



D5.1 – Knowledge Transfer Plan in the Area of Project Management and Administration skill

30/11/2025

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DOCUMENT CONTROL SHEET

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Description of the related task and the deliverable. Extract from DoA	<p>The present document contains the results obtained in all the tasks of WP5 (T5.1, T5.2 and T5.3).</p> <p>Task 5.1: Knowledge Transfer Plan for Funding & EU/Research Project Writing, Management & Coordination / Administrative Skills (Lead: AVENIA; Contributors: ICAMCyL, ISMC; M13-M18)</p> <p>A few training sessions led by AVENIA and ICAMCyL will be organized to guarantee the proper formation of TUKE’s Research Management Office. TUKE will establish its own research management unit and develop its own tools and instruments for projects management and administration described in WP1, focusing on performed at the institutional level (i.e., Preparation of Institutional Research profile, etc), the following activities will be performed in 5 sessions of 3 full days throughout the project, covering the following points: 1) How to prepare a successful project proposal. Examples of different types of call/action will be considered (i.e., Marie Curie Action for Early-Stage Researchers, RIA, IA et).</p>		

	<p>How to look for partners and prepare an interdisciplinary consortium. Proposal planning and writing. Furthermore, once the proposal has been approved, what's next? Project management: project management tools (Risk management, Gantt charts, PRINCE2). Partners coordination, KoM preparation, workshops organization, reports preparation and collection, etc executed by AVENIA with ICAMCyL support. 2) Creation of a) Institutional projects database: creation of a database of projects, funding received, industry partners involved, call, funders, etc. b) Institutional researchers' database through the creation of a database of researchers, organized by their science areas, expertise, and capabilities; and c) Institutional Industry contacts database achieved by AVENIA with ISMC support. 3) Identification of the capabilities that make TUKE an unique and different centre. Identification of main areas of expertise. Moreover, how to identify strategic funding calls and match them with appropriate research accomplished by AVENIA. 4) Workshops organization. Main tips for organizing your workshops: selecting a location, participants, appropriate dates, invitations, main topics to be addressed, and strategic research international conferences and events to attend and promote to researchers as well carried out by AVENIA and ICAMCyL. 5) Session on partner profile preparation and promotion: preparation of TUKE research profile covered by AVENIA. Identification of key partner search platforms reported on D5.1.</p> <p>Task 5.2: Knowledge Transfer Plan for Business Plan Preparation (Lead: MNLT; Contributors: ISMC; M13-M18)</p> <p>The objective of this task is to enhance TUKE's human and professional capabilities through the knowledge transferred to design and carry out a Business Plan Preparation in five steps as described the Section 2.2.4. MNLT will prepare a full pack of learning materials to cover this topic which will be summarized and reported on the D5.1 (M18) by 5 sessions of 3 full days. This task also be linked to Task 6.2/7.2 for TUKE staff training (SL3, YEAR 2 M19-30) reported on D5.1.</p> <p>Task 5.3: Knowledge Transfer Plan for Clustering (Stakeholders, Partners, Industry, Networking (Lead: ISMC; Contributors: AVENIA, ICAMCyL; M13-M18)</p> <p>ISMC, AVENIA and ICAMCyL will organise virtual training sessions in 2 full days focused on the identification of sectorial stakeholders, partners for projects or other ventures, industry analysis and successful networking. A specific session in a full day will be carried out to tackle the stakeholder analysis and partner search, based on the needs of the specific activity planned by AVENIA. Two other sessions will be carried out for the industry analysis and successful networking approach by ISMC and AVENIA. Finally, DC&E, and very specifically in T8.2/9.2 EU industrial clustering and synergies with S3 regions and T8.3/9.3 Industrial Cluster preparation will be covered by ISMC with AVENIA support, the task leaders will ensure a TUKE's practical approach to the theory shared through the training sessions. The Virtual platform will be used during the</p>
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	training sessions for all clustering activities. All the results will be reported on D5.1.			
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ABBREVIATIONS AND ACRONYMS

Glossary	
Acronym	Meaning
CRM	Critical Raw Materials
EU	European Union
KT	Knowledge Transfer

RIA	Research and Innovation Action
IA	Innovation Action
STC	Scientific-Technical Committee
GDPR	General Data Protection Regulation
FAIR	Findable, Accessible, Interoperable, Reusable

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1. EXECUTIVE SUMMARY

This deliverable D5.1 outlines the knowledge transfer plan and results from Work Package 5 (WP5) of the WIDEX project, focusing on enhancing the research management capabilities of the Technical University of Košice (TUKE). It summarizes activities from Tasks 5.1, 5.2, and 5.3, which were initiated earlier than planned to support institutional development. Task 5.1 details five training sessions on project proposal writing, database creation, capabilities identification, workshop organization, and partner profile preparation, with four sessions completed and one in progress. Task 5.2 describes five sessions on business plan preparation, emphasizing practical tools for commercialization. Task 5.3 covers three virtual sessions on clustering and networking, linking to broader dissemination efforts. Overall, these activities have engaged over 70 participants, fostering sustainable administrative and strategic skills aligned with EU priorities.

2. Introduction

This deliverable D5.1 outlines the knowledge transfer plan and results from Work Package 5 (WP5) of the WIDEX project, focusing on enhancing the research management capabilities of the Technical University of Košice (TUKE).

3. TASK 5.1: Knowledge Transfer Plan for Funding & EU/Research Project Writing, Management & Coordination / Administrative Skills

(Lead: AVENIA; Contributors: ICAMCyL, ISMC; M13-M18)

The activities undertaken in Task 5.1 were designed to establish a robust foundation for the research management capabilities of the Technical University of Košice (TUKE), with a particular emphasis on EU-funded projects. This task commenced ahead of the original schedule, initiating in Month 8 (March 2025) following approval by the Project Officer on 18 November 2024. The early start was motivated by the imperative to integrate administrative skills development into the project's early phases,

thereby facilitating enhanced coordination across work packages and ensuring alignment with institutional goals outlined in WP1, such as the preparation of an institutional research profile.

Led by AVENIA and supported by ICAMCYL and ISMC, the knowledge transfer plan was structured around five comprehensive training sessions, each spanning approximately three full days in total duration but delivered in focused segments to accommodate participant availability. These sessions were aligned with a detailed Gantt chart, which outlined timelines, responsibilities, and interdependencies. The sessions addressed key competencies: proposal preparation, institutional database creation, unique capabilities identification, workshop organization, and partner profile promotion. Delivery formats were primarily online via Microsoft Teams to promote accessibility, with hybrid elements incorporated where practical for hands-on exercises. As of the WP Leaders' meeting on 2 July 2025, four sessions had been fully executed, engaging an average of 25 participants per session, while the fifth remains in progress. Participant feedback was systematically collected through post-session surveys to refine subsequent activities, emphasizing interactive learning and practical application.

The process of work carried out involved several iterative stages: initial needs assessment via consultations with TUKE's Research Management Office; material development, including slide decks, templates, and case studies drawn from prior EU projects; session delivery with expert facilitation; and follow-up evaluations to measure knowledge retention. This structured approach ensured progressive skill-building, fostering TUKE's autonomy in research administration.

1.1. Preparation and Proposal Writing for Successful EU Projects

Session 1: How to prepare a successful project proposal:

This session, attended by 29 participants from TUKE, was led by ICAMCYL (Alejandra Diaz and Myriam Montes), with support from POLE AVENIA (Emmanuelle Robins). The agenda was structured to provide a comprehensive overview of European project management principles, commencing with an introduction to the Horizon Europe Programme, followed by detailed guidance on preparing competitive project proposals. Participants gained insights into aligning project objectives with EU funding priorities, including Horizon Europe Pillars 1–3 and Widening Participation programs, and

acquired tools to navigate EU budgeting and reporting requirements, thereby fostering confidence in pursuing funding opportunities.

Introduction to European Project Management

Time	Item	Presenter
Introduction to European Project Management (10.00 – 13:00)		
10:00-10:30	Introduction to Horizon Europe Programme	ICAMCYL
10:30-11:00	How to prepare a project proposal	AVENIA
11:00-11:30	COFFEE BREAK	ALL
11:30-12:00	GA and KOM preparation	ICAMCYL
12:00-12:30	Reports preparation	ICAMCYL
12:30-13:00	Final Remarks	AVENIA

Figure 1: Training Content

This training session was performed online via Microsoft Teams, on 24/03/2025 from 10am to 1pm.

1.2. Institutional Database Creation for Research Management

Session 2: Creation of an Institutional projects database

This session, attended by 24 participants from TUKE and led by ISMC (Laura Quijano) with support from pole AVENIA (Emmanuelle Robins), this session introduced principles for designing and compiling institutional databases to support TUKE’s research management infrastructure and to gain visibility and impact by communicating effectively and reflect about their target in R&I within the raw materials sector. The agenda addressed the creation of three types of databases: projects (tracking funding, partners, and calls) to proof the experience and background of TUKE as beneficiary in and national EC funded projects, researchers (organized by expertise and capabilities) to promote and present the academic and scientific profiles of the staff, and industry contacts (detailing interaction histories and communication preferences). Participants were guided on organizing and maintaining GDPR-compliant data repositories compliant with FAIR principles (Findable, Accessible, Interoperable, Reusable). Tools such as Excel, YouDay, Eudonet, Airtable, and HubSpot CRM were demonstrated, emphasizing accessibility and security. The session also explored website optimization strategies to enhance database usability for international collaboration and included

complementary discussions on organizing field trips (with regards to T6.3/7.3), aligning with broader project dissemination goals.



