Comparative case study

Stimulating entrepreneurship and innovation in the textile industry

Abstract: *Business incubators have long been integral to higher education, fostering strong connections between universities and regional business sectors. This comparative case study, part of the HEInnovate initiative, explores the establishment and operation of incubators to support entrepreneurs and innovators in collaboration with higher education institutions (HEIs). The study examines the University College of Borås, TecnoCampus Catalonia/Reimagine Textile, and Foundry Powered by International Fashion Academy (IFA) Paris, utilising public sources and interviews with HEI representatives. The case study highlights how these incubators stimulate entrepreneurship and innovation within the textile industry, emphasising the importance of societal interest in sharing academic knowledge for practical and commercial applications. Strategic alignment to support entrepreneurs is crucial, as demonstrated by collaborations like Beyond Form and IFA Paris, and initiatives such as 'Urban Agenda Mataró 2030' at TecnoCampus. External organisations and public institutions play vital roles in launching and managing innovation programs, although cooperation agreements between HEIs and incubators are essential for easing the transition of ideas from academia to the market. The study underscores the importance of these agreements in fostering supportive ecosystems for ventures. Operating innovation programs requires navigating complex regulations while balancing academic and business perspectives. Innovation advisors, such as those at Borås University College, are pivotal in supporting research advancement and business preparation, particularly before market entry.*

1. Introduction

Business incubators has been an essential part of higher education throughout the years, with universities and colleges encouraging strong ties to regional business sectors. This comparative case study for the HEInnovate initiative addresses the goal of **Preparing and Supporting Entrepreneurs** through the topic of **starting up and operating an incubator/infrastructure in support of entrepreneurs and innovators** undertaken in cooperation with higher education institutions (HEIs).

The compared cases in this study are the University College of Borås, TecnoCampus Catalonia/Reimagine Textile, and Foundry Powered by International Fashion Academy (IFA) Paris. For each we used information from public sources (websites, strategy documents, newsletters), complementing this with information from communications and interviews with representatives of the HEIs.

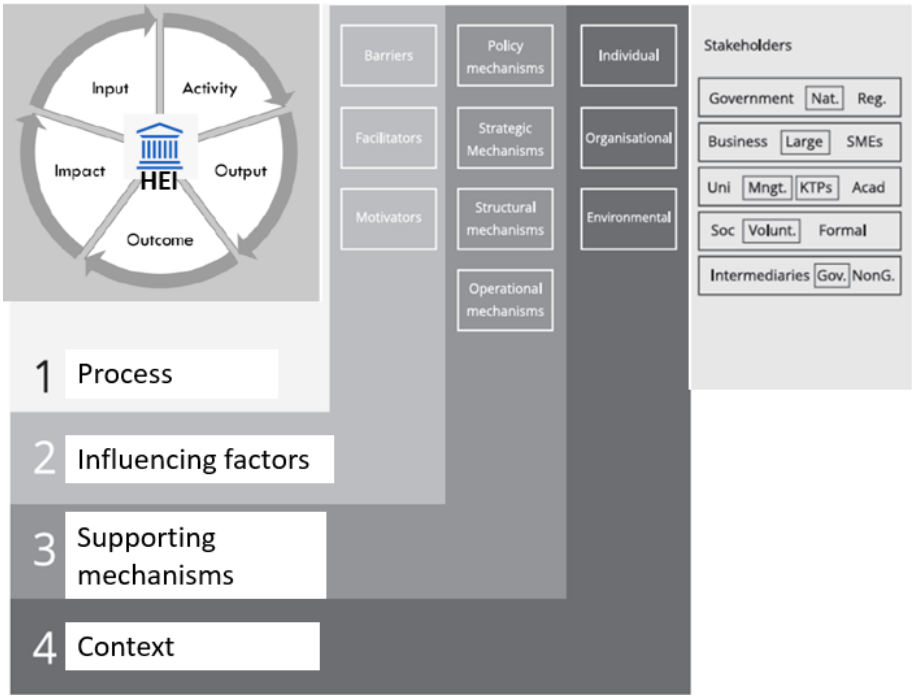
Based on the experiences of these HEIs, this case study will serve as an illustration of interventions stimulating entrepreneurship and innovation in a by tradition locally connected industry and academic environment, namely the field of the textile industry. The case study discusses how starting up a business incubator can help preparing and supporting entrepreneurs through building ties to regional business sectors.

