

Strengthening Regional Innovation: The University of Bayreuth's Role in Building an Innovation Ecosystem

Institute for Entrepreneurship and Innovation, University of Bayreuth, Germany

Abstract

The University of Bayreuth pursues a clear regional transfer strategy: it sees itself as an innovation driver for the Upper Franconia region and is establishing a highly networked innovation ecosystem between the university, companies, research institutions, and societal stakeholders. The focus is on the transfer of knowledge, ideas, and technology, as well as close collaboration with regional partners, such as the Institute for Entrepreneurship and Innovation, which serves as a central interface for transfer, consulting, and innovation projects. Core activities include diverse transfer formats (workshops & consulting) and specific networking events. The University of Bayreuth actively supports startups, conducts co-creation processes with regional companies, and is increasingly committed to the continuous expansion of the transfer infrastructure. The goal is to bring innovations to the economy and society in a market-oriented, interdisciplinary, and sustainable manner – as a guarantee for the region's competitiveness and future viability. Ultimately, the case study contributes to the ongoing discourse on the evolving role of higher education institutions as an active player within its innovation ecosystem.



Authors: David M. Eder, Andreas R. Schmidt, Dr. Petra Beermann

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STRENGTHENING REGIONAL INNOVATION: THE UNIVERSITY OF BAYREUTH'S ROLE IN BUILDING AN INNOVATION <u>ECOSYSTEM</u>

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Background and Institutional Context

Climate change, the energy crisis, and other major challenges pose enormous tasks for society and the economy, also in the Upper Franconia region in Germany. The University of Bayreuth (UBT) sees itself as an active driver and strategic partner in solving these challenges for both the economy and society. The UBT is a mid-sized higher education institution outside a metropolitan area and maintains close ties with other universities in Upper Franconia, including the University of Bamberg and the two universities of applied sciences in Coburg and Hof. It also cooperates with regional research centres, startup and innovation centres, chambers of commerce, associations, startups, and established companies.

Figure 1. University numbers of the University of Bayreuth (2024/25 winter semester)

University of Bayreuth			
Foundation year	1975		
Programmes	185		
Students (2024/25)	11.832		
Graduates (2023)	2.177		
Employees	2.661		
Academic employees	1.634		
Professorships	281		
Total income (Third-party funding)	283,1 million € (73,2 million €)		

A well-functioning network has been established throughout Upper Franconia, where numerous stakeholders interact and benefit from one another. UBT aims to make a significant contribution to successfully mastering these changes, securing prosperity for all, and maintaining the region's competitiveness.

In 2017, the University of Bayreuth formulated its role as a **regional catalyst** and a **driver of innovation** in both its *Transfer Strategy*¹ and *Structure & Development Plan*² (from 2026 onwards, there will be a new University Development Plan 2030+). These strategies, launched by the University Governing Board, Council, and Senate, are key instruments for a cultural change toward a stronger commitment to transfer activities. The transfer ideas, knowledge, and technology, alongside research and teaching, is the third pillar of a higher education institution. Moreover, UBT **ranks first** in national comparison in **start-up** support³ and is a "ZOHO Lab Bayreuth" **core partner** of one of the ten "**Startup Factories**⁴".

It is already foreseeable that universities will have an ever greater responsibility in the transfer of ideas, knowledge, and technology. This calls for an intelligent, innovation-promoting architecture designed to develop and implement solutions promptly. UBT's innovation ecosystem serves as the foundation for this architecture, providing the structure through which diverse actors contribute to joint regional development.



Motivation and Rationale

The UBT identified a pressing need to bridge the gap between academic research and entrepreneurial practice. It recognised that **effective transfer structures** must address both technological feasibility and commercial applicability. To achieve this, the University sought to mobilise its scientific potential to support innovation in business and society, while fostering entrepreneurial mindsets among students and researchers.