WIDEX: Knowledge Transfer Plan for European Project Management and Event organization		
10:00 – 10:30	Institutional projects database: Creation of a database of projects, funding received, industry partners involved, calls, funding agencies, etc.	ISMC
10:30 – 11:00	Institutional researchers database	ISMC
11:00 – 11:30	COFFEE BREAK	
11:30 – 12:00	Institutional Industry contacts database	AVENIA
12:00 – 12:30	How to make the most of these databases: To identify partners, to organize events...	AVENIA & ISMC

Figure 2: Training Content

This training session was performed online via Microsoft Teams, on 16/04/2025 from 10am to 12pm.

1.3. Identification of Unique Institutional Capabilities and Strategic Funding Alignment

Session 3: Identification of the capabilities that make TUKE a unique and different centre

The session addressed the identification of institutional capabilities and their promotion in the context of European project management, emphasizing TUKE's role as a distinctive research centre. Delivered as part of the WIDEX project's knowledge transfer initiatives, the presentation explored the rationale for capability assessment, benefits for academia-industry collaboration, and strategies for matching expertise with funding calls. It included objectives for understanding TUKE's historical and strategic significance, brainstorming exercises, and detailed instructions on navigating EU funding

landscapes. The structure facilitated reflective discussion and practical application, culminating in guidance on crafting compelling research profiles.

Identification of Capabilities: Rationale and Benefits

The presentation started with an exploration of why **identifying capabilities is essential**. It highlighted benefits such as improved student learning through hands-on experiences, internships, and mentoring; enhanced research capabilities via access to industry resources and funding; increased financial support for infrastructure; and strengthened institutional reputation and visibility, which attract top talent.

Specific objectives included comprehending TUKE's historical and strategic role and pinpointing its distinctive strengths as a research entity.

Enhanced visibility was noted as a key outcome, enabling better promotion in research proposals and partnerships, thereby appealing to collaborators and funders. Strategic alignment was emphasized, linking TUKE's expertise in areas like sustainability and green technologies to EU priorities in programs such as Horizon Europe and LIFE, thereby improving grant success rates.

The session posed reflective questions on why partners or funders should select TUKE's faculty, focusing on unique strengths, leadership in specific fields, and offerings that are difficult to replicate elsewhere.

Brainstorming and Expertise Mapping

Interactive brainstorming segments were integrated to facilitate collective identification of TUKE's capabilities. The presentation stressed that pinpointing **main areas of expertise** supports faculty strategy by establishing clear goals, prioritizing significant domains, and developing long-term roadmaps. It further advocated for a strengths-based approach to drive innovation and continuous improvement, directing efforts toward established excellence while uncovering interdisciplinary opportunities.

Identifying Strategic Funding Calls and Matching Research Topics

The session transitioned to **strategies for identifying and aligning with strategic funding calls**. Objectives encompassed understanding the structure of EU programs like Horizon Europe and LIFE,

locating relevant calls, analysing priorities, and matching them to TUKE's strengths to optimize success.

Participants were advised to first clarify research objectives, including specific domains, Technological Readiness Levels (TRL), and intended impacts (societal, environmental, economic).

The structure of major EU programs was detailed, with Horizon Europe described as the flagship initiative with a €95.5 billion budget, aimed at addressing climate change, Sustainable Development Goals, and EU competitiveness. Its pillars were outlined: Pillar 1 (Excellent Science) for basic research; Pillar 2 (Global Challenges & Industrial Competitiveness) for collaborative efforts in themes like climate and health (e.g., Cluster 4: Digital, Industry & Space); Pillar 3 (Innovative Europe) for innovation via the European Innovation Council (EIC), including Pathfinder, Transition, and Accelerator schemes; and Widening Participation to involve under-represented countries.

Tools and platforms were recommended, including the Funding & Tenders Portal as the primary source for opportunities, CORDIS for project results and partner identification, the Strategic Technologies for Europe Platform (STEP), EIT Raw Materials for critical raw materials projects, and EIC components for varying TRL stages (Pathfinder: TRL 1-4; Transition: TRL 4-6).

Monitoring upcoming calls involved subscribing to newsletters, setting alerts, and reviewing timelines.

Engagement with National Contact Points (NCPs) was encouraged for application guidance, alongside participation in info days, workshops, and research networks to bolster proposals.

Preparation of TUKE Research Profile

Guidance on **creating an effective research profile** emphasized gathering materials to showcase strengths, achievements, and EU alignment. A strong organization description should summarize mission, expertise, and unique features like specialized facilities or notable accomplishments.

Platforms for profile placement included the Funding & Tenders Portal, CORDIS, EURAXESS, thematic networks (e.g., Net4Society) and complementary sites like ResearchGate, LinkedIn, ORCID, and the European Clusters Collaboration Platform (ECCP).

Relevant keywords (e.g., sustainability, digital transformation, renewable energy, advanced materials) were advised to enhance discoverability, aligned with EU topics.

Highlighting past projects, such as Horizon Europe or Erasmus+ participation, along with results like publications or innovations, demonstrates experience and credibility.

Defining preferences involved specifying roles (coordinator, work package leader, partner) and ideal collaborators (e.g., tech startups or academic institutions in sustainability), clarifying contributions and expectations.

Accurate contact information (name, email, phone of key personnel like the Legal Entity Appointed Representative [LEAR] or project manager) was deemed crucial for accessibility, with regular updates recommended before deadlines or after achievements.

Final tips advocated starting simply, tailoring profiles strategically, and maintaining activity for competitiveness.



TITLE		
10:00-10:30	Identification of the capabilities that make TUKE <u>an</u> unique and different centre	AVENIA
10:30-11:00	Identification of TUKE main areas of expertise	AVENIA
11:00-11:30	COFFEE BREAK	ALL
11:30-12:00	How to identify strategic funding calls and match them with appropriate research topics	AVENIA
12:00-12:30	Session on partner profile preparation and promotion: preparation of TUKE research profile	AVENIA
12:30-13:00	Final Remarks	AVENIA

Figure 3: Training Content

This training session was performed online via Microsoft Teams, on 28/04/2025 from 10am to 12pm.

1.4. Organization of Workshops and Events for Research Promotion

Session 4: Workshops Organization

The session was designed to equip participants with essential skills for organizing events within research and administrative frameworks, aligning with the broader objectives of the WIDEX project to foster excellence in research management. Presented by Emmanuelle Robins of AVENIA, the content outlined a systematic approach to event planning, integrating key considerations such as objectives, budgeting, and execution. It incorporated theoretical guidance on foundational elements, a comparative overview of various event formats, suggestions for accessible tools, and an illustrative example derived from a real-world workshop. This structure ensured a balance between conceptual understanding and practical applicability, promoting efficiency and strategic impact in event coordination.

Event Organization Steps

The presentation articulated a five-step sequential process for event organization, each accompanied by pertinent guiding questions and operational considerations to facilitate thorough preparation and execution.

The first step focusses on foundational planning, addressing critical questions such as the event's primary objective, the intended audience (including participant numbers and profiles), and the allocated budget. Budgetary aspects require meticulous estimation, validation (with potential revisions), regular updates to reflect actual expenditures, incorporation of a safety margin for unforeseen costs, and a concluding Return on Experience (REX) to inform future endeavours.

The second step relates to scheduling and venue selection, posing inquiries regarding the most suitable date and location. Venue considerations include capacity to accommodate the expected number of participants, provisions for comfort and security, availability of parking, and access to accommodation facilities.

The third step involves formulating a detailed action plan, conceptualized as a comprehensive overview of tasks essential for event success. This entails compiling a task list with associated deadlines (via retro-planning) and assigned responsibilities. Key questions explore available organizational resources, the choice between internal management or subcontracting, equipment

needs, catering requirements, appropriate marketing strategies (such as save-the-date notifications, invitations through social media or email, registration processes, and dedicated websites), and the potential involvement of sponsors.

The fourth step focuses on the event execution phase, with an emphasis on achieving "smooth" operations to ensure seamless delivery.

The fifth step encompasses evaluation and Return on Experience (REX), providing a mechanism for reflective assessment post-event.

Types of Events

The session categorized various event types, including meetings, workshops, networking events, site visits, conferences (from the perspectives of attendee or organizer), onsite events, online events, and hybrid events. A comparative table was utilized to analyse these formats across multiple dimensions, including objectives and targeted audience, budget, place and date, action plan, the event itself, and evaluation with Return on Experience. This analytical tool facilitated a nuanced understanding of how different event modalities align with specific institutional goals in research management.

Key Principles to Consider

Several fundamental principles were underscored throughout the session. Event organization must invariably be guided by a clear objective, as this drives all subsequent decisions. Furthermore, events exert a significant influence on an institution's visibility and reputation. Effective planification and organization are paramount, directly contributing to operational efficiency and successful outcomes.

Recommended Free Tools

To support practical implementation, the presentation recommended a selection of free tools for event management and related tasks. These include Brevo, Mailchimp, and Mailjet for email marketing; Doodle for scheduling; Google Forms and SurveyMonkey for surveys and registrations; Calendly for appointment booking; and various design creation platforms for promotional materials.

Practical Example: Workshop on "Processes and Modelling in Chemical Engineering Using Python"

The latter portion of the session applied the five-step framework to a concrete example, drawing from a training workshop.

In the first step, emphasis was placed on defining the event's objective, identifying the target audience (including participant numbers and profiles), and establishing the budget through estimation, validation, revisions as needed, regular expense tracking, REX integration, and a contingency margin for unanticipated items.

The second step involved selecting an appropriate date (accounting for participants' schedules and competing events) and venue (considering attendee capacity, comfort, security, parking, and accommodation).

