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Developing an open innovation culture in Lund's innovation district

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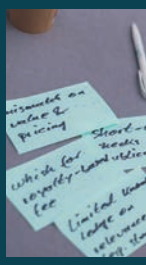
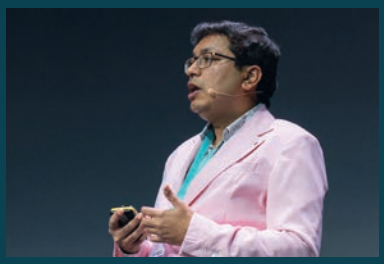

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Developing an open innovation culture in Lund's Innovation District

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Abstract

Recent years have brought new directionality to university's work with innovation – increasing the focus on addressing societal challenges and contributing to much broader frames for impact. Working with complex challenges, where no one actor can do everything by themselves, requires collaboration across actor groups (private sector, academia, public sector, civil society), industrial sectors, disciplines, geographies – and over long periods of time. It's been 20 years since the Chesbrough launched the concept of open innovation and despite the positive uptake of this new paradigm for organizing innovation processes, it is still not the norm. Particularly in situations that require broader ecosystems of actors to undertake different phases of collaborative action over longer periods of time (as is the case when working with societal challenges), new approaches are necessary to develop an open innovation culture.

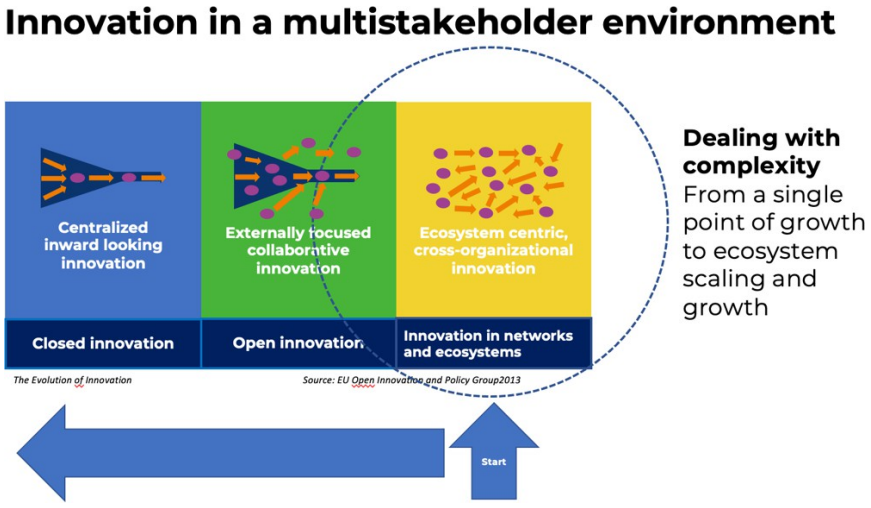

Figure 1. Innovation in a multistakeholder environment – ecosystem scaling and growth.

In an effort to take on a more proactive role in initiating collaborative activities and developing the innovation culture within and for its local innovation ecosystem, Lund University is working together with companies and the municipality in the innovation platform Future by Lund (FBL). FBL works

with creating capacity for innovation, building portfolios, joint infrastructures for test, and in this engaging with Cultural and Creative Industries (CCI) to develop a strong engine with new capacities for ~~the~~ innovation work across sectors. Lund University has taken the lead in the European Cultural and Creative Industries Innovation Policy Platform (ekip) in order to deliver innovation policy recommendations to the European Commission, using policy as an innovation tool and further develop and spread good support mechanisms for networked and open innovation ecosystems. The ekip platform leverages cultural and creative industries (CCI) as drivers of change and transformation – involving ecosystems of large and small companies, institutions, organisations, researchers, and citizens in processes to develop and try new concepts, attract investors, and get new companies and businesses up and running more quickly.

The local territory where this comes to live is included is the Lund Innovation District (Lund ID) where we can see an expansion of activities in existing innovation portfolios (with new partners and new project investments), the establishment of new infrastructures for testing and demonstration, and the start of new portfolios that leverage expertise across the ecosystem. We also see results of the spread of this proactive, structured support to open innovation processes in several other cities (partners of the ekip Platform). Our practitioner case provides an overview of the support mechanisms used to develop an open innovation culture and build portfolios of action across actors and sectors in Lund. It also highlights lessons learned from the test of these mechanisms in other European cities. Lessons from Lund can provide insights to other universities working proactively to contribute to societal impact.

