

Building Entrepreneurial Capacity in Universities Through Cross-Institutional Staff Training

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Abstract: Universities are increasingly expected to act as entrepreneurial and innovation-driven organisations, yet the development of entrepreneurial capacity among academic and professional staff remains uneven and fragmented. To address this issue, this study examines a cross-institutional knowledge management intervention designed to reduce fragmentation in university entrepreneurship support and strengthen staff capacity in innovation ecosystems. The study is situated within a five-university EIT HEI project and draws on needs-assessment data from all partner institutions, while the empirical evaluation focuses on two staff training cases implemented in Finland and the United Kingdom. Building on a multi-site needs assessment, semi-structured interviews and partner competence mapping were thematically analysed and formalised using a DACUM-based competence map that codifies three duty areas: (1) commercialisation of research and innovations, (2) student entrepreneurship support, and (3) innovative teaching methods in entrepreneurship. The resulting competence architecture specifies role-relevant tasks, required knowledge/skills/attitudes, supporting tools, and performance evidence, enabling transfer across heterogeneous academic and professional staff groups. The mapped competences were operationalised through blended local training and mentoring. In the two evaluated cases, training participation was associated with improved self-reported confidence in navigating entrepreneurship ecosystems, stronger cross-silo collaboration, and early spillover effects such as staff acting as ambassadors and strengthening links to external ecosystem actors. However, the study also identified challenges related to staff engagement, knowledge institutionalisation, and sustaining learning beyond project-based interventions. The findings suggest that structured competence mapping combined with multi-channel delivery can function as an effective KM design for eliciting, codifying, and scaling entrepreneurial support knowledge in higher education, while highlighting the need for stronger incentives and more systematic evaluation to sustain participation and evidence impact.

Keywords: Knowledge management, Competence mapping, DACUM, Higher education, Entrepreneurial ecosystems, Organizational learning, Capability building

1. Introduction

Over the past two decades, universities have been increasingly positioned as entrepreneurial and innovation-oriented organisations, expected to contribute not only through teaching and research but also through active engagement with industry and society (Etzkowitz & Leydesdorff, 2000, Guerrero et al., 2016). In practice, however, these activities do not always develop in a coordinated way.

In many institutions, entrepreneurship-related work is spread across different units: technology transfer offices, academic departments, and professional services, often with limited alignment between them (Siegel & Wright, 2015). As a result, expertise tends to remain localised, and opportunities for collaboration are not fully realised. This fragmentation is not only a structural issue but also a knowledge problem: relevant know-how exists, but it is unevenly distributed and not systematically shared.

This raises questions about how universities manage and mobilise knowledge internally. While higher education institutions are strong in knowledge creation, they are less effective when it comes to making that knowledge visible, transferable, and usable across contexts (Nonaka & Takeuchi, 1995, Dalkir, 2017). Much of the knowledge related to entrepreneurship support, for example, mentoring practices, ecosystem navigation, or funding strategies remains tacit and embedded in individual experience. Previous studies have shown that knowledge sharing in universities is often constrained by organisational silos and disciplinary boundaries (Fullwood et al., 2013), which further limits the scalability of such practices.

Efforts to address this have included the development of competence frameworks, most notably EntreComp, which conceptualises entrepreneurship as a set of knowledge, skills, and attitudes applicable across domains (Bacigalupo et al., 2016). These frameworks provide useful reference points, but they are typically broad and require adaptation to specific institutional roles. In parallel, approaches such as DACUM have been used in other contexts to map competences based on real work practices (Norton, 1997), although their use in higher education entrepreneurship remains relatively limited.

At the same time, staff development initiatives have increasingly focused on experiential learning formats (workshops, case-based activities, peer exchange) as a way to build entrepreneurial capability (Fayolle & Gailly, 2008). These approaches are effective at the individual level, but their impact often remains short-lived. Without mechanisms to connect learning to organisational processes, it becomes difficult to sustain change or embed new practices.

Taken together, this points to a gap between individual competence development and organisational knowledge use. What is missing are approaches that link competence mapping, training design, and knowledge management in a way that supports both learning and institutional integration, particularly in settings that involve multiple institutions.

This study addresses that gap by examining a cross-institutional intervention implemented within the CODEUNITED project, funded by the European Institute of Innovation and Technology Higher Education Initiative (EIT HEI). The intervention combines needs assessment, DACUM-based competence mapping, and multi-channel staff training across five European universities.