This understanding led to the creation of the **Institute for Entrepreneurship and Innovation** (IEI), which serves as a **central contact point for coordinating innovation and transfer activities**. The IEI enables companies and researchers to collaborate more efficiently by reducing complexity and providing a single access point to university expertise.

The establishment of the regional innovation ecosystem around the IEI was driven by the recognition that **universities must act as catalysts for regional development**. Upper Franconia's economy—characterised by strong small and medium-sized enterprises, traditional industries, and emerging technology sectors—faces ongoing challenges linked to digitalisation, **sustainability**, and **demographic change**.

Governance and Implementation

The Institute for Entrepreneurship and Innovation (IEI) acts as the organisational backbone of UBT's innovation ecosystem. Founded in 2020, the IEI now has four dedicated professorships in the context of Entrepreneurship, Intrapreneurship, Behaviour and Social, and a dedicated transfer team active in all three pillars: research, teaching and transfer. From a customer-oriented perspective, this centralisation serves multiple purposes. Companies often initiate contact based on limited information and may not find the right person or service. The IEI prevents this by acting as a coordinating interface, ensuring smoother communication and faster collaboration.

In addition to its coordinating role, the IEI provides its own expertise in entrepreneurship and innovation. Companies can access consulting, workshops, and coaching formats supported by an interdisciplinary pool of experts. External partners benefit from regional networks, and internal knowledge is shared through tailored training for intrapreneurs and innovators.

To support technological development, UBT's departments contribute through **Innovation Labs**⁵, which serve as hubs for project-based collaboration. The labs combine facilities and interdisciplinary teams where ideas are developed, prototypes are built, and technologies are tested (see Figure 2).



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FIGURE 2. INNOVATION ARCHITECTURE: COMPETENCIES AND LABS



The innovation structure provides opportunities for students, researchers, companies, startups, and social actors to co-create new ideas, products, and business models. This opening of the university to external cooperation offers enormous potential, connecting previously separate worlds.

The IEI views its mission as building a functioning innovation ecosystem and understands its role as an orchestrator, initiator, and driver of innovation. It maintains ongoing dialogue with stakeholders, ensuring that responsibilities are clearly defined and coordinated.

A key success factor in developing the ecosystem is having a **dedicated orchestrator**. The IEI fulfils this role by coordinating cross-disciplinary dialogue, aligning internal resources with external challenges, and proactively connecting stakeholders through events, dialogue, and digital platforms.

Continuous engagement with regional companies from the earliest stages of innovation is essential. By integrating both market-pull and technology-push approaches, the university co-creates solutions that are technologically feasible and economically relevant (see Figure 3).

FIGURE 3. RELATIONSHIP LEVELS BETWEEN LABS, IEI, AND COMPANIES

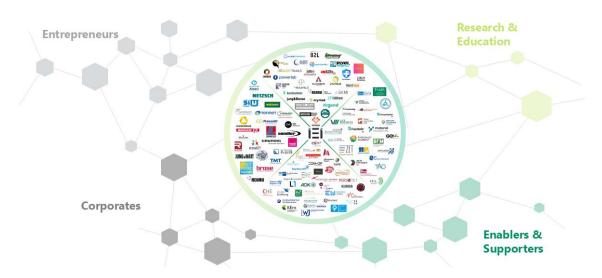
Relationship	Level of Interaction	Tasks
Lab – Company	Technology Level	Deeper understanding of the problem, provides a connection to research, facilities and talents
IEI – Company	Innovation Level	IEI moderates the innovation process, focuses on ROI
IEI – Lab	Process Level	Defines the stage gate process that combines innovation and technology perspectives



Regional Innovation Ecosystem Architecture

This case study examines the innovation ecosystem from UBT's perspective, recognising that the IEI is one component within a broader regional system. The ecosystem consists of four main actor groups: *startups, companies, supporting organisations,* and *research institutions* (see Figure 3 below). In the group of entrepreneurs, there are not only start-ups but also innovation units from companies, because they share the same mindset. Groups such as politics or society are often portrayed as independent groups within an innovation ecosystem. From the IEI's perspective, these important groups are subsumed under the category of "enablers & supporters," depending on the role they play in the innovation process.

