to the analogy of business processes where, according to the repetitive nature of these processes, the principles dominate that they run faster, cheaper, with fewer errors, with the possibility of customization. These principles are not the key to the success of the digital transformation process. The definition of business processes in terms of precise inputs, linear and logical sequence of activities, defined tasks, and predictable results (Bulletpoint, 1996) supports the view of activity architecture and subprocesses for the process view on digital transformation, not enough.

Digital transformation as a structural change is discussed in (Hess et al., 2016), (Bilgeri et al., 2017), (Fuchs et al., 2019), (Fountain et al., 2019), and others. Successful implementation of DT requires a structural change, and appropriate organizational units should be identified as old or new "pillars" for DT development. The positioning of structural interventions concerning the DT strategy was discussed by Hess et al. (2016), formulating strategic questions where the characteristic answers are the impetus for the outcomes of digital transformation efforts in the analysed cases. Ackermann (2020) proposes the establishment of the so-called Digital Initiative Transformation Office to support digitization, especially during the COVID-19 pandemic, where this organizational unit would support all digital initiatives, from an idea to establishment.

The approach to the development of digital transformation through a project perspective has good predispositions that follow from the basic definition of the project that it is a unique set of activities intended to achieve a defined result, with a specified start and end date, and with designed resource allocation, according to (Bowen, 2002). A project in an organization is an exception just as much as it is an undertaking of digital transformation. The traditional design methodology (waterfall model) is not entirely satisfactory for dynamic and uncertain organizational endeavors such as digital transformation, and many authors suggest the application of agile methods for DT projects (Bendor-Samuel, 2019), (Gurusamy et al., 2016), (Ackermann, 2020). The agile framework for DT projects includes an iterative development approach (Scrum sprints, etc.), delivery after a short time, frequent testing and feedback, and daily review of user needs.

The partial approaches to DT listed here are preferably combined and harmonized in practice but should be subordinated to a digital transformation strategy. The rationality of organization management dictates the need to formulate a strategy that will engage digital resources and, through DT, lead the organization towards new ways of creating value, digitized products and services, and ultimately better performance. The need to emphasize the importance and priority of strategy is evident from research conducted by Kane et al. (2015), where the authors put strategy ahead of technology in the mission of driving DT initiatives. The problem of DT strategy is also indicated by the research of MIT & Deloitte (Kane et al., 2016), which showed that only 43% of respondents agree with the statement that employees in the organization have sufficient knowledge and skills to execute a digital strategy.

Organizational Design and Organizational Project Management

Organizational design has been the subject of academic research for a few decades. The two most common organizational design models are Galbraith's Star (Galbraith, 2014) and McKinsey's 7s model (Lowell, 2008). The former includes five elements of the organizational design and their relationships, while the latter consists of seven components and their associations (Strategy, Structure, Style, Staff, Skills, Shared Values, and Systems).

Organizational design and project management are aligned disciplines for project-based organizations. The topic of project-based organization design has been researched recently by Miterev et al. (Miterev et al., 2017). Findings in the study of the latter source, carried out on academic project management literature, show that elements of organizational design based on Galbraith's Star model were "...addressed to a greater or lesser extent. However, no paper discussed the holistic design of project-based organization" (Miterev et al., 2017)

To establish consistent relationships between organizational design and project management, organizational project management as one new research area has been developed.

Organizational project management (OPM) is a function of an organization's research area. It is defined as "...a new sphere of management where dynamic structures in the firm are articulated to implement corporate objectives through projects to maximize value" (Monique Aubry et al., 2007).

OPM addresses organizational design as dynamic structures responsible for facilitating the changes in an organization. There are two concepts of corporate design explicitly addressed by OPM; a contingency theory as a possible theoretical perspective discussed in the research of Müller et al. (2019) and Aubry and Lavoie-Tremblay (2017), and dynamic capabilities, drawing from the resource-based theory of organizational design. The former comes from the standpoint that the "contingency theory of organizational design starts from the fact that the effectiveness of a particular design solution depends on the specific situation in which the organization finds itself." (Fabac, 2017). The latter is "...the antecedent organizational and strategic routines by which managers alter their resource base to generate new value-creating strategies" (Eisenhardt et al., 2000). Davies further explained dynamic capabilities in organizational project management as the concept "applied to identify how firms deploy multiple projects for existing customers and launch innovative projects to develop new technologies and create new markets" (Davies et al., 2008).

The perspective of dynamic capabilities was researched in information systems projects portfolio management by Daniel et al. (2014), considering the capability of successfully leading, managing, and executing IT projects as dynamic capabilities. A similar approach can be seen in the research paper by Killen and Hunt (2010)), where the dynamic capabilities perspective draws on organizational learning theory. Both perspectives are concurrent with the demands of DT; such are needs for innovation in strategy, business models and processes, changes in corporate culture, organizational structure, etc., as elements of organizational design.

One can view OPM as a function within an organization's organizational structure. According to research by Project Management Institute (PMI) as a professional organization, over 70% of companies participating in the research have their project management function organized



through the project management office (PMO) as an organizational entity (Project Management Institute, 2017).

PMO as an organizational entity covering OPM's function within an organization and its relationship with the corporate design was covered in papers of scholars like Aubry and Lavoie-Tremblay (2018) (2017), drawing on theories of organizational design like contingency theory.

Project Management Office and Its Role in Contemporary Organizations

PMO, as an organizational entity responsible for leading, managing, and executing projects, programs, or portfolios of projects, covers various organizational forms. Aubry et al. (2013) recognizes the following types of PMO: a) Organizational Unit PMO/Business Unit PMO/Divisional PMO/Departmental PMO, b) Project-Specific PMO/Project Office/Program Office, c) Project Support/Services/Controls Office d) Enterprise/Organization-wide/Strategic/Corporate/Portfolio/Global PMO and e) Center of Excellence/Center of Competency. Müller et al. (2013) categorize PMO according to relational typology as servicing, controlling, and partnering. Desouza and Evaristo (2006) proposed an approach of classifying PMOs according to knowledge archetypes as a) supporters, b) information managers, c) knowledge managers, and d) coaches. The first falls into the administrative dimension of PMO typology, while the other three fall into a knowledge-intensive category. Monteiro et al. performed thorough research of PMO's academic literature in scientific databases like Web of Science, Scopus, Science Direct, etc., and came up with twelve different typologies of PMO (Monteiro et al., 2016).

Unlike the proposed typologies and categorizations in the previous paragraph, Hill (2004) starts from the standpoint that PMOs can eventually evolve into a more mature organizational form. It means scenarios of developing through different stages, from the project office as the most immature form to the center of excellence as the most mature one.

A study by Hobbs et al. (2008) based on the analysis of eleven organizational transformations shows that PMO was considered a part of innovation efforts. Artto et al. (2011) discussed the integrative role of PMO in front-end innovation, building on theories of management control, organizational design, and front-end innovation in academic literature.

Although PMOs, as an organizational entity in principle, last more than the projects they are responsible for, they are far from being considered stable organizational structures, so they are constantly exposed to tensions to change (Monique Aubry, 2015; Bredillet et al., 2018). These tensions or demands to change may come from the fact that PMOs failed to justify their purpose, given existing circumstances, or just because of the ever-changing nature of the business organization, as explained in contributions by (Darling et al., 2016) or (Schibi, 2013).

The digital transformation paradigm places new demands on project management competencies to control and manage the implementation of organizational changes

(Hornstein, 2015). As the most common organizational form of corporate project management, PMOs in contemporary firms are faced with additional demands on the development of organizational learning and knowledge management (Pemsel et al., 2013), especially in the domain of cross-project learning and improvement (Julian, 2008), as a prerequisite for continuous innovation (Artto et al., 2011) and sustainable development (Gemünden et al., 2018) and building a new value (Hurt et al., 2009).

PMOs play a significant role in project success (Ward & Daniel, 2013), and implementation of the organizational strategy (Project Management Institute, 2013) is considered an organizational imperative in strategic initiative management (Keenan et al., 2013). Although a direct relationship between DT and PMO design in academic literature has not been observed, professional community members are addressing this topic (Workfront, 2018).

Each of the topics mentioned above that represent additional demands on PMOs in the case of transformational projects implies a further aspect of PMO design, and that is how to assess or quantify the contribution of PMO. This contribution can take place in each domain concerning how to evaluate the contribution of PMO in strategy implementation, innovation, organizational learning, and organizational change.

change.

To sum up, there are domains of PMO expertise that are getting greater importance in the design of the PMO when faced with the demands of DT's projects and programs, but also, some domains are not seen in the "traditional" design of PMO. These domains of expertise support the following areas:

- Implementation of digital strategy
- Introduction and improvement of organizational agility
- Innovation management, and consequently, innovation project management
- Knowledge management and organizational learning
- Organizational change management.

Research Gap and Research Questions

As the previous paragraph shows, available academic sources have discussed relationships between DT, organizational design, and OPM. Relationships between organizational design and PMO and OPM and PMO have been covered by scholarly sources. On the other hand, the direct relationship between DT and PMO design has not been observed.

Furthermore, existing project management frameworks, part of PMO's domain of expertise (Aubry et al., 2013), are considered inadequate to support transformational projects (Cha et al., 2018). For successfully managing and executing DT projects and programs, they need to incorporate additional competencies like innovation management, organizational change,

organizational learning, digital strategy implementation, and organizational agility. Therefore, a new or revisited model of PMO competencies should be proposed, drawing on the contributions of (Müller et al., 2019), (Monique et al., 2017), and (Miterev et al., 2017).

There is a possible research gap concerning PMO design since DT introduces some new elements in the model of organizational design (digital strategy and agile organizational structures, e.g.), and PMO is a valuable structural entity responsible for implementing DT projects.

Possible changes in PMO's domains of expertise and extensions in competencies due to demands of DT affect the design of the PMO as a part of an overall organization regardless of the model or organizational design applied, e.g., Galbraith's star model (Galbraith, 2014) or McKinsey's 7s model (Lowell, 2008).

To frame the exploration of this relationship, we proposed the following research question:

- RQ1: What are the design features of a PMO that could successfully meet the requirements of DT projects?

To answer the research question, we choose an approach of preliminary qualitative research carried out on a sample of four Croatian companies.

Methodology

The theoretical framework of this research covers areas where qualitative methodological approaches prevail, given that epistemologically, there is no objective reality in organizational design and project management. However, it is constructed through different perspectives and interpretations.

Considering the above, the case study method was selected as the primary method used in this research. The suitability of a case study as a research method is here seen as justified because research is seeking answers to research questions starting primarily with "Why" and "How" on an actual set of events over which the researcher has no control (Yin, 2018). The case study method is also considered a suitable method in this paper because the research is multidisciplinary, combining topics from digital transformation, organizational design, and organizational project management, where existing theories may appear insufficient to explain the observed phenomenon (Eisenhardt, 1989). The subject matter of the research is complex, with a potentially large number of variables and relationships, and the available number of cases is relatively small for quantitative research design.

A data collection strategy in the research was based on interviews with key stakeholders like directors of PMOs or other employees having an insight into digital transformation projects and PMOs' structure, roles, responsibilities, and performance. As a preparation for the

interviews, a list of questions and topics to be discussed with interviewees was designed. This list includes but is not limited to the following issues:

- The dominant type of digital transformation and rationale for such a decision
- The roles a PMO plays in digital transformation projects
- Digital technologies used when implementing DT
- Fundamental PMO knowledge and skills required for successful implementation of DT
- Project management approaches used in a project DT
- Significant obstacles and risks in DT projects.
- DT project performance compared to projects before DT
- innovations in PMO's work due to the implementational demands of DT - PMO's self-perception of being more digital than before DT implementation

The interviews were carried out in four Croatian companies in April and May 2022.

Results

For this preliminary research, interviewed representatives of three organizations answered relevant questions. Table 1 presents certain demographic information about the involved organizations, while the results of the performed case studies are elaborated below the table.

Figure 4.6

General information about PMOs involved in research

	Case A	Case B	Case C	Case D
Industry sector	IT	Banking	Banking	Telecom
Position	PMO director	Head of PMO	Head of PMO	PMO Director
PMO size	9	13	4Business process(es)	19
Type of DT	Cultural/organizational	Business model(s)	Business process(es)	Cultural/organizational

Case A – An IT Organization

The organization in case study A is a small to medium-sized information technology enterprise with an established reputation as a proven vendor of geospatial software solutions and solutions for the public sector and administration, supporting the digital transformation of its customers. PMO counts nine employees, including the PMO director. As most of the company's business processes are digitalized, the company has chosen the



organizational/cultural type of digital transformation of its business, focused primarily on customer and sustainable value proposition.

PMO sees itself as a key player in the organization's digital transformation in digital agility and a knowledge broker in knowledge creation and distribution processes throughout the organization. Among the more traditional domains of PMO's expertise, the PMO is entrusted with the central point for the governance of project management processes, standards and methodologies, and projects and organizational performance measurements based on key processor indicators.

Digital transformation projects led or monitored by PMO staff include emerging technologies like mobile and cloud computing, social networks, and big data. With the critical knowledge and skills in digital transformation projects, PMO finds strategic and operational planning and strategy implementation, knowledge of methods and techniques of project management, and communication and motivational skills.

Although PMO promotes digital agility and one of its "digital" domains of expertise, projects are led using traditional or hybrid project management methodologies. As the most interfering factors for successfully implementing DT, PMO sees a lack of leadership, a shortage of talent in the market, and resistance to change.

Case B – A business Bank 1

This organization is one of the five largest business banks in the Croatian market. However, all of the bank's key business processes are supported by IT solutions. The bank implements and runs projects with strategic targets to develop or further improve the digital channels of its business operations. These activities align with digital transformation focused on business model transformation, which researchers often cite.

PMO counts 12 employees plus the Head of PMO. The PMO is a part of the organizational unit and a crucial player in implementing digital strategy and related change management. Such organizational structure also allows PMOs to contribute to digital strategy definition and shaping.

The bank has used emerging digital technologies like AI, mobile, and cloud computing in some DT projects. The following domains of expertise have been recognized as where PMO plays a critical role: strategic and operational planning, governance of project management processes, standards and methodologies, communication and motivational skills and techniques, leadership, and knowledge about the business area transformed in projects of DT. The latter enables PMO and its members to help project sponsors and owners to facilitate disruption and maximize benefit, i.e., value to all stakeholders.

The bank uses its DT project hybrid approach in project management approaches. In the initial introduction of the hybrid system, the so-called "incremental waterfall" approach was combined with rolling-wave planning. The waterfall approach carried out each delivery of the project. Still, the project did not have distinctive phases defined by the waterfall (to do all the analysis first, then all development and testing at the whole project level). To elaborate more on this approach, the head of PMO stated: "To be more agile, the bank changed its SDLC approach and supported the agile approach through project management methodology. However, since, as a bank, we deal with a lot of regulatory projects, so we opted for a hybrid approach because we believe we need a project plan with a longer planning horizon (a pure agile approach has a short planning horizon) and risk management and the implementation of individual deliverables are done agilely within the given framework. Still, at any time, the expected end of the project, risks, challenges, and the impact on the budget can be assessed."

When faced with the challenges and obstacles of the DT project, PMO is challenged with overwhelming regulatory demands cutting the capacity for business activities development, lack of project-applied leadership at the project owner's side, and resistance to change.

Case C – A Business Bank 2

This case involves another Croatian business bank, one of the ten largest business banks on the Croatian market. The bank chose digital transformation focused on business process transformation as its dominant change model. Namely, the bank considers transforming its business processes as a prerequisite to focusing on transforming its business model(s).

PMO counts four employees. PMOs should play critical roles in DT projects by implementing a digital strategy, fostering and improving organizational agility, and managing organizational knowledge. Like in the case of B, PMO perceives that it plays a crucial role in strategic and operational planning, governance of project management processes, standards and methodologies, communication and motivational skills and techniques, and leadership. Unlike the other two cases, this PMO considers its knowledge of the potential of digital technologies as crucial for the successful implementation of DT.

Emerging digital technologies used in DT projects of the bank involved mobile computing and other technologies related to development operations and business process management.

Unlike the previous cases, the organization, in this case, practices both an agile and hybrid approach to project management. However, like the two other organizations, PMO sees a lack of leadership and resistance to change as two significant obstacles to implementing a digital strategy, i.e., projects related to DT.

Case D – A telecom company

This organization is one of the largest telecom companies in the Croatian market. Similar to case A, as most of the company's business processes are digitalized, the company opted for the organizational/cultural digital transformation focused primarily on customers and a sustainable value proposition. The PMO director stated that digital transformation had been predominantly manifested by agile transformation to elaborate on the latter.

PMO counts 19 employees. PMO perceives itself as one of its organizational entities supporting its agile transformation.

Emerging technologies in the company's projects involve an almost complete spectrum of digital technologies: artificial intelligence, mobile and cloud computing, social networks, big data, and the internet of things.

Like case B, PMO sees its vital expertise in the governance of project management processes, standards and methodologies, and communication and motivational skills and techniques. Furthermore, like in cases B and C, the organization, in this case, practices a hybrid approach to project management. Unlike in other organizations, PMO perceives a lack of expert knowledge as a significant obstacle to implementing a digital strategy, i.e., projects related to DT.

Discussion

This preliminary research was considered a pilot project of a broader study that would investigate other elements of PMO design adequate to meet the needs of a digital transformation. The conducted research points to certain conclusions regarding the research question: What are the design features of PMO that could successfully meet the requirements of DT projects? The findings are presented and explained below.

PMO design changes

DT is an organizational transformation that implies that all components of organizational design are subject to change (structure, processes, strategy, resources, capabilities, competencies, activities, and organizational culture; for example, the McKinsey model). PMO, as an administrative unit, a structure responsible for managing the project part of the organization, is also subject to change due to the requirements of DT. The more radical the DT, the more changes can be expected in the design of the PMO.

In addition to the PMO design factors we have listed, some authors, such as (Hardy et al., 2001), emphasize several responsibilities of the PMO unit that need to be designed regarding project management standards and successful project execution, and strategic level tasks.

DT can be considered a case of change, an example of PMO transformation driven by external and organizational drivers or events (Aubry et al., 2010). Given this research, it is essential to note that organizations with multiple PMO innovations (Case C, Table 2) also observed more

benefits from PMO transformation than other companies. In addition to emphasizing agility in a broader organizational spectrum, Company C in DT projects seeks to develop innovations in project management, apply new technologies, and provide support for strategic DT projects. From the perspective of general knowledge about the successes of the DT venture, the statements of the respondents of Company C about PMO support in the implementation of the digital strategy are essential. The findings of many papers suggest that one of the critical elements for the success of the digital transformation is developing and implementing an appropriate digital strategy (Sebastian et al., 2017), (Kane et al., 2015).

The chosen type of DT is different for each studied organization (Table 2). This fact may assume different demands on PMO's design, visible from each PMO's crucial roles in an affiliated organization. It is in line with the contingency theory of organizational design.

Knowledge and Agility

Given the critical roles of the PMO organizational unit, the need for competencies in implementing (DT) strategy, establishing digital agility, and knowledge management should be noted. Essential knowledge and skills of PMO staff regarding support for digital transformation include strategic and operational planning, PM methodologies, communication, and motivational skills. PMO managers emphasize the topics of strategy, planning, and agility, which are prerequisites for the success of organizations while going through digital transformation, as stated in (Kane et al., 2015) (Mikalef et al., 2016), (Gurusamy et al., 2016).

Surprisingly, the current perception does not emphasize the knowledge of technology among PMO staff as critical knowledge for the successful implementation of DT. Hartl and Hess (2017) rank openness towards change, agility, innovation, and willingness to learn among the key values of organizational culture with an impact on the success of DT.

Although all four observed PMOs have implemented the agile approach in managing projects as organizational innovation, only case C organization perceived significant benefits in a shorter project life cycle, lower costs and project outcomes. Unlike the other three cases, PMO in case C also introduced some other innovations, resulting in a better perception of itself as a more digital PMO.

Digital PMO

Exploring the impact of digital transformation on project management, Kozarkiewicz (2020) identifies the most prominent aspects: data, IT tools and systems, communication, agile methodology, customer orientation, and process optimization.

Examining Croatian companies through the case study, we found out that when it comes to innovation in the work of PMOs due to DT, the PMO units in A and C companies have gone through a significant transformation by introducing more innovation in their activities, as listed in Table 2.

That, in turn, resulted in a better perception of PMO being more digital (in the case of C). In the research, the representative of company A did not see any improvement in project performance in DT projects compared to traditional projects. It should be noted that conventional projects with selected organizations relate mainly to implementing segments of the information system, its maintenance, and the like.

Specific is the discovery regarding Company D, where all that has been said results in an impression of the PMO's internal perception that it became "somewhat more digital." The Director of PMO (Case D) stated: "Digital transformation has been largely manifested by agile transformation, i.e., introducing agile approaches to delivering value to customers. Digital technologies are inherent in the company's business, so I would not single it out as a part of the digital transformation, but as business as usual."

However, the selected sample of Croatian companies, as the studied cases suggest, indicates the need to develop further the additional competencies in the case of DT projects that will enable the PMO to cope with the demands of digital transformation.

The success of the PMO in implementing DT initiatives

When invited to assess the results of DT projects compared to the traditional projects, the interviewee of Case A did not observe any significant improvement in the PMO performance in terms of project duration, costs, or outcomes. However, there was some innovation in PMO's work due to the demands of DT, such as the introduction of an agile and hybrid approach to running DT projects, which in turn resulted in better control and coordination between project managers and other stakeholders.

The interviewee of company B did not see any significant change in DT project duration, costs, or outcomes when comparing DT and other projects. The agile project management approach was recognized as the primary innovation in PMO's work. Having all this said about case B, the interviewee considered that PMO eventually became more digitalized.

As specified in Case C, their performance perception of the DT projects compared to the other projects was better than in the previous two cases regarding the shorter project life cycle, lower costs and better outcomes.

Given the reports of previous research on low performance in the implementation of digital transformation (Bucy et al., 2016), (Libert et al., 2016), the overall assessment in the surveyed companies that their success in DT projects is not weaker than in other projects is

encouraging. Namely, such an assessment focuses on the PMO units of the structure as good support for digital transformation initiatives in general.

In conclusion, regarding the effect of innovation transformations according to the form of digital PMO unit, we return to the example of organization C, which, in parallel with multiple innovations, records the more incredible benefits from PMO transformation compared to other companies. To distinguish whether this is an isolated example or a rule applicable to a more significant population of PMOs, more extensive research should be conducted on the many cases studied and the tremendous amount of data collected.

The main barriers to implementing the DT strategy identified in our cases are a lack of leadership and resistance to change. This statement is consistent with globally known findings discussed in research papers such as Svahn et al., 2017, Deloitte, 2020, and Sutcliffe et al., 2019.

The limitations of this research should be mentioned here as well. Namely, although this research is a multiple case study, only several available cases may appear insufficient for the analytical generalization needed to build a theory from case study research (Yin, 2018), (Eisenhardt, 1989). Furthermore, being qualitative and based on the case study method, this research can be considered preliminary research because of the small number of variables used. New research should include additional variables to help researchers describe and better understand the organizational context in which PMOs operate.

Concluding Remarks

The choice of approach in developing and implementing digital transformation is not unequivocal, and experiences are different. Through theoretical analysis, the treatment that prefers the application of project management and special organizational units such as PMO has its advantages. It turns out that, in practice, its acceptance is growing.

Digital transformation as a radical organizational change demands changes in the design of PMO as a corporate entity, i.e., the most common organizational structure responsible for managing projects, programs, or portfolios. PMO design has become a topic of interest to adequately support DT efforts by successfully executing its project and programs. By conducting multiple case studies of Croatian companies that have PMOs and implement digital transformation projects, we learned that the knowledge of methodologies and a hybrid project management approach, the implementation of DT strategy, and communication and motivational skills are essential. Croatian companies with PMO entities in digital transformation efforts feel well-known obstacles regarding the DT strategy - lack of leadership and resistance to change. These findings also provide guidelines for answering the research question on the design features of a PMO that could successfully meet the requirements of DT projects.

Preliminary research for this paper showed the need to explore further the relationship between demands of digital transformation and the appropriate design of PMO, primarily in the domain of dynamic capabilities, i.e., domains of expertise. Developing new competencies related to digital projects should enable the PMO structural unit to be transformed into a DPMO - digital project management office.

Extensions of the research carried out for this paper may have theoretical contributions, primarily in organizational project management, developing the further theory of project-based organizations with the focus on PMO as organizational structure assuming a significant role in transformational projects and programs or portfolios. Additionally, practical contributions of further research may be reflected in developing a methodological framework for PMO transformation as a part of overall organizational transformation, such as DT.

