# Capacity-building to Foster Knowledge-based Innovation in Higher Education

Webinar Background Note

Community for Educational Innovation - CEI

18/11/2025





# Capacity-building for Researchers: Fostering Knowledge-based Innovation in Higher Education

Thematic Strand 2 - From Research to Impact: Bridging the innovation gap in higher education

The <u>Community for Educational Innovation (CEI)</u> webinars bring together educators, researchers, policymakers, industry leaders, and representatives from civil society to exchange knowledge, share best practices, and engage in discussions on innovation in education. CEI webinars promote the strategic development of skills and competences essential for student success across various sectors, aligning with the objectives of the recent European Commission's communication on the <u>Union of Skills</u> to enhance the EU's competitiveness through advancing its education and training systems.

This document describes the background, focus, and key questions that will guide the presentations and discussions during the webinar '<u>Capacity-building for Researchers</u>: <u>Fostering Knowledge-based Innovation in Higher Education</u>' on 18 November 2025.

Building capacity for knowledge valorisation means equipping researchers, institutions and their partners with the skills, mindsets, resources and enabling conditions to translate knowledge into value. To promote knowledge valorisation, "a vital first step is prioritising capacity-building initiatives. Stakeholders need the necessary knowledge and mindset to actively participate in such activities." This implies training individuals and fostering supportive environments and networks. Hence, capacity building is the foundation for ensuring that scientific knowledge can be fully used for societal benefit.

Capacity building for knowledge valorisation operates at the individual (and team), organisational, and ecosystem levels.<sup>2</sup> These dimensions should be nurtured jointly to foster a culture of innovation within higher education:

At the individual and team level, capacity building focuses on researchers'
and support staff's knowledge, skills, attitudes, and mindsets. It involves
improving technical and managerial skills and 'soft' skills like commitment,
motivation, and leadership.

<sup>&</sup>lt;sup>1</sup> Knowledge Valorisation: A key to maximising R&I impact, PSF Challenge - Mutual Learning Exercise, 2024, p. 1, https://research-and-innovation.ec.europa.eu/document/download/45c0ff7a-0016-42a9-8652-684d5121d678\_en

<sup>&</sup>lt;sup>2</sup> Schaap, L.; Nijland, F.; Cents-Boonstra, M.; Vanlommel, K. A Framework Supporting the Innovative Capacity of Higher Education Institutions: An Integrative Literature Review. Sustainability 17, 6517, 2025, <a href="https://doi.org/10.3390/su17146517">https://doi.org/10.3390/su17146517</a>

- At the institutional level, it implies assessing institutions' performance and strengthening their mission, strategies, culture, processes, communication, and resources (human, financial, and information). This also involves leadership commitment to promoting creativity, intersectoral collaboration and risk-taking, and simplifying administrative processes that may hindered external engagement.
- At the ecosystem level, it requires creating policies, laws, economic conditions and social norms that allow for growth and the successful management of resources. European policy emphasises engaging "all actors in the research and innovation ecosystem" and focusing on collaboration, co-creation and shared value creation. Higher education institutions often play a key role as knowledge brokers in their regions, acting as bridges between the worlds of research and practice.

### Developing innovation skills and mindsets

A central element of capacity building for knowledge valorisation is developing the skills and mindsets that enable researchers, educators, students and technology transfer offices staff to pursue innovation. As identified by the Mutual Learning Exercise on Knowledge Valorisation<sup>4</sup> held in Vienna on the 19th and 20th of June 2023, the key groups of skills for fostering knowledge valorisation are:

- **Communication and dissemination**: Knowing how to share research findings effectively with a wide range of audiences, such as peers, policymakers, customers, and the public.
- **Intellectual assets management**: knowing how to protect, manage and exploit intellectual assets (patents, copyrights, data) to maximise impact while respecting open science where appropriate.
- Skills to enable open science: Data management, data sharing and other
  relevant skills that enable researchers to practice open science, which is the
  movement to make scientific research, data, and dissemination accessible
  to all levels of society. This can increase the transparency, reproducibility,
  and impact of their research.

