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BIOECONOMY EXCELLENCE ALLIANCE FOR STIMULATING
INNOVATIVE AND INCLUSIVE GREEN TRANSITION

BEAMING

D8.1

BEAMING Knowledge Valorisation Case Study Book

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TABLE OF CONTENTS

Executive summary	7
Abbreviations and Acronyms.....	10
1 Introduction	11
2 Methodological Integration.....	15
3 Conceptual and Institutional Models of Knowledge Valorisation	20
3.1 From Knowledge Transfer to Knowledge Valorisation.....	20
3.2 Core Dimensions of Institutional KV Systems.....	21
3.3 Incentives, Motivation and Institutional Culture	23
3.4 Procedural and Regulatory Conditions	24
3.5 Monitoring, Indicators and Governance Integration.....	25
3.6 Institutional Embeddedness in Innovation Ecosystems	28
4 Interviews Analysis.....	30
4.1 Positioning of the Interviews within the BEAMING Analytical Architecture.....	30
4.2 Methodological Framework of Interviews Analysis	32
4.3 Reported Institutional Support for KV.....	35
4.4 Organisational Structures and Operational Mechanisms.....	39
4.5 Reported Barriers and Structural Constraints.....	43
4.6 Motivational Drivers and Institutional Culture	49
4.7 Measurement Practices and Use of Impact Evidence.....	53
4.8 Future Priorities and Capacity Development Needs	57
4.9 Cross-Cutting Patterns and Configurational Interpretation.....	61
4.10 Methodological and Analytical Limitations.....	66
4.11 Synthesis and Strategic Implications for Knowledge Valorisation Systems.....	69
5 Survey Analysis.....	71
5.1 Introduction.....	71
5.2 Methodological Framework of Survey Analysis	73
5.3 Respondent Profile	79

5.4	Perceived Institutional Support Structures.....	84
5.5	Individual Experience and Attitudes Toward KV	91
5.6	Perceived Barriers to Knowledge Valorisation.....	97
5.7	Training Needs Assessment	103
5.8	Qualitative Insights from Open Responses.....	112
5.9	Contribution to Gap Analysis and Roadmap Development.....	119
5.10	Limitations	124
5.11	Survey Conclusion.....	125
6	Gap Analysis	127
6.1	Analytical positioning and evidence base.....	127
6.2	Conceptual and visibility gaps.....	128
6.3	Competence and readiness gaps.....	130
6.4	Procedural and administrative gaps.....	132
6.5	Incentive and recognition gaps.....	132
6.6	Monitoring and impact evidence gaps.....	133
6.7	External engagement and ecosystem gaps.....	134
6.8	Consolidated gap configuration.....	135
7	Roadmaps to Successful Implementation of Knowledge Valorisation Practices.....	137
7.1	Strategic Framing	137
7.2	Enhancing Visibility and Opportunity Activation.....	139
7.3	Competence Development and Applied Readiness	140
7.4	Procedural Streamlining and Administrative Simplification	142
7.5	Incentive Alignment and Recognition Mechanisms.....	143
7.6	Strengthening Monitoring and Governance Integration.....	144
7.7	Strengthening External Engagement and Ecosystem Interfaces	145
7.8	Phased Implementation Logic.....	146
7.9	Convergence Through Structured Peer Exchange	147
7.10	Consolidated Roadmap Orientation.....	147



References	148
8 ANNEX.....	150
8.1 ANNEX – Interview and Survey structure	150
8.2 ANNEX – Interview.....	159
8.3 ANNEX – Survey.....	211
8.4 ANNEX – List of Figures.....	215
8.5 ANNEX – List of Tables	216

Executive summary

Deliverable D8.1 provides an empirical assessment of **knowledge valorisation practices** across the 10 higher education institutions and 2 research institutes of the BEAMING consortium. The analysis focuses on institutional support structures, user-level awareness, perceived barriers, and capacity development priorities related to knowledge valorisation activities. The empirical evidence is based on two complementary sources: a **survey** administered to students and early-career researchers (Ns = 163) and **institution-level interviews** (N=12). Interview responses were analysed using a structured thematic coding framework designed to systematically capture recurring elements related to governance arrangements, operational support mechanisms, incentive structures, monitoring practices and future development priorities. This approach enables qualitative institutional responses to be organised in a comparable format and provides the analytical basis for the interpretation presented in the report.

Integrated empirical findings are presented combining interview evidence on institutional governance and support structures with survey data capturing awareness, confidence and perceived barriers among students and early-career researchers. Together, these sources enable a cross-level interpretation linking institutional configurations with aggregated user perceptions across the BEAMING consortium and identifying alliance-level patterns shaping knowledge valorisation engagement.

Interview evidence indicates that knowledge valorisation is supported through institutional elements across partner institutions, including intellectual property management procedures, technology transfer or equivalent support units, legal and contractual assistance, collaboration interfaces with external partners, and entrepreneurial support pathways. While organisational configurations differ in centralisation and formalisation, core support components are present across institutions.

Monitoring practices are also reported, particularly regarding patents, collaboration outputs and entrepreneurial activities. However, the extent to

which monitoring evidence informs governance and strategic decision-making varies across institutions.

Survey results reveal uneven visibility of institutional support mechanisms. In areas such as intellectual property guidance and start-up or spin-off support, 44.2% of respondents select “Don’t know,” indicating substantial uncertainty regarding these pathways. By contrast, perceived availability is higher for industry collaboration (76.7%), participation in international networks (73.0%) and innovation-related mobility programmes (62.6%).

Self-assessed **awareness of knowledge valorisation opportunities** records a mean of 2.75 on a 0–5 scale. While 38.7% fall within the low awareness band (0–2), 31.3% report high awareness (4–5), indicating a distributed pattern across the awareness scale. Limited awareness or training opportunities is identified as a barrier by 40.5% of respondents, suggesting a significant visibility and opportunity-awareness gap at user level.

A consistent difference emerges between **engagement interest** and **applied confidence**. Interest in future training, workshops or mobility related to knowledge valorisation is high (mean 3.91; 72.4% in the high band), while confidence in developing a business idea from research remains lower (mean 2.70; 43.8% in the low band).

Perceived **usefulness of prior training** records a mean of 2.64, with 45.0% of respondents positioned in the low band, suggesting limited perceived impact of earlier competence-building initiatives.

Training demand is extensive: 1,736 topic selections were recorded (average 10.65 per respondent), with 98.8% selecting at least one topic. Highest demand concerns developing business plans based on research ideas (61.4%), market analysis and user identification (55.8%), innovation management (49.1%), accessing funding for innovation (46.6%) and building industry partnerships (46.0%). These findings indicate strong engagement potential combined with moderate applied confidence, pointing to a competence gap in operational readiness.

Survey data show **cumulative and multi-dimensional barriers**. The frequently reported constraints include lack of time or competing academic priorities (56.4%), insufficient funding or incentives (53.4%), bureaucratic or administrative obstacles (43.6%), and limited awareness or training opportunities (40.5%). Interview evidence confirms similar challenges, referencing procedural complexity, resource limitations, incentive alignment issues and ecosystem-related constraints.

The **integrated analysis** identifies **six interrelated domains** requiring structured attention:

1. Visibility and opportunity awareness
2. Competence and applied readiness
3. Procedural and administrative friction
4. Incentive coherence
5. Monitoring-to-decision integration
6. Engagement and ecosystem pathways

These domains provide the **empirical basis** for roadmap development. The roadmap therefore focuses on improving visibility and access clarity, strengthening modular training architectures, streamlining procedures, aligning incentives, integrating monitoring feedback into governance processes and reinforcing external engagement interfaces.

The evidence indicates that knowledge valorisation across the BEAMING alliance is **structurally embedded but unevenly activated** at user level. Institutional support mechanisms are present across partner institutions; however, awareness, applied confidence, and procedural accessibility vary considerably. A recurrent pattern emerges in which high engagement interest coexists with moderate applied confidence and cumulative constraints, indicating uneven activation of existing support structures.

Deliverable D8.1 thus provides an empirical baseline for targeted capacity-building measures aimed at improving activation, alignment and governance integration of knowledge valorisation across the alliance.

Abbreviations and Acronyms

Acronyms	Explanation
EC	European Commission
ECR	Early Career Researcher
ERA	European Research Area
EU	European Union
HEI	Higher Education Institution
IP	Intellectual Property
KPI	Key Performance Indicator
KV	Knowledge Valorisation
R&I	Research and Innovation
RRI	Responsible Research and Innovation
SME	Small and Medium-sized Enterprise
TRL	Technology Readiness Level
TTO	Technology Transfer Office
WP	Work Package

1 Introduction

The **Bioeconomy Excellence Alliance for Stimulating Innovative and Inclusive Green Transition** (BEAMING) is a collaborative European initiative funded under the Horizon Europe Widening Participation and Spreading Excellence (WIDERA) programme. The project addresses persistent structural imbalances within the European research and innovation (R&I) system that continue to affect institutions located in widening regions. These disparities are visible not only in research performance and access to competitive funding but also in the capacity of institutions to translate scientific knowledge into societal, economic and environmental value.

Reducing such disparities represents a central objective of the **European Research Area**. Within this context, strengthening institutional capacity for knowledge valorisation has become an important policy priority, particularly for institutions operating in less innovation-intensive environments. Although research activity across Europe has expanded significantly in recent decades, the transformation of research outputs into innovation, policy solutions and societal impact remains uneven across regions and institutions (Perkmann et al., 2021; Hayter et al., 2020).

The **bioeconomy** constitutes a strategic domain within European policy and lies at the intersection of sustainability, climate transition, industrial competitiveness and regional development. Innovation in this field depends on complex interactions among research organisations, industry, public authorities and civil society. Institutions located in widening regions frequently encounter structural constraints that limit full participation in innovation ecosystems. These constraints include limited technology transfer infrastructure, fragmented collaboration networks, insufficient incentives for engagement beyond academic publication and restricted access to industrial and financial partners (Amry et al., 2021; van de Burgwal et al., 2019).

The **BEAMING project** addresses these challenges through the establishment of a structured alliance aimed at strengthening research excellence and institutional capacity for impact generation. The alliance connects higher

education institutions and research organisations with complementary profiles and combines institutional reform, capacity building and inter-institutional collaboration. Enhancement of the role of participating institutions within European innovation ecosystems is pursued through coordinated institutional development across governance arrangements, organisational culture, operational mechanisms and human capital.

Knowledge valorisation functions within this framework as a central enabling process through which research-based knowledge generates economic, societal and policy value. Contemporary research policy increasingly recognises knowledge valorisation as a core function of publicly funded research organisations. Earlier technology transfer models focused mainly on patents and licensing; current approaches incorporate broader forms of knowledge exchange such as collaborative research, entrepreneurial activity, policy engagement and societal innovation pathways (Perkmann et al., 2013; Hayter et al., 2020).

Recent European **policy developments** reinforce this broader perspective. The Council Recommendation on the guiding principles for knowledge valorisation (EU 2022/2415) and the Code of Practice on the management of intellectual assets for knowledge valorisation promote inclusive, responsible and impact-oriented approaches that integrate research results into economic, societal and policy contexts (European Commission, 2022; European Commission, 2023). Institutional governance arrangements, incentive structures and collaboration ecosystems are highlighted within these frameworks as key enabling conditions for effective knowledge valorisation.

Within the **BEAMING architecture**, knowledge valorisation operates both as a strategic objective and as a transversal mechanism supporting several project activities. Research excellence is considered inseparable from the capacity to generate societal and economic benefits, particularly in complex domains such as the bioeconomy where innovation pathways rely on interaction between academia, industry, public authorities and civil society. Strengthening institutional capacity for knowledge valorisation therefore

represents an essential component of the alliance's broader objective of enhancing research impact and institutional transformation.

Work Package 8 (WP8) focuses specifically on assessing institutional regulatory environments, governance arrangements and operational practices related to knowledge valorisation across the BEAMING consortium. Instead of assuming homogeneous starting conditions, the assessment examines variations in institutional support mechanisms, incentive systems, monitoring practices and external engagement models that shape knowledge valorisation activities across partner institutions.

Deliverable D8.1 – **Knowledge Valorisation Case Study Book** – constitutes the primary output of Task 8.2 and provides an evidence-based analysis of institutional knowledge valorisation practices across all participating organisations. Structural patterns, perceived barriers and areas for capacity enhancement are identified in order to inform the design of subsequent capacity-building interventions within the alliance.

The **analytical framework** applied in this deliverable reflects the understanding of knowledge valorisation as a non-linear and multi-actor process through which research-based knowledge generates economic, societal or policy value. Commercialisation pathways such as patents, licences and spin-offs represent only one dimension of this process. Collaborative research, policy contribution and societal innovation initiatives also constitute important forms of knowledge valorisation (van de Burgwal et al., 2019; Amry et al., 2021). The assessment therefore examines enabling conditions in addition to measurable outputs, including governance arrangements, incentive structures, organisational culture and integration with external innovation ecosystems.

Complementary sources of evidence support the empirical analysis. Desk research examines relevant European policy frameworks and defines the thematic domains guiding the assessment. A structured survey targeting students and early-career researchers (Ns = 163) captures awareness levels, attitudes, perceived barriers and training demand related to knowledge valorisation. Semi-structured interviews with senior researchers and

institutional managers document governance configurations, operational mechanisms and strategic priorities across partner institutions. Comparison between institutional articulation and user-level experience allows identification of situations in which support structures are formally present but weakly perceived or insufficiently activated. Empirical evidence for the assessment is derived exclusively from the survey and interview components. The survey provides quantitative insight into awareness, perceptions, and needs of students and early-career researchers, while the interviews capture institutional-level perspectives, governance arrangements, and strategic orientations. Triangulation is applied through the integration of these two independent data sources, enabling cross-validation between user-level experience and institutional articulation. Desk research serves a complementary role, providing policy context, conceptual framing, and benchmarking references for the interpretation of empirical findings.

A system of **knowledge valorisation performance indicators** was developed within Task 8.2 to support monitoring of institutional capacities and practices across the BEAMING alliance. Empirical evidence from desk research, interviews and surveys informed the development of the indicator system. The framework operationalises the assessment model and provides a mechanism for tracking institutional progress in the implementation of knowledge valorisation activities.

Deliverable D8.1 represents a foundational milestone within the BEAMING project lifecycle. The deliverable establishes a **structured empirical baseline** that supports the design and monitoring of subsequent capacity-building measures, including training programmes, mobility schemes and Communities of Practice aimed at strengthening knowledge valorisation competences across partner institutions. The deliverable also contributes to **institutional learning** within the BEAMING alliance. Documentation of institutional configurations, constraints and development priorities facilitates structured reflection and exchange of practices among participating organisations. In this sense, D8.1 functions both as an analytical assessment and as a strategic instrument supporting the progressive strengthening of knowledge valorisation as an institutional function within the BEAMING partnership.

2 Methodological Integration

Deliverable D8.1 adopts an **exploratory mixed-methods design** that combines quantitative survey evidence with qualitative institutional interview data in order to analyse knowledge valorisation (KV) practices across the BEAMING alliance. Mixed-methods approaches are widely used in organisational and policy research when the objective is to integrate different sources of evidence capturing both structural configurations and behavioural perceptions within complex institutional environments (Fetters et al., 2013; Tashakkori & Teddlie, 2010). In the context of knowledge valorisation systems, this design allows simultaneous examination of institutional arrangements and the extent to which these arrangements are recognised and activated by research actors.

The **desk research** component provided the conceptual and policy foundation for the analytical framework applied in this deliverable, in alignment with the core dimensions of knowledge valorisation systems defined in **Chapter 3**.

The corpus consisted of:

- i.** European Commission policy documents and recommendations on knowledge valorisation and research impact (including ERA and Horizon Europe frameworks);
- ii.** complementary policy and analytical reports on knowledge transfer and innovation systems;
- iii.** selected academic literature supporting conceptual clarification.

Documents were selected through purposive sampling based on relevance to institutional knowledge valorisation, applicability to higher education and research organisations, and alignment with European policy priorities.

A structured analytical reading was conducted to extract recurrent dimensions corresponding to the framework operationalised in Chapter 3, namely:

- governance and strategic integration;
- incentives and institutional culture;
- procedural and regulatory conditions;
- monitoring and indicators;
- ecosystem engagement and external interfaces.

These dimensions were used to define the analytical categories underpinning both the interview protocol and the survey instrument.

Desk research informed the design of data collection tools and provided a deductive reference structure for interpreting empirical findings. Interview and survey evidence were analysed against these dimensions to identify patterns of institutional articulation, variation in implementation, and gaps between structural provision and perceived accessibility.

This approach enables a structured comparison between observed institutional practices and policy-oriented reference frameworks, supporting a consistent interpretation of knowledge valorisation capacity across the BEAMING alliance.

The analysis is conducted at consortium level in order to ensure a systemic interpretation of knowledge valorisation practices across partner institutions. While the underlying data collection was performed at institutional level, the reporting approach prioritises aggregated patterns, shared structural features, and recurrent gaps. This choice is consistent with the objective of identifying common capacity-building needs, transferable practices, and collective challenges within the alliance.

The **empirical framework** integrates two complementary components. The first component consists of a **structured survey** targeting students and Early Career Researchers (ECRs) across the BEAMING partner institutions. The survey provides a quantitative profile of awareness levels, engagement interest, perceived barriers and training demand related to knowledge valorisation activities. The final cleaned dataset includes 163 respondents distributed across multiple institutions within the consortium. Participation

was voluntary and the questionnaire was disseminated through institutional communication channels. The objective was not to obtain statistically representative institutional samples, but rather to capture indicative behavioural patterns related to awareness, motivation and perceived constraints affecting participation in knowledge valorisation processes. Because response distribution across institutions is uneven, reflecting differences in institutional size and dissemination reach, the survey findings are interpreted at the level of aggregated alliance-wide patterns. Similar perception-based survey approaches are commonly applied in studies of academic engagement and university–industry interaction, where the objective is to identify behavioural signals relevant for institutional capacity development (Perkmann et al., 2013; Perkmann et al., 2021).

The second empirical component consists of **qualitative interviews** conducted with senior researchers, research managers and institutional representatives responsible for knowledge valorisation or related governance functions. Each participating institution provided a single consolidated response reflecting a governance-level perspective on institutional support structures, operational mechanisms, incentive arrangements and monitoring practices related to knowledge valorisation. The interview component therefore documents how institutional frameworks are articulated at organisational level, including intellectual property management procedures, technology transfer structures, collaboration interfaces with external partners and evaluation mechanisms used to monitor research impact and knowledge transfer activities.

For the survey, the unit of analysis is the individual respondent. Survey findings describe aggregated perceptions across career stages, disciplinary backgrounds and levels of research experience. The results therefore capture patterns of awareness, confidence, engagement interest and perceived barriers affecting participation in knowledge valorisation activities. For the interview component, the unit of analysis is the institution. Each institutional response represents a governance-level description of organisational arrangements and strategic priorities. (Saldaña, 2021).

The **integration of survey and interview evidence** enables structured comparison between institutional provision and user-level recognition of knowledge valorisation mechanisms. Interview data identify the presence of institutional support structures and governance arrangements, while survey responses capture the extent to which these mechanisms are perceived as visible, accessible and actionable by intended beneficiaries. This cross-level analytical strategy allows comparison between institutional articulation and behavioural activation conditions within the BEAMING ecosystem. The objective of this integration is to identify recurring patterns of alignment or misalignment between institutional structures and user-level perceptions. Such cross-level interpretative approaches are frequently applied in studies of research and innovation systems, where institutional configurations and behavioural dynamics interact within complex organisational environments (Geuna & Rossi, 2015).

Within the qualitative component, thematic coding of interview responses generates aggregated indicators describing the distribution of structural references across institutions. These indicators are used to summarise the presence of institutional mechanisms related to knowledge valorisation across the alliance.

Several analytical boundaries are acknowledged to maintain interpretative clarity. The methodological integration applied in this deliverable is descriptive and pattern-oriented. The analysis does not attempt to rank institutions or measure comparative institutional performance. Absence of explicit articulation within interview responses is interpreted as non-articulation within the dataset and not as a confirmation of absence of practice. Similarly, survey responses indicating uncertainty or lack of awareness are interpreted as visibility signals, not as definitive structural gaps.

The combined use of survey and interview evidence strengthens the robustness of the analytical framework by enabling complementary examination of governance arrangements and user-level experience. By combining institutional mapping with perception-based evidence, this approach identifies cross-level patterns relevant for later gap analysis and

roadmap development. Through this integrated approach, Deliverable D8.1 establishes an empirical foundation for identifying priority areas for competence development, governance alignment and improved visibility of knowledge valorisation mechanisms across the BEAMING alliance.

3 Conceptual and Institutional Models of Knowledge Valorisation

3.1 From Knowledge Transfer to Knowledge Valorisation

Knowledge valorisation has evolved within the European research policy landscape from a predominantly technology transfer-oriented paradigm toward a broader impact-oriented framework (European Commission, 2022; Perkmann et al., 2013). Early institutional approaches were primarily centred on intellectual property protection, patenting, licensing and contractual collaboration with industry (Siegel, Veugelers, & Wright, 2007; Audretsch, Lehmann, & Wright, 2014). While these mechanisms remain important components of research translation, contemporary policy frameworks conceptualise valorisation more broadly (European Commission, 2022; OECD, 2021).

Under Horizon Europe, knowledge valorisation refers to the **generation of economic, societal, environmental and policy value from research results** (European Commission, 2022). This evolution reflects a shift from linear “research-to-market” models toward systemic interpretations embedded in innovation ecosystems (Carayannis & Campbell, 2012; Chesbrough, 2017). Valorisation therefore encompasses commercialisation pathways alongside policy uptake, societal engagement, open science alignment and multi-actor collaboration (OECD, 2019; European Commission, 2023).

Within this broader framing, higher education institutions and research organisations increasingly treat valorisation as a strategic function intersecting with research excellence, societal engagement and regional development (Grimaldi, Kenney, Siegel, & Wright, 2011; Wright, Siegel, & Mustar, 2017). Institutional models are thus expected to accommodate both economic and non-economic impact pathways, recognising that value generation occurs through diverse and context-dependent channels (Perkmann et al., 2013; OECD, 2021).

This conceptual evolution implies increasing integration of strategy, support structures, incentive arrangements and monitoring systems within institutional governance architectures .

3.2 Core Dimensions of Institutional KV Systems

Institutional knowledge valorisation systems can be analytically described as structured configurations composed of interrelated governance, operational and support components (Perkmann et al., 2013; Wright, Siegel, & Mustar, 2017; OECD, 2021). While organisational forms vary, several core dimensions are recurrently referenced in institutional descriptions across participating organisations (Audretsch, Lehmann, & Wright, 2014; European Commission, 2022).

The structural configuration of institutional knowledge valorisation systems can be represented as an interconnected framework linking governance arrangements, operational support structures, incentive environments and external ecosystem interfaces (**Figure 1**) (Perkmann et al., 2013; Carayannis & Campbell, 2012).

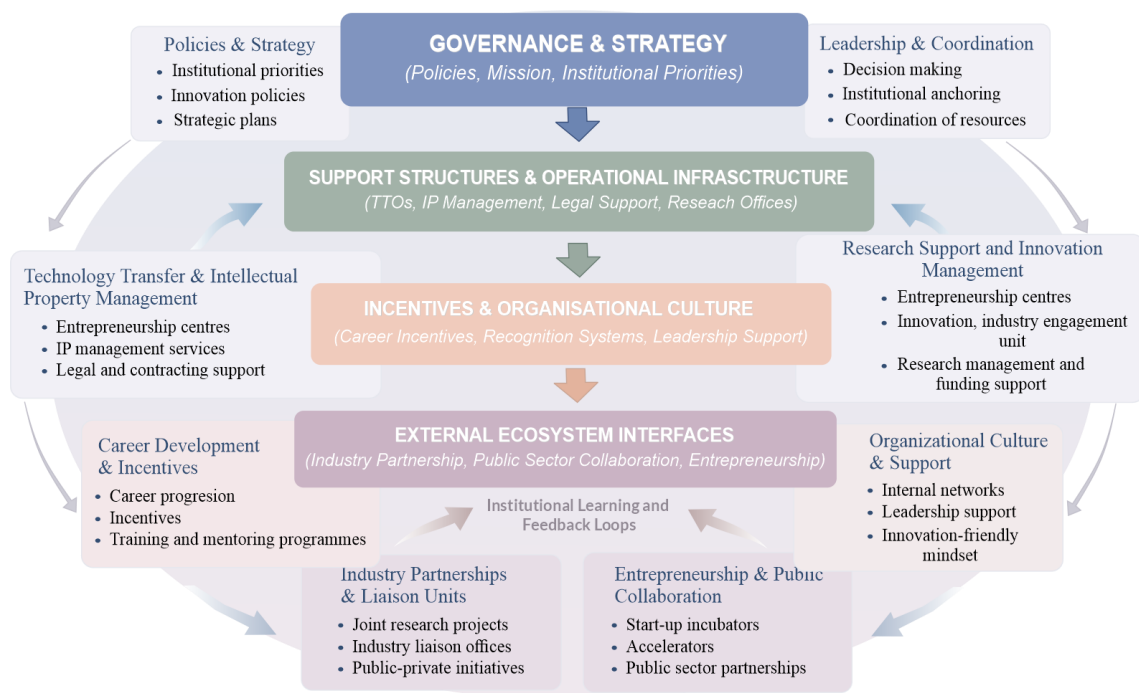


Figure 1. Conceptual Model of Institutional Knowledge Valorisation Systems

Figure 1 presents the main analytical components of institutional knowledge valorisation systems and their interrelations. Governance and strategy provide institutional anchoring, operational support structures enable implementation, incentive environments shape researcher engagement, and external ecosystem interfaces facilitate collaboration and application pathways (OECD, 2021; European Commission, 2023). Feedback loops indicate the role of institutional learning and adaptive coordination across these dimensions (Wright et al., 2017).

Strategic and governance anchoring constitutes the first dimension. Valorisation may be articulated through dedicated strategies, embedded within broader research and innovation plans, or incorporated into institutional mission statements (European Commission, 2022; OECD, 2019). Strategic anchoring defines objectives, allocates responsibilities and situates valorisation within governance structures.

Operational support structures represent a second dimension. These commonly include technology transfer offices or equivalent units, intellectual property support functions, legal and contractual services, research support offices and innovation centres (Perkmann et al., 2013; Audretsch et al., 2014). Such structures establish procedural pathways for patenting, licensing, partnership negotiation and exploitation planning (Wright et al., 2017). Organisational arrangements may be centralised or distributed, provided that access points and responsibilities are identifiable.

External collaboration mechanisms form a third dimension. Institutions frequently maintain liaison units, partnership frameworks or structured collaboration interfaces that facilitate engagement with industry, public authorities and non-academic stakeholders (OECD, 2019; European Commission, 2022). These mechanisms extend valorisation beyond internal research activities.

Entrepreneurial support pathways constitute a related component, including incubators, accelerators, technology parks, mentoring schemes and proof-of-concept instruments (Grimaldi, Kenney, Siegel, & Wright, 2011;

Wright et al., 2017). These elements diversify valorisation routes and support venture creation.

Administrative coordination and capacity underpin the coherence of these dimensions. Effective models involve coordination between academic units, research management offices, legal services and leadership structures, ensuring predictable workflows and clear allocation of responsibilities (Perkmann et al., 2013; OECD, 2021). Across institutional contexts, variation typically concerns configuration, degree of integration and operational level of structural development (Audretsch et al., 2014; European Commission, 2022).

3.3 Incentives, Motivation and Institutional Culture

Formal structures alone do not determine knowledge valorisation dynamics. Incentive arrangements and institutional culture influence researcher behaviour and engagement patterns (Wright, Siegel, & Mustar, 2017; Perkmann et al., 2021; OECD, 2021).

Financial incentives may include revenue-sharing schemes, royalty distribution mechanisms, seed funding instruments and innovation awards. These mechanisms provide tangible recognition of applied engagement (Audretsch, Cunningham, Kuratko, Lehmann, & Menter, 2019; OECD, 2021).

Recognition and career progression mechanisms represent an additional dimension. The integration of patents, collaboration projects, spin-offs or societal impact cases into evaluation and promotion criteria influences the perceived legitimacy of valorisation engagement (European Commission, 2023; Perkmann et al., 2021). Where evaluation systems emphasise publication outputs exclusively, alignment between strategic objectives and individual incentives may be weakened (Hicks et al., 2015; OECD, 2021).

Societal mission orientation constitutes a complementary motivational dimension. Engagement in knowledge valorisation may be driven by commitments to societal challenges, policy development or sustainable development goals (European Commission, 2022; Molas-Gallart, Boni, Schot,

& Giachi, 2021). Institutional narratives that frame valorisation within broader public mission commitments may shape participation patterns.

Leadership support and institutional culture define the normative environment within which valorisation activities occur. Visible endorsement by leadership and dissemination of applied success cases may contribute to the institutional positioning of valorisation activities (Audretsch et al., 2019; Wright et al., 2017).

Analytically, institutional models can be examined in terms of incentive coherence: the degree to which financial rewards, recognition systems and cultural narratives align with strategic objectives (Perkmann et al., 2021; OECD, 2021).

3.4 Procedural and Regulatory Conditions

The effectiveness of institutional models is also shaped by procedural and regulatory conditions (Guimón & Paunov, 2019; European Commission, 2023; Perkmann et al., 2021).

Administrative processes associated with patent filing, contract negotiation, compliance requirements and internal approvals influence operational feasibility. Workflow design, clarity of documentation requirements and predictability of timelines shape user interaction with institutional mechanisms (European Commission, 2023; Guimón & Paunov, 2019).

Intellectual property management frameworks define ownership rules, revenue distribution arrangements, disclosure obligations and collaboration agreements. The transparency and clarity of these frameworks affect legal certainty and perceived accessibility (European Commission, 2023; Audretsch et al., 2019).

Resource allocation and time constraints further condition participation in valorisation activities. Academic workloads and competing priorities may influence engagement patterns independently of structural provision (Perkmann et al., 2021; Molas-Gallart et al., 2021).

Funding instruments, including internal seed mechanisms or proof-of-concept schemes, contribute to shaping the procedural environment in which exploratory valorisation activities occur (European Commission, 2022; Guimón & Paunov, 2019).

From an analytical perspective, procedural conditions interact with structural components. The presence of support structures does not automatically imply ease of access or operational fluidity (Perkmann et al., 2021; Wright, Siegel, & Mustar, 2017).

3.5 Monitoring, Indicators and Governance Integration

Measurement systems represent a core element of institutional knowledge valorisation architectures (European Commission, 2023; Guimón & Paunov, 2019; Molas-Gallart et al., 2015). **Monitoring practices** frequently combine quantitative indicators, such as patent applications, granted patents, licensing agreements, spin-off creation and contract research volume, with qualitative documentation of societal and policy impact (OECD, 2019; European Commission, 2022).

A conceptual distinction may be drawn between measurement as reporting and measurement as governance input (Molas-Gallart et al., 2015; Wilsdon et al., 2015). In some institutional configurations, monitoring data primarily serve accountability or reporting purposes. In others, performance evidence informs strategic review cycles, resource allocation decisions and policy adjustments (Guimón & Paunov, 2019; European Commission, 2023).

Feedback mechanisms linking monitoring evidence to governance processes shape institutional learning capacity (Kuhlmann & Rip, 2018; Molas-Gallart et al., 2015). Consistency in indicator definitions and data collection practices further influences transparency and internal comparability (OECD, 2019).

For this assessment, monitoring is used as a lens to examine institutional practices. In **Chapter 4**, interview data are analysed to see whether performance evidence serves primarily for reporting or as input into governance processes such as strategic planning, resource allocation, or

policy adjustment (**Table 1**) (Wilsdon et al., 2015). This perspective allows identification of differences in the degree to which monitoring systems are integrated into institutional governance (European Commission, 2023; Guimón & Paunov, 2019).

Table 1. Analytical distinction between monitoring functions in institutional KV systems

Monitoring orientation	Institutional characteristics	Examples of indicators	Governance implications
Monitoring as reporting	Indicators primarily collected for accountability, reporting obligations or external benchmarking purposes	Patent applications, granted patents, licensing agreements, spin-off creation, contract research volume	Monitoring evidence mainly documents activities and outputs, with limited explicit reference to governance decision-making processes
Monitoring as governance input	Monitoring evidence explicitly linked to institutional planning, evaluation or policy review processes	Combined quantitative indicators and qualitative documentation of societal, policy or innovation impact	Monitoring evidence informs strategic review cycles, resource allocation decisions and policy adjustments

To complement the conceptual discussion on monitoring systems, a preliminary framework of knowledge valorisation performance indicators is proposed. The indicators reflect the most frequently reported monitoring practices identified through the institutional interviews and align with commonly used metrics in research and innovation policy frameworks (**Table 2**) (Guimón & Paunov, 2019; European Commission, 2022; European Commission, 2023).

The framework aims to support systematic monitoring of knowledge valorisation activities across institutions while remaining adaptable to different institutional contexts (Guimón & Paunov, 2019; Molas-Gallart et al., 2015; Wilsdon et al., 2015; European Commission, 2023).

Table 2. Proposed Knowledge Valorisation Monitoring Indicators

Dimension	Indicator	Definition	Measurement unit
Knowledge outputs	Patent applications	Number of patent applications submitted by the institution annually	count/year
Knowledge transfer	Licensing agreements	Number of active licensing agreements with external partners	count/year
Entrepreneurship	Spin-offs and start-ups	Number of companies created based on institutional research	count/year
Industry collaboration	Contract research projects	Research contracts with private sector organisations	count/year
Collaborative innovation	Joint publications with industry	Publications co-authored with industry partners	% of total publications
Research engagement	Public engagement activities	Outreach and dissemination activities targeting society	count/year
Capacity building	Training on knowledge valorisation	Institutional training programmes for researchers	events/year

The proposed indicators allow participating institutions to track the evolution of knowledge valorisation capacities over time. The framework aims to support internal institutional learning and policy development.

Indicators can be monitored annually and integrated into institutional research management systems, enabling evidence-based governance of knowledge valorisation activities.

3.6 Institutional Embeddedness in Innovation Ecosystems

Beyond the internal governance and operational structures discussed in the previous sections, institutional knowledge valorisation systems are embedded in **broader innovation ecosystems** shaped by regional, national and international conditions (Carayannis & Campbell, 2012; Audretsch et al., 2019; OECD, 2019).

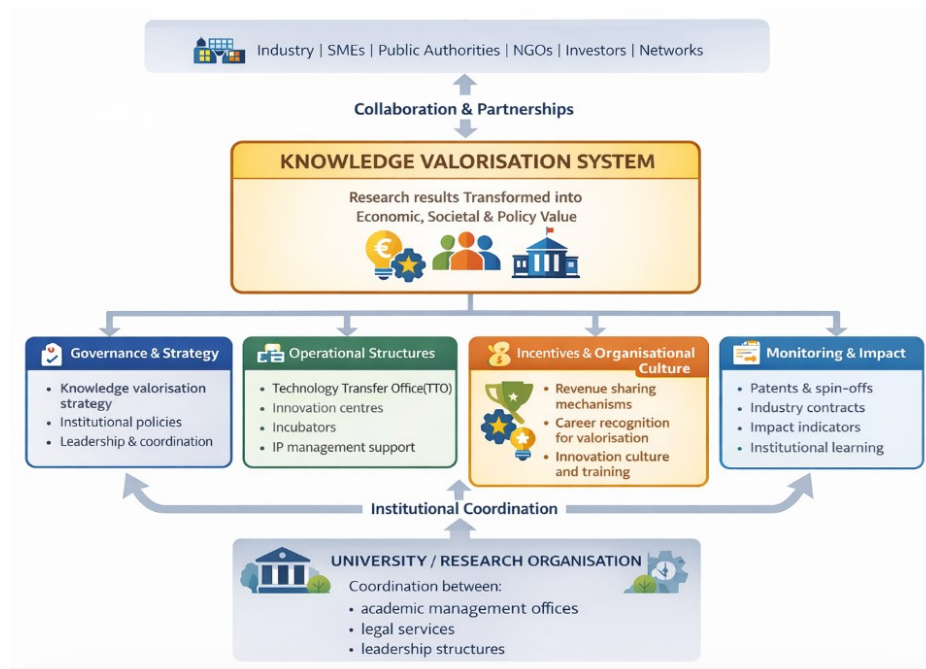


Figure 2 External innovation ecosystem

Regional integration involves structured relationships with industry clusters, public authorities, incubators, accelerators and funding bodies. Ecosystem density and industrial composition influence available application pathways (Audretsch et al., 2019; European Commission, 2022).