The third step outlined the action plan and retroplanning, addressing resource availability for organization, decisions on internal versus subcontracted management, equipment requirements, catering provisions, and marketing strategies (including save-the-date announcements, social media or email invitations, registration systems, and dedicated websites). It also specified timelines, responsibilities, and retroplanning elements.

The fourth step concentrated on event-day logistics, recommending a checklist covering participant welcoming, security measures, catering staff, decoration, and animation, alongside sharing the overall plan and individual schedules.

The fifth step focused on evaluation and REX, including the selection of an appropriate evaluation form, timing for feedback collection, and analysis of successes ("tops") and shortcomings ("flops") with underlying reasons.

The example concluded with a summary of insights and a congratulatory note on successful application.



24/03/2025

***Knowledge Transfer in Area of Research Management,
Coordination and Administration Skills***

How to organize an event (conference, workshop...)

Emmanuelle ROBINS, AVENIA



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Figure 4: Training Content

This training session was performed online via Microsoft Teams, on 24/03/2025 from 2pm to 3.30pm.

1.5. Partner Profile Preparation and Promotion for Enhanced Collaboration

Session 5: Partner Profile Preparation and Promotion

This ongoing session, led by pole AVENIA (Emmanuelle Robins), focuses on partner profile preparation and promotion, specifically the preparation of TUKE research profiles to enhance collaboration potential in EU research networks. It builds on Session 3 by refining partner profiles for EU collaboration platforms, incorporating feedback from prior trainings. Emphasis is on aligning profiles with funding priorities to maximize partnership opportunities, with finalization pending participant input. The first drafts of the profiles, including one general profile for TUKE and specific profiles for the Faculty of Mining, Ecology, Process Control and Geotechnologies (FBERG) and the Faculty of Materials, Metallurgy and Recycling (FMMR), have been submitted to the project coordinators for review.

This training sessions were performed online via Microsoft Teams, on 28/04/2025 from 10am to 12pm, and on 27/05/2025 from 1pm to 2pm.

4.TASK 5.2: Knowledge Transfer Plan for Business Plan Preparation

(Lead: MNLТ; Contributors: ISMC; M13-M18)

The Knowledge Transfer plan for Business Plan Preparation falls under Task 5.2 and aims to enhance TUKE' s human and professional capabilities through the knowledge transferred to design and carry out a Business Plan preparation in five steps. This five-step knowledge plan includes the following stages:

- The product/service validation & public acceptance
- The product/service positioning & Client Prospects
- The demonstration of sustainable and novel approaches
- The legal, normative and ethical requirements and
- The IPR strategy.

The Knowledge Transfer will be delivered through five online training sessions conducted over three full days, equipping TUKE's participants with a robust theoretical foundation and practical competencies to effectively address the requirements of business plan preparation.

As the leader of this task, MNLТ Innovations has designed and structured the Knowledge Transfer plan based on its extensive expertise in business plan development, innovation management, and training delivery, ensuring that the content reflects proven methodologies and best practices.

The five steps involved in business plan preparation provide a concrete framework for business development and ensure that TUKE's participants are equipped with a holistic knowledge package, positioning them competitively within the European research ecosystem. These five training sessions have been further divided into specific modules and submodules, ensuring that each thematic area is covered in depth and that participants develop a comprehensive

and applicable understanding of business plan preparation – a program that fully capitalizes on MNLT’s experience in supporting diverse stakeholders through similar capacity-building activities.

The following Figure 5 illustrates the analytical structure of the Knowledge Transfer Plan for the Business Plan Preparation:

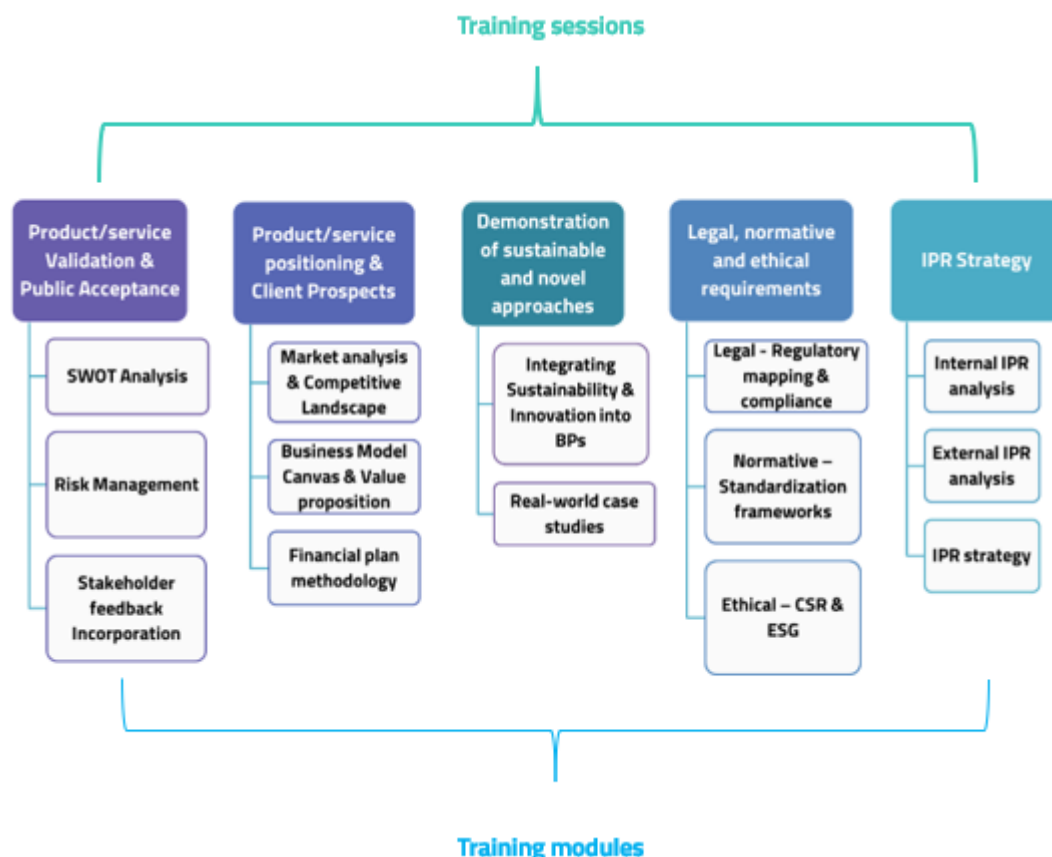


Figure 5: Knowledge Transfer Plan in Business Plan Preparation

2.1. Product/service validation & public acceptance

The knowledge transfer begins with the training session of "Product or service validation and the public acceptance", since business plans begin by validating the project’s idea in order to ensure that it addresses a real problem and that is acceptable to the market.

This session aims to render TUKE’s participants capable to understand the role of product/service validation particularly for green, non-invasive CRM recovery technologies, to examine the principles and applications of SWOT analysis as a strategic tool to identify internal strengths and weaknesses as well as external opportunities and threats, to identify methods for risk detection and mitigation and to recognize

the importance of stakeholder engagement in validating business concepts and ensuring public acceptance.

The training session comprises the following training modules:

- ✓ SWOT analysis, as strategic tool for business plan preparation,
- ✓ Risk mitigation strategy (formulation)
- ✓ Stakeholder engagement through feedback incorporation

SWOT analysis – A strategic tool for Business Plan Preparation

In this training module, TUKE' s participants will get familiarized with SWOT analysis, a strategic tool for a business plan preparation. The section will provide answers, indicatively to the following questions¹:

- ✓ SWOT definition
- ✓ SWOT analysis core elements
- ✓ SWOT applications

SWOT analysis is a structured planning method that helps organizations and projects identify internal and external factors influencing success. It is widely applied in strategic planning, organizational development, and decision-making, including business plan preparation.

SWOT stands for: Strength, Weakness, Opportunity, Threat, which constitute the main elements of a SWOT analysis. A sample layout for a SWOT analysis developed by MNLT is shown in Figure 6.

¹ <https://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/swot-analysis/main#:~:text=SWOT%20stands%20for%3A%20Strength%2C%20Weakness, strategic%20planning%20and%20decision%2Dmaking>

