This paper was presented at the XXXVII ISPIM Innovation Conference, held in Granada, Spain on 07 June to 10 June 2026. ISBN 978-952-65771-2-8.

Orchestrating cross-regional DIH services using the innovation corridor concept

Sami Jantunen*, Anna-Maija Kiukas, Heta Hotokka

South-Eastern Finland University of Applied Sciences, Patteristonkatu 3, 50101 Mikkeli, Finland.
E-mail: sami.jantunen@xamk.fi, anna-maija.kiukas@xamk.fi, heta.hotokka@xamk.fi

Niklas Litmala

LAB University of Applied Sciences, Yliopistonkatu 36, 53850 Lappeenranta
E-mail: niklas.litmala@lab.fi

Kati Korhola

LAB University of Applied Sciences, Mukkulankatu 19, 15210 Lahti
E-mail: kati.korhola@lab.fi

* Corresponding author

Abstract: Digital Innovation Hubs (DIHs) aim to support companies by providing access to digital technologies, expertise, and innovation infrastructures. When DIH services are delivered across regional boundaries, orchestration becomes more complex due to fragmented governance, differing practices, and the absence of hierarchical control. This study examines how DIH service orchestration can be designed for cross-regional service delivery and how the innovation corridor concept can support this process. The research follows a design-oriented qualitative approach and draws on empirical material from a cross-regional development project involving higher education institutions and small and medium-sized enterprises. The findings show that effective cross-regional orchestration requires explicit coordination practices that address service scoping, responsibility allocation, and continuity. The innovation corridor concept provides a lightweight framework for aligning participating organisations around shared mission, governance, trust, and financial sustainability, thereby supporting coordinated DIH service delivery across regions.

Keywords: Digital Innovation Hubs; service orchestration; cross-regional collaboration; innovation corridors; interorganisational coordination; SMEs; RDI services; innovation ecosystems; governance; service design

This paper was presented at the XXXVII ISPIM Innovation Conference, held in Granada, Spain on 07 June to 10 June 2026. ISBN 978-952-65771-2-8.

1 Introduction

Digital Innovation Hubs (DIH) are positioned as one-stop-shops that help companies and public organisations respond to digital challenges and improve competitiveness (European Commission, 2025). Delivering that promise requires orchestration across multiple service providers and facilities so that delivery is coherent for the organisation being served. This is difficult when actors are autonomous and no hierarchical authority exists (Dhanaraj & Parkhe, 2006).

We argue that orchestration becomes more demanding when DIH services are delivered across regional borders. Working across regions adds frictions such as misaligned infrastructure, fragmented governance, administrative complexity, cultural differences, trust deficits, and financial sustainability challenges (Karanikolova et al., 2024). To address these barriers, the concept of *interregional innovation corridors* has been introduced (Karanikolova et al., 2024), providing structured collaboration channels intended to reduce coordination challenges between regions. The challenge is to design service logic that client organisations find useful and that participating hubs can govern and sustain over time. Hence, this study addresses following research questions:

1. How can DIH service orchestration be designed and implemented for cross regional service delivery, and
2. how can the innovation corridor concept support this orchestration?

2 Background

Coordination under multilateral interdependence is a central issue in innovation network and ecosystem research. Adner (2017) describes ecosystems as structured configurations shaped by complementary roles, interdependencies, and alignment requirements. Without explicit coordination mechanisms and adequate coordination capacity, network level coordination tends to break down as the number of participants and interfaces grows (Dhanaraj & Parkhe, 2006; Provan & Kenis, 2008). A recent integrative review of management practices in interorganisational innovation networks argues that orchestration practices should fit the network's characteristics (Hurmelinna-Laukkanen et al., 2022). This implies that delivery across regions calls for more explicit orchestration than local cooperation.

The concept of interregional innovation corridors has emerged in European policy and practice as a response to persistent barriers in cross regional collaboration. Earlier forms of cooperation between regions have often remained ad hoc, fragmented and resource intensive, with limited long-term return on investment. Innovation corridors seek to overcome these limitations by offering a more structured and durable model for collaboration (Karanikolova et al., 2024).