 $\underline{practice\_en\#:} \text{-:text=The} \& 20 \\ \underline{guiding} \& 20 \\ \underline{principles} \& 20 \\ \underline{engage} \& 20 \\ \underline{all,by} \& 20 \\ \underline{research} \& 20 \\ \underline{and} \& 20 \\ \underline{innovation} \& 20 \\ \underline{and} \& 20 \\ \underline{a$ 

<sup>&</sup>lt;sup>3</sup> European Commission, Guiding Principles for Knowledge Valorisation and implementing Codes of Practice, https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/eu-valorisation-policy/knowledge-valorisation-platform/guiding-principles-knowledge-valorisation-and-implementing-codes-

<sup>&</sup>lt;sup>4</sup> European Commission: Directorate-General for Research and Innovation and Moonir Shawrav, M., Incentives and skills – Focus on research talent – Mutual learning exercise on knowledge valorisation – Focus on skills, intersectoral cooperation and incentive systems – Second thematic report, 2023, <a href="https://data.europa.eu/doi/10.2777/78254">https://data.europa.eu/doi/10.2777/78254</a>

- **Business skills**: Enabling researchers to spot opportunities, navigate the business world, understand market needs, and transform ideas into viable innovations. They include entrepreneurship, project management, problemsolving, networking, adaptability, and cultural awareness.
- **Soft skills**: These skills complement the technical expertise of researchers and include critical thinking, ethics and integrity, creativity, leadership, negotiation skills, etc.
- Intermediary skills for knowledge valorisation: Specific skills and training
  are needed for professionals in technology scouting, knowledge brokering,
  technology transfer, and knowledge valorisation. Intermediaries assist
  researchers and contribute to their skills development and valorisation
  activities.

These skills are embedded within the ResearchComp framework,<sup>5</sup> a competence framework for researchers developed by the European Commission. ResearchComp defines seven competence areas, 38 competences and 389 learning outcomes along four proficiency levels. Many of the competences highlighted in ResearchComp – from communication and collaboration to innovation and intellectual asset management – directly support knowledge valorisation. The framework provides a common reference point and language for skills, helping researchers assess their strengths and identify gaps, and helping universities or training providers design targeted training to meet those needs.

Fostering transversal skills such as entrepreneurship, creativity, critical thinking and civic engagement are broadly promoted by the 'Guiding principles for knowledge valorisation',<sup>6</sup> the 'European strategy for universities',<sup>7</sup> and the 'European Skills Agenda for sustainable competitiveness, social fairness and resilience'.<sup>8</sup>

### Institutional support for knowledge valorisation

Beyond skilled people, the institutions and the ecosystem must also develop capacities to support knowledge valorisation. This implies that they need to "consider the impact of organisational policies and culture [...] [and] create a supportive and conducive atmosphere for researchers, innovators, and

<sup>&</sup>lt;sup>5</sup> European Commission, ResearchComp: The European Competence Framework for Researchers, 2023, https://research-and-innovation.ec.europa.eu/document/download/7da29338-37bf-4d51-b5eb-a157lb84c7ad\_en?filename=ec\_rtd\_research-competence-presentation.pdf

<sup>&</sup>lt;sup>6</sup> Council Recommendation on the guiding principles for knowledge valorisation, 2022/2415, p. 143, <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H2415">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H2415</a>

<sup>&</sup>lt;sup>7</sup> Communication on a European Strategy for Universities, COM(2022) 16 final, <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52022DC0016">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52022DC0016</a>

<sup>&</sup>lt;sup>8</sup> Communication on a European Skills Agenda for sustainable competitiveness, social fairness and resilience, COM/2020/274 final, <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52020DC0274">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52020DC0274</a>

entrepreneurs, ultimately leading to greater success." Support mechanisms create the practical pathways and incentives for researchers to engage in valorisation activities.