More information: <https://thedigitalprojectmanager.com/personal/new-pm/digital-project-management/>

Unit 6 Project Management in Digital Disruption: Emergence of Digital Project Management Office

for Lesson 5. Creating and Managing Digital Content

Task: Read this case study and answer the questions:

Lumi file 27file Question and answers (correct answers in bold)

How to Create a Digital Content Strategy

A content marketing strategy isn't just about your digital content-it's also about the strategy surrounding your content. Why? Because a strong content strategy can help guide your content team's activities, equipping them with clear responsibilities, an editorial calendar, goals, metrics and an integrated plan for deployment.

Before You Create Digital Content

Content strategy informs content creation. So, before you create any content, there are several strategic concerns that need to be considered, including:

Choose the type of content you will create. There are many different types of content you can create for your brand. Some of the most common and useful types of content include infographics, logos, press releases, pitches, whitepapers, case studies, landing page, SEO pages and blog posts-each of which serves a different purpose. One of the keys to effective strategy is to align the type of content you create with desired outcomes.



Set goals and objectives. Ideally, your strategy should identify specific content goals like increased SEO value, more backlinks to your website, improved readership, increased engagement, additional leads, etc. Goals should be practical and attainable—an editorial calendar is a great tool for keeping track of your content and goals.

Plan how you will reach your audience. How are you going to distribute that whitepaper? Which publications do you plan to target with your contributed article pitch or press release? These are the types of questions you need to answer before you create content. The distribution and amplification of content is a critical part of content strategy. In today's omnichannel marketing environment, the best strategies identify multiple channels and touch points for high value content.

After Digital Content Has Been Created

Many brands drop the ball when it comes to optimizing their digital content and content strategy. However, optimization is important for measuring results and making changes to improve the impact of your content with target audiences.

Leverage social media insights and analytics. Social media increases brand awareness builds a loyal foundation of supporters and creates opportunities for dialog you with audience(s). After you have shared content via social media channels, the next step is to measure its success. Did you see the desired results? Was your content shared, liked, thought-provoking? If not, delve deeper into what went wrong. Was it the content? Did you share it with the wrong network? By identifying your content's social shortcomings, you gain insights that will improve your reach in subsequent social content campaigns.

Perform A/B testing. A/B testing a simple way to test changes you make to your content such as a new landing page. It validates whether the change improved your conversion rates, which take the guesswork out of website optimization. By consistently performing A/B testing on key pieces of content, you can increase revenue, leads, downloads and more.

Track your reach. Track your reach through KPIs such as unique visits and more detailed analytics that illustrate user behaviors. Bounce rates, click rates and heat maps are great tools for identifying how your audience in interacting with your content on a more meaningful level.

Want to take the guesswork out of creating a digital content strategy? Walker Sands is here to help. Fill out the form or call us at (312) 267-0066 to get started today.



Unit 7 How to manage your digital content seamlessly with media asset management

for Lesson 5. Creating and Managing Digital Content

Task: Read this case study and answer the questions:

Lumi file 28file Question and answers (correct answers in bold)

Fueling Efficiency, Fostering Collaboration: The Ultimate Approach for Effortless Digital Asset Consumption

Businesses today must be able to efficiently and securely handle a veritable flood of digital content. Digital asset management solutions are certainly a first step, but what is needed is an ecosystem for managing and consuming digital assets. This is easier and more cost-effective than you might think.

There's no doubt that we've arrived in the Age of Content. More than ever, digital content influences how we communicate, collaborate, inform, learn, socialize, engage, and generally interact with people. In marketing and publishing, this means how we reach and attract current and potential customers.

To do this, we use a variety of channels, from print media to websites and blogs via a plethora of social media platforms to the emerging Metaverse. In addition to the channels, we use presentations, sales collateral, user manuals and much more.

Creating such diverse types of media requires gathering enormous amounts of text, images, graphics, video and audio. These digital assets can be sourced from storage solutions such as Dropbox, OneDrive, Google Drive and SharePoint, as well as from digital asset management (DAM) systems and image agencies including Adobe Stock and Shutterstock, among others.

This presents companies with a major challenge: How can they efficiently and securely manage such an unprecedented amount of content and deliver it to everyone in the organization in a controlled manner?

Digital assets are of high value

It should not be forgotten that these are high-value files. That's why they are called "digital assets." Think of the time and the licensing costs invested in creating them. And if the files can no longer be found, the costs of re-creating or retrieving them can be enormous.

In addition – few things are less productive or more frustrating than wasting time searching for the files needed, even though these high costs usually remain hidden.

Files should be accessible from anywhere and at any time and must be effortlessly usable across various applications.

To minimize digital distraction, authorized personnel – whether internal or external – must be able to access the right files in the environment that they are working in. This means direct access to the correct media in Adobe Creative Cloud, WordPress, brand management tools, project management solutions, content management platforms, and Microsoft Office applications, among others.

Data silos are one of the biggest drags on process efficiency. It's not without reason that "no silo" has become a mantra in modern IT. All too often, departments implement their own individual solutions, which they consider to be suitable for their requirements. As a rule, however, only they have direct access to the files created with these applications.

On the wish list: a digital content ecosystem

Wouldn't it be wonderful if all digital assets could be available and used in all applications, regardless of where they come from or where they are physically stored? Wouldn't it be great to build an enterprise-wide, holistic ecosystem to create, manage and consume digital content? Digital content management should be as easy to use and transparent as possible. And it should be available in the background so that users don't have to deal with it from a technical perspective.

Software must be open and flexible

The magic word for building such a system is "integration." Individual applications must be able to communicate and exchange data. The programs must be introduced to one another, so to speak, and a technical connection must be created. Even though this has become much easier in recent years, thanks to standardized interfaces such as the so-called REST API, the reality often remains different.

The effort required for these integrations can be daunting and it cannot be done without a skilled IT department or a powerful external integrator. This is especially true if the

applications in question are not yet “state-of-the-art” in terms of interfaces or if they do not offer the desired technical openness.

CI HUB Connector is open for everything

With CI HUB Connector, we have created a solution to this challenge. The connector virtually centralizes all digital assets so that users feel that they are working with a single central pool.

In this context, the CI HUB Connector acts as the “integration ministry” and already brings a large number of well-known standard integrations, along with some specialized ones. The following software categories are currently covered:

- Digital Asset Management (DAM)
- Cloud File Sharing
- Stock agencies
- Work Management
- Brand Management
- Customer Experience Management
- Content Management
- Automation
- Rights Management
- Product Information Management (PIM)

And the journey continues

The range of supported programs is constantly being expanded. After all, the credo in the development was and is:

- No matter where your data is coming from
- No matter which data type you need
- No matter how you want to use it
- Digital asset consumption is a snap

Access to the virtual central digital content pool is very simple. The CI HUB Connector is available in the supported applications as a palette, which has the same basic structure in all applications.

It offers comprehensive functions, which makes the consumption of digital assets convenient and efficient. The scope of these functions depends on what the respective source application technically allows. We have divided them accordingly into four levels: Basic, Extended, Premium, and Custom. Information about them can be found [here](#).

The standard for all applications – the Basic Level – are filter and search options, as well as the possibility of downloading or transferring digital assets in documents in the target program simply by dragging and dropping. These basic functions alone make working with digital content much easier.

One-Click-Integration

The integration of the individual programs is accomplished with a single click. This is also done via the CI HUB palette. Users simply click on the plus sign and select the application they want to connect with from a list. They might have to log into the desired application with their credentials. In other words, technical understanding is not required to set up this digital content ecosystem.

Immediate efficiency boost

Due to the easy implementation and use of CI HUB Connector, the system delivers an immediate efficiency gain. Employees save an enormous amount of time that was previously wasted searching for files.

In addition, users can continue to work in their preferred applications, as these can be seamlessly integrated into the company's software environment and content workflows via CI Hub. This saves time-consuming training that is often necessary to be able to tap the benefits of software.

Costs are factored into operating costs

Also good to know: No upfront investment is required to implement CI HUB. The usage is billed in a subscription model via monthly costs per user. The amount depends on the integrated applications. This means that the costs are included in the operating costs, which is another economic advantage.

In a nutshell

From marketing and sales to internal communications, product development, and beyond, digital content is the lifeblood of nearly every business process today. Consequently, the volume of this content is continuously increasing, making its provision and consumption across all departments and applications a real challenge. Businesses should be able to handle digital content in the most straightforward way at all times and in all places.

Unit 8 INFLUENCER MARKETING AND PUBLIC RELATIONS: THE NEW DYNAMICS OF BUILDING A BRAND IMAGE IN THE DIGITAL AGE

for Lesson 5. Creating and Managing Digital Content

Task: Read this case study and answer the questions:

Lumi file 29file Question and answers (correct answers in bold)

Introduction

The constantly evolving nature of the digital era has forced companies to reassess their approaches to marketing and communication. The internet and social media have created new pathways for brands to reach their target audience more efficiently and cement their brand image. Influencer marketing and public relations are vital in adapting to the digital demands and encircling brand triumph. Traditional forms of media and communication have given way to digital platforms that provide brands with enhanced capabilities to engage with their target audiences. Central to this shift are two primary components: influencer marketing and public relations. Influencer marketing has emerged as a critical strategy for brands to communicate and persuade their audiences in the digital era. Public relations plays a significant function in shaping brand image and reputation. The integration of public relations and influencer marketing in the digital age results in a strong synergy for building brand image. The integration of public relations and influencer marketing in the digital age results in a strong synergy for building brand image.

Influencer Marketing And Public Relations in The Digital Age

It is essential to provide clear and concise definitions of the basic concepts used in this study. Digital marketing, as a concept included here, refers to the various marketing activities carried out through the Internet, mobile, and interactive platforms. These activities aim to promote a brand and business using methods and practices that differ from traditional media while simultaneously supporting marketing efforts. According to Alan, Kabadayı, and Erişke (2018, p.494), digital marketing is defined as such. Digital marketing is a form of marketing that promotes, markets, and sells products, brands, and services through the use of modern technologies and digital platforms. Digital marketing enables reaching a larger audience, increasing engagement, and achieving measurable outcomes compared to conventional marketing methods.

Digital public relations entails the utilization of internet platforms to inform stakeholders about a company's services, activities, and to propagate information. Gifford (2010, p. 63) highlights that it incorporates traditional public relations strategies and tactics with digital

media and online platforms. Besides, digital public relations refers to the integration of traditional public relations strategies and tactics with digital media and online platforms. This approach aims to facilitate interaction between a brand or organization and its target audience through digital channels, enhance communication, and cultivate a positive image.

The concept of influencers, individuals who have established themselves as opinion leaders through the content they create on social media platforms, holds the power to sway the masses, steer purchasing decisions, and boast a large following (Bor & Erten, 2019, p. 16). They are characterized as such. They typically specialize in a particular subject or have a sizable fan base, creating and sharing digital content on platforms like social media. This is because their followers display significant interest in their viewpoints, recommendations, and materials.

Influencer marketing refers to when influential opinion leaders, whether they are celebrities or non-celebrities with a large following on social media platforms, utilize their posts to promote positive attitudes and reactions in their followers (who are consumers) towards the brand's interests. (Martinez-Lopez, Anaya-Sanchez, Giordano, & Lopez-Lopez, 2020, p. 1) This marketing technique, known as Influencer Marketing, aims to encourage the endorsement of products to a wider audience. In a general sense, influencer marketing is a brand marketing strategy that employs social media influencers to target their desired audiences.

In the present era of digital interaction, influencer marketing represents a viable strategy for brands to cultivate their own image and connect with a broad audience. This approach entails partnering with influencers capable of drawing the interest of a particular target demographic, thereby enhancing the transmission of the brand's intended message. (Gedik, 2020). Influencers with substantial followings on social media possess the capability of organically creating a viral marketing effect through sharing their own product experiences. Therefore, they have emerged as significant resources for brands seeking to proficiently engage their consumers and fortify their brand identity. (Mert, 2018a). Furthermore, they have been acknowledged as indispensable advertising and marketing assets in the digital realm. (Çağdaş, 2022). Public relations plays a critical role in shaping and upholding a brand's image. It involves managing communication between an organization and its stakeholders, including the media, customers, and the general public. The emergence of the digital age has brought substantial changes to the dynamics of public relations (Mert, 2018b). The increased prevalence of social media and online platforms grants brands novel chances to connect with their target audiences and safeguard their reputations (Ceyhan, 2021). Developing a sturdy brand personality and reputation proves crucial for effective brand management, where public relations assumes a vital role in constructing and preserving both. In the digital era, influencer marketing and public relations have emerged as pivotal factors accountable for establishing brand image. By implementing these components in their marketing and



communication strategies, brands can successfully establish and uphold a robust brand image in today's digital era.

The Role of Influencers in Building Brand Image

In today's digital age, developing a thriving brand image is vital to business expansion. Due to the rising impact of influencers in marketing, brands have revised their strategies to focus on digital marketing and keep pace with rapidly evolving trends in the realm. This is because influencers have a significant impact on building brand image and can significantly affect how consumers view a brand (Keçeci & Karaca, 2022; Eysel & Beliz, 2020). Influencers have become instrumental in shaping brand image and influencing consumer behavior, thanks to their ability to engage with their followers on a personal level and their authenticity.

Brands partner with influencers to effectively reach their target audiences and broadcast their messages to a broad audience. Social media platforms, in particular, provide a powerful tool for brands to accomplish this objective (Mert, 2018a). The dynamic nature of social media, along with the extensive followings of influencers, presents numerous opportunities for brands to promote themselves and communicate their values. Influencers serve not only as content creators, but also as spokespeople and representatives for brands, fostering a reliable connection between consumers and the brand. Brand collaborations on social media platforms allow companies to form personal and meaningful connections with their target audience and reach a wider demographic. Consequently, impressive brand collaborations have become a crucial component of modern marketing strategies.

Journal of Business and Finance in Emerging Markets Vol 6 No 2 70 As brand image-building dynamics constantly evolve in the digital era, influencer marketing and public relations remain essential factors in shaping brand perception and creating a robust brand image.

Benefits of Influencer Marketing In Building Brand Image

In the digital age, influencer marketing has gained immense popularity because of its numerous benefits in shaping brand image. One key advantage is its capability to create fruitful partnerships between brands and influencers, forming a deep connection with consumers and a favorable brand image (Keçeci & Karaca, 2022). Such partnerships not only improve brand visibility, but also expand brand outreach by reaching fresh audiences and promoting brand awareness (Aslan, 2023). As influencers play an increasingly significant role in marketing, brands have begun to prioritize their digital marketing strategies and swiftly adapt to the evolving situation (Eysel & Beliz, 2020). By utilizing the influence and reach of influencers, brands can competently shape their brand image and perception in the digital sphere.

Additionally, influencer marketing provides a trust factor to the brand. When an influencer promotes a product or service, followers view it as a recommendation from a trusted source, thus endorsing the brand builds trust and credibility (Uğurlu Akbaş, 2019). In today's digital age, where advertising overwhelms consumers, influencer marketing provides an authentic and relatable approach to brand promotion.

Influencer marketing enables brands to leverage social media's potential to cultivate brand loyalty undistorted by subjective evaluations. On social media platforms, brands can engage their target audience, creating communities around their offerings. By collaborating with influencers wielding a robust social media presence, brands can augment their followers' allegiance and interaction, fortifying brand image (cycle-marketing.com, 2023). Brands that do not adjust to new formations and trends driven by influencers face the possibility of being left behind by young consumers (Eyel & Beliz, 2020). Influencer marketing provides a fresh approach to building a brand image in the digital age, with the potential for increased visibility, awareness, credibility, and brand loyalty.

Challenges of Influencer Marketing in Building Brand Image

In addition to its benefits for building brand image, influencer marketing can pose challenges. Ensuring active participation by the target audience is one such challenge. While influencers can reach a wider audience, it is critical that the target audience actively engage with the brand's message (Gedik, 2020). Careful selection of influencers with a genuine connection to the target audience and the ability to effectively communicate the brand's values and proposition is crucial in influencer marketing (Kunt & Hassan, 2021). Additionally, the choice and utilization of communication platforms in digital marketing play a significant role in reaching and engaging relevant target audiences (Ceyhan, 2021).

However, one challenge of influencer marketing is the need for authenticity and credibility. In the realm of influencer marketing, there are occurrences where influencers are viewed as insincere or unreliable, resulting in detrimental effects on the brand's reputation. It is pivotal for the brand to conduct a thorough assessment of potential influencers for adherence to the brand's principles and possession of an authentic rapport with their followers. (Keçeci & Karaca, 2022). This helps establish the necessary credibility to develop and uphold a positive brand image in today's digital age (Hamşioğlu & Nalcı, 2021).

Finding suitable influencers who align with a brand's image and values is a crucial challenge in influencer marketing. To ensure a strong brand fit, brands should consider the influencer's content type, audience demographics, and brand story (miniplanet.com.tr, 2023). This is because collaborating with influencers who have a natural connection to the brand fosters a seamless brand experience and helps to promote a positive brand image (suspendplus.com, 2023). Influencer selection is a crucial element for effective influencer marketing.

In light of these explanations, we can identify additional challenges for influencer marketing in establishing brand image.

Content quality and consistency: The quality and consistency of influencer-generated content significantly impact the brand's image. Consequently, the content should align with the brand's values and target audience to ensure maximum effectiveness.

Sponsorship perception: It is crucial for influencers to maintain sincerity and openness when endorsing sponsored content. Followers tend to steer clear of overtly promotional messages and content.

Managing long-term relationships: Managing the alignment of an influencer's values with a brand and maintaining the continuity of the collaboration poses a challenge in long-term partnerships.

Follower fraud: Unethical practices, such as influencers purchasing fake followers or engagement, can hinder the attainment of authentic engagement and loyalty.

Changing trends and dynamics: Trends in social media and influencer marketing are an everchanging landscape, necessitating brands to continuously develop up-to-date and effective strategies.

Crisis awareness: Crisis situations encountered by influencers or brands have the potential to swiftly proliferate on social media and significantly impact their image. Thus, managing the crisis necessitates efficient communication and crisis management tactics.

Target audience diversity: Brands should manage audience diversity when working with multiple influencers because different influencers may appeal to different audiences.

Compensation and budget management: Influencer collaborations may require a specific budget, and brands need to be careful about how they compensate influencers and manage their budgets.

Influencer marketing has become a crucial means of enhancing brand image and forging strong relationships with target audiences. However, success hinges on thorough evaluation of influencer selection, content quality, long-term relationship management, budget, and compensation. In addition, aligning the values and goals of influencers and brands is essential for effective brand image-building. All these challenges necessitate strategic thinking and planning for brands seeking to maximize the potential of influencer marketing.

Evolution of Public Relations in The Digital Age and Integration of Influencer Marketing

The evolution of public relations in the digital age refers to a period in which communication and interaction processes have significantly transformed and grown with the rapid spread of communication technologies and digital platforms. The goal of this evolution is to exceed



conventional public relations methods and adapt to the rapidly changing nature of the contemporary world.

While print, television, radio, and face-to-face communication were once the primary focus of traditional public relations practice, the emergence of the digital age has drastically altered communication. Digital platforms, social media networks, online news sites, blogs, podcasts, video, and instant communication tools now enable organizations and brands to engage with their audiences in a more immediate, interactive, and personalized manner.

The impact of the digital age on public relations goes beyond communication channel diversification. It now allows brands and organizations to directly and personally connect with their audiences, resulting in more effective communication management. Practicing public relations in the digital age also involves utilizing data analytics to achieve better results.

Tracking, analysing, and measuring online interactions and feedback helps brands gain a better understanding of the impact of their campaigns and shape future strategies. However, this evolution has also brought about increased competition and fast-changing dynamics, making continuous learning and adaptation essential for PR professionals.

In the digital age, brands' endeavors to establish and sustain their brand image have gained significant importance. Consequently, the incorporation of influencer marketing and public relations has become increasingly critical. Social media platforms, in particular, have emerged as a tool for brands to utilize Influencers to attain their public relations goals (Keçeci & Karaca, 2022). In today's world, influencers' social media presence makes them important players in brand communication who serve as brand ambassadors in public relations campaigns (Boran, 2023). Integrating influencers and public relations enables brands to reach and connect with their target audiences through authentic and relatable content (Peltekoğlu & Askeroğlu, 2019).

Effective building of brand image and reputation depends on solid public relations strategies and marketing techniques that impact consumer attitudes and behavior (Karapinar, 2018). In the digital marketing age, brands now have the ability to engage with consumers on a more personal level, which can generate a sense of community and bolster brand loyalty (Köse & Yeygel Çakır, 2019). Additionally, digital storytelling can serve as a communication tool to foster this interaction. Digital storytelling has become a potent content creation instrument in social media marketing, empowering brands to engage their target audience through captivating narratives (Büyükçelikok, 2018). This permits brands to convey their values, mission, and selling proposition to their audience, hence promoting a more robust brandconsumer relationship (Şahbaz, 2018). In today's competitive scenario, it is essential to adopt a holistic perspective when approaching brand communication. Public relations is crucial in shaping brand image and maintaining a positive reputation. Meanwhile, social media platforms emerge as tools for interacting with and building relationships with target audiences. Consequently, social media channels also play an effective role in building brand

loyalty. Brands must adapt their communication strategies to the digital age, ensuring that their content resonates with their target audiences and aligns.

with their values. To create a cohesive brand message, it is essential to comprehend the digital landscape and effectively utilize influencers and public relations (Keçeci & Karaca, 2022). By integrating influencer marketing and public relations, brands can establish a robust brand identity that captivates their target market and fuels business accomplishments.

The digital age has redefined the role of public relations experts. In the wake of social media's ascent and digital communication platforms, public relations has transcended conventional media relations to encompass online reputation management and developing connections with opinion leaders. Now, PR professionals are tasked with navigating digital ecosystems, fostering relationships with influencers, and leveraging them to augment brand image (Boran, 2023).

The integration of influencer marketing and public relations is crucial in developing a comprehensive and effective brand communication strategy in the digital era (Ceyhan, 2021).

As such, public relations professionals should continuously adjust to the evolving dynamics of influencer marketing and utilize these strategies to establish brand credibility and uphold a favorable brand image (Peltekoğlu & Askeroğlu, 2019).

Integrating public relations with influencer marketing involves using public relations strategies and influencer marketing methods in harmony to reach a brand's target audience more efficiently and establish a positive brand image. Brands aim to leverage the power of influencers, support their public relations efforts, and expand their audience. To achieve this integration, brands should consider the following points:

Alignment of strategic objectives: Brands ought to merge their public relations and influencer marketing strategies in order to establish shared objectives. These goals may encompass boosting brand recognition, promoting novel products or services, supporting a particular campaign, or cultivating a favorable brand reputation.

Take a public relations approach to influencer selection: When choosing influencers, it is crucial to take a public relations viewpoint. It is important to evaluate any potential influencers in light of the brand's values, mission, and target audience.

Story and content integration: To ensure the content aligns with the brand's identity, it is recommended that companies integrate their PR and influencer marketing approaches in content development. Briefing the influencers on the brand's narrative and messaging is a necessary step in the process.

Monitoring and evaluation: Brands can integrate public relations and influencer marketing metrics to oversee and assess the effectiveness of influencer marketing campaigns. This approach aids in gauging the campaign's impact and the progression of the brand's image.

Joint events and projects: Brands can enhance their influence by merging public relations events with influencer marketing initiatives. For instance, they could plan launch events or social responsibility projects that unite influencers and brand delegates.

Consistent communication: Brands must align the content and messages produced through influencer marketing with their public relations strategy to ensure consistency and a coherent brand image. By doing so, brands' communications will appear more cohesive and complete.

Managing influencer relationships: Influencer relationship management is a task that can be undertaken by public relations teams. Effective influencer marketing is achieved by establishing communication, coordination, and collaboration with influencers.

Integrating public relations into influencer marketing aims to communicate the brand's values, goals, and messages to the target audience in a more intimate and credible manner by combining them with the influencer's content. This strategy expands the brand's reach while providing the audience with an opportunity to form an emotional connection. In doing so, the brand achieves a wider audience and greater credibility. This integration enables brands to reach out to influencers' followers on social media platforms, raising brand awareness and fostering stronger engagement with the intended audience.