2. Analytical framework

For this comparative study we apply an analytical framework developed by Davey et al. in 2018 (see Figure 1). Originally, the framework was developed to study university-business collaborations, but it can also provide useful categories to describe and understand other change processes in higher education institutions. In the following, the integration of

pedagogical innovations in HEIs will be understood as a change process, as this will alter existing practices.

Analytical Framework



Source: Davey, T. et al. (2018): The state of university-business cooperation in Europe. Final report. Luxembourg: Publications Office of the European Union, p. 26

The framework includes the various levels, factors, and challenges around implementing change towards a more sustainable and innovative HEI.

Central to the analytical framework is the process dimension, which relates to the change process. This process is operationalised as a simple activity chain. It distinguishes between inputs, activities, outputs, outcomes, and impact. The process can be regarded as a cycle because organisational change is usually not just a sequence of different activities, but often its actual outcome and impact will lead to further action in the institution. This dynamic process is embedded in three further dimensions (or layers) the influencing factors at the second level, the supporting mechanisms on the third level, and the context - on the fourth level.

The second layer of influencing factors signifies the immediate environment in which the process takes place. At this level, various barriers, facilitators, and motivators influence the activity chain and pull it in one or other direction. The (third) level of supporting mechanisms relates to the institution's enabling environment and includes the policies that frame rather than directly influence the steps in the change process.

Finally, the fourth dimension stands for the wider context in which the process is situated. It includes factors that are not under the institution's direct control, such as the individual characteristics and preferences of the actors involved or circumstances in the socio-economic environment of the HEI. In addition, the framework also looks at different categories of stakeholders that can have a role in the change process. Stakeholders are linked to very different organisations in the institution's environment.

3. The individual cases

3.1. TecnoCampus Catalonia/Incubator programme Reimagine Textile

TecnoCampus is a university centre established in 2002, affiliated with Pompeu Fabra University and a business park located in Mataró, Barcelona. The university has over 4,000 students and offers university studies in various fields such as technologies, audiovisuals, video games, business, and health – focused on the professional world and entrepreneurship. In 2023, three universities underwent a transformation, consolidating into the TechnoCampus University Center. The campus comprises four distinct faculties, encompassing a business department, a cultural industries department, a health department, and a technology department. Within the University Center, numerous companies are situated, fostering a culture that promotes both entrepreneurship and intrapreneurship among students.[1]

Reimagine Textile is a business innovation program aimed at the textile sector of Maresme territory, an ancient stronghold in the industry currently representing 24 percent of the textile industry in Catalonia.[2] The goal of Reimagine Textile is to boost and reinvent the textile and fashion sector in Catalonia in terms of:

- Innovation
- Technology
- Sustainability

This joint challenge has become a benchmark success factor of Reimagine Textile – in Catalonia and throughout the world. Reimagine Textile is driven by TecnoCampus, the **City Council of Mataró**, and **Eurecat Technology Center**. Eurecat was established in 2005 with the mission of becoming a key agent in public-private cooperation within the area of research and innovation. Eurecat provides business services such as technology consulting, as well as training and development of innovative products and services.[3]

Reimagine Textile is financed by the local administrative body Dupitació Barcelona, and the City Hall of Catalonia, Generalitat de Catalunya. Furthermore, Reimagine Textile has been supported (2018–2022) within the framework of PECT Textil del Maresme, a project of specialization and territorial competitiveness, co-financed by the European Regional Development Fund. The project aimed to promote economic growth and innovation in the Mataró and Maresme region by capitalising on the historical strength of the textile sector in the area. The project was aligned with the European strategy of Research and Innovation for Smart Specialization and the corresponding Catalan strategy.