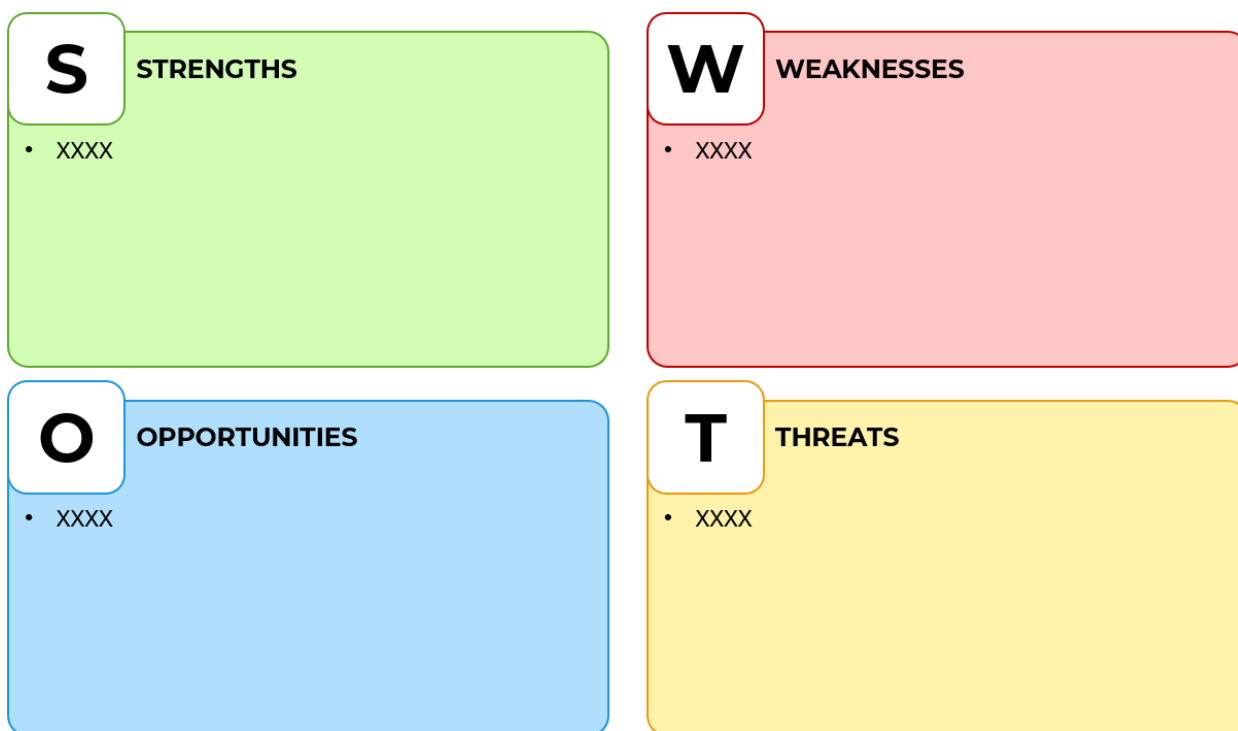


Figure 6: SWOT analysis template, adapted by MNL INNOVATIONS

Strengths (S) are internal assets, resources, or competencies that provide an advantage (e.g., innovative technology, skilled workforce).

Weaknesses (W) are internal limitations that hinder performance or competitiveness (e.g., limited funding, lack of market presence).

Opportunities (O) are favorable external conditions that can be leveraged (e.g., market trends, supportive policy frameworks).

Threats (T) are external risks or challenges that could negatively impact the project (e.g., competing technologies, regulatory changes).

The purpose of conducting a SWOT analysis in business plan preparation is to diagnose the current position of the project or organization by systematically evaluating its strengths, weaknesses, opportunities, and threats. This process enables the early identification of barriers, risks, and challenges, thereby informing decision-making and guiding the design of strategies that enhance sustainability and competitiveness. Moreover, it facilitates the integration of stakeholder feedback by aligning internal capacities with external expectations, ensuring that strategic planning remains both comprehensive and responsive.

Risk mitigation strategy

The SWOT analysis provides the strategic foundation by identifying internal and external factors shaping the product's market readiness. However, in business plan preparation, it is insufficient to only know strengths and threats; one must demonstrate the ability to manage them systematically. Therefore, the identified weaknesses and threats are further translated into a structured risk management framework, where they are analyzed, prioritized, and mitigated through tailored strategies. This integration strengthens the robustness of the business plan, ensuring both strategic foresight and operational resilience.

In this second training module, TUKE' s participants will be introduced to the fundamental principles of Risk Management Methodology² namely:

- ✓ Risk identification
- ✓ Risk analysis/assessment
- ✓ Risk evaluation
- ✓ Risk treatment/mitigation
- ✓ Risk monitoring and review

TUKE' s participants will first learn how to identify risks, followed by the risk analysis or assessment which involves looking at the likelihood that a risk will be realized, and the potential impact that risk would have on an organization or project if that risk was realized. By quantifying these on a three- or five-point scale, risk prioritization becomes simpler. Multiplying the risk's likelihood score with the risk's impact score generates the risk's overall risk score. This value can then be compared to other risks for prioritization purposes. Risk assessment matrices help visualize the relationship between likelihood and impact, serving as a valuable tool in risk professionals' arsenals.

The following *Figure 7* and *Figure 8* illustrate examples of risk assessment matrices, using the five-point scale and the three-point scale, respectively³:

² <https://auditboard.com/blog/risk-management-101>

³ <https://auditboard.com/blog/what-is-a-risk-assessment-matrix>



Figure 7: 5 x 5 risk assessment matrix



Figure 8: 3 x 3 risk assessment matrix

In risk management methodology, risk evaluation is the next step, where risks are prioritized according to their overall risk score, calculated as likelihood × impact, followed by the risk treatment/mitigation step

which involves both coming up with the action plan for handling open risks, and then executing on that action plan. There are four generally accepted “treatment” strategies for risks. These four treatments are:⁴

- Risk Acceptance: Risk thresholds are within acceptable tolerance, and the organization chooses to accept this risk.
- Risk Transfer: The organization chooses to transfer the risk or part of the risk to a third-party provider or insurance company.
- Risk Avoidance: The organization chooses not to move forward with that risk and avoids incurring it.
- Risk Mitigation: The organization establishes an action plan for reducing or limiting risk to acceptable levels.

The last step in the risk management lifecycle is monitoring risks; risks should be monitored on a regular basis to detect any changes to risk scoring, mitigation plans, or owners.

The steps of the above risk methodology are recorded in the Risk Register template (Figure 9), a documentation tool that supports risk management by providing all the necessary information for effective handling, continuous monitoring, and regular updates.

Risk	Likelihood	Impact	Risk Score <i>Likelihood x Impact</i>	Risk Treatment <i>Accept, Transfer, Mitigate, Avoid</i>	Mitigation Plan	Risk Owner
An AWS outage would result in an operational risk, as it would cause our ecommerce site and intranet to fail.	1 (Highly Unlikely)	4 (High Impact)	4/25 (Low Risk)	Mitigate	The IT infrastructure team will implement a redundant cloud site in Azure that can be used in the event of an AWS outage.	John Doe (IT Infrastructure Manager)

Figure 9: Risk register template example

⁴ <https://auditboard.com/blog/risk-management-101>

Stakeholder feedback incorporation and public acceptance

In this third training module, TUKE's participants will be introduced with stakeholder analysis in order to assess the significance of stakeholder feedback in the frame of business plan preparation. Stakeholder feedback contributes to product validation by identifying market relevance and ensuring alignment with real needs. Stakeholder feedback is systematically embedded into SWOT and risk management to ensure the product/service is validated not only technically and financially, but also socially.

TUKE's participants will be navigated across three (3) main pillars of stakeholder analysis, namely:

- The stakeholder mapping and identification
- The engagement and data collection methods and
- The analysis and integration within the frame of a business plan.

Stakeholder identification and mapping

TUKE's participants will be introduced to the stakeholder analysis process, with a primary focus on stakeholder identification—namely, recognizing the individuals, groups, and organizations that are either affected by or capable of affecting the proposed product or service—and on the subsequent prioritization of these stakeholders for their involvement in the decision-making process.⁵

A strategic framework for the categorization of stakeholders is the Power/Interest Matrix or Mendelow's Matrix (*Figure 10*) which uses a four-quadrant grid to visualize stakeholders by plotting their **power or influence on the horizontal axis** and their **interest on the vertical axis**.

⁵ Mark S. Reed, Anil Graves, Norman Dandy, Helena Posthumus, Klaus Hubacek, Joe Morris, Christina Prell, Claire H. Quinn, and Lindsay C. Stringer, "Who's in and Why? A Typology of Stakeholder Analysis Methods for Natural Resource Management," *Journal of Environmental Management* 90, no. 5 (2009): 1933–49, <https://doi.org/10.1016/j.jenvman.2009.01.001>



Figure 10: Mendelow's Matrix or Power/Interest matrix⁶

Stakeholders are typically classified into the following quadrants:⁷

- High Power/High Interest: Stakeholders in this quadrant are crucial/key players requiring close collaboration due to their significant influence and vested interest in the subject matter, e.g. directors, management, investors or partners.
- High Power/Low Interest: While these stakeholders possess substantial power or authority, they may not be directly invested in the subject's outcomes. It's crucial to maintain their satisfaction without inundating them with excessive communication, e.g. banks, government, or regulatory bodies.
- Low Power/High Interest: Stakeholders here may lack significant power but hold a strong interest in the subject's outcomes. Engaging them effectively can garner support and address potential concerns, e.g. employees, suppliers or community groups.
- Low Power/Low Interest: These stakeholders have limited influence and interest in the subject. While they may not necessitate intensive engagement, keeping them informed fosters transparency and goodwill, e.g. local community or general public.

⁶ <https://accountancyindex.com/what-is-mendelows-matrix/>

⁷ <https://www.interreg-central.eu/news/enhancing-stakeholder-engagement-through-the-power-interest-matrix/>

Engagement and data collection methods

In this training sub-module, TUKE's participants will be introduced to stakeholder engagement and data collection through the systematic application of methods such as structured interviews, surveys, focus groups, and workshops. The session will present the fundamental approaches to engaging stakeholders and collecting relevant data, while emphasizing their importance for effective business plan preparation.

Analysis and integration

In this training sub-module, TUKE's participants will understand how the stakeholder feedback obtained at the previous section are incorporated for the needs of the business plan. Integrating this feedback into the business plan means turning them into clear opportunities, such as focusing on groups with strong acceptance and support, and recognizing risks like resistance, backlash, or reputation damage. These insights are then connected to risk management by adding measures to reduce risks, for example, targeted public information campaigns.

At the end of this session, TUKE's participants will be able to apply SWOT analysis to critically assess strengths and vulnerabilities of green, non-invasive CRM recovery technologies, articulate risk mitigation strategies that strengthen the overall business plan and collect stakeholder feedback enabling a business plan preparation that validates proposed product or service technically, financially and socially.