Partnership interface models define how external actors access institutional expertise. Clearly articulated collaboration pathways, designated contact points and framework agreements structure engagement processes (Perkmann et al., 2021; Guimón & Paunov, 2019).

Participation in **international networks** and knowledge valorisation communities contributes to exposure to transnational practices and evolving policy frameworks (European Commission, 2023; Guimón & Paunov, 2019).

Institutional models therefore reflect a combination of internal governance coherence and external ecosystem positioning. Variation across contexts may be interpreted as differentiated implementation pathways within a shared policy paradigm oriented toward facilitating the application and diffusion of research results within innovation ecosystems (Carayannis & Campbell, 2012; European Commission, 2022).

Institutional knowledge valorisation systems combine internal governance coherence with strategic positioning within external innovation ecosystems. Differences across institutional contexts primarily concern the configuration of ecosystem interfaces and collaboration environments and less the presence of fundamentally different structural components (Audretsch et al., 2019; Perkmann et al., 2021).

The analysis therefore focuses on institutional articulation of knowledge valorisation arrangements as reflected in reported institutional accounts (Guimón & Paunov, 2019); European Commission, 2023)

4 Interviews Analysis

4.1 Positioning of the Interviews within the BEAMING Analytical Architecture

The interview component constitutes a central pillar of the institutional assessment framework implemented under the BEAMING project. While the survey captures perceptions and experiences of Bachelor's, Master's and PhD students, as well as Early Career Researchers, the interview process targets senior researchers, project directors and institutional research managers. This differentiation ensures analytical complementarity between user-level activation conditions and governance-level articulation.

The interviews were designed to assess how institutional strategies, policies and operational practices support knowledge valorisation. In contrast to perception-based survey indicators, the interview instrument focuses on formal structures, governance arrangements, procedural pathways, strategic alignment and impact measurement mechanisms. This enables the analysis to distinguish between structural provision, procedural clarity and implementation capacity.

Within the overall assessment architecture, the interviews serve a set of interconnected functions. First, they provide **structured evidence** regarding the existence and articulation of institutional knowledge valorisation frameworks. This includes formal strategies, technology transfer mechanisms, intellectual property management procedures, collaboration arrangements with industry, and support schemes for start-ups or spin-offs. The checklist-based structure of the interview instrument supports systematic documentation of key institutional elements across partner contexts.

Second, the open-ended components generate **qualitative evidence** on enabling conditions, governance processes, motivational drivers, review cycles and perceived barriers. This qualitative layer supports identification of

recurring constraints and differentiated configurations across institutions, without constructing performance hierarchies.

Third, the interviews provide a **complementary layer** for interpreting survey-based signals. Where survey responses indicate limited awareness, confidence gaps or uncertainty regarding support mechanisms, interview evidence enables analytical differentiation between actual structural absence and visibility or communication deficits. Conversely, where governance-level articulation is strong but user-level recognition remains low, this indicates potential misalignment between formal arrangements and operational accessibility.

In this sense, the interview component contributes governance-level differentiation to the broader analytical logic of the deliverable. Survey findings establish alliance-wide perceptual and behavioural patterns, while interviews document institutional structures and strategic priorities. The subsequent Gap Analysis integrates both evidence streams in order to identify shared development domains and typological configurations across the consortium.

Importantly, the interview purpose is to clarify how knowledge valorisation is embedded within institutional regulatory environments, organisational structures and strategic agendas, and to generate signals regarding the articulation and organisational embedding of knowledge valorisation arrangements relevant for capacity development.

The **analytical contribution** of the interviews is therefore twofold: (1) to map the institutional landscape within which knowledge valorisation activities are organised; and (2) to identify directional priorities for policy refinement, competence strengthening and strategic convergence within the BEAMING alliance.

By **integrating senior-level perspectives with survey-based evidence** from early career researchers and students, the assessment framework ensures that governance realities and operational experiences are examined jointly.

This strengthens the robustness of the subsequent gap identification process and supports the formulation of context-sensitive roadmap orientations.

Finally, the interview design aligns with the **broader objectives of WP8** by addressing institutional readiness to translate research outcomes into value-added applications, strengthen intellectual property and technology transfer frameworks, and reinforce entrepreneurship and multi-stakeholder collaboration. Through its focus on governance alignment with European recommendations, internal review mechanisms and training priorities, the interview component situates existing arrangements within a developmental perspective oriented toward progressive capacity consolidation across the alliance.

While the interview evidence documents diverse institutional arrangements, several recurring organisational configurations can be observed across the participating institutions. In order to enhance analytical differentiation, the subsequent analysis considers a set of indicative institutional models of knowledge valorisation systems: a centralised transfer model, a distributed faculty-based model, and an ecosystem-embedded hybrid model. These models serve as interpretative reference points for examining how institutional governance arrangements and operational support structures are articulated across the BEAMING consortium.

4.2 Methodological Framework of Interviews Analysis

4.2.1 Interview Instrument Structure

The interview instrument consisted of **nine open-ended questions** (Q1–Q9; see the master coding scheme in Section 8.1.1), complemented by structured checklist items. Each participating institution provided a single consolidated response representing a governance-level perspective.

The open-ended questions addressed institutional support structures, operational mechanisms, perceived barriers, motivational drivers, reported best practices, measurement approaches, use of impact evidence, future priorities and training needs.

The unit of analysis for the qualitative component is the institution-level response to each question. No individual-level disaggregation was performed.

4.2.2 Analytical Approach and Coding Logic

A qualitative thematic content analysis was applied to the open-ended responses following a structured and transparent procedure:

1. Full reading of all institutional responses per question
2. Identification of recurring themes explicitly articulated in the text
3. Inductive development of a question-specific code list
4. Operational definition of each code through explicit textual criteria
5. Binary coding at institutional level (presence = 1; absence = 0)

The coding scheme captures thematic articulation. A code was assigned as present only when an explicit reference to the defined element was observed in the institutional response.

Although coding was applied using a binary logic (presence = 1; absence = 0), aggregated frequencies across institutional contexts allow identification of distribution patterns. The analysis remains configurational and descriptive, focusing on thematic distribution.

In some sections of the report, aggregated distributions of binary codes are used to summarise thematic presence across institutional contexts.

4.2.3 Code Structure and Thematic Domains

Codes were developed separately for each open-ended question to reflect thematic specificity. The consolidated codebook includes domains such as:

- Institutional support elements
(e.g., IP support, technology transfer structures, collaboration mechanisms)
- Operational infrastructures
(e.g., innovation centres, incubators, liaison offices)

- Reported barriers
(e.g., regulatory complexity, funding constraints, incentive misalignment)
- Motivational drivers
(e.g., financial incentives, recognition systems, societal mission orientation)
- Measurement practices
(e.g., patent indicators, partnership metrics, evaluation frameworks)
- Governance use of impact evidence
(e.g., strategic planning, resource allocation, policy review)
- Future priorities
(e.g., training expansion, partnership strengthening, strategy refinement)
- Training needs
(e.g., entrepreneurship, IP management, impact communication)

Codes were applied independently per question and were not merged across questions, even where conceptual overlap occurred.

4.2.4 Coding Procedure and Matrix Construction

For each question, all institutional responses were examined against the relevant code definitions. Coding was applied in binary format at institution level: if a thematic element appeared at least once in the response, the corresponding code was assigned as present.

Following this process, a consolidated **Code × Institution matrix** was constructed, with:

- rows representing institutional identifiers (INST),
- columns representing thematic codes across Q1–Q9,
- binary values indicating presence (1) or absence (0).

The matrix provides a structured representation of thematic distribution across institutional contexts, allowing identification of recurring patterns and areas of variation without constructing composite indices.

4.2.5 Treatment of Checklist Items

In addition to open-ended responses, the instrument included structured checklist questions recorded as provided (e.g., Yes/No/Don't know). Checklist data were not transformed into composite indicators and were not merged into the thematic coding scheme.

Where relevant, checklist results are descriptively reported alongside thematic findings as complementary evidence

4.2.6 Analytical Boundaries and Limitations

Differences in response length may influence thematic coverage, although coding criteria rely strictly on explicit reference, not on volume. Because each institution provided a single consolidated response, internal diversity of perspectives within institutions is not represented. The analysis therefore reflects governance-level accounts at the time of data collection.

4.3 Reported Institutional Support for KV

4.3.1 Formal Strategies or Policy References

Interview responses indicate that knowledge valorisation is, in several institutional contexts, articulated through explicit strategic or policy-level references. Multiple institutions report formally adopted strategies, innovation frameworks or policy documents defining objectives, responsibilities and procedural orientations related to the translation of research results into societal or economic value. These strategic references often encompass innovation agendas, entrepreneurship support and structured collaboration with external stakeholders.

In some cases, respondents describe dedicated policy instruments explicitly addressing intellectual property management, commercialisation pathways or external engagement mechanisms. In other contexts, knowledge valorisation is embedded within broader research and innovation strategies, as opposed to being articulated through standalone documents. The

observed variation therefore concerns the degree of formalisation and visibility through which strategic commitment is expressed.

Overall, the interview dataset suggests that strategic recognition of knowledge valorisation is present in part of the sample, although institutional approaches differ in how explicitly such recognition is codified and communicated.

4.3.2 Allocation of Institutional Responsibilities

Across institutional contexts, responsibility for knowledge valorisation support is generally identifiable within organisational structures. Interview responses frequently reference designated offices or functional units tasked with supporting intellectual property management, technology transfer, collaboration agreements and innovation-related activities.

Several institutions report dedicated technology transfer offices or equivalent commercialisation units serving as primary interfaces between research teams and external partners. These structures are described as providing support for patent filing, licensing procedures, negotiation of agreements and identification of commercial opportunities.

Such arrangements correspond to what may be described as a centralised transfer configuration, where knowledge valorisation activities are coordinated primarily through a central technology transfer or innovation office.

Other institutional contexts describe more distributed responsibility models, in which valorisation-related tasks are shared across research support offices, legal departments, innovation centres or faculty-level structures. While decentralised, these arrangements nonetheless indicate identifiable contact points and procedural pathways for researchers seeking institutional support.

These arrangements resemble a distributed faculty-based configuration, where valorisation activities emerge primarily through academic units and departmental collaboration networks.

Legal and contractual assistance is described in some institutional responses. Institutions refer to internal legal expertise or administrative services facilitating cooperation agreements, licensing arrangements and contract negotiations, reflecting recognition of the regulatory complexity inherent in valorisation activities.

Support for external collaboration appears in several cases. Many institutions describe mechanisms facilitating engagement with companies, public authorities and other non-academic stakeholders. These include partnership offices, liaison functions, structured collaboration frameworks and contract-based cooperation schemes. Such references underline the centrality of external engagement within institutional valorisation infrastructures.

4.3.3 References to Alignment with European-Level Guidance

In a number of institutional responses, references are made to alignment with European-level frameworks, priorities, or regulatory orientations relevant to knowledge valorisation. These references are typically expressed in general terms, indicating that institutional strategies or procedures take into account European recommendations, funding requirements, or policy developments.

Such references do not always include detailed mappings or operational specifications. Rather, they signal that European-level guidance is recognised as a contextual framework shaping institutional approaches. The empirical presence of these references suggests awareness of broader policy environments within which knowledge valorisation activities are embedded.

At the same time, alignment references are not uniformly articulated across all institutional contexts. Where absent, the dataset records no explicit mention. The variation therefore reflects differences in the degree to which European-level orientation is explicitly acknowledged in interview responses.

4.3.4 Internal Review or Update Mechanisms

Interview responses contain observable references to internal review processes and periodic updating of knowledge valorisation-related

arrangements. Some institutions describe structured review cycles, committee oversight or governance mechanisms responsible for revising strategies and operational procedures. These references suggest institutional capacity for procedural adaptation and organisational learning.

In certain contexts, respondents indicate that support structures or policies have undergone recent revision, reflecting evolving institutional approaches. In others, review mechanisms are described more implicitly through references to leadership oversight or governance committees.

The distribution of explicit references to internal review processes is uneven. Where present, they indicate structured mechanisms for adjustment and refinement. Where not mentioned, the dataset does not allow determination of whether review mechanisms are absent or simply not articulated in the institutional response.

4.3.5 Consolidated Perspective

Some institutions describe consolidated organisational structures with clearly defined mandates, while others report more distributed arrangements involving multiple units.

These differentiated configurations reflect contextual diversity in organisational design and governance embedding. Variation concerns organisational form and procedural integration. Institutional support mechanisms are broadly present across reported configurations.

The following section examines the operational mechanisms underpinning these configurations.

4.4 Organisational Structures and Operational Mechanisms

4.4.1 Technology Transfer and Equivalent Support Units

Interview responses indicate that a substantial number of institutions operate identifiable structures dedicated to technology transfer or commercialisation support. These structures include technology transfer offices, innovation centres or functionally equivalent units operating under different institutional designations.

Reported responsibilities commonly encompass support for intellectual property protection, assessment of commercial potential, facilitation of licensing agreements and interaction with external partners. In several institutional contexts, these units are described as centralised at institutional level. In others, transfer-related functions are embedded within broader research support offices or innovation departments.

Despite differences in nomenclature and organisational positioning, the presence of a defined institutional interface for commercialisation-related activities is present in some institutional responses. Where explicitly identified, such units are described as coordination points linking researchers with legal, administrative and partnership services, contributing to clearer procedural pathways for patent initiation, agreement negotiation and application-oriented collaboration.

4.4.2 Intellectual Property Management Procedures

Intellectual property management constitutes a core operational element across institutional responses. Institutions frequently describe structured procedures governing patent filing, licensing negotiations and ownership clarification. These processes may involve internal assessment of patentability, engagement with legal expertise and formal decision-making steps regarding protection strategies.

The degree of procedural detail varies. Some institutions report clearly defined guidelines and internal review processes, while others refer more

generally to available support mechanisms. Where articulated, IP procedures are often linked to revenue-sharing arrangements and formal rules defining rights and responsibilities, indicating that intellectual property management is embedded within broader institutional regulatory frameworks.

4.4.3 Industry Collaboration and External Partnerships

Collaboration with industry and non-academic partners represents a prominent operational dimension across institutional responses. Institutions describe mechanisms facilitating contract research, joint development projects and structured partnerships with companies, public authorities and civil society actors.

Operational arrangements supporting collaboration include liaison functions, partnership offices, framework agreements and contract management services. In some contexts, collaboration is coordinated through dedicated industry-facing units; in others, engagement originates within research groups and is administratively supported at central level.

The recurrence of collaboration-related references suggests that external engagement is institutionally organised through identifiable processes encompassing agreement negotiation, intellectual property clarification and coordination of implementation activities.

4.4.4 Start-up and Spin-off Support Mechanisms

Support for entrepreneurial pathways, including start-up and spin-off development, is reported in multiple institutional contexts. Interview responses refer to incubation programmes, innovation hubs, accelerators, technology parks and mentoring schemes associated with or connected to the institution.

In certain cases, institutions describe direct involvement in spin-off creation through provision of mentoring, infrastructure or legal facilitation. In others, entrepreneurial support is embedded within regional innovation ecosystems, with institutions collaborating with external incubators or technology parks.

Where present, entrepreneurial support mechanisms are frequently described as interlinked with intellectual property management and industry collaboration functions, reflecting the interdependence between protection processes, partnership development and venture creation.

4.4.5 Access to External Funding and Investment Channels

Institutional responses also refer to mechanisms facilitating access to external funding sources relevant to knowledge valorisation activities. These include support in identifying innovation-oriented grants, assistance with proposal preparation and guidance in accessing investment channels for commercialisation initiatives.

In some contexts, internal seed funding schemes or innovation funds are mentioned as instruments supporting early-stage development and proof-of-concept activities. The presence and level of articulation of such funding mechanisms vary across institutional contexts.

Where described, financial facilitation functions are typically integrated within transfer units or research support offices, indicating operational linkage between funding support and broader valorisation infrastructures.

4.4.6 Coordination Between Administrative and Academic Units

Effective knowledge valorisation support is described as dependent on coordination between academic researchers and administrative or support units. Interview responses reference interaction between transfer offices, legal departments, research management units and academic leadership structures.

Some institutions describe formal coordination mechanisms, such as committees or governance platforms bringing together academic and administrative representatives. These arrangements are presented as facilitating communication, clarifying responsibilities and aligning operational processes.

In other contexts, coordination is described more implicitly, suggesting interaction patterns that are functional but less formally structured.

4.4.7 Consolidated Perspective

The empirical evidence indicates that organisational structures supporting knowledge valorisation encompass technology transfer units, intellectual property management procedures, collaboration mechanisms, entrepreneurial support pathways, funding facilitation instruments and coordination arrangements linking administrative and academic actors. Core structural components recur across institutional contexts, although their configuration, degree of formalisation and level of integration differ.

The structural arrangements described above also suggest several indicative organisational configurations of knowledge valorisation systems across the participating institutions. Based on the interview evidence, these broad models can be analytically distinguished: (i) a centralised technology transfer model, where valorisation activities are coordinated primarily through a central transfer office or innovation unit; (ii) a distributed research-support model, where responsibilities are shared across research support offices, legal services and faculty-level structures; and (iii) an ecosystem-embedded model, where internal institutional arrangements are complemented by strong collaboration interfaces with external innovation actors such as incubators, technology parks or regional innovation agencies.

These configurations should be interpreted as analytical reference models capturing typical combinations of governance arrangements and operational structures.

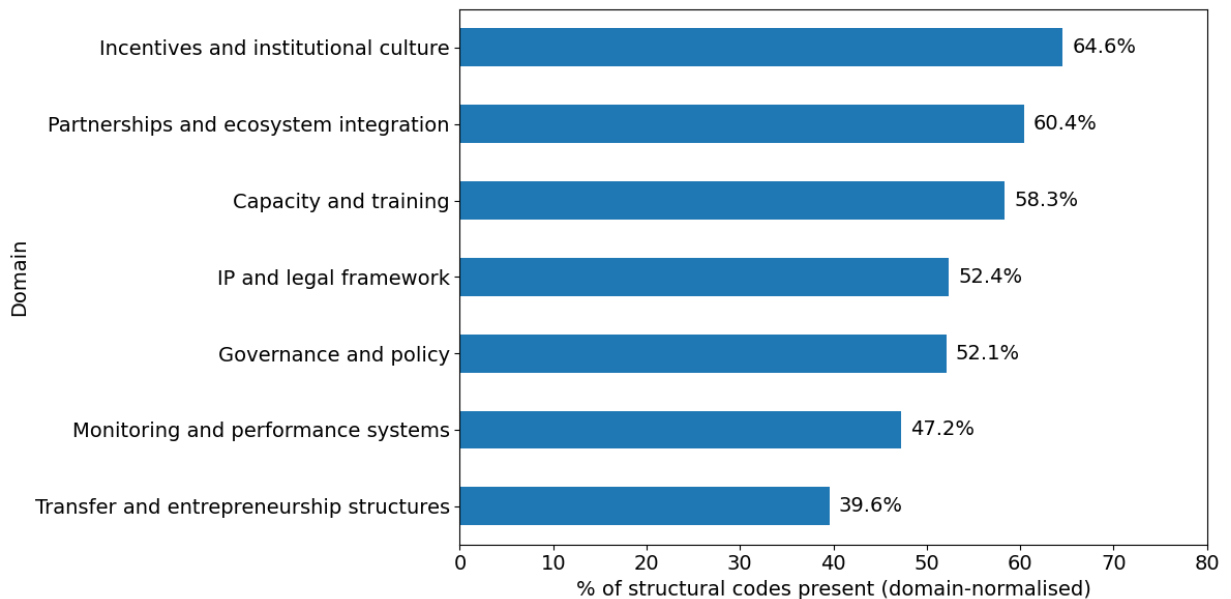


Figure 3. Structural degree of articulation (alliance level): % of structural codes present (domain-normalised; Note: The figure does not measure institutional intensity in a performance sense. It represents the domain-normalised density of structural articulation)

The **Figure 3** translates the descriptive evidence into domain-normalised structural degree of articulation. It confirms that institutional arrangements are present across all domains.

However, structural articulation remains uneven in density. Incentives and institutional culture display higher articulation. Governance, IP, transfer structures and monitoring remain clustered at moderate levels of structural density.

4.5 Reported Barriers and Structural Constraints

4.5.1 Regulatory and Administrative Complexity

Interview responses identify regulatory and administrative procedures as recurrent barriers affecting knowledge valorisation activities. Institutions refer to approval processes, compliance requirements, contractual formalities and

internal procedural steps that may slow down or complicate collaboration with external partners.

In several contexts, respondents describe bureaucratic burdens associated with contract negotiation, intellectual property protection or the financial management of externally funded projects. These references indicate that procedural complexity is perceived as constraining primarily through its impact on timelines, flexibility and administrative workload.

Overall, administrative and regulatory demands emerge as a structural condition shaping valorisation activities across multiple institutional contexts.

4.5.2 Funding and Resource Limitations

Funding constraints and limited resource availability are also reported as barriers. Institutions refer to insufficient internal budgets, limited seed funding and constrained human resources dedicated to supporting innovation-related activities.

In some cases, respondents note that while formal support units exist, their operational capacity is restricted by staffing limitations or financial constraints. Resource challenges are particularly associated with early-stage development activities, proof-of-concept support and the sustainability of dedicated transfer personnel.

Institutional articulation of funding limitations varies, reflecting differentiated levels of investment and financial facilitation capacity within valorisation infrastructures.

4.5.3 Academic Incentive Structures

A recurrent theme concerns the alignment between academic evaluation systems and knowledge valorisation engagement. Several institutions refer to publication-focused promotion criteria and performance assessment frameworks that prioritise traditional academic outputs over applied or commercialisation-oriented activities.

Where articulated, respondents indicate that incentive structures may not sufficiently reward participation in industry collaboration, patenting or entrepreneurial initiatives. These references suggest that behavioural engagement is shaped not only by the availability of support mechanisms but also by career-related evaluation environments.

Variation across contexts lies primarily in the degree to which incentive misalignment is explicitly emphasised as a barrier.

4.5.4 Intellectual Property Complexity

Complexity related to intellectual property management is identified in several responses as a constraining factor. Institutions refer to challenges in navigating ownership arrangements, negotiating licensing terms or clarifying rights within collaborative projects.

In certain cases, respondents highlight difficulties in balancing openness and protection. Intellectual property systems, while institutionally supported, involve procedural complexity that interviewees associate with reduced researcher engagement.

Intellectual property management therefore appears both as a support element and, in some cases, as a source of operational friction.

4.5.5 Time Constraints and Workload Pressures

Time limitations and competing academic responsibilities are frequently described as constraining conditions. Respondents refer to teaching loads, administrative duties and research obligations that limit the time available for valorisation activities.

These references underline that engagement in knowledge valorisation often requires additional effort beyond core academic tasks. Where time constraints are emphasised, they are sometimes linked to broader discussions of incentive alignment and workload distribution.

Temporal pressures thus form part of the structural environment within which valorisation must be pursued.

4.5.6 Skills and Competence Gaps

Several institutional contexts report limited experience or insufficient skills among researchers or support staff as a barrier. These references include limited familiarity with commercialisation processes, negotiation practices and market-oriented thinking.

Skills gaps are described both at researcher level and, in some cases, within administrative support units. Such evidence suggests that knowledge valorisation engagement depends not only on structural availability but also on human capital, experiential readiness and competence development capacity.

4.5.7 Market and Ecosystem Limitations

Some institutions refer to external environment factors, including limited regional industry bases, market uncertainty or constrained innovation ecosystems. These references position barriers not only within institutional arrangements but also within broader contextual conditions.

Where articulated, respondents describe challenges in identifying suitable industrial partners or viable commercial opportunities within regional settings. This suggests that institutional valorisation mechanisms operate within external ecosystems that may facilitate or restrict application pathways.

Although less uniformly mentioned than administrative or incentive-related constraints, ecosystem limitations remain a relevant contextual dimension.

4.5.8 Cumulative Barrier Configuration

The reported barriers rarely appear in isolation. In several institutional contexts, administrative complexity, funding limitations, incentive misalignment and time pressures are described in combination, indicating that constraints operate cumulatively. At the same time, barriers coexist with established support structures such as transfer units, intellectual property systems and collaboration mechanisms, reflecting institutional environments in which structural provision and operational challenges are simultaneously present.

As shown in **Figure 4**, partnerships and ecosystem integration emerge as the most widely reported friction domain, followed by funding and resource constraints. Governance, IP and incentive-related barriers are present but less uniformly reported across institutions. The coexistence of moderate structural articulation (**Figure 3**) and high barrier prevalence (**Figure 4**) in specific domains indicates that structural existence does not automatically translate into functional effectiveness.

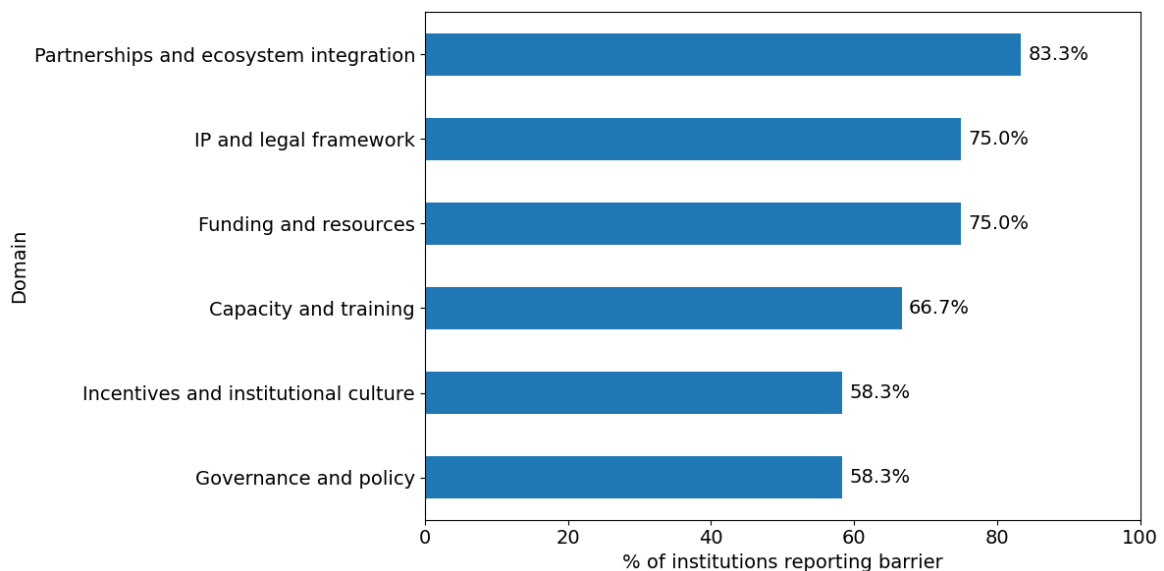


Figure 4. Barrier distribution (alliance level): % institutions reporting barrier per domain

4.5.9 Cross-Level Comparison of Reported Barriers

The interview evidence presented above reflects barriers articulated from an institutional governance perspective, whereas the survey findings presented in Section 5.6 capture constraints perceived by students and early-career researchers. A comparison between these two evidence streams reveals both convergence and differentiation in how knowledge valorisation barriers are experienced across organisational levels.

As illustrated in **Figure 4**, interview responses tend to emphasise ecosystem and structural frictions, including regulatory complexity, partnership interface challenges and external collaboration constraints. These elements reflect the perspective of institutional actors involved in designing or managing valorisation support structures and collaboration frameworks.

By contrast, survey responses place stronger emphasis on individual-level operational constraints, particularly time limitations, workload pressures and access to funding opportunities. These responses reflect the practical conditions under which researchers engage with valorisation activities within their day-to-day academic responsibilities.

Taken together, the two datasets suggest that barriers operate across multiple levels of the institutional system. Structural and ecosystem conditions shape the external collaboration environment and administrative procedures, while behavioural and resource constraints influence the capacity of individual researchers to participate in valorisation activities. The observed differences therefore reflect complementary perspectives, highlighting the multi-layered nature of knowledge valorisation systems.

This cross-level interpretation reinforces the importance of addressing both structural coordination mechanisms and researcher-level activation conditions in future capacity-building initiatives within the BEAMING alliance.

4.6 Motivational Drivers and Institutional Culture

Table 3 summarises the frequency with which key motivational drivers are referenced across institutional interview responses.

Table 3. Frequency of reported motivational drivers in institutional interviews

Motivational driver	% of institutions mentioning
Financial incentives	75.00%
Recognition and career-related	83.33%
Societal impact	75.00%
Institutional culture	25.00%
Leadership encouragement	50.00%
Collaboration and network-based	58.33%
Entrepreneurial orientation	58.33%
Research application / practical relevance	58.33%

4.6.1 Financial Incentives and Revenue-Sharing Mechanisms

Interview responses indicate that financial incentives constitute one of the explicit motivational drivers associated with engagement in knowledge valorisation activities. Several institutional contexts refer to revenue-sharing schemes, royalty distribution mechanisms or financial rewards linked to patenting, licensing and entrepreneurial activity. Based on the binary coding applied to the interview dataset, financial incentive mechanisms are referenced by 75% of participating institutions, indicating that monetary rewards represent a frequently motivational element within institutional knowledge valorisation arrangements.

Where described, such arrangements are embedded within formal intellectual property regulations defining income distribution between the institution and individual researchers. These mechanisms are presented as instruments encouraging disclosure of inventions and participation in commercialisation pathways.

References to financial incentives are commonly articulated across institutional responses, although the degree of emphasis varies. In some contexts, monetary incentives are articulated as central motivators; in others, they appear as one element within a broader motivational framework.

4.6.2 Recognition, Career Advancement, and Evaluation Frameworks

Recognition and career-related incentives also emerge as significant motivational dimensions. Institutions refer to promotion criteria, performance assessment systems and formal acknowledgement of applied research or innovation activities.

Several responses describe efforts to incorporate innovation-related achievements, such as patents, spin-off creation, collaborative projects or societal impact contributions, into evaluation processes. These references indicate attempts to align career progression mechanisms with institutional knowledge valorisation objectives.

Recognition mechanisms are referenced by 83.33% of institutions, representing the most frequently reported motivational driver among the three quantified categories.

At the same time, articulation of recognition mechanisms varies. In some institutional contexts, systems appear consolidated; in others, references suggest ongoing adjustments or emerging initiatives. This variation reflects differentiated degrees of integration of valorisation-related achievements within governance and evaluation frameworks.

4.6.3 Societal Impact

Motivation linked to societal relevance and public impact constitutes a broadly theme. Several institutions describe engagement in knowledge valorisation as driven by a desire to translate research outcomes into societal benefit, address public challenges or contribute to sustainable development objectives.

Based on the coding results, societal impact motivation is referenced by 75% of institutions, indicating a high level of recurrence comparable to financial incentive mechanisms.

These references position knowledge valorisation not solely as a commercial activity but also as an extension of institutional public missions. In certain contexts, respondents explicitly frame valorisation within broader commitments to regional development or societal responsibility.

The recurrence of societal impact terms suggests that non-financial motivations form an integral part of institutional discourse surrounding knowledge valorisation.

4.6.4 Leadership Support and Institutional Culture

Leadership signals and institutional culture are also described as influential motivational factors. Leadership encouragement is referenced by 50% of institutions, indicating a moderate level of recurrence across institutional responses. Based on the coded dataset, institutional culture is referenced by 25% of institutions, indicating a more limited level of recurrence compared to other motivational drivers. In some institutional responses, references are made to strategic emphasis articulated by senior management, visible endorsement of innovation activities or the cultivation of an innovation-oriented institutional environment.

4.6.5 Collaboration and Network-Based Motivation

Participation in collaboration networks is also presented as a motivational driver. Institutions describe partnerships with industry, public authorities and regional actors as providing access to real-world challenges, applied research opportunities and enhanced visibility.

In some responses, collaboration is portrayed as intrinsically motivating due to opportunities for interaction with external stakeholders and observation of practical application of research results. This suggests that network

integration functions both as an operational mechanism and as a source of professional motivation.

References to collaboration-based motivation appear across institutional contexts, indicating the importance of external engagement within valorisation narratives. Based on the coded dataset, collaboration and network-based motivation is referenced by 58.33% of institutions.

4.6.6 Entrepreneurial Orientation and Application of Research

Entrepreneurial interest and the aspiration to translate research into practical applications are also reported as motivational elements. Several institutions refer to researcher-driven initiatives aimed at developing start-ups or pursuing commercial opportunities. In certain contexts, entrepreneurial engagement is associated with specific research domains or individual initiatives, though 58.33% of institutions reference it as part of the broader motivational landscape.

Similarly, 58.33% of institutions describe satisfaction derived from applying research in real-world contexts, highlighting intrinsic motivation linked to practical relevance and problem-solving.

4.6.7 Combined Motivational Configurations

The interview evidence suggests that motivational drivers rarely operate in isolation. Financial incentives, recognition systems, societal mission orientation, leadership endorsement and collaborative opportunities frequently coexist within institutional narratives. Institutional variation therefore concerns the relative configuration and articulation of these drivers, not their presence or absence.

References to motivational mechanisms often appear alongside descriptions of constraints such as evaluation misalignment or workload pressures, indicating that enabling and limiting factors coexist within the same institutional environments.

4.7 Measurement Practices and Use of Impact Evidence

4.7.1 Intellectual Property and Patent-Related Indicators

Interview responses indicate that measurement of knowledge valorisation activities frequently includes intellectual property-related indicators. Several institutions refer to tracking patent applications, granted patents, licensing agreements and, in some cases, royalty income as part of their monitoring practices.

Where described, these indicators are embedded within broader institutional reporting systems. Patent-related metrics are presented as tangible outputs associated with valorisation efforts and are sometimes compiled through annual reports or institutional dashboards.

Across responses, intellectual property indicators emerge as one of the most established and consistently articulated measurement domains, although the level of procedural detail varies between institutions.

4.7.2 Spin-off, Start-up, and Collaboration Metrics

In addition to patent-related indicators, institutions report monitoring entrepreneurial and collaboration-oriented outcomes. These include the number of spin-offs created, start-ups supported, collaboration agreements concluded and industry-funded projects implemented.

Such indicators reflect an operational focus on partnership and commercialisation outputs. Several contexts describe collaboration metrics as part of institutional performance reporting systems, including contract research volumes and external partnership activity.

These references suggest that quantifiable indicators linked to entrepreneurship and external cooperation are commonly employed as proxies for valorisation performance.

4.7.3 Societal and Policy Impact References

Some institutional responses refer to measurement of societal or policy-related impact, including qualitative assessment of impact cases, documentation of policy influence and reporting of broader societal contributions arising from research activities. Compared to patent or collaboration indicators, societal impact measurement appears less uniformly structured, relying primarily on narrative case descriptions that complement quantitative metrics.

4.7.4 Evaluation Frameworks and Monitoring Systems

Several institutions describe formal evaluation frameworks or monitoring systems incorporating valorisation-related indicators. These may include key performance indicators (KPIs), internal dashboards or reporting cycles linked to institutional strategy implementation.