FIGURE 4. REGIONAL INNOVATION ECOSYSTEM FROM THE PERSPECTIVE OF THE INSTITUTE FOR ENTREPRENEURSHIP AND INNOVATION AT THE UNIVERSITY OF BAYREUTH, GERMANY



Over recent decades, significant investments in science, research, and transfer infrastructure have strengthened the regional innovation landscape. Institutions such as the **Fraunhofer Centres** and **Neue Materialien Bayreuth GmbH** have become essential cooperation partners for Upper Franconian companies. Together, these actors form a dense network that fosters entrepreneurship and innovation across disciplines and sectors.

Key Activities and Mechanisms

Open Innovation Lab

The **Open Innovation Lab** serves as a multifunctional and creative space that can be reconfigured for various occasions such as **workshops**, **networking events**, **lectures**, or **innovation sprints**. Its modular structure allows for maximum flexibility, enabling new formats of co-creation. The space itself provides inspiration for innovation through its layout, which includes a stage for keynotes, flexible seating areas, and well-equipped workstations (see Picture 1 below).



PICTURE 1. OPEN INNOVATION LAB: A MULTIFUNCTIONAL SPACE FOR INNOVATION AND CREATIVITY







Podcast as a Communication Multiplier

To support the development of the innovation ecosystem, the IEI created the **podcast "Time for the Future"**. The podcast discusses innovation topics from diverse perspectives and features stakeholders such as companies, startups, and representatives from other ecosystems. It fulfils two key functions: first, it **provides deeper insight into the mechanisms of the regional ecosystem;** and second, it **extends visibility beyond regional borders** by connecting audiences and fostering shared learning.

Networking Events

The regional innovation ecosystem is dynamic, with new participants constantly joining and existing ones evolving. To maintain interaction and visibility, UBT organises **networking events** that bring together actors who might otherwise not meet and introduce new thematic impulses into the ecosystem.

These formats serve as platforms for stakeholders to exchange ideas, establish personal connections, and initiate joint projects. They include: Bottles & Founders, Start & Connect, Zukunftsschmiede (Forge of the Future), Start & Grow, and Design & Dine—each with a specific purpose and audience (see Figure 5 below).

FIGURE 5. OVERVIEW OF THE NETWORKING EVENTS AT UBT

Event	Role/Function	Description
Bottles & Founders	Establishment of the	Recurring event: Monthly
	startup scene, exchange	Duration: 2 hours
	between founders, and	Structure: 3-4 short presentations
	visibility of role models	from startups about their origins
		and current challenges
		Location: Small bar with a stage
Start & Connect	Bringing together startups	Recurring event: twice a year
	and established	Duration: 2-3 hours
	companies	Structure: Speed-dating and
		reverse pitches
		Location: Open Innovation Lab
Zukunftsschmiede	Lighthouse event for the	Recurring event: twice a year
(Forge of the Future)	regional innovation	Duration: 2-3 hours
,	ecosystem	Structure: 2-3 keynotes, panel
		discussion



		Location: situational
Start & Grow	Bringing startups and	Recurring event: twice a year
	supporters together	Duration: 2-3 hours
		Structure: 1 keynote, several world
		café sessions
		Location: Open Innovation Lab
Design & Dine	Bringing together the	Recurring event: once a year
	network in the food sector	Duration: 3 hours
		Structure: 1 keynote, several world
		café sessions
		Location: Heinersreuther Hof ⁶

Funding Mechanisms and Resource Allocation

The development and expansion of these structures is mostly supported by both the federal government and the state of Bavaria. For example, the "Innovative University^{2"} funding program was able to provide a significant boost. In addition, regional foundations, like the Oberfrankenstiftung and the Adalbert-Raps-Stiftung, contribute financially and also act as catalysts and multipliers.

Outcomes and Impact

The creation of the IEI and the establishment of the innovation ecosystem have led to tangible outcomes for both the **university** and the **region**.