The four key strategies that can support knowledge valorisation at the institutional levels, as identified by the 2023 *Mutual learning exercise on knowledge valorisation*, are:

- Funding: Support for researchers on their efforts in knowledge valorisation should help researchers grow individually and contribute to a diverse and dynamic research and innovation ecosystem. This includes facilitating access to grants, expertise, accelerators, and innovation spaces.
- Incentives: Incentives should help to attract researchers from industry to academia and provide researchers with reward systems that include research autonomy, leadership roles, opportunities for research commercialisation, co-ownership of intellectual property, royalty sharing, and recognition of knowledge valorisation activities in career progression.
   Secondments: These are opportunities for researchers to work in different sectors and foster a culture of intersectoral collaboration and mutual learning. Secondments can vary from short placements (less than a month) to medium-term (several months), often aligned with specific research projects or academic terms.
- Mobility: Support for geographical, cross-disciplinary, and intersectoral
  mobility schemes and recognition of such mobility. This can require tools
  such as promoting role models, coaching and mentoring, professors of
  practice, careers services, and networking projects.

The work of the Coalition for Advancing Research Assessment (CoARA)<sup>10</sup> is a concrete step toward promoting these support measures. This coalition of over 500 European research organisations is committed to reforming the evaluation methods and processes of research, researchers, and research organisations. It aims to reduce the emphasis on simplistic metrics and to value a broader range of outputs, including open science practices and knowledge valorisation activities.

### Consolidating a supportive ecosystem for knowledge valorisation

At the ecosystem level, capacity building for knowledge valorisation implies creating a supportive environment for research and innovation. This includes developing policies, laws, and economic conditions supporting knowledge valorisation across regional and country-level sectors. According to the European Commission, creating thriving regional innovation ecosystems requires engaging

\_

<sup>&</sup>lt;sup>9</sup> European Commission: Directorate-General for Research and Innovation and Moonir Shawrav, p. 11.

<sup>&</sup>lt;sup>10</sup> Coalition for Advancing Research Assessment (CoARA), <a href="https://coara.org/">https://coara.org/</a>

all stakeholders and focusing on collaboration, co-creation, and the creation of societal value.

Several interrelated factors shape the capacities of regional innovation ecosystems.

- **The absorptive capacity** plays a crucial role, as it represents the capacity of local firms to absorb the knowledge produced by local research institutions. This includes the "organisational structures and informal networks that exist to facilitate the flow of information."<sup>11</sup>
- **Smart Specialisation Strategies** (S3)<sup>12</sup> are a key policy tool in Europe that aligns regional innovation efforts, collaborative efforts, and resources with focus areas of strength and broader European Union goals.
- **Innovation support structures**, including technology transfer offices, innovation hubs, business incubators, and funding mechanisms, provide essential resources for research valorisation and developing new ventures.

At the regional ecosystem level, key incentives for knowledge valorisation include regional mechanisms to help researchers and entrepreneurs navigate the market, and tax incentives encouraging innovation investment. Seed funding and venture capital programmes support early-stage ventures, while innovation-friendly public procurement creates market demand for novel solutions. Capacity-building initiatives and the development of innovation clusters foster collaboration and knowledge exchange. Additionally, access to regional data and intellectual property management support ensures knowledge can be protected and utilised for economic growth, creating a regional supportive environment for innovation.

## Key challenges in capacity building for knowledge valorisation

The most significant challenges and barriers hindering capacity-building for knowledge valorisation in higher education, as highlighted in recent literature, include:

• **Skills gaps for navigating knowledge valorisation**: It has been observed that there is a "shortage of individuals with the necessary intermediary skills for knowledge valorisation," which hinders the development of innovation support capacities in the system. A shortage of dedicated knowledge transfer professionals (intermediaries) can hinder institutions' ability to support valorisation. Furthermore, many senior researchers, for instance,

\_

<sup>&</sup>lt;sup>11</sup> The Royal Society, *Regional absorptive capacity – The skills dimension*, 2022, p. 27, <a href="https://royalsociety.org/-/media/policy/Publications/2022/absorptive-capacity-report.pdf">https://royalsociety.org/-/media/policy/Publications/2022/absorptive-capacity-report.pdf</a>

<sup>&</sup>lt;sup>12</sup> European Commission, About S3, <a href="https://ec.europa.eu/regional\_policy/policy/communities-and-networks/s3-community-of-practice/about\_en">https://ec.europa.eu/regional\_policy/policy/communities-and-networks/s3-community-of-practice/about\_en</a>

<sup>&</sup>lt;sup>13</sup> European Commission: Directorate-General for Research and Innovation and Moonir Shawrav, p. 10.

have never received entrepreneurship or intellectual property management training and may find it daunting to engage in these areas.