Where explicitly articulated, knowledge valorisation metrics appear integrated into broader performance assessment systems through annual reporting obligations, strategic review processes or committee-based oversight mechanisms.

In other institutional contexts, measurement practices are described in more general terms without detailed reference to formal frameworks, suggesting variation in the degree of institutionalisation of monitoring processes.

The **Figure 5** summarises the distribution of monitoring and performance indicator components reported across institutional interview responses. Values represent the percentage of institutions referencing specific monitoring elements within the interview dataset. Formal evaluation frameworks and governance-level integration appear comparatively more consolidated. By contrast, spin-off and societal impact metrics display lower institutional articulation.

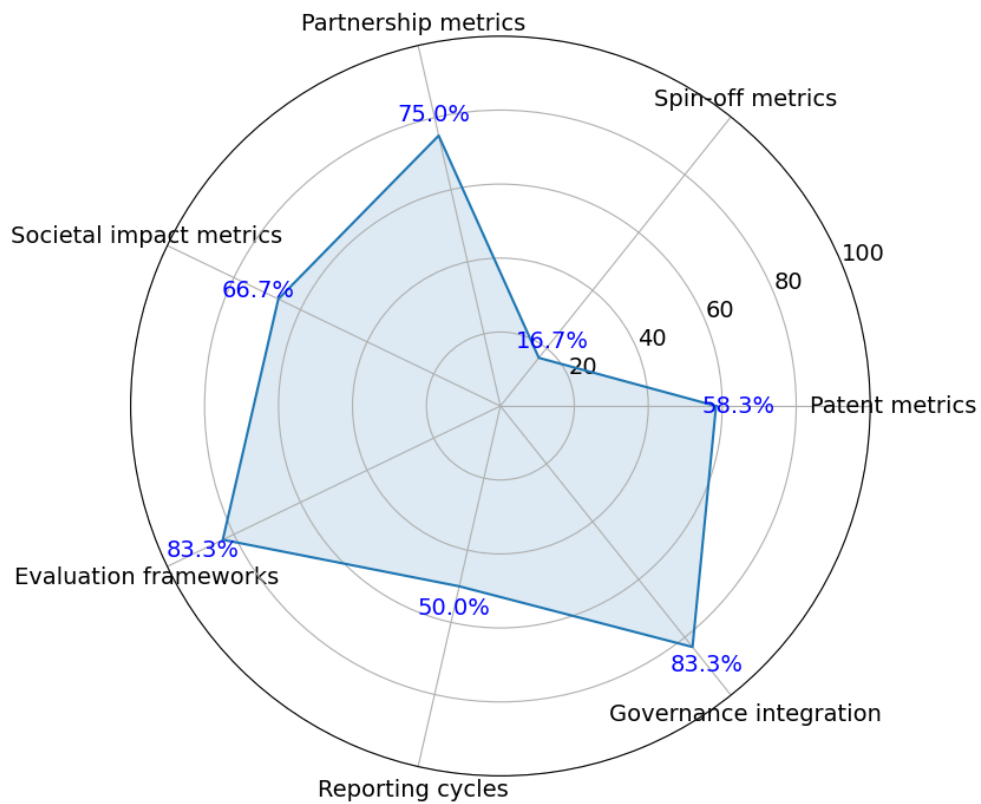


Figure 5. Distribution of monitoring and performance indicator components across institutions (alliance level)

This pattern indicates partial institutionalisation of monitoring systems, with stronger procedural embedding than outcome-specific exploitation tracking. The uneven consolidation of monitoring components provides a structural explanation for subsequent gap identification in relation to visibility, performance tracking and strategic use of evidence.

4.7.5 Use of Impact Evidence in Strategic Decision-Making

Beyond measurement itself, some interview responses indicate that impact evidence is used to inform strategic planning and decision-making. Institutions describe utilisation of monitoring data in revising strategies, adjusting support mechanisms or refining operational arrangements.

Where mentioned, performance indicators contribute to governance discussions, strategic reviews and policy updates. In other contexts, measurement is described primarily as a reporting function.

This variation highlights differentiated levels of integration between monitoring activity and governance adaptation.

4.7.6 Resource Allocation and Policy Review Functions

In several institutional contexts, monitoring data is described as informing resource allocation decisions, including funding distribution, staffing within support units or prioritisation of thematic areas based on observed activity levels.

Some responses also refer to policy review or procedural updates based on evaluation outcomes, indicating feedback mechanisms linking monitoring evidence to governance adjustments.

Where such functions are not explicitly articulated, the dataset does not provide sufficient information to determine whether structured feedback loops are absent or simply not described in the institutional response.

4.7.7 Limited or Emerging Measurement Practices

A subset of responses indicates limited formalisation of measurement practices. In these cases, respondents refer to the absence of dedicated valorisation indicators or reliance on general research performance metrics without specific monitoring of valorisation outcomes.

Such references suggest that while valorisation activities may be supported structurally, systematic measurement frameworks remain under development in certain institutional contexts. Limited measurement articulation reflects differentiated stages of monitoring level of structural development and not the absence of activity.

4.7.8 Overall Measurement Configuration

Interview evidence indicates that institutional measurement of knowledge valorisation commonly relies on quantifiable indicators related to patents, spin-offs, collaborations and externally funded projects (see 3.5). Societal and policy impact dimensions are also acknowledged, although often captured through qualitative documentation alongside standardised metrics.

The extent to which monitoring evidence is embedded within governance and strategic adaptation processes varies across institutional contexts. Some institutions describe integration into planning and review cycles, while others emphasise reporting-oriented functions. Institutional variation therefore concerns the scope of indicators employed, the degree of formalisation of monitoring systems and their integration within broader governance arrangements.

4.8 Future Priorities and Capacity Development Needs

4.8.1 Strengthening Strategic and Policy Frameworks

Interview responses indicate that several institutions identify further consolidation of strategic and policy frameworks as a priority for advancing knowledge valorisation. Respondents refer to intentions to formalise existing practices, revise internal regulations or strengthen the visibility of valorisation objectives within institutional strategies.

In some contexts, future priorities include clearer articulation of roles and responsibilities, refinement of internal procedures or integration of valorisation objectives into broader research and innovation plans. These references suggest that, although foundational structures are in place, institutions perceive scope for improved coherence and strategic alignment. Institutional emphasis varies between drafting new policy instruments, revising existing frameworks or enhancing implementation of established provisions.

4.8.2 Enhancing Intellectual Property and Commercialisation Systems

Several institutions identify improvement of intellectual property management systems and commercialisation pathways as a future priority. Reported objectives include clarifying ownership arrangements, refining licensing processes, strengthening professional expertise within transfer units and increasing operational efficiency.

In certain contexts, respondents emphasise streamlining intellectual property procedures to reduce administrative burden and accelerate decision-making. In others, priorities focus on increasing awareness among researchers regarding disclosure processes and protection strategies. These references indicate that intellectual property systems, while structurally established, are perceived as requiring continued operational refinement and capacity enhancement.

4.8.3 Expanding Collaboration and Partnership Networks

Expansion and deepening of collaboration with industry and external stakeholders frequently appear among institutional priorities. Institutions refer to strengthening existing partnerships, diversifying external engagement or building new connections with companies, public authorities and regional actors.

In some responses, emphasis is placed on developing structured partnership frameworks or increasing visibility of institutional expertise to external audiences. These priorities reflect recognition of the central role of external engagement in effective knowledge valorisation.

Collaboration expansion is articulated both as a strategic ambition and as an operational objective within ongoing institutional development.

4.8.4 Improving Incentive Structures and Recognition Mechanisms

Refinement of incentive systems is also identified as a future priority in several institutional contexts. These references include adjustments to evaluation

criteria, greater recognition of applied research outputs and enhanced visibility of innovation-related achievements within career progression frameworks.

Such priorities often relate to earlier discussions concerning alignment between academic evaluation systems and valorisation engagement. Their articulation suggests institutional awareness of the behavioural dimensions influencing researcher participation.

Institutional approaches differ in terms of whether incentive reform is described as under development, planned or at an exploratory stage.

4.8.5 Increasing Funding and Resource Allocation

Some institutions identify expansion of financial and human resources dedicated to knowledge valorisation as a priority. These references include strengthening seed funding schemes, increasing staffing within transfer units or securing additional external funding to support innovation-related initiatives.

Where mentioned, resource enhancement priorities are associated with scaling up entrepreneurial activity, improving service capacity or consolidating existing support structures.

Institutional articulation of resource needs varies, reflecting differentiated levels of investment and planning capacity.

4.8.6 Streamlining Administrative Procedures

Future planning frequently includes simplification of administrative processes. Institutions refer to reducing bureaucratic complexity, accelerating approval workflows and clarifying procedural steps related to contract negotiation and intellectual property management.

These priorities are typically framed in relation to improving efficiency and responsiveness of support systems. Administrative optimisation is presented as a governance objective aligned with enhancing operational functionality.

4.8.7 Training and Capacity Development Needs

Training and capacity development constitute a prominent component of institutional future planning. Institutions identify needs in areas such as intellectual property management, technology transfer procedures, entrepreneurship, industry collaboration, negotiation skills and impact communication.

Some responses emphasise training for researchers, while others extend capacity development to administrative and support personnel. This dual focus reflects recognition that effective knowledge valorisation requires both academic engagement and professional support competence.

Training priorities are frequently linked to raising awareness, strengthening practical skills and fostering entrepreneurial mindsets within institutional environments.

4.8.8 Policy Awareness and Alignment with Broader Frameworks

Certain institutions also refer to the need for enhanced awareness of European and national policy frameworks relevant to knowledge valorisation. These priorities include improving understanding of regulatory developments, aligning internal practices with evolving external requirements and increasing familiarity with funding programme expectations.

Such references highlight the influence of broader governance environments on institutional development trajectories and suggest ongoing adaptation to external policy contexts.

4.8.9 Integrated Priority Configuration

Across institutional contexts, future priorities tend to combine structural, procedural, financial and capacity-related elements. Strategic consolidation, refinement of intellectual property systems, expansion of partnerships, incentive alignment and training initiatives frequently appear in combination.

These priorities can also be interpreted in relation to the barrier patterns identified in Section 4.5. Administrative simplification initiatives correspond to previously reported regulatory complexity, while expanded training and competence development respond to identified skills gaps. Similarly, priorities related to partnership expansion and ecosystem engagement reflect challenges associated with collaboration interfaces and external innovation environments. Institutional variation lies primarily in the relative emphasis placed on particular dimensions. Some institutions prioritise governance consolidation and policy refinement, while others emphasise capacity development, collaboration expansion or resource strengthening.

Overall, the reported priorities indicate that knowledge valorisation systems are perceived as evolving and subject to ongoing development. Institutions describe intentions to refine procedures, strengthen capabilities and enhance alignment between strategic objectives and operational practices, reflecting a forward-oriented approach to institutional capacity building.

4.9 Cross-Cutting Patterns and Configurational Interpretation

While the interview evidence reveals substantial diversity in institutional arrangements, several recurring organisational patterns can be identified across the participating institutions. These patterns can be interpreted as indicative configurations of knowledge valorisation systems.

Centralised transfer model - knowledge valorisation activities are coordinated primarily through a central technology transfer or innovation

office responsible for intellectual property management, industry collaboration and entrepreneurial support services.

Distributed faculty-based model - knowledge valorisation initiatives are largely driven by faculties, departments or research centres, with central administrative structures providing facilitation and advisory support.

Ecosystem-embedded hybrid model - institutional support structures operate in combination with strong external partnerships involving incubators, innovation agencies, technology parks or industry clusters, creating a network-based model of knowledge valorisation.

4.9.1 Recurring Structural Baseline Across Institutional Contexts

Across institutional responses, several structural elements recur with notable consistency. These include intellectual property management support, identifiable transfer or commercialisation units, mechanisms facilitating collaboration with external partners, and legal or contractual assistance. Their repeated presence indicates the existence of a shared structural baseline for knowledge valorisation support.

This baseline does not imply uniformity of organisational design. Rather, it suggests that certain components are widely recognised as foundational for enabling the translation of research results into societal or economic value. Intellectual property procedures, transfer coordination and collaboration interfaces emerge as core pillars within the institutional configurations described.

Differences therefore arise primarily in configuration, degree of integration and operational emphasis, not in the presence of support structures.

4.9.2 Differentiated Organisational Configurations

Although core elements recur, their institutional arrangement varies. Some institutions describe centralised models in which transfer functions, intellectual property management, collaboration facilitation and

entrepreneurial support are integrated within dedicated units. In these configurations, responsibility allocation appears concentrated and formally articulated.

Other institutions report more distributed arrangements, where valorisation-related functions are shared across research offices, legal departments, innovation centres and academic units. These models rely more heavily on coordination mechanisms and interaction between administrative and academic actors.

4.9.3 Coexistence of Support and Constraint

A frequent cross-cutting pattern concerns the coexistence of established support structures with reported operational barriers. Institutions that describe technology transfer units or intellectual property systems frequently also refer to administrative complexity, incentive misalignment, funding limitations or time pressures.

This pattern indicates that structural provision does not eliminate constraints. Knowledge valorisation operates within environments shaped by regulatory requirements, resource considerations and behavioural dynamics. Enabling mechanisms and constraining conditions therefore coexist within the same institutional settings.

The interaction between these dimensions influences the manner and extent of engagement, without negating the presence of structural commitment.

4.9.4 Interaction Between Incentives and Culture

Motivational drivers reveal interaction between formal incentive mechanisms and institutional culture. Financial rewards, recognition systems and evaluation criteria represent explicit governance instruments. Simultaneously, references to societal mission, leadership endorsement and collaborative orientation reflect normative and cultural dimensions.

In several contexts, incentive alignment efforts are accompanied by initiatives to cultivate innovation-oriented mindsets. Where incentive misalignment is reported, it often coincides with references to publication-focused evaluation systems or workload pressures.

These patterns indicate that engagement in knowledge valorisation is shaped by the combined influence of governance frameworks, cultural orientation and professional recognition structures. Institutional variation concerns the relative articulation and alignment of these dimensions.

4.9.5 Measurement Practices and Governance Integration

Measurement practices constitute another cross-cutting dimension. Quantitative indicators related to patents, spin-offs and collaboration agreements are reported in several responses. However, the degree to which these indicators are embedded within strategic planning and governance processes differs across contexts.

In some institutions, monitoring data is described as informing resource allocation, policy revision and strategic review. In others, measurement appears primarily associated with reporting functions.

This variation reflects differentiated levels of integration between monitoring systems and governance processes. Interview evidence suggests that measurement-related activities are present in several institutions, although their integration into formal decision-making processes appears to vary across cases.

The cross-cutting patterns identified across the interview analysis can be summarised through three analytical dimensions combining structural arrangements, barrier clusters and motivational configurations (**Table 4**).

Table 4. Cross-cutting analytical patterns in institutional knowledge valorisation systems

Analytical dimension	Observed patterns across institutions	Interpretation
Structural baseline	Presence of core support elements such as technology transfer structures, IP management procedures, collaboration interfaces and research-support units	Institutional frameworks for knowledge valorisation are broadly articulated, though organisational configurations vary
Barrier clusters	Regulatory complexity, limited funding for proof-of-concept activities, fragmented support structures and incentive misalignment	Barriers primarily relate to operational coordination and resource constraints
Motivational configurations	Financial incentives, recognition systems, societal impact orientation and collaboration opportunities	Engagement drivers combine formal incentives with mission-oriented motivations linked to societal impact

4.9.6 Development Trajectories and Incremental Refinement

Future priorities articulated by institutions frequently correspond to areas previously identified as constraints. Administrative complexity is associated with intentions to streamline procedures. Incentive misalignment is linked to planned adjustments in evaluation systems. Resource limitations are connected to ambitions to expand funding or staffing.

This alignment suggests that institutions frame knowledge valorisation development as a process of incremental refinement. Reported priorities reflect ongoing efforts to strengthen coherence, enhance operational efficiency and expand institutional capacity.

Institutional trajectories differ in sequencing and emphasis but share an orientation toward progressive consolidation.

4.9.7 Contextual Diversity

The combined patterns observed across structural support, barriers, motivational drivers, measurement practices and future priorities demonstrate contextual diversity. Institutions share foundational structural elements while differing in organisational configuration, governance articulation and developmental focus.

The cross-cutting interpretation therefore highlights diversity within a shared structural baseline. Knowledge valorisation across institutional contexts is characterised by identifiable support mechanisms, coexistence of enabling and constraining factors, interaction between incentives and culture, differentiated monitoring integration and ongoing developmental refinement.

Overall, the integrated analysis indicates that knowledge valorisation is institutionally embedded through structured governance arrangements and operational mechanisms, shaped by incentive and cultural dynamics, monitored through evolving measurement systems and subject to continuous institutional development.

4.10 Methodological and Analytical Limitations

4.10.1 Institution-Level Consolidated Responses

The analysis is based on a single consolidated response per institution. As a result, findings reflect governance-level or designated representative views at the time of data collection.

This approach provides clarity regarding institutional positioning but does not capture variation within institutions. Differences across faculties, departments or disciplinary domains are not represented.

4.10.2 Thematic Presence

The qualitative coding approach relies on binary identification of thematic presence. Consequently, institutions that briefly mention an element and those that elaborate extensively are treated equivalently in terms of thematic presence. This methodological choice ensures consistency but limits differentiation regarding degree of development or operational complexity.

4.10.3 Variability in Response Detail

Interview responses vary in length and descriptive specificity. Some institutional accounts provide extensive detail on structures, procedures and priorities, while others remain more concise. Although coding criteria were applied consistently, variation in reporting detail may influence the number of identifiable themes.

This variability reflects differences in articulation style and does not necessarily indicate differences in institutional capacity; therefore, the analysis documents only explicit references.

4.10.4 Self-Reported Institutional Accounts

All findings derive from self-reported institutional responses. As such, results represent institutional descriptions of support mechanisms and barriers.

Self-reporting may emphasise elements considered strategically salient or omit aspects perceived as less central. Interpretation remains confined to documented statements within the dataset.

4.10.5 Contextual Specificity and External Conditions

Institutional responses are situated within specific regulatory, regional and organisational environments. Ecosystem limitations, funding conditions and governance frameworks indicate that external context shapes institutional configurations.

The analysis does not systematically control for contextual variables such as national regulatory regimes or regional industrial structures. Differences observed across institutions may therefore be influenced by external factors not fully captured within the dataset.

4.10.6 Snapshot Character of Evolving Practices

Several institutions report that knowledge valorisation structures and policies are undergoing revision or further development. The dataset therefore captures configurations at a particular moment in time.

Findings should be interpreted as a snapshot of articulated practices and priorities and not a definitive account of long-term institutional trajectories.

4.10.7 Scope of Thematic Coverage

The interview instrument focuses on selected dimensions of knowledge valorisation, including structural support, barriers, motivational drivers, measurement practices and future priorities. Other potential dimensions, such as discipline-specific practices, informal engagement pathways or micro-level operational variation, may not be fully represented.

4.10.8 Binary Aggregation and Relational Complexity

The binary coding framework enables systematic aggregation of themes across institutional contexts. However, reducing complex narratives to presence or absence inevitably simplifies nuanced institutional descriptions.

Interconnections between themes within individual responses may be more intricate than represented in the aggregated matrix. For example, intellectual property management may be closely linked to collaboration mechanisms or incentive structures in a given institutional configuration. While the coding captures thematic presence, it does not formally model relational dynamics between themes.

4.10.9 Concluding Note on Analytical Scope

These limitations define the methodological scope within which conclusions are drawn. The chapter documents institutional configurations, reported barriers, motivational drivers, measurement practices and future priorities as articulated by participating institutions, within the constraints inherent to qualitative, institution-level and self-reported data.

4.11 Synthesis and Strategic Implications for Knowledge Valorisation Systems

The interview-based analysis provides a consolidated empirical perspective on the structural, cultural and operational configurations underpinning knowledge valorisation across the BEAMING alliance.

Across cases, knowledge valorisation systems can be analytically positioned along a limited number of organisational configurations, including centralised transfer-oriented models, distributed research-support arrangements and ecosystem-embedded approaches. These configurations should be interpreted as indicative analytical constructs capturing dominant coordination logics. The comparative perspective highlights that effectiveness is not determined by structural presence alone, but by the coherence of interactions between governance, incentives, operational processes and external engagement interfaces.

A cross-cutting pattern emerging from the analysis concerns the distinction between structural provision and functional activation, with integration into everyday research practices remaining uneven across partner institutions. This indicates that knowledge valorisation capacity is shaped not only by the existence of support structures, but by the extent to which these structures are internally coordinated, clearly communicated and aligned with researcher incentives and workflows.

From a strategic perspective, the findings point to several interrelated implications. First, strengthening institutional visibility and navigability of

valorisation mechanisms emerges as a priority condition for activation. Second, improving coherence between incentive systems, evaluation criteria and valorisation objectives is critical for enabling sustained engagement beyond individual initiative. Third, reducing procedural complexity and administrative friction can enhance the usability of existing support infrastructures. Fourth, reinforcing the integration of monitoring practices into governance cycles can support evidence-informed adaptation and resource allocation.

These implications are not independent; they form a coupled system in which improvements in one dimension reinforce progress in others. For example, enhanced visibility without incentive alignment may increase awareness without generating engagement, while structural refinement without governance integration may improve processes without affecting strategic outcomes. The analysis therefore supports a systemic interpretation of knowledge valorisation capacity as an emergent property of aligned institutional components.

At the level of the BEAMING alliance, the comparative evidence provides a foundation for structured peer learning and strategic convergence. Institutional diversity represents a resource for mutual learning, allowing partners to exchange practices related to workflow organisation, monitoring integration, training design and ecosystem engagement. Convergence should not be understood as standardisation, but as the progressive alignment of core principles, interoperable approaches and shared analytical frameworks that enable coordinated development while preserving contextual specificity.

5 Survey Analysis

5.1 Introduction

The survey constitutes a core empirical component of Deliverable D8.1 and forms part of Task 8.2 within the BEAMING project. Task 8.2 aims to provide a structured assessment of knowledge valorisation environments across the alliance, examining institutional capacity, enabling mechanisms and behavioural conditions that shape the translation of research outputs into societal, environmental and economic value. Within this framework, the survey functions as a demand-side instrument designed to capture how students and early career researchers perceive, understand and engage with knowledge valorisation structures in their institutional contexts.

In line with the BEAMING conceptual framework, knowledge valorisation extends beyond formal technology transfer procedures. It encompasses intellectual property management, industry collaboration, entrepreneurship support, innovation-oriented mobility, communication of research results to non-academic audiences and mechanisms for demonstrating societal impact. While institutional mapping documents the existence of policies, offices and procedures, it does not capture whether such mechanisms are visible, accessible or meaningful to research performers. The survey therefore addresses the behavioural and perceptual dimensions of knowledge valorisation capacity.

The survey contributes to several interrelated analytical objectives. First, it **establishes a baseline** of conceptual familiarity with knowledge valorisation among Bachelor's, Master's and doctoral students, as well as Early Career Researchers. Assessing awareness and understanding is essential for determining whether institutional strategies are internalised at the level of research performers.

Second, it **evaluates the perceived availability and visibility of institutional support mechanisms** relevant to knowledge valorisation. Respondents were asked about intellectual property guidance, entrepreneurship courses, start-

up assistance, industry collaboration opportunities, innovation-oriented mobility schemes, participation in international networks and documented success stories. The inclusion of a “Don’t know” category allows differentiation between confirmed absence of support and limited awareness of existing mechanisms, enabling distinction between structural gaps and visibility shortcomings.

Third, the survey **assesses individual experience**, motivation and competence dimensions related to knowledge valorisation. Likert-scale items capture awareness of opportunities, perceived usefulness of previous innovation training, supervisory encouragement, confidence in developing business ideas from research and interest in participating in future training or mobility schemes. These indicators provide insight into behavioural readiness and potential competence gaps relative to expressed demand.

In addition, the survey documents **perceived barriers and detailed training needs** aligned with BEAMING’s capacity-building strategy. The barrier assessment addresses issues such as limited awareness, time constraints, administrative complexity, funding limitations and unclear intellectual property regulations. The training component translates these constraints into articulated demand across thematic areas including innovation management, technology transfer, entrepreneurship, research communication and policy-oriented engagement.

The survey design follows the alliance-based logic of BEAMING. Its objective is identification of systemic patterns characterising the alliance as a whole. This aggregated perspective supports coordinated capacity-building interventions grounded in shared challenges and developmental trajectories.

Within the architecture of D8.1, the survey serves two strategic functions. It provides empirical grounding for the identification of awareness, visibility, competence and engagement gaps, and it informs the analytical logic of the subsequent gap analysis. By capturing the perspective of students and Early Career Researchers, actors central to the long-term sustainability of knowledge valorisation ecosystems, the survey ensures alignment between institutional strategies and the needs of emerging research performers.

In summary, the survey operationalises Task 8.2 at the level of research performers by providing a structured quantitative assessment of awareness, engagement, barriers and training demand. It complements institutional interview findings and contributes to an evidence-based foundation for roadmap development within the BEAMING alliance.

5.2 Methodological Framework of Survey Analysis

5.2.1 Instrument Design

The survey instrument was designed to capture multiple dimensions of knowledge valorisation capacity from the perspective of students and Early Career Researchers within the BEAMING alliance. Its structure operationalises knowledge valorisation not only as a structural or policy-driven construct, but also as a behavioural and competence-related process shaped by awareness, perception, motivation and perceived opportunity.

The questionnaire was organised around **five analytical domains**:

1. Respondent profile;
2. Familiarity with the concept of knowledge valorisation;
3. Perceived availability and visibility of institutional support mechanisms;
4. Individual experiences and attitudes related to innovation and valorisation;
5. Perceived barriers and articulated training needs.

This structure ensures alignment with the objectives of Deliverable D8.1, which integrates institutional mapping with behavioural evidence.

Multiple **question formats** were employed to capture both categorical and scaled responses:

- Single-choice items (e.g., career stage, conceptual familiarity) were encoded as mutually exclusive categories.
- Multiple-choice items (e.g., disciplinary background, barriers, training needs) were encoded using binary indicators (1 = selected; 0 = not selected), allowing respondents to select multiple applicable options.
- Likert-scale items were used to assess awareness of opportunities, perceived usefulness of previous training, supervisor encouragement, confidence in developing business ideas and interest in future participation. The intended scale ranged from 0 (very low) to 5 (very high). Raw responses recorded on a 1–6 scale were recoded to the predefined 0–5 scale prior to analysis to ensure interpretive consistency.

“Other” response options were included where relevant. These were treated as binary indicators in quantitative aggregation, while associated free-text entries were analysed qualitatively and excluded from numerical duplication.

The instrument prioritised clarity, comparability and analytical traceability. Each item was explicitly linked to one of the five analytical domains, enabling systematic alignment between survey evidence and Task 8.2 objectives.

To provide additional analytical transparency, a set of exploratory cross-tabulations was conducted to examine potential relationships between selected survey variables. These cross-tabulations do not aim to establish statistical associations relationships but provide a descriptive overview of how awareness levels and perceived barriers are distributed across different respondent characteristics.

Two **exploratory comparisons** were examined:

1. awareness of knowledge valorisation opportunities across different levels of research experience;
2. perceived barriers across disciplinary fields.

Because the survey follows a voluntary convenience sampling approach and does not aim to generate statistically representative institutional samples, the cross-tabulations are interpreted descriptively and serve only to identify possible distribution patterns within the respondent group.

Table 5. Awareness of knowledge valorisation opportunities by research experience

Research experience	Low awareness (0-2)	Medium (3)	High (4-5)
<1 year	47.60%	26.20%	26.20%
1-3 years	44.60%	23.20%	32.10%
4-6 years	28.00%	28.00%	44.00%
> 6 years	27.50%	45.00%	27.50%

The distribution of responses indicates variation in reported awareness across levels of research experience (**Table 5**). Respondents with less than one year of research experience appear most frequently in the low-awareness category (47.6%), while about one quarter report high levels of awareness (26.2%). A similar pattern is visible among researchers with one to three years of experience, where low awareness represents the largest share of responses (44.6%).

Among respondents with four to six years of research experience, the distribution becomes more balanced and the proportion of high awareness increases to 44.0%. This pattern is consistent with the expectation that longer exposure to research environments, collaborative projects and institutional procedures may increase familiarity with knowledge valorisation opportunities. At the same time, medium and low awareness levels remain present across all experience categories.

Researchers with more than six years of experience show the highest concentration in the medium-awareness category (45.0%), while low and high awareness levels appear in similar proportions (27.5% each).

Overall, the results suggest that exposure to research environments and institutional processes may contribute to increased awareness over time.

Table 6. Perceived barriers to knowledge valorisation by disciplinary field

Discipline	Time constraints	Funding limitations	Administrative barriers	Awareness / training
Engineering & Technology	59.20%	53.10%	44.90%	46.90%
Life Sciences	51.30%	64.10%	48.70%	46.20%
Social Sciences	64.40%	55.60%	48.90%	37.80%
Environmental Sciences	44.80%	34.50%	34.50%	37.90%

The descriptive comparison indicates that perceived barriers are broadly similar across disciplinary fields (**Table 6**). Time constraints appear among the most frequently reported challenges, particularly among respondents in Social Sciences (64.4%) and Engineering and Technology (59.2%). Funding limitations are also frequently mentioned, especially in Life Sciences (64.1%) and Social Sciences (55.6%).

Administrative barriers are reported by a substantial proportion of respondents across several disciplines, reaching approximately half of respondents in Life Sciences (48.7%) and Social Sciences (48.9%). Awareness and training barriers are reported across all disciplinary groups, ranging from 37.8% in Social Sciences to around 46–47% in Engineering and Technology and Life Sciences.

Overall, the results suggest that structural constraints—particularly time availability and funding resources—constitute the most frequently perceived obstacles to knowledge valorisation, while administrative procedures and awareness gaps remain additional but slightly less dominant challenges across disciplinary contexts.

No strong discipline-specific barrier pattern emerges from the cross-tabulation. The results therefore suggest that perceived constraints are largely systemic in nature and affect respondents across different research domains in broadly similar ways.

5.2.2 Target Group and Sampling Criteria

The target population comprised Bachelor's students, Master's students, doctoral candidates and Early Career Researchers (defined as researchers up to eight years post-PhD). These groups were selected because they represent both the emerging research workforce and transitional career stages where engagement with innovation pathways becomes particularly relevant. The distribution across career stages is as follows:

- Bachelor's students: 15.34%
- Master's students: 24.54%
- Doctoral candidates: 39.88%
- Early Career Researchers: 20.25%

Doctoral candidates constitute the largest subgroup, indicating that the dataset primarily reflects perspectives of individuals actively engaged in research activities.

Years of research experience further contextualise the sample:

- <1 year: 25.77%
- 1–3 years: 34.36%
- 4–6 years: 15.34%
- >6 years: 24.54%

The distribution suggests that most respondents possess sufficient exposure to research environments to form informed perceptions regarding institutional support and innovation pathways.

The survey was disseminated through institutional communication channels across partner institutions. Participation was voluntary and no quota-based sampling was applied. The dataset therefore reflects a self-selected but thematically relevant respondent group aligned with the objectives of Task 8.2.

The survey was disseminated through institutional communication channels across partner institutions participating in the BEAMING alliance. Because distribution was conducted through multiple institutional channels and open participation was encouraged, the exact size of the population exposed to the survey cannot be precisely determined. Consequently, a formal response rate cannot be calculated.

Responses were received from multiple partner institutions within the consortium. However, the number of responses per institution varies and the survey was not designed to produce statistically representative institutional samples. For this reason, the results are interpreted at the alliance level, focusing on behavioural patterns and perceived conditions among students and early-career researchers.

The sampling approach can therefore be characterised as voluntary convenience sampling within a defined target group, appropriate for exploratory analysis aimed at identifying awareness levels, perceived barriers and training needs related to knowledge valorisation.

5.2.3 Data Collection and Ethical Handling

The survey was administered electronically. Participation was anonymous and no personally identifiable information was collected. Respondents were informed of the survey's purpose and the use of aggregated data within Deliverable D8.1.

Data preparation included:

- verification of structural consistency in categorical encoding;
- recoding of Likert-scale items from 1–6 to the predefined 0–5 scale;
- interpretation of blank cells in binary selection questions as structural zeros (non-selection).

Analyses were conducted using a reproducible computational workflow. Descriptive statistics included absolute frequencies, percentages, means, medians, standard deviations and distribution bands. Selected cross-

tabulations explored associations between familiarity with knowledge valorisation and selected attitudinal indicators.

No inferential statistical testing was performed, as the analytical objective is descriptive and exploratory. The survey provides a transparent representation of patterns within the respondent group across the BEAMING alliance, supporting qualitative interpretation and strategic alignment within Deliverable D8.1.

5.3 Respondent Profile

Understanding respondent characteristics is essential for interpreting subsequent findings on awareness, institutional support, perceived barriers and training needs. The profile analysis situates survey results within the academic and professional trajectories of participants and provides context for how perceptions of knowledge valorisation emerge.

5.3.1 Career Stage Distribution

The final cleaned dataset comprises 163 respondents distributed across four career stages (Figure 6):

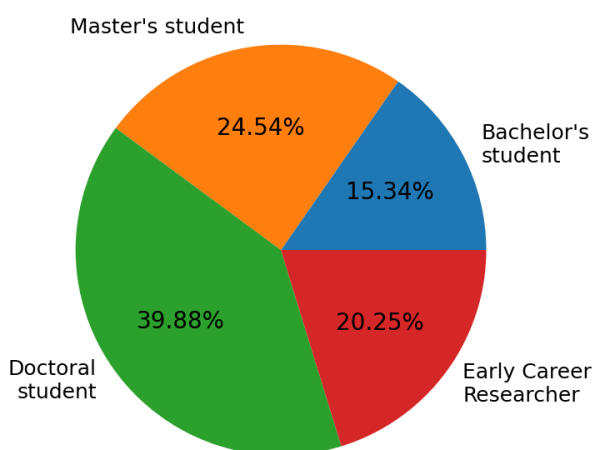


Figure 6. Career stage distribution

Doctoral candidates represent the largest subgroup, accounting for 39.88% of the sample. This numerical predominance is analytically relevant because doctoral researchers are typically positioned at the intersection of research production and early professional specialisation. They are frequently involved in externally funded projects, collaborative research environments and applied research contexts where KV pathways may become operationally visible.

Bachelor's and Master's students together represent 39.88% of respondents. Their inclusion ensures that the survey captures perspectives from earlier stages of the academic trajectory. While undergraduate and master-level students may have more limited exposure to formal innovation processes, their perceptions of institutional visibility, training availability and opportunity awareness remain important for understanding how knowledge valorisation concepts are introduced and communicated within educational pathways.

Early Career Researchers constitute 20.25% of the sample. This subgroup represents one fifth of all respondents. ECRs are commonly engaged in grant applications, collaborative projects and early-stage research leadership responsibilities. Their responses therefore reflect direct interaction with institutional procedures, support structures and governance mechanisms related to knowledge valorisation activities.

The distribution across career stages demonstrates that the survey captures a structured cross-section of emerging researchers across multiple academic levels. The presence of respondents from Bachelor's to postdoctoral stages allows the analysis to integrate perspectives associated with different levels of research autonomy, institutional exposure and professional responsibility.

5.3.2 Research Experience

Years of research experience provide additional context for interpreting respondent perceptions (Figure 7). Most respondents (60.13%) report up to three years of research experience. This indicates that a substantial share of participants are still consolidating research routines and may draw primarily on early project exposure, supervision relationships, lab or group participation, and initial dissemination activities when forming views on knowledge valorisation opportunities.