Conclusion

The rapid evolution of technology and communication tools in the digital age has necessitated the evolution of marketing and public relations, enabling brands to reconstruct their communication strategies. Public relations has transitioned from being confined to traditional media to digital platforms, fostering more immediate, interactive, and personalized engagements between brands and their target audiences. This development extends beyond channel diversification and involves utilizing data analytics to better communicate brand values and objectives.

This evolution has not only spawned the idea of influencer marketing but also elevated its significance. Thanks to social media, influencers with substantial followings have allowed for more organic interaction between brands and their target audiences. As brand ambassadors, influencers can effectively communicate a brand's values and messages to their followers, aiding companies in enhancing their brand image. However, there are several challenges associated with influencer marketing. Particularly, appropriate influencers must be chosen, content quality must be ensured, and successful collaborations must be established. Moreover, issues like the prevalence of fake followers necessitate consideration. Consequently, influencer marketing approaches ought to be carefully devised and executed.

In this regard, integrating public relations with influencer marketing is crucial for achieving a holistic approach to brand image building. This integration entails more than just selecting influencers, as it involves aligning strategic goals. Thus, brands need to set common objectives by combining public relations and influencer marketing strategies to guarantee effective

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communication. Working with influencers should create brand content that aligns with the brand's values and identity, while maintaining consistency in brand communication. It is crucial to monitor and evaluate the integration to enhance strategies and measure their impact. Modern PR professionals are tasked with managing brand image and communication across traditional media, digital platforms, and with influencers. Developing new skills is necessary to reach a wider audience and create a strong brand image.

Digital marketing, public relations, and influencer marketing strategies enhance brand effectiveness, build strong relationships with target audiences, and create a firm image. Implementing these dynamics helps brands gain a competitive advantage in a rapidly changing digital environment. The convergence of public relations and influencer marketing enables brands to formulate a thorough communication strategy and establish a successful brand identity. Consequently, companies can attain their communication and brand image goals by capitalizing on these dynamics seamlessly.

Unit 9 How AI Will Transform Project Management by Antonio Nieto-Rodriguez and Ricardo Viana Vargas

for Lesson 6. New and emerging technologies' impact on Project Management

Task: Read this case study and answer the questions:

Lumi file 30file Question and answers (correct answers in bold)

Sometime in the near future, the CEO of a large telecom provider is using a smartphone app to check on her organization's seven strategic initiatives. Within a few taps, she knows the status of every project and what percentage of expected benefits each one has delivered. Project charters and key performance indicators are available in moments, as are each team member's morale level and the overall buy-in of critical stakeholders.

She drills down on the "rebranding" initiative. A few months earlier, a large competitor had launched a new green brand, prompting her company to accelerate its own sustainability rollout. Many AI-driven self-adjustments have already occurred, based on parameters chosen by the project manager and the project team at the initiative's outset. The app informs the CEO of every change that needs her attention — as well as potential risks — and prioritizes decisions that she must make, providing potential solutions to each.

Before making any choices, the CEO calls the project manager, who now spends most of his time coaching and supporting the team, maintaining regular conversations with key stakeholders, and cultivating a high-performing culture. A few weeks earlier the project had



been slightly behind, and the app recommended that the team should apply agile techniques to speed up one project stream.

During the meeting, they simulate possible solutions and agree on a path forward. The project plan is automatically updated, and messages are sent informing affected team members and stakeholders of the changes and a projection of the expected results.

Thanks to new technologies and ways of working, a strategic project that could have drifted out of control — perhaps even to failure — is now again in line to be successful and deliver the expected results.

Back in the present, project management doesn't always move along quite as smoothly, but this future is probably less than a decade away. To get there sooner, innovators and organizations should be investing in project management technology now.

Project Management Today and Path Forward

Every year, approximately \$48 trillion are invested in projects. Yet according to the Standish Group, only 35% of projects are considered successful. The wasted resources and unrealized benefits of the other 65% are mind-blowing.

For years in our research and publications, we have been promoting the modernization of project management. One reason we have found why project success rates are so poor is the low level of maturity of technologies available for managing them. Most organizations and project leaders are still using spreadsheets, slides, and other applications that haven't evolved much over the past few decades. These are adequate when you are measuring project success by deliverables and deadlines met, but they fall short in an environment where projects and initiatives are always adapting — and continuously changing the business. There has been improvement in project portfolio management applications, but planning and team collaboration capabilities, automation and “intelligent” features are still lacking.

If applying AI and other technological innovations to project management could improve the success ratio of projects by just 25%, it would equate to trillions of dollars of value and benefits to organizations, societies, and individuals. Each of the core technologies described in the story above is ready — the only question now is how soon they will be effectively applied to project management.

Gartner's research indicates that change is coming soon, predicting that by 2030, 80% of project management tasks will be run by AI, powered by big data, machine learning (ML), and natural language processing. A handful of researchers, such as Paul Boudreau in his book *Applying Artificial Intelligence Tools to Project Management*, and a growing number of



startups, have already developed algorithms to apply AI and ML in the world of project management. When this next generation of tools is widely adopted, there will be radical changes.

6 Aspects of Project Management that Will Be Disrupted

We see these coming technological developments as an opportunity like none before. Organizations and project leaders that are most prepared for this moment of disruption will stand to reap the most rewards. Nearly every aspect of project management, from planning to processes to people, will be affected. Let's take a look at six key areas.

1. Better selection and prioritization

Selection and prioritization are a type of prediction: which projects will bring the most value to the organization? When the correct data is available, ML can detect patterns that can't be discerned by other means and can vastly exceed human accuracy in making predictions. ML-driven prioritization will soon result in:

- Faster identification of launch-ready projects that have the right fundamentals in place
- Selection of projects that have higher chances of success and delivering the highest benefits
- A better balance in the project portfolio and overview of risk in the organization
- Removal of human biases from decision-making

2. Support for the project management office

Data analytics and automation startups are now helping organizations streamline and optimize the role of the project management office (PMO). The most famous case is President Emmanuel Macron's use of the latest technology to maintain up-to-date information about every French public-sector project. These new intelligent tools will radically transform the way PMOs operate and perform with:

- Better monitoring of project progress
- The capability to anticipate potential problems and to address some simple ones automatically
- Automated preparation and distribution of project reports, and gathering of feedback
- Greater sophistication in selecting the best project management methodology for each project
- Compliance monitoring for processes and policies

- Automation, via virtual assistants, of support functions such as status updates, risk assessment, and stakeholder analysis

3. Improved, faster project definition, planning, and reporting

One of the most developed areas in project management automation is risk management. New applications use big data and ML to help leaders and project managers anticipate risks that might otherwise go unnoticed. These tools can already propose mitigating actions, and soon, they will be able to adjust the plans automatically to avoid certain types of risks.

Similar approaches will soon facilitate project definition, planning, and reporting. These exercises are now time-consuming, repetitive, and mostly manual. ML, natural language processing, and plain text output will lead to:

- Improved project scoping by automating the time-consuming collection and analysis of user stories. These tools will reveal potential problems such as ambiguities, duplicates, omissions, inconsistencies, and complexities.
- Tools to facilitate scheduling processes and draft detailed plans and resource demands
- Automated reporting that is not only produced with less labor but will replace today's reports — which are often weeks old — with real-time data. These tools will also drill deeper than is currently possible, displaying project status, benefits achieved, potential slippage, and team sentiment in a clear, objective way.

4. Virtual project assistants

Practically overnight, ChatGPT changed the world's understanding of how AI can analyze massive sets of data and generate novel and immediate insights in plain text. In project management, tools like these will power "bots" or "virtual assistants." Oracle recently announced a new project management digital assistant, which provides instant status updates and helps users update time and task progress via text, voice or chat.

The digital assistant learns from past time entries, project planning data, and the overall context to tailor interactions and smartly capture critical project information. PMOtto is a ML-enabled virtual project assistant that is already in use. A user can ask PMOtto "Schedule John to paint the wall next week and allocate him full time to the task." The assistant might reply, "Based on previous similar tasks allocated to John, it seems that he will need two weeks to do the work and not one week as you requested. Should I adjust it?"

5. Advanced testing systems and software

Testing is another essential task in most projects, and project managers need to test early and often. It's rare today to find a major project without multiple systems and types of software

that must be tested before the project goes live. Soon, advanced testing systems that are now only feasible for certain megaprojects will become widely available.

The Elizabeth line, part of the Crossrail project in the United Kingdom, is a complex railway with new stations, new infrastructure, new tracks, and new trains; it was, therefore, important that every element of the project went through a rigorous testing and commissioning process to ensure safety and reliability. It required a never-before-seen combination of hardware and software, and after initial challenges, the project team developed the Crossrail Integration Facility. This fully automated off-site testing facility has proven invaluable in increasing systems' efficiency, cost-effectiveness, and resilience. Systems engineer Alessandra Scholl-Sternberg describes some of its features: "An extensive system automation library has been written, which enables complex set-ups to be achieved, health checks to be accurately performed, endurance testing to occur over extended periods and the implementation of tests of repetitive nature." Rigorous audits can be run at the facility 24-7, free from the risk of operator bias.

Advanced and automated system testing solutions for software projects will soon allow early detection of defects and self-correcting processes. This will significantly reduce time spent on cumbersome testing activities, reduce the number of reworks, and ultimately, deliver easy-to-use and bug-free solutions.

6. A new role for the project manager

For many project managers, automating a significant part of their current tasks may feel scary, but successful ones will learn to use these tools to their advantage. Project managers will not be going away, but they will need to embrace these changes and take advantage of the new technologies. We currently think of cross-functional project teams as a group of individuals, but we may soon think of them as a group of humans and robots.

With a shift away from administrative work, the project manager of the future will need to cultivate strong soft skills, leadership capabilities, strategic thinking, and business acumen. They must focus on the delivery of the expected benefits and their alignment with strategic goals. They will also need a good understanding of these technologies. Some organizations are already building AI into their project management education and certification programs, and Northeastern University is incorporating AI into its curriculum, teaching project managers how to use AI to automate and improve data sets and optimize investment value from projects.

Data and People Make the Future a Reality



When these tools are ready for organizations, how will you make sure your organization is ready for them? Any AI adoption process begins with data, but you must not fail to prepare your people as well.

Training AI algorithms to manage projects will require large amounts of project-related data. Your organization may retain troves of historical project data, but they are likely to be stored in thousands of documents in a variety of file formats scattered around different systems. The information could be out-of-date, might use different taxonomies, or contain outliers and gaps. Roughly 80% of the time spent preparing a ML algorithm for use is focused on data gathering and cleaning, which takes raw and unstructured data and transforms it into structured data that can train a machine learning model.

Without available and properly managed data, the AI transformation will never happen at your organization — but no AI transformation will flourish if you don't also prepare yourself and your team for the change.

This new generation of tools will not only change the technology on how we manage projects, but will change completely our work in the project. Project managers must be prepared to coach and train their teams to adapt to this transition. They should increase their focus on human interactions while identifying technology skill deficits in their people early and work to address them. In addition to focusing on project deliverables they should focus on creating high performing teams in which members receive what is needed to allow them to perform at their best.

If you are seriously considering applying AI to your projects and project management practices, the following questions will help you assess your decision.

- Are you ready to spend time making an accurate inventory of all your projects, including the latest status update?
- Can you invest several resources for some months to gather, clean, and structure your project data?
- Have you made up your mind to let go of your old project management habits, such as your monthly progress reports?
- Are you prepared to invest in training your project management community in this new technology?
- Are they willing to move out of their traditional comfort zones and radically change how they manage their projects?
- Is your organization ready to accept and adopt a new technology and hand over the reins on decisions with increasingly higher stakes?
- Are you ready to let this technology make mistakes as it learns to perform better for your organization?

- Does your executive sponsor for this project have the capability and credibility in your organization to lead this transformation?
- Are senior leaders willing to wait several months, up to one year, to start seeing the benefits of the automation?

If the answer to all these questions is yes, then you are ready to embark on this pioneering transformation. If you have one or more “no” answers, then you need to work on flipping them to “yes” before moving ahead.

As we have seen, the application of artificial intelligence in project management will bring significant benefits, not only in the automation of administrative and low value tasks, but even more important, including AI and other disruptive technologies in your toolbox will help your organization, its leaders and project managers select, define and implement projects more successfully.

The CEO in our story was once in the position you are in today. We encourage you to take the first steps toward this positive vision of future of project management now.

Unit 10 5 ways technology has changed project management

for Lesson 6. New and emerging technologies’ impact on Project Management

Task: Read this case study and answer the questions:

Lumi file 31file Question and answers (correct answers in bold)

Technology has made a lot of things in life easier, but how has it affected project management? To put it simply, it has changed it in every conceivable way. Advances in software, hardware, communication technology and other areas have transformed the world of project management over the last 20 or 30 years, and things are changing even faster today. While new capabilities often lead to heightened expectations from customers and senior management, the net result is that project teams are able to achieve more in less time than ever before.

From easier collaboration to more accurate reporting, here’s how technology has made every PM’s life a little bit easier.

#1. Improved Communication

Most project managers would tell you that communication is the key to project success. It should come as no surprise, then, that one of the most important uses of technology in project management is to ensure proper communication between managers, team members and other stakeholders. A few decades ago, when email first came into common use, project



managers used it to replace interoffice memos, faxes, voice messages and other less-reliable forms of communication. Now, as social collaboration tools and other innovations have begun to replace email, successful project managers continue to use the latest technology to share updates, documents and other critical information with their project teams.

#2. Efficiency in the Cloud

Project management software, as a concept, is nothing new. Until recently, however, effective project management solutions were often too expensive and too labor-intensive to justify use by any but the largest and most profitable organizations. In the last decade, a revolution has taken place, as cloud-based project management software like Planview AdaptiveWork has become accessible for companies of all sizes. Cloud project management technology is not only more cost-effective and easy to manage, it allows for mobile access and interoperability in a way that on premise PM solutions simply can't match.

#3. Real-Time Updates and Reporting

In the old days, it might take days or even weeks for a project manager to gather updates from stakeholders, update the project plan accordingly and distribute the latest reports and Gantt charts to the team. Today, thanks to cloud-based project management software, PMs can check on task status, update project documentation and alert the team of any issues in a matter of seconds. For example, Planview AdaptiveWork's industry-leading reporting and task tracking features make it easy for everyone on the project to stay up to date.

#4. Mobile, Decentralized Project Teams

Few project managers in the 1980s or 1990s would have believed that a project team could work effectively if the team members did not regularly meet face to face. Today, thanks to amazing advances in communication technology and project management software, organizations can build project teams with employees and contractors located in multiple cities, time zones, countries and even continents. Not only does this enable better alignment between project needs and available resources, but it can dramatically improve the speed at which a team can operate.

#5. Social Collaboration

It didn't happen overnight, but now that businesses have begun to adopt social collaboration tools on a large scale, project management has become faster and easier. Rather than attempting to sift through an impossible-to-manage sprawl of emails, meeting notes and



other documentation to find relevant information, project team members can use Planview AdaptiveWork's cloud collaboration tools to communicate in real time and organize all of their interactions and work documents together in a single location. Ideas get shared with a wider audience, tasks get completed faster and project managers can follow the action without disrupting everyone's day for unnecessary status meetings.



Lesson 2 - Activity

1.1 Activity for Unit 1

Lumi file 32file Question and answers (correct answers in bold)

Entrepreneurship education seeks to enhance individual characteristics and promote a more entrepreneurial culture.

A. True

B. False

2.1 Activity for Unit 2

Lumi file 33file Question and answers (correct answers in bold)

Digital technology is changing the business environment in the Northern Territory.

A. True

B. False

3.1 Activity for Unit 3

Lumi file 34file Question and answers (correct answers in bold)

Wrike's intelligent writing tools leverage advanced AI algorithms to help users write more effectively, efficiently, and accurately.

A. True

B. False

4.1 Activity for Unit 4

Lumi file 35file Question and answers (correct answers in bold)

AI can completely replace the project manager in managing a project.

A. True

B. False

5.1 Activity for Unit 5

Lumi file 36file Question and answers (correct answers in bold)



Digital transformation strategy represents a shift from having separate business and IT strategies.

A. True

B. False

6.1 Activity fot Unit 6

Lumi file 37file Question and answers (correct answers in bold)

An editorial calendar is a great tool for keeping track of content and goals.

A. True

B. False

7.1 Activity for Unit 7

Lumi file 38file Question and answers (correct answers in bold)

Sales & Marketing personnel do not benefit from accessing centralized content for campaigns and product launches through DAM systems.

A. True

B. False

8.1 Activity for unit 8

Lumi file 39file Question and answers (correct answers in bold)

Digital marketing refers to marketing activities conducted through the Internet, mobile, and interactive platforms.

A. True

B. False

9.1 Activity for Unit 9

Lumi file 40file Question and answers (correct answers in bold)

The app provides the CEO with project charters, key performance indicators, team members' morale levels, and stakeholder buy-in.

A. True

B. False



10.1 Activity for unit 10

Lumi file 41file Question and answers (correct answers in bold)

Project managers do not need to adapt to new technologies for communication once they establish effective methods.

A. True

B. False

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HYPRO4ST

WP3 Design And Development of the HyPro4ST Online training Course and Practical Guide Module 5 – Additional Material

Page **224** of **307**



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Lesson 1 – Theoretical chapter

Unit 1 Agile project management: Principles, benefits, tools, tips, and when to make the switch

for Lesson 1. The Agile Leader

Task: Read this article and answer whether the sentence is true or false?

Lumi file 42file Question and answers (correct answers in bold)

Agile project management definition

Agile project management is a methodology used primarily in software development that favors flexibility and collaboration, incorporating customer feedback throughout the project life cycle. The methodology takes an iterative approach to development, breaking down work into small, manageable cycles called “sprints” to focus on continuous improvement in the development of a product or service.

In addition to emphasizing iterative development, in which each sprint results in a potentially shippable increment, agile project management incorporates cross-functional teams who work closely with stakeholders in a process that allows for adjustments as requirements evolve and formalizes feedback loops at the end of each sprint.

Agile project management vs. traditional project management

Agile project management differs from traditional project management, often called waterfall, in a number of ways. Whereas waterfall follows a more rigid, linear approach in which requirements are gathered up front, agile project management’s emphasis on iterative development allows for adaptability and flexibility along the way. Agile’s sprint methodology also differs from traditional project management, which typically advances in distinct phases, from requirements gathering to implementation to deployment.

Agile’s approach to customer feedback also affords more continuous collaboration with stakeholders to better align deliverables to end-user needs. Whereas waterfall typically divides team members into siloed roles, agile project management is cross-functional with team members often taking on more than one distinct role. Although agile does value documentation, it is not as heavily emphasized as it is in traditional project management, for which documentation is often very detailed and assembled in advance.

Compared to traditional project management, agile provides project teams, sponsors, project leaders, and customers many project-specific benefits, including:

- More rapid deployment of solutions
- Reduced waste through minimization of resources
- Increased flexibility and adaptability to change



- Increased success through more focused efforts
- Faster turnaround times
- Faster detection of issues and defects
- Optimized development processes
- A lighter weight framework
- Optimal project control
- Increased focus on specific customer needs
- Increased frequency of collaboration and feedback

When to use agile project management

As with any other methodology, however, agile is not well-suited for every project, and sufficient due diligence is always recommended to identify the best methodology for each unique situation. Agile project management is most effective when a project's requirements are not fully discernible from the outset or are likely to evolve over the project's duration. It is also a good fit when regular feedback is necessary or would be beneficial for aligning deliverables to customer needs. Agile project management is also a strong choice when time-to-market is essential or when dealing with projects of high complexity, as agile's cross-functional, iterative approach enables teams to deliver solutions quicker while addressing issues as they arise.

Agile may not work as intended if a customer is not clear on goals, the project manager or team is inexperienced, or if they do not function well under significant pressure. Throughout the development process, agile favors the developers, project teams and customer goals, but not necessarily the end user's experience. Due to its less formal and more flexible processes, agile may not always be easily absorbed within larger more traditional organizations where there are significant amounts of rigidity or flexibility within processes, policies, or teams. It may also face problems being used with customers who similarly have rigid processes or operating methods, or on projects subject to strict regulation and documentation, those with fixed contracts and scope, or environments in which stakeholder feedback is unavailable or feedback participation is likely to meet resistance.

The benefits of agile

Agile was originally developed for the software industry to streamline and improve the development process in an effort to rapidly identify and adjust for issues and defects. It provides a way for developers and teams to deliver a better product, in a faster manner, through short, iterative, interactive sessions/sprints. In the era of digital transformation, with many companies migrating to a digital workplace, agile is a perfect fit for organizations looking to transform how they manage projects and operate as a whole. Agile can help ensure

company-wide process and methodological alignment. In terms of business benefits, both the digital workplace and agile provide:

- Increased flexibility
- Increased productivity
- Increased transparency
- Higher quality deliverables
- Decreased risk of missed objectives
- Increased stakeholder engagement and satisfaction

Agile project management principles

There are 12 key principles that still guide agile project management today:

1. Customer satisfaction is always the highest priority and is achieved through rapid and continuous delivery.
2. Changing environments are embraced at any stage of the process to provide the customer with a competitive advantage.
3. A product or service is delivered with higher frequency.
4. Stakeholders and developers collaborate closely on a daily basis.
5. All stakeholders and team members remain motivated for optimal project outcomes, while teams are provided with all the necessary tools and support, and are trusted to accomplish project goals.
6. Face-to-face meetings are deemed the most efficient and effective format for project success.
7. A final working product is the ultimate measure of success.
8. Sustainable development is accomplished through agile processes whereby development teams and stakeholders are able to maintain a constant and ongoing pace.
9. Agility is enhanced through a continuous focus on technical excellence and proper design.
10. Simplicity is an essential element.
11. Self-organizing teams are most likely to develop the best architectures and designs and to meet requirements.
12. Regular intervals are used by teams to improve efficiency through fine-tuning behaviors.

Organizational hurdles to adopting agile

Organizations looking to adopt agile for project management may encounter any of a number of common hurdles, such as the following:

- A company structure or culture that does not adequately support agile: Although project teams may be ready for agile development, the rest of the company may not be on board. Sponsors, executives, and functional leaders must also buy into and support agile for it to be truly effective.
- Unclear understanding of the impact to the overall business goals: Simply executing projects using agile methodology isn't enough to reap the desired benefits. Projects can still be executed in ways that don't provide the entire business with the results that help achieve sustainable growth. Strategic alignment is still critical.
- Rushed testing cycles: Sprints can create a risk of rushed testing cycles. In the process of trying to get through sprints as quickly as possible, teams can become more focused on the timeline and miss simple aspects of the testing cycle, which can have potential significant repercussions. Defects can go undetected or are detected too late.
- Limited agile skill: Although agile is rapidly taking root, top agile talent can be hard to find and attract. Limited agile talent means limited benefits for companies wanting to execute projects using this methodology.

For a deeper look at how to make the shift, see "Agile project management: 16 tips for a smooth switch to agile."

For insights into how organizations go wrong with agile, see "7 simple ways to fail at agile" and "5 misconceptions CIOs still have about agile."

Popular agile methodologies

Within agile there are some frequently used or popular methods, with Scrum, Kanban, and Lean being the most popular. Some agile methods include:

- Scrum
- Kanban
- Lean (LN)
- Dynamic System Development Model, (DSDM)
- Extreme Programming (XP)
- Crystal
- Adaptive software development (ASD)
- Agile Unified Process (AUP)
- Crystal Clear methods
- Disciplined agile delivery
- Feature-driven development (FDD)
- Scrumban

- RAD (Rapid Application Development)

To find out which methodology is right for your project or organization, see “Comparing agile project management frameworks.”

Combining agile with other methodologies

The opportunity exists to combine agile with other methodologies such as waterfall to create a hybrid solution. Companies sometimes use waterfall to handle one or more phases — such as planning — where these do not require rapid or repetitive steps. Planning in particular requires a more comprehensive, methodical, often slower approach to defining, analyzing, and documenting aspects of a project. This makes waterfall a better approach. Once a project enters the development phase, rapid and repetitive changes require a different approach and this is where agile kicks in to deliver the best results in the shortest amount of time.

This hybrid approach aids in making agile even more adaptable within various industries or to suit the more unique nature of a project, product, or service. Again, due diligence is required to determine the suitability and capacity of the different methods and processes available.

Agile project management and Scrum

Scrum is a powerful framework for implementing agile processes in software development and other projects. This highly adopted framework utilizes short iterations of work, called sprints, and daily meetings, called scrums, to tackle discrete portions of a project in succession until the project as a whole is complete. There are three key roles within Scrum: the Scrum master, product owner, and Scrum team members:

- The product owner creates and prioritizes a product backlog (work to be done).
- Teams select items from the backlog and determine how to complete the work.
- Work must be completed within a sprint (usually two to four weeks).
- The Scrum master meets with teams briefly each day to get progress updates.
- Sprint reviews are conducted at the end of each sprint.
- The process starts again until all work or backlog is complete.