The actions within Reimagine Textile are, furthermore, supported by the following strategic plans: Urban Agenda Mataró 2030[4], from Mataró City Hall, and the current plan TecnoCampus 2027[5]. Both are mutually aligned and highlight investment in innovative, sustainable, and circular industries.[6]

The work of Reimagine Textile is supported by **four cornerstones,** i.e., activities. The first cornerstone, the **Reimagine Textile** program, involves work with enterprising talent through a high-performance annual program incorporating an innovation and/or technology component as a competitive advantage. The program is based on three axes, i.e. an (a) innovative business model[7]; (b) sustainability/circularity; and (c) sector strategy[8].

The second cornerstone is the **Incubator programme Reimagine Textile**, an incubator model that goes beyond the infrastructure of the hosting of startups. An incubator pilot was initiated in 2018 and a new incubator was implemented from 2021 to today. The incubator presents a portfolio of supporting mechanisms through the process of developing a startup/company, such as the following:

Strategic localization, offering startups infrastructures surrounded by an innovation ecosystem (business park, textile industrial region, university, and technical centre Eurecat). The incubator offers workspace, meeting rooms, photo studio, training rooms and congress spaces. Also, the incubator offers **competitive advantage** and differentiation in terms of business, technology, and sustainability. Moreover, the incubator gives the opportunity of **architecture and empowerment** of the entrepreneur team. The incubator both helps the startup build the team in terms of distributing roles and responsibilities to maximize efficiency, as well as identifying training needs and offering training in key areas such as digital marketing, pitch to investors, and financial planning.

Growth challenge (scale up) represents another activity offered by the incubator programme. Together with the startups, the areas of weaknesses or opportunities are discovered, and the incubator are looking for the mentor-advisor who can support them. **Competitive key, digitalization and sustainability** mean identification of the startups' strategic opportunities in terms of digitization and sustainability/circularity.

Within the local production offer, the incubator helps in the search for suppliers and enhances the utilization of the services on the **digital platform Cooperatextil.com**. From the start in 2013 the platform has facilitated a directory of textile companies to give visibility to the production chain in the Catalan textile sector and its connection to the national and international textile production requirement[9].

Connection represents another service, in support of communication, branding and networking. Trough **access to financing** the companies in the incubator are informed about calls for grants and funding and they receive application support. Within the offer **prototyping and experiment** the startups have access to the services within **FabLab**, such as designs and manufacturing of samples and prototypes, as well as 3D Printing and industrial ironing[10]. FabLab started in 2021 (within the framework of PECT), as a complement to the incubator, to enable experimentation by the incubated companies and other textile companies in the region.

Virtual incubation is offered through the so called "Passport RT", which gives startups the ability to access incubation services for companies that do not are physically located in the incubator. At last, the incubated companies get access to **education planned by TecnoCampus**, where the incubator is located. For instance, the incubator has facilitated collaboration between startups and the university, such as through coordination of textile startups and the university's "ergonomic lab" – with a potential to develop products to improve life for senior people.

The third cornerstone of Reimagine Textile is the **Corporate accelerator**, which enables startups and companies to maximise growth by combining the key factors **knowledge of the university**, **new business models** and **product and process innovation**. The fourth cornerstone represents the **Technical drive** offer to entrepreneurs, providing information on the state of the art of technology to give companies a competitive advantage in the market.

The results of Reimagine Textile are measured by several performance indicators, as listed below.

- Start-up in incubation
- Jobs generated
- Raised capital
- Patents
- Utility models

For example, one startup incubated during 2023 developed and patented 100% recycled and recyclable sports textile (residues from the strings of tennis rackets transformed into fabric). Another start-up has created fashion for people with their mobility reduced. In the regional perspective, the Catalonian fashion cluster, MODACC[11] has initiated collaboration with Reimagine Textile. Within this network fashion brands are connected to startups in order to create synergies and collaboration.