The aim is to explore how such an approach can support the development of entrepreneurial capacity among university staff and, at the same time, contribute to more structured knowledge processes within institutions. Specifically, the study looks at how competences are identified and formalised, how they are translated into training activities, and what kinds of outcomes and challenges emerge during implementation. Accordingly, the study is guided by the following research questions: 1) how does DACUM-based competence mapping support the codification and transfer of entrepreneurial knowledge within higher education institutions, 2) how do cross-institutional staff training interventions contribute to entrepreneurial capacity-building and organisational learning in universities?

2. Literature Review

Knowledge management (KM) in higher education builds on organisational KM theory, adapted to the distinctive structures of academic institutions. HEIs are regarded as knowledge organisations by nature, yet paradoxically resistant to formal KM adoption (Rowley, 2000, Quarchioni et al., 2020). Their knowledge is distributed across faculties, departments, and professional services, embedded in both explicit artefacts and tacit expertise (Al-Kurdi et al., 2018, Ramjeawon & Rowley, 2018).

Effective KM requires strategic embeddedness rather than ad hoc practice. Many HEIs lack formal KM strategies, dedicated roles, or performance frameworks, conditions consistently identified as structural barriers to effectiveness (Santos et al., 2024, Anatan & Bangun, 2024, Subedi, 2025). Alongside strategy, culture and leadership are critical enablers: trust, psychological safety, and collaborative norms facilitate voluntary knowledge sharing, while entrepreneurial and knowledge-oriented leadership strengthen the link between sharing, innovation, and intellectual capital (Fan & Beh, 2024, Basit et al., 2024, Ibarra-Cisneros et al., 2023).

At the organisational level, KM research highlights three interrelated mechanisms: knowledge codification (converting tacit expertise into explicit, reusable forms), knowledge transfer (moving and adapting knowledge across individuals, teams, and institutions), and institutional learning (embedding transferred knowledge in routines and organisational memory) (Nonaka & Takeuchi, 1995, Metaxiotis & Psarras, 2003, Castaneda et al., 2018). These mechanisms are especially relevant in entrepreneurial universities, where knowledge related to commercialisation, student support, mentoring, and ecosystem engagement tends to be practice-based and dispersed across multiple actors.

DACUM (Developing A Curriculum) competence mapping operationalises this codification-transfer-learning sequence by externalising tacit work knowledge into structured descriptions of duties, tasks, skills, knowledge requirements, tools, and performance indicators (Norton, 1997). The method is built around a facilitated workshop in which a panel of expert practitioners collaboratively analyse and articulate the full scope of a job or role. Rather than relying on external job analysts or pre-existing frameworks, DACUM centres the expertise of practitioners themselves, making the process particularly well suited to capturing contextually embedded, experience-based knowledge that resists easy formalisation. The primary output is a DACUM chart: a structured occupational profile that maps duties (broad areas of responsibility) onto specific tasks (discrete, observable units of work), together with the supporting knowledge, skills, attitudes, and tools required to perform them competently (Norton, 1997).

Each stage of the codification-transfer-learning sequence maps onto a distinct function of DACUM. First, DACUM supports knowledge codification by transforming tacit staff expertise into explicit competence descriptions, tasks, tools, and performance indicators that can be documented and communicated. Second, it supports knowledge transfer by rendering local practices understandable and reusable across departments, roles, and institutions. Third, DACUM supports institutional learning when the mapped competences are incorporated into staff development programmes, organisational routines, curricula, support services, or broader innovation ecosystem practices.

3. Methodology and Data

This study adopted a multi-phase mixed-methods design to investigate the development and implementation of a competence-based training intervention across higher education institutions. The methodology integrated qualitative needs assessment, competence mapping, and quantitative-qualitative evaluation of training delivery. The design followed a sequential exploratory logic, in which qualitative findings from interviews informed competence mapping and training design, which were subsequently evaluated using both quantitative and qualitative data. Such mixed-methods approaches are widely used in educational research to combine contextual depth with measurable outcomes (Jansen & van Leeuwen, 2020, Englund, 2025).