Keywords

Open Innovation Culture, Collaborative Ecosystems, Innovation Districts, Societal Challenges, Creative and Cultural Industries (CCI), Innovation Portfolio Expansion, Cross-Sector Collaboration, the Zone and LIEPT Models.

1 Introduction

In today's world the need for addressing societal challenges has highlighted the critical role of interdisciplinarity in innovating for best solutions. The innovation ecosystems in this regard are crucial since they serve as incubating contexts that can bring together the cross sectoral knowledge that leads to meaningful innovations. But not all kind of innovation ecosystems bring about the same type of value. Those with dynamics that are promoted by an open culture of sharing and integration have the best possibility to capture the valuable inventions and promote it. Yet, despite the recognized importance, there remains a significant gap in understanding how such cultures are developed and sustained in innovation ecosystems (Autio, Nambisan, Thomas, & Wright, 2018). Which policies and actions work and can there be policies that sustain and cultivate the culture of multidisciplinary collaboration within the innovation ecosystems, are the questions we have little knowledge about (Pocek et al.,

2022). This paper addresses the problem by exploring the process of cultivation of an open innovation culture across an ecosystem of innovation, depicting it with a case of Lund Innovation District (Lund ID), known for its ability to attract, preserve, and leverage knowledge and its spillovers (El Awad et al., 2022; Pocek, 2022).

Indeed, promoting and training how to work in an open innovation culture is vital for the functioning and success of innovation ecosystems (Brown & Mason, 2017). Policies in charge of promotion must have an in-depth understanding of ecosystem processes, including who needs support and how to balance competition with collaboration in the ecosystem itself (Adner, 2017). Policies and actions able to identify and act upon these gaps within these ecosystems—be it in skills, culture, collaboration, and interconnections, or otherwise—are crucial for understanding how to effectively track and influence ecosystem dynamics so as to be able to enhance an open innovation process. This understanding forms the foundation for capacity building of the ecosystem and its stakeholders to address the significant challenges that lie ahead, challenges that innovation is uniquely positioned to solve.

Against this background, the main goal of this paper is to shed light on the strategies and initiatives that facilitate the development of an open culture within an ecosystem of innovation, emphasizing the collaborative efforts though a concrete case study, the one of Lund Innovation District. We focus our case based on results from application of the FBL Zone Model for open innovation. We focus in particular on the *yellow zone* of the model, which is where open innovation culture is unfolding. Thus, our results portray the process of open innovation crafting and then expand onto the interrelated activities such as expansion of activities within portfolios, the creation of new infrastructures to test innovations. Furthermore, we find that open approaches are expanding beyond Lund ID confines, facilitated by the ekip partners integrating the Cultural and Creative industries as enablers. Finally, we find that open innovation strives for training and ecosystem capacity building. All of these findings are contextualized under the yellow zone of the FBL Zone model and that has been further elaborated also in the use of the OECD OPSI-model.

The paper is structured to first establish a theoretical framework that underpins the concept of open innovation and its significance within entrepreneurship and innovation ecosystems (Chesbrough, 2003; Iansiti & Levien, 2004). Following this, we narrate the evolution of the open innovation culture in the context of our study, Lund ID, highlighting key initiatives and collaborations that have play a pivotal role in this process (Schein, 2010; Harrison & Corley, 2011). We further present the results, culminating in a discussion that synthesizes our findings and offers recommendations for policymakers interested in promoting open innovation cultures within their own ecosystems (Tsai, 2001; Cohen & Levinthal, 1990).

2 Theoretical framework

An open culture is an inherent part of innovation ecosystems which are formed with the very purpose to encourage collaboration, knowledge sharing and cocreation among systems stakeholders (Chesbrough, 2003). On the other hand, the framework of an innovation ecosystem can serve as a context for understanding how open culture can produce innovation that benefits organizations connected within a certain environment (Moore, 1996; Adner, 2017; Munigala et al., 2018). In ecosystems, "the connectedness" between organizations and therefore their collaboration is vital for innovation processes (Iansiti and Levien, 2004; Munigala et al., 2018). An open culture encourages "the connectedness" and sharing of ideas and resources and ultimately, the collective ability to address challenges that are to be solved (Autio and Thomas, 2014, Pocek, 2022). Research also found that from an institutional perspective, trust, and a shared vision and commitment are strong foundations for open culture and foster the positive dynamics of an ecosystem (Tsai, 2001, Pocek, 2022).