Corridors are described as bridges between regional innovation ecosystems. They connect complementary strengths through shared services, aligned strategies and joint activities. The model addresses common economic and operational obstacles, including high upfront investment needs, information asymmetries, fragmented governance structures and limited access to testing and innovation infrastructures. By embedding collaboration within a stable framework, corridors aim to lower the threshold for initiating EU level cooperation and to shift from isolated projects toward more coordinated and strategic partnerships (Karanikolova et al., 2024).

Innovation corridor is built on four core elements (Figure 1) (Karanikolova et al., 2024). *Mission alignment* clarifies shared objectives and priorities. *Governance* establishes integrated decision making and coordination structures. *Cultural alignment* strengthens trust and mutual understanding among partners. *Financial sustainability* ensures continuity beyond short term funding cycles. Together, these building blocks translate the idea of interregional collaboration into practical implementation themes that guide the institutionalisation and long-term functioning of innovation corridors. While the four building blocks create the structural conditions for collaboration, innovation projects translate these conditions into concrete interregional action. Through joint research and development, business development initiatives and competence building activities, regions generate tangible value and test their strategic alignment in practice (Karanikolova et al., 2024). In this sense, innovation projects both activate the corridor and reinforce it, turning institutional design into sustained collaborative performance.

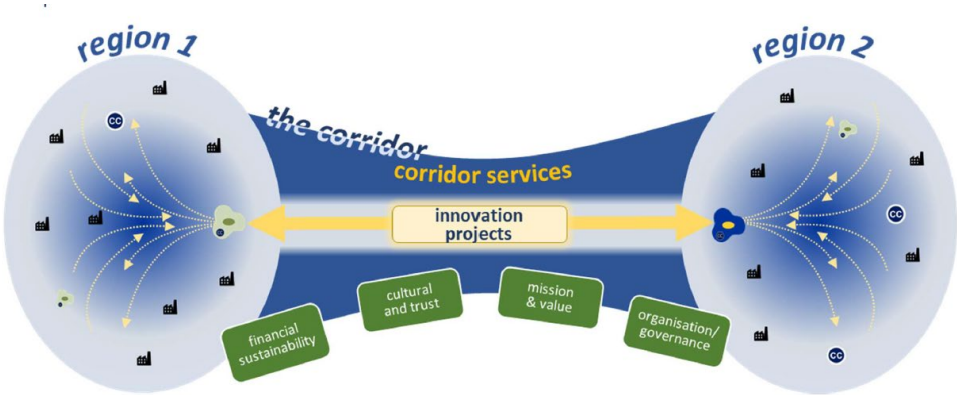

Figure 1 Innovation corridor concept (Karanikolova et al., 2024).

3 Research approach and empirical material

This study is part of the *INKA – Strengthening SMEs' Innovation and Growth Potential in Internationalizing Ecosystems* project, carried out by South-Eastern Finland University of Applied Sciences (Xamk) in partnership with LAB University of Applied Sciences (South-Eastern Finland University of Applied Sciences, n.d.). The project is funded by the European Regional Development Fund through the Regional Council of South Savo. The project focuses on strengthening the innovation capacity and growth potential of small and medium-sized enterprises (SMEs) by developing a unified, business-driven service model that enables companies to access research, development and innovation (RDI) services and infrastructure more easily both within and across regions. To this end, the project develops a cross-regional innovation corridor to promote collaboration between Higher Education Institutions (HEI) and SMEs and to support participation in innovation networks. It aims to make RDI and DIH services more accessible to companies and to enhance support for product development and commercialisation processes from early idea stages through to market implementation.

This research in progress follows a design-oriented qualitative approach. The study uses the innovation corridor concept (Karanikolova et al., 2024) as a practical structuring

device to design, pilot, and advance cross-regional DIH service delivery. Empirical material is generated through two tightly connected activities: internal corridor development carried out jointly by the participating organisations, and company-level innovation projects where the corridor is applied in practice.