2.2. Product/service positioning & Client Prospects

The second step in business plan preparation is the "Product/service positioning and the client prospects". In this training session, TUKE's participants will be introduced to market analysis, competitive landscape mapping, business model development tools, and value proposition articulation.

Market analysis & competitive landscape

An effective business plan requires a clear understanding of the market environment in which a product or service will operate. Market analysis provides this foundation by systematically examining customer needs, industry trends, competitors, and potential barriers to entry. Incorporating these insights allows the business plan to move past theoretical assumptions and be anchored in data-driven projections of demand, pricing strategies, and market positioning. This connection ensures

that the business plan is not only a strategic document but also a realistic roadmap for implementation, risk anticipation, and resource allocation.⁸

In this training module, TUKE' s participants will be guided step by step, first through **understanding the market size, demand, and segmentation** (Market Analysis), and then through **evaluating and benchmarking competitors** (Competitive Landscape).

TUKE' s participants will dive into "**Market sizing and Growth estimation**", which involves quantifying the market size by combining secondary data sources, such as industry reports and trade associations, with primary data gathered through surveys and interviews. Building upon these insights, forecasting models, including trend analysis and scenario building, are then applied to estimate market growth and anticipate future developments.

Following, TUKE' s participants will be introduced to the "**Competitive landscape mapping**" which involves the market positioning of a product/service in terms of pricing, quality, innovation and customer cash. Pricing structures and product/service features and quality ratings amongst the main data that are utilized in this part.

Business Model Canvas & Value Proposition

The next sub-thematic area in this training session is "Business Model canvas & value proposition", both of which are considered essential tools in business planning. Business Model Canvas (BMC) provides a **holistic view** of how a business creates, delivers, and captures value, all in a single-page framework⁹, while Value Proposition (VP) emphasizes the **fit between customer needs and the product/service offering**.¹⁰

TUKE' s participants will be familiarized with the nine (9) building blocks that BMC comprises, a) the Customer Segments, b) the Value Proposition, c) the Channels, d) the Customer Relationships, e) the Revenue streams, f) the Key Resources, g) the Key activities, h) the Key Partnerships and the i) cost structure, as shown in Figure 11.

⁸ Philip Kotler and Kevin Lane Keller, *Marketing Management*, 15th ed. (Boston: Pearson, 2016).

⁹ <https://growenterprise.co.uk/2023/01/09/what-is-the-business-model-canvas-and-how-does-it-work/>

¹⁰ <https://businessmodelanalyst.com/value-proposition-canvas/>

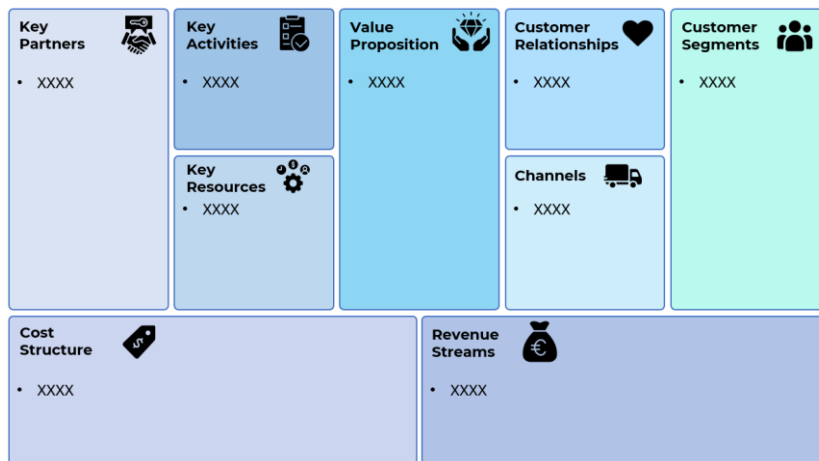


Figure 11: Business Model Canvas template, adapted by MNLT INNOVATIONS

Then, TUKE’s participants will be introduced with Value Proposition design. More specifically, the content will explore the core of the business model, the structure of the Value Proposition Canvas (Figure 12) with its two main parts—the Customer Profile and the Value Map—as well as the process of identifying customer pains, gains, and jobs-to-be-done. It will further emphasize how product or service features can be linked to solving customer pains and creating gains.

Value Proposition Canvas explores two of the nine building blocks of BMC more deeply and is shown in Figure 12.11

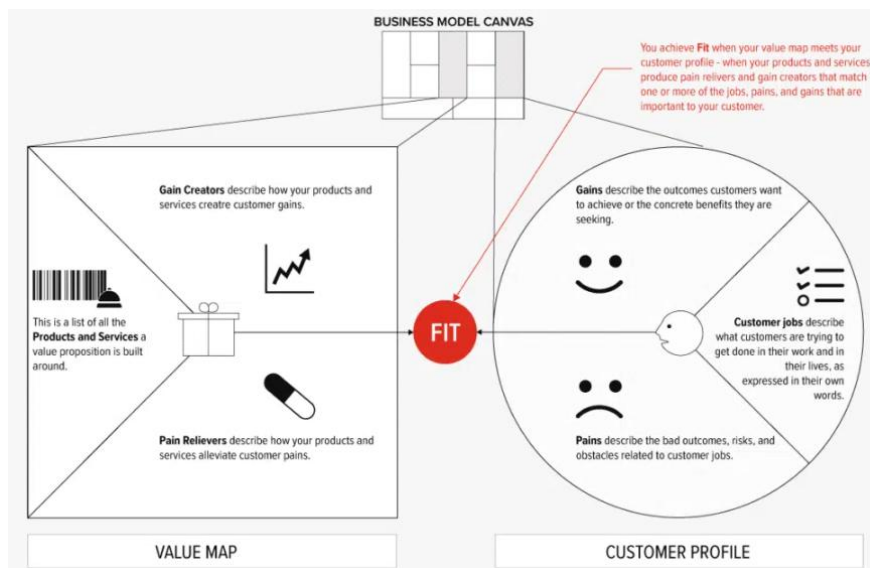


Figure 12: Value Proposition Canvas template

¹¹ <https://www.garyfox.co/value-proposition-canvas-guide/>

Financial plan methodology

The next training module in this training session is the Financial plan methodology. TUKE's participants will understand how to construct a structured financial planning methodology, from assumptions to profitability assessment, and how to apply it in practice for business plan preparation.

The content will cover the following topics:

- An introduction to Financial planning in Business Planning: why financial planning is a cornerstone of business plan preparation.
- Forecasting production and Market adoption: demonstration of how to project production volumes in alignment with technological and operational milestones and explanation of market adoption curves (early adoption, growth phase, maturity) and how they link production to demand.
- Revenue estimation: calculation of revenues as sales volume \times price, construction of multiple scenarios such as conservative, base, and optimistic, introduction of considerations such as subsidies, co-funding, or strategic partnerships.
- Cost calculation: cost structuring into Capital Expenditure (CAPEX) and Operational Expenditure (OPEX), further categorization into variable and fixed costs.
- Cash flow projections: net cash flow projections upon revenues and costs combination, time horizon reference and discounting concept for Net Present Value calculation.
- Profitability metrics: Return of Investment (ROI), Payback Period (PP), Break-even point.
- Scenario and sensitivity analysis: sensitivity analysis introduction ("what if" changes in price or costs), thresholds identification, explanation of uncertainty testing through adjustments in adoption rates, prices, or costs.

	Market Penetration		Market Acceptance			Market Adoption					Total
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Production Capacity											
Revenues											
Product Sales											
Costs											
CAPEX											
Equipment											
Other CAPEX											
OPEX											
Energy consumption											
Personnel											
Raw material supply											
Other OPEX											
Total OPEX											
Total Costs											
Gross Profit											
Depreciation											
EBITDA											
Corporate Tax											
Net Profit											

Figure 13: Financial Business planning template, adapted by MNLT INNOVATIONS

2.3. Demonstration of innovative and novel approaches

With validation and positioning already clarified, in the previous training sessions, attention can now shift to the demonstration of sustainable and novel approaches. The upcoming training session in this Knowledge Transfer Plan is designed to equip TUKE’s participants with the ability to understand how sustainability and innovation can be embedded in business plan development, become familiar with relevant tools, frameworks, and case studies illustrating practical applications, and effectively highlight sustainable and innovative elements as key value drivers in their own business plans.

This training session is structured around the following training modules:

- **Introduction-Why Sustainability and Innovation matter in EU projects:** In European funding, sustainability and innovation strengthen both the proposal and the exploitation plan. Sustainability reduces risk, improves acceptance by regulators, and aligns with EU climate neutrality and circularity objectives, which is key to gaining funding and successful project exploitation. ¹² In parallel, innovation differentiates the project’s solution and supports future

¹² <https://www.zsi.at/project/evaluation-of-the-european-framework-programmes-for-research-and-innovation-global-challenges-and-industrial-competitiveness-related-to-the-green-transition/>

market uptake by raising product/service performance and adoption probabilities.¹³ Together, these elements map directly to EU evaluation dimensions—Excellence, Impact, and Quality & Efficiency of the Implementation—as specified in the Horizon Europe General Annexes, and align with EU priorities on climate neutrality and circularity^{14,15}. For project teams, placing sustainability and innovation at the center of proposals translates to more compelling value propositions, more credible routes to adoption, and robust, fundable impact sections.