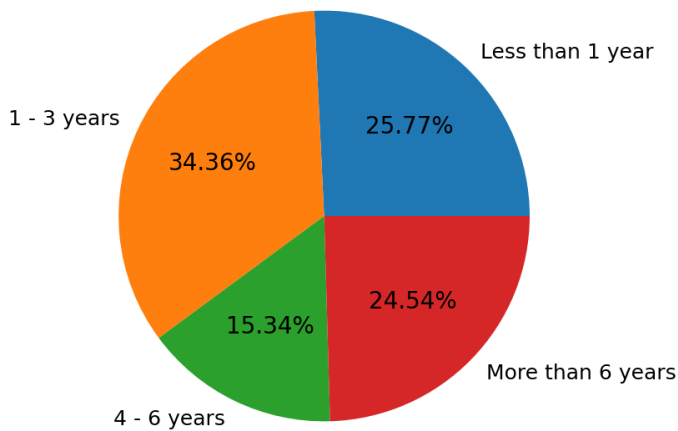


Figure 7. Experience level distribution

Respondents reporting 4-6 years of research experience account for 15.34% of the sample. This segment is likely to have accumulated more sustained involvement in project-based research and collaboration, including repeated interaction with institutional processes that support research development and external engagement.

The 25.77% reporting less than one year of research experience reflects early-stage exposure. Their perceptions may be shaped primarily by institutional communication, course content and first contact with research environments, and less by direct participation in innovation or transfer activities. Conversely, respondents with more than six years of experience constitute 24.54% of the sample and may have had repeated engagement with grant applications, applied research contexts, or external partners, which can influence how institutional support and procedural visibility are perceived.

The distribution of research experience supports interpreting survey results as grounded in lived research participation across a range of experience levels. At the same time, the concentration in the lower experience bands indicates that institutional support structures and training provision remain salient for respondents who are developing their longer-term engagement with knowledge valorisation pathways.

5.3.3 Disciplinary Distribution

Respondents were permitted to select one or more disciplinary fields. The distribution (percentage of respondents selecting each field) is as follows (**Figure 8**):

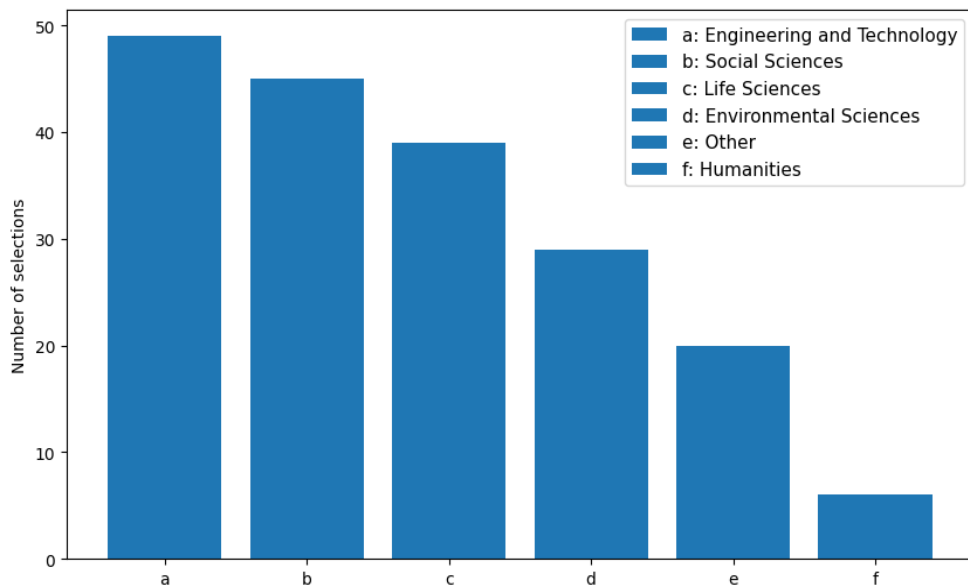


Figure 8. *Disciplinary Distribution*

The respondents demonstrate a clear multidisciplinary profile. Engineering and Technology constitutes the largest single disciplinary group, which is consistent with the technological and applied research orientation often associated with knowledge valorisation pathways such as patenting, licensing and industrial collaboration.

Social Sciences and Life Sciences together account for more than half of respondents. In these domains, knowledge valorisation may take diverse forms, including policy engagement, societal impact initiatives, applied research partnerships and community-oriented innovation processes. The presence of Environmental Sciences further reinforces the relevance of sustainability-oriented research and impact pathways within the alliance.

The 12.27% selecting "Other" includes a range of explicitly specified fields. These comprise Agricultural economics, Agricultural science, Animal Sciences, Crop production, Field crop production, Food technology, Meat Technology and Meat Processing, Business and Management (four entries), Economics, Digital Production, Journalism digital production, Security (two entries), Childhood Education, Teacher, Statistics, and Socio-economic Innovation research. The

entries indicate additional sectoral, applied and interdisciplinary orientations that extend beyond the predefined disciplinary categories.

The relatively small representation of Humanities (3.68%) does not diminish its analytical relevance. Humanities-based research may engage with valorisation through cultural, social and policy-oriented impact channels.

The multidisciplinary composition of the respondents underscores the importance of designing knowledge valorisation support measures that are adaptable across diverse epistemic cultures and application logics. Different disciplines may encounter distinct barriers and opportunity structures, even if systemic patterns remain shared at the alliance level.

5.3.4 Implications for Interpretation

The combined distributions of career stage, research experience and disciplinary affiliation define the structural context within which subsequent survey findings must be interpreted.

The largest subgroup consists of doctoral students (39.88%), followed by Master's students (24.54%), Early Career Researchers (20.25%) and Bachelor's students (15.34%). In parallel, 60.13% of respondents report up to three years of research experience, while 24.54% report more than six years. This configuration indicates that the dataset is weighted toward respondents situated in early and intermediate phases of research engagement, while still including a substantial share with extended research experience.

The coexistence of lower experience bands (less than three years) and respondents reporting more than six years of experience provides variation in exposure to institutional procedures, project environments and external collaboration contexts. Consequently, perceptions of knowledge valorisation visibility, support mechanisms and training needs reflect both initial exposure stages and more sustained research trajectories.

The disciplinary distribution further frames interpretation. Engineering and Technology (30.06%), Social Sciences (27.61%) and Life Sciences (23.93%)

together account for the majority of selections, with additional representation from Environmental Sciences (17.79%), Humanities (3.68%) and a heterogeneous “Other” category (12.27%). The presence of applied, sector-oriented and interdisciplinary fields within the “Other” category expands the analytical scope beyond the predefined disciplinary clusters.

Taken together, the respondent profile demonstrates that the survey results are grounded in a multidisciplinary group spanning undergraduate to early postdoctoral stages and encompassing a broad range of research experience levels. The subsequent analyses of institutional support, awareness, perceived barriers and training needs must therefore be interpreted as reflecting perceptions formed across heterogeneous disciplinary contexts and varying degrees of research exposure within the BEAMING alliance.

5.4 Perceived Institutional Support Structures

The perceived availability and visibility of institutional support mechanisms constitute a critical dimension of knowledge valorisation capacity. While formal structures may exist at institutional level, their practical relevance depends on whether they are recognised, accessible and perceived as meaningful by students and Early Career Researchers. This section analyses responses to seven survey items addressing specific support mechanisms and examines systemic patterns emerging from the distribution of “Yes”, “No” and “Don’t know” responses.

5.4.1 Intellectual Property and Patent Guidance

Respondents were asked whether their institution provides guidance on intellectual property (IP) and patents (**Figure 9**):

The distribution indicates that 42.33% of respondents report the availability of institutional guidance on IP and patents. At the same time, 44.17% selected "Don't know", representing the largest single response category. This proportion is comparable to the share of affirmative responses and signals limited clarity regarding the visibility or communication of IP-related support structures. Only 13.50% explicitly report that such guidance is not provided. The difference between the relatively low "No" responses and the high proportion of uncertainty suggests that awareness may be a defining feature of this distribution.

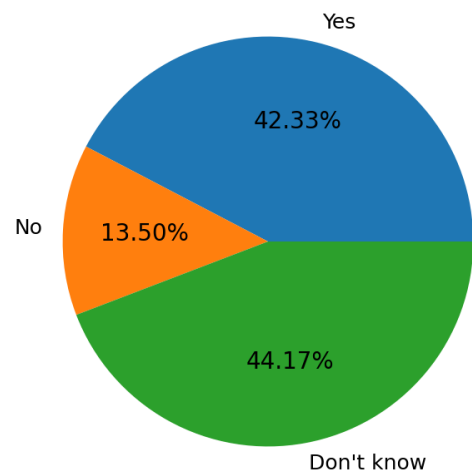


Figure 9. Intellectual Property and Patent Guidance

Overall, the results document a divided perception among respondents: while a substantial share recognises the existence of IP and patent guidance, an equally substantial proportion remains uncertain about its availability. This pattern is directly relevant for understanding how knowledge valorisation support mechanisms are perceived at the institutional level.

5.4.2 Entrepreneurship and Innovation Courses

Respondents evaluated the availability of entrepreneurship or innovation-related courses (**Figure 10**):

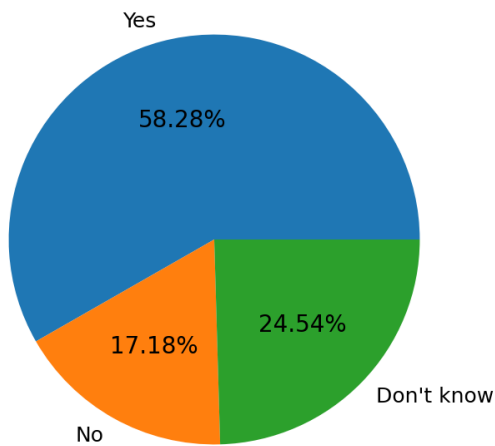


Figure 10. *Entrepreneurship and Innovation Courses*

A majority of respondents (58.28%) report that their institution provides access to entrepreneurship or innovation courses. This constitutes the largest affirmative share among the institutional support items assessed in this section. The proportion of "Don't know" responses (24.54%) remains substantial but is notably lower than in the case of intellectual property guidance. Only 17.18% of respondents indicate that such courses are not available. The distribution therefore shows that reported availability clearly exceeds both

explicit absence and uncertainty. At the same time, nearly two out of five respondents either do not recognise the existence of such courses or are unsure about their availability.

Overall, the results document that entrepreneurship and innovation courses are visible to a majority of respondents, while a significant minority remains outside this recognition, indicating uneven awareness across the surveyed population.

5.4.3 Opportunities for Industry Collaboration

Most respondents (76.69%) report that their institution provides opportunities to collaborate with industry. A smaller share selected "Don't know" (17.79%), indicating that a portion of respondents are not aware of whether such opportunities are available. Only 5.52% report that these opportunities are not provided (**Figure 11**).

The distribution indicates that reported availability of industry collaboration opportunities is substantially higher than both explicit absence and uncertainty. This documents that, for this item, respondents most frequently identify the presence of an institutional mechanism linked to external engagement within knowledge valorisation activities.

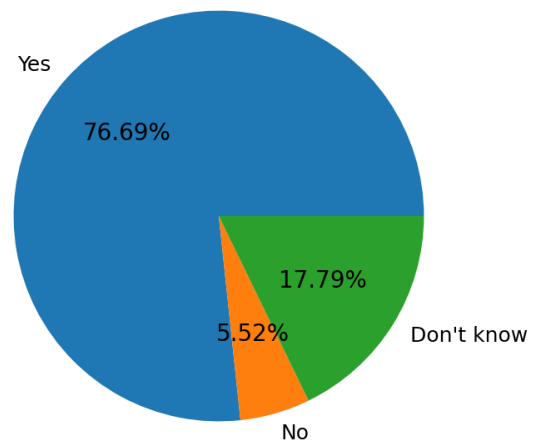


Figure 11. Opportunities for Industry Collaboration

5.4.4 Support for Start-ups and Spin-offs

The largest response category is "Don't know" (44.17%), indicating that a substantial proportion of respondents are uncertain whether their institution provides support for creating start-ups or spin-offs.

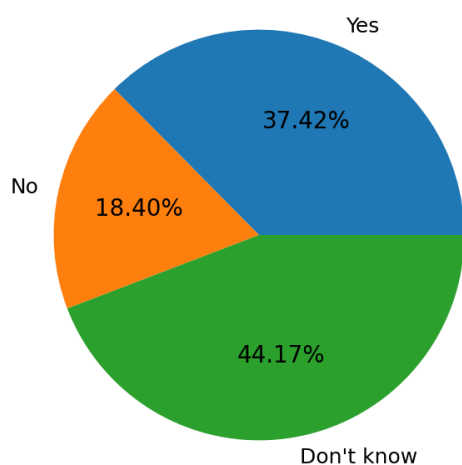


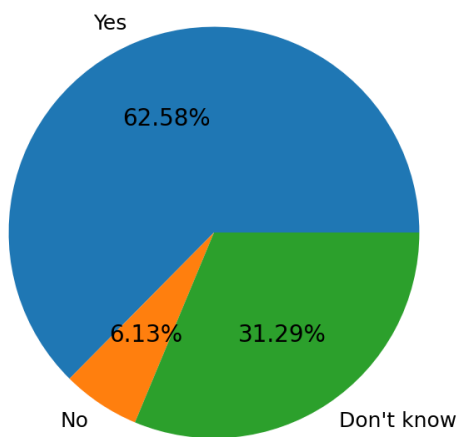
Figure 12. Support for Start-ups and Spin-offs

Affirmative responses account for 37.42% of the sample, while 18.40% explicitly report that such support is not available (**Figure 12**). The distribution shows that reported availability does not constitute a majority position. The proportion of uncertainty exceeds both the share of affirmative and negative responses. The relatively limited "No" responses compared to the higher level of uncertainty suggests that lack of awareness may be more prevalent than explicit absence.

Overall, the results document divided perceptions regarding entrepreneurial support structures. While more than one-third of respondents recognise the existence of start-up or spin-off support, an even larger share remains uncertain about its availability.

5.4.5 Innovation-Focused Mobility Programmes

A majority of respondents (62.58%) report that their institution provides mobility or exchange programmes focused on innovation. This constitutes the dominant response category for this item. The share of "Don't know" responses is 31.29%, indicating that nearly one-third of respondents are uncertain about the availability of such programmes. Only 6.13% explicitly report that innovation-focused mobility schemes are not provided (**Figure 13**).



The distribution shows that reported availability clearly exceeds both explicit absence and uncertainty. While a notable proportion of respondents remain unsure, the majority recognise the presence of mobility or exchange mechanisms linked to innovation-related activities. This pattern documents comparatively high visibility of this support dimension within the surveyed population.

Figure 13. Innovation-Focused Mobility Programmes

5.4.6 Participation in International Knowledge Valorisation Networks

A clear majority of respondents (73.01%) report participation in international activities, networks, or exchanges related to knowledge valorisation. This represents the dominant response category for this item. The share of "Don't know" responses is 22.70%, indicating that nearly one-quarter of respondents are uncertain about the availability of such opportunities. Only 4.29% explicitly report that participation in international knowledge valorisation activities is not available (**Figure 14**).

The distribution shows that reported availability substantially exceeds both explicit absence and uncertainty. While a notable minority remains uncertain, the large affirmative share documents high recognition of international engagement mechanisms linked to knowledge valorisation.

Overall, the results indicate that international networking and exchange activities are generally perceived as accessible among respondents, constituting one of the most recognised institutional support dimensions in this section.

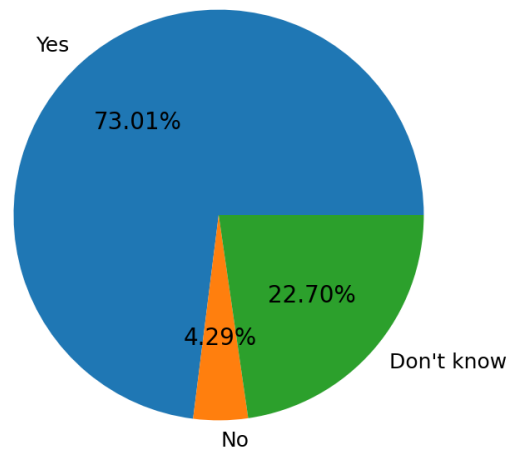


Figure 14. Participation in International Knowledge Valorisation Networks

5.4.7 Documented Success Stories and Visible Examples

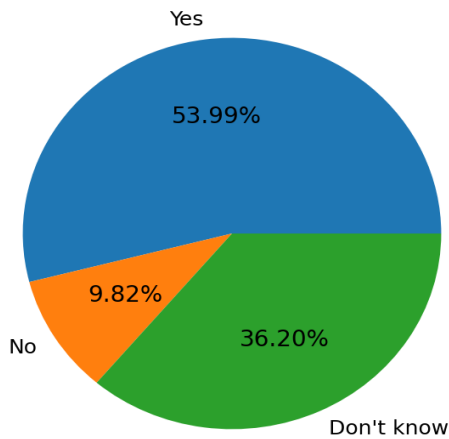


Figure 15. Documented Success Stories and Visible Examples

A majority of respondents (53.99%) report that their institution provides documented success stories or visible examples of technology transfer, spin-offs, or industry collaboration. This constitutes the largest response category for this item. The share of "Don't know" responses is 36.20%, indicating that more than one-third of respondents are uncertain about the availability or visibility of such examples. Only 9.82% explicitly report that documented success stories are not available (**Figure 15**).

The distribution shows that reported availability exceeds both explicit absence and uncertainty. At the same time, the relatively high level of uncertainty indicates that visibility and communication of documented cases may not be uniform across respondents.

Overall, the results document that more than half of respondents recognise the presence of visible success examples related to knowledge valorisation, while a substantial minority remains unaware of their existence.

5.4.8 Cross-Item Synthesis of Perceived Institutional Support

Across the seven support mechanisms analysed in these Sections about Institutional Support, respondents report differentiated levels of perceived availability.

High levels of reported availability are observed for opportunities to collaborate with industry (76.69%), participation in international knowledge valorisation activities (73.01%), and innovation-focused mobility programmes

(62.58%). Entrepreneurship and innovation courses are recognised by 58.28% of respondents, while documented success stories are reported by 53.99%.

In contrast, intellectual property and patent guidance (42.33%) and support for start-ups or spin-offs (37.42%) display lower affirmative shares. For these two items, the proportion of "Don't know" responses (44.17% in both cases) equals or exceeds the share of positive responses, indicating comparatively limited visibility.

Across items, "Don't know" responses range from 17.79% (industry collaboration) to 44.17% (IP guidance and start-up support). This pattern demonstrates that uncertainty constitutes a recurring feature of perceived institutional support. Explicit negative responses ("No") remain comparatively low across all mechanisms, ranging between 4.29% and 18.40%.

Taken together, the results document that respondents most recognise mechanisms linked to collaboration, mobility and international engagement, while support structures related to intellectual property management and entrepreneurial creation exhibit comparatively higher levels of uncertainty. The distribution therefore reflects variation in perceived visibility across different types of support mechanisms.

This perception-based synthesis provides an analytical bridge between the structural inventory of institutional mechanisms and the subsequent assessment of individual attitudes. It establishes a consistent basis for interpreting how perceived availability interacts with awareness, confidence and interest dimensions.

5.5 Individual Experience and Attitudes Toward KV

Beyond the structural dimension of institutional support, knowledge valorisation capacity depends on **individual awareness, motivation, confidence and perceived encouragement**. This section analyses five Likert-scale items (0–5 scale) capturing behavioural and attitudinal dimensions related to knowledge valorisation among respondents. Together, these

indicators provide insight into readiness for engagement and highlight potential competence-related constraints.

5.5.1 Awareness of Knowledge Valorisation Opportunities

Respondents assessed their level of awareness regarding available knowledge valorisation opportunities within their institution.

The distribution indicates that 38.65% of respondents fall within the low-awareness band (0-2). The median value of 3 shows that the central tendency lies at the midpoint of the scale. A further 30.06% selected the midpoint category (3), while 31.29% report high awareness (4-5) (**Figure 16**).

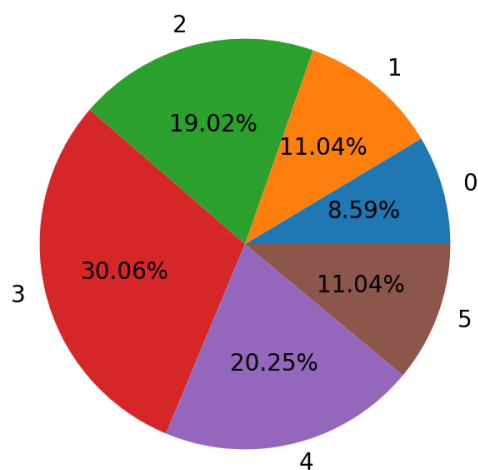


Figure 16. Awareness of Knowledge Valorisation Opportunities

This pattern is directly consistent with the presence of substantial "Don't know" responses in Section 5.4. Respondents who are uncertain about the existence of specific institutional mechanisms may also place themselves at the midpoint or lower end of the awareness scale. At the same time, the share reporting high awareness indicates that a substantial proportion of respondents recognise knowledge valorisation opportunities in their institutional environment.

From a systemic perspective, awareness represents the entry point into knowledge valorisation pathways. The distribution here documents a mixed picture: awareness is not uniformly low, but a combined 68.71% of respondents remain at the midpoint or below. The results therefore indicate that visibility of knowledge valorisation opportunities varies considerably across respondents.

5.5.2 Perceived Usefulness of Previous Innovation Training

Respondents evaluated the usefulness of any previous innovation or entrepreneurship-related training they had received.

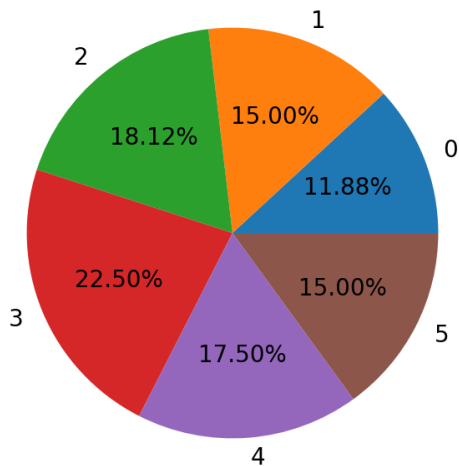


Figure 17. Perceived Usefulness of Previous Innovation Training

The distribution shows that 45.01% of respondents fall within the low-usefulness range (0-2). The median value of 3 indicates that the central observation lies at the midpoint of the scale. A total of 22.50% selected the midpoint category (3), while 32.50% report high usefulness (4-5).

The mean value of 2.64 is positioned slightly below the midpoint of the scale, reflecting a distribution spread across low, medium and high categories (**Figure 17**). The responses therefore document heterogeneous perceptions regarding the usefulness of previously received training on innovation or entrepreneurship.

Overall, the data indicate that perceptions are not concentrated in a single segment of the scale. While a substantial proportion of respondents report limited usefulness, nearly one-third indicate high usefulness, and the median at 3 confirms that the midpoint represents the central tendency of the distribution.

5.5.3 Supervisor Encouragement to Engage in Knowledge Valorisation

Respondents assessed the extent to which supervisors or mentors encourage engagement in knowledge valorisation activities. The distribution shows that 26.70% of respondents fall within the low-encouragement range (0-2). A further 20.50% selected the midpoint category (3). More than half of respondents (52.80%) report high levels of supervisory encouragement (4-5).

The mean value of 3.37 is above the midpoint of the scale, and the median of 4 indicates that the central tendency lies within the high-encouragement band. The largest single category corresponds to the highest scale value (5), accounting for 31.68% of responses (**Figure 18**).

Overall, the results document that supervisory or mentoring support for knowledge valorisation activities is positively perceived by a majority of respondents, while approximately one quarter report limited encouragement.

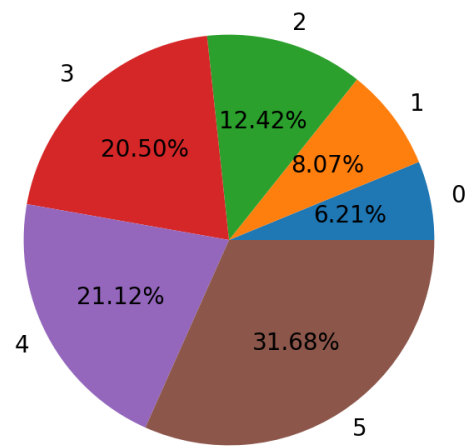


Figure 18. Supervisor Encouragement to Engage in Knowledge Valorisation

5.5.4 Confidence in Developing a Business Idea from Research

Confidence represents a key competence-related dimension of knowledge valorisation. Respondents rated their confidence in developing a business idea based on their research.

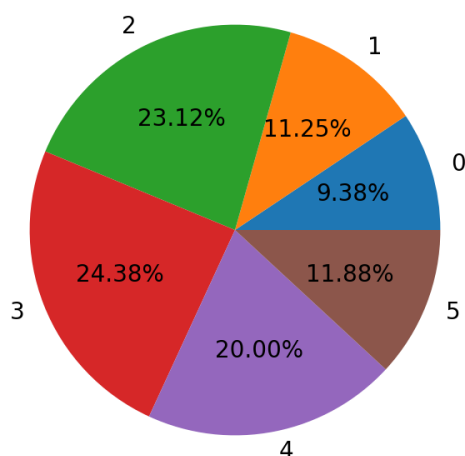


Figure 19. Confidence in Developing a Business Idea from Research

The distribution shows that 43.76% of respondents fall within the low-confidence range (0-2). A further 24.38% selected the midpoint category (3). The high-confidence band (4-5) accounts for 31.88% of responses.

The mean value of 2.70 is positioned slightly below the midpoint of the scale, while the median of 3 indicates that the central tendency lies in the midpoint category. The largest single response category corresponds to value 3 (24.38%), followed by value 2 (23.13%) (**Figure 19**).

The overall pattern indicates a concentration of responses around the midpoint of the scale, combined with a substantial share reporting low confidence and a comparable share reporting high confidence. This distribution reflects differentiated levels of perceived entrepreneurial readiness among respondents.

5.5.5 Interest in Participating in Future Knowledge Valorisation Activities

Respondents evaluated their interest in participating in future training, workshops or mobility schemes related to knowledge valorisation.

This item exhibits the highest mean value among the five attitudinal indicators (Mean = 3.91). The median of 4 confirms that the central tendency lies within the high-interest band. A total of 72.40% of respondents selected values 4 or 5, indicating strong interest in future engagement with knowledge valorisation-related activities.

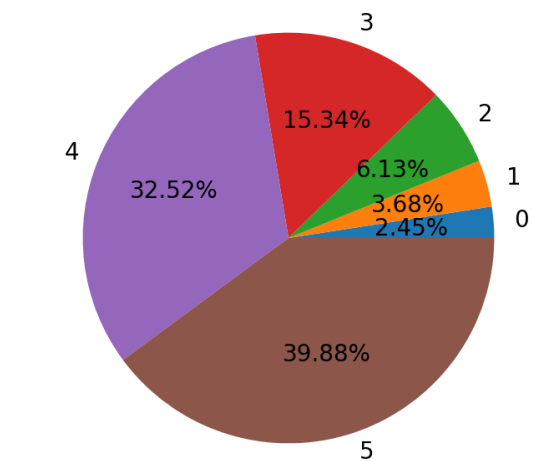


Figure 20. Interest in Participating in Future Knowledge Valorisation Activities

Only 12.26% of respondents fall within the low-interest range (0-2), while 15.34% selected the midpoint category (3). The largest single response category corresponds to value 5 (39.88%), followed by value 4 (32.52%) (**Figure 20**). The distribution is therefore clearly skewed toward the upper end of the scale.

The contrast between this high level of expressed interest and the more moderate values observed for awareness, training usefulness and confidence is analytically relevant. The data indicate that limited current engagement with knowledge valorisation activities cannot be attributed to lack of motivation. Rather, the pattern suggests that structural factors, informational

clarity and competence-related dimensions may influence actual participation levels.

In alignment with the barrier assessment presented in Section 5.6, where limited awareness and competing priorities are reported, the strong interest documented here indicates substantial potential demand for well-structured, clearly communicated and accessible knowledge valorisation training and mobility formats within the surveyed population.

5.5.6 Internal Consistency Across Attitudinal Indicators

When considered together, the **five indicators** reveal a structured and internally coherent attitudinal configuration across respondents.

1. Awareness of knowledge valorisation opportunities is centred at the midpoint (Mean = 2.75; Median = 3), with 68.71% of respondents positioned at or below the midpoint of the scale.

2. The perceived usefulness of previous innovation or entrepreneurship training is similarly distributed around the midpoint (Mean = 2.64; Median = 3), with 45.01% reporting low usefulness and 32.50% reporting high usefulness.

3. Supervisor or mentor encouragement displays a more positive distribution (Mean = 3.37; Median = 4), with 52.80% of respondents located in the high-encouragement band.

4. Confidence in developing a business idea from research is centred near the midpoint (Mean = 2.70; Median = 3), with 43.76% reporting low confidence and 31.88% reporting high confidence.

5. Interest in future participation in KV-related activities is clearly concentrated at the upper end of the scale (Mean = 3.91; Median = 4), with 72.40% of respondents located in the high-interest band.

Taken together, these indicators document a consistent pattern. While awareness, perceived training usefulness and entrepreneurial confidence

cluster around the midpoint of the scale and include substantial low segments, supervisory encouragement and, in particular, future interest display markedly stronger positive distributions.

The coexistence of moderate awareness and confidence levels with a strongly positive interest profile indicates that motivational orientation toward knowledge valorisation activities is not the primary limiting dimension within the respondent population. Instead, the data point to differentiated levels of informational clarity, experiential exposure and competence-related readiness.

This attitudinal configuration provides a behavioural complement to the structural assessment presented in Section 5.4. The internal consistency across indicators supports the interpretation that strengthening visibility, enhancing applied training formats and consolidating confidence-building mechanisms are central for translating expressed interest into sustained engagement.

The combined evidence from these five items therefore establishes an analytical bridge toward the subsequent examination of perceived barriers and articulated training needs, ensuring coherence between individual-level perceptions and institutional-level support structures.

5.6 Perceived Barriers to Knowledge Valorisation

Understanding perceived barriers is essential for contextualising both the structural assessment of institutional support and the attitudinal indicators presented in the previous section. Barriers reflect constraints that may inhibit engagement with knowledge valorisation (KV) activities even when interest exists. The survey included a multi-select question allowing respondents to identify factors limiting their involvement in knowledge valorisation processes. Percentages below are calculated against the total number of respondents.

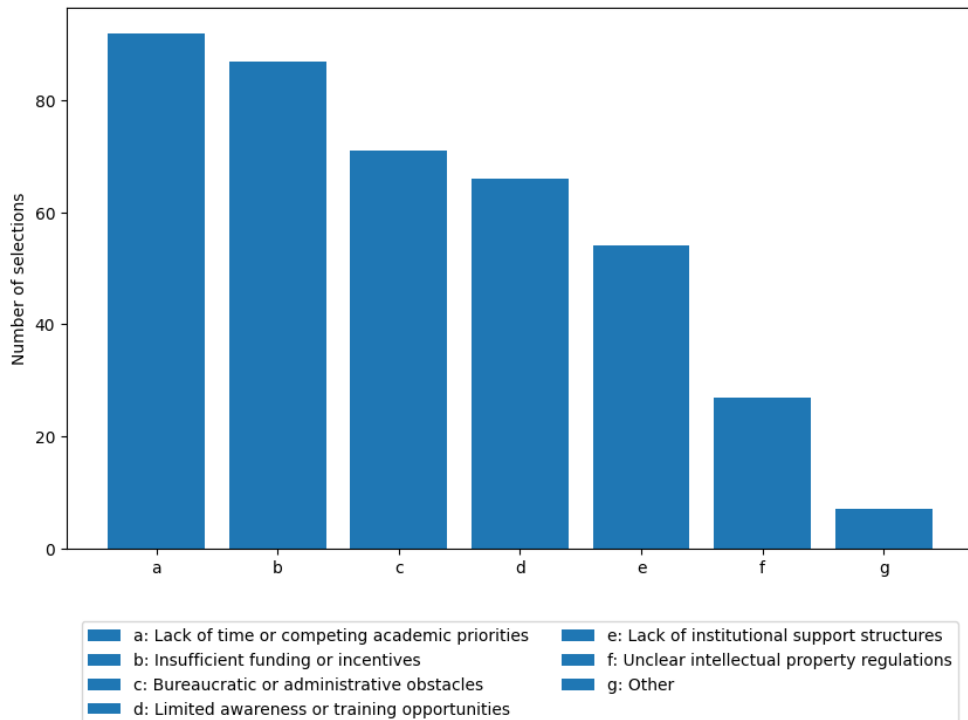


Figure 21. Perceived Barriers to Knowledge Valorisation

The validated distribution of responses is as follows (**Figure 21**):

- Lack of **time** or competing academic priorities: 92 respondents (56.44%)
- Insufficient **funding** or incentives: 87 respondents (53.37%)
- Bureaucratic or **administrative obstacles**: 71 respondents (43.56%)
- Limited **awareness** or training opportunities: 66 respondents (40.49%)
- Lack of **institutional support** structures: 54 respondents (33.13%)
- Unclear **intellectual property** regulations: 27 respondents (16.56%)
- **Other**: 7 respondents (4.29%)

The barrier profile indicates that constraints are primarily associated with time availability, funding conditions, and administrative complexity, followed by awareness and structural support dimensions.

5.6.1 Perceived Lack of Institutional Support Structures

Lack of institutional support structures was selected by 33.13% of respondents, suggesting that one third perceive existing mechanisms as insufficient, inaccessible, or inadequate to their needs.

5.6.2 Funding and Incentive Structures

Insufficient funding or incentives was selected by 53.37% of respondents, making it the second most frequently identified barrier. This confirms that financial conditions and incentive mechanisms represent a central structural dimension of perceived constraint.

The data indicate that more than half of respondents associate limited engagement with lack of dedicated financial support, seed funding, innovation grants, or tangible reward structures. The prevalence of this barrier highlights the relevance of accessible funding pathways in facilitating early-stage valorisation activities.

5.6.3 Awareness and Training Limitations

Limited awareness or training opportunities were identified by 40.49% of respondents. This confirms that informational visibility and access to structured competence development remain relevant barriers.

The proportion indicates that approximately two out of five respondents perceive deficits in awareness or training provision. This aligns quantitatively with previously observed moderate awareness levels in the attitudinal section and confirms that informational constraints persist alongside structural ones.

5.6.4 Administrative and Bureaucratic Obstacles

Bureaucratic or administrative obstacles were selected by 43.56% of respondents. This reflects perceived procedural complexity within institutional environments.

Although the survey item does not disaggregate specific administrative mechanisms, the frequency of selection confirms that institutional procedures are experienced as an inhibiting factor by a substantial proportion of respondents. Administrative burden may also interact with time constraints, reinforcing cumulative effects.

5.6.5 Time Constraints and Competing Academic Priorities

The most frequently selected barrier (56.44%) concerns lack of time or competing academic priorities. This finding demonstrates that engagement in knowledge valorisation is perceived as structurally constrained by core academic obligations, including coursework, thesis preparation, research deliverables, and publication requirements.

Given that the target population consists of Bachelor's, Master's, and PhD students as well as Early Career Researchers, this result indicates that valorisation-related engagement competes directly with mandatory academic milestones. The data therefore confirm that temporal capacity constitutes an important limiting factor within the surveyed group.

5.6.6 Unclear Intellectual Property Regulations

Unclear intellectual property regulations were selected by 16.56% of respondents. While less frequently selected than other barriers, this dimension remains relevant for approximately one in six respondents.

The data confirm that regulatory clarity regarding IP management is not universally understood. Even at a lower percentage relative to other constraints, IP-related uncertainty represents a structural element of the overall barrier configuration.