3.2. Borås University College/Borås INK

Borås University College, established in 1977, operates across a diverse range of fields but is particularly renowned for its specialisation in textiles, library, and information science. The university places a significant emphasis on long-term sustainability in its research endeavours, securing funding from numerous external sources. As a member of European University Association, some research projects receive partial funding form the EU's Recovery and Resilience Facility.[12] In 2022, the school had approximately 18 300 enrolled students, supported by a dedicated staff comprising 822 employees and 497 teachers, with 57 percent of them teaching faculty having completed dissertations. The institution offers a diverse academic curriculum, comprising total of 67 programs and 189 distinct courses across various subject areas.[13]

The University of Borås strategically focuses on creating an attractive learning environment and fostering innovation. Their vision, encapsulated in the phrase "Together, we take responsibility for the future", underscores collective responsibility and the transformative impact of education and research. Their two strategic goals are the following:

- The Attractive Learning Environment

The university aspires to create an appealing place for both students and faculty. Innovation and practical application are integral components of this goal. The focus is on turning ideas into reality within a vibrant learning ecosystem.

- Complete Academic Environments 2.0

The university is committed to developing and testing visionary, modern, and updated learning environments.[14]

Borås Technical Weaving School was established in 1866. Following its recognition as the best in Europe in 1989, it underwent a transformation and evolved into what is now recognized as **the Swedish school of textiles**.[15] The Swedish school of Textiles is one of three universities in Sweden with the permission to have an artistic postgraduate education and is the only one in the field of textiles. The university college are leading in its field both in Sweden and worldwide. They offer three main specializations: design, technical solutions, and sustainable business model.[16]

The Swedish School of Textiles engages in research across various textile domains, with a particular emphasis on the textile production chain. Specifically, their research spans textile technology, design, and textile management. Noteworthy research areas include sustainable fashion, customized clothing production for customers, and the development of textile colorization methods that eliminate the need for water. Through collaborative efforts with industries, universities in Sweden and Europe, and research groups, they strive to foster the evolution of a sustainable fashion industry.[17] Furthermore, the school provides companies and organizations with opportunities for skill enhancement through lectures and customized training courses.[18]

Science Park Borås is an integral part of **Borås University College** and one of the leading Science Parks in Sweden, with a pronounced focus on sustainability and consumption-related

issues.[19] The core activity of Science Park Borås is the project arena where stakeholders from academia, business, public organizations, and civil society come together, creating synergies. Science Park Borås provides the resources and processes needed to transform innovation into societal benefit. With opportunities for collaboration, cutting-edge research, and creative meeting places at the **Textile Fashion Center**, Science Park Borås aims to attract more companies to the Borås region and contribute to increased employment.[20]

Borås University College offers a substantial infrastructure in the support of entrepreneurs and innovators. In general, there are certain counselling alternatives and steps to follow when it comes to developing a business idea or utilising academic research findings:

- Drivhuset
- The "Grants and Innovation Office" (GIO)
- The incubator BoråsINK

Drivhuset supports students to start and run a business

An initial step for students who want to start a business is to approach **Drivhuset**. The core objective of Drivhuset is to foster and facilitate initiatives that enhance creativity, education, and the growth of regional textile enterprises. Drivhuset is a foundation that primarily secures its operational funding from The Swedish Agency for Economic and Regional Growth and Götalandsregionen.[21]

Drivhuset and Borås University college intends to cooperate in encouraging entrepreneurship, innovations, competence, and knowledge at the University college and within the region. The main objective is to support and inspire students to start and run a business. Drivhuset and Borås University college has been given some different tasks in this project. Drivhuset is committed to providing students with a comprehensive set of offerings to foster entrepreneurship. Firstly, they aim to inspire through a variety of inspirational events. Additionally, they are dedicated to offering guidance, education, courses, lectures, and workshops, all grounded in the Loopa-method.[22] This method prioritizes placing the customer at the center of focus and describes the process for developing concept, ideas, products, and services. Furhermore, Drivhuset seeks to facilitate networking activities for students, creating opportunities for connection and the exchange of innovative ideas. Within the Textile Fashion Center, Drivhuset is equipped to provide office spaces for students. A collaborative synergy is established among Drivhuset, the regional innovation system, and the student union.[23]