- **Methodological tools and Performance metrics:** This module introduces simple but effective tools to measure and present sustainability and innovation performance within a business plan. The focus will be on key performance indicators (KPIs) that demonstrate progress and impact in a clear and measurable way. Examples may include energy consumption per unit of output, waste reduction rates, employee satisfaction scores, or revenue share from innovative products. Participants will be guided through the selection of relevant metrics and shown how these can be incorporated into a business plan to strengthen credibility and align with EU project reporting and impact evaluation requirements. This module is delivered through a guided walkthrough with straightforward examples that show how performance indicators can be applied in practice.
- **Real-world case studies:** This training session employs a robust case-based learning approach. Accordingly, following the previous training modules, practical examples from European-funded projects will be presented to demonstrate the successful integration of sustainability and innovation. These case studies have been selected from MNLT’s extensive project portfolio for their strong relevance to CRM recovery and recycling technologies. This training session will showcase a non-exhaustive set of sustainable and innovative approaches, including:
 - **PGM Mining and Recovery:** This case study will explore innovative approaches to platinum-group metal (PGM) extraction and recovery, focusing on cleaner production technologies and efficiency gains in energy and resource use.
 - **Rare Earth Elements (REE) Supply chain:** This case study will examine the development of responsible and transparent supply chains for rare earth elements used in permanent magnets.
 - **Recycling methods for CRM:** This case study will present innovative recycling processes for materials such as cobalt, lithium, and rare earths recovered from end-of-life batteries and magnets.

¹³ <https://eucalls.net/blog/research-innovation-eu-funding>

¹⁴ European Commission (2019). *The European Green Deal* (COM (2019) 640)

¹⁵ https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2023-2024/wp-13-general-annexes_horizon-2023-2024_en.pdf

For each case study, the core business model dimensions will be outlined, and the areas where innovation appears will be highlighted. The analysis will focus on how these dimensions reflect sustainability goals and regulatory alignment, as detailed in the following aspects:

- **Value Proposition:** Unique technical or functional advantages, improved performance, or sustainability benefits that define the project's core offering.
- **Operations:** Advanced manufacturing steps, resource-efficient or circular processes, and supply chain adaptations that enable sustainable production.
- **Revenue Models:** Exploring concepts of how project results could later generate value — for example, through service-based offerings, licensing opportunities, or future collaboration with industrial partners.
- **Partnerships:** Collaboration frameworks, open innovation schemes, and cross-sector cooperation that strengthen market entry and knowledge transfer.
- **Financing:** Understanding potential funding options (e.g. Horizon Europe Innovation Fund, InvestEU) that could support further development after the grant period.

Each case study will be briefly analyzed under these categories to illustrate how sustainability and innovation translate into viable business models within the European funding context.

2.4. Legal, normative and ethical requirements

The next step in Business Plan preparation is the "Legal, normative and ethical requirements". In this training session TUKE's participants will understand the legal, normative, and ethical frameworks that underpin business planning, be able to identify relevant regulatory and standardization obligations for a project and recognize ethical considerations and corporate responsibilities that influence business model viability and societal acceptance.

TUKE's participants will gain an initial understanding of the legal, normative, and ethical dimensions that accompany business plan preparation, enabling them to distinguish between mandatory requirements (legal), voluntary frameworks (normative), and value-driven principles (ethical). Following this introductory overview, the training will proceed by guiding them through each dimension in a structured and detailed manner.

Legal requirements – Regulatory mapping & compliance

This training module provides an overview of the European environmental legislation package, focusing on how regulatory compliance and policy developments shape business strategies. Particular attention will be given to legislation related to Critical Raw Materials (CRMs) and its influence on the market

positioning of green, non-invasive CRM recovery technologies. TUKE' s participants will become familiar with the main European environmental and critical raw materials (CRM) regulations that affect technology-oriented business planning. Moreover, participants will learn how to reflect legal and policy requirements in their business plans and how to link their work with broader European goals under initiatives like the Green Deal, the Circular Economy Action Plan, and the Sustainable Products Initiative.

Amongst the topics that this training module will cover are the following:

- European Critical Raw Material Act (ECRMA) and study on the EU' s list of Critical Raw Materials (2020)^{16,17},
- Circular Economy Action Plan and CRM,
- Ecodesign for Sustainable Products Regulation (ESPR)¹⁸.

Normative requirements – Standardization frameworks

In this training module TUKE' s participants will understand how normative frameworks—standards and certifications—shape market access, competitiveness, and trust in business planning.

Normative Requirements (standards and consensus-based frameworks) ensure that businesses operate in alignment with established and recognized frameworks. This training module will cover the following topics:

- **Standardization Frameworks:** Role of ISO, CEN, CENELEC, ETSI and sector-specific standards.
- **Standardization process:** This training sub-module will examine the different pathways of standardization available within the European Union. For example, the process required for a European (EU) Standard' s publication includes 3 main steps, as illustrated in Figure 14:¹⁹
 - ✓ The European Commission (EC) drafts the standardization request and consults with the European Standardization Organizations ('ESOs') and other stakeholders,
 - ✓ The European Committee for Standardization (CEN) and European Committee for Electrotechnical Standardization (CENELEC) develop standards in response to the request,
 - ✓ The Commission then proceeds to recognize the standards through publication in the Official Journal of the European Union (OJEU), following a compliance check.

¹⁶ https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202401252

¹⁷ https://rmis.jrc.ec.europa.eu/uploads/CRM_2020_Report_Final.pdf

¹⁸ https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202401252

¹⁹ <https://www.cencenelec.eu/media/Guides/CEN-CLC/cenclcguide30.pdf>

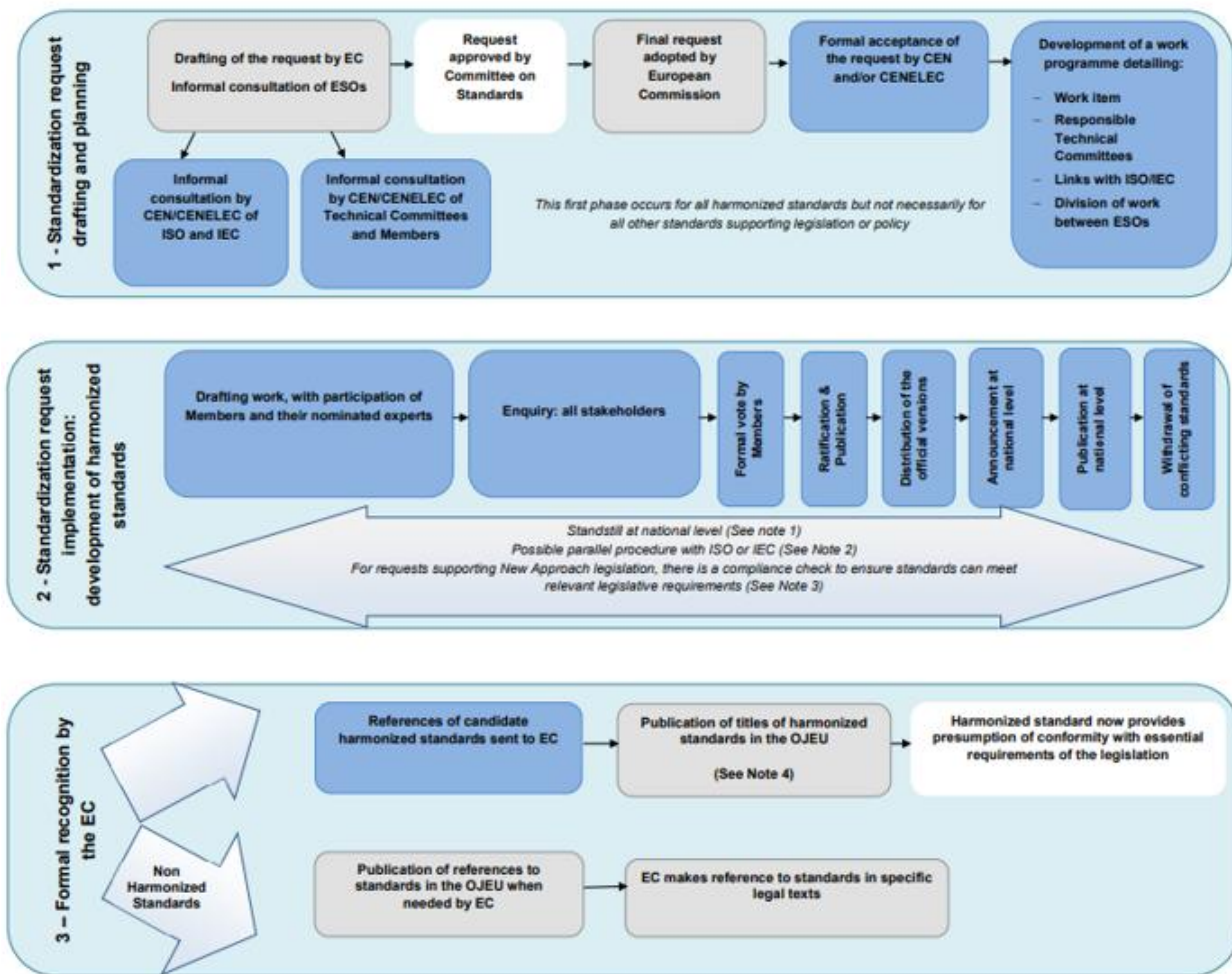


Figure 14: Standardization process for the development of Commission requested standards

Except from the above-mentioned official EU standardization process, CEN offers a fast-track pre-standardization, as called, option, which enables market uptake before full standardization processes are initiated. The CEN Workshop Agreement (CWA) is a consensus-based agreement that is prepared rapidly and flexibly by interested stakeholders (industry, SMEs, research bodies, public authorities, etc.) participating in a CEN Workshop, which is an open platform organized around a specific topic or need.²⁰

- **Certification and Conformity Assessment:** Understanding CE marking, ecolabels, and other certification schemes as market entry requirements.