5.6.7 Other Reported Barriers (Descriptive Analysis)

The "Other" category was selected by 7 respondents (4.29% of total respondents). Free-text entries include the following statements:

- Language barrier
- My research is ecological and not really commercialized
- Reliance on informal, personal contacts instead of clear formal channels; lack of clear guidance on who to contact with ideas or results
- The Master's programme feels disconnected from real research and practical application. Students often do not know what is expected from them, and neither side seems to clearly communicate needs and possibilities. A general sense of demotivation and lack of challenge also limits engagement in knowledge valorisation
- Communication gaps between international students and professors; lack of visibility of valorisation activities
- Not always clear which research results are marketable; researchers lack time; more structured pathways needed
- Feeling that my research topic is far from business-oriented issues

These responses can be grouped into the following thematic clusters:

- 1.** Communication and language barriers (language barrier; communication gaps; lack of visibility).
- 2.** Lack of formalised and structured pathways (reliance on informal contacts; unclear guidance; need for structured pathways).
- 3.** Perceived misalignment between research profile and commercialisation potential (ecological research not commercialised; research topic far from business orientation; uncertainty about marketability).
- 4.** Perceived disconnection between academic programmes and practical application (programme-level demotivation; unclear expectations).

Given the small number of selections (N = 7), these findings do not alter the overall quantitative distribution of barriers. However, they provide qualitative

nuance regarding specific micro-level constraints experienced by individual respondents.

5.6.8 Barriers synthesis

The distribution of responses indicates a **clear hierarchy of perceived barriers** within the surveyed group (Ns = 163; multiple selections allowed). The most frequently selected barrier is lack of time or competing academic priorities (92 respondents; 56.44%), followed by insufficient funding or incentives (87 respondents; 53.37%). Bureaucratic or administrative obstacles are selected by 71 respondents (43.56%), while limited awareness or training opportunities are reported by 66 respondents (40.49%). Lack of institutional support structures is indicated by 54 respondents (33.13%), and unclear intellectual property regulations by 27 respondents (16.56%). The "Other" category accounts for 7 respondents (4.29%).

The numerical distribution shows that more than half of respondents identify time constraints and funding limitations as limiting factors. Administrative complexity and awareness-related issues are reported by approximately four out of ten respondents. One third report insufficient institutional support structures, while IP-related uncertainty affects a smaller but still measurable proportion of respondents.

Given the multi-select format of the question, the percentages reflect overlapping selections and should not be interpreted as mutually exclusive categories. The results therefore indicate that perceived barriers are not isolated phenomena but coexist within the same group of respondents. The data show that constraints are distributed across temporal, financial, administrative, informational, and structural dimensions.

From a systemic perspective, the barrier configuration highlights that the most frequently reported constraints are embedded in core academic workload conditions and resource availability, while governance clarity and institutional structuring issues remain present at lower frequencies. The empirical distribution provides a quantitative basis for assessing the relative

weight of each constraint category within the surveyed group, without implying causal relationships or institutional differentiation.

5.7 Training Needs Assessment

The identification of training needs constitutes a central element of the survey, directly informing the **capacity-building logic of the BEAMING Alliance**. While previous sections examined awareness levels, support visibility, attitudes and perceived barriers, this section translates those findings into articulated demand for specific competence development areas.

Respondents were invited to select topics of interest across five thematic clusters aligned with the knowledge valorisation architecture addressed in Deliverable D8.1: (i) Management of Innovation; (ii) Technology Brokering and Transfer; (iii) Research Marketing and Communication; (iv) Business Plan Development and Entrepreneurship; and (v) Cross-cutting and Policy-Oriented Topics. Each cluster included multiple selectable subtopics.

The analysis below presents both topic-level selection frequencies and aggregate indicators reflecting the breadth of expressed demand.

5.7.1 Management of Innovation

The mean number of selections per respondent within this cluster is 2.28 (total selections: 371). Of the 163 respondents, 161 (98.77%) selected at least one topic within this cluster. The topic-level distribution is as follows (**Figure 22**):

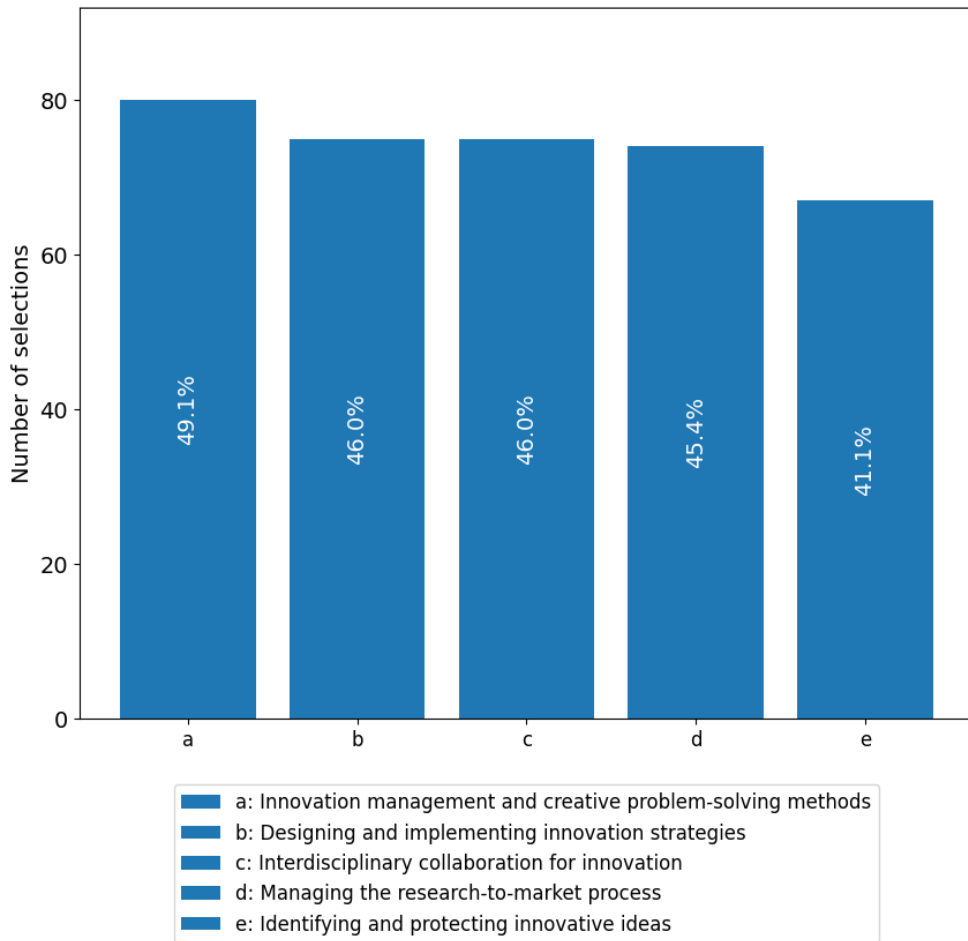


Figure 22. Management of Innovation

- Innovation management and creative problem-solving: **80** (49.08%)
- Managing the research-to-market process: **74** (45.40%)
- Designing and implementing innovation strategies within academic environments: **75** (46.01%)
- Identifying & protecting innovative ideas (discovery to application): **67** (41.10%)
- Interdisciplinary collaboration for innovation: **75** (46.01%)

The highest selection within this cluster concerns Innovation management and creative problem-solving methods (80 respondents; 49.08%). The next highest selections are Designing and implementing innovation strategies within academic environments (75; 46.01%) and other items clustered within a comparable frequency band.

The distribution shows that interest is spread across process-oriented and strategy-oriented components of innovation practice. Items related to managing translation pathways and interdisciplinary collaboration attract selection levels close to the cluster maximum, while other items register lower but still measurable selection levels. The internal ordering provides a quantitative profile of which innovation-management competences are most frequently prioritised by respondents.

5.7.2 Technology Brokering and Transfer

The mean number of selections per respondent within this cluster is 1.89 (total selections: 308). A total of 156 respondents (95.71%) selected at least one topic within this cluster. The topic-level distribution is depicted in **Figure 23**:

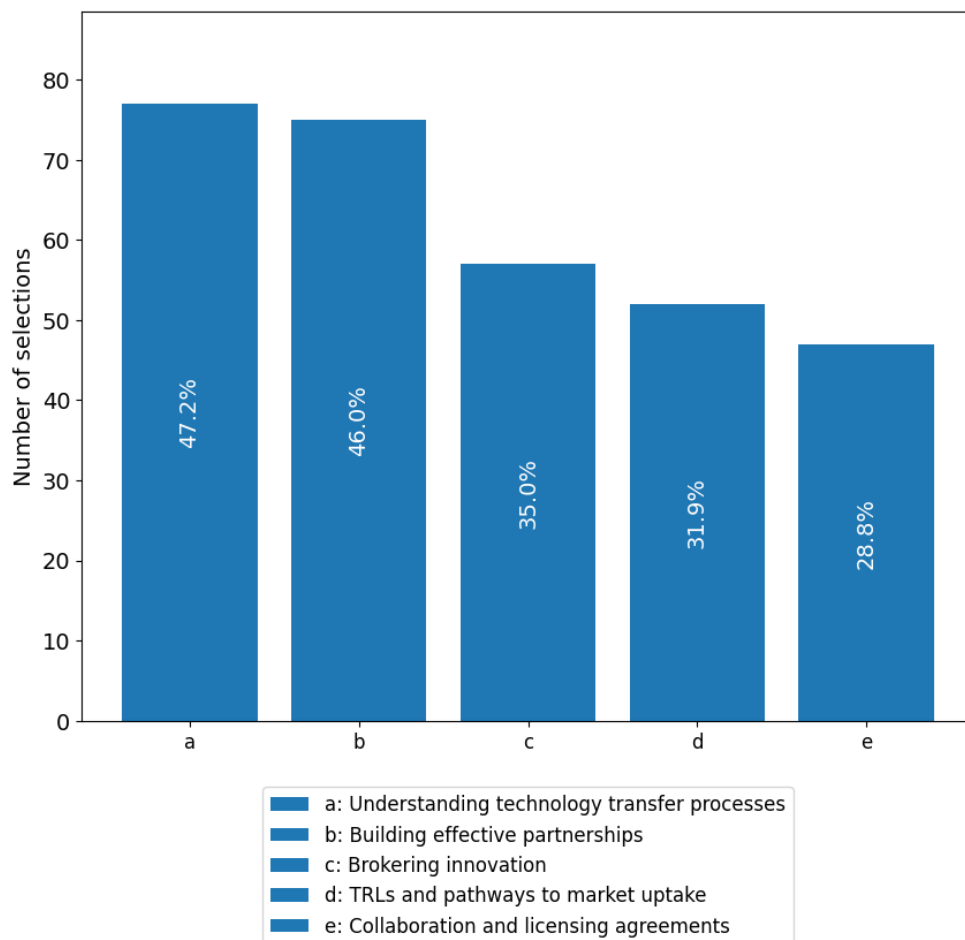


Figure 23. Technology Brokering and Transfer

- Understanding technology transfer and stakeholder roles: **77** (47.24%)
- Building effective partnerships with industry and SMEs: **75** (46.01%)
- Negotiating collaboration and licensing agreements: **47** (28.83%)
- TRLs and pathways to market uptake: **52** (31.90%)
- Brokering innovation between academia, public institutions, and private sector actors: **57** (34.97%)

The most frequently selected topic in this cluster is Understanding technology transfer processes and stakeholder roles (77; 47.24%). The second-ranked item is Building effective partnerships with industry and SMEs (75; 46.01%).

The topic ordering indicates that relational and process-understanding elements of technology transfer (partnership building and understanding transfer processes) are selected more frequently than items positioned closer to formal negotiation or brokering functions. Lower selection values for negotiation- and brokering-labelled items are recorded in the same question block and therefore remain part of the expressed training demand, albeit at reduced frequency relative to the top-ranked topics.

5.7.3 Research Marketing and Communication

The mean number of selections per respondent within this cluster is 2.17 (total selections: 354). A total of 157 respondents (96.32%) selected at least one topic within this cluster. De topic-level distribution is depicted in **Figure 24**:

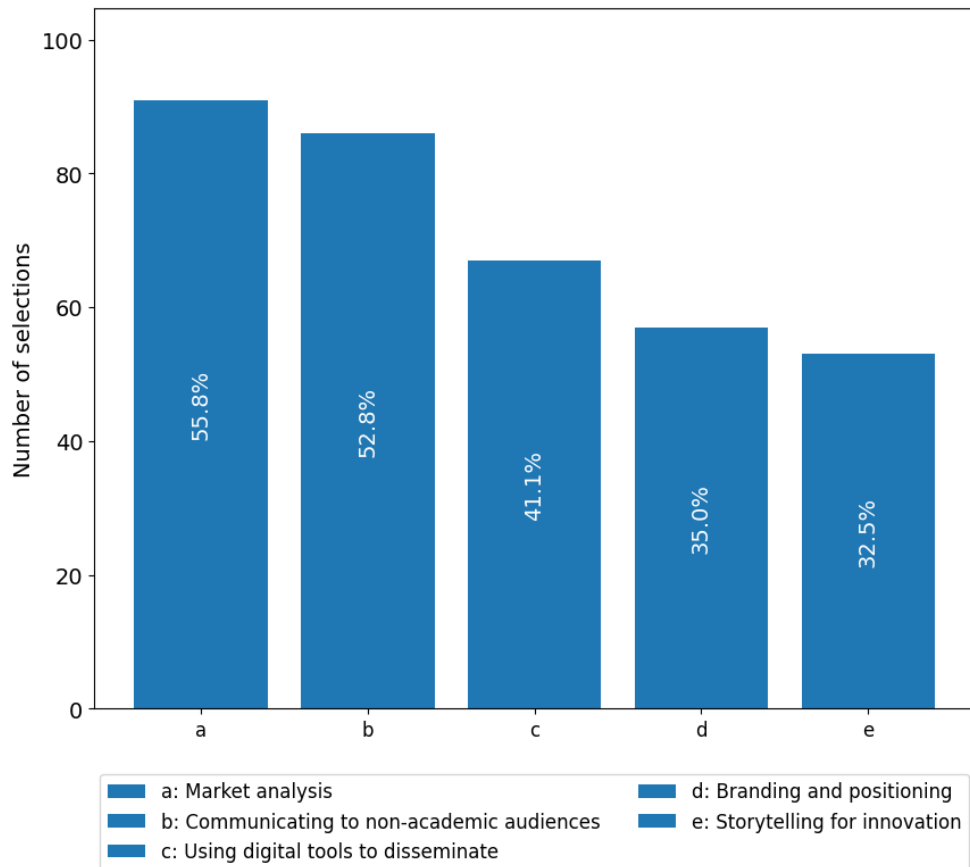


Figure 24. Research Marketing and Communication

- Communicating research results to non-academic audiences: **86** (52.76%)
- Market analysis and identifying potential users of research outcomes: **91** (55.83%)
- Branding & positioning research results or institutional competencies: **57** (34.97%)
- Storytelling for innovation and science-to-society communication: **53** (32.52%)
- Using digital tools & platforms for disseminating innovation outcomes: **67** (41.10%)

The highest selection in this cluster is Market analysis and identifying potential users of research outcomes (91; 55.83%). The next highest topics include Communicating research results to non-academic audiences (86; 52.76%) and Using digital tools and platforms for disseminating innovation outcomes (67; 41.10%).

The distribution reflects strong attention to outward-facing communication and dissemination capabilities. A substantial share of respondents selects topics related to communication with non-academic audiences and the use

of digital dissemination tools, while market- and branding-oriented topics register lower selection levels within the same cluster. The relative differences across items provide a quantitative gradient between audience communication competences and more formal market-positioning competences.

5.7.4 Business Plan Development and Entrepreneurship

The mean number of selections per respondent within this cluster is 2.26 (total selections: 369). A total of 153 respondents (93.87%) selected at least one topic within this cluster. Topic-level distribution is depicted in **Figure 25**:

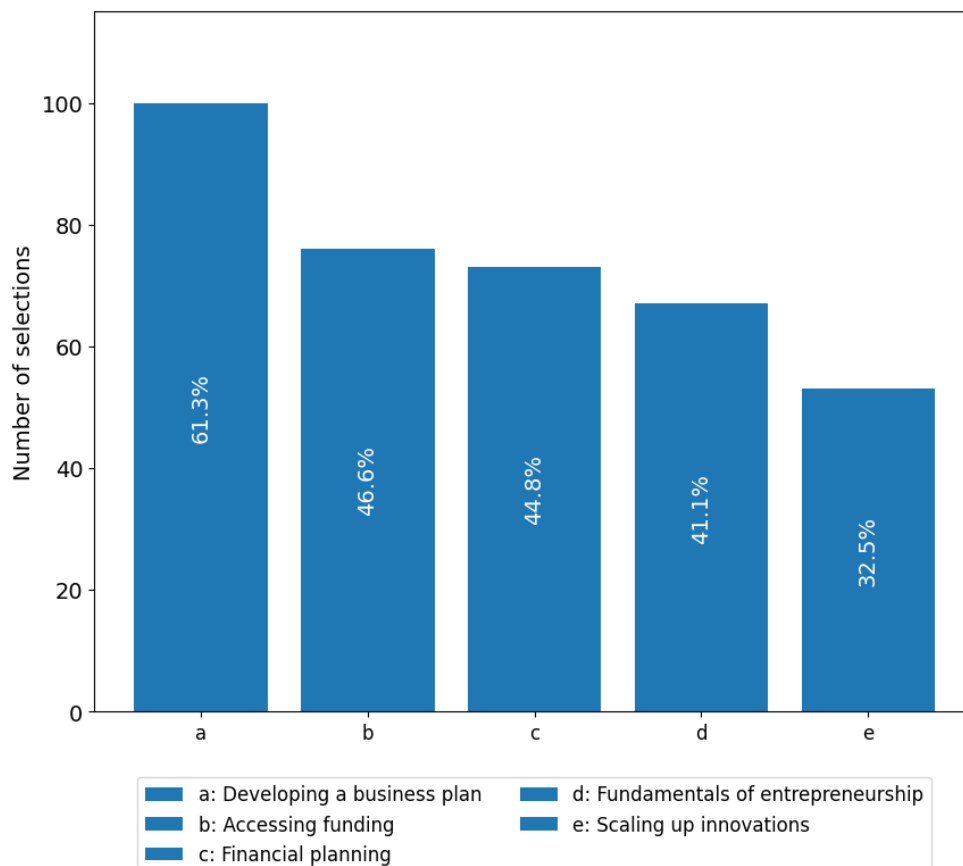


Figure 25. Business Plan Development and Entrepreneurship

- Developing a business plan based on a research idea: **100** (61.35%)
- Fundamentals of entrepreneurship and start-up creation: **67** (41.10%)
- Financial planning, revenue models, and investment readiness: **73** (44.79%)
- Accessing funding for innovation and valorisation (EU programmes, venture capital, angel investors, etc.): **76** (46.63%)
- Scaling up innovations and sustaining spin-off growth: **53** (32.52%)

The most frequently selected topic is Developing a business plan based on a research idea (100; 61.35%). The remaining items in this cluster form a descending distribution across business-plan development, funding access, financial planning and scaling dimensions.

The ordering documents that foundational entrepreneurship topics and early-stage venture design elements are selected at higher levels than later-stage scaling topics. Within the same cluster, the presence of selections across all subtopics indicates that respondents articulate demand spanning both entry-level entrepreneurship competences and more advanced operational dimensions.

5.7.5 Cross-cutting and Policy-Oriented Topics

The mean number of selections per respondent within this cluster is 2.05 (total selections: 334). A total of 152 respondents (93.25%) selected at least one topic within this cluster.

- Intellectual property management and patenting strategies: **70** (42.94%)
- Data management, open science, responsible research practices: **80** (49.08%)
- Measuring and demonstrating societal impact of research: **67** (41.10%)
- Policy engagement, contribution to evidence-based decision-making: **51** (31.29%)
- Ethical and sustainable innovation (ESG principles, SDGs alignment): **61** (37.42%)

The "Other" option is selected by 4 respondents (2.45%) (**Figure 26**).

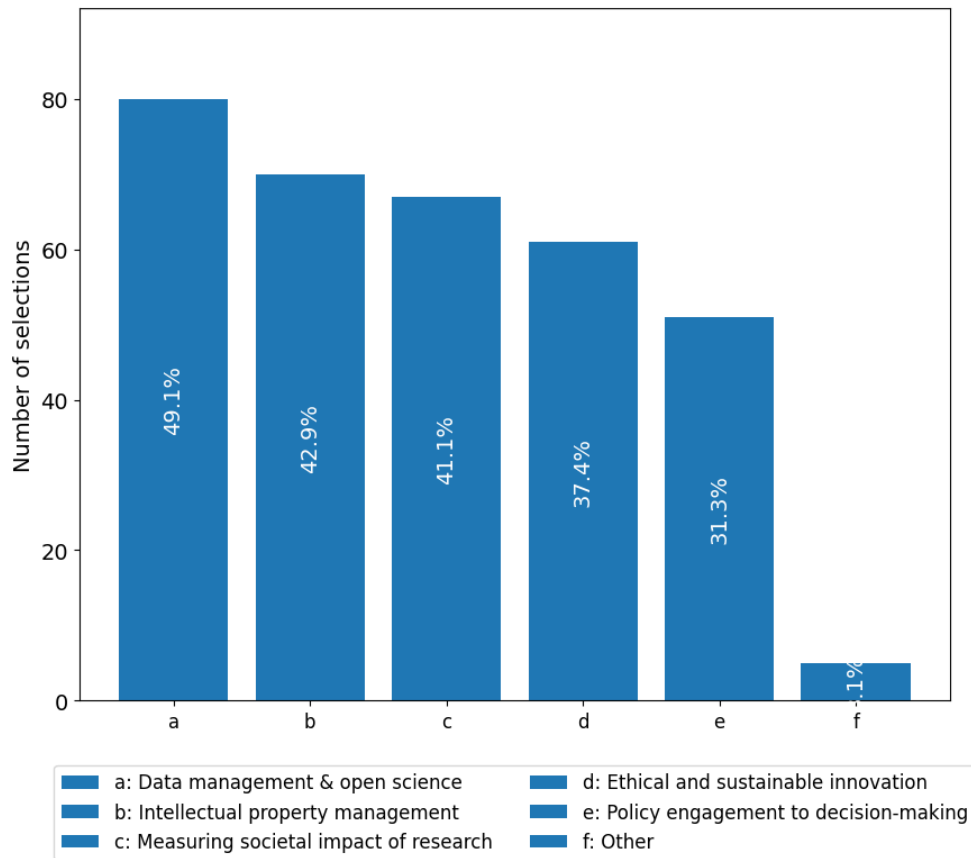


Figure 26. Cross-cutting and Policy-Oriented Topics

The free-text responses refer to:

- clearer communication about existing support structures and successful cases
- introductory and foundational training on knowledge valorisation
- practical linkage between study programmes and real company projects
- structured guidance on institutional options and pathways
- one response indicating that none of the predefined options was suitable

The inputs indicate demand for improved visibility of existing mechanisms, foundational orientation to knowledge valorisation concepts, and clearer operational pathways connecting academic activities with applied contexts. These responses complement the predefined training categories by emphasising communication clarity and structured entry-level guidance.

Within this cluster, the highest selection is Data management, open science, and responsible research practices (80; 49.08%).

Additional items related to intellectual property management, responsible research practices, and evidence-to-policy themes are selected at lower but measurable levels.

The distribution documents that respondents select both impact-oriented and governance-oriented themes.

Items linked to impact measurement and IP management register among the higher selection values, while policy engagement and ethics/sustainability topics appear at lower frequencies within the same block.

5.7.6 Aggregate Demand Patterns

Across questions for training needs, the total number of topic selections is 1736. This corresponds to an average of 10.65 selected topics per respondent (Ns = 163). In the survey instrument, respondents were allowed to select multiple training topics within each thematic cluster. The questionnaire did not impose a numerical limit on the number of selections, and respondents were not asked to rank or prioritise topics. Consequently, the number of topic selections reflects the breadth of perceived training interest and not a prioritised ranking of demand intensity. A total of 161 respondents (98.77%) selected at least one topic across these training-need clusters.

At the cluster level, mean selections per respondent are as follows:

- Management of Innovation: **2.28**
- Technology Brokering and Transfer: **1.89**
- Research Marketing and Communication: **2.17**
- Business Plan Development and Entrepreneurship: **2.26**
- Cross-cutting and Policy-Oriented Topics: **2.05**

These aggregates document broad engagement with the training-need inventory across clusters, with mean selections per respondent in a similar range across the five thematic blocks.

The distribution across items within each cluster provides a ranked view of the most frequently selected topics, while the cluster-level means capture breadth of demand within each thematic block.

At the topic level selections the ranking can be seen in the **Figure 27**.

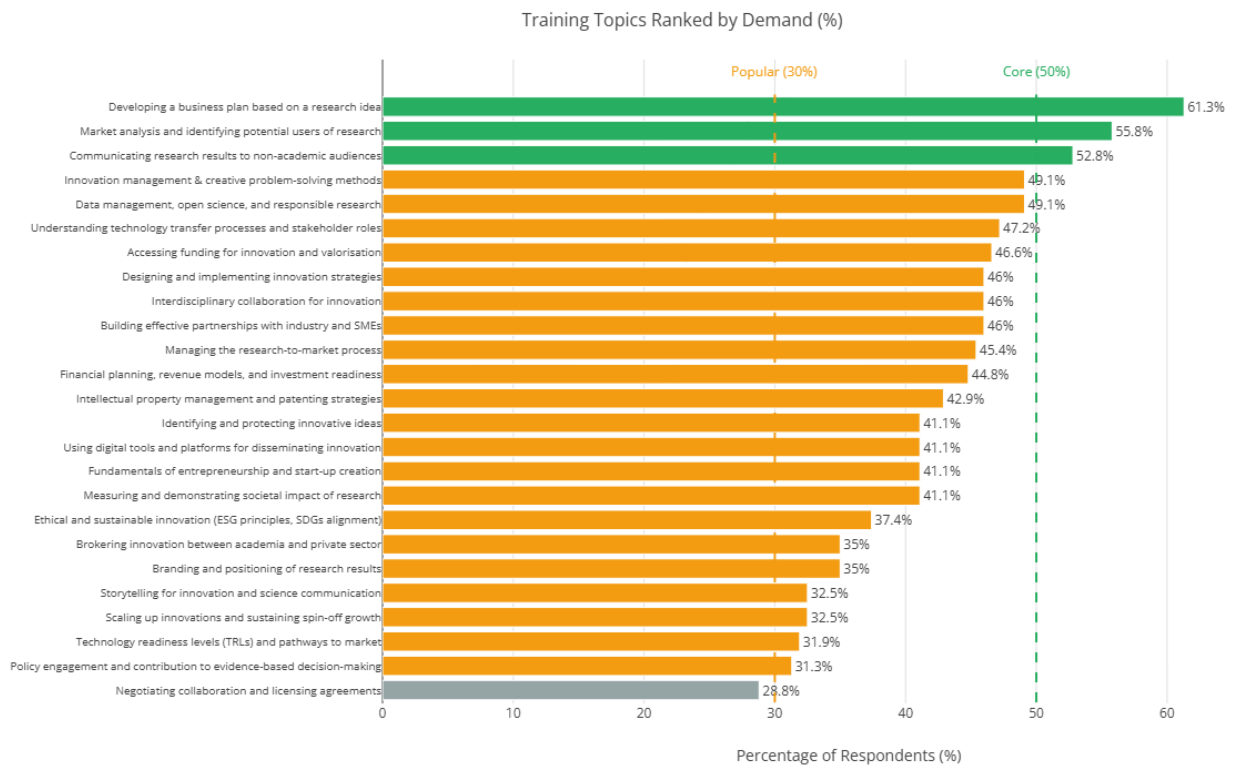


Figure 27. Training topics ranking

5.8 Qualitative Insights from Open Responses

In addition to structured quantitative items, the survey included open-response fields linked to the "Other" categories in disciplinary background, perceived barriers, and cross-cutting training topics. The survey also included an open-ended question on additional forms of support, training, or

resources. These qualitative inputs provide contextual detail on how respondents expressed needs beyond predefined response options.

Across the dataset, "Other" selections with free-text entries were recorded in these areas:

- Disciplinary field: 20 cases (12.27%)
- Barriers to knowledge valorisation: 7 cases (4.29%), with 7 text entries
- Cross-cutting training topics: 5 cases (3.07%), with 5 text entries

The open-ended question on additional support contains 46 non-empty entries. After exclusion of invalid or non-informative entries, 37 responses are retained for qualitative analysis.

5.8.1 Disciplinary Specification Beyond Predefined Categories

20 respondents selected "Other" when identifying their disciplinary field (12.27% of $N_s = 163$). The corresponding free-text entries include the following labels:

- Business and Management (4)
- Security (2)
- Journalism digital production
- Digital Production
- Teacher
- Economics
- Childhood Education
- Agricultural science
- Field crop production
- Crop production
- Agricultural economics
- Meat Technology and Meat Processing
- Food technology
- Animal Sciences
- Statistics
- Socio-economic Innovation research

These entries indicate disciplinary labels not covered by the predefined categories (Life Sciences, Engineering and Technology, Environmental Sciences, Social Sciences, Humanities). The presence of business-oriented, security-oriented, education-related, agriculture-related, and methods-related labels is relevant for training design, as training uptake and perceived applicability can vary by disciplinary framing and by the typical valorisation pathways associated with different knowledge domains.

5.8.2 Additional Barriers Identified by Respondents

7 respondents selected "Other" in the barriers question (4.29% of Ns = 163) and provided the following free-text entries:

- Language barrier
- My research is ecological and not really commercialized
- Reliance on informal, personal contacts instead of clear formal channels; lack of clear guidance on who to contact with ideas or results.
- The Master's programme feels disconnected from real research and practical application. Students often do not know what is expected from them (e.g. portfolio), and neither side seems to clearly communicate needs and possibilities. A general sense of demotivation and lack of challenge also limits engagement in knowledge valorisation.
- Communication gaps between international students and professors; lack of visibility of valorisation activities
- Not always clear which research results are marketable; researchers lack time; more structured pathways needed
- Feeling that my research topic is far from business-oriented issues

The additional barrier entries refer to language and communication barriers, limited visibility of valorisation activities, reliance on informal contacts instead of formal channels, unclear points of contact for ideas or results, perceived distance between research topics and business-oriented applications, and perceived disconnection between study programmes and practical application contexts. These inputs add specificity to the barrier landscape by

describing concrete access and communication constraints alongside topic- and pathway-related concerns.

5.8.3 Additional Cross-cutting Training Needs

4 respondents selected "Other" within the cross-cutting training cluster (2.45% of Ns = 163) and provided the following free-text entries:

- Clearer communication about existing support structures, examples of successful cases, and how Master's students can practically connect their portfolio work to real company projects.
- Clear introductory training on what knowledge valorisation is, how it relates to our Master's studies, and how we as students can get involved in ongoing research projects. More transparent communication about existing programmes and expectations (e.g. portfolio), with realistic examples and guidance.
- Better internal communication about KV activities in the university.
- Foundational training on valorisation basics; micro-learning modules; overview of institutional KV options.

These entries emphasise communication and visibility of existing support structures, introductory orientation on knowledge valorisation concepts and institutional options, practical links between study activities and company-facing projects, and micro-learning formats for foundational topics.

5.8.4 Integrative Interpretation of Qualitative Inputs

The open-ended question captures additional forms of support, training, or resources that respondents consider relevant for knowledge valorisation.

Across the 37 responses considered in this section, recurring mentions include:

- industry/partners: 14 responses
- training/workshops: 11 responses
- mentoring/support: 11 responses
- innovation/entrepreneurship: 9 responses

- funding/resources: 7 responses
- IP/patents: 7 responses
- communication/visibility: 5 responses
- impact/policy: 5 responses
- platforms/portals: 3 responses

The 37 valid responses to the open-ended question provide more granular insight into how respondents conceptualise effective support for knowledge valorisation.

Another theme concerns structured interaction with external stakeholders. Fourteen responses contain explicit references to collaboration with industry, companies, SMEs, government bodies, NGOs, or broader stakeholder environments. These entries refer to matchmaking events, brokerage mechanisms, networking platforms, and clearer pathways for connecting research outcomes with external partners. The emphasis is placed not only on contact opportunities, but on organised and institutionally supported interfaces that reduce reliance on informal personal networks.

Training-related requests are also prominent. Eleven responses explicitly mention workshops, courses, modules, or structured training formats. These references frequently highlight the need for practical and applied learning formats. In several entries, respondents request step-by-step guidance on how to move from research output to application, indicating demand for operational clarity in translational processes.

An equally high number of responses (eleven) refer to mentoring, supervision, or expert guidance. These statements indicate that respondents value personalised support mechanisms alongside formal training provision. Mentoring is described in relation to methodological advice, business idea evaluation, project development, and navigation of institutional procedures. The recurrence of such references suggests that respondents associate effective valorisation not only with formal programmes but also with access to experienced intermediaries.

Nine responses explicitly refer to entrepreneurship, business development, start-up creation, market orientation, or spin-off processes. These entries align with the quantitative findings in Section 5.7, where entrepreneurship-related topics register high selection levels. The open-ended responses provide additional contextualisation by highlighting uncertainty regarding how to assess market potential and how to initiate early-stage venture development.

Seven responses refer to funding, grants, seed resources, or financial support mechanisms. These statements indicate that respondents perceive access to financial instruments as a practical enabling condition for valorisation. In some cases, funding is linked directly to feasibility testing, prototyping, or proof-of-concept development.

Seven responses include references to intellectual property, patents, or licensing, indicating demand for clearer guidance on IP management processes. These entries reinforce the relevance of IP-related training and procedural clarity identified in earlier survey sections.

Communication and visibility are referenced in five responses. These entries refer to clearer information about existing programmes, improved internal communication about valorisation activities, and better dissemination of successful cases. The qualitative inputs indicate that awareness gaps are not limited to conceptual understanding but extend to visibility of institutional opportunities.

Five responses include references to societal impact, governance, policy engagement, or broader non-commercial value dimensions. In these entries, respondents articulate an understanding of knowledge valorisation that extends beyond commercialisation and includes public value, participatory governance, and societal transformation.

Three responses explicitly mention online platforms, portals, or digital interfaces as mechanisms for sharing research outcomes and facilitating collaboration. These references indicate interest in accessible digital infrastructures supporting interaction and dissemination.

Taken together, the open-ended responses demonstrate that respondents articulate training and support needs across multiple operational dimensions: structured stakeholder engagement, applied training formats, mentoring and guidance, funding access, IP clarity, communication visibility, and impact orientation. The qualitative data add contextual depth to the quantitative distributions presented in Section 5.6 by illustrating how respondents describe practical barriers and enabling mechanisms in their own terms.

5.8.5 Integrative Interpretation of Qualitative Inputs

The qualitative inputs extend the quantitative findings by clarifying how respondents interpret knowledge valorisation in operational terms. They document (i) disciplinary positioning beyond predefined categories, (ii) additional barriers related to communication clarity, formal access channels, and perceived applicability of research topics, and (iii) articulated training and support needs that combine stakeholder engagement, structured learning formats, mentoring, funding access, and IP guidance.

The open-ended responses demonstrate that respondents frame effective knowledge valorisation support as a combination of institutional visibility, structured interaction mechanisms with external actors, applied training delivery, and personalised guidance. Requests for matchmaking formats, digital interfaces, foundational orientation modules, and clearer procedural pathways indicate that respondents prioritise practical navigability of the valorisation ecosystem.