The research was conducted within the CODEUNITED project, a collaborative initiative involving five higher education institutions. The project strengthens university-oriented innovation ecosystems by embedding interdisciplinary entrepreneurship education through ecosystem mapping, inclusive training, and collaborative startup support. Multiple staff training programmes were organised in Autumn 2025 in each institution. Phase 1 implementation engaged 143 staff members (37 mentored) across all five partner universities. It is important to distinguish, however, between this broader project context and the empirical dataset on which the present study's analysis is based. This study focuses on two cases of staff training, organised in Finland and the UK, which constitute the core analytical dataset. The needs assessment phase drew on input from all five institutions, while the training evaluation data derive exclusively from these two cases (n=20 in total, see Table 1).

The study involved two groups of participants: project staff and training participants. Between August and October 2025, semi-structured interviews and group discussions were held with representatives of each institution's staff (both academic and support staff involved in entrepreneurship initiatives). Participants described their current programmes or support for entrepreneurship, relevant past projects and initiatives, expertise they could share, and needs for further development. These conversations explored existing practices, institutional capacity gaps, and future competence needs in three focus areas: research commercialisation and technology transfer, support for student entrepreneurship, and entrepreneurial teaching methods and staff development. In addition, each partner completed a competence mapping spreadsheet documenting specific expertise areas and key staff contacts. The qualitative transcripts were analysed to extract recurring themes regarding skill gaps and successful practices.

The participants of the training in the UK (n=11) responded to pre- and post-participation surveys assessing changes in confidence, applied entrepreneurial practice, and broader competence development using the EntreComp framework (Bacigalupo et al., 2016). The participants of the training in Finland filled in reflection diaries (n=3) or participated in semi-structured interviews (n=6).

Table 1: Summary of data sources, participants, and analytical methods

Phase	Data source	Participants	n	Analytical method
Needs assessment	Interviews & group discussions	Academic & support staff, all five institutions	8 group or individual interviews	Thematic analysis
Needs assessment	Competence mapping spreadsheet	Staff representatives, all five institutions	1 consolidated spreadsheet	Thematic analysis
Training evaluation (UK)	Pre- and post-surveys	Training participants	11	Descriptive statistics
Training evaluation (Finland)	Reflection diaries	Training participants	3	Thematic analysis
Training evaluation (Finland)	Semi-structured interviews	Training participants	6	Thematic analysis

Qualitative data (interviews, reflections, and discussions) were analysed using thematic analysis, involving iterative coding and the development of categories and themes to identify patterns in needs, experiences, and outcomes. Quantitative data from surveys were analysed using descriptive statistics to measure changes over time, particularly in pre-post comparisons.

4. Results

The results trace how entrepreneurial knowledge was identified, codified, transferred, and applied through the intervention. The analysis first examines how institutional needs and practices were translated into the DACUM competence framework, then considers how this framework informed training design and implementation. Finally, it assesses participant development, reported changes in practice, and implementation challenges. Together, the findings show how competence mapping and staff training functioned as KM mechanisms supporting knowledge sharing, absorptive capacity, boundary-spanning work, and organisational learning.

4.1 DACUM Competence Framework

The DACUM competence framework was a central outcome of the analysis, translating dispersed institutional needs and practices into a structured model for entrepreneurship capacity-building. From a KM perspective, it functioned as a knowledge codification mechanism by converting partly tacit staff expertise into explicit duties, tasks, knowledge, skills, attitudes, tools, and performance evidence. The framework is organised into three interrelated duty areas that reflect the core functions required to support innovation ecosystems within universities.

The first area focuses on strengthening the ability of staff to support the commercialisation of research outputs, bridging the gap between academic knowledge and market application. The second area emphasises the role of staff as facilitators and connectors within student entrepreneurship ecosystems, highlighting mentoring, coordination, and stakeholder engagement. The third area addresses the pedagogical dimension, focusing on the delivery of experiential and practice-oriented entrepreneurship education through innovative teaching methods.

Across these areas, the framework integrates knowledge, skills, attitudes, and performance-oriented outputs, making it both descriptive and actionable. It also created a shared vocabulary across institutions, supporting knowledge transfer between academic staff, professional services, and entrepreneurship support roles. In this sense, the framework operated as a boundary object that made locally embedded expertise understandable and reusable across organisational contexts.