- Cultural and mindset barriers: In many academic environments, "university policies, and academic culture may further hinder researchers from actively pursuing commercial opportunities."<sup>14</sup> A traditional mindset that prioritises basic research and scholarly publication over innovation or external engagement may persist.
- **Misalignment of incentives**: Incentive structures within higher education frequently do not recognise or reward knowledge valorisation activities adequately. "Research assessment in Europe often relies on various criteria and metrics, including publication output, citation counts, grants awarded, and societal impact. (...) However, there are concerns that the overemphasis on quantitative indicators may lead to a narrow understanding of research excellence, potentially overlooking other valuable contributions such as interdisciplinary research, knowledge transfer, and public engagement." 15
- Legal and administrative hurdles: Regulatory and administrative barriers can significantly slow down or block valorisation activities. These include complex university regulations on intellectual property ownership and revenue sharing, lengthy processes for contract approval, restrictive policies on faculty consulting or company creation, and national-level legal issues. Additionally, "intersectoral mobility, which involves the movement of researchers and professionals between academia, industry, and other sectors, as well as entrepreneurship, faces various legal complexities that can hinder the process." 16
- **Resource constraints**: Not all universities have the same level of funding to invest in support staff, incubators or training programmes. "One of the most important barriers related to knowledge valorisation is the early stage of the technology and difficulty in obtaining funding for its development (especially when the technology is high risk and immature)"<sup>17</sup>

<sup>&</sup>lt;sup>14</sup> Morisson, A., and Pattinson. M., Research Valorisation: A Policy Brief from the Policy Learning Platform for a smarter Europe, 2024, p. 8, <a href="https://www.interregeurope.eu/sites/default/files/2024-03/Policy%20brief%20on%20research%20valorisation.pdf">https://www.interregeurope.eu/sites/default/files/2024-03/Policy%20brief%20on%20research%20valorisation.pdf</a>

<sup>&</sup>lt;sup>15</sup> European Commission, Mutual learning exercise on knowledge valorisation – Topic 2b Discussion Paper. Incentives and Skills: Focus on Research Talent, 2023, p. 9, <a href="https://projects.research-and-innovation.ec.europa.eu/sites/default/files/rio/report/DiscussionPaper\_KnowledgeValorisation\_Topic%202b\_V7.">https://projects.research-and-innovation.ec.europa.eu/sites/default/files/rio/report/DiscussionPaper\_KnowledgeValorisation\_Topic%202b\_V7.</a> pdf

<sup>&</sup>lt;sup>16</sup> European Commission: Directorate-General for Research and Innovation and Moonir Shawrav, p. 11.

<sup>&</sup>lt;sup>17</sup> Grębosz-Krawczyk Magdalena & Sowa Mateusz, *Where is the social impact? Key barriers to knowledge valorisation*, Marketing of Scientific and Research Organisations, Sciendo, vol. 55(1), 2025, p. 9, <a href="https://doi.org/10.2478/minib-2025-0001">https://doi.org/10.2478/minib-2025-0001</a>

### Focus and key questions for the webinar

The webinar, 'Capacity-building for Researchers: Fostering Knowledge-based Innovation in Higher Education', will explore strategies for fostering researchers' skills, mindsets, and leadership to promote knowledge-based innovation and valorisation. Key questions guiding the discussion will include:

- What are the most significant barriers to capacity building for knowledge valorisation at the individual and institutional levels?
- What are the key benefits for higher education institutions investing in capacity building for knowledge valorisation?
- How can university leadership demonstrate a commitment to capacity building for knowledge valorisation and create the organisational culture necessary for fostering knowledge valorisation?