Creating an open culture within ecosystems for innovation brings several opportunities. Some of the most prominent effects are increased creativity, faster solving of various tasks, and better outputs in terms of innovation new products and services (West & Bogers, 2014). This means, that open culture ecosystems are capable of attracting more talents, which is beneficial for their human capital (Cohen & Levinthal, 1990). At the same time, the strategies of achieving such culture creation should be elaborated quite thoroughly and managed carefully, since they are not without challenges. According to the recent literature, there are some aspects of an ecosystem, which make an important contribution to its role in promoting an open innovation culture; for instance, the role of the knowledge intermediaries that allow different actors to collaborate more efficiently with each other (Spigel, 2017; Stam & Spigel, 2016). They usually bring up the conversation platforms that allow for an open dialogue and knowledge sharing which, in its turn, promote the common perspective of multiple actors and their cooperation (Mazzucato and Robinson, 2018).

Building upon the established understanding of the importance of an open culture within innovation ecosystems, it is crucial to acknowledge that culture, as an informal institution, evolves gradually over longer period of time (Schein, 2010; Pocek et al., 2022). Cultivating such a culture requires not only immediate actions but also a sustained commitment through policies that support openness over the long term (Harrison & Corley, 2011; Pocek et al., 2022).

Considering the centrality of open culture to the positive dynamics of ecosystems and correspondingly more significant innovations, its fostering as an institution is a rather

complex, time-bound, and context-dependent process. While existing theoretical frameworks for open cultures create an opportunity for understanding the phenomenon itself. The studies of the successful policies and policy formulation examples in the existing ecosystems can help build the knowledge on the lessons to be learnt and applied in other contexts, innovation districts, the effective strategies and understand of the scenarios in which they can be observed (Schein, 2010; Harrison & Corley, 2011).

3 Methodology/process

3.1 Context: Lund Innovation District

In this section we introduce the Lund Innovation District and its main stakeholders, as the context of our study. In figure 2 we present the map of Lund Innovation District.

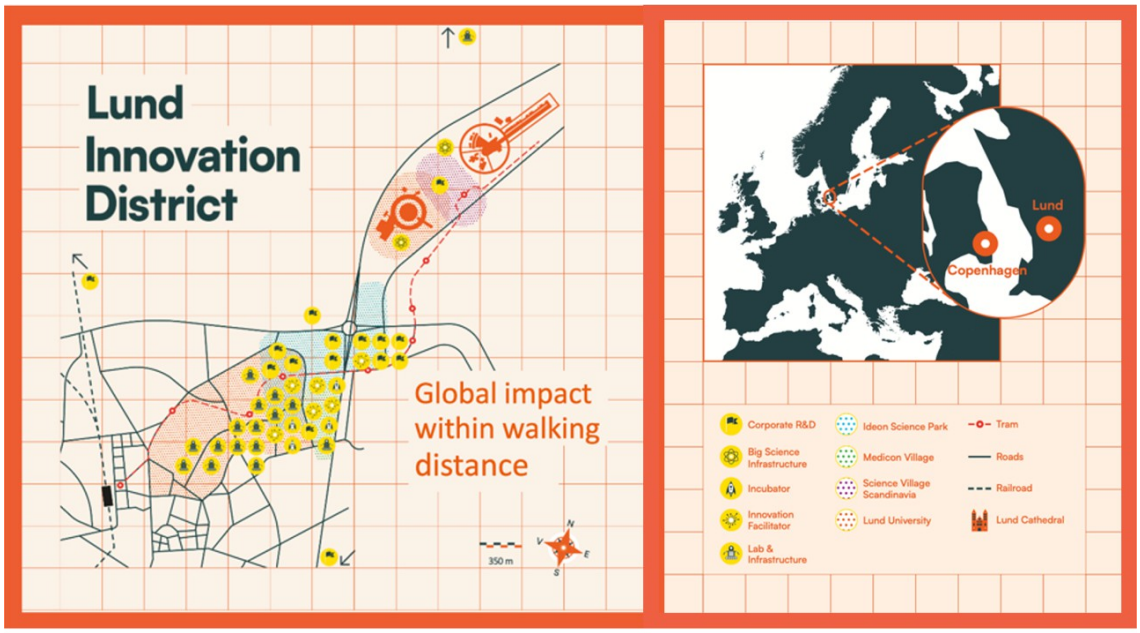

Figure 2. Map of Lund Innovation District, a dense innovation area.

Lund University is an academic powerhouse and human capital generator in the district, investing over 9 billion SEK in education and research every year. At the same time, it is also an innovation powerhouse that connects academics and students with each other and with them private and public sector. Coupled with the system of Lund University's different academic disciplines that are encouraged into inter-disciplinary cooperation we can also find cutting-edge laboratories and infrastructures like LTH Open Door, Nano Lab, HumLab, DarkLab, MaxIV.