²⁰ <https://www.cencenelec.eu/media/Guides/CEN-CLC/cenclguide29.pdf>

Ethical requirements – Corporate Social Responsibility (CSR) and Environmental, Social, Governance (ESG)

In this training module, TUKE' s participants will learn how to recognize ethical challenges and responsibilities in business planning, to incorporate Corporate Social Responsibility (CSR), Environmental, Social and Governance (ESG) framework, and stakeholder expectations into their business models, as well as to apply structured reasoning to ethical dilemmas, transforming ethical responsibility into competitive and reputational advantage.

Ethical requirements ensure that businesses go beyond compliance and align with broader societal values. This training module will cover the following topics:

- **Business Ethics Principles:** Upholding fair competition, anti-corruption measures, and transparency as core foundations of trust.
- **Corporate Social Responsibility (CSR) and Sustainability:** Embedding ESG (Environmental, Social, Governance) considerations into the business model to address long-term societal and environmental impacts.
- **Ethical Technology Deployment:** Applying principles of responsible innovation, data ethics, privacy protection, and harm avoidance in product and process design.
- **Stakeholder and Societal Expectations:** Recognizing the importance of public trust, inclusivity, and respect for human rights in shaping acceptance and legitimacy.
- **Ethics in Decision-Making:** Learning from case studies that highlight dilemmas in resource allocation, environmental trade-offs, or community engagement.

2.5. IPR strategy

The next step in Business Plan preparation is the "IPR strategy". In this training session, TUKE' s participants will understand the role of Intellectual Property Rights (IPR) in protecting innovations and strengthening competitiveness and be able to differentiate between external IPR protection (legal frameworks, patents, trademarks, copyrights, design rights) and internal IPR management (organizational policies, knowledge management, confidentiality measures). Moreover, this training session aims to equip TUKE' s participants with skills to formulate an IPR strategy that supports business sustainability, market positioning, and investor confidence.

This training session will be structured around three distinct training modules, that will be analyzed in the following sections:

- Internal IPR analysis
- External IPR analysis
- IPR strategy formulation

Internal IPR analysis

In this training module, TUKE' s participants will understand the principles governing IPR management in European funded projects, including the Horizon Europe framework, gain practical skills in drafting consortium agreements and managing intellectual assets collaboratively and recognize risks of IP conflicts, leakage, or misuse in multi-partner projects and develop strategies to mitigate them.

Internal IPR arrangements are essential, in **European funded projects**, for ensuring that project results can be exploited beyond the project, supporting commercialization through clear ownership, access rights, and well-structured consortium agreements. They form a critical part of exploitation and impact strategies in Horizon Europe proposals and provide the foundation for innovation plans, investor engagement, and technology transfer. More broadly, in business plan preparation, internal IPR management enhances credibility by demonstrating that intellectual assets are securely protected, while also enabling partnerships, licensing, and spin-offs. It reduces legal risks, supports strategic collaborations, and creates a structured pathway from research outputs to market entry, ensuring alignment between innovation activities and business strategy.

This training module will cover the following topics:

- **Internal IPR policies in EU projects:** Rules for ownership of project results (foreground) and pre-existing knowledge (background); distinction between individual partner ownership and joint ownership under the Grant Agreement.
- **Confidentiality and access rights:** Non-disclosure obligations among partners; conditions for granting access to background and results for implementation and exploitation purposes.
- **Employee invention rights in projects:** Internal arrangements within participating institutions to ensure compliance with EU IPR rules while acknowledging researchers' contributions.
- **IP management systems in consortia:** Procedures for documenting results, registering rights, and monitoring exploitation potential within the consortium: **Consortium agreements and joint IP management:** Structuring agreements to allocate responsibilities, handle joint ownership, manage licensing, and define exploitation strategies.

- **Knowledge management and dissemination obligations:** Balancing open science requirements (publications, data management plans) with protection of exploitable results.
- **Risk management in EU collaborations:** Anticipating IP conflicts, misuse of confidential information, and disputes over ownership; strategies for mediation and resolution.

By the end of this training module, TUKE' s participants will be able to apply EU rules on IPR to design compliant internal practices for research projects, draft and interpret consortium agreements with a clear understanding of IP provisions, link internal IPR management to exploitation plans and business plan development in EU projects and transfer these practices to general entrepreneurial contexts to strengthen business plan credibility and reduce risks.

External IPR analysis

In this training module, TUKE' s participants will understand the main categories of external IPR and their application in EU-funded projects, learn how and when to apply patenting, branding, and copyright protection to project results, recognize the importance of distinguishing between background and foreground IP when considering external protection, gain awareness of how EU competition law and dissemination obligations influence external IPR decisions and be able to assess which protection mechanism is most appropriate for different types of project outputs.

This training module will cover the following topics:

- **Introduction to IPR categories:** Introduction to patents, trademarks, copyrights, designs, and trade secrets and their relevance to collaborative EU research outputs.
- **Patent strategy in EU projects:** How and when project results should be patented; interaction with European Patent Office (EPO) and Patent Cooperation Treaty (PCT); rules on ownership and exploitation of patents arising from EU-funded work.
- **Trademarks and branding for EU results:** Using trademarks to protect project-developed tools, platforms, or services, especially during commercialization after project completion.
- **Copyrights and design rights:** Importance for protecting software, databases, and creative content developed in research consortia, with reference to EU copyright frameworks.
- **Trade secrets in collaborations:** Managing confidential background knowledge (pre-existing IP) versus results (foreground IP) — particularly relevant in consortium agreements.
- **IPR and competition law in EU context:** Ensuring compliance with EU competition law, freedom to operate, and avoiding misuse of public funding through anticompetitive IP practices.

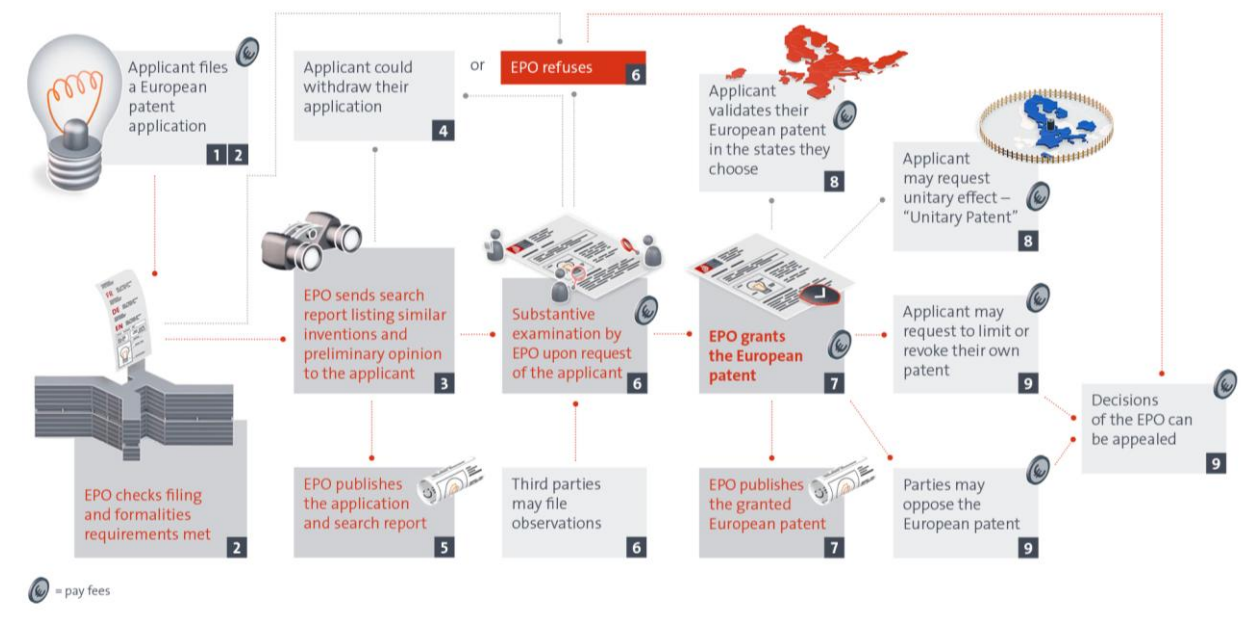


Figure 15: Overview of the European patent application process²¹

IPR strategy

In this training session, TUKE' s participants will understand how to formulate an IPR strategy that bridges internal (consortium-level) and external (legal protection) considerations, be able to align IPR strategy with project exploitation plans (EU context) and business plan preparation (general context) and gain skills to design strategic options for commercialization, licensing, and long-term sustainability of results.

This training module will cover the following topics:

- **Strategic role of IPR:** Why IPR strategy matters for competitiveness, funding success, and investor confidence.
- **From internal to external protection:** How consortium agreements and ownership structures determine feasible patenting, branding, or licensing strategies.
- **Exploitation strategies in EU projects:** Integrating IPR into Horizon Europe exploitation, dissemination, and impact plans.
- **Business plan integration:** Translating IPR choices into market-entry strategies, revenue models, and risk mitigation sections of a business plan.
- **Strategic options for exploitation:** Licensing, spin-offs, joint ventures, open innovation models.

²¹ <https://www.epo.org/en/new-to-patents/how-to-apply-for-a-patent>

- **Monitoring and adaptation:** How to revisit and adapt IPR strategies throughout the project lifecycle.