Internal corridor development through structured dialogue

Internal development of the innovation corridor is supported through structured dialogue and joint participation in the project. As a concrete outcome, an innovation corridor canvas was created to structure cross-organisational discussion and shared understanding. Selected elements of the corridor concept were translated into explicit design questions, which were collaboratively addressed using the canvas in autumn 2025.

Questions related to *mission and value* address how the shared purpose of the innovation corridor is framed and interpreted. These questions ask what the common mission of the collaboration is, what kind of impact is sought for companies within a 12-month horizon, and what is explicitly outside the scope of collaboration. In addition, they extend the mission framing by asking what positive societal effects are sought and which effects are intended to be reduced. Together, these questions make explicit how the corridor's purpose is understood both in terms of value creation for companies and broader considerations. Questions related to *financial sustainability* address the conditions under which collaboration can be maintained without permanent funding. Because participation cannot rely on dedicated resources, collaboration must be grounded in activities that participating organisations would undertake in any case. The canvas therefore makes explicit what each organisation gains from collaboration and what is expected to improve, ensuring that shared work is anchored in realistic use of existing resources. The *corridor services* element of the innovation corridor concept is reflected in questions that focus on objectives over time. These questions specify concrete objectives at 1-, 3-, and 12-month intervals and identify the artefacts through which progress is articulated, such as service descriptions, agreements or data templates. Questions related to *organisational governance* address the conditions under which collaboration can be organised. These focus on risks, constraints, and matters to be taken into account, including organisational, legal, IPR-related, budgetary, and scheduling considerations that shape the feasibility of cross-regional collaboration.`

Culture and trust were not translated into explicit questions, as they are expected to develop through joint participation. Furthermore, *innovation projects* are treated separately as a second empirical data source and discussed in the following subsection.

Innovation projects with companies

The study also draws on innovation projects implemented with six companies. The projects were initiated in autumn 2025 and are still ongoing at the time of writing. The innovation projects were launched based on development needs identified through discussions between project staff and company representatives. Each project was framed as an innovation pilot that combined company participation with available RDI expertise, student involvement, and project-based support instruments.

Student projects and theses formed an integral part of several pilots. Project staff were involved throughout the implementation, and external expertise was included where relevant. The empirical material related to the innovation projects consists of project

descriptions, process documentation, progress records, and records of interaction between project staff and company representatives. The material is analysed qualitatively to identify emerging DIH service needs reflected in the innovation projects. The analysis focuses on how company-level development work points to recurring demands for specific types of support, capabilities, and service configurations.

4 Findings

This section synthesises findings from internal innovation corridor development and company-level innovation projects, structured around insights from the completed corridor canvas, expressed needs, and expressed challenges.

Development of Shared Understanding Through Structured Dialogue

Figure 2 presents the Innovation Corridor canvas as the outcome of a collaborative dialogue among participating stakeholders. Through this process, a shared mission emerged that focuses on integrating existing RDI capabilities into a common service pathway supporting SMEs in early-stage development and commercialisation, while deliberately excluding production and sales. Participation in the corridor is motivated by the concrete benefits identified by the participants, including access to complementary regional expertise and facilities, improved visibility and use of existing RDI infrastructures, and better opportunities to jointly develop projects and research consortia that would be difficult to realise individually. These objectives are linked to broader social and environmental considerations, where strengthened innovation capability and regional coordination are expected to reduce inefficiencies experienced by companies, such as fragmented service journeys, duplicated coordination, long waiting times, unclear responsibilities, and barriers to accessing RDI services. The collaboration is further defined through a set of concrete development outcomes, beginning with the identification of shared service concepts and pilot cases, followed by company-driven service development and contracting, and leading to the formalisation and cross-regional use of selected DIH-based services. The same dialogue also made explicit the organisational, financial, and contractual conditions under which these outcomes are considered achievable, including decision-making responsibilities, funding and cost-sharing arrangements, IP and data practices, availability and prioritisation of RDI infrastructures, and challenges related to continuity.