Agile project management tools, templates and resources

There are also many templates available from companies like Microsoft that project managers can use rather than re-creating the wheel. Here are just a few among several others available from Microsoft:

- Agile glossary

- Agile process guides
- Backlogs
- Use agile in Microsoft Project

Agile project management software vendors also typically have built-in agile templates in their software.

Agile project management software

Companies using agile are likely to leverage software geared to agile development in order to get the full benefits of this methodology. Here are just some of the agile solutions available:

- Atlassian Jira + Agile: This is an agile project management tool that supports Scrum, Kanban, and mixed methodologies. This project management software comes with a comprehensive set of tools that help Scrum teams perform events with ease.
- Agilean: Agilean automates workflow management for small and midsize IT companies fitting different verticals. It is customizable and has 50 built-in templates.
- SprintGround: This is a project management tool created for developers to organize work and help them track progress.
- VersionOne: This project management solution is built to support the Scaled Agile Framework at all levels.

For a deeper look at agile project management software options, see “Top 11 agile tools for project management.”

Key agile skills

There are six key agile project management skills or attributes that all project managers should have:

1. An ability to cut through unnecessary work and focus only on essential work
2. Sound judgment under pressure and the ability to remain calm under stress
3. Strong motivation and coaching skill to guide and support teams throughout a project
4. Exceptional organizational abilities to keep everything straight and prioritize
5. The ability to think and make decisions quickly as circumstances change rapidly
6. A high level of adaptability in order to accept change and reduce unnecessary confusion and risk

Agile project management certification and training



As agile methodology picks up speed, so does the demand for professionals with agile knowledge and experience. Here are the most popular agile-focused certs for benchmarking your knowledge.

- Agile Programme Management (AgilePgM)
- Agile Project Management (AgilePM)
- Professional Scrum Master (PSM)
- Professional Scrum Product Owner (PSPO)
- Certified Agile Project Manager
- SAFe Agilist
- SAFe Product Owner/Product Manager
- SAFe Scrum Master
- Certified ScrumMaster (CSM)
- Certified Scrum Product Owner (CSPO)
- ICAgile Agile Fundamentals (ICP)
- ICAgile Agile Product Ownership (ICP-APO)
- ICAgile Agile Team Facilitation (ICP-ATF)
- ICAgile Business Agility Foundations (ICP-BAF)
- ICAgile Agile Project and Delivery Management (ICP-APM)
- PMI Agile Certified Practitioner (PMI-ACP)

For a more in-depth look at these certs, see “Top 16 agile certifications available today.”

The future of agile

As competition is continually increasing and time to market is also shrinking, agile offers numerous benefits and limited drawbacks. As more companies make the shift to a digital workplace that is highly dependent on speed, flexibility and increased productivity, agile or hybrid methodologies will become increasingly necessary. Its application in multiple industries and alignment with the benefits offered by a digital workplace model, indicate that agile adoption rates will continue to increase across industries around the world.

Unit 2 THE ROLE OF THE AGILE LEADERSHIP MODEL AS A COMPETITIVE ADVANTAGE FOR THE FUTURE LEADER IN THE ERA OF GLOBALIZATION AND INDUSTRIAL REVOLUTION 4.0

for Lesson 1. The Agile Leader

Task: Read this article and answer whether the sentence is true or false?

Lumi file 43file Question and answers (correct answers in bold)

INTRODUCTION

Globalization and industrial revolution 4.0 are an era that emphasizes the use and development of technology on a massive scale in various sectors of human life. This era is also known as the Digital Revolution era or the era of Technology Disruption (Kagerman, 2013). The industrial revolution 4.0 has fundamentally changed human life. It is different from the previous stage of the industrial revolution era. Now, the 4th generation industrial revolution has a wider scale, scope, and complexity. The advancement in new technologies area that integrates the physical, digital and biological worlds has influenced all disciplines, economies, industry, and government (Schwab, 2017).

The fourth industrial revolution offers and gives some opportunities for improving many aspects of human's better life. Generally, the effect in the economic sector of the 4th revolution industry can raise the average income in the world; improve the quality of people's lives, as well development. However, the 4.0 Industrial Revolution can also cause various kinds of threats. Especially, when someone does not want to develop and cannot adapt to the various changing in this era.

Based on the results of research from McKinsey in 2016 (Suwardana, 2018) that the impact of digital technology development in the 4.0 industrial revolution era in the next five (5) years there will be

52.6 million types of jobs will disappear from the earth. The results of this study give the message that every person who still wants to have self-existence in global competition must prepare mentally and skills which has a competitive advantage. The implications of the industrial revolution are like two currencies. One side has a positive value for work productivity and the efficiency of the production process. On the other side, the competition of the larger number of competitors will increase the number of jobless. Instead, it will become a serious social problem for the pillar of stability a country's politics or economy.

For awareness and accepting the change as a necessity of life must be followed by preparing and readiness to face these changes by developing self and increasing self-competency through the synergy of the industrial revolution 4.0 with the mental revolution.

1. Nowadays, people in the Industrial Revolution 4.0 era could not survive if they only live on the basic old literacy capital ways, they are reading, writing and mathematics ability. However, a human must be able to master three main literacy competencies, namely: Data Literacy: the ability to read, analyze, and use information (big data) in the digital world.
2. Technology literacy: the ability to understand the workings of machines and technology applications (coding/programming, artificial intelligence, and engineering principles).

3. Human literacy: ability to communicate, collaborate, think critically, creatively and innovatively.

The human literacy ability is the skills of an individual to lead, teamwork, cultural agility, and entrepreneurship. Based on the description, one of the human competitive in the Industrial Revolution 4.0 era is leadership skills. Mulyasa (Mulyasa, 2004) stated that leadership is defined as an activity to influence people against the achievement of organizational goals. While leadership according to Hasibuan (Hasibuan, 2010) is the way a leader influences the behaviour of subordinates, so they want to work together and work productively to achieve organizational goals. In a study conducted by Pramesti and Dedi (Paramesti, 2018) about millennial leadership, the result of their research found that in the millennial era, the current (modern) ideal model of leadership is needed to be able to adapt for facing the era's developments. This is because in the millennial era every part of human life has been affected by modernization for development to the new configuration.

The research that conducted by the author has similarity with the previous research, it is about leadership theory in the current time but in this research focus to the role of specific leadership model in the 4.0 industrial revolution era. In this context, one of the leadership models that are appropriate to be applied by leaders in this era is the agile leadership model.

The agile leadership model is a model of leadership that has characteristics of fast, responsive, decisions maker, risk-taker, dealing with crises, and leading. The figure of an agile leader will be very adaptive in dealing with everything that happens in their environment and society. The agile leader appropriate to apply in the industrial revolution 4.0 era.

Based on the explanation above the authors consider that is needed a study to answer the question of how is the role of the agile leadership model as a competitive advantage for the future leader in the era of globalization and industrial revolution 4.0. Therefore, this article will examine about the role of the agile leadership model as a competitive advantage for the future leader in globalization and the industrial revolution 4.0 era.

THEORETICAL FRAMEWORK Globalization and Industrial Revolution 4.0

The concept of globalization is a term that has a relationship with increasing interconnectedness and dependence between nations and between people throughout the world through trade, investment, travel, popular culture, and other forms of interaction so that the borders of a country become increasingly narrow. The era of globalization is marked by the rapid development of science and technology that easier to maintain activities ranging from education, economy, development and so on, so that the boundaries between regions and countries that were originally large, become smaller due to the development of technology and science (Febryanto, 2017).



In the beginning, the concept of the Industrial Revolution 4.0 was released by the Germany government to promote computerization of manufacturing in their country. German Chancellor Angela Merkel (Merkel, 2014) believes that Industry 4.0 is a comprehensive transformation effort from all aspects of production in the industry through the merger of digital and internet technology with conventional industries. Meanwhile, according to Kagermann (Kagermann, Wahlster, & Helbig, 2013), the Industrial Revolution 4.0 is an integration of the Cyber-Physical System (CPS) and the

Internet of Things (IoT), and the Internet of Services (IoS) into industrial processes including manufacturing and logistics and other processes. According to Lee (Lee, 2008), this merging process can be realized through integration between physical and computational processes (a combination of computer and network technology). Furthermore, Hermann (Hermann, Pentek, & Otto, 2016) added that Industry 4.0 is a term to refer to a set of technology and value chain organizations in the form of a smart factory which is a modular factory that implements CPS, IoT and IoS technologies in monitoring the physical process of production then displays it virtually and decentralizes decision making.

According to Hassim (2016) in Mahardi (Mahardi, D., dan Taher, 2018), the Industrial Revolution 4.0 is marked by the emergence of supercomputers, smart robots, unmanned vehicles, cloud computing, big data systems, genetic engineering and neurotechnology development (optimize functions of human brains). The sectors are influenced by new technological advances include (1) artificial intelligence robots, (2) Nanotechnology, (3) biotechnology, and (4) quantum computer, (5) blockchain (such as bitcoin), (6) internet of things, and (7) 3D printers.

According to Schwab (Schwab, 2017), a famous economist from Germany also the Founder and Executive Chair of the World Economic Forum (WEF) who introduced the concept of the Industrial Revolution 4.0 in his book entitled "The Fourth Industrial Revolution", explains that the world has experienced four industrial revolutions. The first industrial revolution or Industrial Revolution 1.0 was marked by the invention of a steam engine to support production engines, trains, and sailing ships. Various work equipment that originally depended on human and animal power was later replaced by steam engine power. The impact, production can be multiplied and distributed to various regions more massively. However, this industrial revolution also had a negative impact in the form of mass unemployment.

Furthermore, the Industrial Revolution 2.0 was marked by the discovery of the concept of electrical energy and the concept of division of labor to produce large quantities of products in the early 19th century. The emergence of electrical energy prompted scientists to find various other technologies such as lights, telegraph machines, and conveyor technology. The development of this industrial technology continues until it reaches the stage of the Industrial Revolution 3.0 which is marked by the birth of information technology and production

processes that can be controlled automatically in the early 20th century. In this era, industrial machinery is no longer controlled by manpower but uses a Programmable Logic Controller (PLC) or computer-based automation system. As a result, production costs are becoming increasingly cheap. Information technology is also increasingly advanced including camera technology that is integrated with mobile phones and the development of the creative industry in the music world with the discovery of digital music.

Finally, the last stage of the industrial revolution is the birth of digital technology which has a massive impact on human life. The latest industrial revolution or the Industrial Revolution 4.0 is encouraging people to implement automation systems in all production activities. The increasingly massive internet technology not only connects millions of people around the world but has also become the basis for online trade. In the transportation area, it develops into online transportation businesses such as Gojek, Uber, and Grab. It shows the integration of human activities with information technology development. Nowadays business also develops in that ways, online market places grow quickly. In Indonesia online markets that being favourite such as Bukalapak, Tokopedia, Olx, Shopee, Lazada, etc. It shows that the development of the Industrial Revolution 4.0 affected the trade and economic sectors.

Furthermore, the development of autonomous vehicle technology, drones, social media applications, biotechnology, and nanotechnology has also increasingly confirmed that the world and human life have fundamentally changed due to the emergence of the 4.0 Industrial Revolution era.

Hermann et al (Hermann et al., 2016) added that there were four design principles in the Industrial Revolution 4.0 era, they are:

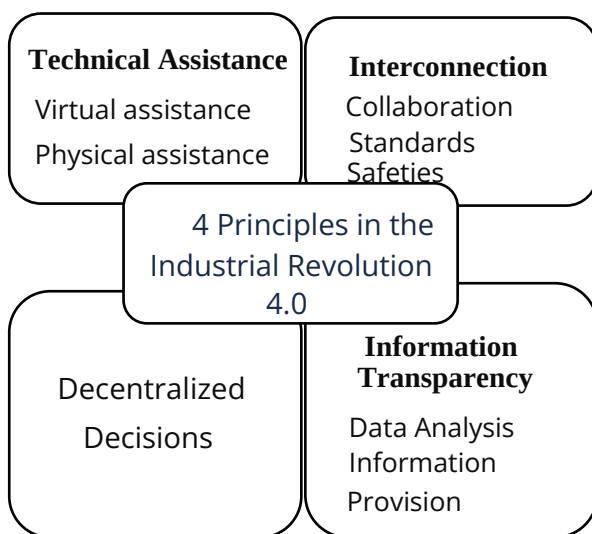
1. Interconnection: the ability of machines, devices, sensors, and humans to connect and communicate with each other through the Internet of Things (IoT) or the Internet of People (IoP). This principle requires collaboration, standards, and safety in its implementation.
2. Information Transparency: the ability of information systems to create virtual copies of the physical world by enriching digital models with sensor data including data analysis and information provision.
3. Technical Assistance, which is includes: (a) the ability of the assistance system to support people by consciously combining and evaluating information to make appropriate decisions and solve urgent problems in a short period of time; and (b) the ability of the system to support humans by performing various tasks that are unpleasant, too tiring, or insecure. Both of these abilities include virtual and physical assistance.
4. Decentralized Decisions: the ability of virtual physical systems to make their own decisions and carry out tasks as effectively and efficiently as possible. Simply stated, the four principles of the Industrial Revolution 4.0 above can be described in Figure 2.

Agile Leadership

The agile leadership model is a model of leadership that has characteristics of fast, responsive, decisions maker, risk-taker, dealing with crises, and leading. The figure of an agile leader will be very adaptive in dealing with everything happens in their environment and society. The agile leader appropriate to apply in the industrial revolution 4.0 era. The leader focuses on how to maximize productivity and teamwork, despite all the changes faced.

Figure 5.2

Four Basic Principles of the Industrial Revolution 4.0 Source: Hermann et al., 2016



Agile leadership requires an individual who has six main characteristics, they are: calm, adaptable, innovative, always learning from experience and give feedback, and not hesitate to help build others. The first characteristic of an agile leader is calm and adaptability to change, pressure, and crisis. The agile leader must be able to remain calm in all situations so they can automatically calm his subordinates who are also under the same work pressure. This calm attitude will also help the agile leader in adapting so they can make the right decision in responding to all situations. Also, agile leadership requires leaders to have innovation in finding solutions to deal with changes, crises, and pressures that can come at any time. Agile leaders are leaders who are full of innovation. So, when there is a change, the agile leader will not only stand stuck and let the company or its organization be rolled up in the flow of changes.

A further characteristic of agile leaders is to always learn from experience and give feedback. Experience is the best teacher for a leader, but a leader also should not be fixated on his own

experiences and thoughts. A leader needs to gather feedback from people around him for consideration.

Furthermore, another characteristic of agile leaders is that they do not hesitate to help build others. This includes the ability to motivate and inspire the people they lead.

Competitive Advantage

Competitive Advantage is an advantage over competitors obtained by offering greater value to consumers than competitors' bids (Kotler, 2008). According to David (David, 2006), competitive advantage can be described as a situation where when a company can do something and other companies cannot or have something that is desired by its competitors. Competitive advantage has two main characteristics they are durability and imitability. Durability is the resistance of the company's core competencies from obsolescence, while imitability is the durability of the company's core competencies from competitors who want to emulate the product being produced (Hunger, 2004).

To achieve an ideal and sustainable competitive advantage, a company must be able to adapt to the trends and changes in the company's external environment continuously, both through increasing the ability, competence, and internal resources of the company to get the maximum benefit from the products produced (David, 2006).

Research methods

This article used a qualitative research method with a systematic review approach of Indonesian literature which is relevant to the research topic. According to Camey (2002), a systematic review approach is a literature study approach that aims to identify, collect, critically assess and synthesize the results of previous studies that are relevant to a particular topic. The results of this synthesis are used specifically to describe and discuss the problems examined in this article. This systematic review process began by searching for relevant literature with a discussion of the role of agile leadership in the Industrial Revolution 4.0 era.

The search started by searching books and journals online through a search engine, they are ResearchGate, Google and Google Scholar. The search results show 28 sources are consisting of books, journals, websites that discuss the agile leadership model and the Industrial Revolution 4.0 era.

After collecting data that was found from some sources, the next stage is the data analysis process. The data was analysed by using qualitative data analysis technique. The model data analysis that used in this research is the interactive model data analysis. The process of

interactive model data analysis included condensation, display, and drawing the conclusion/verification. (Miles, Huberman, & Saldaña, 2014).

Furthermore, data is performed to determine the data sources that are truly relevant to the research topic. Based on the results of data reduction, obtained 8 books, 7 research journals, 1 thesis and 6 websites that are relevant to the research topic. All sources have been used as references in writing this article.

Results and discussion

Globalization and the Industrial Revolution 4.0 have many fundamental changes in human life. Both of these eras contribute to the latest technologies, automation, digitalization and creating standardization in several sectors of human life. To overcome the fundamental changes in the structure of life, humans need to develop a capability that can be a competitive advantage for facing the competition with technology and machinery that have gradually shifted the position of humans in the industrial world.

One of the abilities that humans can develop for facing significant developments in the Globalization and the Industrial Revolution 4.0 era is leadership ability. Based on studies conducted by Harvard, the Carnegie Foundation, and the Stanford Research Centre, there will be a shift in the concept of leadership in the current digital era into the future. In 2020 estimated that the characteristics of leaders needed in the industrial world are the leader who has skills such as complex problem solving, critical thinking, creativity, people management, coordination, emotional intelligence, judgment and decision making, service orientation, negotiation, and cognitive flexibility (Syahadah, 2018). Leadership is one type of skill in people management so that a leader who masters the right leadership model is needed by all industrial companies for facing some changes in the Globalization and Industrial Revolution 4.0 era.

In this context, one of the leadership models that are appropriate to develop the characteristics of leaders needed in industry 4.0 is the agile leadership model. The agile leadership model which is a model of leadership that has characteristic of fast, responsive, decisions maker, risk-taker, dealing with crises, and leading. Those explain that the leader can make decisions quickly. The reason is by faster-moving it possible to catch many opportunities and decreasing some problems could appear.

The figure of an agile leader will be very adaptive in dealing with everything happens in their environment and society. The agile leader appropriate to apply in the industrial revolution 4.0 era. The leader focuses on how to maximize productivity and teamwork, despite all the changes faced. This explains that a leader who can unite the team and give clear direction is a very important part.

This is because the agile leadership model always strives to create leaders who are having the characteristic of responsive in making decisions, dealing with crises, and leading. But it also seeks to create a leader who is adaptive, innovative, and flexible in doing a job. On the other hand, agile leaders are expected to continue to develop while still prioritizing productivity and achievement of company goals. So that agile leaders can be described as intelligent leaders who see opportunities, are quick to adapt, and are agile in facilitating change. According to Jamil Azzaini, agile leaders are leaders who are open-minded and have ambiguity acceptance, which is willing to accept obscurity. This ambiguity could mean unclear future business prospects, unclear company management systems, or unclear product manuals issued by the company. This will then be simplified, improved, and refined by an agile leader to accommodate change (Irendy, 2017).

In the fourth industrial revolution era that made everything modernized the role of agile leadership model is very important, because the leader's basic character of the agile leadership model is appropriate to be applied in the terminal condition of the 4.0 industrial revolution era, considering all aspects of life that are centered on the four principles of progress including technical assistants, interconnection, decentralized Decision, and transparency information.

Conclusions, Recommendation, and Limitation

Globalization and the Industrial Revolution 4.0 have many fundamental changes in human life as a result of the development of information and communication technology, as well as rapid and drastic science. So, we need a character of Human Resources who can face all forms of change in the globalization and industrial revolution era. One of the required characters is in the agile leadership model. This leadership model should be considered to be applied in the Industrial Revolution 4.0 era because the fast-changing world requires a figure of leader who is calm, adaptable, innovative, always learning from experience and give feedback and motivate to help others and think for next generation. On the other hand, the agile leadership model can create intelligent leaders who can see opportunities, quick to adapt, fast in facilitating change, open-minded and have high ambiguity acceptance. Besides, agile leaders can also continue to grow while still maintaining the productivity and achievement of the company's main goals at the same time.

Unit 3 Emotional Intelligence as a Success Factor for Project and Project Manager

for Lesson 2. The Emotional Literate Project Manager

Task: Read this article and answer whether the sentence is true or false?

Introduction

The concept of Emotional Intelligence was first coined by Peter Salovey and John Mayer and later popularized by Dan Goleman in 1996. By definition, emotional intelligence refers to the act of understanding and managing one's emotions and being able to influence other people. (Lim and Kim, 2020; Salovey and Mayer, 1993) mentioned that project managers need to understand emotional intelligence, because it helps people to understand and recognize feelings and emotions and use the same understanding in decision making and actions (Deepa, 2013). In the same way, a project manager should have adequate knowledge in tracking schedules and budgets because this is the basis of project science and management. Therefore, for any modern-day project success, emotional intelligence is critical because it helps project managers define scope, schedule, budget and track quality project milestones (O'Connor et al., 2019). The uncertainties in project management require effective emotional intelligence because it begins a series of emotional activities which a project manager must handle (Batool, 2013). The ability to manage these emotions will determine the success or failure of the project. In addition, project managers with high emotional intelligence are aware of the emotional situations of others, and they interact with the project team in a manner that draws them to the participant (Abousamra and Shaalan, 2017).

Managers can use emotional understanding to enhance strong relationships, lead a more fulfilling life and attain great success at work (Cherniss, 2000). In project management, emotional intelligence is made up of four characteristics namely social awareness, relationship management, self-management and self-awareness which promotes self-confidence and allows people to identify their strengths and weaknesses (Alshawabkeh et al., 2021) (CuéllarMolina et al., 2019). Alternatively, self-management is the ability to control impulse feelings and behaviours, manage emotions healthily, take initiatives, adjust to changing circumstances and follow through on commitments. According to (Scott-Ladd and Chan, 2004), emotional intelligence is the ability to perceive, identify, comprehend and successfully manage emotions. Therefore, it is the effective management of activities and relationships. In addition, emotional understanding and skills impact the success and happiness in the workplace besides, our personal lives (O'Connor et al., 2019; Ugoani et al., 2015). Moreover, project managers can direct emotional power to improve project team's satisfaction. Emotional intelligence grants the ability to be present and listen to somebody when they require the most. It is that sense of internal balance that enables one to maintain the composure, engage in good decision making, successfully communicate and enhance effective leadership even when he is under stress. In project performance, emotional intelligence adds value to cognitive intelligence merely turning good performers into stars (Hussain Rahim and Imran Malik, 2010; Louzi et al., 2022b). This research project is conducted to answer the following questions:

1. How EI skill is a necessity to project manager communication skills?

2. Are project managers with better EI skills are more successful project managers in delivering successful projects?

Literature Review

Emotional intelligence has been found essential for improving managers' communication skills. (Cuéllar-Molina et al., 2019) questioned 284 students to examine the relationship between emotional intelligence and communication skills and he published that successful individuals must possess good communication skills. (Ghazal et al., 2021) (I. A. Akour et al., 2022; R. S. Al-Marroof et al., 2021a) stated that managers need communication skills to be able to initiate and mobilize resources for a project, and he indicated that a project manager spends at least 90 percent of his time communicating (Kurdi et al., 2022b)(Al-Awamleh et al., 2022; M. T. Khan et al., 2022). Therefore, effective communication skills are inevitable (Bawaneh et al., 2023)(Akour et al., 2023). The manager must always be there for other members and make sure that they are in touch with the changes taking place in the project (A. Al-Marroof et al., 2021; Al-Marroof et al., 2022b). They need to communicate well with the team to be able to understand the emerging issues and know other project stakeholders point of views (Aityassine et al., 2022; Aljumah et al., 2023; Ahmad Ibrahim Aljumah et al., 2022a; Mohammed T. Nuseir et al., 2022; E Tariq et al., 2022). The author also observed that it is not enough to just speak and hear from people, rather understanding the complete message and acting upon it is vital (Nuseira and Aljumahb, 2020). The project manager must thus be able to convey the message using a specific and appropriate tone (Aljumah et al., 2020; El Khatib et al., 2021; El Khatib and Ahmed, 2020; M T Nuseir et al., 2022a). (Abudaqa et al., 2022; Ahmad Ibrahim Aljumah et al., 2022b; Alzoubi et al., 2019) stated that emotional intelligence (EI) play a critical role in modern-day's work setting. Emotional intelligence has been proposed as an important predictor in organizational outcomes (H. M. Alzoubi et al., 2022d)(Amiri et al., 2020; Gulseven and Ahmed, 2022). The success of managing a project lies in the ability of the manager being able to easily realize or recognize and effectively manage their emotions (Ahmed et al., 2022)(Hosam and Abousamra, 2022; Samra et al., 2020). They should be able to understand their emotions, discriminate between them and be in a position to use the information they get to guide their actions and thinking (H. Alzoubi et al., 2020). This is the core of emotional intelligence that every other manager requires to be able to steer their projects to completion (Nadzri et al., 2023)(M. Alshurideh et al.,

2023)(Muhammad Turki Alshurideh et al., 2022c; T M Ghazal et al., 2023a). With proper emotional intelligence management skills, managers are able to successfully maximize the effectiveness of communicating with the team and the stakeholders and at the same time listen and consult on various issues surrounding the project (Al-Dmour et al., 2023; M. T. Alshurideh et al., 2023b; Blooshi et al., 2023; Lee et al., 2023; Varma et al., 2023). The author observes that most projects tend to fail because of project managers not being able to articulate the vision and success criteria of the project, and also lack the prerequisite communication skills. Powerful communication skills allow project managers to be effective in their work and more especially in situations that involve relationships with different members of the organization (Alsharari and Abousamra, 2019; M T Alshurideh et al., 2022; Louzi et al.,

2022a). Emotional intelligence facilitates effective communication hence these two elements are intractably entwined (Muhammad Turki

Alshurideh et al., 2022b) (Rasha Abu Samrah, 2016; Samra and R., 2019). Therefore, with proper emotional intelligence skills, the project manager can easily communicate with the various stakeholders in the project and hence been in apposition to visualize the ultimate result so that they can work towards achieving it (H. M. Alzoubi et al., 2022f; A. Khan et al., 2022).