In aggregate, the qualitative evidence reinforces the quantitative pattern observed in Sections 5.6 and 5.7: interest in engagement is accompanied by articulated needs for structured interfaces, capacity-building formats, and enabling resources. The open responses therefore contribute to a more granular understanding of how respondents expect institutional knowledge valorisation mechanisms to function in practice, complementing the barrier and training demand distributions documented earlier.

5.9 Contribution to Gap Analysis and Roadmap Development

The survey findings provide a quantitative evidence base for subsequent analytical integration within Deliverable D8.1. The purpose of this section is not to replicate the detailed synthesis performed in the dedicated chapters on Gap Analysis and Roadmap Development, but to specify the principal analytical dimensions emerging from the survey that will be integrated with interview evidence and institutional mapping.

The survey captures perceptions and self-reported experiences of knowledge valorisation among Bachelor's students, Master's students, doctoral candidates, and Early Career Researchers. The survey evidence therefore constitutes a demand-side and behavioural perspective that complements institutional mapping of policies, procedures and structures.

Across the survey, the evidence supports a gap-oriented interpretation along these interrelated axes: conceptual awareness, structural visibility of support mechanisms, and competence-related readiness for engagement. These axes are analytically connected and should be read as interacting dimensions.

5.9.1 Conceptual Awareness and Internalisation of Knowledge Valorisation

The survey documents uneven awareness of knowledge valorisation opportunities within institutions.

On the 0 to 5 scale, awareness of knowledge valorisation opportunities records a mean of 2.75 and a median of 3. A total of 38.65% of respondents are in the low-awareness band (0 to 2), 30.06% select the midpoint (3), and 31.29% are in the high-awareness band (4 to 5). Taken together, 68.71% of respondents are positioned at or below the midpoint of the scale.

In the barrier assessment, limited awareness or training opportunities are selected by 66 respondents, corresponding to 40.49% of total respondents. This barrier distribution is consistent with the awareness pattern,

documenting that awareness and training visibility are salient constraints for a substantial share of respondents.

From a gap-oriented perspective, these distributions indicate that conceptual internalisation of knowledge valorisation and recognition of available opportunities are not uniformly embedded across the respondent group. The survey does not determine whether this reflects insufficient communication, limited engagement formats or uneven exposure across contexts. It provides a structured baseline on the distribution of awareness within the surveyed population.

5.9.2 Structural Visibility and Accessibility of Support Mechanisms

The survey includes a perception-based assessment of seven institutional support mechanisms relevant to knowledge valorisation, each coded as Yes, No, or Don't know. The distribution of Don't know responses provides a direct indicator of visibility and recognition among respondents.

The highest perceived availability is reported for external engagement and collaboration mechanisms:

- Opportunities to collaborate with industry: Yes 76.69%; No 5.52%; Don't know 17.79%.
- Participation in international activities, networks, or exchanges related to knowledge valorisation: Yes 73.01%; No 4.29%; Don't know 22.70%.
- Mobility or exchange programmes focused on innovation: Yes 62.58%; No 6.13%; Don't know 31.29%.

Entrepreneurship and innovation courses are reported as available by 58.28% of respondents, with 17.18% reporting No and 24.54% selecting Don't know.

Documented success stories or visible examples of technology transfer, spin-offs, or industry collaboration are reported by 53.99% of respondents, while 9.82% report No and 36.20% select Don't know.

In contrast, the two mechanisms most directly linked to intellectual property management and venture creation display lower affirmative recognition and higher uncertainty:

- Guidance on intellectual property and patents: Yes 42.33%; No 13.50%; Don't know 44.17%.
- Support for creating start-ups or spin-offs: Yes 37.42%; No 18.40%; Don't know 44.17%.

Across all items, explicit No responses remain comparatively low relative to the frequency of Don't know responses in several domains. The survey captures perceived availability and awareness among researchers. In analytical terms, this distinction between existence and recognition is relevant for gap identification: visibility and accessibility can represent cross-cutting issues even when structures are formally present.

5.9.3 Competence Gaps and Confidence in Application Pathways

The survey assesses five attitudinal and experience indicators on a 0 to 5 scale. Taken together, they provide a behavioural profile relevant for interpreting competence-related readiness to engage in knowledge valorisation activities.

Awareness of opportunities is centred near the midpoint (mean 2.75; median 3), with 38.65% in the low band and 31.29% in the high band.

The perceived usefulness of prior innovation or entrepreneurship training records a mean of 2.64 and a median of 3. A total of 45.01% of respondents fall in the low-usefulness band (0 to 2), 22.50% select the midpoint (3), and 32.50% are in the high band (4 to 5).

Supervisor or mentor encouragement shows a more positive distribution. The mean is 3.37 and the median is 4. A total of 52.80% of respondents are in the high-encouragement band (4 to 5), 20.50% select the midpoint (3), and 26.70% fall in the low band (0 to 2).

Confidence in developing a business idea from research records a mean of 2.70 and a median of 3. A total of 43.76% of respondents fall in the low-confidence band (0 to 2), 24.38% select the midpoint (3), and 31.88% fall in the high band (4 to 5).

Interest in participating in future training, workshops or mobility related to knowledge valorisation records the highest mean among the five indicators, at 3.91, with a median of 4. A total of 72.40% of respondents fall in the high-interest band (4 to 5), 15.34% select the midpoint (3), and 12.26% fall in the low band (0 to 2).

This configuration documents strong expressed interest in future engagement alongside moderate awareness and moderate confidence levels. The survey evidence therefore supports the identification of competence-related readiness issues in relation to application pathways, while also documenting substantial demand-side potential for structured engagement.

5.9.4 Cumulative Barrier Configuration

The barrier assessment is multi-select. Percentages are calculated against total respondents (Ns = 163). The distribution documents a hierarchy of perceived constraints.

The most frequently selected barrier is lack of time or competing academic priorities, selected by 92 respondents (56.44%). The second most frequently selected barrier is insufficient funding or incentives, selected by 87 respondents (53.37%). Bureaucratic or administrative obstacles are selected by 71 respondents (43.56%), while limited awareness or training opportunities are selected by 66 respondents (40.49%). Lack of institutional support structures is selected by 54 respondents (33.13%), and unclear intellectual property regulations by 27 respondents (16.56%). The Other category is selected by 7 respondents (4.29%).

The multi-select format implies that these categories overlap. The distribution therefore documents coexistence of constraints across temporal, financial, administrative, informational and structural dimensions.

The free-text entries under Other provide descriptive nuance and include language and communication barriers, reliance on informal personal contacts instead of clear formal channels, lack of clear guidance on points of contact, perceived disconnection between study programmes and practical application, perceived uncertainty about which results are marketable, and perceived distance between research topics and business-oriented issues. These entries are descriptive and do not alter the quantitative distribution.

5.9.5 Strategic Orientation for Roadmap Development

The survey provides a quantitative baseline that can be complemented by institutional mapping and interview evidence. The profile documented by the survey includes:

- moderate and uneven awareness of knowledge valorisation opportunities (mean 2.75; median 3; 38.65% low band);
- heterogeneous visibility of institutional support mechanisms, including high uncertainty for IP and patent guidance and start-up or spin-off support (Don't know 44.17% for both items);
- moderate self-assessed confidence in developing a business idea from research (mean 2.70; median 3; 43.76% low band);
- high expressed interest in future participation (mean 3.91; median 4; 72.40% high band);
- cumulative barriers dominated by time constraints (56.44%) and funding or incentive limitations (53.37%);
- broad articulated training demand across thematic clusters aligned to innovation management, technology transfer, research communication, entrepreneurship and cross-cutting topics.

These distributions define a demand-side and behavioural baseline that informs, but does not substitute, the dedicated analytical integration undertaken in the Gap Analysis and Roadmap Development chapters.

5.10 Limitations

While the survey provides structured and quantitatively robust insight into perceptions of knowledge valorisation among students and Early Career Researchers within the BEAMING alliance, several limitations define the interpretative scope of the findings.

5.10.1 Perception-Based Measurement

Respondents assess awareness, availability of support mechanisms, perceived usefulness of training and experienced barriers based on individual exposure and interpretation, so the findings reflect perceived accessibility and engagement conditions.

This distinction is analytically important. A support mechanism may exist formally yet remain insufficiently visible to respondents. Conversely, high awareness does not necessarily imply operational effectiveness. The survey provides a behavioural and experiential layer of evidence that complements institutional mapping and qualitative analysis conducted elsewhere in Deliverable D8.1.

5.10.2 Cross-Sectional Design

The dataset represents a cross-sectional snapshot collected at a specific moment in time. Knowledge valorisation awareness and engagement are dynamic phenomena influenced by institutional reforms, project initiatives and evolving policy environments. The survey does not capture temporal change or longitudinal progression.

The findings are therefore interpretable as a baseline assessment. Evaluation of roadmap implementation and institutional evolution would require follow-up data collection to assess changes in awareness, confidence and perceived barriers over time.

5.10.3 Self-Selection of Respondents

Participation was voluntary and disseminated through institutional communication channels across partner institutions. The dataset therefore reflects a self-selected group of participants. Individuals with particular interest in innovation or with stronger views regarding institutional support may have been more inclined to respond.

Although the distribution across career stages and disciplines demonstrates thematic relevance and diversity, the findings capture indicative patterns of awareness, perceived barriers and training demand across the alliance.

5.10.4 Limited Depth of Qualitative Exploration

Although the survey included open-response fields, the primary design is quantitative. Qualitative inputs provide contextual nuance but do not support comprehensive thematic coding or in-depth narrative analysis of individual experiences. Richer qualitative exploration is addressed through the institutional interview component integrated elsewhere in Deliverable D8.1.

The survey provides essential empirical grounding for subsequent analytical integration while remaining complementary to institutional mapping and qualitative evidence.

5.11 Survey Conclusion

The survey provides a **structured quantitative assessment** of knowledge valorisation awareness, perceived institutional support, attitudinal readiness, experienced barriers and articulated training needs among students and Early Career Researchers within the BEAMING alliance. Embedded within Task 8.2 and the broader architecture of Deliverable D8.1, it contributes a behavioural and demand-side perspective that complements institutional mapping and interview-based inquiry.

Together, the survey findings establish an empirical baseline – characterised by uneven awareness, differentiated visibility of institutional support, and

strong demand for training - that provides both a quantitative and behavioural foundation informing the subsequent Gap Analysis and Roadmap Development chapters.

6 Gap Analysis

6.1 Analytical positioning and evidence base

This gap analysis consolidates empirical evidence generated through two complementary data streams:

- Survey evidence (Ns = 163) capturing perceptions, experiences, barriers and articulated training demand among students and early career researchers.
- Institution-level interview evidence (Ni = 12 institutional contexts) coded through a structured thematic framework and summarised through a code × institution matrix.

Table 7. Evidence sources supporting identified gap domains

Gap domain	Evidence from survey	Evidence from interviews	Sections
Visibility of institutional support	High proportion of “Don’t know” responses regarding IP guidance and start-up support	Institutional mechanisms reported but not always communicated to researchers	5.4; 4.3
Incentive alignment	Moderate interest in valorisation but uneven supervisor encouragement	References to publication-oriented evaluation systems	5.5; 4.6
Administrative and regulatory complexity	Perceived barriers related to funding access and procedures	References to regulatory and administrative constraints	5.6; 4.5
Skills and competence gaps	High training demand across innovation, transfer and entrepreneurship topics	Institutional references to limited researcher experience and competence needs	5.7; 4.5
Ecosystem and collaboration interfaces	Interest in industry engagement	Institutional emphasis on partnership structures and ecosystem constraints	5.4; 4.5

Gaps are identified as patterns observed across the dataset, based on the relationship between reported structural elements and perceived

accessibility, awareness, or usability. Observed differences are interpreted as indicative configurations that inform structured reflection and capacity development pathways.

6.2 Conceptual and visibility gaps

6.2.1 Visibility gaps across institutional support mechanisms

Across survey items, uncertainty regarding the existence of specific support mechanisms is uneven across domains. The distribution of "Don't know" responses documents differentiated visibility and recognition among respondents.

Two mechanisms most directly linked to intellectual property management and venture creation show the highest uncertainty:

- Guidance on intellectual property and patents: Yes 42.33%; No 13.50%; Don't know 44.17%.
- Support for creating start-ups or spin-offs: Yes 37.42%; No 18.40%; Don't know 44.17%.

Several other mechanisms show lower uncertainty and higher affirmative recognition:

- Mobility or exchange programmes focused on innovation: Yes 62.58%; No 6.13%; Don't know 31.29%.
- Documented success stories or visible examples of technology transfer, spin-offs, or industry collaboration: Yes 53.99%; No 9.82%; Don't know 36.20%.
- Access to entrepreneurship or innovation courses: Yes 58.28%; No 17.18%; Don't know 24.54%.

The survey documents perceived availability and awareness among research performers. It does not provide objective verification of whether a mechanism exists formally. For gap identification, the distinction between existence and recognition remains relevant: visibility and accessibility can represent cross-cutting issues even when structures are formally present.

The interview-based structural mapping confirms that institutional arrangements are present across all major domains (**Figure 3**). However, structural degree of articulation varies between domains. At the same time, barrier prevalence remains high in specific areas (**Figure 4**).

6.2.2 Limited opportunity awareness

Self-assessed awareness of knowledge valorisation opportunities is centred near the midpoint of the 0 to 5 scale (mean 2.75; median 3). A total of 38.65% of respondents fall in the low band (0 to 2) while 31.29% fall in the high band (4 to 5).

This pattern is consistent with the barrier profile, where limited awareness or training opportunities are selected by 40.49% of respondents. In the survey dataset, awareness-related constraints coexist with time, funding and administrative barriers, indicating that informational limitations form part of a broader configuration of constraints.

6.2.3 Structural baseline vs. end-user visibility

Interview evidence indicates that knowledge valorisation is institutionally recognised and structurally supported across contexts, with frequent references to operational mechanisms such as intellectual property management procedures, transfer or commercialisation units, and external collaboration pathways.

In contrast, survey results show that user-facing recognition of some support components is uneven, particularly for IP guidance and start-up or spin-off support, where "Don't know" responses reach 44.17%.

The triangulated evidence therefore indicates a structural-to-user translation gap: institutional articulation of support structures does not consistently translate into end-user recognition, navigation clarity, or perceived accessibility for all mechanism types.

6.3 Competence and readiness gaps

6.3.1 Confidence gap relative to engagement interest

A readiness asymmetry emerges when comparing confidence and interest indicators.

- Confidence in developing a business idea from research: mean 2.70; median 3; 43.76% in the low band (0 to 2); 31.88% in the high band (4 to 5).
- Interest in participating in future training, workshops or mobility related to knowledge valorisation: mean 3.91; median 4; 72.40% in the high band (4 to 5); 12.26% in the low band (0 to 2).

This contrast documents substantial engagement potential combined with moderate confidence in translation capability, positioning the gap primarily in applied readiness.

6.3.2 Perceived usefulness of prior training

Perceived usefulness of previous innovation or entrepreneurship training records a mean of 2.64 and a median of 3. A total of 45.01% of respondents fall in the low-usefulness band (0 to 2), 22.50% select the midpoint (3), and 32.50% fall in the high band (4 to 5).

When considered alongside high future interest, this configuration indicates that prior training experience is not uniformly perceived as producing applied readiness or practical value at user level. The survey results remain perception-based and do not specify training formats or intensity.

6.3.3 Demand breadth and priority themes

Across training-need questions, the total number of topic selections is 1736. This corresponds to an average of 10.65 selected topics per respondent (Ns = 163). A total of 161 respondents (98.77%) selected at least one topic across the training-need clusters. High-frequency topics include:

- Developing a business plan based on a research idea: 100 (61.35%).
- Market analysis and identifying potential users of research outcomes: 91 (55.83%).
- Lack of time or competing academic priorities is the most frequently selected barrier (92 respondents; 56.44%), indicating that competence development needs are articulated under strong workload constraints.
- Innovation management and creative problem-solving methods: 80 (49.08%).
- Building effective partnerships with industry and SMEs: 75 (46.01%).
- Accessing funding for innovation and valorisation (EU programmes, venture capital, angel investors, etc.): 76 (46.63%).

The distribution indicates that competence needs span multiple dimensions, including innovation management, technology transfer process-understanding, research marketing and communication, business planning and funding access, and cross-cutting governance-oriented themes.

6.3.4 Capacity signals from institutional interviews

Interview analysis identifies that institutional perspectives frequently combine references to competence development needs with references to structural and procedural constraints. In several responses, references to incentive alignment are accompanied by mentions of initiatives aimed at fostering innovation-oriented attitudes among researchers.

Where constraints are emphasised, they are described as interacting with workload pressures, administrative complexity and resource limitations. Within this framing, competence development is positioned as a reinforcement mechanism that must operate alongside procedural streamlining and incentive coherence to support engagement.

6.4 Procedural and administrative gaps

6.4.1 Administrative complexity and cumulative constraints

Bureaucratic or administrative obstacles are selected by 71 respondents (43.56%), and lack of time or competing academic priorities by 92 respondents (56.44%).

The barrier distribution indicates that constraints are primarily associated with time availability, funding conditions, and administrative complexity, followed by awareness and structural support dimensions. Given the multi-select format of the barrier item, percentages reflect overlapping selections.

6.4.2 Institutional articulation of procedural constraints

Interview evidence reports a recurrent pattern of coexistence of support and constraint. Institutions that describe structured support mechanisms also refer to operational barriers such as administrative complexity, resource considerations and time pressures.

Interview material also indicates that administrative complexity is frequently associated with intentions to streamline procedures as part of future development priorities. This positions procedural friction as an operational integration issue.

6.5 Incentive and recognition gaps

6.5.1 Incentive constraints as a perceived barrier

Insufficient funding or incentives is selected by 87 respondents (53.37%). This indicates that more than half of respondents associate limited engagement with financial conditions and incentive mechanisms, including perceived lack of dedicated financial support pathways.

The survey item does not disaggregate incentive types; the evidence is therefore limited to the frequency of selection as a perceived barrier.

6.5.2 Recognition mechanisms and alignment signals

Interview analysis documents interaction between formal incentive mechanisms and institutional culture. Financial rewards, recognition systems and evaluation criteria are described as explicit governance instruments, while societal mission, leadership endorsement and collaborative orientation are described as cultural dimensions.

Where incentive misalignment is reported, it is described as coinciding with publication-focused evaluation systems or workload pressures. Accordingly, the gap is best interpreted as one of incentive coherence and alignment between recognition mechanisms, evaluation practice and engagement expectations.

6.6 Monitoring and impact evidence gaps

6.6.1 Measurement practices as structural baseline

Interview evidence indicates that measurement practices is reported across multiple institutional contexts, including quantitative indicators related to patents, spin-offs and collaboration agreements.

At the same time, the analysis reports variation in how monitoring functions are positioned. In some contexts, monitoring is described as informing resource allocation, policy revision and strategic review, while in others it is described primarily as a reporting function.

6.6.2 Governance integration of monitoring evidence

The interview analysis therefore indicates differentiated levels of integration between monitoring systems and governance processes. Measurement functions are broadly present but unevenly embedded within iterative policy and decision-making cycles.

This pattern constitutes a monitoring-to-decision integration gap: indicators are present, yet their systematic use in governance adaptation and decision support differs across institutional contexts.

6.7 External engagement and ecosystem gaps

6.7.1 Partnership mechanisms

Survey data report high perceived availability of opportunities to collaborate with industry (Yes 76.69%; No 5.52%; Don't know 17.79%).

Interview evidence indicates that external collaboration pathways are part of the structural baseline across institutional contexts.

The combined evidence therefore supports an accessibility and route-clarity gap that is narrower than a structural absence gap. While affirmative recognition is high, a non-trivial share of respondents still reports uncertainty, indicating that access routes and contact points may not be uniformly clear to all user groups.

6.7.2 International networks and exposure

Participation in international activities, networks, or exchanges related to knowledge valorisation is reported as available by 73.01% of respondents, with 4.29% reporting No and 22.70% selecting Don't know.

This distribution indicates comparatively high perceived availability alongside remaining uncertainty for a subset of respondents. Within the logic of gap identification, the relevant issue is not low availability in perception terms, but uneven recognition and navigation clarity.

6.7.3 Ecosystem limitations

Interview evidence indicates that institutional responses are situated within specific regulatory, regional and organisational environments. Ecosystem

limitations, funding conditions and governance frameworks are reported as contextual factors shaping institutional configurations.

The interview analysis does not quantify ecosystem constraints; it documents that external context can shape how engagement pathways are operationalised and prioritised.

6.8 Consolidated gap configuration

Across survey and interview evidence, six interrelated gap domains emerge:

Visibility and opportunity awareness gap

User-level perception data document uneven recognition of specific support mechanisms, with the highest uncertainty concentrated in IP guidance and start-up or spin-off support.

Competence and applied readiness gap

Confidence and usefulness distributions remain moderate relative to high future interest and broad training-topic demand, indicating an applied readiness asymmetry.

Procedural and administrative friction gap

User-level barriers highlight time constraints, funding conditions and administrative obstacles, while interview evidence reports coexistence of structured support and operational constraints, including intentions to streamline procedures.

Incentive coherence gap

Funding and incentives are frequently selected as barriers in the survey, while interview evidence describes interaction between formal recognition mechanisms, evaluation criteria and cultural orientation, including instances of incentive misalignment.

Monitoring-to-decision integration gap

Interview evidence reports that monitoring indicators are commonly present, yet their integration into governance cycles differs across contexts.

Engagement and ecosystem pathway gap

Survey data indicate high perceived availability of collaboration and international network opportunities, while a remaining share reports uncertainty; interview evidence indicates that external context shapes institutional configurations and engagement pathways.

As established in 4.9, the identified gaps reflect activation and integration asymmetries within institutionally embedded knowledge valorisation systems. The configuration provides an empirical basis for roadmap design focused on visibility enhancement, competence strengthening, procedural streamlining, incentive coherence, governance integration of monitoring evidence and strengthened pathway clarity for external engagement.

7 Roadmaps to Successful Implementation of Knowledge Valorisation Practices

7.1 Strategic Framing

The preceding gap analysis identified six interrelated domains requiring structured intervention: visibility and awareness, competence development, procedural efficiency, incentive coherence, monitoring-to-governance integration, and external engagement pathways.

The present roadmap translates these empirically grounded gaps into a set of evidence-informed orientations for strengthening knowledge valorisation practices across institutional contexts. It does not prescribe uniform organisational models or normative institutional solutions. Instead, it provides a structured set of possible development directions that can be adapted to differentiated institutional configurations while addressing recurring activation and integration asymmetries identified in both survey and interview evidence.

The roadmap measures presented in this chapter are directly derived from the empirically identified gap domains (Chapter 6), which are grounded in interview and survey evidence (Chapters 4 and 5). **Table 8** provides a structured mapping between roadmap orientations, identified gaps and supporting evidence.

Table 8 Mapping roadmap, gap and data

Roadmap Section (Cap. 7)	Key Measure / Orientation	Gap Addressed (Cap. 6)	Evidence Base (Ch. 4–5)
7.2 Enhancing Visibility and Opportunity Activation	Awareness campaigns, visibility platforms	6.2 Conceptual and visibility gaps	<i>Survey: limited awareness & high “don’t know” responses (Sec. 5.4); Interviews: structural presence vs. low user visibility</i>
7.3 Competence Development and Applied Readiness	Training modules, practical skill development	6.3 Competence and readiness gaps	<i>Survey: moderate confidence + high interest + strong training demand (Sec. 5.5, 5.7)</i>
7.4 Procedural Streamlining and Administrative Simplification	Workflow mapping, process simplification	6.4 Procedural and admin. gaps	<i>Survey: administrative barriers (Sec. 5.6); Interviews: procedural complexity</i>
7.5 Incentive Alignment and Recognition Mechanisms	Reform of incentives, recognition systems	6.5 Incentive and recognition gaps	<i>Survey: funding/incentives as major barrier (Sec. 5.6); Interviews: misalignment of academic incentives</i>
7.6 Strengthening Monitoring and Governance Integration	Indicator harmonisation, feedback loops	6.6 Monitoring and impact evidence gaps	<i>Interviews: monitoring exists but uneven governance integration (Sec. 4.7)</i>
7.7 Strengthening External Engagement and Ecosystem Interfaces	Partnership facilitation, ecosystem mapping	6.7 External engagement and ecosystem gaps	<i>Survey: high collaboration availability but residual uncertainty (Sec. 5.4); Interviews: ecosystem dependence</i>
7.8 Phased Implementation Logic	Sequencing: visibility → competence → governance	Cross-cutting (all gaps)	<i>Combined evidence: awareness + competence gaps precede governance integration</i>
7.9 Convergence Through Structured Peer Exchange	Peer learning, exchange of practices	Cross-cutting structural variation	<i>Interviews: differentiated institutional configurations (Sec. 4.x)</i>
7.10 Consolidated Roadmap Orientation	Integrated strategic framework	6.8 Consolidated gap configuration	<i>Synthesis of all empirical components</i>

Figure 28 provides an overview of the analytical linkage between evidence, gap domains and roadmap measures. **Table 8** complements this representation by providing a detailed mapping between individual roadmap components and their empirical basis.

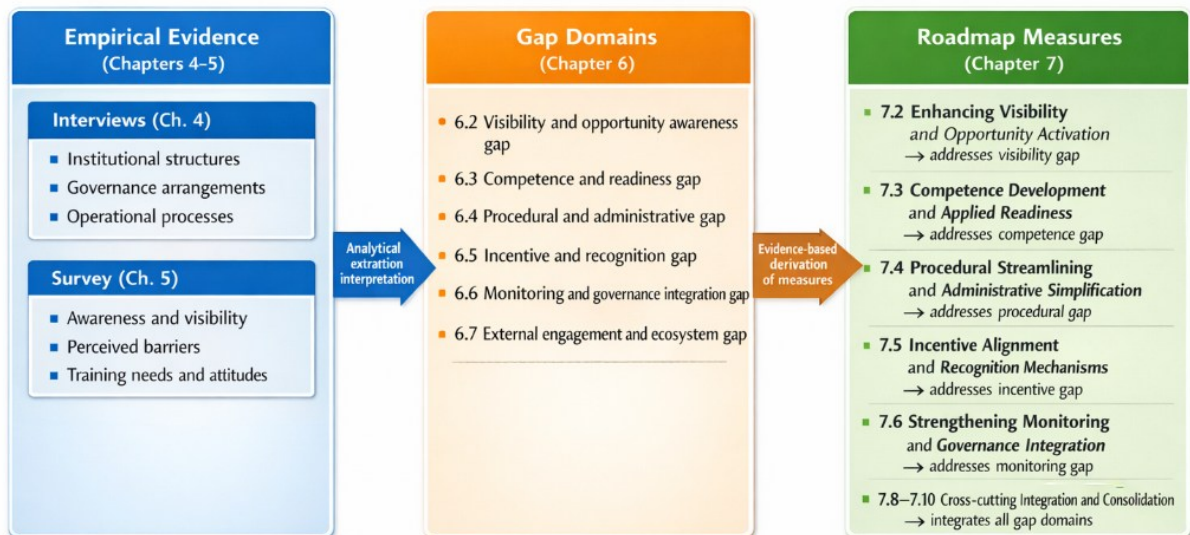


Figure 28 Analytical linkage overview

7.2 Enhancing Visibility and Opportunity Activation

7.2.1 Institutional Visibility Frameworks

Survey results indicate substantial uncertainty regarding selected institutional mechanisms:

- Guidance on intellectual property and patents: 44.17% "Don't know".
- Support for creating start-ups or spin-offs: 44.17% "Don't know".

In contrast, perceived availability of collaboration with industry (76.69% Yes) and international activities (73.01% Yes) is comparatively high.

This distribution indicates differentiated visibility across support categories. Institutions should therefore prioritise structured visibility consolidation mechanisms that:

- Centralise access to IP guidance, spin-off support, mobility programmes, entrepreneurship courses, and partnership pathways.
- Clearly specify procedural entry points, responsible units, and expected timelines.
- Translate institutional structures into user-navigable formats.

The intervention focus is visibility coherence, not structural expansion.

7.2.2 Structured Communication Cycles

Given the documented gap between institutional articulation (interview evidence) and uneven user recognition (survey evidence), structured and recurrent communication cycles should:

- Present documented success cases already reported at institutional level.
- Clarify operational procedures for engagement.
- Provide periodic updates on funding instruments and collaboration opportunities.

Embedding communication within routine academic cycles supports regular exposure, addressing the awareness-related barrier selected by 40.49% of respondents.

7.3 Competence Development and Applied Readiness

7.3.1 Modular Training Architecture

Survey evidence demonstrates extensive and diversified training demand:

- 1736 total topic selections.
- 10.65 average topic selections per respondent.
- 98.77% of respondents selecting at least one topic.

High-demand topics include:

- Business plan development (61.35%).
- Market analysis (55.83%).
- Accessing funding (46.63%).
- Innovation management (49.08%).
- Industry partnership building (46.01%).

These data indicate multidimensional competence demand spanning management, transfer processes, communication, funding readiness, and policy-oriented dimensions.

Training architecture should therefore reflect this distribution by structuring modules across the four identified axes without narrowing scope.

7.3.2 Applied and Experiential Learning Formats

Perceived usefulness of previous training (mean 2.64; 45.01% low band) remains moderate relative to future interest levels.

To address this confidence-usefulness asymmetry, training formats should incorporate:

- Case-based and institutionally contextualised exercises.
- Negotiation and partnership simulations.
- Mentored development of concrete innovation or impact pathways.

This aligns directly with the documented confidence gap (mean 2.70) relative to interest (mean 3.91).

7.3.3 Dual Target Group Approach

Interview evidence indicates that effective knowledge valorisation depends on coordinated interaction between research staff and administrative

support structures. Capacity-building initiatives should therefore extend beyond students and early career researchers to include administrative and support actors responsible for IP management, transfer and research management.

7.4 Procedural Streamlining and Administrative Simplification

7.4.1 Process Mapping and Bottleneck Identification

Survey data identify:

- Lack of time or competing priorities: 56.44%.
- Bureaucratic or administrative obstacles: 43.56%.

Interview evidence documents coexisting structural support and operational constraints. Institutions should therefore conduct structured workflow mapping covering:

- Patent procedures.
- Contract approval sequences.
- Governance checkpoints.
- Funding allocation processes.

The objective is identification of friction points contributing to cumulative time pressure.

7.4.2 Standardisation and Template Development

Where legally feasible, standardisation of:

- Contract templates.
- Licensing models.
- Procedural checklists.

Reduces transaction costs and administrative uncertainty, directly addressing reported administrative barriers.

7.4.3 Time-Sensitive Pathways

Given the predominance of time constraints in survey responses, institutions may implement differentiated review tracks for early-stage innovation or exploratory collaboration processes.

Such differentiation addresses the most frequently selected barrier category (56.44%).

7.5 Incentive Alignment and Recognition Mechanisms

7.5.1 Integration of Valorisation Outputs into Evaluation Systems

Survey data indicate that 53.37% of respondents perceive insufficient funding or incentives as a barrier. Interview evidence describes interaction between incentive structures, evaluation systems and institutional culture. Institutions should therefore review the alignment between performance evaluation criteria, recognition of patents, collaborations, spin-offs and societal impact cases, and career progression mechanisms.

7.5.2 Financial and Non-Financial Incentives

Incentive instruments may include seed funding schemes, public recognition formats and revenue-sharing mechanisms. Interview evidence indicates that intrinsic motivation, mission orientation and cultural factors coexist with financial incentives, so alignment should preserve motivational diversity across both financial and non-financial dimensions.

7.6 Strengthening Monitoring and Governance Integration

7.6.1 Indicator Harmonisation

Interview analysis confirms the presence of monitoring practices (patents, collaborations, spin-offs, impact cases), with variation in governance integration.

Institutions should:

- Clarify indicator definitions.
- Harmonise reporting cycles.
- Assign data ownership responsibilities.

This reduces fragmentation.

7.6.2 Embedding Feedback Loops

Where monitoring functions remain reporting-oriented, their structured integration into strategic review processes, resource allocation decisions, and policy revision cycles strengthens governance coherence.

7.6.3 Impact Documentation Beyond Quantitative Outputs

Interview material indicates the presence of both quantitative and qualitative impact dimensions. Structured qualitative documentation complements numeric indicators and broadens evaluative scope beyond patent-centric metrics.

7.7 Strengthening External Engagement and Ecosystem Interfaces

7.7.1 Partnership Interface Clarification

Survey results show high perceived availability of collaboration opportunities (76.69% Yes), yet 17.79% report uncertainty. Institutions should formalise and communicate partnership entry points to reduce residual ambiguity.

7.7.2 Ecosystem Mapping

Interview evidence indicates that regulatory and regional ecosystems shape institutional configurations. Structured ecosystem mapping allows identification of regional clusters, funding actors and incubation infrastructures, supporting strategic engagement with the broader innovation environment.

7.7.3 International Knowledge Exchange

Participation in international activities is perceived as available by 73.01% of respondents, with 22.70% selecting "Don't know".

Structured facilitation of:

- Transnational peer exchange.
- Mobility schemes.
- Thematic benchmarking.

This addresses remaining uncertainty while reinforcing existing structural pathways.

7.8 Phased Implementation Logic

Visibility and Activation

- Consolidate institutional visibility platforms.
- Launch awareness cycles.
- Introduce foundational modular training responding to high-demand topics.

Structural Refinement

- Conduct workflow mapping.
- Standardise procedures and templates.
- Harmonise core monitoring indicators.

Governance Integration

- Embed monitoring feedback loops.
- Review evaluation criteria for incentive coherence.
- Align resource allocation with documented performance signals.

This sequencing reflects the pattern observed in the responses, where issues related to awareness and competences appear more frequently than those related to structural refinement or governance integration. Within the BEAMING project architecture, this phased logic aligns with the progressive implementation of activities across work packages. Early-stage actions related to visibility, awareness and competence development correspond to the capacity-building and community engagement objectives implemented through WP8 activities and their interaction with mobility schemes, Communities of Practice and Open Science initiatives developed across the project. Subsequent phases addressing structural refinement and governance integration reflect the longer-term objective of consolidating institutional knowledge valorisation frameworks within partner organisations and embedding these practices within the evolving BEAMING alliance strategy.

The monitoring indicator framework outlined in Section 3.5.1 may provide a common reference structure supporting this harmonisation process across the BEAMING partner institutions.

7.9 Convergence Through Structured Peer Exchange

Interview evidence documents differentiated institutional configurations.

Peer exchange may include:

- Sharing workflow mapping practices.
- Comparing monitoring integration models.
- Jointly developing modular training materials aligned with survey demand distributions.
- Exchanging impact documentation methodologies.

Convergence should focus on interoperability and shared learning.

7.10 Consolidated Roadmap Orientation

The roadmap operationalises these patterns into structured directions aimed at:

- Increasing clarity and accessibility of support mechanisms.
- Bridging confidence and applied readiness gaps.
- Reducing administrative friction.
- Enhancing incentive alignment.
- Integrating monitoring into governance cycles.
- Strengthening ecosystem and partnership pathway clarity.

Implementation should remain context-sensitive while directly addressing recurring structural and activation gaps identified in the empirical evidence. The roadmap therefore provides a structured and evidence-grounded pathway for advancing knowledge valorisation practices through targeted refinement, coordinated capacity development and strengthened governance integration across institutional contexts.

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8 ANNEX

8.1 ANNEX – Interview and Survey structure

8.1.1 Interview structure

INTERVIEW ON KNOWLEDGE VALORIZATION

(Senior Researchers, Project Directors, Research Managers)

Focused on strategy, governance, barriers, and priorities

Purpose

This interview is part of the BEAMING project (Task 8.2) and aims to assess how institutional strategies, policies, and practices support Knowledge Valorisation (KV). The interview seeks insights from senior researchers, project directors, and managers on challenges, successes, governance processes, and future needs.