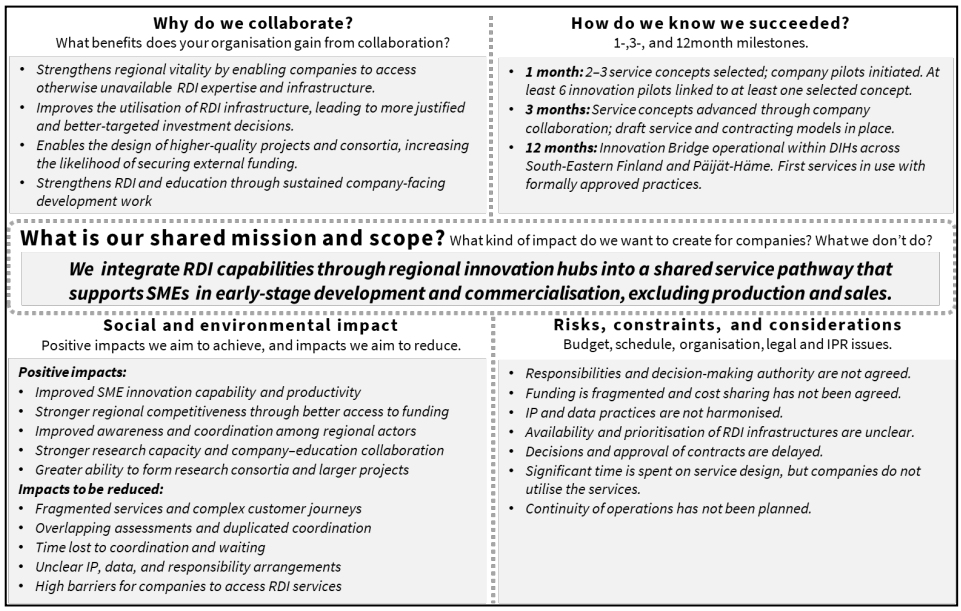

Figure 2 Innovation corridor canvas: Structure and outcomes of collaborative design.

Expressed Needs

Companies consistently expressed a need for early-stage support in clarifying and structuring their development efforts. Digitalisation was not treated as an end in itself, but as one element within broader business development activities. Firms frequently discussed *growth and new market opportunities*, particularly in connection with *productisation and commercialisation* needs such as *value proposition definition, service packaging, pricing logic, and market understanding*. Incremental, minimum-viable-product-oriented development was generally preferred over comprehensive or long-term transformation initiatives. In addition, companies valued access to complementary expertise and networks, especially when facilitated through guided collaboration and brokerage rather than outsourcing.

Experienced Challenges

Across the cases, companies encountered recurring challenges related to the practical execution of collaborative development. Early-stage work was often slowed by *insufficient initial scoping* and *unclear expectations*, particularly in projects involving student collaboration or multiple actors. *Limited internal resources and time constraints* on the company side affected continuity and responsiveness, making it difficult to sustain momentum alongside day-to-day business operations. *Uncertainties around intellectual property, contracting, compensation, and decision-making responsibilities* repeatedly emerged as friction points, especially when projects evolved or expanded during execution. In addition, delays related to *partner availability, student recruitment cycles, and administrative procedures* highlighted a mismatch between company timelines and academic or project-based rhythms. These challenges underline the need for clearer

upfront agreements, realistic pacing, and coordination mechanisms that better align collaborative development with company realities.

5 Discussion and conclusions

This study examined how Digital Innovation Hub (DIH) services can be orchestrated across regional boundaries (RQ1) and how the innovation corridor concept can support such orchestration (RQ2).