The district's varied innovation ecosystem is also composed of university faculties, early-stage startups to established multinationals, corporate incubators and accelerators, corporate innovation offices, in the fields of manufacturing of the electronics sector, the technology field, pharmaceuticals, life sciences and the University collaboration office and innovation platform as coordinators among many others. The knowledge spillover possibilities are essential for the district and its vitality, meaning that companies interact with their peers and their surroundings. These indispensable elements help companies grow by being present and active in the district. In addition, the vibrant private sector in proximity to Lund University, facilitates the ability of academic research to be translated immediately into practice and creates a way for it to enter the new markets. A rich infrastructure that supports the ecosystem of innovation is also composed out of incubators, such as corporate incubators embedded in R&D, VentureLab for students, Ideon Innovation and SmiLe Incubator. The different incubators are characterized by different profiles, they can provide a tailored service for startups with different interests in doing business. This also broadens the district's ability of doing innovative work in specialized areas.

As for the spillover, companies benefit from collaboration and the vast innovation landscape the district offers. Notably, the district is home to the Ideon, Medicon Village, and the newly emerged Science Village Scandinavia Science Parks. These support systems operate as incubators in the field of technology and life sciences. The science parks are investment and talent magnets, which also adds to the enrichment of the innovation landscape. Additionally, the district possesses major facilities such as the MAX IV laboratory and the European Spallation Source supplemented by Science Village. In that way, Lund is a major global science hub and the place to be for value creation. Finally, the innovation catalysts such as Future by Lund (FBL) are strategic initiatives having an explicit aim to stimulate an open innovation culture within the district (Wise et al., 2023). This organisation employs a set of actions that open up opportunities for cooperation between the public, private sector, and scientists in order to ensure fast and efficient innovations.

In short, Lund Innovation District takes a systemic approach. It comprises both academic excellence and industrial innovation, and wherever possible also contains social undertakings. The district has a unique feature: **"global impact within walking distance"** which in itself emphasizes the collaborative nature of its ecosystem for innovation. Proximity allows for substantial discoveries and innovations in orbiting around one another to create a dense innovation synergy.

3.2 Method

The methodology is divided into several interrelated links, starting from the moment when Lund University researchers formed a strategic partnership with FBL in 2020. Phase one started with a partnership agreement set between the researchers and FBL, with the focus of the exploration of Lund ID's environment. The main goal was to research innovative district's cultural and dynamic characteristics in order to understand the borders, driving force that shapes its dynamics and barriers for establishing a sound innovation ecosystem. It encompassed creating an extensive interview guide tailored for the variety of stakeholders in this ecosystem. This guide facilitated structured yet open-ended conversations, enabling an understanding of the collaborative dynamics, stakeholder engagement, and the stages of open innovation within Lund ID. This approach was instrumental in capturing the lived experiences of the stakeholders within Lund ID, shedding light on the tacit knowledge, unspoken norms, and the collaborative tendencies that underpin the ecosystem.

Following the completion of the interviews and the preliminary analysis, the research focus shifted towards the application of the insights gained and FBL beginning to experiment with innovation portfolio tracking, developing an ecosystem tracking portfolio, and dialogue with ecosystem stakeholders around these topics. It is important to note that FBL promoted collaboration and dialogue in the ecosystem, and hence open innovation culture, without a direct mandate but out of need of following growth in the ecosystems before the portfolio approach took formal shape. As such the organisation experimented in the open innovation processes within the ecosystem. Following this, the portfolio strategy, once it was formally structured, aimed at systematically capturing the state of the innovation ecosystem, identifying key areas for intervention, and measuring the impact of various initiatives. Today, transformed from a 10-year project (with different phases) to a newly formed NGO in close partnership with Lund University Collaboration Office, the City of Lund and more than 25 companies as members, FBL functions as an orchestrator together with its partners and members to explore and build different cross innovation areas by a portfolio approach. Today the new FBL innovation platform is a backbone of the innovation district, acting as facilitator and kick-starter of portfolios with multistakeholders.

In parallel with the development of portfolio strategy, the story behind Lund ID's development was further enriched by Lund University’s leadership in the ekip policy platform supported by FBL. The project is a strategic attempt to use cultural and creative industries for innovation, planting a networked open innovation ecosystem in Lund as well as across Europe. Dealing with complexity when growth starts in an ecosystem and a cross innovation area. Besides its role as coordinator of ekip, LU Collaboration office and FBL are contributing with best practices that were inherited from research and interviews and draws on experiences gained across the spectrum of

academia and industry while facilitating cross-sector collaboration in the ecosystem.