According to (Ahmed and Nabeel Al Amiri, 2022; Almasaeid et al., 2022; Alteneiji, n.d.), communication is an important tool in the management of organizations and a key determinant of their success. Managers in every organizations have always viewed communication as a key success factor (El Khatib et al., 2020b; M. El Khatib et al., 2021). Through effective communication, managers are able to add value to their organization. This is because communication enhance relationship through uniting workers, managers and decision-makers, and also helps to improve teamwork (T M Ghazal et al., 2023c; Taher M. Ghazal et al., 2023; Sakkthivel et al., 2022; Samrah et al., 2017). However, to effectively communicate and use communication to enhance relationship between stakeholders, managers must possess emotional intelligence (El Khatib and Ahmed, 2018; Nuseir and Aljumah, 2022; Emad Tariq et al., 2022). Emotional intelligence encompasses self-awareness and socialawareness. With those attributes, managers can effectively manage their behaviors in the manner in which they approach issues and situations in the organization. (Al-Marroof et al., 2022a; M. T. Alshurideh et al., 2023d) added that managing the feelings of different employees in the right manner is a display of proper management skills. The different feelings and emotions harbored by employees greatly determine the success of their performance and work (Alhamad et al., 2021; Nuseir and Aljumah, 2020). Happy employees will tend to perform well unlike the unhappy ones. According to (H. M. Alzoubi et al., 2020; Khatib et al., 2022; Khatib and Oplencia, 2015; Nuseir, 2020), managers who are well equipped with the right emotional intelligence are most likely to perform well in as far as communicating with their employees is concerned, and this is important, because it brings synergy and cooperation among various stakeholders in the organization (Mounir M El Khatib et al., 2019; Nuseir and Elrefae, 2022; Nuseir et al., 2020). Therefore, hiring employees with excellent emotional intelligence is important, because it will improve their communication skills that are imperative in the modern-day world where managers must constantly share their ideas and organizational processes on a regular basis (Abudaqa et al., 2021; El Khatib et al., 2022; Khatib et al., 2016).

The success of a project depends on how well managers' report the progress of their projects to the concerned parties. Monitoring the progress with stakeholders in a precise manner is crucial, because it facilitates an understanding on how well the project is progressing. (Abousamra et al., 2022) demonstrated the relationship between leadership and emotional intelligence and its effectiveness in emotional intelligence. According to the author, the nature of many projects today needs project managers who possess the right emotional intelligence skills (Aziz et al., 2023; Farrukh et al., 2023). Since projects need a lot of interactions between

different stakeholders, they need a manager who have exceptional emotional skills to be able to adapt different situations in the project as quickly as possible and offer guidance (H. M.

Alzoubi et al., 2022b; El Khatib et al., 2020a; Nuseir, 2021). Once the project is completed, the managers is also required to deliver the status of the project to the upper managers. (AlDhaheiri et al., 2023; Gaytan et al., 2023) stated that emotional intelligence is the key to improve the performance of a project manager (M. T. Alshurideh et al., 2023a; Alzoubi and Ahmed, 2019; Nuseir et al., 2021). The study showed that emotional intelligence levels have been associated with better project performances than those with low emotional intelligence (A I Aljumah et al., 2022a; Muhammad Turki Alshurideh et al., 2022a; M. El Khatib et al., 2022). They are able to handle complex projects more effectively and with ease and hence they are likely to succeed (I. Akour et al., 2022; H. Alzoubi et al., 2022). Tasks that involve interpersonal actions such as communication is directly linked to emotional intelligence more than those that need cognitive abilities. In this regard, therefore, project managers must be equipped with adequate emotional intelligence because the role of project manager generally included communication and interpersonal actions that are critical to the completion of a project (Abudaqa et al., 2021; Aljumah et al., 2021a) (E. Khatib et al., 2021).

According to (Muhammad Alshurideh et al., 2022; T M Ghazal et al., 2023a), at least 80% of the project failures that have so far been documented are related to the human elements of project management that mostly include personal skills, social intelligence, bad teamwork, inadequate communication, and poor leadership skills (M. T. Alshurideh et al., 2023c; Arshad et al., 2023). Managers might possess excellent professional and technical skills and knowledge, however, without adequate emotional intelligence skills, they might not be able to handle certain aspects of the project that are related to interrelationships and communication with members of the project team (H. M. Alzoubi et al., 2022a; El Khatib, 2015). In addition, work teams tend to collaborate more easily and smoothly when members are able to exchange knowledge and skills between them. In this regard, emotional intelligence is one of the most important skills that is attributed to increase the organizational performance (E. Khatib et al., 2022). Several studies have pointed out that emotions are an important facilitate when it comes to thinking processes, possetting high emotional intelligence raises the competencies of the manager in managing teams and solving conflicts within the organization.

High emotional intelligence levels tend to allow work teams to accommodate one another's feelings and deal with them appropriately. Also, it makes them motivated to share their concerns and weaknesses that contribute to the overall success of the project (H. M. Alzoubi et al., 2022c). Emotional intelligence also helps to create an environment of trust within the workplace and this allows individuals to manage their emotions and anxiety when they encounter unexpected challenges or situations. High emotional intelligence enables team members to engage in productive discussions that help them address the various conflicts arising in the workplace.

(El Khatib and Ahmed, 2019; Nuseira and Aljumahb, 2020) mentioned that emotional intelligence has been found to contribute to leadership efficiency. Transformational leaders have been found to have high emotional intelligence that explain why transformational

leadership in project management is associated with successful projects. Transformational leaders are more competent and able to handle difficulties in workplaces more effectively and because of their ability to recognize and manage emotions (Mounir M. El Khatib et al., 2019). In addition, transformational leaders are capable of developing and nurturing relationship between project team members that inspires and motivates them to perform exemplary well in the project. (T M Ghazal et al., 2023b) stated that project managers are responsible of the ultimate success or failure of a project. To attain success, project managers must interact more frequently with stakeholders and project team members. Research indicates that about 88% of the project managers spend over half of their time communicating and interacting with project team members.

The frequent interaction throughout the course of the project requires managers to possess special skills and knowledge that will enable them manage conflicts on a regular basis through building and strengthening relationships to ensure success of the projects. Project managers must also possess teamwork skills to effectively lead the project teams in a project. In this regard, human skills are essential in project management and as a result, emotional intelligence is recognized as an important tool for workplaces because of its close links with outstanding job performance. Emotionally intelligent workers tend to perform better on projects as compared to managers with lower emotional intelligence.

(Kurdi et al., 2022a) noted that self-awareness and emotional consciousness are closely related. This implies that excellent project managers tend to understand their strengths and weaknesses and hence are aware of their emotions. They understand that the emotions have an impact on their decision-making process and perceptions as well as on team members. Excellent project managers possess the ability to assess themselves and manage their emotions in a manner that make it easier to perform various tasks. (Akour et al., 2021; H. M. Alzoubi et al., 2022e) explained that project managers need to improve their soft skills to build good relationships with their clients and staff, and to manage change properly. (A I Aljumah et al., 2022b; Aljumah et al., 2021b) noted that emotional intelligence skills are an important element for project managers, because it is an integration of self and social skills that managers rely on to make important decisions and judgments and also communicate effectively with team members. Organizations nowadays consider project management to be significant differentiator and determiner of success. Moreover, 70% of project success have been attributed to the ability of managers to apply emotional intelligence while managing their projects. The author also mentioned that at least 90% of the top performing managers have been found to possess high emotional quotient in addition to excellent technical skills that enable them to succeed in executing their projects (Abousamra and Hosameldeen, 2022; R. S. Al-Marouf et al., 2021b; T M Ghazal et al., 2023b; M T Nuseir et al., 2022b).

Research Methodology

The research is based on collecting qualitative and quantitative data from primary and secondary source. The primary data were collected through formal interviews with three managers in the ministry of health and prevention while the secondary data were collected

from various academic articles and e-books. In addition, a formal questionnaire was distributed randomly among the selected departments in order to know employees' opinions about their managers' skills. Thus, a stratified sampling method was applied first then the random distribution method. The collected data were used as an evidence to support the research questions that have been mentioned earlier. There are various methodologies in project management such as the Waterfall, Agile, Adaptive, Scrum, Lean, and Kanban methodologies. The Waterfall methodology was selected for this research project, because it provides a better understanding of project stages and it is simple and easy to make and measure. This research focused on managers' emotional skills and the hiring process in the ministry of health and prevention. Finally, the qualitative data were compared with the quantitative data to make the final interpretation of data 3.1. Collected Data

Qualitative Data

In order to develop better understanding of whether hiring a project manager who better understands emotional intelligence results in the project success, we interviewed three different managers from the Ministry of Health and Prevention in order to obtain their point of view pertaining the emotional intelligence trend. Therefore, we focused on the following questions:

What do you think of emotional intelligence trend?

How EI skill is a necessity to project manager communication skills?

Are Project Manager with better EI skills are more successful project managers?

Is EI an important factor for project success?

Initially, we started our interview with Mr. Munad who manages project managers specifically the public private partnership. Mr. Munad advised that understanding emotional intelligence is essential that adds value to the project manager communication skills but is not an important factor for the project success. Additionally, he confirmed that while hiring a project manager he focuses on the capability of the project manager to plan, schedule and execute the project rather than having a high understanding of emotional intelligence. Our second interview was conducted with Mr. Ayman from Human Resources who confirmed that based on the recent studies, human resources do focuses on recruiting a project manager with high understanding of emotional intelligence considering the importance of maintaining well relationships with all stakeholders involved within the project. Also, he confirmed that project success depends on having an effective relationship to ensure that all goals are met. Therefore, the human resources do focus on the characteristics of the individual during the interview and observe how well they are as certain about dealing with their emotions and others. Furthermore, a project manager success is essential with way they deal with their team and engage them for better outcomes. The final interview was conducted with Dr. Abdalla – Manager of Medical Support Services, who agreed that a project manager with high emotional intelligence awareness is the key to deliver success since they are involved with decision making, building an effective team and managing them. For that, while hiring a

project manager he does ensure the manager's capability of having an effective communication skill as well as high emotional intelligence understanding considering that being an effective negotiator with all stakeholders involved will result better outcomes.

Additionally, he confirmed that people are the key factor for any project, so having a project manager who is able to understand his team emotions and have the ability to manage them effectively will affect their achievements as well, because they are managed by a well oriented individual who can perceive the emotions of himself and others and understands how to deal with challenging situations. To conclude, with the different feedback received from three interviews held within the same workplace, we infer that there are different traits perceived for a project manager depending on the departments' heads and work processes. Some advised that emotional intelligence is vital for any project manager to get his full capabilities within the project workflow, others confirmed that emotional intelligence does not verify the skills of the project manager and thus will not affect the process throughout the project.

Data Analysis and Discussion

Based on findings, it can be concluded that the ministry of health and prevention started focusing on emotional intelligence skills during the last few years only. Also, some managers consider it as an additional skill that can add value to project manager communication skills, and it is not an important factor for the project success. On the other hand, other managers from human resources department confirmed that recruiting a project manager with high understanding of emotional intelligence is important for them. Also, they added that it is essential to maintain well relationships with all stakeholders involved within the project, and they assured that project success depends on having an effective relationship to ensure that all goals are met. Moreover, the manager of medical services agreed that a project manager with high emotional intelligence awareness is the key to deliver success since they are involved in decision making, building an effective team and managing them. Additionally, he confirmed that having a project manager who is able to understand his team emotions and have the ability to manage them effectively will positively affect the performance of his team. The quantitative data shows the number of responses in the department of general projects and medical services. The total number of responses was 28 responses.

The results indicated that both managers use various soft skills in the daily work. All of them agreed that their managers use verbal and nonverbal communication to interact with them, and 75 percent of them focused on coaching and monitoring. Also, 57% of them chose motivation as one the noticeable soft skills in their managers' attitudes while 39 % selected negotiations, and only 3% chose empathy and creativity. Thirteen employees showed that their managers have good soft skills, and only 4 of them consider their skills excellent. In addition, the results showed that 14 out of 28 employees selected performance as the main focus for the upper-management while the second group which consists of 10 employees showed that the applied management style of leadership is relationship-oriented, and none of them showed that is detail oriented.



Moreover, the percentages of the personal characteristics of the selected managers were as followed: knowledgeable (75%), optimistic (71%), visionary and confident (57%), and good listener (35%). The level of effectiveness of involvement practices and the strength of managerial support were examined based on five-point scale. 46% of the sample size showed that the applied involvement practices are effective while 75 % of participants showed that the managerial support is strong , and around 18% of them showed that the managerial support is average .However , the plot shows that the data are positively skewed which means that the managerial support has a positive effect on the employees which in turn will embrace their ability to deliver successful projects.

Recommendations

Based on the different opinions sought from the interviewed managers within the Ministry of Health and Prevention, majority agreed the importance for a project manager to adopt emotional intelligence skills. For that, in order to adapt this trend, it is recommended that Human Resource department conducts a test for all new joiners for “Project manager” position to obtain how well they are aware of emotional intelligence. Upon which the project manager within the Ministry of Health and Prevention will have a full understanding of emotional intelligence which is not only a factor of the project success, but also for maintaining a well-balanced relationship with all stakeholders involved within the project assigned either internally or externally. Furthermore, existing project managers should strive to improve their emotional intelligence skills, for that the organization should conduct a training session for the project managers and ensure a follow-up session is being maintained regularly with these managers to ensure that they utilize the key skills learned within their day-to-day duties and projects. Following which assessment to be conducted in order to verify if expected outcomes was achieved with managers who managed to utilize their emotional intelligence skills and whether it aimed to achieve the desired outcomes. Our second advise for the Ministry is to focus more on creativity and empathy and conduct a peer review analysis to measure the team productivity who are involved within the project, considering that project managers should not only be capable of communicating properly with external partners involved in the project but how capable they manage their team by understanding the five main core categories of emotional intelligence which includes importance of social skills, motivation, empathy, self-awareness and relationship management which may lead to project success if they are implemented properly.

Conclusion

The purpose of this study was to determine whether hiring a project manager who better understands emotional intelligence results in project success. From the interviews that were conducted, emotional intelligence was found to be an important aspect for project managers with good communication skills. However, some managers conflicted on the impact of emotional intelligence on the success of a project. A survey was conducted in the department of general projects and medical services, and had a total of 28 responses. The results of the

survey showed that most managers relied on both verbal and nonverbal communication methods to interact with their employees. However, only few managers were reported to employ empathy and creativity while interacting with the employees.

Project Analytics:

Analytics can be defined as the systematic quantitative analysis of data to obtain meaningful information for better decision making. It involves the collective use of various analytical methodologies such as statistical and operational research methodologies, Lean Six Sigma, and software programming. Though Analysis and Analytics terms sounds similar, but they do have some differences.

Project analytics can help project managers handle complex projects and keep them on-schedule and on-budget. Using analytics, project managers have the ability to go beyond simply capturing data and completing tasks as they are completed. Now, they can find out a multitude of information, including exactly how projects are performing, and whether or not they are in line with the overall objectives. Analytics provides project managers the ability to make strategic decisions and improve project success rate focus on being knowledgeable, optimistic, visionary, and confident, rather than being a good listener to the employees. These results showed that most of the managers lacked emotional intelligence, as their focus was on employee performance.

Despite these results, most of the employees felt that the managers were supportive enough. However, according to the study, managerial support was associated with high performance among employees. The study revealed that emotional intelligence contributed to the development of effective communication skills among project managers. This is evident where only a few employees stated that the style employed by the management was relationshiporiented or people oriented. Most of the employees identified the management as supportive enough. The study revealed that the success of the project depends on the managerial skills of the manager. To sum up , it can be concluded that the null hypothesis which states that " project manager`s EI skill is important for his communication skills " and the alternative hypothesis which states that " project manager`s EI skill is positively linked to project success" are both accepted .In addition , the upper-management should transfer its main focus to people, to build strong inter-relationships and improve the collaboration among project teams, in order to ensure a successful project delivery.

Unit 4 Managing risk attitude using emotional literacy

for Lesson 2. The Emotional Literate Project Manager

Task: Read this article and answer whether the sentence is true or false?

Lumi file 45file Question and answers (correct answers in bold)



Introduction

Risk management is recognised as an essential contributor to business and project success, since it focuses on addressing uncertainties in a proactive manner in order to minimise threats, maximise opportunities, and optimise achievement of objectives. There is wide convergence and international consensus on the necessary elements for a risk management process, and this is supported by a growing range of capable tools and techniques, an accepted body of knowledge, an academic and research base, and wide experience of practical implementation across many industries.

Despite this vision, in practice risk management often fails to meet expectations, as demonstrated by the continued history of business and project failures. Foreseeable threats materialise into problems and crises, and achievable opportunities are missed leading to lost benefits. Clearly the mere existence of accepted principles, well-defined processes, and widespread practice is not sufficient to guarantee success. Some other essential ingredient is missing.

The most significant Critical Success Factor for effective risk management is the one most often lacking: an appropriate and mature risk culture (Hillson, 2002a). Research and experience both indicate that the attitude of individuals and organisations has a significant influence on whether risk management delivers what it promises (Hillson & Murray-Webster, 2005). Risk management is undertaken by people, acting individually and in various groups. The human element introduces an additional layer of complexity into the risk process, with a multitude of influences both explicit and covert. These act as sources of bias, creating preferred risk attitudes which affect every aspect of risk management. Risk attitudes exist at individual, group, corporate and national levels, and can be assessed and described with some degree of accuracy. This allows sources of bias to be diagnosed, exposing their influence on the risk process.

But diagnosis is different from treatment. Where preferred risk attitude is not conducive to effective risk management, action is required to modify attitude. Recent advances in the field of emotional intelligence provide a means by which attitudinal change can be promoted and managed, for both individuals and organisations.

It is important firstly to understand risk attitudes and the impact they can have on the risk management process if their presence and influence are not recognised or managed. It is also important to understand how development of emotional literacy can provide practical and powerful tools for modifying risk attitudes. this paper addresses both aspects and offers guidelines on applying emotional literacy to understanding and managing risk attitude.

What is Risk?



The word “risk” is a common and widely-used part of today's vocabulary, relating to personal circumstances (health, pensions, insurance, investments etc), society (terrorism, economic performance, food safety etc), and business (corporate governance, strategy, business continuity etc). Yet, somewhat surprisingly, there is still no broad consensus on the meaning of this term (Hillson, 2002b; Hillson, 2003). Various national and international standards and guidelines exist which mention risk, but there are many different definitions and underlying concepts in these documents (Raz & Hillson, 2005). Even among risk practitioners in the various professional bodies there is an ongoing debate about the subject matter at the heart of their discipline. And of course there is huge variation in the general literature, reflecting the lack of official agreement on the basic definition of risk (Hillson, 2006).

Despite differences of detail, all definitions agree that risk has two characteristics: it is related to uncertainty, and it has consequences. Risk however is not the same as uncertainty, whether aleatoric variability or epistemic ambiguity. The key distinction between uncertainty and risk arises from consideration of consequences. Perhaps the simplest definition of risk is “uncertainty that matters”, since uncertainty without consequence poses no risk. In this sense, risk cannot be defined unless it is related to objectives of some kind. A more complete definition therefore might be “an uncertain event or condition that, if it occurs, has a positive or negative effect on at least one [project] objective” (Project Management Institute, 2004, p238).

Defining this link between risk and objectives is essential to the process of risk management, since it is a prerequisite for identifying risks, assessing their significance, and determining appropriate responses. It is also however a crucial factor in understanding risk attitudes, since these are also driven by the objectives of the individual, group or organisation concerned, and the extent to which the risk “matters”.

What is Attitude?

“Attitude” is another word used commonly but loosely. Dictionaries offer two differing definitions. The first relates to the inner working of the human mind, where attitude is “state of mind, mental view or disposition with regard to a fact or state”. A second equally valid definition describes the positioning of an object in space, such as an aircraft, spaceship, or missile, where attitude is said to mean “orientation of axes in relation to some reference plane, usually the horizontal”.

It is interesting to note that both definitions insist that attitude can only exist in relation to a datum point – either a fact towards which one holds a mental disposition, or a reference plane such as the horizon against which orientation is measured. In this respect “attitude” is similar to “risk”, which is defined in terms of objectives.



Although at first sight mental views and aircraft positioning do not seem to have much in common, in fact the two definitions of attitude are not incompatible or unrelated (Hillson & Murray-Webster, 2005):

- Just as the pilot makes a decision on what attitude to adopt for the aircraft in three-dimensional space in order to position it to execute the desired manoeuvre, so an individual or group can make an attitudinal choice to lean towards a particular desired response, behaviour, or outcome.
- The attitude of an aircraft does not in itself result in motion, although it is a direct influence on the direction taken. In addition to attitude some force must act on the aircraft to generate motion – analogous to motivation.
- Aircraft attitude needs to be followed by movement if it is to result in execution of a manoeuvre, and similarly individual or group attitudes must be translated into action if the desired outcome is to be achieved.
- Attitude in space can be described using a number of elements, usually termed “pitch”, “roll” and “yaw”. It is also possible to subdivide human attitudes into their component dimensions to enable them to be better understood and managed.
- As the number of degrees of freedom for aircraft movement is almost unlimited within the three dimensions of space, so there is a bewildering array of potential attitudes that can be chosen in any given situation.
- While there may be a preferred response (initial default positioning), the final outcome remains a matter of choice.

As a result of this comparison, the term “attitude” as applied to internal human mental processes and positioning is used here to refer to chosen responses to situations. Some attitudes may be deeply rooted, representing core values for the individual or group, but they nevertheless represent a choice. Other attitudes may be more malleable. Attitudes differ from personal characteristics in that they are situational responses rather than natural preferences or traits, and chosen attitudes may therefore differ depending on a range of different influences. Clearly if these influences can be identified and understood, the possibility of changing them is introduced, allowing individuals and groups to manage their attitudes proactively. Emotional intelligence and emotional literacy provide the basis for achieving such attitudinal management and this concept is explored below.

This attribute of attitudes to be capable of modification is essential to the case for understanding and managing risk attitudes. If attitudes were fixed inherent attributes of individuals, inborn and unchangeable, then while it might be possible to understand them it would never be possible to manage them. The attitudes of individuals or groups would then not be comparable to an aircraft flying freely through the air but would instead be like a cruise missile pre-programmed to strike a fixed target.



What is Risk Attitude?