Table 2: DACUM Competence Framework

Component	D1 – Commercialisation of Research	D2 – Student Entrepreneurship Support	D3 – Innovative Teaching Methods
Definition	Enabling academic staff and support personnel to translate research outputs into commercial value through patents, licenses, spin-outs, and funded innovation pathways.	Equipping staff to mentor, coach, and connect student entrepreneurs with resources, partners, and ecosystems locally and internationally.	Preparing educators to deliver experiential, challenge-based, and cross-disciplinary entrepreneurship education using modern pedagogical techniques.
Core Tasks	Manage IP and patenting processes, Identify commercial opportunities, Develop funding strategies, Prepare investor-ready pitches, Navigate technology transfer, Cultivate entrepreneurial mindset	Provide mentoring, Refer to ecosystem actors, Facilitate cross-departmental support, Support internationalization, Track outcomes	Design workshops, Organize challenges, Use serious games, Train-the-trainer, Integrate into curricula, Evaluate outcomes, Develop MOOC content
Knowledge	IP basics, TTO policies, licensing frameworks, innovation maturity levels	Institutional ecosystem, support services, startup visa/IP basics	Experiential learning theory, game-based learning, interdisciplinary pedagogy
Skills	Prior-art search, business model analysis, pitch preparation, negotiation	Coaching, active listening, ecosystem navigation, stakeholder engagement	Workshop facilitation, game moderation, curriculum design, rubric creation, digital content authoring

Component	D1 – Commercialisation of Research	D2 – Student Entrepreneurship Support	D3 – Innovative Teaching Methods
Attitudes	Proactivity, risk tolerance, openness to feedback, impact orientation	Empathy, inclusiveness, initiative, student-centredness	Creativity, learner-centeredness, adaptability, continuous improvement
Tools & Resources	Invention disclosure forms, NDA templates, BMC, FTO checklist, grant templates, pitch decks, TRL/IRL grids	Mentoring forms, CRM tools, partner lists, alumni registries, event templates	Design thinking templates, rubrics, game kits, teaching portfolios, MOOC platforms, self-efficacy scales
Performance Evidence	Patents filed, FTO notes, opportunity assessments, spin-out pathways, funding secured	Students mentored, referrals tracked, events held, cross-border ventures	Courses with entrepreneurial content, challenges delivered, MOOC modules published, learning impact measured

4.2 Training Programme Design and Implementation

The training programmes translated the DACUM duty areas into role-oriented learning activities. In KM terms, the programmes moved codified knowledge into situated learning environments where participants could interpret, adapt, and apply it to their own roles.

4.2.1 Startup Sprint (UK)

The Startup Sprint was organised in the UK, focused on the D2 competence area (Student Entrepreneurship Support) and was delivered to 11 non-academic staff members representing diverse roles within student and professional services. The programme adopted a blended learning format, combining four online sessions with three hybrid “Lunch and Learn” sessions. Its design was explicitly informed by DACUM-defined tasks associated with supporting early-stage student entrepreneurship, including facilitating venture development, identifying and communicating opportunities, and connecting students with relevant ecosystem actors.

To support these objectives, the programme integrated internal institutional initiatives, such as the Talent Marketplace and the READY programme, with external perspectives from organisations including Barclays Eagle Labs and The Big Issue. The training strengthened boundary-spanning capacity by helping staff translate knowledge between students, professional services, academic units, and external ecosystem partners.

4.2.2 From Research to Business (Finland)

The From Research to Business: Staff Training on Entrepreneurial Mindset and Business Finland Funding addressed the D1 competence area (Commercialisation of Research and Innovations) and was delivered as an in-person programme across the Lahti and Lappeenranta campuses. The training was designed to strengthen staff members’ entrepreneurial mindset and their practical readiness to engage with research commercialisation pathways and national funding instruments. It brought together participants from Research, Development and Innovation (RDI), education, and support services, reflecting the cross-functional nature of commercialisation processes.

The programme combined keynote lectures, expert panels, real-life project cases, and interactive ideation workshops to provide both conceptual understanding and applied learning opportunities. The first session, held at the Lahti campus, focused on entrepreneurial mindset development and opportunity recognition. The second session, delivered at the Lappeenranta campus, concentrated on research-to-business pathways and Business Finland funding mechanisms.

The training content, with the exception of workshop activities, was recorded and made available to participants through the programme’s MOOC platform, supporting continuity of learning and broader accessibility. The learning objectives emphasised both conceptual and practical competence development, enabling participants to understand commercialisation pathways, apply an entrepreneurial mindset within RDI activities, navigate and prepare for Business Finland funding instruments, and use ideation tools to generate and refine innovation ideas. In addition, the programme supported interdisciplinary collaboration and enhanced participants’ ability to identify innovation opportunities within research projects and communicate research-based ideas effectively to relevant stakeholders. The activities supported absorptive capacity by

helping participants recognise, assimilate, and apply external knowledge on funding, commercialisation, and research-to-business pathways.