The university college is expected to play a key role in fostering student entrepreneurship. This entails inspiring students through events and networking activities, leveraging their expertise and knowledge. Additionally, the university college should facilitate seamless communication between Drivhuset and the university, ensuring effective collaboration. The Borås University college is expected to be represented in Drivhusets board. The university college is also expected to transfer payments for Drivhusets contributions to the written agreement. In terms of actual results of the agreement, Drivhuset is obligated to report the project.[24]

The Grants and Innovation Office (GIO) supports the researchers
In general, a university researcher or project leader who need advice beyond solely starting up a business, can approach the Grants and Innovation Office (GIO) at the University College of Borås. GIO is a part of Chalmers Innovation Office – a central hub for innovation advisors in western Sweden. Chalmers Innovation Office is working to enhance the support and innovation efforts of universities in the region. By many, the GIO offers **Innovation Guidance** by GIO's innovation advisors, which provides guidance to researchers who aim to make their work

beneficial to society by collaborating with the public sector, private industry, and civil society actors.[25] Moreover, the innovation advisors help to evolve innovative ideas in collaboration with the GIO's network within Chalmers Innovation Office.

The main difference between the clients who want to start a business and researcher who approaches the GIO is the drivers behind their entrepreneurship. Researchers normally are motivated at first hand by academic research and teaching, while the commercialisation of their research is a secondary motivator. For the innovation advisor it is crucial to understand these prerequisites, i.e. the balance between research and the beneficial of the research. At the GIO one of the innovation advisors have a background as a researcher, which is an advantage from this aspect.

As state entities, Swedish universities, including Borås University College, in general grapple with additional complexities. They must meticulously navigate the tension between academic autonomy and societal accountability. Furthermore, Swedish regulations such as Confidentiality, The Principle of Public Access, and the Public Procurement Act pose formidable challenges to research utilization. For instance, the principle of public access can impede early-stage business development, incentivizing researchers to withhold findings to safeguard innovations and patents.

Moreover, in Sweden, researchers retain ownership of their results. Hence, the universities cannot commercialise on research outputs. Consequently, universities play a pivotal role in the support of the societal benefits derived from research outcomes. At the University College of Borås, innovation advisors occupy critical positions within this intricate innovation ecosystem. Altogether, the GIO serves as an intermediate support stage for advancing research. Given the elevated threshold, an innovation office becomes vital for preparing one's business product before transitioning to an actual product.

The Incubator BoråsINK – the final step in executing business ideas and innovation

After evolving business ideas or innovations at Drivhuset or the Innovation Office, the next step to execute the process is to turn to the incubator. The **incubator BoråsINK** operates in the creative growth environment in the Textile Fashion Center where the startups get access to an office space, studio, and machinery in Science Park Borås.[26] The incubator supports entrepreneurs and innovators in technology, textiles, and fashion with business development – from business concept to market launch. Furthermore, the incubator offers financing, technical, and commercial networks. With the support of experienced business developers, the incubator provides start-ups inspiration as well as business-oriented and custom-made coaching.[27]

The incubator Borås INKs' main purpose is to promote the creation of more knowledge-intensive companies that generate growth in the Borås region. Furthermore, the incubator should work to offer expansive development environments for the start of new companies, especially within Borås region's areas of strength. The incubator is owned by the City of Borås and has no profit requirement. It is financed through operational grants from Vinnova, the region of Västra Götaland, and the region of Borås, through project grants, and through cooperation agreements.[28] The distinct organizational structure of the incubator, operating independently under Borås city, facilitates seamless engagement with local small businesses and the broader municipal community. However, a potential drawback lies in the increased effort required to establish contact with the incubator.