In summary, the methodology adopted for this research narrative is characterized by its phased approach and each phase of the methodology is interconnected, reflecting a coherent journey from understanding to action, underscored by a commitment to fostering open innovation within the Lund ID.

4 Results

As we have explored the context of Lund's ID we now attempt to present the tangible outcomes of open innovation dynamics in the district. The results section considers the direct implication of FBL Zone Model, through which open innovation principles on Lund's ecosystem can be observed. We proceed firstly by demonstrating the crafting of collaboration in the *yellow zone*. We then move on to show the extent of what is already happening within the zone, by presenting outcomes of the processes accompanying open innovation, such as:

- An expansion of activities in existing innovation portfolios (with new partners and new project investments),
- The establishment of new infrastructures for testing and demonstration, and the start of new portfolios that leverage expertise across the ecosystem.
- We also see results of the spread of this proactive, structured support to open innovation processes in several other cities (partners of the ekip platform)
- Integration and Impact of Cultural and Creative Industries.
- Training and ecosystem capacity building.

4.1 Crafting collaboration in the yellow zone

The yellow zone in the FBL Zone model represents the dynamic space in which open innovation thrives. As demonstrated in Wise et al. (2023) FBL has pioneered a strategy to curate the yellow zone and to catalyze its widespread. Thus, FBL has creatively nurtured the yellow zone, that is the arena where open innovation happens, by identifying and acting upon the opportunities in the ecosystem for innovation and partnership.

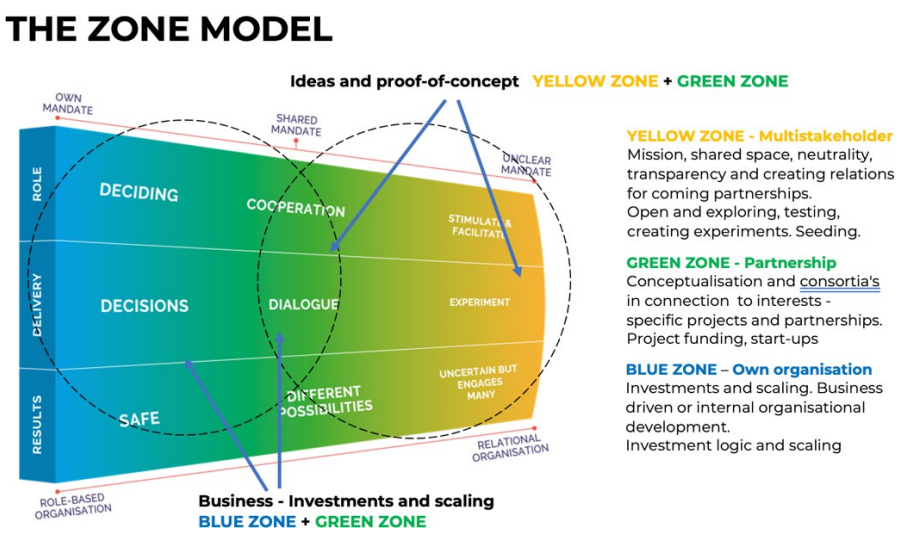

Figure 3. The FBL Zone model

These actions however have had longer tradition in Lund ID. This means that FBL has been acting as an intermediary and the curator of the yellow zone long before the development of the coherent more structured portfolio approach. As such it has acted as a proactive figure in the ecosystem, fostering experimentation and dialogue among the ecosystem stakeholders from across the spectrum, without any predefined structure. Hence the yellow zone existed before the formal portfolio approach took shape. But now, with a more structured approach, we are also able to track the consequences of the analytical approach FBL is pursuing in nurturing an open innovation culture. For example, not only those traditionally related to innovation ecosystems, such as high tech or life science stakeholders collaborate. FBL brings to the table also the CCIs, to diversify and strengthen the set of competences across the ecosystem, in the yellow zone.

More than encouraging and facilitating dialogue in the process of crafting of open innovation, FBL acts also as a representation and connector of dots in the ecosystem dynamics. For example, in the process of preparing the encounters that take place in the yellow zone, FBL surveys and provides a shared language of understanding to foster collaboration spirit. It helps experimentation; for example, the collaboration itself may require representatives to meet several times, have joint explorations and insights making activities, before any sign of a rough idea of being on the same page starts floating.