With respect to the first research question, the study shows that effective cross-regional DIH service orchestration cannot be achieved by scaling individual services or projects alone. Innovation projects play a critical role in clarifying company needs and shaping DIH service content, but they do not themselves address how services are delivered jointly across regions. Cross-regional orchestration therefore requires explicit design of coordination practices, including intake and scoping, responsibility allocation, handovers between organisations, and shared service conditions. These coordination elements emerged as recurring issues once service delivery crossed organisational and regional boundaries, indicating that orchestration must be treated as a design task of its own.

Addressing the second research question, the findings show that the innovation corridor concept supports cross-regional orchestration by providing a structured yet lightweight framework for making coordination challenges explicit and manageable. Rather than defining new services or imposing hierarchical control, the corridor concept helps participating organisations align around mission, governance, trust, and financial sustainability. When operationalised through the corridor canvas, the concept translates a general ambition for cross-regional collaboration into concrete alignment topics that surface in service pilots. Overall, the study shows that cross-regional DIH service orchestration can be designed by combining company-driven innovation projects with an explicit orchestration framework. Innovation projects inform *what* kinds of services are needed, while the innovation corridor concept supports *how* those services are coordinated and delivered across organisational and regional boundaries.

Although the study is exploratory and based on work in progress, the findings suggest that the innovation corridor concept offers a feasible approach for moving from identified DIH service needs toward coordinated cross-regional delivery. Future research should examine how such orchestration practices stabilise over time and how their effects can be assessed across different regional and organisational contexts.

6 Areas for feedback & development

We welcome views on whether the proposed action plan, derived from the innovation corridor concept, is consistent with insights from the broader literature on networks, ecosystems, and interorganisational coordination, and whether any critical mechanisms are missing or overemphasised. We also invite feedback on the action plan's practical usefulness. Which parts would most likely enable early cross-regional delivery, and which parts are most likely to fail in practice due to overhead, misaligned incentives, or lack of decision rights and resourcing. Finally, feedback is sought on how to assess early progress in a way that is meaningful across different regions and organisational settings. This includes suggestions for indicators related to coherence of the SME facing service

journey, coordination overhead, and the feasibility of continuity arrangements that support longer term collaboration beyond time limited initiatives

References

Adner, R. (2017). 'Ecosystem as structure: An actionable construct for strategy', *Journal of Management*, 43(1), pp. 39-58. Available at: https://doi.org/10.1177/0149206316678451.

Dhanaraj, C. and Parkhe, A. (2006). 'Orchestrating innovation networks'. *Academy of Management Review*, 31(3), pp. 659-669. Available at: https://doi.org/10.5465/amr.2006.21318923.

European Commission, Directorate-General for Communications Networks, Content and Technology (2025). European Digital Innovation Hubs. Shaping Europe's digital future, 19 December. Available at: https://digital-strategy.ec.europa.eu/en/policies/edihs (Accessed: 22 January 2026).

Hurmelinna-Laukkanen, P., Möller, K. and Nätti, S. (2022). 'Orchestrating innovation networks: Alignment and orchestration profile approach'. *Journal of Business Research*, 140, pp. 170-188. Available at: https://doi.org/10.1016/j.jbusres.2021.11.084.

Karanikolova, K., van der Molen, S. and Butter, M. (2024). 'Interregional innovation corridors: PS09 Introduction to structural interregional collaborations on innovation'. Methodological report. Available at: https://doi.org/10.13140/RG.2.2.19060.46721 (Accessed 22 January 2026).

Provan, K.G. and Kenis, P. (2008). 'Modes of network governance: Structure, management, and effectiveness'. *Journal of Public Administration Research and Theory*, 18(2), pp. 229-252. Available at: https://doi.org/10.1093/jopart/mum015.

South-Eastern Finland University of Applied Sciences (n.d.). 'INKA – Pk-yritysten innovaatioiden ja kasvuedellytysten vahvistaminen kansainvälistyvissä ekosysteemeissä. [INKA – Strengthening SMEs' Innovation and Growth Potential in Internationalizing Ecosystems]'. Available at: https://www.xamk.fi/hanke/inka/ (Accessed: 30 March 2026).