However, cooperation agreements can reduce this step. In 2012 a **cooperation agreement** was established between Borås University College and BoråsINK, specifically focused on fostering innovation and entrepreneurship. The motivation behind this collaboration was to

establish dedicated comprehensive early-stage innovation support for students and researchers, in contrast to external entrepreneurs. While the innovation office meticulously shapes and molds ventures until they evolve into fully-fledged companies, the incubator remains indispensable for facilitating the subsequent steps. Hence, the importance of creating a partnership which streamlines the support to entrepreneurs.

The cooperation agreement specifies the tasks for the incubator and the university. The agreement from 2022 states six requirements that the incubator must provide. Firstly, the incubator must provide **business development** in the form of networking, business acumen, providing knowledge from previous experience and general coaching about the operation. The incubator should also provide the necessary **infrastructure** and **capital** for the Textile Fashion Centre. Further, they should provide **knowledge and competence** to teachers and students for them to establish viable companies. The incubator should provide an **inclusive and innovative environment** for entrepreneurs, employers and students at the university, financiers, and the regional textile enterprises, where they can meet and further develop the university and region. Lastly, the incubator shall make it own stakes to further **develop the innovation system in the region** of Borås.[29]

The University of Borås has been given a total of three tasks in the partnership agreement. They should facilitate the incubators work through continuous **communication**. They must also **make useful of the knowledge** and competence provided by the incubators. Lastly, the University of Borås should provide **events for networking and inspiration**.[30]

In addition to the mutually agreed-upon requirements, the University of Borås should be represented in the incubator's board. The university should also present achieved results, thereby leveraging the scientific and educational resources of the university. The shared objective is to establish effective communication to enhance the ongoing collaboration for competency and knowledge support. This is made possible via regular coordination meetings between the incubator, the innovation advisor, Science Park Borås, and, between the University of Borås and the incubator.

Borås University college is obligated to transfer financial capital to the incubator for their contributions to the agreement. In terms of actual results of the agreement, the incubator is obligated to report the project to Borås University College two times a year. The report must include the total number of individuals that has taken part in the activities and utilized the support and, the result of this.[31]

3.3. Foundry Powered by IFA Paris

International Fashion Academy, IFA Paris, was founded in 1982. The same year, with the aim to join the French fashion heritage with the modern globalized world, its signature program: Bachelor Fashion Design & Technology, was introduced. In 2002, IFA opened a Shanghai campus, in partnership with the Shanghai University of Engineering Science (SUES). In 2009, IFA extended the supply of programs by launching its first MBAs. Also in 2009, IFA established its Istanbul campus in cooperation with Turkey, Bahçeşehir University. In addition, IFA Paris launched an online campus in 2020 with the intention of creating a possibility for students to seamlessly swap between online- and physical programs.[32]

IFA Paris has a total of 1300 students across its campuses and distance learning programs, representing over 50 nationalities.[33] The university delivers an array of undergraduate programs, encompassing both the business and fashion facets of the industry. The Business of Fashion Marketing program equips students to navigate industry challenges, while the Fashion Design and Technology program imparts essential technical skills and knowledge for creating fashion collections. In addition to these offerings, the university provides a bachelor's program in

sustainable fashion, spanning both the business and fashion dimensions.[34] In the realm of postgraduate studies, IFA Paris extends its MBA program in design, management, and technology. The latter is tailored for students with backgrounds in both business and fashion design, aspiring to lead the way in the realm of digital fashion.[35]

The sustainability perspective is incorporated in most of IFAs academic programs, with the aim of becoming a Corporate Social Responsibility certified institution. IFA Paris places significant emphasis on mitigating chemical pollution, minimizing resource wastage, and curbing over-utilization. The institution has formulated a sustainable strategy with three core objectives: fostering transparency in relationships with diverse stakeholders, cultivating a multicultural environment to meet the needs of students and alumni, and positioning its graduates as sustainable leaders who champion innovation and transformative change.[36]