If “risk” is defined as “an uncertainty that could have a positive or negative effect on one or more objectives”, and “attitude” is defined as “chosen state of mind, mental view or disposition with regard to a fact or state”, then combining the two gives an initial definition of “risk attitude” as “chosen state of mind with regard to those uncertainties that could have a positive or negative effect on objectives”. One more factor is important to consider however, namely perception. Both “risk” and “attitude” are influenced by perception (Tversky & Kahneman, 1974; Kahneman & Tversky, 1979; Kahneman D., Slovic P. & Tversky A, 1986; Lopes, 1987; Slovic, 2000; Gilovich T. Griffin D. & Kahneman D, 2002; Slovic Salovey P., Brackett M. A. & Mayer J. D., 2004), including rational situational factors (such as familiarity, manageability, proximity or propinquity), subconscious heuristics operating at both individual and group level (for example availability, groupthink, or risky/cautious shift), and emotions (discussed below). The influence of perception on risk affects the answers to such questions as “How uncertain is it? And how much does it matter?” Adding the influence of perception into the initial definition of risk attitude above leads to the following more complete definition (Hillson & Murray-Webster, 2005):

Risk attitude is “chosen response to uncertainty that matters, influenced by perception”.

A range of possible attitudes can be adopted towards the same situation, and these result in differing behaviours, which lead to consequences, both intended and unintended. Indeed, behaviour is the only reliable diagnostic indicator of inner attitude, and considerable attention has therefore been paid to behavioural psychology and management by those seeking to understand and manage the effects of human factors in business (Yates, 1992). Another approach however, which might prove more fruitful, is to seek to understand and address the underlying attitudes, rather than concentrating on the presenting behavioural symptoms.

One key conclusion on which researchers and practitioners are agreed is that risk attitudes exist on a spectrum, as shown in Exhibit 1. The same uncertain situation will elicit different risk attitudes from different individuals or groups, depending on how they perceive the uncertainty. And since attitude drives behaviour, different people will exhibit different responses to the same situation, as a result of their differing underlying risk attitudes – a situation regarded as too risky by one person or group will be seen as acceptable by another.

What is Emotional Literacy?

Everyone experiences emotions throughout their waking and working day, and even when they sleep. Yet like the term “risk”, there is no single widely-accepted definition. Dictionary definitions of “emotion” range from “disturbance of mind” to “mental sensation or state”. However, emotion is situational, and is only meaningful in context. For example, fear may prevent someone from pursuing a course of action that would be beneficial for them, and

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such fear would be negative. Conversely if fear prevents the person from pursuing a dangerous course of action, then it is positive. Emotions have no absolute meaning; their significance is only important relative to a given situation. In this way emotions are like both risk and attitude – only relevant in relation to defined objectives.

However, much people may like to believe that in work situations they behave logically, analysing problems and making decisions in a rational way, the reality is that emotions are always present, influencing behaviour and actions (Slovic, 2005). The rich English vocabulary has many words to describe how people feel. Some emotions like fear, anger or desire are so primal, that it is difficult for people to consciously over-ride them. Resultant actions may be positive or negative, empowering or debilitating, but it is certain that emotions will affect behaviour. Not only do emotions drive the actions of individuals, they also affect the wider groups in which people work.

Effective decision-making requires individuals and groups to be aware of the emotions that are driving them in any particular situation. This awareness does not make the emotion go away, although awareness and understanding enables the choice to change, but it does provide the basis for harnessing emotions to produce results that lead towards rather than away from goals. This leads to two central concepts:

- Emotions can be recognised, understood, appropriately expressed and managed
- People can harness emotions to help themselves and others succeed

Emotional intelligence offers an approach towards achieving these two aims. Although the term has only become popular recently (Goleman, 1995, 1998, 2001, 2003; Mayer & Geher, 1996; Druskat & Woolf, 2001; Goleman et al., 2004; Salovey et al., 2004), the concept is not new; philosophers and psychologists for centuries have been stressing the importance of understanding and managing one's own emotional state. However, until recently, businesses have tended to view emotions as private and not to be expressed at work. These views have changed in more recent years, and it is recognised that emotions must be considered and expressed in a productive way (Chernis & Goleman, 2001).

Although there is no absolute agreement between authors on the features that together make an emotionally intelligent person, there is considerable overlap and enough synergy to draw conclusions about the critical dimensions. These dimensions can then be mapped to the four major stages that individuals and groups need to go through to become emotionally literate as shown in Exhibit 2. Emotional literacy takes the components of emotional intelligence and applies them so that emotions are not just recognised, understood, and appropriately expressed, but also managed (Sharp, 2001; Steiner, 2003).

Figure 5.9

Exhibit 2: Components of emotional literacy

1. RECOGNISE EMOTIONS • Self-awareness • Empathy • Organisational awareness • Trust	2. UNDERSTAND EMOTIONS • Relative regard • Personal power and self-confidence • Flexibility/Behavioural adaptability
3. APPROPRIATELY EXPRESS EMOTIONS • Goal directedness and Emotional self-control • Personal openness and Emotional honesty • Assertiveness and Conflict handling • Optimism • Constructive discontent	4. MANAGE EMOTIONS • Intentionality/Impulse control • Emotional resilience/Stress tolerance • Interdependence • General health and Quality of life



Emotional Literacy and Risk Attitudes

Risk management is naturally exposed to sources of explicit and implicit bias, since all elements of the risk process are performed by individuals and groups of people whose risk attitudes affect every aspect of risk management. Where the risk attitude adopted is not conducive to effective risk management, action is required to modify attitude. Emotional literacy provides a means by which attitudinal change can be promoted and managed, for both individuals and groups.

Risk can be defined as uncertainty that matters, including both threats and opportunities. In a similar way, emotional literacy in the context of risk management is about understanding and managing emotions that matter, including those that help and those that hinder. All elements of the risk process are affected by the emotions of the stakeholders, at both individual and group levels, including risk identification, assessment of probability and impacts, and selection of an appropriate response strategy and actions.

Risk attitudes are usually adopted subconsciously and without conscious validation. This can be good since it allows people to act quickly in uncertain situations, but it can also be bad if it results in sub-optimal decisions or behaviour. Like any other attitude however, risk attitudes are a choice for an individual or group. Some people may not realise this, believing themselves to be inherently and unchangeably risk-averse or risk-seeking. This is most likely to be because their repeated choice has become so deeply habitualised that they behave as if there is no choice. A better approach however is for individuals and groups to learn how to assess each situation, and then to choose a risk attitude explicitly, selecting the attitude which is most appropriate to the situation and which offers the best chance of achieving their objectives. This approach requires emotional literacy, involving both awareness and action, which is likely to be more effective than “choosing not to choose” and simply adopting whatever risk attitude comes naturally.

Exhibit 3 presents a simple process where the application of emotional intelligence and emotional literacy can be used to assess risk attitude and to modify it where necessary (Hillson & Murray-Webster, 2005). Each step in this process can be implemented by addressing a series of questions designed to encourage self-awareness and promote self-modification. The same process can be applied by either individuals or groups.

Conclusion

Risk matters. Risk attitudes matter. Emotions matter. Each of these statements is connected by a focus on achievement of objectives, which are the measure of “mattering”. The various dimensions of risk, risk attitude and emotions can each be described and assessed in isolation using well-proven models and frameworks. But they interact in powerful ways, and those interactions play a significant part in determining the effectiveness of each separate part. For individuals, groups and organisations who need to ensure that management of risk is effective, it is essential that they understand and manage all elements of this complex web. How are risk attitudes adopted and modified? How does the perception of risk affect behaviour and decision-making? Why are emotions important in the workplace?

Despite the complexities of this challenge, some core concepts have been defined and the broad outlines of a solution exist. Applying the proven techniques of emotional literacy will start to unveil the mysteries of risk attitudes and allow steps to be taken towards improved risk management effectiveness.

Subconscious and unmanaged risk attitudes pose a significant threat to the ability of individuals and groups to achieve their objectives. Developing emotional literacy at both individual and group levels offers a route towards understanding and managing risk attitudes, allowing the undoubted benefits to be reaped and creating a framework for ongoing learning and increased risk management effectiveness.

Unit 5 Project manager's emotional intelligence and project performance: The mediating role of project commitment

for Lesson 2. The Emotional Literate Project Manager

Task: Read this article and answer whether the sentence is true or false?

Lumi file 46file Question and answers (correct answers in bold)

Introduction

With increasing levels of project complexity, project managers are experiencing an avalanche of “hard skill” requirements; however, the challenges of their “soft skills,” especially emotional intelligence (EI), a nonverbal channel of social skills (Rezvani et al., 2016), are by no means attenuated. The emotional intelligence of project managers has been a key determinant in ensuring the effective functioning of project teams Stephens & Carmeli (2016). Although PMBOK gives some guiding suggestions on knowledge, skills, and personal abilities, discussion of the social abilities of the project manager has never stopped Davis (2011). Emotional intelligence is defined as “the subset of social intelligence that involves the ability to monitor

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one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (P. 189) (Salovey & Mayer, 1990). Emotional intelligence, which is associated with the intuition and skills needed for project managers to solve challenges, is crucial for successfully navigating projects (Akkermans et al., 2020; Crawford et al., 2006). The impact of project managers' EI on performance is not easily gained and may be lessened due to intrinsic features of project managers and key characteristics of projects (Lin et al., 2018). The complex project environment hinders and complicates the path towards project performance. The complexity of a project and the emotional involvement of its project manager are interwoven and are critical for project performance.

Although the existing research initially focused on the impact of project managers' leadership on project success, as the research continues to deepen, research on project managers' leadership gradually focuses on personal characteristics such as communication skills, emotional intelligence, and other knowledge and skills that contribute to project success (Geoghegan & Dulewicz, 2010; Khosravi et al., 2020). However, there is scant research on the EI mechanisms of project managers for project performance under different degrees of project complexity. A large majority of project managers regard EI as core ability, especially in the face of complex problems Clarke (2010). The project manager has to face the complex system as "first of its kind" (Sauser et al., 2009) and integrate the relationships among project members. Although EI is associated with project performance, diverging or even conflicting results have been found in the extant research (Ashkanasy & Dorris, 2017; Khosravi et al., 2020). There are still arguments about the actual impacts on performance in the research Rubin (2005). Previous studies have apparently failed to capture the impact of project managers' EI on the relationship between individuals and organizations and have not fully taken the complexity of the project context into consideration, which may be interpreted as an inflated influence of EI.

The first aim is to examine the link between the EI of the project manager and project performance to emphasize the effects of EI. There are still inconsistent conclusions in existing research on the effect of emotional intelligence. Prior empirical research has demonstrated that emotional intelligence can affect behaviour, performance and team performance (Ehrhardt et al., 2014). The project manager acts as a demonstrator in the work. Previous research has found that leaders' emotional intelligence has the most significant impact on employees' performance (Wu et al., 2011). Instead, Lindebaum (Lindebaum & Cassell, 2012) proposes that EI has a limited effect on project performance improvement, and it is difficult to improve project performance by training project managers in emotional intelligence. Positive emotions are taken as resources based on conservation of resource theory (Jianqun et al., 2019), the conversion of positive emotions is not inexhaustible, and the effectiveness of project managers using emotional intelligence needs empirical validation in a broad context.

The second aim is to explore the EI mechanisms of project managers for project performance from the perspective of project managers. A project manager's EI affects both him/her and his/her project team members. During interactions between managers and their subordinates, EI determines the role of managers Clarke (2010). A manager responds to intangible benefits within his/her team by increasing affective commitment to the organization. Research has shown that employees with high EI regard their relationships with their organizations as extensions of their relationships with their colleagues or managers Abraham (2000). Project managers' project commitment involves project work engagement, emotional recognition and loyalty to project objectives. Researchers have also highlighted the need to investigate the mediators or moderators of the relationship between EI and project performance (Rezvani et al., 2018).

The third aim of the present study is to assess the role of project complexity as a moderator of the EI-commitment relationship. As the complexity of a project increases, the need for more complex modes of interaction during the project leads to the success or failure of the project being related to management issues than to technical issues (Bjorvatn & Wald, 2018). In this regard, Bjorvatn reviewed recent research to highlight the importance of complex projects in developing social skills (Bjorvatn & Wald, 2018). The high complexity of a project accompanied by strong correlations and levels of uncertainty among elements Li (2008) may lead to the project manager becoming overly anxious. Conversely, complex projects also allow project managers to meet challenges and handle complex multidimensional relationships (Jalocha et al., 2013). Thus, the moderating role of project complexity enhances understanding of the conditions under which EI can influence project commitment. To achieve the above goals, this study poses the following two research questions:

- RQ1: What is the impact of project managers' emotional intelligence on project commitment and project performance
- RQ2: Does project complexity play a moderating role in the relationship between project managers' emotional intelligence and project commitment

According to conservation of resource theory, the role of emotional resources depends on the situation involved. This article aims to open the black box of how emotional intelligence affects project performance and provides practical means through which project managers can use emotional resources based on a sample of project managers in China. This article contributes to the application of conservation of resource theory to the project context. To explore the development of theory, this article adopts a quantitative-based empirical approach with the temporary organization of projects used as the unit of analysis and applies a composite-based SEM method, partial least squares (PLS-SEM), to assess the hypothesized model (Sarstedt et al., 2020). In the following section, the theoretical background of this work is provided; subsequently, the research methodology and design, including the hypotheses,

are developed, and then a data analysis and discussion are provided. Finally, the study's implications, limitations and conclusions are provided.

Emotional intelligence

EI is acknowledged apart from clinical psychology concepts of management owing to its notable impact on the emotional intelligence ability model Goleman (1995). Mayer first defined emotional intelligence as the ability to recognize emotions and use them to enhance thinking, including the ability to obtain accurate perceptions of one's own and others' emotions based on experiences, to use emotions to guide thinking and behavior, to understand emotions and to regulate emotions to promote.

Research methodology

This paper applies confirmatory theory by using statistical methods to test the empirical data and then accepting or rejecting the hypothesis model (Henseler et al., 2016). The research model used measures four constructs: the project manager's emotional intelligence and project commitment, project performance and project complexity.

Data analysis and results

The hypotheses depicted in our conceptual model (Fig. 1) were examined with PLS-SEM by using Smart-PLS 3.2.8 Hair J (2017). This technique is widely adopted in social science for its capability to test multiple endogenous and exogenous variables simultaneously (Hair and Sarstedt, 2019; Pesämaa et al., 2021; Shmueli et al., 2019) and is suitable for small and skewed data samples and complex models (e.g., mediation, moderation, and moderated mediation). The PLS software meets the requirements of

Discussion

This research has developed a conceptual model to study how project managers' emotional intelligence affects project commitment and project performance in projects with different degrees/levels of project complexity. Research examining project managers' emotional intelligence in complex situations is a rather recent phenomenon, given that emotions are often regarded as a dysfunctional and irrational phenomenon that distracts workers and controls attention Clark (2010).

Unit 6 Effective Strategies for Managing Communication in a Project

for Lesson 3. Communicating Effectively as a Project Manager

Task: Read this article and answer whether the sentence is true or false?

Lumi file 47file Question and answers (correct answers in bold)

Objective and Originality

The objective of this study is to examine most effective strategies for managing communication in a project. Our approach to managing communication is distinguished where we address four communication strategies that have comprehensive guidelines for a project team to implement smoothly.

Contributions

This study will allow project team to communicate effectively in both directions upward and downward and at different level of communications using various types of channels and at right level of information which will lead to the project success.

Research Methodology

The field of this study is purely about communication management and its effective strategies. We organize our search to be based on publications that have a focus on communication management in a project-based environment. We selected six publications that presents critical factors to enhance communication such human performance, corporate communications, stakeholder management and project management.

Literature

According to Neves & Eisenberger (2012), the literature of communication management has stated that communication management is key factor for the firm's success. Furthermore, Ramsing (2009) claimed that in recent years most of project managers have different educational background but with limited background in communication management. Communication management is defined as the skills required to move information which include speaking, listening, writing, and procedures of critical thinking with good knowledge and constructive feedback (ORourke, 2013). Good communication management in terms of accuracy, openness, and frequency of information about policies are positively linked to employee performance (Neves & Eisenberger, 2012). In contrast, poor communication can lead the firm to not meeting the organizational expectation as well as customer satisfaction (Ramsing, 2009). Another perspective of communication management is the concept of

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choosing the best communication channels and implementing them during the project lifecycle. Researchers have established the theory of media richness which is related to the different communication media such as memos, phone and email and to which level the organization uses amount of data that could be communicated (Byrne & LeMay, 2006). Furthermore, PMI (2017) considers communication management as a knowledge area in project management.

Results And Discussion

This study provides four effective strategies that support this significant knowledge area of communication management. Effective Strategies 1: PMI (2017) Communication Strategy An effective strategy for communication can be following the processes of communication management that are provided by Project Management Institute. PMI (2017) provides three main processes for communication management which are explained in Table 1. For the plan communication process, a project manager must state all the communication approaches that will be used during the project. Stakeholders may be internal or external to the company. So, the project manager must identify them and share the communication plan with them to ensure that all the elements of the communication plan are understood prior to the start of the project. In the second process, all stakeholders must be included to communicate, collect and share data with others and make sure the messages that being communicated are well understood. For the last step, the project team must keep watching and monitoring the communication activities during the project lifecycle.

Unit 7 Emotional Intelligence and Resilience for Embracing Change during Industry4.0

for Lesson 4. Embracing Complexity, Adaptability & Resilience

Task: Read this article and answer whether the sentence is true or false?

Lumi file 48file Question and answers (correct answers in bold)

Introduction:

Industrial revolutions generally are marked with innovative technologies employed in the field of manufacturing that have an impact on the economy of a country and its citizens. Till now the world has experienced three industrial revolutions and is in the midst of the fourth one. The first industrial revolution (1760-1840) which originated in Britain commenced with use of technology in manufacturing and slowly spread to the other continents as well. The transition from hand production methods to machine production processes was truly revolutionary and

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its impact was huge and pervasive. While the first industrial revolution was marked with the mechanization of manufacturing processes through water and steam power, the second industrial revolution happened with the advent of electrical power in manufacturing processes. The fourth industrial revolution is the continuation of the third where computers entered the world of manufacturing. Though some industrialists do not believe in naming this as a separate phase of development and consider it as a natural progression of the third industrial revolution, the invasive effects of this phase has compelled the usage of a separate term for this as industry4.0. Though the computers were introduced in the third industrial revolution, in industry 4.0 they will connect and communicate with each other to make decisions without human interference (Ślusarczyk, 2018).

Thus making the so called “smart factories” a reality.

Every industrial revolution has successfully created notable economic upheaval and changes in the organization structure. Along with sustained and unprecedented growth an industrial revolution brings about irreversible changes that have the ability to affect the human resources of a firm, both in a positive and negative way. With the advent of machinery and automations, manufacturing processes have become simpler thus eliminating much of the physical labor which was previously carried about by the employee. While this can be attributed as one of the positive aspects of these industrial revolutions, enhanced complexity of jobs, increasing demands from the human resources for productivity, continuous innovations and creativity have doubled the emotional labor of an employee. Moreover, the introduction of artificial intelligence requires the employees to engage in continuous up skilling and increase their technical competence. This may be simpler when considering the young working force in developed countries, but when it comes to the underdeveloped and developing countries the employees are slightly older and not familiar with the new technologies (Transtenjak and Cosik, 2017). All these demands are bound to create emotional pressure for the employees and change their way of life in innumerable ways. But like any change, these industrial revolutions will persist and it is only wise to be prepared to embrace them. Since when utilized properly they can lead to exponential growth of an organization. Standing on the verge of the fourth industrial revolution or I4 as it is popularly called, it is high time that we explore on how ready are we to embrace it?

The basic concept was first presented at the Hannover fair in the year 2011. Since its introduction, Industry 4.0 in Germany is a common discussion topic in research, academic and industry communities at many different occasions.

The term Industry 4.0 was gifted to the world by Germany. The basic concept was first proposed at the Hannover fair in 2011 and then formally adopted by the German government in its 2020 strategic plans in 2013. It is the contemporary issue that is of major concern to the manufacturing sectors of the world (Sommer, 2015). It marks the beginning of the current trend of automation and data exchange in manufacturing technologies. It comprises of the

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cyber-physical systems, the Internet of things, cloud computing, cyber security, intelligent robotics, PLM, semantic technologies, industrial big data, computational vision and cognitive computing (Baena et al., 2017; Posada et al., 2015; Dallasega et al., 2018). Basically it is one of those phases where technology will change the way things were manufactured. Industry 4.0 offers a lot of opportunities to the organizations that are willing to grow and expand. With the aid of smart technologies, manufacturers can optimize their operations efficiently and quickly by knowing what needs attention. Similar to the other industrial revolutions, industry 4.0 also carries with it certain uncertainties and ambiguities which will be needed to be dealt with by the organizations who wish to survive and sustain. The foremost requirement will be the financial cost for implementing such advanced technologies, which could be difficult for new entrants and SMEs. Secondly generation of large amounts of data requires big time data analysis. Though this will be taken care of by the cyber-physical systems (CPS), internet of things (IoT), cloud computing etc, the involvement of human resources cannot be overlooked. To manage this herculean task, the organization's human capital will have to be exemplary and smarter than the machines they monitor. Human professionals will be obligated to adapt and change since the roles that are known to them are highly likely to get a different structure during industry 4.0. Workers have to learn to deal with new situation and accept the term of life-learning process (Ansari et al, 2018), constantly improving their performance (Transtenjak and Cosik, 2017). Hence organizations need to focus in future proofing their employees before they adopt technologies and automation, since the competitiveness of an organization is more defined by their competent workforce rather than machines and systems (Bauer et al, 2015). Keeping in line with this view a study by Hecklau et al (2016) has come up with a competency model for the development of human resources of an organization to overcome the challenges of industry 4.0. Hence human resource development will play a more prominent role during industry 4.0.

With increase in competitors worldwide and the need for process customization to suit rapidly changing customer requirements, there will be a huge demand for innovation, creativity, and enhanced skill level from the human resources of an organization (Hecklau, 2016). The pressure to perform will be more than ever and in such situations an employee will have to be equipped with a certain flexibility and adaptability which can only be facilitated by his/her emotional intelligence.

„RULE YOUR FEELINGS LEST YOUR FEELINGS RULE YOU“

Emotional intelligence refers to a set of skills that contribute to accurate appraisal and expression of emotions in oneself and in others, effective regulation of those emotions and the use of feelings to motivate, plan, and succeed in one's life. (Meyer and Solovey, 1990). These are the four basic skills that an emotionally intelligent person is known to possess. Though the concept of emotional intelligence first appeared in a paper published by Michael

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Beldoch in 1964, Meyer and Solovey were the first to develop a model for emotional intelligence in 1990.

However the term gained popularity after the Goleman's book of 1995, titled, "Emotional Intelligence – Why it can matter more than IQ". The reason why the term was acknowledged could be because Goleman had invariably shown the much larger scope of emotional intelligence and how it is related to an individual's achievement in both work and life settings. Earlier experiments conducted on patients suffering from brain damage have shown significant overlapping between general intelligence and emotional intelligence in terms of behaviour. Like Goleman various scholars, like Bar on (1985) Instead and Huy (1999) Parker(2004), have empirically tested the significance of emotional intelligence and found that sometimes EQ can be more important than IQ especially when the individual is facing difficult and challenging times. Emotional Intelligence of an individual apart from predicting his/her performance (Cote and Miners, 2006) and leadership attributes (Downey, Papageorgiou & Stough, 2005), team cohesiveness and learning propensity also gives an individual emotional clarity that helps them to face the obstacles and hurdles better in life. (Berrocal et al, 2006). The emotional intelligence of an individual helps them to engage in adaptive behaviour in the face of challenges. This can be well associated to industry 4.0 wherein the work environment will most likely be unpredictable and challenging. Success is as important as survival during industry 4.0 since it is not a temporary, but a continuous and persisting phase. Organizations that fail to revamp their resources might run the risk of extinction. As industry 4.0 takes shape countries across the world are acknowledging the work complexities their human operators will be facing in no time (Longo et al, 2017).

„TOUGH TIMES DON'T LAST BUT TOUGH PEOPLE DO“

While the organizations aim to bank on the opportunities of industry 4.0, failures and setbacks will be common. But it will depend on the mindset of its human resources and their perception of these setbacks that will influence the success and sustainability of these organizations. Resilience is one such factor that can have significant influence on an individual's mindset in the face of adversity.

Resilience is defined as "the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks" (Walker et al. 2004). Resilient individuals recover from adverse situations more quickly than individuals who are not resilient enough (Bonanno, 2004). Thus, the resilience of an organization's human resource will help it to spring back to normalcy when confronted by challenges and gain the lost momentum. Study by Andrew et al, (2011) have also shown that emotional intelligence is an antecedent to resilience. Thus, the proposed theoretical model envisions that when employees are emotionally intelligent and resilient, they will be better



able to embrace changes and this in turn will ensure an organization's success during industry4.0.