Additional Information

- **Estimated duration:** 50 – 60 minutes.
- **Confidentiality:** All responses will remain confidential and will be used only in aggregated form for project reporting and analysis.

Open-ended Questions

1. Institutional Support

How does your institution currently support the valorisation of research results?

Follow-up: To what extent are your institution's valorisation policies aligned with EC recommendations?

2. Mechanisms and Structures

Which technology transfer mechanisms or structures (e.g., TTO, IP office, industry liaison units) are most effective in your institution, and why?

3. Barriers and Challenges

What are the most significant obstacles you encounter in translating research results into practice?

4. Motivation Factors

Following the discussion on barriers, we would like to explore what drives researchers to engage in knowledge valorisation.

What are the main factors that motivate researchers and teams within your institution to engage in knowledge valorisation activities (e.g., recognition, financial incentives, societal impact, institutional culture, career advancement)?

Follow-up: To what extent do these motivation mechanisms influence actual participation in valorisation initiatives?

5. Best Practices

Could you share a concrete example of a successful case of knowledge valorisation in your institution? What made it successful?

6. Results and Impact Measurement

How does your institution assess or measure the **results and impact** of knowledge valorisation activities (e.g., number of patents, licenses, spin-offs, partnerships, societal or policy impact)?

*Follow-up: Are there specific **indicators or evaluation frameworks** used to track progress and outcomes over time?*

7. Use of Impact Evidence

In what ways are the measured results or impact assessments **used to inform institutional strategies**, improve practices, or guide decision-making on valorisation policies?

8. Future Priorities

From your perspective, what would be the three most important measures or changes needed to strengthen knowledge valorisation in your institution?

Follow-up: How frequently are knowledge valorisation policies reviewed, and who is involved in this process?

9. Training Needs

Based on your experience, what topic of training would be most beneficial to enhance knowledge valorisation in your institution?

Checklist Question

To complement the discussion, please indicate whether your institution currently has the following elements supporting Knowledge Valorisation:

		Yes	No	Don't know
a)	A formal strategy or policy for knowledge valorisation			
b)	A Technology Transfer Office (TTO) or equivalent structure			
c)	Procedures for intellectual property management (patents, licenses, revenue sharing)			
d)	Support programmes for startups/spin-offs			
e)	Active partnerships with incubators, accelerators, or technology parks			
f)	Access to external funding sources (venture capital, angel investors, innovation grants)			
g)	Training programmes for researchers and staff on knowledge valorisation			

8.1.2 Survey structure

SURVEY ON KNOWLEDGE VALORIZATION

*focused on the individual experiences and perceptions of **Bachelor's, Master's, and PhD students, as well as Early Career Researchers***

Purpose

This survey is part of the BEAMING project (Task 8.2) and aims to capture the experiences and perceptions of **Bachelor's, Master's, and PhD students, as well as Early Career Researchers**, regarding knowledge valorisation opportunities, support, and needs within their institutions.

Additional Information

- **Estimated completion time:** 15 – 20 minutes.
- **Confidentiality:** All responses are anonymous. Results will be reported only in aggregated form, without identifying individual participants.

Section 1: **About You and Your Research Profile**

Select your institution:

AUP – AGRAREN UNIVERSITET – PLOVDIV
AUT – UNIVERSITETI BUJQESOR I TIRANES
BME – BUDAPESTI MUSZAKI ES GAZDASAGTUDOMANYI EGYETEM
BOKU – UNIVERSITAET FUER BODENKULTUR WIEN
EDU – UNIVERZITET EDUCONS U SREMSKOJ KAMENICI PRIVATNE USTANOVE
FhG-ISI – FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV
INCDSB – INSTITUTUL NATIONAL DE CERCERTARE DEZVOLTARE PENTRU STIINTE BIOLOGICE
UKIM – Ss. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE
UNIBL – UNIVERZITET U BANJOJ LUCI
UNSFA – UNIVERZITET U NOVOM SADU, POLJOPRIVREDNI FAKULTET NOVI SAD
UP – Pannon Egyetem – University Of Pannonia
UniOS – SVEUCILISTE JOSIPA JURJA STROSSMAYERA U OSIJEKU, PREHRAMBENOTEHNOLOSKI FAKULTET OSIJEK

Q1. Faculty or Research Field

(Please select or specify the option that best describes you.)

- Life Sciences
- Engineering and Technology
- Environmental Sciences
- Social Sciences
- Humanities
- Other (please specify): _____

Q2. Level of Study / Career Stage

(Please select or specify the option that best describes you.)

- Bachelor's student
- Master's student
- Doctoral student
- Early Career Researcher (up to 8 years post-PhD)

Q3. Years of Research Experience

(Please select or specify the option that best describes you.)

- Less than 1 year
- 1 - 3 years
- 4 - 6 years
- More than 6 years

Q4. Familiarity with the concept

How familiar are you with the term **"knowledge valorisation"**?

- I have never heard of it
- I have heard of it but I'm not sure what it means
- I have a general understanding
- I am familiar and can explain it to others

Section 2: From Research to Innovation and Societal Impact (Knowledge Valorisation)

Q5. Institutional support (Yes / No / Don't know)

Does your institution provide the following?

		Yes	No	Don't know
a)	Guidance on intellectual property (IP) and patents			
b)	Access to entrepreneurship or innovation courses			
c)	Opportunities to collaborate with industry			
d)	Support for creating start-ups or spin-offs			
e)	Mobility or exchange programmes focused on innovation			
f)	Participation in international activities, networks, or exchanges related to knowledge valorisation			
g)	Documented success stories or visible examples of technology transfer, spin-offs, or industry collaboration			

Q6. Personal experience and perception (scale 0–5)

Please reflect on your personal experiences when rating the following statements.

On a scale from **0 (not at all / very negative)** to **5 (to a great extent / very positive)**, please rate:

		0	1	2	3	4	5
		<i>not at all / very negative</i>					<i>to a great extent / very positive</i>
a)	Your awareness of knowledge valorisation opportunities in your institution						
b)	The usefulness of training you have received on innovation or entrepreneurship						

c)	The supportiveness of your supervisors or mentors in encouraging knowledge valorisation activities						
d)	Your confidence in developing a business idea from your research						
e)	Your interest in participating in future training, workshops, or mobility related to knowledge valorisation						

Q7. Perceived barriers

In your opinion, what are the **main barriers** that limit knowledge valorisation in your institution or research environment?

(You may select more than one.)

- Lack of institutional support structures
- Insufficient funding or incentives
- Limited awareness or training opportunities
- Bureaucratic or administrative obstacles
- Lack of time or competing academic priorities
- Unclear intellectual property regulations
- Other (please specify): _____

Section 3: Training and Support Needs for Future Innovators

What types of training or topics related to knowledge valorisation would you find most useful or interesting for your personal and professional development?

(You may select more than one.)

Q8.1. Management of Innovation

- Innovation management and creative problem-solving methods
- Managing the research-to-market process
- Designing and implementing innovation strategies within academic environments

- Identifying and protecting innovative ideas (from discovery to application)
- Interdisciplinary collaboration for innovation

Q8.2. Technology Brokering and Transfer

- Understanding technology transfer processes and stakeholder roles
- Building effective partnerships with industry and SMEs
- Negotiating collaboration and licensing agreements
- Technology readiness levels (TRLs) and pathways to market uptake
- Brokering innovation between academia, public institutions, and private sector actors

Q8.3. Research Marketing and Communication

- Communicating research results to non-academic audiences
- Market analysis and identifying potential users of research outcomes
- Branding and positioning of research results or institutional competencies
- Storytelling for innovation and science-to-society communication
- Using digital tools and platforms for disseminating innovation outcomes

Q8.4. Business Plan Development and Entrepreneurship

- Developing a business plan based on a research idea
- Fundamentals of entrepreneurship and start-up creation
- Financial planning, revenue models, and investment readiness
- Accessing funding for innovation and valorisation (EU programmes, venture capital, angel investors, etc.)
- Scaling up innovations and sustaining spin-off growth

Q8.5. Cross-cutting and Policy-oriented Topics

- Intellectual property management and patenting strategies
- Data management, open science, and responsible research practices
- Measuring and demonstrating societal impact of research
- Policy engagement and contribution to evidence-based decision-making
- Ethical and sustainable innovation (ESG principles, SDGs alignment)
- Other (please specify): _____

Q9. *What additional forms of support, training, or resources would help you better valorise your research results?
(Please describe in your own words.)*

8.2 ANNEX - Interview

8.2.1 Master Codebook – Interview Question Coding

Code	Group	Question
Q1	Institutional Support	How does your institution currently support the valorisation of research results? Follow-up: To what extent are your institution's valorisation policies aligned with EC recommendations?
Q2	Mechanisms and Structures	Which technology transfer mechanisms or structures (e.g., TTO, IP office, industry liaison units) are most effective in your institution, and why?
Q3	Barriers and Challenges	What are the most significant obstacles you encounter in translating research results into practice?
Q4	Motivation Factors	Following the discussion on barriers, we would like to explore what drives researchers to engage in knowledge valorisation. What are the main factors that motivate researchers and teams within your institution to engage in knowledge valorisation activities (e.g., recognition, financial incentives, societal impact, institutional culture, career advancement)? Follow-up: To what extent do these motivation mechanisms influence actual participation in valorisation initiatives?
Q5	Best Practices	Could you share a concrete example of a successful case of knowledge valorisation in your institution? What made it successful?
Q6	Results and Impact Measurement	How does your institution assess or measure the results and impact of knowledge valorisation activities (e.g., number of patents, licenses, spin-offs, partnerships, societal or policy impact)? Follow-up: Are there specific indicators or evaluation frameworks used to track progress and outcomes over time?
Q7	Use of Impact Evidence	In what ways are the measured results or impact assessments used to inform institutional strategies, improve practices, or guide decision-making on valorisation policies?
Q8	Future Priorities	From your perspective, what would be the three most important measures or changes needed to strengthen knowledge valorisation in your institution? Follow-up: How frequently are knowledge valorisation policies reviewed, and who is involved in this process?
Q9	Training Needs	Based on your experience, what topic of training would be most beneficial to enhance knowledge valorisation in your institution?

8.2.2 Master Codebook – Interview Thematic Analysis (Q1–Q9)

Question	Code	Definition
Q1	IP_PATENTS	Institutional support for IP, patents, licensing, revenue-sharing.
Q1	TTO_OR_EQUIV	Technology transfer or commercialisation structures.
Q1	INDUSTRY_COLLAB	Support for collaboration with industry/SMEs.
Q1	STARTUP_SPINOFF	Support for start-up or spin-off development.
Q1	FUNDING_SUPPORT	Support for accessing funding or seed capital.
Q1	LEGAL_CONTRACTS	Legal/contractual support for agreements.
Q1	TRAINING_AWARENESS	Training and awareness-raising for valorisation.
Q1	GOVERNANCE_STRATEGY	Governance-level strategy or policy references.
Q1	IMPACT_MONITORING	Support related to monitoring or measuring impact.
Q1	OPEN_SCIENCE_RRI	References to open science or responsible research.
Q2	TTO_STRUCTURE	Technology Transfer Office or equivalent structure.
Q2	IP_OFFICE_SUPPORT	Dedicated IP office or structured IP support.
Q2	INDUSTRY_LIAISON_UNIT	Dedicated industry liaison structure.
Q2	INNOVATION_CENTRE	Innovation centre or hub structure.
Q2	INCUBATOR_ACCELERATOR	Incubator/accelerator/technology park structure.
Q2	RESEARCH_SUPPORT_OFFICE	Research support/project management office.
Q2	EXTERNAL_PARTNERSHIP_STRUCTURE	Formal external collaboration frameworks.
Q3	REGULATORY_PROCEDURAL	Regulatory or administrative procedural barriers.

Q3	FUNDING_RESOURCE_LIMITS	Funding or resource constraints.
Q3	ACADEMIC_INCENTIVE_MISALIGN	Misalignment in academic incentive structures.
Q3	MARKET_DEMAND_UNCERTAINTY	Market or demand-related uncertainty.
Q3	IP_COMPLEXITY	Complexity of IP management.
Q3	TIME_CONSTRAINTS	Time limitations and workload pressures.
Q3	SKILLS_COMPETENCE_GAP	Skills or competence gaps.
Q3	ECOSYSTEM_LIMITATIONS	Regional ecosystem limitations.
Q4	FINANCIAL_INCENTIVES	Financial incentives as motivation drivers.
Q4	RECOGNITION_CAREER	Recognition and career-related motivation.
Q4	SOCIETAL_IMPACT	Societal impact motivation.
Q4	INSTITUTIONAL_CULTURE	Institutional culture influencing motivation.
Q4	LEADERSHIP_SUPPORT	Leadership encouragement as motivation.
Q4	COLLAB_NETWORK	Collaboration and network-based motivation.
Q4	ENTREPRENEURSHIP_INTEREST	Entrepreneurial motivation.
Q4	RESEARCH_APPLICATION	Desire to see research applied.
Q5	SPINOFF_CASE	Spin-off/start-up example.
Q5	PATENT_COMMERCIALISATION_CASE	Patent or licensing example.
Q5	INDUSTRY_COLLAB_CASE	Industry collaboration example.
Q5	RESEARCH_APPLIED_IMPACT_CASE	Applied research impact example.
Q5	ENABLING_IP_SUPPORT	IP/legal support as enabling factor.
Q5	ENABLING_LEADERSHIP	Leadership support as enabling factor.
Q5	ENABLING_EXTERNAL_ECOSYSTEM	External ecosystem as enabling factor.
Q5	ENABLING_TEAM_INITIATIVE	Team initiative as enabling factor.
Q6	PATENTS_IP_METRICS	Patent/IP indicators used for measurement.
Q6	SPINOFF_STARTUP_METRICS	Spin-off/start-up metrics.
Q6	PARTNERSHIP_CONTRACT_METRICS	Partnership/contract metrics.

Q6	SOCIETAL_POLICY_IMPACT	Societal or policy impact measurement.
Q6	EVALUATION_FRAMEWORK	Evaluation framework/KPI references.
Q6	REPORTING_CYCLES	Regular reporting cycles.
Q6	PROJECT_LEVEL_TRACKING	Project-level tracking mechanisms.
Q6	NO_FORMAL_INDICATORS	No formal indicators reported.
Q7	STRATEGIC_DECISION_SUPPORT	Impact evidence used for strategy.
Q7	RESOURCE_ALLOCATION	Impact evidence used for resource allocation.
Q7	POLICY_REVIEW_UPDATE	Impact evidence used for policy updates.
Q7	PERFORMANCE_EVALUATION	Impact evidence used for performance evaluation.
Q7	REPORTING_EXTERNAL	Impact evidence used for external reporting.
Q7	INTERNAL_FEEDBACK_LOOP	Impact evidence used for internal improvement.
Q7	LIMITED_USE	Limited or unclear use of impact evidence.
Q8	INCREASE_TRAINING_AWARENESS	Priority to increase training/awareness.
Q8	STRENGTHEN_STRATEGY_POLICY	Priority to strengthen strategy/policy.
Q8	ENHANCE_IP_SYSTEM	Priority to enhance IP systems.
Q8	IMPROVE_INCENTIVES	Priority to improve incentives.
Q8	EXPAND_PARTNERSHIPS	Priority to expand partnerships.
Q8	INCREASE_FUNDING_SUPPORT	Priority to increase funding support.
Q8	STREAMLINE_PROCEDURES	Priority to streamline procedures.
Q8	REVIEW_POLICY_CYCLE	Reference to governance review cycles.
Q9	IP_TRAINING	Training need in IP management.
Q9	TECH_TRANSFER_TRAINING	Training need in technology transfer.
Q9	ENTREPRENEURSHIP_TRAINING	Entrepreneurship training need.
Q9	INDUSTRY_COLLAB_TRAINING	Industry collaboration training need.

Q9	IMPACT_COMMUNICATION_TRAINING	Impact communication training need.
Q9	PROJECT_EXPLOITATION_TRAINING	Project exploitation training need.
Q9	ADMIN_CAPACITY_TRAINING	Administrative capacity training need.
Q9	POLICY_AWARENESS_TRAINING	Policy awareness training need.

8.2.3 Code × Institution Matrix (Q1–Q9)

CODE	BME	FhG-ISI	Unios	INCDSB	EDU	UNIBL	UKIM	UNSFA	AUT	UP	AUP	BOKU
IP_PATENTS	1	1	0	1	0	0	0	0	1	0	1	1
TTO_OR_EQUIV	1	1	1	1	1	1	0	0	1	0	1	1
INDUSTRY_COLLAB	1	1	1	1	1	1	0	1	1	1	1	1
STARTUP_SPINOFF	1	1	1	0	0	1	0	0	1	0	0	1
FUNDING_SUPPORT	1	1	0	0	0	1	0	0	0	0	1	1
LEGAL_CONTRACTS	1	1	0	1	1	1	1	1	1	1	0	1
TRAINING_AWARENESS	1	1	0	0	1	1	1	1	1	1	1	0
GOVERNANCE_STRATEGY	1	0	1	0	1	1	1	0	1	1	1	1
IMPACT_MONITORING	1	1	0	0	0	0	1	1	1	0	1	1
OPEN_SCIENCE_RRI	0	0	0	0	1	1	0	0	1	0	1	1
TTO_STRUCTURE	1	1	1	1	1	1	1	1	1	1	1	1
IP_OFFICE_SUPPORT	1	1	1	0	1	1	0	1	0	0	1	1
INDUSTRY_LIAISON_UNIT	0	1	0	0	1	1	1	1	1	0	0	1
INNOVATION_CENTRE	0	0	0	0	0	1	0	0	0	0	0	0
INCUBATOR_ACCELERATOR	0	0	1	0	1	1	0	0	0	0	0	0
RESEARCH_SUPPORT_OFFICE	0	0	0	0	0	1	0	0	0	0	1	0
EXTERNAL_PARTNERSHIP_STRUCTURE	0	1	0	0	0	0	0	0	0	0	0	0
REGULATORY_PROCEDURAL	0	0	0	0	1	1	1	1	0	1	1	1
FUNDING_RESOURCE_LIMITS	1	1	0	1	1	1	1	0	1	0	1	1

CODE	BME	FhG-ISI	Unios	INCDSB	EDU	UNIBL	UKIM	UNSFA	AUT	UP	AUP	BOKU
ACADEMIC_INCENTIVE_MISALIGN	0	0	0	1	1	1	1	0	1	0	1	1
MARKET_DEMAND_UNCERTAINTY	1	0	0	1	1	1	1	1	1	0	0	1
IP_COMPLEXITY	1	0	1	1	1	1	1	0	1	0	1	1
TIME_CONSTRAINTS	0	0	0	1	0	1	1	1	1	1	0	1
SKILLS_COMPETENCE_GAP	0	0	1	0	0	1	1	1	1	0	0	0
ECOSYSTEM_LIMITATIONS	0	1	0	0	1	0	0	0	0	0	1	0
FINANCIAL_INCENTIVES	1	1	1	1	1	1	1	0	1	0	1	0
RECOGNITION_CAREER	1	1	1	1	1	1	1	0	1	0	1	1
SOCIETAL_IMPACT	0	1	1	1	1	1	1	0	1	0	1	1
INSTITUTIONAL_CULTURE	1	1	0	0	0	1	0	0	0	0	0	0
LEADERSHIP_SUPPORT	0	0	1	1	1	1	0	0	0	0	1	1
COLLAB_NETWORK	1	1	0	1	1	1	1	0	1	0	0	0
ENTREPRENEURSHIP_INTEREST	1	0	0	0	1	1	1	0	1	0	1	1
RESEARCH_APPLICATION	1	0	0	1	1	1	0	0	1	0	1	1
SPINOFF_CASE	1	0	0	0	0	0	0	0	0	0	1	1
PATENT_COMMERCIALISATION_CASE	1	0	0	0	0	0	0	0	0	0	1	0
INDUSTRY_COLLAB_CASE	1	1	1	1	1	1	0	1	0	0	1	1
RESEARCH_APPLIED_IMPACT_CASE	1	1	1	0	1	1	1	1	0	0	1	0
ENABLING_IP_SUPPORT	1	1	0	0	1	1	0	1	1	0	1	1
ENABLING_LEADERSHIP	0	0	0	0	0	1	0	0	1	0	1	0
ENABLING_EXTERNAL_ECOSYSTEM	0	0	0	0	0	0	0	0	0	0	0	0
ENABLING_TEAM_INITIATIVE	0	1	0	0	1	1	1	0	0	0	0	0

CODE	BME	FhG-ISI	Unios	INCDSB	EDU	UNIBL	UKIM	UNSAFA	AUT	UP	AUP	BOKU
PATENTS_IP_METRICS	1	0	1	0	1	0	1	0	1	0	1	1
SPINOFF_STARTUP_METRICS	1	0	0	0	0	0	0	0	0	0	0	1
PARTNERSHIP_CONTRACT_METRICS	0	1	1	0	1	1	1	0	1	1	1	1
SOCIETAL_POLICY_IMPACT	1	1	0	1	1	1	1	0	1	0	1	0
EVALUATION_FRAMEWORK	1	1	1	1	1	1	1	0	1	0	1	1
REPORTING_CYCLES	0	1	0	1	0	1	0	0	1	0	1	1
PROJECT_LEVEL_TRACKING	0	1	0	0	1	1	1	0	1	1	1	0
NO_FORMAL_INDICATORS	0	0	1	0	0	0	0	0	0	0	0	0
STRATEGIC_DECISION_SUPPORT	0	1	1	1	1	1	1	0	1	0	1	1
RESOURCE_ALLOCATION	0	0	0	0	1	0	0	0	1	0	1	0
POLICY_REVIEW_UPDATE	0	0	0	0	1	0	1	0	1	0	0	1
PERFORMANCE_EVALUATION	1	0	0	1	0	1	0	0	1	0	1	1
REPORTING_EXTERNAL	0	0	0	0	1	1	1	0	1	0	0	0
INTERNAL_FEEDBACK_LOOP	0	1	0	0	0	1	1	0	1	0	1	1
LIMITED_USE	0	0	0	0	0	1	1	0	1	0	0	0
INCREASE_TRAINING_AWARENESS	1	1	0	1	1	0	1	0	1	0	1	1
STRENGTHEN_STRATEGY_POLICY	1	0	1	1	1	0	1	0	1	0	1	1
ENHANCE_IP_SYSTEM	0	0	1	0	1	1	1	0	0	0	0	1
IMPROVE_INCENTIVES	0	0	0	1	0	0	1	0	1	0	0	0
EXPAND_PARTNERSHIPS	0	1	1	1	1	1	1	0	0	0	1	1
INCREASE_FUNDING_SUPPORT	0	1	0	0	0	1	1	0	1	0	1	0
STREAMLINE_PROCEDURES	0	0	0	1	0	0	0	0	0	0	0	0

CODE	BME	FhG-ISI	Unios	INCDSB	EDU	UNIBL	UKIM	UNSAFA	AUT	UP	AUP	BOKU
REVIEW_POLICY_CYCLE	1	1	0	1	1	1	0	0	1	1	1	1
IP_TRAINING	1	0	0	1	1	1	0	0	1	0	0	1
TECH_TRANSFER_TRAINING	1	0	0	1	1	1	1	0	1	0	1	1
ENTREPRENEURSHIP_TRAINING	0	0	0	0	1	0	0	0	0	0	0	1
INDUSTRY_COLLAB_TRAINING	0	0	0	1	1	1	1	0	0	0	1	1
IMPACT_COMMUNICATION_TRAINING	0	0	0	0	1	0	0	0	1	1	1	1
PROJECT_EXPLOITATION_TRAINING	1	1	1	0	1	1	1	0	0	0	1	1
ADMIN_CAPACITY_TRAINING	1	0	0	1	1	1	1	0	0	0	1	1
POLICY_AWARENESS_TRAINING	0	0	0	0	1	1	1	0	0	0	1	0

8.2.4 Institutional Support

Dataset: Interviews

Coding procedure (Q1)

Initial codes were derived from recurring support modalities explicitly mentioned in responses.

Each code is operationalised with a conservative keyword rule-set (shown below). Keyword rules are used only to flag potential mentions; interpretive validation remains anchored in the original text.

Coding unit: institution-level Q1 response (binary presence/absence per code).

Institutional identifiers are reported only as the INST label as present in the dataset.

Codebook and empirical coverage

Code	Definition (what is counted)	Institutions flagged (N)	Evidence snippet (≤ 20 words)
IP_PATENTS	Intellectual property (IP) guidance, patenting, licensing, IP strategy/policy support.	6	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
TTO_OR_EQUIV	Dedicated technology transfer / commercialisation unit, TTO, innovation office/centre acting as transfer interface.	9	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...

Code	Definition (what is counted)	Institutions flagged (N)	Evidence snippet (≤ 20 words)
INDUSTRY_COLLAB	Support for collaboration with industry/SMEs, contract research, partnerships, applied projects with companies.	11	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
STARTUP_SPINOFF	Support for start-ups/spin-offs/entrepreneurship pathways (incubation, accelerators, spin-off formation).	6	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
FUNDING_SUPPORT	Institutional support for accessing external funding (innovation grants, investors) or internal seed funding for valorisation.	5	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
LEGAL_CONTRACTS	Legal/administrative support for agreements (contracts, licensing, NDAs, cooperation agreements).	10	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...

Code	Definition (what is counted)	Institutions flagged (N)	Evidence snippet (≤ 20 words)
TRAINING_AWARENES S	Training, awareness-raising, capacity-building actions for researchers on valorisation/innovation/entrepreneurship.	9	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
GOVERNANCE_STRATE GY	References to committees, policies, strategies, leadership roles overseeing valorisation support.	9	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
IMPACT_MONITORING	Support for measuring/monitoring valorisation results/impact (indicators, evaluation, reporting).	7	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
OPEN_SCIENCE_RRI	References to open science, responsible research, societal engagement as part of valorisation support.	5	As Vice-Rector for Science and International Cooperation, I can say that in recent years, Educons University has been systematically building...

Keyword rule-sets used for flagging

IP_PATENTS: patent; licen; intellectual property; copyright; trademark; revenue sharing

TTO_OR_EQUIV: technology transfer; commerciali; innovation (office|centre|center); transfer office; liaison

INDUSTRY_COLLAB: industry; SME; company|companies; industrial; partnership; collaborat; contract research

STARTUP_SPINOFF: spin[-]off; start[-]up; entrepreneur; incubat; accelerat; venture

FUNDING_SUPPORT: grant; funding; seed; venture capital|VC; angel; investment; innovation (grant|fund)

LEGAL_CONTRACTS: contract; agreement; legal; NDA; licen(s|c)ing; terms and conditions

TRAINING_AWARENESS: training; workshop; seminar; awareness; capacity; course

GOVERNANCE_STRATEGY: strategy; policy; committee; vice[-]?rector; board; council; governance

IMPACT_MONITORING: indicator; measure; monitor; evaluation; impact; report

OPEN_SCIENCE_RRI: open science; responsible; RRI; citizen; societal

Institution lists per code (INST)

IP_PATENTS (N=6): BME, FhG-ISI, INCDSB, AUT, AUP, BOKU

TTO_OR_EQUIV (N=9): BME, FhG-ISI, Unios, INCDSB, EDU, UNIBL, AUT, AUP, BOKU

INDUSTRY_COLLAB (N=11): BME, FhG-ISI, Unios, INCDSB, EDU, UNIBL, UNSFA, AUT, UP, AUP, BOKU

STARTUP_SPINOFF (N=6): BME, FhG-ISI, Unios, UNIBL, AUT, BOKU

FUNDING_SUPPORT (N=5): BME, FhG-ISI, UNIBL, AUP, BOKU

LEGAL_CONTRACTS (N=10): BME, FhG-ISI, INCDSB, EDU, UNIBL, UKIM, UNSFA, AUT, AUP, BOKU

TRAINING_AWARENESS (N=9): BME, FhG-ISI, EDU, UNIBL, UKIM, UNSFA, AUT, UP, AUP

GOVERNANCE_STRATEGY (N=9): BME, Unios, EDU, UNIBL, UKIM, AUT, UP, AUP, BOKU

IMPACT_MONITORING (N=7): BME, FhG-ISI, UKIM, UNSFA, AUT, AUP, BOKU

OPEN_SCIENCE_RRI (N=5): EDU, UNIBL, AUT, AUP, BOKU

8.2.5 Coding procedure

- All Questions responses were read in full.
- Initial codes were derived from recurring support modalities explicitly mentioned in responses.
- Each code is operationalised with a conservative keyword rule-set (shown below). Keyword rules are used only to **flag** potential mentions.
- Coding unit: institution-level Qestion response (binary presence/absence per code).
- Institutional identifiers are reported only as the INST label as present in the dataset.

8.2.6 Institutional Support – Q1

8.2.6.1 Codebook and empirical coverage

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤20 words)
IP_PATENTS	Intellectual property (IP) guidance, patenting, licensing, IP strategy/policy support.	6	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
TTO_OR_EQUIV	Dedicated technology transfer / commercialisation unit, TTO, innovation office/centre acting as transfer interface.	9	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
INDUSTRY_COLL AB	Support for collaboration with industry/SMEs, contract research, partnerships, applied projects with companies.	11	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
STARTUP_SPIN OFF	Support for start-ups/spin-offs/entrepreneurship pathways (incubation, accelerators, spin-off formation).	6	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
FUNDING_SUPP ORT	Institutional support for accessing external funding (innovation grants, investors) or internal seed funding for valorisation.	5	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
LEGAL_CONTRACTS	Legal/administrative support for agreements (contracts, licensing, NDAs, cooperation agreements).	10	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
TRAINING_AWARENESS	Training, awareness-raising, capacity-building actions for researchers on valorisation/innovation/entrepreneurship.	9	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
GOVERNANCE_STRATEGY	References to committees, policies, strategies, leadership roles overseeing valorisation support.	9	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...
IMPACT_MONITORING	Support for measuring/monitoring valorisation results/impact (indicators, evaluation, reporting).	7	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical...

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
OPEN_SCIENCE_RRI	References to open science, responsible research, societal engagement as part of valorisation support.	5	EDU	As Vice-Rector for Science and International Cooperation, I can say that in recent years, Educons University has been systematically building...

8.2.6.2 Keyword rule-sets used for flagging

- **IP_PATENTS:** patent; licen; intellectual property; copyright; trademark; revenue sharing
- **TTO_OR_EQUIV:** technology transfer; commerciali; innovation (office|centre|center); transfer office; liaison
- **INDUSTRY_COLLAB:** industry; SME; company|companies; industrial; partnership; collaborat; contract research
- **STARTUP_SPINOFF:** spin[-]?off; start[-]?up; entrepreneur; incubat; accelerat; venture
- **FUNDING_SUPPORT:** grant; funding; seed; venture capital|VC; angel; investment; innovation (grant|fund)
- **LEGAL_CONTRACTS:** contract; agreement; legal; NDA; licen(s|c)ing; terms and conditions
- **TRAINING_AWARENESS:** training; workshop; seminar; awareness; capacity; course
- **GOVERNANCE_STRATEGY:** strategy; policy; committee; vice[-]?rector; board; council; governance
- **IMPACT_MONITORING:** indicator; measure; monitor; evaluation; impact; report
- **OPEN_SCIENCE_RRI:** open science; responsible; RRI; citizen; societal

8.2.6.3 Institution lists per code (INST)

- **IP_PATENTS (N=6):** BME, FhG-ISI, INCDSB, AUT, AUP, BOKU
- **TTO_OR_EQUIV (N=9):** BME, FhG-ISI, Unios, INCDSB, EDU, UNIBL, AUT, AUP, BOKU
- **INDUSTRY_COLLAB (N=11):** BME, FhG-ISI, Unios, INCDSB, EDU, UNIBL, UNSFA, AUT, UP, AUP, BOKU
- **STARTUP_SPINOFF (N=6):** BME, FhG-ISI, Unios, UNIBL, AUT, BOKU
- **FUNDING_SUPPORT (N=5):** BME, FhG-ISI, UNIBL, AUP, BOKU
- **LEGAL_CONTRACTS (N=10):** BME, FhG-ISI, INCDSB, EDU, UNIBL, UKIM, UNSFA, AUT, AUP, BOKU
- **TRAINING_AWARENESS (N=9):** BME, FhG-ISI, EDU, UNIBL, UKIM, UNSFA, AUT, UP, AUP
- **GOVERNANCE_STRATEGY (N=9):** BME, Unios, EDU, UNIBL, UKIM, AUT, UP, AUP, BOKU
- **IMPACT_MONITORING (N=7):** BME, FhG-ISI, UKIM, UNSFA, AUT, AUP, BOKU
- **OPEN_SCIENCE_RRI (N=5):** EDU, UNIBL, AUT, AUP, BOKU

8.2.7 Coding Validation – Q1

This document provides a manual validation sample (up to 2 institutions per code) to confirm that keyword-based flagging corresponds to substantive content only for question Q1.

Code	Institution (INST)	Excerpt (≤ 25 words)
IP_PATENTS	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical use and close the innovation
IP_PATENTS	FhG-ISI	Fraunhofer ISI supports the valorisation of research results in two ways: 1. Valorisation of research results is a research topic for Fraunhofer ISI: Fraunhofer ISI
TTO_OR_EQUIV	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical use and close the innovation
TTO_OR_EQUIV	FhG-ISI	Fraunhofer ISI supports the valorisation of research results in two ways: 1. Valorisation of research results is a research topic for Fraunhofer ISI: Fraunhofer ISI

Code	Institution (INST)	Excerpt (≤ 25 words)
INDUSTRY_COLLAB	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical use and close the innovation
INDUSTRY_COLLAB	FhG-ISI	Fraunhofer ISI supports the valorisation of research results in two ways: 1. Valorisation of research results is a research topic for Fraunhofer ISI: Fraunhofer ISI
STARTUP_SPINOFF	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical use and close the innovation
STARTUP_SPINOFF	FhG-ISI	Fraunhofer ISI supports the valorisation of research results in two ways: 1. Valorisation of research results is a research topic for Fraunhofer ISI: Fraunhofer ISI
FUNDING_SUPPORT	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical use and close the innovation
FUNDING_SUPPORT	FhG-ISI	Fraunhofer ISI supports the valorisation of research results in two ways: 1. Valorisation of research results is a research topic for Fraunhofer ISI: Fraunhofer ISI

Code	Institution (INST)	Excerpt (≤ 25 words)
LEGAL_CONTRACTS	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical use and close the innovation
LEGAL_CONTRACTS	FhG-ISI	Fraunhofer ISI supports the valorisation of research results in two ways: 1. Valorisation of research results is a research topic for Fraunhofer ISI: Fraunhofer ISI
TRAINING_AWARENESS	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical use and close the innovation
TRAINING_AWARENESS	FhG-ISI	Fraunhofer ISI supports the valorisation of research results in two ways: 1. Valorisation of research results is a research topic for Fraunhofer ISI: Fraunhofer ISI
GOVERNANCE_STRATEGY	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical use and close the innovation
GOVERNANCE_STRATEGY	Unios	Our institution established a Committee for Cooperation with the Economy, Technology Transfer and Innovation in order to improve the cooperation of the Faculty with the

Code	Institution (INST)	Excerpt (≤25 words)
IMPACT_MONITORING	BME	Knowledge valorisation is an integrated part of the university's R&I policies and strategies. Main goal: to promote research with practical use and close the innovation
IMPACT_MONITORING	FhG-ISI	Fraunhofer ISI supports the valorisation of research results in two ways: 1. Valorisation of research results is a research topic for Fraunhofer ISI: Fraunhofer ISI
OPEN_SCIENCE_RRI	EDU	As Vice-Rector for Science and International Cooperation, I can say that in recent years, Educons University has been systematically building a culture in which scientific
OPEN_SCIENCE_RRI	UNIBL	Okay, this process is not formally supported. There are no formal documents that support this process of valorization of knowledge and results of scientific research.