Finally, the essential character of this innovation culture is its engine: the Lund University Collaboration Office, the City of Lund, the companies, and FBL that in different combinations form the operational unit setting up portfolios, all of them

starting to unfold in the yellow zone. The Collaboration Office is procuring resources for coordination and involving researchers and academics interested in the innovation projects. The city and the companies provides resources and more context and FBL acts as a platform for collaboration facilitating the processes across organisations. Together they bring different stakeholders into the conversation in the yellow zone, stakeholders at place and stakeholders in relationship with the innovation district. Thus, the yellow zone, that is currently in its scale up phase in the ecosystem, is also the context of potential of structured open innovation process.

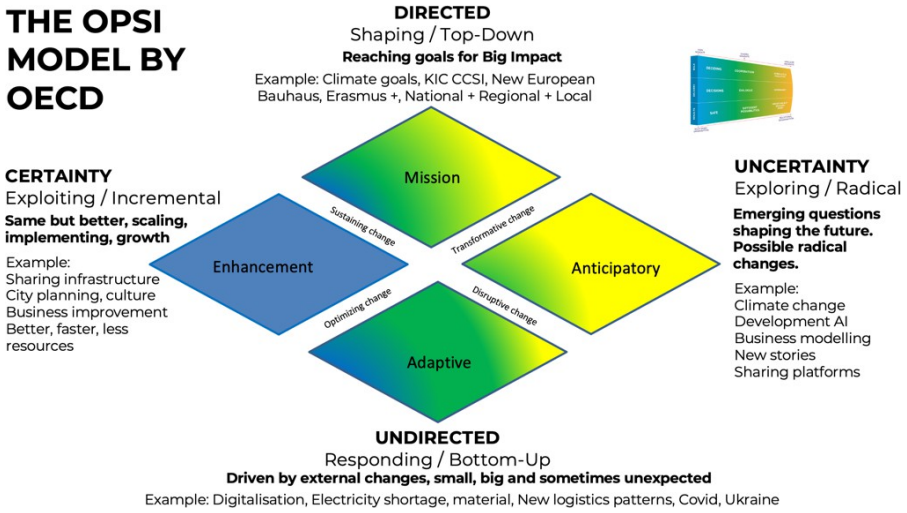

Figure 4. The OECD and FBL developed OPSI Model and the yellow zone model.

4.2 Expansion of activities in existing innovation portfolios

Lund ID has achieved significant steps in creating a vibrant open innovation environment through a series of specific measures that match with the goals contained in ekip. This expansion is not simply quantitative; it also involves qualitative evolution through new cross sectoral partnerships and investments.

In order to expand on the portfolios, FBL developed the methodology for understanding the portfolio using different lenses and approaches that takes into account the scope of the portfolios, coordination, institutional factors, the type of stakeholders and resources needed, as presented in figure 2. This process takes place within the yellow zone presented in Figure 5.

Figure 5. Understanding of the Portfolio Approach

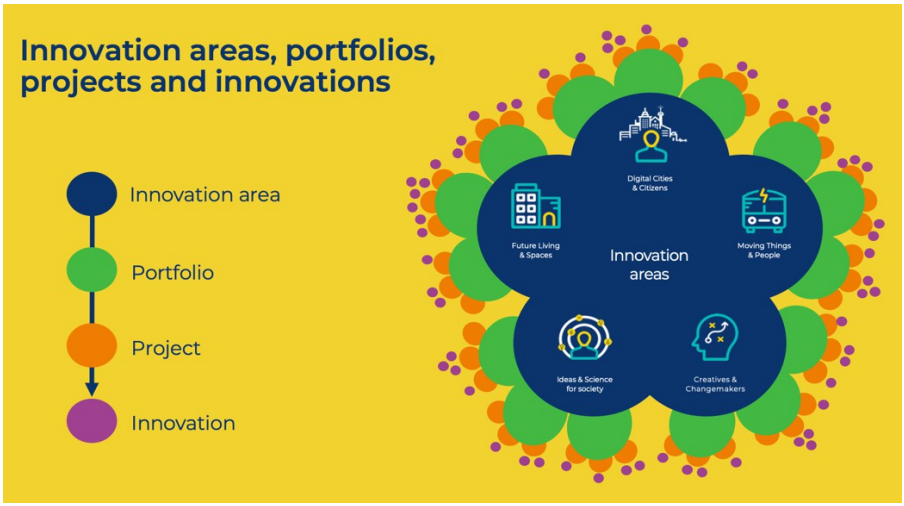

Figure 6. The relationship between innovation areas, portfolios, projects, and innovations.