Methodology

The study is descriptive in nature and has utilized data collected from journals like EBSCO, EMERALD, Research gate to propose the research hypothesis.

Theoretical Framework

Industry 4.0 or the age of digitization is based on the four principles of interconnected network of machines, information transparency, enhanced technical assistance and decentralized decision-making. These advanced technologies are aimed at helping organizations to face challenges like heterogeneous markets, global competition, constantly changing consumer demands and shorter production to market time cycles. While simple monotonous processes will become automated, the other procedures will become more complicated (Becker and Stern, 2016) and changing of job profiles will become inevitable (Hecklau 2016). The Inclusive Growth and Development Report 2017 on future jobs in the context of industry 4.0 asserts that disruptive changes in the employment landscape are likely to occur during this phase. It foresees significant job creation, job displacements, and widened skill gaps among the other changes. It quotes the findings of a popular study by McLeod, Scott and Karl Fisch (2009), which states that 65% of children entering primary school today will mostly end up working in completely new job types that don't yet exist.

While many research scholars are contemplating the readiness of organizations to implement industry4.0, a survey conducted by the software giant Infosys in collaboration with the Institute for industrial management at the University of Aachen, Germany (2015) reveals that only 15% companies worldwide have dedicated strategies in place to implement industry4.0. The survey was conducted among 400 companies in five highly developed countries like China, France, Germany, UK and the US. The survey results also show that 85% of companies are aware of the concept and China has the largest number of early adopters. Another study conducted by Basl (2017) has identified that insufficient skills and training as one of the causes for not implementing Industry4.0 in companies of Czech Republic. Thus, confirming that successful implementation of industry4.0 demands skills and sufficient training for the organization's human capital. The study also concludes that creating awareness about industry 4.0 is essential to motivate employees to embrace industry4.0 and accept it as the norm. The other track of research about industry4.0 deals with scholars trying to propose models enumerating the competencies and skills that will be required from the employees. A study by Benesova and Tupa (2017) has proposed a set of skills and qualifications that will be demanded by the various professionals during implementation of industry 4.0 in

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manufacturing companies. Skills like flexibility, problem solving capacity and also willingness to learn are mentioned as requirements for almost all jobs. The duo believes that the existing employees will have to be retrained if the organizations are willing to implement industry4.0. Hecklau et al (2016) in their study about a holistic HRM approach for industry4.0 have enumerated on the challenges the organizations will most likely face during industry4.0 and the various competencies that the employees will need in order to combat these challenges. They have categorized the various competencies as Technical, Methodological, Social and Personal competencies. While the technical competency is about constantly updating of one's knowledge related to their respective field of expertise, the social and personal competencies of an individual constitute his/her emotional intelligence. The required traits like flexibility, ambiguity tolerance, motivation to learn, ability to work under pressure, sustainable mindset, compliance, ability to cooperate, networking and communication skills as identified by the authors are determined mostly by the emotional intelligence of the employees. According to the study these core competencies decide the readiness of the employees for industry4.0 and are crucial to its successful implementation. According to Bradberry and Greaves (2009), the four skills of emotional intelligence i.e. self awareness, self management, social awareness and relationship management pair up under the two competencies namely personal and social competencies. They believe that emotional intelligence is the foundation for a host of skills like change tolerance, flexibility, stress tolerance, time management, social skills and decision making. Irrespective of the job type Emotional intelligence is known to account for 58% of performance. Scott and Chan (2004) have synthesized a theoretical model that shows how when properly harnessed, emotional intelligence can improve the organization's ability to manage change and improve performance outcomes. Winkler and Flaum (2015) highlight the study by Meyer and Solovey to confirm how emotional intelligence of a person increases his learning agility and change accepting propensity. To keep in pace with changing times an employee should be willing to learn and stretch from his/her comfort zones while demonstrating more adaptability than resistance. Huy and Insead (1999) also believe that emotional intelligence facilitates individual adaptation and change which in turn increases the likelihood for organizations to realize radical change. Revolutionary changes like industry4.0 are likely to trigger mixed emotions among the human resources of an organization. During the implementation process small setbacks will be inevitable, and only emotionally intelligent employees with a stronger sense of self worth will be able to balance the emotions and progress. Emotional intelligence also helps them to draw on their inner strength to face adversities and bounce back to normalcy by building on their resilience. Armstrong et al (2011) studied the impact of emotional intelligence on the resilience of 414 individuals who have faced adversities in life. The study confirms that emotional intelligence appeared central to psychological resilience of the individuals. Keeping in line with this finding, is a study conducted by Edward and Warlow (2005) which infers that to cope with adversities emotional intelligence and resilience are required and that they can be developed through support and



training programmes. Similarly, a study by Bahram (2007) with 557 participants has revealed that emotional intelligence was a stronger predictor of resilience than cognitive intelligence thus proving that emotional intelligence has a significant impact on the resilience of an individual. Hence employees with high emotional intelligence tend to become more resilient in due course of time. Resilient individuals expend less effort in assimilating organizational change and therefore have greater potential to improve productivity and quality. Mallak (2016) has expressed his view that resilient individuals tend to participate in positive coping behaviour when confronted with adversities and have greater tolerance for ambiguities. He also stresses on the fact that resilient organizations seek better processes for dealing with uncertainties and turbulent business situations. Thus a considerable level of emotional intelligence and resilience helps employees to better cope up with challenges and setbacks induced by Industry4.0 within organizations.

Based on the arguments stated above the study proposes the following hypothesis :

- H1: Emotional intelligence is significantly related to resilience of employees.
- H2: Emotional intelligence and resilience of employees is significantly related to organization's capability to embrace industry4.0

Research implications

The above stated hypothesis needs to be tested with data collected from employees to ascertain the impact of emotional intelligence and resilience of employees on an organization's capability to embrace change imposed during industry4.0. The study tries to understand and establish the relationship between emotional intelligence and resilience of employees and their impact on an organization's ability to embrace change in the face of industry4.0. In a work environment full of ambiguity and uncertainty, it is essential to conduct studies of this nature in order to explore and identify factors that can enhance an organization's ability to embrace change. Studies in this context support the study hypothesis that emotional intelligence enhances an individual's resilience and this in turn accentuates an organization's capability to embrace change effectively. Emotionally intelligent people have considerable control over their emotions and possess social skills that help them to navigate through tough times. When people are well aware of their emotions, they are able to steer them in a positive way even during challenging times. Such people are able to recover from setbacks and are resilient enough to handle pressure. When such employees are there in an organization, the atmosphere within the system is conducive to change. The studies regarding industry4.0 predict the ambiguous and uncertain nature of the work environment that will prevail during its implementation. Since we are already in the midst of industry4.0, it is only advisable that organizations resort to strategies and training modules that will enhance the emotional intelligence of the employees and prepare them for the future. Only a workforce

with greater flexibility and a mindset to embrace change will be able to determine the success and sustainability of an organization during times like industry4.0. This study finds conformity with Charles Darwin's ideology about change that, "It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change."



Unit 8 Promoting equity, inclusion, and efficiency: A team science approach to the development of authorship guidelines for a multi-disciplinary research team

for Lesson 5. Promoting Diversity, Equity and Inclusion in Project Teams

Task: Read this article and answer whether the sentence is true or false?

Lumi file 49file Question and answers (correct answers in bold)

Introduction

Advances in clinical research are increasingly generated by large multi-disciplinary teams, and sometimes these teams are organized into even larger groups such as research consortia. Distributing authorship opportunities amongst the members of these large groups and identifying those who prefer or even expect to be included in writing manuscripts can pose a challenge. Factors that contribute to these challenges include differences in disciplinary norms, institutional culture, and career status [Reference Hesselmann, Schendzielorz and Sorgatz1–Reference Cutas and Shaw4]. Less experienced team members may be unfamiliar with the range of publication practices and may find it difficult to navigate authorship roles [Reference Cutas and Shaw4, Reference Gómez-Ferri, González-Alcaide and Llopis-Goig5]. Nevertheless, there has been growing appreciation of the importance of equity and inclusion in manuscript development to promote the professional growth and work satisfaction of team members [Reference Levites Strekalova, Qin and McCormack6, Reference Conn, Ward and Herrick7].

The International Committee of Medical Journal Editors (ICMJE) has developed recommendations that provide criteria regarding what are sufficient contributions for authorship [8]. These guidelines provide an important framework for confirming authorship criteria have been met at the time of submission. However, they do not offer prospective guidance for who should lead the manuscript and who should be involved in its development. In addition, while previous literature addresses authorship disputes within multi-disciplinary research teams and what is considered sufficient criterion for authorship [Reference Birnholtz9–Reference Bozeman and Youtie13], less has been written about how large research teams can engage in these prospective processes that provide structure and clarity to authorship roles and responsibilities, thereby sharing authorship opportunities equitably. Furthermore, manuscript preparation can become progressively time-intensive and burdensome to navigate as the size of the authorship group increases [Reference Youtie and Bozeman14].

Team science is an organizational approach that aims to facilitate engagement within interdisciplinary teams to support team collaboration and mitigate conflict through

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communication and the development of standard processes [Reference Moshontz, Ebersole, Weston and Klein15]. In this manuscript, we describe how we used a team science approach to develop an equitable and inclusive authorship process for our large multi-disciplinary, multi-site research project.

Materials and Methods

The CHARM study was a genomic medicine implementation study that sought to increase access to genomic testing for hereditary cancer syndromes for individuals from low-income, low-literacy, and Spanish-speaking populations [Reference Mittendorf, Kauffman and Amendola16]. The CHARM team consisted of approximately 75 multi-disciplinary members across ten institutions and several time zones. The team was organized into working groups with overlapping members, dedicated to different aspects of the study. Each working group had a designated “team lead” who was responsible for leading that aspect of the study, including major manuscript decisions, in collaboration with the principal investigators. CHARM is one of seven CSER (Clinical Sequencing Evidence-Generating Research) Consortium Studies organized by NHGRI [Reference Amendola, Berg and Horowitz17]. Throughout the project period, CHARM held bi-weekly virtual meetings that all investigators and staff were encouraged to attend and actively participate in. Halfway through the study, discussions about manuscript planning during these meetings revealed variations in the expectations of team members and in team members’ previous experiences with authorship and manuscript development.

Recognizing the concerns team members expressed as manuscript development intensified, the CHARM Team Science Working Group was tasked with developing CHARM authorship guidelines. In the summer of 2020, the working group led four simultaneous virtual small group hour-long discussions on authorship with the team. Each session was moderated by a senior investigator (BB, GJ, SL, KA) with experience leading focus groups. A scribe was assigned to each group to take notes. Team members were purposively assigned to groups of 8–10 team members that included investigators and research staff across all institutions and working groups of the CHARM study. The moderators facilitated the discussion using four prompts: (1) “What does authorship mean to you? Why is it important?,” (2) “What has been your experience with authorship in the past (other studies and CHARM)?,” (3) “What challenges have you experienced?,” and (4) “What processes may help to address challenges that may arise?”

In the weeks following the small group sessions, the CHARM team convened for a large group discussion facilitated by BW to promote interactive discussion and elicit further feedback. The notes from the small and large group discussions were summarized and compiled by a project manager (HL). The challenges and suggestions identified were inductively organized

into values and principles by our Team Science Working Group (BW, KG, HL, BB, SL, GJ) to guide the development of a standardized approach to authorship.

CHARM principal investigators (BW, KG) drafted an authorship guidelines document to address the specific authorship goals of the CHARM team. These guidelines drew from the equitable and inclusive authorship approach recently developed at the Kaiser Permanente Center for Health Research (unpublished internal institutional policy). A draft of the guidelines was presented to the CHARM team via email and at team meetings for feedback. Once the revised guidelines were circulated to the team, CHARM team members (TK, CJ, JB) developed specific processes and approaches to support the guidelines.

Results

CHARM Team Authorship Discussion

The meaning of authorship: Most team members viewed authorship as valuable to their career advancement and meeting performance goals. Authorship was also seen as especially valuable for those early in their career to gain experience and recognition, including the importance of taking on first and senior authorship roles during manuscript development. Some team members viewed authorship as an explicit expectation of their institutional role. Others, including some of those who were involved in specific tasks such as recruitment or genetic laboratory analysis, acknowledged the value of inclusion in some manuscripts to reflect their contributions, even if not an institutional expectation of their role. The discussion groups recognized that authorship expectations can differ among individuals, depending on one's discipline, career stage, role within the study team, and/or institution. The expectations may be related to the meaning of authorship order, speed of publication, and co-authorship responsibilities.

Past experiences and challenges with authorship. One key challenge team members identified was determining who should be the lead authors, i.e. first and last (senior) authors. Team members reported past experiences that were, at times, both awkward and difficult, particularly when more than one team member perceived that they had contributed equally to the work related to the topic of the manuscript. Additionally, some team members noted that the traditional model of the project principal investigator being the senior author was problematic for this large multi-disciplinary study that involves diverse, multiple senior leadership. They also expressed some confusion as to who was responsible for determining the first and senior authors and their responsibilities for a manuscript.

The second key challenge involved inclusion as a coauthor. There was concern that in a large research team, many team members may meet authorship criteria, but it was challenging to identify these potential authors because of the fragmented way our work was conducted across multiple institutions and working groups. People working on the same project might

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never have any direct interaction with each other or be fully aware of who is engaged in moving the work forward. It was also unclear whether team members involved in core tasks, such as recruitment and data analysis, should always be included as coauthors, especially because it could be infeasible or burdensome for those team members given the number of manuscripts expected to be produced by the study. Some team members expressed frustration that there were occasions in which they were unaware of a manuscript that was in progress to which they would have liked to contribute. Some team members felt that to be included on a paper required an assertiveness that, on bigger teams, can feel uncomfortable or perceived as self-promotion. Conversely, team members also discussed the burden of having too many coauthors on a manuscript, which could substantially delay receiving feedback and lead to a greater likelihood of having to resolve contradictory feedback.

Processes to address the challenges of authorship. The small group participants recommended clarifying expectations for each authorship role in manuscript writing. Team members recommended using an acknowledgments section, or when allowed by a journal, a “non-author contributor” list, to recognize team members who made contributions to the research and did not have the capacity to be involved in fulfilling all responsibilities of co-authorship. CHARM team members further suggested creating a visual dashboard to display every team member’s involvement in each manuscript. This created an opportunity to improve equity of lead authorship and inclusion in authorship amongst team members.

Additional recommendations addressed the culture of authorship. Team members recommended that potential authors be transparent and communicate about their capacity to contribute to a manuscript. Team members suggested supporting one another to advocate for themselves in the writing process, while also recognizing that some are uncomfortable with advocating for themselves in a large research team. Team members also discussed the need for a process to moderate differences in approaches to a manuscript, calling for collaborative engagement between lead authors and team leads to deliberate options and arrive at a solution.

Authorship Guidelines

Following the group discussions, recommendations were incorporated into existing tools and approaches and were also used to aid the development of new tools and approaches. For instance, at the outset of CHARM, the team created and implemented a concept sheet for each manuscript as a tool to define a manuscript’s scope, analysis plan, and audience as well as which team members may be involved (see supplementary material 1). The CHARM team leads were typically responsible for generating a concept sheet. The Team leads were the group of investigators who directed key aspects of the CHARM study, often representing different institutions, and including roles such as the multiple principal investigators, site

principal investigators, program director (administrative lead), and co-investigators leading critical functions of the study. They had expertise in a variety of areas of practice (i.e., genetic counseling, laboratory science, patient engagement, health systems) and worked collaboratively with the study principal investigators and study methodologists (quantitative and/or qualitative) to create the CHARM analysis and dissemination plan, including determining the lead authors for each manuscript. The concept sheet process was incorporated by the Team Science Working Group into the authorship guidelines.

The guidelines included three components to support the authorship objectives of the CHARM team. One component clarified the roles and responsibilities of authors. A second described the CHARM study's values and related principles to uphold these values. Further, the guidelines established several implementation approaches to support manuscript authorship decisions, writing processes, and management of the manuscript. The goal of the guidelines was to set expectations that promote a cohesive authorship culture within the CHARM team. They were intended to be inclusive in offering co-authorship to all who contribute to the research and to support junior researchers taking on leadership roles.

The guidelines defined author roles for each manuscript (see Table 1). The lead authors for each manuscript guided the analysis and writing and were typically the first and last authors. The primary writing group is the core group involved in the details of the manuscript development. The secondary writing group is not involved in drafting but meets authorship criteria under ICMJE guidelines due to their involvement in editing the manuscript.

The CHARM guidelines articulate three core values of equity, inclusion, and efficiency with associated principles for each in authorship opportunities. In this context, equity refers to the distribution of leadership roles in manuscripts. Inclusion refers to including those team members who would like the opportunity to contribute to manuscripts and have made a sufficient contribution. Efficiency refers to developing processes to prospectively facilitate the development of the manuscript to reduce the overall time and effort required to produce the manuscript. Each value (equity, inclusion, and efficiency) is connected to principles and implementation approaches.

Equity: Our team identified three authorship principles related to equity. First, team leads should distribute lead authorship opportunities among team members who are guiding key aspects of the study. Second, team leads should encourage junior team members to be first author with mentorship from a senior author. Third, lead authors are also expected to identify second and third authors and up to two additional senior authors. The rationale for identifying these roles close to the onset of working on each manuscript was to clarify roles and broaden leadership within the team.

We developed a tool in Smartsheet (CJ, JB), a cloud-based work management platform, which allowed the CHARM team to visualize who was involved in each of 34 CHARM manuscripts

(ranging from planned to published) and authorship roles for each team member. The first author entered information into a form that populated the Smartsheet for each manuscript, including the authors, their role in the manuscript, and institutions. Monthly automated requests were sent to first authors asking that they update the information, which helps to capture changes to authorship lists during manuscript development. Data were displayed as a visual dashboard to summarize authorship distribution across the CHARM team. The dashboard listed all team members across the various CHARM sites and displayed a stacked bar chart showing the manuscripts and the authorship roles that have been filled by team members (see Fig. 1). The dashboard was accessible to all team members and promoted equity by providing a visual aid to identify which team members have or have not been lead authors. In addition, the dashboard promoted inclusion by identifying team members who might have been overlooked as a coauthor on each manuscript and promoted efficiency by tracking the progress of manuscripts and helping with the management of manuscripts across the project via automated update requests. The template the CHARM team created is available.

Team leads and lead authors are expected to identify the writing teams on the concept sheet. The concept sheet is reviewed by the principal investigators and by all the team leads and is presented at team meetings. At each step, team members can nominate others or themselves for the paper. The concept sheets, as well as the dashboard, were accessible to all team members in cloud-based files to promote transparency in manuscript development. We also created a “non-author” contributor list of current and past team members that could be used on any paper, to be acknowledged “on behalf of the CHARM team.” This allowed those who have received funding support from the grant or have contributed significantly to the project to be recognized even if they were not authors on a paper.

Efficiency: The first efficiency principle advises team leads to be realistic about the capacity of the team members to lead papers. This is important to ensure that progress on a paper is made in a timely way. In addition, team leads are advised to focus on completing manuscripts that are of highest priority. We appreciated that this prioritization could allow us to write the most important manuscripts with more engagement of the team compared to what might happen if too many papers were planned to be written at the same time. A correlated second principle is for team members to be realistic about their own capacity to fulfil the obligations of being a lead author or part of a writing group when deciding whether to commit to work on a manuscript. Third, the coauthors should take responsibility to be actively engaged in the development and/or review of manuscripts, including communicating with the lead authors in a timely manner and proactively asking for more time, if needed.

To implement our efficiency principles, project managers were assigned to each manuscript to facilitate efficient development and review of manuscripts. These project managers established clear timelines and deadlines. They were expected to forecast expectations for

each step to promote responsiveness to timelines by all authors. Lead authors were encouraged to limit the number of rounds of review. If a secondary author did not respond to deadlines, team leads were expected to follow up and keep the paper moving forward.

Discussion

The CHARM team developed authorship guidelines by participating in a collaborative process [Reference Moshontz, Ebersole, Weston and Klein15]. The guidelines promote equity in lead/senior authorship opportunities, inclusion of team members as coauthors, and efficiency in manuscript writing. While the ICMJE [8] guidelines aid in the retrospective determination of authorship, the CHARM guidelines illustrate how study guidelines can be used to prospectively direct authorship roles to meet the ICMJE guidelines.

In addition to efficiency, the values of equity and inclusion have become increasingly recognized as essential to the success of academic pursuits. While the use of the concepts in our authorship guidelines differs from the more traditional meaning of advancing equity and inclusion by centering the importance of underrepresented team members in the research enterprise [Reference Wedekind, Noe and Mokaya18, Reference Mori19], using equity and inclusion as a lens for the development of these guidelines promotes leadership in manuscript development and promotes recognition of team member contributions. Our team chose to emphasize the equitable distribution of lead author responsibilities because of the value we place on personal and professional development of team members. We emphasized inclusion because of the value of acknowledging the contributions of our team members, the vast array of disciplines they represent, and the variety of expertise they contribute to the success of the research endeavour. However, our fundamental rationale is a belief that a manuscript development process that embraces equity and inclusion will result in better science and better training for the next generation of researchers. An approach to authorship that optimizes these values can still support an efficient manuscript process by expecting all coauthors to respond to requests for input in a timely manner, as well as additional strategies, including limiting the number of revisions, using a software platform that allows simultaneous revisions, or proposing a deliberate method for sequential revisions by each author.

Large research teams and consortia, such as the CHARM study, are uniquely positioned to produce multiple manuscripts to communicate the research activities. Investigation into multifaceted research questions can result in multiple papers that allow for broader opportunities for team members to lead or be included as a coauthor on a manuscript. Further, by using a non-author contributor list, additional team members can be recognized for their contribution to the success of the research project, although they may have not been able to or did not choose to meet ICMJE authorship criteria in on a particular manuscript.

Large research teams can specifically offer opportunities to achieve equity and inclusion, given the number of manuscripts to be written and published.

The principles incorporated in the CHARM authorship guidelines reflect the values and challenges identified by team members within our group process. This process led to guidelines that were unique to the CHARM team, yet other large research teams and consortia can engage in a similar process to develop guidelines that serve their needs. The method for creating the guidelines generates opportunities for research teams to collectively engage in a process that can improve collaboration, communication, team dynamics, and the research endeavour.

While these guidelines have been implemented for the CHARM study, there remain several caveats. We did not assess whether these approaches are effective in improving equity, inclusion, and efficiency in manuscript development. We did not review how well the team members adhered to the guidelines. It is unknown whether the use of these guidelines will support resolution of any conflicts between team members. Future research should address the impact of these approaches.

The CHARM team process to develop authorship guidelines used a team science approach to facilitate communication and establish clearer expectations amongst authors and team members in the writing process with a goal to the engagement of the research team. The process used to develop these guidelines and the values identified may be useful to other multi-disciplinary, multi-institutional research teams who face similar challenges.

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Unit 9 How to Build Lifelong Learning Skills

for Lesson 6. Becoming an independent lifelong learner

Task: Read this blog and answer the questions:

Lumi file 50file Question and answers (correct answers in bold)

1. Cultivate a growth mindset

While a fixed mindset hinders you from becoming a lifelong learner, a growth mindset emphasizes student agency and continuous changes. With a growth mindset, “you believe your intelligence and life skills can be developed with concerted effort and thoughtful feedback, not that they’re innate and immutable,” the University of Phoenix shared. If you have an idea of what you want, there’s always a way to get there.

Students who are armed with a growth mindset continue to improve their skills and grow both personally and professionally during every season of life. Kevin Dickinson, writing for Big Think, suggested that students should “recognize that they will always have room to grow.”

2. Set SMART goals

SMART goals are specific, measurable, achievable, relevant and timely, which help keep lifelong learning on track. The following five questions can help you make sure the goals you agree are SMART:

- Specific: what do I need to do?
- Measurable: how will I know I have been successful?
- Achievable: can I do it on my own or with a little help?
- Relevant: will it help me be better at one certain subject?
- Timely: when do I need to complete it?

Such a framework can help students become disciplined and emboldened to set goals and obtain achievements in an effective manner. It also boosts continual reflections, allowing students to “view their investments of time, energy, and resources through the lens of what is most important for them to achieve their aspirations.”



3. Find motivations

Figuring out what inspires you puts you in the driver's seat to achieve what you want to do. Curiosity may have killed the cat, but it's what sustains a lifelong learner. Re-igniting what makes you tick as a person reduces boredom, makes life more interesting, and can even open future opportunities.