4.3 Outcomes of Staff Training Implementation

This section presents outcomes from the training interventions, focusing on changes in participant capabilities, applied practice, and learning experiences. The findings also show how the interventions supported knowledge sharing, absorptive capacity, and organisational learning, while revealing barriers to embedding new knowledge within institutional routines.

4.3.1 Outcomes of the Startup Sprint

The evaluation of the Startup Sprint indicates positive developments across participants' confidence, applied practice, and broader entrepreneurial competences, while also revealing constraints affecting implementation within institutional contexts. These gains suggest that participants developed not only individual competences but also greater capacity to interpret entrepreneurial knowledge in relation to their professional roles.

Participants reported increased confidence across all measured dimensions, with the most notable improvements related to strategic and reflective aspects of their roles. In particular, substantial gains were observed in developing strategies to support enterprise initiatives and in reflecting on employability and professional growth. More moderate improvements were identified in understanding entrepreneurial thinking and applying practical techniques for idea development, suggesting enhanced capability to support early-stage entrepreneurial activity within participants' roles.

Consistent improvements were also evident in applied entrepreneurial practice. Participants demonstrated stronger capacity to mobilise colleagues and resources, identify opportunities for innovation, and define value propositions. In contrast, the ability to communicate ideas clearly and persuasively showed more limited improvement, indicating a potential area for further development. Overall, these findings align with core D2 competences, particularly those related to opportunity recognition and early-stage venture support.

Analysis based on the EntreComp framework shows development across all competence areas, with the strongest gains in resource mobilisation, creativity, and motivation and perseverance. This pattern indicates that the training contributed not only to task-specific improvements but also to broader entrepreneurial competences, supporting the development of more opportunity-oriented and proactive behaviours. Despite these gains, participants identified several challenges in embedding entrepreneurship into their practice. These included difficulties in influencing stakeholders who do not perceive entrepreneurship as part of their role, limited time and competing priorities, challenges in engaging students who do not immediately recognise the relevance of entrepreneurship, and a lack of clarity regarding individual contributions to enterprise activity. The reported barriers point to limits in organisational learning: while individual knowledge and confidence increased, institutional routines, incentives, and role expectations did not always support application.

Participants reported a range of intended actions to apply their learning, including strengthening connections with external ecosystem partners, integrating entrepreneurial approaches into existing programmes, and enhancing collaboration across internal teams. In addition, there was evidence of a shift towards a more proactive and intrapreneurial orientation in their work. Participants' intended actions suggest an emerging community-of-practice dynamic, where enterprise support began to be understood as a shared responsibility rather than an isolated specialist function.

4.3.2 Outcomes of the from research to business

Participants entered the training with varying levels of prior experience in research commercialisation and entrepreneurship. While some were already engaged in related activities, others had more limited exposure and approached the training as an opportunity to better understand entrepreneurship, teamwork, and research-to-business pathways.

Participants highlighted that entrepreneurship requires courage, perseverance, risk-taking, and sustained commitment, and emphasized the importance of teamwork and collaboration in successful research and development and commercialisation processes. The training contributed to a clearer understanding of research-to-business pathways, the complexity of Business Finland funding instruments, and the role of RDI specialists within these processes. This indicates knowledge transfer from external experts and institutional cases into participants' understanding of commercialisation practice.

In terms of application, participants reported intentions to adopt a more innovative and opportunity-oriented mindset, further develop and refine ideas, and integrate business and financial perspectives into their work. Planned actions included exploring project ideas in more depth, seeking mentorship, reflecting on individual contributions to RDI activities, disseminating acquired knowledge, and reviewing Business Finland-funded cases, although some participants indicated no immediate follow-up actions. The mixed follow-up intentions suggest that absorptive capacity varied according to prior experience, role relevance, and access to support.

Collaboration emerged as a key outcome of the training, with participants valuing the opportunity to engage with colleagues and external partners. They highlighted the benefits of shared ambition, diverse perspectives, and exposure to entrepreneurial journeys, as well as the recognition of a strong but underutilized internal knowledge base within the organization. From a KM perspective, the training made hidden organisational knowledge more visible and created opportunities for cross-unit knowledge sharing.