8.2.8 Mechanisms and Structures - Q2

8.2.8.1 Codebook and empirical coverage

Code	Definition	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
TTO_STRUCTURE RE	Reference to Technology Transfer Office or equivalent commercialisation body.	12	BME	BME Innolab Ltd. – main commercialisation body, business-oriented management, manages innovation funds and PoC projects. BME FIEK (Centre for University–Industry...
IP_OFFICE_SUPPORT	Reference to IP office or structured intellectual property support.	8	BME	BME Innolab Ltd. – main commercialisation body, business-oriented management, manages innovation funds and PoC projects. BME FIEK (Centre for University–Industry...
INDUSTRY_LIAISON_UNIT	Reference to dedicated industry liaison or partnership unit.	7	FhG-ISI	As outlined in the background chapter, technology transfer mechanisms such as TTO, IP office, industry liaison units are established within...

Code	Definition	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
INNOVATION_CENTRE	Reference to innovation centre, innovation hub, or similar structure.	1	UNIBL	There are, like I would say, the most common is the direct transfer with the farmers, because our topic is...
INCUBATOR_ACCELERATOR	Reference to incubator, accelerator, or technology park involvement.	3	Unios	As already mentioned we cooperate with the University Technology Transfer Office Tera Tehnopolis. Furthermore, our Institution mostly cooperate with the...
RESEARCH_SUPPORT_OFFICE	Reference to research support or project management office supporting valorisation.	2	UNIBL	There are, like I would say, the most common is the direct transfer with the farmers, because our topic is...
EXTERNAL_PARTNERSHIP_STRUCTURE	Reference to structured external collaboration frameworks or formal partnerships.	1	FhG-ISI	As outlined in the background chapter, technology transfer mechanisms such as TTO, IP office, industry liaison units are established within...

8.2.8.2 Keyword rule-sets used for flagging

- **TTO_STRUCTURE:** technology transfer; commerciali; transfer office
- **IP_OFFICE_SUPPORT:** intellectual property; patent; licen
- **INDUSTRY_LIAISON_UNIT:** industry liaison; industry office; partnership office; collaborat
- **INNOVATION_CENTRE:** innovation centre; innovation center; innovation hub
- **INCUBATOR_ACCELERATOR:** incubat; accelerat; technology park
- **RESEARCH_SUPPORT_OFFICE:** research office; project management; support office
- **EXTERNAL_PARTNERSHIP_STRUCTURE:** framework agreement; formal partnership; external partner; cooperation agreement

8.2.8.3 Institution lists per code (INST)

- **TTO_STRUCTURE (N=12):** BME, FhG-ISI, Unios, INCDSB, EDU, UNIBL, UKIM, UNSFA, AUT, UP, AUP, BOKU
- **IP_OFFICE_SUPPORT (N=8):** BME, FhG-ISI, Unios, EDU, UNIBL, UNSFA, AUP, BOKU
- **INDUSTRY_LIAISON_UNIT (N=7):** FhG-ISI, EDU, UNIBL, UKIM, UNSFA, AUT, BOKU
- **INNOVATION_CENTRE (N=1):** UNIBL
- **INCUBATOR_ACCELERATOR (N=3):** Unios, EDU, UNIBL
- **RESEARCH_SUPPORT_OFFICE (N=2):** UNIBL, AUP
- **EXTERNAL_PARTNERSHIP_STRUCTURE (N=1):** FhG-ISI

8.2.9 Barriers and Challenges – Q3

8.2.9.1 Codebook and empirical coverage

Code	Definition	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤20 words)
REGULATORY_ PROCEDURAL	References to regulations, administrative procedures, bureaucracy, approvals or compliance constraints.	7	EDU	Precisely because we are actively working on valorization, I can clearly see the obstacles: 1. Insufficiently formalized institutional processes – ...
FUNDING_RES OURCE_LIMITS	Mentions of limited funding, budget constraints, or lack of resources/capacity.	9	BME	Market interests and negotiation challenges: financial agreements and interest alignment are complex, and researchers require support for effective business negotiations....
ACADEMIC_IN CENTIVE_MISA LIGN	Mentions of publication focus, academic priorities, promotion/evaluation	7	INCDSB	The most significant obstacles are insufficient funding for the validation studies, development of the prototype and demonstration projects; high cost...

Code	Definition	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
	systems limiting valorisation.			
MARKET_DEMAND_UNCERTAINTY	References to market uncertainty, commercial viability, negotiation or demand-related barriers.	8	BME	Market interests and negotiation challenges: financial agreements and interest alignment are complex, and researchers require support for effective business negotiations....
IP_COMPLEXITY	Mentions of intellectual property complexity, patenting difficulties or licensing challenges.	9	BME	Market interests and negotiation challenges: financial agreements and interest alignment are complex, and researchers require support for effective business negotiations....
TIME_CONSTRAINTS	References to time limitations, workload, teaching pressure or competing priorities.	7	INCDSB	The most significant obstacles are insufficient funding for the validation studies, development of the prototype and demonstration projects; high cost...

Code	Definition	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
SKILLS_COMPE TENCE_GAP	Mentions of lack of skills, competence gaps or insufficient experience.	5	Unios	Due to long-year emphasis of importance of publicizing research results in top ranking journals rather than considering the potential of...
ECOSYSTEM_L IMITATIONS	References to regional ecosystem limitations or weak external environment.	3	FhG-ISI	For Fraunhofer institutes, it is mandatory to acquire a certain percentage of their budget from industry. Fraunhofer ISI struggles to...

8.2.9.2 Keyword rule-sets used for flagging

- **REGULATORY_PROCEDURAL:** regulation; procedure; administrat; bureaucr; approval; compliance
- **FUNDING_RESOURCE_LIMITS:** fund; resource; budget; financial; capacity
- **ACADEMIC_INCENTIVE_MISALIGN:** publication; academic; promotion; evaluation; incentive
- **MARKET_DEMAND_UNCERTAINTY:** market; demand; negotiat; commercial
- **IP_COMPLEXITY:** patent; licen; intellectual property
- **TIME_CONSTRAINTS:** time; workload; teaching; competing
- **SKILLS_COMPETENCE_GAP:** lack of skills; competence; experience; knowledge
- **ECOSYSTEM_LIMITATIONS:** ecosystem; regional; industry base; external environment

8.2.9.3 Institution lists per code (INST)

- **REGULATORY_PROCEDURAL (N=7):** EDU, UNIBL, UKIM, UNSFA, UP, AUP, BOKU
- **FUNDING_RESOURCE_LIMITS (N=9):** BME, FhG-ISI, INCDSB, EDU, UNIBL, UKIM, AUT, AUP, BOKU
- **ACADEMIC_INCENTIVE_MISALIGN (N=7):** INCDSB, EDU, UNIBL, UKIM, AUT, AUP, BOKU
- **MARKET_DEMAND_UNCERTAINTY (N=8):** BME, INCDSB, EDU, UNIBL, UKIM, UNSFA, AUT, BOKU
- **IP_COMPLEXITY (N=9):** BME, Unios, INCDSB, EDU, UNIBL, UKIM, AUT, AUP, BOKU
- **TIME_CONSTRAINTS (N=7):** INCDSB, UNIBL, UKIM, UNSFA, AUT, UP, BOKU
- **SKILLS_COMPETENCE_GAP (N=5):** Unios, UNIBL, UKIM, UNSFA, AUT
- **ECOSYSTEM_LIMITATIONS (N=3):** FhG-ISI, EDU, AUP

8.2.10 Motivation Factors – Q4

8.2.10.1 Codebook and empirical coverage

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
FINANCIAL_INCENTIVES	Mentions of financial incentives, remuneration, revenue sharing, bonuses, monetary rewards.	9	BME	Financial incentives: inventor's remuneration scheme exists (standard contract), though not yet fully implemented. Institutional culture: Presence of motivated, successful teams...
RECOGNITION_CAREER	Recognition, career advancement, promotion, evaluation criteria, reputation/recognition.	10	BME	Financial incentives: inventor's remuneration scheme exists (standard contract), though not yet fully implemented. Institutional culture: Presence of motivated, successful teams...
SOCIETAL_IMPACT	Motivation linked to societal impact, relevance, public	9	FhG-ISI	Main factors are to work on relevant topics and to have impact on

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
	benefit, addressing challenges.			shaping developments in policy, technology, economy, ecology,...
INSTITUTIONAL_CULTURE	Mentions of institutional culture, organisational climate, norms, internal attitudes.	3	BME	Financial incentives: inventor's remuneration scheme exists (standard contract), though not yet fully implemented. Institutional culture: Presence of motivated, successful teams...
LEADERSHIP_SUPPORT	Leadership signals/support, management encouragement, strategic emphasis from leadership.	6	Unios	Researchers mostly engage in knowledge valorization for the recognition of their work and probably financial support along with societal impact...
COLLAB_NETWORK	Motivation via collaboration, networks, partnerships, applied cooperation.	7	BME	Financial incentives: inventor's remuneration scheme exists (standard contract), though not yet fully implemented. Institutional culture: Presence of motivated, successful teams...

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
ENTREPRENEURSHIP_INT EREST	Entrepreneurship interest, start-up/spin-off drive, innovation ambition.	7	BME	Financial incentives: inventor's remuneration scheme exists (standard contract), though not yet fully implemented. Institutional culture: Presence of motivated, successful teams...
RESEARCH_APPLICATION	Motivation to see research applied/translated, real-world uptake, practical application.	7	BME	Financial incentives: inventor's remuneration scheme exists (standard contract), though not yet fully implemented. Institutional culture: Presence of motivated, successful teams...

8.2.10.2 Keyword rule-sets used for flagging

- **FINANCIAL_INCENTIVES:** financial; remunerat; revenue sharing; bonus; royalt; payment; incentive
- **RECOGNITION_CAREER:** recognit; career; promotion; evaluation; appraisal; reward; reputation
- **SOCIETAL_IMPACT:** societ; impact; relevant; public; challenge; sustainable; SDG
- **INSTITUTIONAL_CULTURE:** culture; climate; mindset; attitude; tradition

- **LEADERSHIP_SUPPORT:** leadership; management; vice[-]?rector; rector; support; encourag
- **COLLAB_NETWORK:** collabor; partner; network; industry; SME; stakeholder
- **ENTREPRENEURSHIP_INTEREST:** entrepreneur; start[-]?up; spin[-]?off; innovation; venture
- **RESEARCH_APPLICATION:** application; implement; uptake; real[-]?world; translate; practice

8.2.10.3 Institution lists per code (INST)

- **FINANCIAL_INCENTIVES (N=9):** BME, FhG-ISI, Unios, INCDSB, EDU, UNIBL, UKIM, AUT, AUP
- **RECOGNITION_CAREER (N=10):** BME, FhG-ISI, Unios, INCDSB, EDU, UNIBL, UKIM, AUT, AUP, BOKU
- **SOCIETAL_IMPACT (N=9):** FhG-ISI, Unios, INCDSB, EDU, UNIBL, UKIM, AUT, AUP, BOKU
- **INSTITUTIONAL_CULTURE (N=3):** BME, FhG-ISI, UNIBL
- **LEADERSHIP_SUPPORT (N=6):** Unios, INCDSB, EDU, UNIBL, AUP, BOKU
- **COLLAB_NETWORK (N=7):** BME, FhG-ISI, INCDSB, EDU, UNIBL, UKIM, AUT
- **ENTREPRENEURSHIP_INTEREST (N=7):** BME, EDU, UNIBL, UKIM, AUT, AUP, BOKU
- **RESEARCH_APPLICATION (N=7):** BME, INCDSB, EDU, UNIBL, AUT, AUP, BOKU

8.2.11 Best Practices – Q5

8.2.11.1 Codebook and empirical coverage

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤20 words)
SPINOFF_CASE	Concrete example of spin-off/start-up creation.	3	BME	aHead Spin-off (case example): The university financed the patent applications. Researchers, with BME's support, founded a spin-off company. The IP...
PATENT_COMMERCIALISATION_CASE	Example involving patenting/licensing/commercial exploitation.	2	BME	aHead Spin-off (case example): The university financed the patent applications. Researchers, with BME's support, founded a spin-off company. The IP...
INDUSTRY_COLLABORATION_CASE	Example of structured collaboration with industry/SMEs.	9	BME	aHead Spin-off (case example): The university financed the patent applications. Researchers, with BME's support, founded a spin-off company. The IP...

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
RESEARCH_APP LIED_IMPACT_ CASE	Example of applied research generating societal/practical impact.	8	BME	aHead Spin-off (case example): The university financed the patent applications. Researchers, with BME's support, founded a spin-off company. The IP...
ENABLING_IP_S UPPORT	Success attributed to strong IP/legal/administrative support.	8	BME	aHead Spin-off (case example): The university financed the patent applications. Researchers, with BME's support, founded a spin-off company. The IP...
ENABLING_LEA DERSHIP	Success attributed to leadership/management support.	3	UNIBL	The our main platform for valorization for knowledge transfer is our Experimental Education Center in Aleksanadovac. As I already mentioned,...
ENABLING_EXTE RNAL_ECOSYST EM	Success linked to incubators, accelerators, ecosystem actors.	0		

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
ENABLING_TEAM_INITIATIVE	Success attributed to motivated research team/individual initiative.	4	FhG-ISI	A good practice example from the department Emerging Technologies is the focus topic battery technologies Industrial Technologies - Fraunhofer ISI...

8.2.11.2 Keyword rule-sets used for flagging

- **SPINOFF_CASE:** spin[-]?off; start[-]?up
- **PATENT_COMMERCIALISATION_CASE:** patent; licen; intellectual property
- **INDUSTRY_COLLAB_CASE:** industry; SME; company; collaborat; partnership
- **RESEARCH_APPLIED_IMPACT_CASE:** application; implemented; impact; public; policy
- **ENABLING_IP_SUPPORT:** IP; legal; contract; support office
- **ENABLING_LEADERSHIP:** leadership; management; vice[-]?rector; support from
- **ENABLING_EXTERNAL_ECOSYSTEM:** incubat; accelerat; ecosystem; technology park
- **ENABLING_TEAM_INITIATIVE:** team; initiative; research group; motivat

8.2.11.3 Institution lists per code (INST)

- **SPINOFF_CASE (N=3):** BME, AUP, BOKU
- **PATENT_COMMERCIALISATION_CASE (N=2):** BME, AUP
- **INDUSTRY_COLLAB_CASE (N=9):** BME, FhG-ISI, Unios, INCDSB, EDU, UNIBL, UNSFA, AUP, BOKU
- **RESEARCH_APPLIED_IMPACT_CASE (N=8):** BME, FhG-ISI, Unios, EDU, UNIBL, UKIM, UNSFA, AUP
- **ENABLING_IP_SUPPORT (N=8):** BME, FhG-ISI, EDU, UNIBL, UNSFA, AUT, AUP, BOKU
- **ENABLING_LEADERSHIP (N=3):** UNIBL, AUT, AUP
- **ENABLING_EXTERNAL_ECOSYSTEM (N=0):** None
- **ENABLING_TEAM_INITIATIVE (N=4):** FhG-ISI, EDU, UNIBL, UKIM

8.2.12 Results and Impact Measurement – Q6

8.2.12.1 Codebook and empirical coverage

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
PATENTS_IP_METRICS	Mentions of patents, IP indicators, licensing, royalties, IP-related metrics.	7	BME	Indicators: • Number of patents and total valorisation volume. • Examination of the economic indicators of spin-off companies and other...
SPINOFF_STARTUP_METRICS	Mentions of spin-offs/start-ups as tracked outcomes.	2	BME	Indicators: • Number of patents and total valorisation volume. • Examination of the economic indicators of spin-off companies and other...
PARTNERSHIP_CONTRACT_METRICS	Mentions of partnerships, collaboration contracts, industry projects as tracked outcomes.	9	FhG-ISI	Fraunhofer ISI regularly conducts commissioned studies to assess and measure innovation activities on the level of whole countries, institutions. For...

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
SOCIETAL_POLICY_IMPACT	Mentions of societal impact, policy impact, qualitative impact descriptions.	8	BME	Indicators: • Number of patents and total valorisation volume. • Examination of the economic indicators of spin-off companies and other...
EVALUATION_FRAMEWORK	References to evaluation frameworks, indicators, KPIs, monitoring systems.	10	BME	Indicators: • Number of patents and total valorisation volume. • Examination of the economic indicators of spin-off companies and other...
REPORTING_CYCLES	References to regular reporting cycles or institutional reporting routines.	6	FhG-ISI	Fraunhofer ISI regularly conducts commissioned studies to assess and measure innovation activities on the level of whole countries, institutions. For...
PROJECT_LEVEL_TRACKING	Mentions of project-level tracking/evaluation (commissioned studies, project reporting).	7	FhG-ISI	Fraunhofer ISI regularly conducts commissioned studies to assess and measure innovation activities on the level of whole countries, institutions. For...
NO_FORMAL_INDICATORS	Explicit statements that no specific	1	Unios	There are no specific indicators used to track progress and outcomes. We

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
	indicators/frameworks are used.			collect data on number of patents, partnerships, etc.

8.2.12.2 Keyword rule-sets used for flagging

- **PATENTS_IP_METRICS:** patent; license|licence; royalt; intellectual property
- **SPINOFF_STARTUP_METRICS:** spin[-]?off; start[-]?up
- **PARTNERSHIP_CONTRACT_METRICS:** partnership; collaborat; contract; industry; SME
- **SOCIETAL_POLICY_IMPACT:** societ; policy; impact; public
- **EVALUATION_FRAMEWORK:** indicator; KPI; framework; monitor; evaluation; dashboard
- **REPORTING_CYCLES:** annual; yearly; report; regular; cycle
- **PROJECT_LEVEL_TRACKING:** project; commissioned; study; deliverable; reporting requirements
- **NO_FORMAL_INDICATORS:** no specific indicator; no indicators; not used; none

8.2.12.3 Institution lists per code (INST)

- **PATENTS_IP_METRICS (N=7):** BME, Unios, EDU, UKIM, AUT, AUP, BOKU
- **SPINOFF_STARTUP_METRICS (N=2):** BME, BOKU
- **PARTNERSHIP_CONTRACT_METRICS (N=9):** FhG-ISI, Unios, EDU, UNIBL, UKIM, AUT, UP, AUP, BOKU

- **SOCIETAL_POLICY_IMPACT (N=8):** BME, FhG-ISI, INCDSB, EDU, UNIBL, UKIM, AUT, AUP
- **EVALUATION_FRAMEWORK (N=10):** BME, FhG-ISI, Unios, INCDSB, EDU, UNIBL, UKIM, AUT, AUP, BOKU
- **REPORTING_CYCLES (N=6):** FhG-ISI, INCDSB, UNIBL, AUT, AUP, BOKU
- **PROJECT_LEVEL_TRACKING (N=7):** FhG-ISI, EDU, UNIBL, UKIM, AUT, UP, AUP
- **NO_FORMAL_INDICATORS (N=1):** Unios

8.2.13 Use of Impact Evidence – Q7

8.2.13.1 Codebook and empirical coverage

Code	Definition	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤20 words)
STRATEGIC_DE CISION_SUPPO RT	Impact evidence used to inform institutional strategy or planning.	9	FhG-ISI	The measures on knowledge valorisation at ISI is used to consider whether the strategy and practices are still appropriate. Minor...
RESOURCE_ALL OCATION	Impact results used to guide funding or resource allocation decisions.	3	EDU	The results we measure are not just for reporting. They are the basis for: • improving the institutional research and...
POLICY_REVIEW _UPDATE	Impact evidence used to revise or update policies/procedures.	4	EDU	The results we measure are not just for reporting. They are the basis for: • improving the institutional research and...
PERFORMANCE _EVALUATION	Impact evidence used in evaluation or	6	BME	Impact evaluation framework: At senior management level, there is

Code	Definition	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤20 words)
	performance review processes.			strong commitment. The goal is to establish a predictable yet flexible...
REPORTING_EXTERNAL	Use of impact evidence for external reporting obligations.	4	EDU	The results we measure are not just for reporting. They are the basis for: • improving the institutional research and...
INTERNAL_FEEDBACK_LOOP	Impact evidence used to improve internal practices or processes.	6	FhG-ISI	The measures on knowledge valorisation at ISI is used to consider whether the strategy and practices are still appropriate. Minor...
LIMITED_USE	Explicit indication that impact evidence has limited or unclear use.	3	UNIBL	Because our university is centralized to much things depending on the top level. Each year each organizational unit including the...

8.2.13.2 Keyword rule-sets used for flagging

STRATEGIC_DECISION_SUPPORT: strategy; strategic; planning; decision

RESOURCE_ALLOCATION: resource; allocation; budget; funding

POLICY_REVIEW_UPDATE: policy; revise; update; procedure

PERFORMANCE_EVALUATION: evaluation; performance; appraisal; assessment

REPORTING_EXTERNAL: report; external; authority; commission

INTERNAL_FEEDBACK_LOOP: improve; adjust; refine; feedback

LIMITED_USE: limited; not used; rarely; unclear

8.2.13.3 Institution lists per code (INST)

STRATEGIC_DECISION_SUPPORT (N=9): FhG-ISI, Unios, INCDSB, EDU, UNIBL, UKIM, AUT, AUP, BOKU

RESOURCE_ALLOCATION (N=3): EDU, AUT, AUP

POLICY_REVIEW_UPDATE (N=4): EDU, UKIM, AUT, BOKU

PERFORMANCE_EVALUATION (N=6): BME, INCDSB, UNIBL, AUT, AUP, BOKU

REPORTING_EXTERNAL (N=4): EDU, UNIBL, UKIM, AUT

INTERNAL_FEEDBACK_LOOP (N=6): FhG-ISI, UNIBL, UKIM, AUT, AUP, BOKU

LIMITED_USE (N=3): UNIBL, UKIM, AUT

8.2.14 Future Priorities – Q8

8.2.14.1 Codebook and empirical coverage

Code	Definition	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤20 words)
INCREASE_TRAINING_AWARENESS	Priority to increase training, awareness-raising, capacity building.	8	BME	1. Training and awareness-raising: innovation and valorisation training programmes for researchers. 2. Supportive environment – strengthen institutional infrastructure and services....
STRENGTHEN_STRATEGY_POLICY	Priority to strengthen or formalise strategy, policy, procedures.	8	BME	1. Training and awareness-raising: innovation and valorisation training programmes for researchers. 2. Supportive environment – strengthen institutional infrastructure and services....
ENHANCE_IP_SYSTEM	Priority to improve IP management, patenting, licensing systems.	5	Unios	Established policies (e. g. procedure) for intellectual property protection Education of researchers regarding the intellectual property and entrepreneurship Facilitating start-up...

Code	Definition	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
IMPROVE_INCENTIVES	Priority to improve incentive structures, recognition, rewards.	3	INCDSB	The three most important measures or changes needed to strengthen knowledge valorisation in my institution are the training opportunities, more...
EXPAND_PARTNERSHIPS	Priority to expand collaboration with industry/external partners.	8	FhG-ISI	<ul style="list-style-type: none"> • More systematic strategic institute-wide approach to strengthen interaction with industry and to achieve the acquisition targets for industry-funded projects...
INCREASE_FUNDING_SUPPORT	Priority to increase funding, seed capital, financial resources.	5	FhG-ISI	<ul style="list-style-type: none"> • More systematic strategic institute-wide approach to strengthen interaction with industry and to achieve the acquisition targets for industry-funded projects...
STREAMLINE_PROCEDURES	Priority to simplify or streamline administrative procedures.	1	INCDSB	The three most important measures or changes needed to strengthen knowledge valorisation in my institution are the training opportunities, more...

Code	Definition	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
REVIEW_POLICY_CYCLE	Reference to review frequency or governance actors in policy review.	9	BME	1. Training and awareness-raising: innovation and valorisation training programmes for researchers. 2. Supportive environment – strengthen institutional infrastructure and services....

8.2.14.2 Keyword rule-sets used for flagging

- **INCREASE_TRAINING_AWARENESS:** training; awareness; capacity; seminar; workshop
- **STRENGTHEN_STRATEGY_POLICY:** strategy; policy; procedure; formalise; regulation
- **ENHANCE_IP_SYSTEM:** patent; licen; intellectual property
- **IMPROVE_INCENTIVES:** incentive; recognit; reward; promotion; evaluation
- **EXPAND_PARTNERSHIPS:** industry; partner; collaborat; SME
- **INCREASE_FUNDING_SUPPORT:** fund; budget; financial; seed; investment
- **STREAMLINE_PROCEDURES:** simplify; streamline; administrat; bureaucr; approval
- **REVIEW_POLICY_CYCLE:** review; annual; board; committee; council

8.2.14.3 Institution lists per code (INST)

- **INCREASE_TRAINING_AWARENESS (N=8):** BME, FhG-ISI, INCDSB, EDU, UKIM, AUT, AUP, BOKU
- **STRENGTHEN_STRATEGY_POLICY (N=8):** BME, Unios, INCDSB, EDU, UKIM, AUT, AUP, BOKU
- **ENHANCE_IP_SYSTEM (N=5):** Unios, EDU, UNIBL, UKIM, BOKU
- **IMPROVE_INCENTIVES (N=3):** INCDSB, UKIM, AUT
- **EXPAND_PARTNERSHIPS (N=8):** FhG-ISI, Unios, INCDSB, EDU, UNIBL, UKIM, AUP, BOKU
- **INCREASE_FUNDING_SUPPORT (N=5):** FhG-ISI, UNIBL, UKIM, AUT, AUP
- **STREAMLINE_PROCEDURES (N=1):** INCDSB
- **REVIEW_POLICY_CYCLE (N=9):** BME, FhG-ISI, INCDSB, EDU, UNIBL, AUT, UP, AUP, BOKU

8.2.15 Training Needs – Q9

8.2.15.1 Codebook and empirical coverage

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
IP_TRAINING	Training needs related to intellectual property, patents, licensing.	6	BME	Innovation and valorisation training for researchers. Career development pathways related to innovation. Micro-credential programmes on knowledge valorisation. PhD-level courses on...
TECH_TRANSF ER_TRAINING	Training on technology transfer processes, commercialisation pathways.	8	BME	Innovation and valorisation training for researchers. Career development pathways related to innovation. Micro-credential programmes on knowledge valorisation. PhD-level courses on...
ENTREPRENEUR SHIP_TRAININ G	Entrepreneurship, start-up, spin-off, business development training.	2	EDU	In my opinion and experience, the most useful trainings would be: • intellectual property, • communication with industry and partnership...

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
INDUSTRY_CO LLAB_TRAININ G	Training on collaboration with industry, negotiation, partnership building.	6	INCDSB	The most beneficial to enhance knowledge valorisation in my institution are the industry collaboration and the funding programmes. A beneficial...
IMPACT_COM MUNICATION_ TRAINING	Training on societal impact, communication, dissemination to non-academic audiences.	5	EDU	In my opinion and experience, the most useful trainings would be: • intellectual property, • communication with industry and partnership...
PROJECT_EXP LOITATION_TR AINING	Training on exploitation planning, project-based valorisation requirements.	8	BME	Innovation and valorisation training for researchers. Career development pathways related to innovation. Micro-credential programmes on knowledge valorisation. PhD-level courses on...
ADMIN_CAPA CITY_TRAININ G	Training needs for administrative/support staff.	7	BME	Innovation and valorisation training for researchers. Career development pathways related to innovation. Micro-credential programmes on knowledge valorisation. PhD-level courses on...

Code	Definition (what is counted)	Institutions flagged (N)	Example institution (INST)	Evidence snippet (≤ 20 words)
POLICY_AWAR ENESS_TRAINING	Training on European/national policy frameworks relevant to valorisation.	4	EDU	In my opinion and experience, the most useful trainings would be: • intellectual property, • communication with industry and partnership...

8.2.15.2 Keyword rule-sets used for flagging

- **IP_TRAINING:** patent; licen; intellectual property
- **TECH_TRANSFER_TRAINING:** technology transfer; commerciali; valorisation; knowledge transfer
- **ENTREPRENEURSHIP_TRAINING:** entrepreneur; start[-]up; spin[-]off; business plan; venture
- **INDUSTRY_COLLAB_TRAINING:** industry; collaborat; negotiat; partner; SME
- **IMPACT_COMMUNICATION_TRAINING:** impact; communicat; disseminat; public; stakeholder
- **PROJECT_EXPLOITATION_TRAINING:** exploitation; project; Horizon; proposal
- **ADMIN_CAPACITY_TRAINING:** administrat; staff; support unit; management
- **POLICY_AWARENESS_TRAINING:** policy; European; regulation; framework

8.2.15.3 Institution lists per code (INST)

- **IP_TRAINING (N=6):** BME, INCDSB, EDU, UNIBL, AUT, BOKU
- **TECH_TRANSFER_TRAINING (N=8):** BME, INCDSB, EDU, UNIBL, UKIM, AUT, AUP, BOKU
- **ENTREPRENEURSHIP_TRAINING (N=2):** EDU, BOKU
- **INDUSTRY_COLLAB_TRAINING (N=6):** INCDSB, EDU, UNIBL, UKIM, AUP, BOKU
- **IMPACT_COMMUNICATION_TRAINING (N=5):** EDU, AUT, UP, AUP, BOKU
- **PROJECT_EXPLOITATION_TRAINING (N=8):** BME, FhG-ISI, Unios, EDU, UNIBL, UKIM, AUP, BOKU
- **ADMIN_CAPACITY_TRAINING (N=7):** BME, INCDSB, EDU, UNIBL, UKIM, AUP, BOKU
- **POLICY_AWARENESS_TRAINING (N=4):** EDU, UNIBL, UKIM, AUP

8.3 ANNEX – Survey

8.3.1 Survey methodology and sampling

The survey on knowledge valorisation was conducted among Bachelor's, Master's and PhD students as well as Early Career Researchers within the partner institutions of the BEAMING alliance. Participation was voluntary and responses were collected anonymously through an online questionnaire.

The dataset used in the analysis contains 163 responses. The questionnaire included closed questions, Likert-scale items, multiple-choice questions and one open question.

The survey aimed to capture: - awareness and understanding of knowledge valorisation - perceptions of institutional support mechanisms - perceived barriers to knowledge valorisation - training needs related to innovation and research commercialisation

8.3.2 Respondent profile

Respondents reported their research field and career stage. The questionnaire targeted early-stage academic actors, including undergraduate students, master students, doctoral candidates and early career researchers.

Fields of research included: - Life Sciences - Engineering and Technology - Environmental Sciences - Social Sciences - Humanities - Other domains reported by respondents.

Career stage categories included: - Bachelor's students - Master's students - PhD students - Early Career Researchers.

8.3.3 Structure of the questionnaire

The questionnaire contained several thematic sections:

1. Respondent profile and research background.
2. Familiarity with the concept of knowledge valorisation.

3. Institutional support mechanisms for knowledge valorisation.
4. Personal experience and perceptions of knowledge valorisation.
5. Perceived barriers to valorisation.
6. Training needs related to innovation, technology transfer and entrepreneurship.
7. Open question regarding additional support needs.

The survey combined factual questions regarding institutional support with perception-based questions using a Likert scale from 0 to 5.

8.3.4 Descriptive statistical analysis

The analysis conducted in the deliverable is based primarily on descriptive statistics. Frequency distributions were calculated for each question in order to determine the prevalence of specific institutional mechanisms and the distribution of perceptions among respondents.

For Likert-scale questions, the analysis focused on the distribution of responses across the six-point scale (0–5). These distributions were used to identify patterns of awareness, perceived usefulness of training, and levels of confidence in engaging in knowledge valorisation activities.

8.3.5 Cross-tabulation and comparative analysis

In addition to descriptive statistics, several cross-tabulations were used in the analytical chapters of the report. These comparisons examined variations across domains and career stages.

Cross-tabulations allowed the analysis to identify differences in: - awareness of knowledge valorisation opportunities - perceived usefulness of innovation training - perception of institutional support mechanisms - interest in participating in future training activities.

These cross-tabulations support the interpretation of survey results presented in the analytical chapters of the deliverable.

8.3.6 Indicator construction

The survey results contribute to the construction of several analytical indicators used in the report. These indicators capture aspects of institutional knowledge valorisation environments as perceived by respondents.

The indicators include: - awareness of knowledge valorisation opportunities - perceived usefulness of innovation and entrepreneurship training - perceived supervisor support for valorisation activities - confidence in developing research-based business ideas - interest in participating in future knowledge valorisation training.

These indicators are derived from Likert-scale questions and are used to characterise the perceived maturity of knowledge valorisation environments across the alliance.

8.3.7 Open-ended responses

The final survey question allowed respondents to describe additional forms of support or training that would help them better valorise their research results.

Responses to this question were reviewed qualitatively and used to complement the quantitative analysis presented in the report. Recurring themes included requests for:

- clearer guidance on intellectual property and patents
- practical training on innovation and entrepreneurship
- improved access to industry collaboration opportunities
- mentoring and support for developing business ideas.

8.3.8 Limitations

The survey results represent perceptions of early-stage researchers and students. While these perceptions provide important insights into the visibility and accessibility of knowledge valorisation mechanisms,

they do not necessarily reflect the full institutional infrastructure available within partner institutions.

In addition, response numbers vary across institutions and research fields. Consequently, the survey results should be interpreted as indicative of perceived institutional environments and not as a comprehensive measurement of institutional performance.

8.4 ANNEX – List of Figures

Figure 1. Conceptual Model of Institutional Knowledge Valorisation Systems	21
Figure 2 External innovation ecosystem	28
Figure 3. Structural degree of articulation (alliance level): % of structural codes present (domain-normalised; Note: The figure does not measure institutional intensity in a performance sense. It represents the domain-normalised density of structural articulation)	43
Figure 4. Barrier distribution (alliance level): % institutions reporting barrier per domain	47
Figure 5. Distribution of monitoring and performance indicator components across institutions (alliance level)	55
Figure 6. Career stage distribution	79
Figure 7. Experience level distribution	81
Figure 8. Disciplinary Distribution	82
Figure 9. Intellectual Property and Patent Guidance	85
Figure 10. Entrepreneurship and Innovation Courses	86
Figure 11. Opportunities for Industry Collaboration	87
Figure 12. Support for Start-ups and Spin-offs	87
Figure 13. Innovation-Focused Mobility Programmes	88
Figure 14. Participation in International Knowledge Valorisation Networks	89
Figure 15. Documented Success Stories and Visible Examples	90
Figure 16. Awareness of Knowledge Valorisation Opportunities	92
Figure 17. Perceived Usefulness of Previous Innovation Training	93
Figure 18. Supervisor Encouragement to Engage in Knowledge Valorisation	94
Figure 19. Confidence in Developing a Business Idea from Research	94
Figure 20. Interest in Participating in Future Knowledge Valorisation Activities	95
Figure 21. Perceived Barriers to Knowledge Valorisation	98
Figure 22. Management of Innovation	104
Figure 23. Technology Brokering and Transfer	105
Figure 24. Research Marketing and Communication	107
Figure 25. Business Plan Development and Entrepreneurship	108
Figure 26. Cross-cutting and Policy-Oriented Topics	110
Figure 27. Training topics ranking	112
Figure 28 Analytical linkage overview	139

8.5 ANNEX – List of Tables

Table 1. Analytical distinction between monitoring functions in institutional knowledge valorisation systems	26
Table 2. Proposed Knowledge Valorisation Monitoring Indicators	27
Table 3. Frequency of reported motivational drivers in institutional interviews	49
Table 4. Cross-cutting analytical patterns in institutional knowledge valorisation systems.....	65
Table 5. Awareness of knowledge valorisation opportunities by research experience.....	75
Table 6. Perceived barriers to knowledge valorisation by disciplinary field.....	76
Table 7. Evidence sources supporting identified gap domains.....	127
Table 8 Mapping roadmap, gap and data.....	138