Do you have a good practice in 'Bridging the Innovation Gap in Higher Education'? You are welcome to share it with the CEI team to enrich the final report for this thematic strand. The good practices can focus on:

- **Partnerships** between higher education institutions and non-academic stakeholders.
- Support services for research-based innovation.
- Capacity-building for researchers, innovators, and support staff.

Contribute your experience in the CEI community's call for good practices here!

### References

- Coalition for Advancing Research Assessment (CoARA), <a href="https://coara.org/">https://coara.org/</a>
- Council Recommendation on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe, C/2023/1640, <a href="https://eur-lex.europa.eu/eli/C/2023/1640/oj/eng">https://eur-lex.europa.eu/eli/C/2023/1640/oj/eng</a>
- Council Recommendation on the guiding principles for knowledge valorisation, 2022/2415, <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H2415">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H2415</a>
- European Commission, Guiding Principles for Knowledge Valorisation and implementing Codes of Practice, <a href="https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/eu-valorisation-policy/knowledge-valorisation-platform/guiding-principles-knowledge-valorisation-and-implementing-codes-practice\_en#:~:text=The%20guiding%20principles%20engage%20all,by%20research%20and%20innovation%20activities</a>
- European Commission, Mutual learning exercise on knowledge valorisation Topic 2b Discussion Paper. Incentives and Skills: Focus on Research Talent, 2023, <a href="https://projects.research-and-innovation.ec.europa.eu/sites/default/files/rio/report/DiscussionPaper\_KnowledgeValorisation\_Topic%202b\_V7.pdf">https://projects.research-and-innovation.ec.europa.eu/sites/default/files/rio/report/DiscussionPaper\_KnowledgeValorisation\_Topic%202b\_V7.pdf</a>
- European Commission, ResearchComp: The European Competence Framework for Researchers, 2023, <a href="https://research-and-innovation.ec.europa.eu/document/download/7da29338-37bf-4d51-b5eb-a1571b84c7ad\_en?filename=ec\_rtd\_research-competence-presentation.pdf">https://research-and-innovation.ec.europa.eu/document/download/7da29338-37bf-4d51-b5eb-a1571b84c7ad\_en?filename=ec\_rtd\_research-competence-presentation.pdf</a>
- European Commission: Directorate-General for Research and Innovation and Moonir Shawrav, M., Incentives and skills Focus on research talent Mutual learning exercise on knowledge valorisation Focus on skills, intersectoral cooperation and incentive systems Second thematic report, 2023, <a href="https://data.europa.eu/doi/10.2777/78254">https://data.europa.eu/doi/10.2777/78254</a>
- Grębosz-Krawczyk Magdalena & Sowa Mateusz, Where is the social impact? Key barriers to knowledge valorisation, Marketing of Scientific and Research Organisations, Sciendo, vol. 55(1), 2025, https://doi.org/10.2478/minib-2025-0001
- Knowledge Valorisation: A key to maximising R&I impact, PSF Challenge Mutual Learning Exercise, 2024, <a href="https://research-and-innovation.ec.europa.eu/document/download/45c0ff7a-0016-42a9-8652-684d5121d678\_en">https://research-and-innovation.ec.europa.eu/document/download/45c0ff7a-0016-42a9-8652-684d5121d678\_en</a>
- Morisson, A., and Pattinson. M., Research Valorisation: A Policy Brief from the Policy Learning Platform for a smarter Europe, 2024,

p.https://www.interregeurope.eu/sites/default/files/2024-03/Policy%20brief%20on%20research%20valorisation.pdf

Schaap, L.; Nijland, F.; Cents-Boonstra, M.; Vanlommel, K. A Framework Supporting the Innovative Capacity of Higher Education Institutions: An Integrative Literature Review. Sustainability 17, 6517, 2025, https://doi.org/10.3390/su17146517

The Royal Society, Regional absorptive capacity – The skills dimension, 2022, <a href="https://royalsociety.org/-/media/policy/Publications/2022/absorptive-capacity-report.pdf">https://royalsociety.org/-/media/policy/Publications/2022/absorptive-capacity-report.pdf</a>