4.3 Establishment of new infrastructures for testing and demonstration, and the start of new portfolios that leverage expertise across the ecosystem

Meanwhile and always within the yellow zone, it is also important to provide new possibilities by infrastructures enabling exploration and testing to leverage development and innovations. In this environment, different ideas can be born, fostered, and realized out of an innovation area and portfolio. Hence, Lund ID is a context for exploration and experimentation of different innovation strategies, from

mission and adaptive innovations to transformative changes, as shown by actions of FBL. For example, the ekip platform, is set to capture the essence of collaborative innovation, bringing together different expertise and skill sets from across the ecosystem. It is this collaborative ecosystem approach to create innovation policy recommendations for the Cultural and Creative Industries, that makes it possible to also use policy as a tool for open innovation.

4.4 Spread of support to open innovation processes in several other cities (partners of the ekip platform)

What's more, Lund ID's open innovation model has brought its influence beyond the boundaries and has started to inspire other cities' open innovation processes. This is especially true for the partners of ekip platform. ekip in this regard is helping with policies for open innovation and but also how to make those policies into tools for innovation. Hence, the district's innovation strategies will have nationwide and Europe-wide implications. This is because ekip represents a network of cities which aim to promote open innovation culture as the basis for productive innovation ecosystems. By engaging with ekip, FBL not only enhances Lund ID’s capacity for innovation, but also contributes to a European agenda related to CCI (Figure 7).

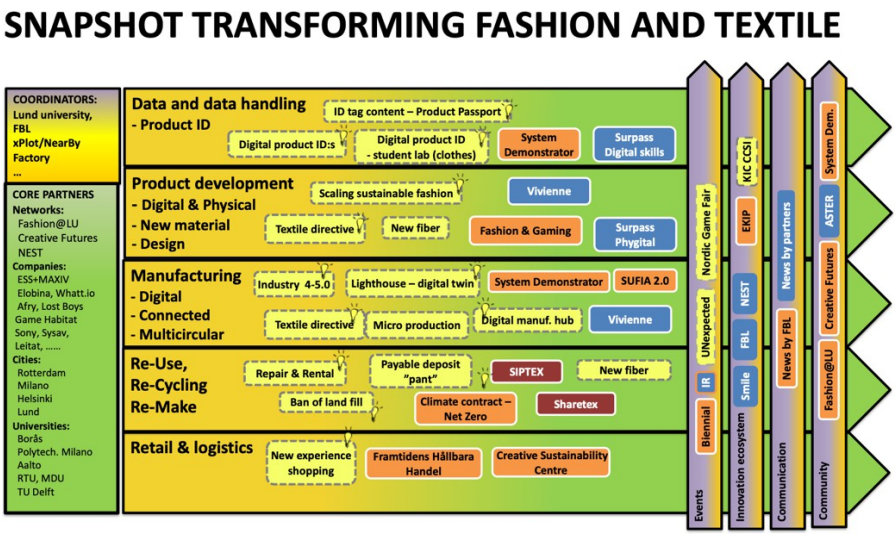

Figure 7. A snapshot of the innovation portfolio “Transforming Fashion & Textile”.

4.5 Integration and Impact of Cultural and Creative Industries

Finally, the results are seen in terms of integration and impact of CCIs within the yellow zone. This is because, Lund ID has strategically leveraged the strengths of the

CCIs to enrich and diversify its innovation ecosystem portfolio. Indeed, this integration has also contributed to collaborations that are atypical in high tech innovation ecosystems, where the predominance of technologic experts often marginalizes creative and artistic potential. On the contrary, thanks to the mission-oriented approach, the use of portfolio thinking and policies as innovation tool the traditional gap in Lund ID between technology, culture and creativity is being overcome, driving forward-thinking innovation, starting from the yellow zone (Figure 3).

Figure 8. The Innovation area Creatives and Changemakers, and innovation portfolios in the making.

4.6 Training and ecosystem capacity building

Training and ecosystem capacity building is a significant portion of what is happening in the yellow zone. For example, FBL has included in its innovative strategy a survey to study the ecosystem of the Lund ID better and inform its open innovation approach. Such a survey is not limited to simple mapping of the current state but is important for defining requirements that should be met and for characterising the ecosystem and its development. It is critical for informing the actions in the yellow zone, since these include explorative and experimental actions which should be undertaken to make the open innovation culture active. For example, the results of the survey data collection process, reveal the imperative for training aimed at understanding the multifaceted district. Another factor that the data collection process reveals as a significant, is the need for greater collaboration. Overall, the results of the survey represent a call for action in developing training and ecosystem capacity-building initiatives that not only build on the existing but also

develop the missing links within an increasingly diverse ecosystem, in the yellow zone.