With its emphasis on sustainability and fashion tech, **Foundry Powered by IFA Paris** was initiated in 2019 as the first **fashion-tech innovation lab** in France. Foundry was launched and is still operated by the private enterprise **Beyond Form** in partnership with IFA Paris. Hence, Foundry is not a legal entity. Beyond Form is a venture studio building fashion technologies with a mission to modernize the fashion industry through tech innovations, and thus create a more sustainable and efficient fashion system.[37]

Before Foundry, quite surprisingly, not many fashion tech incubators were suited in Paris. However, there is a big draw for talents and fashion start-ups to locate to Paris. Thus, Beyond Form noticed this gap in the market, as well as lack of organised support of fashion textile innovations in the city. Foundry's' mission is to pioneer fashion technology as a discipline in Paris and beyond. Foundry is devoted to bridging the gap between academia and industry. The lab is a facilitator for students, startups, and industry collaborators to come together in a joint ecosystem.[38]

Within Foundry, three key components coexist:

- Startup Program: Every 6 months founders from all over the world are welcomed to work with the Beyond Form team on building out their early-stage fashion tech businesses. There is an entrance fee for the incubator.
- Fashion Technology Innovation Lab: At the lab, students at IFA can experiment with fashion technology, such as wearable electronics, advanced rapid prototyping or software.
- Modules for All: Not limited to MBA Fashion Technology students, other programs such as Bachelor Fashion Design & Technology and MBA Fashion Management also offer specialized modules focused on fashion technology.

Foundry offers a six-month incubator period for start-ups to deduct clear business ideas and develop prototypes. According to Beyond Form, the startups often do not succeed during this dedicated timeframe. However, the incubated student/company can continue as an intern in order to get additional advice.

The Foundry space is split into three sections:

- A co-working space for startups (Startup program participants) and entrepreneurs able to house up to 30 permanent individuals, in addition to flexible roamers.
- A makerspace to help Foundry users to make their practical solutions, ranging from 3D printers, laser cutters and 3D body scanners etcetera.
- A demo space to showcase what are the possibilities of fashion technology within the fashion industry.[39]

The Foundry space is founded by sponsor donations of hardware, software, or expertise. Above the lab facilities, the cooperation *per se* between the students and industry is also supported by private enterprise. To turn students' ideas into innovations, Beyond Form partners with promising startups and bolsters them with capital, industry expertise, and operational resources.[40] One of Foundrys major outcomes are the numerous connections to big fashion brands, made possible through the activities and support within Foundry. Another important outcome is the diversity among the startups. For instance, by 2023, more than 75 percent of the incubated businesses are female, and 50 percent are people of colour.

The Foundry Lab faces several challenges as it strives to foster innovation in the fashion industry. These include underestimating the 6-month incubator timeline, navigating French Fashion tax regulations, and dealing with visa limitations for innovators. Furthermore, given the entrance fee for the incubator, Beyond Form recognizes the necessity of investigating alternative funding methods to make it easier for aspiring entrepreneurs to participate.

4. Analysis

4.1. The process

The three institutions all offer substantial infrastructures in the support of entrepreneurs and innovators. Through the four cornerstones of the Reimagine Textile innovation program, infrastructure is created to foster both entrepreneurship and the traditional textile industry of Catalonia. In contrast to Reimagine Textile, Borås University College does not offer a formal innovation program specifically tailored for entrepreneurs. However, the university does provide a robust support structure that significantly favours research innovations.

For entrepreneurial students the first step of the support structure is operated in cooperation with Borås University College and Drivhuset, which provides a portfolio of offerings to students who want to start a business. For research-based ideas, and student ideas of a certain innovative height, support is given by the advisory services of GIO, dedicated to researchers who want to make their work beneficial to society. After the preparing processes of Drivhuset or the GIO, the final step within the infrastructure is for the entrepreneur to enter the incubator BoråsINK. In contrast to the Reimagine Textile Incubator and the Foundry lab, both of which primarily cater to students, BoråsINK exemplifies an advanced and refined form of support for business concepts and innovative initiatives that have undergone earlier-stage preparation.