By the end of this session, TUKE's participants will be able to formulate clear IPR strategy tailored to EU-funded projects, to integrate IPR strategy into business plan preparation, to select the most appropriate exploitation pathways for specific innovations and link project-level IPR management to long-term organizational competitiveness.

2.6. Conclusions

The Knowledge Transfer Plan under Task 5.2 provides a comprehensive and methodologically coherent framework for strengthening TUKE's capacity in business plan preparation. By integrating analytical tools such as SWOT analysis, risk management methodologies, market positioning frameworks, sustainability and innovation assessment metrics, and IPR strategies, the program ensures a complete and structured understanding of how viable business models are developed within European research and innovation contexts. The focus on green, non-invasive CRM recovery technologies ensures thematic coherence with the project's sustainability objectives while fostering practical learning through real-world examples and case-based approaches.

Across all training modules and submodules, illustrative examples will be drawn, to the extent possible, from green, non-invasive CRM recovery technologies. This approach will enable TUKE's participants to more effectively comprehend and contextualize the methodologies and concepts under instruction, ensuring the direct applicability of the knowledge transferred to their institutional and research contexts. The allocation of training modules and submodules will be finalized during the last stages of the educational material development, ensuring that the content remains adaptive to emerging project priorities and aligned with EU best practices in knowledge transfer and innovation management.

Ultimately, this plan serves not only as a training roadmap but also as a transferable methodology for enhancing institutional competence, innovation performance, and market alignment. Through its progressive sequence—from product validation to legal and ethical compliance and strategic IPR management—it consolidates theoretical insight with applied skill-building. TUKE's participants will thus emerge equipped to design, evaluate, and implement business plans that meet the expectations of EU-funded frameworks, ensuring scientific, environmental, and socio-economic impact in alignment with the principles of sustainable innovation and responsible research practice.

5.TASK 5.3: Knowledge Transfer Plan for Clustering (Stakeholders, Partners, Industry, Networking)

(Lead: ISMC; Contributors: AVENIA, ICAMCyL; M13-M18)

In Task 5.3, led by ISMC with the support of AVENIA and ICAMCyL, two virtual training sessions will be organized starting in January 2026. The planned activities focus on strengthening TUKE's capacity in stakeholder identification, partner search, industry analysis, and networking strategies that will be based on the training performed in T5.1, while ensuring alignment with broader EU industrial clustering initiatives (T8.2/9.2) and cluster preparation methodologies (T8.3/9.3). The first will focus on identifying specific industry stakeholders, finding partners for projects or other initiatives, industry analysis, and effective networking. Table 1 presents the first draft of the agenda co-designed with the contributors in T5.3.

Table 1: draft agenda

Time	Item	Presenter
<i>TITLE</i>		
09:30 – 09:40	Welcome and objectives	ISMC / AVENIA
09:40 – 10:00	Industry Analysis – Tools and Approaches Introduction to sector-specific analysis, market trends, and positioning strategies for industrial cooperation. Practical guidance for preparing and structuring industrial clusters (T8.3/9.3). Cluster perspective / gap or need? Slovakia compared to other regions	ISMC + external expert industrial cluster in Slovakia
10:30 – 11:00	Building Successful Networks Techniques and approaches for establishing and maintaining strong networks across sectors and regions. Government, private sector?	AVENIA
11:00 – 11:15	COFFEE BREAK	ALL
11:30 – 12:00	Synergies with EU Industrial Strategies and S3 Regions Deep dive into T8.2/9.2 – linking clustering activities with EU industrial priorities and Smart Specialisation Strategies.	External expert + Lapland
12:00 – 13:00	Practical Workshop – TUKE's Case Study Approach	ISMC / AVENIA

	Hands-on exercises simulating stakeholder mapping, partner selection, and cluster formation strategies. An example of Slovakia – stakeholder mapping	
13:00 – 13:15	Wrap-Up and conclusions	ISMC / AVENIA

This session represents the first of the two full-day training blocks planned in Task 5.3. The agenda has been structured to progressively build participants' competencies in industrial analysis, stakeholder mapping, networking practices and alignment with EU-level clustering initiatives. The session will be jointly prepared and delivered by ISMC, AVENIA, ICAMCyL, and external experts, ensuring a balanced combination of theoretical inputs, practical tools, and region-specific perspectives applicable to TUKE's strategic priorities.

The agenda will cover the following thematic blocks:

Industry Analysis – Tools and Approaches

ISMC will introduce methodologies for sector-specific industry analysis, including market trend identification, competitive positioning and tools supporting the early steps of industrial cluster preparation (T8.3/9.3).

An external expert will provide a comparative assessment of the Slovak industrial landscape, highlighting structural gaps and strategic opportunities in relation to other EU regions.

Building Successful Networks

AVENIA and ICAMCyL will present approaches for creating and maintaining cross-sector and cross-regional networks, covering both public and private engagement strategies. Practical frameworks will be shared for identifying high-value partnerships and strengthening TUKE's visibility within European innovation ecosystems.

Synergies with EU Industrial Strategies and S3 Regions (T8.2/9.2)

This segment will provide an in-depth overview of opportunities emerging from EU Smart Specialisation Strategies (S3) and the relevance of industrial modernisation platforms. The session will emphasise mechanisms to align TUKE's cluster ambitions with the European Strategic Cluster Partnerships for Smart Specialisation Investments (ESCP-S3). External speakers will illustrate concrete pathways for integrating Slovak competencies with European cluster networks, using examples from regions such as Lapland.

Practical Workshop – TUKE's Case Study Approach

ISMC and AVENIA will facilitate a hands-on workshop where participants will apply the presented methodologies to TUKE's real context. Exercises will include stakeholder mapping, partner prioritisation and outlining preliminary cluster formation strategies based on TUKE's strengths. TUKE will contribute preparatory materials including its internal methodology, a preliminary stakeholder map and an initial contact database.

The second intended session aims to reach the following outcomes:

- A refined **stakeholder map** aligned with AVENIA's planned activity
- A **prioritised list of partners** (industry, clusters, institutions, EU actors) relevant to the activity
- Identification of **gaps, needs, and strategic opportunities** for stakeholder engagement
- Practical methods that AVENIA can continue using for subsequent cluster-related actions

In Table 2 is presented the draft agenda. The session agenda has been designed to progressively build TUKE participants' capacity in identifying, evaluating, and prioritising stakeholders and potential partners through a combination of theoretical inputs and practical exercises.

The first thematic block focuses on the **fundamentals of stakeholder analysis**, delivered by AVENIA. This section will introduce key concepts such as stakeholder categories, roles, influence and interest levels, and their relevance in shaping successful collaborative activities. It will provide the conceptual framework necessary for the rest of the session. Following this, AVENIA and ICAMCyL will jointly present a set of **tools and methods for stakeholder mapping**, including influence/interest matrices, prioritisation techniques, and data-driven mapping templates. Real examples from previous clustering initiatives were discussed to facilitate application in AVENIA's context.

ISMC will deliver a session on **partner search strategies**, addressing how to identify and approach potential partners who can bring added value to AVENIA's activity. This segment will highlight different types of partners (industry, institutional, cluster-level, EU-level), mechanisms for establishing collaboration, and criteria for prioritising strategic partners.

The next agenda block will provide a dedicated space for **aligning stakeholder and partner search efforts with AVENIA's specific activity**. AVENIA will present the concrete needs, expected outcomes, and thematic priorities of their planned action. Based on this information, the session will explore potential gaps in the current stakeholder landscape, opportunities for collaboration and key actors whose engagement would be critical for the activity's success.

The session will conclude with a **practical workshop**, jointly facilitated by AVENIA, ISMC and ICAMCyL. Participants could apply the methodologies introduced earlier to AVENIA's real data, performing exercises such as stakeholder scoring, influence mapping, and partner prioritisation. This hands-on component will ensure that the theoretical content was immediately translated into actionable outputs directly supporting AVENIA's preparation work.

Table 2: draft agenda

Time	Item	Presenter
TITLE		
09:30 – 09:40	Welcome and objectives	ISMC / AVENIA
09:40 – 10:00	Fundamentals of Stakeholder Analysis Overview of stakeholder categories, roles, influence/interest assessment, and methodologies applicable to AVENIA's planned activity.	AVENIA
10:30 – 11:00	Tools and Methods for Stakeholder Mapping Practical tools (matrices, scoring methods, mapping templates). Examples from similar cluster development actions.	AVENIA + ICAMCyL
11:00 – 11:15	COFFEE BREAK	ALL
11:30 – 12:00	Partner Search Strategies for Cluster-Related Activities Approaches for identifying high-value partners, EU collaboration mechanisms, and alignment with industry priorities.	External expert + ISMC
12:00 – 13:00	Practical Workshop – Application to AVENIA's Case Interactive exercise using real data: stakeholder scoring, mapping, and partner prioritisation for AVENIA's activity.	ISMC / AVENIA / ICAMCyL
13:00 – 13:15	Wrap-Up and conclusions	ISMC / AVENIA

Next Steps

In the upcoming months, T5.3 will:

- Organise the two full day training block, completing the set of virtual sessions planned under Task 5.3.
- Continue developing materials linked to EU clustering activities, including benchmarking outputs (D8.2) and preparatory inputs for the **Portfolio of Involvement Ideas (D9.4)**.

6. CONCLUSIONS

This deliverable D5.1 aims at enhancing the research management capabilities of the Technical University of Košice (TUKE).

Activities conducted within Tasks 5.1, 5.2, and 5.3, have engaged over 70 participants, fostering sustainable administrative and strategic skills aligned with EU priorities.

They are linked to other Work Packages (WP6, WP8, WP9), currently on-going, according to timelines.