Dickinson believed that "the transition from studying course material to obtain a good grade to learning in order to attain continual self-improvement or career advancement may be the most important paradigm shift that a lifelong learner will make."

4. Encourage independent learning

Online education that predominates in the 21st century can serve as a practical model where many teachers laid more emphasis on students' autonomic and independent learning with the aid of technology.

As a pioneering advocate of the adoption of self-directed learning, Malcolm Knowles dissected such mode into five steps: individuals take the initiative, with or without the assistance of others, in.

- 1) diagnosing their learning needs,
- 2) formulating learning goals,
- 3) identifying human and material resources for learning,
- 4) choosing and implementing appropriate learning strategies, and
- 5) evaluating learning outcomes.

In a word, research showed that independent and self-directed learning offers learners the "freedom and autonomy to choose the what, why, how, and where of their learning."

5. Foster critical thinking

Dr. Peter Facione defined critical thinking to be "purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based."

It is intertwined with diverse cognitive, interpersonal and intrapersonal competencies, including creativity, self-direction, motivation, effective communication, and more, which pave the way for students to become lifelong learners.

6. Use technology



We live in an age with access to an abundance of information, rapid changes in technology tools, and the ability to collaborate and make individual contributions on an unprecedented scale. To be lifelong learners in the 21st century, students must be able to exhibit a range of independent learning and critical thinking skills related to information, media and technology.

One way to blend technology with lifelong learning is through the use of edtech. There are plenty of platforms directed at online learning, among which ClassIn plays an active and essential role. For example, it provides a platform for learners to learn independently, think creatively, and act cooperatively.

Lesson 2 – Activity

1.1 Activity for Unit1

Lumi file 51file Question and answers (correct answers in bold)

Agile project management emphasizes flexibility and customer feedback throughout the project life cycle.

A. True

B. False

2.1 Activity for Unit 2

Lumi file 52file Question and answers (correct answers in bold)

The agile leadership model is appropriate for the Industrial Revolution 4.0 era.

A. True

B. False

3.1 Activity for Unit 3

Lumi file 53file Question and answers (correct answers in bold)

Human resources focus on recruiting a project manager with high understanding of emotional intelligence considering the importance of maintaining well relationships with all stakeholders involved within the project.

A. True

B. False

4.1 Activity for unit 4

Lumi file 54file Question and answers (correct answers in bold)

Risk management is considered insignificant for the success of a business or project.

A. True

B. False



5.1 Activity for Unit 5

Lumi file 55file Question and answers (correct answers in bold)

The research aims to examine the link between a project manager's emotional intelligence and project performance.

A. True

B. False

6.1 Activity for Unit 6

Lumi file 56file Question and answers (correct answers in bold)

Feedback mechanisms do not enhance the impact of communication efforts.

A. True

B. False

7.1 Activity for Unit 7

Lumi file 57file Question and answers (correct answers in bold)

In industry 4.0, computers will connect and communicate with each other to make decisions without human interference.

A. True

B. False

8.1 Activity for Unit 8

Lumi file 58file Question and answers (correct answers in bold)

All team members viewed authorship as valuable for career advancement and meeting performance goals.

A. True

B. False

9.1 Activity for 9

Lumi file 59file Question and answers (correct answers in bold)

SMART goals include specific, measurable, achievable, relevant, and timely criteria.



A. True

B. False



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WP3 Design And Development of the HyPro4ST Online training Course and Practical Guide Module 6 – Additional Material

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Erasmus Plus Programme, KA 2: Cooperation Among
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Lesson 1: Communication in projectized organization

Unit 1: Introduction

"Communication is both a process and an activity. It is a process of information exchange using a common system of symbols, signs, or behaviors (Cleland 1994; PMBOK 2004). It is an activity that consists of defining the communication needs and expectations for the project; how, when, in what format and by whom and to whom, information will be exchanged; it is based on the requirements of the stakeholders." (Ying and Pheng, 2014)

Unit 2 Theoretical chapter: Communication in projectized organization

PowerPoint presentation

Introduction

Much of the project work is associated with communication and engagement, especially maintaining the engagement of project team members and other stakeholders.

Communication entails formal and informal communication, in addition to verbal and written communication.

Types of organizational communications (Project Management Institute, 2017; 2021⁶)

Internal communication focuses on ensuring effective communication between managers and employees and among employees in different parts of an organization. This is vital for regulating employee behaviour in a way that helps to deliver on the organization's objective, for innovation in changing how things are done, and for information needed by employees to perform their duties.

External or inter-organizational communication focuses on exchanging information with external parties, i.e., stakeholders (clients, local communities, national agencies).

Internal and external communication should be seen as mutually intertwined because the other will likely be detrimentally affected if one is ineffective.

The internal communication

Understanding communication within organizations is vital because, without effective communication systems and procedures, they cannot manage the complex flow of information necessary for interaction with their internal and external environment.

Organizational communication can also be distinct in formal and informal forms of interaction. Formal communications are the accepted communication system within organizations; they are the official sources of information that use prescribed channels. Informal channels are communication routes other than those identified by the organizations, e.g., emerge through friendships or contacts between individuals willing to cooperate (Emmitt and Gorse 2003).

How to manage a project team?

Managing the project team requires various management and leadership skills for fostering teamwork and integrating the efforts of team members to create high-performance teams.

Team management involves communication, conflict management, negotiation, and leadership skills.

Conflict management and communication

Conflict is inevitable in a project environment. Sources of conflict include scarce resources, scheduling priorities, and personal work styles.

Team ground rules, group norms, and solid project management practices, like communication planning and role definition, reduce the amount of conflict.

If conflict escalates, the project manager should help facilitate a satisfactory resolution. Conflict should be addressed early, usually privately, using a direct, collaborative approach. Formal procedures may be used if disruptive conflict continues, including disciplinary actions.

The success of project managers in managing their project teams often depends on their ability to resolve conflict. Different project managers may use different conflict resolution methods.



Techniques for resolving conflict

There are five general techniques for resolving conflict:

- Withdraw/avoid

Retreating from an actual or potential conflict situation; postponing the issue to be better prepared or to be resolved by others.

- Smooth/accommodate

Emphasizing areas of agreement rather than areas of difference; conceding one's position to the needs of others to maintain harmony and relationships.

- Compromise/reconcile

Searching for solutions that bring some degree of satisfaction to all parties in order to temporarily or partially resolve the conflict. This approach occasionally results in a lose-lose situation.

- Force/direct.

Pushing one's viewpoint at the expense of others; offering only win-lose solutions, usually enforced through a power position to resolve an emergency. This approach often results to a win-lose situation.

- Collaborate/problem solve.

Incorporating multiple viewpoints and insights from differing perspectives; requires a cooperative attitude and open

Emotional intelligence and communication

Emotional intelligence is the ability to identify, assess, and manage the personal emotions of oneself and other people and the collective emotions of groups of people.

The team can use emotional intelligence to reduce tension and increase cooperation, making emotional intelligence an important factor in conflict management and communication.

Communication in Agile Environments

Some agile practitioners think the role of a project manager is not needed, due to self-organizing teams taking on the former responsibilities of the project manager.

However, pragmatic agile practitioners and organizations realize that project managers can add significant value in many situations.

When working on an agile project, project managers shift from being the center to serving the team and the management. In an agile environment, project managers are servant leaders, changing their emphasis to coaching people who want help, fostering greater collaboration on the team, and aligning stakeholder needs.

Communication and stakeholders

Communication is central to constituting, managing, and maintaining stakeholder relationships.

Communication planning overlaps with stakeholder identification, analysis, prioritization, and engagement.

For an organization to be truly responsible to its stakeholders, it must engage in communicative processes that enable complete and open representation for all the parties.

What to consider when communicating with stakeholders?

Communication is a crucial factor in engaging with stakeholders effectively; therefore, planning communication for the project entails considering the following:

- Who needs information?
- What information does each stakeholder need?
- Why should information be shared with stakeholders?
- What is the best way to provide information?
- When and how often is the information needed?
- Who has the information needed?

PMO and communication (Planisware, 2023)

One key role of the PMO is to facilitate communication between project stakeholders. Without everyone working in tandem, projects can easily fall into disarray, and teams can lose sight of objectives.

Stakeholders are not always willing or able to “stakehold” effectively.

Keeping stakeholders engaged is a complex and demanding process. It means balancing multiple perspectives and adapting to varied needs.

A PMO can bring clarity and consistency to the project management processes. They can do this by:

- Standardizing reporting
- Formalizing change request processes
- Attaching priorities and goals to project charters.
- Implementing PM methodologies for effective communication.

A project management tool could be a valuable mean of successfully communicating with different stakeholders.

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Unit 3 Activity: Drag the words in appropriate place

Based on the previous presentation, answer the following questions.

Lumi file 60: Drag the words in appropriate place

Place the words in the appropriate places. (Correct answers in brackets)

Communication entails _____ and _____ communication, in addition to verbal and written communication. (formal; informal)

Internal communication focuses on ensuring effective communication between _____ and _____ and among _____ in different parts of an organization. (managers; employees; employees)

External or inter-organizational communication focuses on _____ with external parties, i.e., stakeholders. (exchanging information)

_____ involves communication, conflict management, negotiation, and leadership skills. (Team management)



_____ should be addressed early, usually privately, using a _____,
_____ approach. (Conflict; direct; collaborative)

The team can use _____ _____to reduce tension and increase
cooperation, making emotional intelligence an important factor in _____
_____ and communication. (emotional intelligence; conflict management)

Communication is central to constituting, managing, and maintaining
_____. (stakeholder relationships)

One of the key roles of the PMO is to _____ between
project stakeholders. (facilitate communication)



Lesson 2: How does PMO work in a Tourism Company?

Unit 1: Introduction

This lesson will present how a PMO can function in a tourism enterprise. Read carefully the following text and answer the questions. Information presented in this part were provided by Valamar Riviera.

Unit 2 Case study: Valamar's PMO example

Company background

Valamar Riviera is a privately owned joint-stock company and the leading Croatian tourism company that manages hotels, resorts and camping resorts in attractive tourist destinations – in Istria, on the islands of Krk, Rab and Hvar, in Makarska and Dubrovnik, and Obertauern in Austria. Valamar's 37 hotels and resorts and 15 camping resorts, with a capacity of about 21 thousand accommodation units, can accommodate around 58,000 guests daily. They have five brands: Valamar Collection, Valamar Hotels & Resorts, [PLACES] by Valamar, Sunny by Valamar and Camping Adriatic by Valamar. Their commercial accommodation structure includes two types of accommodation, hotels and resorts, and camping sites, with slight camp prevalence in the total number of accommodation units.

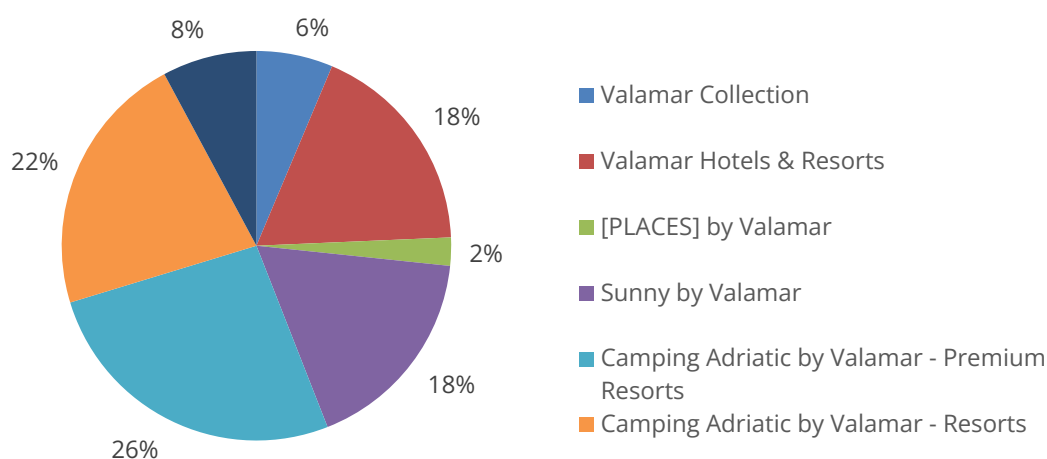


Figure 16: Accommodation units structure

Source: <https://valamar-riviera.com/en/home/>

Organization structure

The key bodies of Valamar Riviera d.d. are the General Assembly, the Supervisory Board with its committees and the Management Board led by the President of the Management Board of Valamar Riviera. The specific powers and responsibilities of these bodies are regulated by the relevant Croatian legislation, the Company's Articles of Association and other internal acts.

The Supervisory Board consists of nine members. It meets at least four times a year, and it actively participates in critical decisions through relevant committees, which meet more often to consider key strategic initiatives and provide support to the Management Board in the decision-making process and supervision of the management of the Company's affairs under relevant regulations and acts.

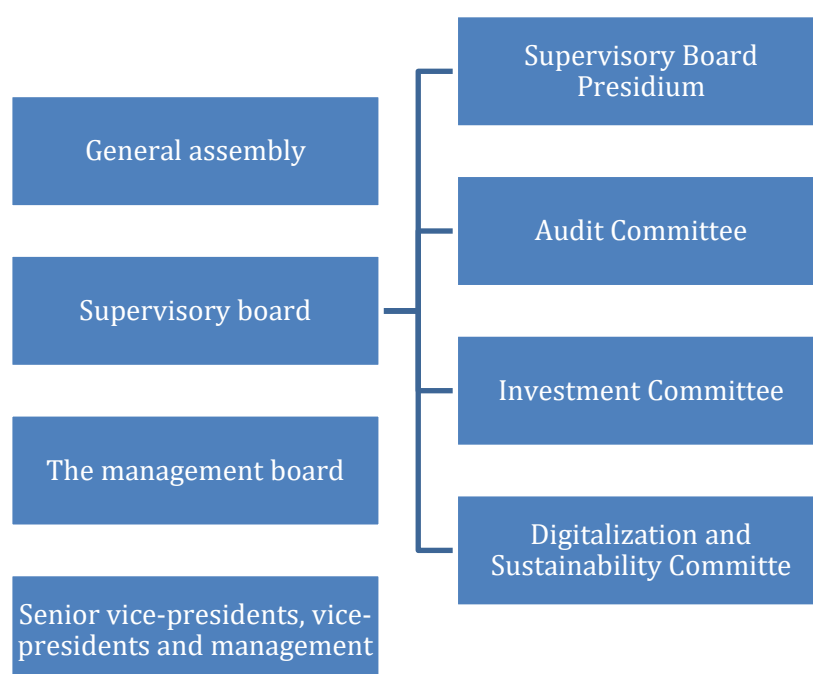


Figure 17: Valamar's corporate structure

Source: <https://valamar-riviera.com/en/home/>

The Management Board consists of three members who oversee different business aspects. **Senior management or Division vice presidents** manage critical functional business areas and activities. **Strategic corporate business functions** are organized into three divisions led by three senior vice-presidents (Sales and Marketing, Operations, and Property development, maintenance and technical services) and two sectors led by two vice-presidents (Strategic planning and controlling, and Human resources development). The tasks of senior management

are cross-functional management and leadership, implementing corporate strategies, and providing management support to the management board president. Therefore, senior management works closely with the Management Board and performs the given corporate functions through business boards that are focused on those strategic activities of the Company that require a high level of interdepartmental functional management: Capex Committee, Product and Service Development Committee, Procurement and Partnerships Committee, Digitization Committee, Sustainability Committee, and Human Resources Management Committee.

For more information about Valamar's corporate functions, see <https://valamar-riviera.com/en/home/>

Project management office

To achieve better monitoring and coordination, and to foster more effective communication among different departments, Valamar has established a PMO. The main task of the project management office is to support processes in managing strategic projects and continuously work on standardizing reporting processes. It is organized as a separate department and reports directly to the Management board. It was established to monitor and report on the key strategic projects within the Company. PMO does not manage the project itself but coordinates the efforts of different stakeholders and departments, collects information, and aligns the reporting system to be standardized across the Company.

The mission of PMO is to:

- Define key elements of Project management philosophy, reporting documents, and software,
- Organize meetings of Project committees, including crucial documentation and follow-up of the meetings
- Assist and help relevant stakeholders with education and technical support,
- Be a Central HUB for all projects within the Company

The scope of the PMO is to coordinate activities between different departments and unify reporting practices on important strategic projects. PMO plays a supporting role in project management by establishing a standardized reporting structure and rules. A single person is responsible for PMO management, coordination with Project managers, reporting to the MB, running software solutions and updating procedures. Its day-to-day tasks include project management reporting, software usage and the creation of a charter for Project committee organization. PMO uses software based on the MS Project application. This solution includes different



modifications, including simple to complex project management options, an approval process, and a change process.

Key performance indicators used to evaluate the work of the PMO and its efficiency include the number of realized /closed projects, the number of successfully realized projects (within budget and timeline), and lessons learned from the projects. The risks associated with the PMO are inaccurate timeline inputs, budget non-transparency, and liaison with other company IT systems.

How does the project development process work?

A project idea needs to align with Valamar's company goals and be developed so that the project proposal contains specific data. PMO will assist by checking if the proposal includes all the necessary information. A project manager is appointed, and that person develops a project proposal comprising the project description and goal(s), project duration, budget, and milestones/deliverables/indicators. After the PMO confirms that the project proposal contains all the relevant information, the proposal is forwarded to the Sector manager, who submits it to the Management board. If the Management board approves the project, the project manager organizes all the work and inputs all relevant data into the software so that the PMO can monitor project execution. If needed, the project manager contacts relevant stakeholders. However, if media is defined as a stakeholder, the Corporate business unit assists with this task.

Unit 3 Activity: Questions and answers

Based on the case study description, answer the following questions? (correct responses in bold)

Lumi files: Answer the questions. (correct answers are in bold)

What is the challenge that was identified by Valamar's PMO?

- Failing to anticipate or adequately resolve team conflicts
- **Inaccurate inputs on timeline**
- Lack of communication between the PMO and team members
- Lack of visibility into a team's work

Would you describe Valamar's PMO as Directive PMO type?

- **No**
- Yes



By taking into account the PMO's position within Valamar's organizational structure, how would you classify this PMO?

- Enterprise Project Management Office
- **Departmental PMO**
- Individual (project) PMO



Lesson 3: Running a project in a tourism company

Unit 1: Introduction

This lesson presents a project implemented by a tourism company. Read the description and answer the questions below.

Unit 2 Case study: Valamar's initiative "*Easy as one, two, tree* "

PDF file: Case study description

Background

Valamar is dedicated to protecting its destinations' natural and cultural heritage and is committed to carbon neutrality, renewable energy sources, a circular economy, and caring for biodiversity. It also has a special focus on the protection of the Adriatic Sea and the procurement of local food. In July 2022, Valamar initiated a simple but successful campaign in which Valamar's guests could donate money to purchase new trees for reforestation. *Easy as one, two, tree* campaign idea was developed to contribute to Valamar's sustainability strategy, which focuses on six strategic initiatives that are planned until 2025. These initiatives should position Valamar as a sustainability leader among different European tourism companies. The strategy involves the whole chain value – suppliers, employees, management, guests and the local community.

Project description

At that moment, over 80.000 trees had already been planted in different locations, and Valamar maintained them. However, to reduce carbon imprint and protect the biodiversity envisioned in their strategy, Valamar committed to planting one additional tree for each donated one. The initial goal was to plant 1.000 trees. Since that initial goal was realized in the campaign's first two weeks, the number was increased to 3.000 trees. When the campaign finished, in cooperation with CO2PENSATING BY PLANTING program (for more information, see <https://compensatingbyplanting.com/>) planting initiatives were organized in three locations in Croatia (Perjasica, Draganić, and Makarska). A total of 3.100 trees were planted. This campaign continued, and 8.000 trees were planted the following year.

Project stakeholders and project communication



Easy as one, two, tree campaign promoted sustainable living/business and included different stakeholders: guests, employees, and local communities. Guests have contributed to climate and nature protection efforts and received information about climate change's negative impacts on forests in Croatia. Employees were included in this initiative by donating money or as planting initiatives volunteers. They were informed about this campaign through an internal newsletter, while employees working in hotels and camps received additional education about the importance of reforestation in climate and environment protection, enabling them to effectively communicate with guests and encourage them to donate.

Local communities were informed about this initiative through media and CO2PENSATING BY PLANTING initiative. Different schools, fire brigades, NGOs representatives and local public authorities were included as stakeholders.

The main communication channels included face-to-face communication with guests, boards, press releases in different media, internal (employees) and external (guests) newsletters, social media posts (incl. Facebook, Instagram and LinkedIn), posts on Valamar's corporative web page, TA point application available to guests after check-in, and Valamar Experience Concierge web page. The Quality department in charge of this project monitored the number of press releases and social media engagement.

Project management

This project is managed by the Quality and Sustainability sector and implemented by the Operation department, namely the Front Office Department, while the PMO coordinates this project and prepares reports.

Project sustainability

This Easy as One, Two, Tree campaign will continue in 2024 as well due to its extremely positive reception by guests and other stakeholders. This year, the goal is to plant 10,000 trees. It is estimated that this action will, on average, compensate for 250 tons of carbon dioxide emissions.

To get more information about Valamar sustainability efforts, please check integrated annual reports and sustainability available at <https://valamar-riviera.com/en/media/integrated-annual-reports/>



Unit 3 Activity: Questions and answers

Select the correct answer. (Correct answer in bold)

Lumi files: Answer the questions.

Today's tourism industry faces various challenges. Select the appropriate challenge that Easy as one, two, tree project is expected to mitigate.



- Ageing population
- **Climate change and global warming**
- Food waste
- Inadequate infrastructure
- Labour shortages
- Seasonality
- Urbanization
- Waste management
- World population increase

Identify the Easy as one, two, tree project stakeholders.

- **Tourists**
- **Local community**
- Tourism companies
- Water providers
- Electricity providers

What communication channels were used to communicate this project to employees?

- face-to-face communication
- information boards
- **newsletters**
- press releases in different media
- social media posts
- TA point application

What communication channels were used to communicate this project to local community?

- face-to-face communication
- information boards
- newsletters
- **press releases in different media**
- **social media posts**
- TA point application
- Other

PDF file: Stakeholder communication outline

Based on the information provided by Easy as one, two, tree project case study, answer the following questions.

- Who needs information?

- What information do stakeholder need?

Guests

Employees

PMO

Others

- Why should information be shared with stakeholders?

- What is the best way to provide information?

Possible solution:

- Who needs information?

Employees, PMO, the Management board, guests, schools, fire brigades, NGOs representatives and local public authorities, general public (local community), media

- What information do stakeholder need?

Guest need information that Valamar is starting this initiative, how climate change's negative impacts on forests in Croatia, what are the main goals of this initiative and what kind of impact will this initiative have on local community (tourist destination).



Employees in general need information about the beginning of this project and how they can contribute to it, either by donating money or as planting initiatives volunteers. Employees working in hotels and camps need additional education about the importance of reforestation in climate and environment protection, and how to effectively communicate with guests and encourage them to donate money.

PMO needs information about project duration, budget and milestones/deliverables/indicators

Others need information that Valamar is starting this initiative, what are the main goals of this initiative and what kind of impact will this initiative have on local community (tourist destination).

- Why should information be shared with stakeholders?

To promote the project

To inform local community that Valamar tries to mitigate negative impacts that tourism industry has on local community

To foster the implementation of project activities

To achieve sustainability goals set in corporate strategy

- What is the best way to provide information?

Printed media (newspapers, tourism related journals), radio, television, company's promotion material like brochures, information boards, social media and web pages

PDF file: Identify the main project elements that the project manager had to put into the project proposal.

Based on the information provided in Case study: Valamar's PMO example and Case study: Valamar's initiative "Easy as one, two, tree ", define the following project element:

- Project description and goal(s)

- Project duration

- Budget (what elements must be included in a budget)

- Milestones/deliverables/indicators (for each year)

2022: _____



2023: _____

2023: _____

Possible solution:

- Project description and goal(s)

To reduce carbon imprint and protect the biodiversity envisioned in their strategy, Valamar committed to planting one additional tree for each donated one. The initial goal was to plant 1.000 trees.

- Project duration

This initiative started in 2022, and continued in 2023. It will carry on in 2024.

- Budget

Trees, paid promotion (press and social media), printed material (information boards, brochures), employees' costs (education, travelling expenses).

- Milestones/deliverables/indicators

2022: 1.000 trees

2023: 8.000 trees

2024: 10.000 trees