Internally, interdisciplinary cooperation has strengthened, and entrepreneurship has become an integral part of university culture. Academic departments increasingly incorporate innovation-related topics into curricula, while staff engagement in transfer activities has grown.

Regionally, the IEI has fostered collaboration between academia and industry, facilitating joint innovation projects and enabling SMEs to access university expertise. These collaborations have contributed to regional competitiveness, knowledge diffusion, and talent retention in Upper Franconia.

FIGURE 6. INNOVATION ACTIVITIES IN NUMBERS (IN 2023)

Category	Total Number	
Events hosted (attendees)	194 (~6000)	
Start-up projects supported	~150	
Companies collaborations	~200	

Success Factors and Lessons Learned

Effective governance, strategic anchoring in university management, and continuous stakeholder involvement are among the most critical success factors. The presence of a



dedicated orchestrator — the IEI — has proven essential in coordinating cross-sector collaboration and preventing fragmentation.

Clear governance structures and defined responsibilities reduce overlap, strengthen collaboration, and enable agile responses to emerging challenges. Moreover, the success of an ecosystem depends on motivation and leadership at the individual level. Trust, communication, and mutual recognition are crucial for maintaining collaboration.

Strategic commitment from university leadership provides legitimacy and ensures the continuity of innovation-related activities. To balance research, education, and third-mission activities, universities must allocate dedicated staff and resources to transfer and innovation functions. This professionalisation ensures long-term partnerships and sustained institutional memory.

Future Outlook and Sustainability

Looking ahead, the University of Bayreuth plans to scale and further institutionalise its innovation ecosystem. The existing Innovation Labs will be expanded with new infrastructure, advanced prototyping technologies, and interdisciplinary facilities.

Networking and co-creation formats will be deepened to encourage more frequent, thematic, and cross-sectoral collaboration. The university also aims to move toward a **platform-based ecosystem model**, including the creation of a **Digital Twin**—a virtual representation of its innovation ecosystem. This digital tool will visualise collaborations, resources, and processes, enabling data-driven decision-making and international reach.

Furthermore, activities and relationships are being expanded at the **national and international level** and extend beyond the borders of the Upper Franconia Region. In addition to existing internationalisation efforts (e.g., gateway offices⁸), further points of contact with countries such as India, South Africa or Canada are being sought.

These developments aim to strengthen Upper Franconia's position as a region of innovation, combining local collaboration with global connectivity.

Conclusion

The University of Bayreuth demonstrates how a university can act as an **orchestrator of regional innovation** through structured transfer, co-creation, and active engagement with diverse stakeholders. The IEI has established itself as the central platform that connects research, entrepreneurship, and industry in a cohesive ecosystem.

By combining institutional structures with participatory approaches, UBT contributes significantly to sustainable regional transformation. Its case illustrates how universities can leverage internal expertise and external partnerships to build innovation capacity, strengthen regional identity, and foster long-term competitiveness.



Contacts and Sources

Contacts



David Michael Eder

Institute for Entrepreneurship and Innovation, University of Bayreuth Transfer- & Innovation Manager

david.eder@uni-bayreuth.de

Connect on LinkedIn



Dr. Petra Beermann

Institute for Entrepreneurship and Innovation, University of Bayreuth Director for Transfer & Innovation

petra.beermann@uni-bayreuth.de

Connect on LinkedIn



Andreas Roland Schmidt

Institute for Entrepreneurship and Innovation, University of Bayreuth Project Manager Innovation Ecosystem

andreas.r.schmidt@uni-bayreuth.de

in Connect on LinkedIn

Resources

- 1. UBT Transfer Strategy https://www.uni-bayreuth.de/en/transfer-strategy
- 2. UBT Structure and Development Plan https://www.uni-bayreuth.de/en/structure-development-plan
- 3. UBT Start-up Ranking https://www.uni-bayreuth.de/en/press-release/start-up-ranking
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