Finally, participants suggested that future training could place greater emphasis on concrete next steps, mentoring, and follow-up support, as well as improved utilisation of internal expertise. At the same time, they emphasized the continued importance of practical case-based learning and peer interaction. These suggestions indicate that one-off training is insufficient for institutional learning unless supported by continuing communities of practice, mentoring, and mechanisms for embedding knowledge into everyday routines.

5. Discussion and Conclusion

The findings suggest that competence-based training, when grounded in a structured framework such as DACUM, can do more than support individual learning, it can also function as a mechanism for organising and mobilising knowledge within higher education institutions. Across both interventions, participants reported improvements in confidence and their ability to engage in entrepreneurial practices, particularly in opportunity identification, resource mobilisation, and early-stage support. These outcomes were most visible where training activities were closely aligned with concrete role tasks, indicating the importance of contextualising competences within everyday practice.

From a knowledge management perspective, the intervention can be understood as a process of knowledge elicitation, codification, transfer, and early-stage institutional learning, where new knowledge begins to influence roles, practices, and collaboration patterns. The needs assessment and competence mapping captured dispersed and often tacit knowledge about entrepreneurship support across partner institutions. The DACUM framework then translated this knowledge into a shared structure, making roles, tasks, and expectations more explicit. This positions DACUM as an organisational knowledge codification mechanism. Training activities acted as the primary vehicle for knowledge transfer, combining experiential learning formats with peer interaction and external input. The intervention therefore created a common language and boundary object through which entrepreneurship-related knowledge could be shared across roles, units, and institutional contexts.

At the same time, the results highlight limits in how far such processes can be sustained. While participants expressed intentions to apply what they had learned, this did not consistently translate into immediate or observable changes in practice. Reported barriers, including time constraints, unclear role boundaries, and difficulties in engaging stakeholders, point to challenges in embedding knowledge within organisational routines. This suggests that the main constraint is not only knowledge availability, but also absorptive capacity: the ability of institutions and staff to recognise, assimilate, apply, and institutionalise new entrepreneurial knowledge.

A similar pattern can be observed across both domains addressed in the study. In the Startup Sprint (D2), non-academic staff strengthened their role as intermediaries connecting students with internal and external resources, illustrating boundary-spanning roles that support knowledge flows across institutional and ecosystem boundaries. In the From Research to Business training (D1), participants developed a clearer understanding of commercialisation pathways and funding mechanisms, alongside a more opportunity-oriented mindset. However, in both cases, the absence of structured follow-up, such as mentoring, project pipelines, or dedicated time for application, limited the transition from individual learning to sustained organisational practice.

These findings point to the importance of moving beyond training as a standalone activity. While competence frameworks and training interventions can support knowledge articulation and transfer, their long-term impact depends on whether institutions provide conditions for continued use. This includes aligning roles, creating opportunities for collaboration, and supporting ongoing engagement with entrepreneurial activities.

Without such alignment, communities of practice may remain temporary and informal, and newly codified knowledge may remain at the level of individual capability rather than becoming embedded in institutional memory, routines, and decision-making.

The study makes a theoretical contribution to KM literature by showing how DACUM competence mapping can operate as a mechanism for organisational knowledge codification, transfer, and institutional learning in entrepreneurial universities. It demonstrates that competence mapping can be used not only for curriculum or training design, but also to structure, externalise, and share entrepreneurship-related expertise across institutions. The cross-institutional setting further contributes to KM debates by showing how shared competence frameworks can facilitate knowledge exchange across organisational boundaries, while also revealing that transfer requires local interpretation, absorptive capacity, and sustained communities of practice.

At the same time, the study has several limitations. The empirical analysis is based on a relatively small number of participants in the evaluated cases, and the findings rely primarily on self-reported data. In addition, the evaluation focuses on short-term outcomes, making it difficult to assess longer-term behavioural or institutional change. Future research could address these limitations by incorporating longitudinal designs, broader samples, and more objective indicators of impact, particularly measures of how codified entrepreneurial knowledge becomes embedded in organisational routines, roles, and institutional learning processes.

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Ethics Declaration: This study was conducted in accordance with standard ethical principles for research involving human participants. Participation in interviews, surveys, and reflection activities was voluntary, and all participants were informed about the use of the collected data. Informed consent was obtained prior to data collection. All data were anonymised to ensure participant confidentiality, and no personally identifiable information is reported. The study did not involve sensitive personal data or vulnerable groups. Data were used solely for research and evaluation purposes within the scope of the project.

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