5 Conclusion and discussion

In this paper we argued for inter-sectoral collaboration and a strategic union between CCIs, and we explained how public policies commitment can support the development of a strong open innovation culture in an ecosystem. Lund ID's journey displays how diverse stakeholders can come together over a shared vision and both external and internal ideas can be utilized to solve challenging problems in complex systems of varying scopes, while also being instrumental for human progress. Policy in Lund ID could be compared with what Mazzucato (2018) described as setting big goals for innovation to help society, working in diverse terrains such as education, industry, arts, culture, and crafts. This point is also made by the research when it refers to the importance of public policies in guiding innovation efforts, as Foray (2015) notes. Finally, it is noted by Ansell and Gash (2008) that working together across different sectors is crucial for the mission-oriented agenda. Lund ID is a vivid example of this kind of thinking taking shape. It creates an environment that has value and welcomes an outside cooperation. This approach corresponds to Chesbrough 's (2003) "open innovation" model.

5.1 Policy implications

When it comes to implications for policy, our research has shown the necessity of promoting joint operations and adding culture across the industrial structure as methods optimizing innovations for all. Hence an inclusive culture is essential, and policies should ensure diversity as well as fair access to resources in the ecosystem. Furthermore, monitoring the ecosystem’s health is important coupled with international cooperation, in order to exchange information and have better results. We also showed how collaborative action in particular with respect to the cultural and creative sector can become an integral part of the ecosystem through its fostering in the yellow zone. We also find that policy platforms for dialogue and innovation such as the one of ekip, contribute to the culture of openness within the district and across its borders. In sum, this paper suggests that the policies promoting open culture in innovation ecosystems should be comprehensive and flexible, promoting social diverseness, experiment, embrace constant learning as well as international cooperation in public and private policy making.

References

Adner, R. (2017). Ecosystem as structure: An actionable construct for strategy. Journal of Management, 43(1), 39-58.

Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. Journal of Public Administration Research and Theory, 18(4), 543-571. https://doi.org/10.1093/jopart/mum032

Autio, E., Nambisan, S., Thomas, L. D. W., & Wright, M. (2018). Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. Strategic Entrepreneurship Journal, 12(1), 72- 95.

Brown, R., & Mason, C. (2017). Looking inside the spiky bits: A critical review and conceptualisation of entrepreneurial ecosystems. Small Business Economics, 49(1), 11-30.

Chesbrough, H. W. (2003). Open Innovation: The New Imperative for Creating and Profiting from Technology. Boston, MA: Harvard Business School Press.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. Administrative Science Quarterly, 35(1), 128-152.

El-Awad, Z., Gabrielsson, J., Pocek, J., & Politis, D. (2022). Unpacking the early alumni engagement of entrepreneurship graduates. Journal of Small Business Management.

Foray, D. (2015). Smart specialization: Opportunities and challenges for regional innovation policy. Routledge. https://doi.org/10.4324/9781315768465

Harrison, S. H., & Corley, K. G. (2011). Clean climbing, carabiners, and cultural cultivation: Developing an open innovation community. Organization Science, 22(4), 391-410.

Iansiti, M., & Levien, R. (2004). Strategy as ecology. Harvard Business Review, 82(3), 68-78, 126. PMID: 15029791.

Mazzucato, M. (2018). The value of everything: Making and taking in the global economy. PublicAffairs.

Mazzucato, M., & Robinson, D. K. (2018). Co-creating and directing Innovation Ecosystems? NASA's changing approach to public-private partnerships in low-earth orbit. Technological Forecasting and Social Change, 136, 166-177.

Moore, J. F. (1996). The Death of Competition: Leadership and Strategy in the Age of Business Ecosystems. New York, NY: HarperBusiness.

Munigala, V., Oinonen, P., & Ekman, K. (2018). Envisioning future innovative experimental ecosystems through the foresight approach. Case: Design Factory. European Journal of Futures Research, 6, 1-16.

Pocek, J. (2022). Tendencies towards integration and disintegration of the entrepreneurial ecosystem: An institution-based view of the dynamics. European Planning Studies, 30(12), 2575-2594. https://doi.org/10.1080/09654313.2022.2043831

Poček, J., Fassio, C., & Kraus, S. (2022). "And yet it moves": National entrepreneurial culture and entrepreneurship-friendly policies: Evidence from OECD countries. Entrepreneurship Research Journal. https://doi.org/10.1515/erj-2022-0133

Schein, E. H. (2010). Organizational Culture and Leadership (4th ed.). San Francisco, CA: Jossey-Bass.

Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. Entrepreneurship Theory and Practice, 41(1), 49-72.