Compared to the other two institutions, Foundry Powered by IFA is the core facility and structure for preparing and supporting entrepreneurs, serving as a hub for fashion technology innovation. Foundry fosters a startup program, specifically a 6-month incubator, and collaborates with various academic programs at IFA that focus on fashion tech. Consequently, these programs also enjoy access to lab facilities.

Each one of the three different support structures in general and the incubators/labs in particular offer similar services to entrepreneurs and innovators. For instance, office and demo space, prototyping and machinery facilities as well as access to financial/commercial support or networks.

4.2. Influencing factors

Motivators

These three institutions/incubators, motivated by higher societal goals, strategically position themselves in historically significant textile and fashion regions. Their mission is to revitalize the traditional industry by infusing innovation, technology, and sustainability. They foster startups

that offer novel business models and solutions, aiming to reduce the textile industry's environmental impact while enhancing its competitiveness. Furthermore, the different support structures in Borås, Catalonia and Paris are all driven by the urge to bridge the gap between academia and industry.

Given that all these institutions and programs operate within the textile sector, a significant portion of their academic content and research holds potential for practical utilization and commercialization. Consequently, there exists a collective societal interest in disseminating this valuable knowledge. For instance, Borås University College in Borås actively engages in applied research and collaborates closely with industry partners. The support of entrepreneur's benefits society as a whole, and financiers specifically seek tangible applications to ensure funding security.

Foundry Powered by IFA stands out due to its operational model – it operates in under a partnership of the private enterprise Beyond Form and the fashion school IFA Paris. In contrast, the Reimagine Textile and BorårsINK have non-profit requirements, and the driving forces behind them are public institutions. Specifically, the City Council of Mataró and The City of Borås play pivotal roles in these initiatives. Their shared goal is twofold: to stimulate the economy of Catalonia and Borås while also contributing to the region's areas of strength.

Facilitators

The Foundry lab is a facilitator for students, startups, and industry collaborators to come together in a joint ecosystem at IFA Paris. Foundry was launched partly by Beyond Form, noticing a gap in the Parisian market for fashion textile innovations. Also, by many, Beyond Form provides capital, expertise, and operational resources, transforming students' ideas into innovations. Thus, Beyond Form constitutes an important force in bridging the gap between academia and enterprise through its support of entrepreneurs. Similarly, the Eurecat Technology Center, in joint mission with TechnoCampus and City Council of Mataró, constitutes a driver in public-private cooperation within the context of the Reimagine Textile program/Incubator program.

However, the organizational landscape of Drivhuset, the GIO, and the BorårsINK incubator stands out for its distinct support structure. While BorårsINK operates independently within the city of Borås, it fosters seamless collaboration with local small businesses and the broader municipal community. However, there is a potential challenge: establishing contact with the incubator can be more effort-intensive for students and researchers within the university. Fortunately, the cooperation agreement between Borås University and the incubator streamlines the transition from the GIO to the incubator. In this process, the innovation advisor at the GIO plays a pivotal role, preparing ventures until they mature into fully-fledged companies poised to enter the incubator. The advisor's understanding of researchers' motives and incentives is crucial in balancing academic perspectives with the drive for business development.

Barriers

The three different entities encounter diverse barriers in their endeavours preparing and supporting entrepreneurs. For instance, both Foundry/IFA Paris and Borås University College grapple with national regulations. At Foundry, the startup must navigate French Fashion tax rules and address visa restrictions for international innovators. At Borås University College, such challenges include navigating the tension between academic autonomy and societal accountability, dealing with Swedish regulations such as Confidentiality, The Principle of Public Access, and the Public Procurement Act, and the challenge of researchers retaining ownership of their results. The innovation advisors and the Growth and Innovation Office (GIO) play crucial

roles in supporting research advancement and business preparation before market entry, navigating these challenges.

One major barrier for the Reimagine Textile Program/Incubator is the lack of space since the incubator currently is full. Therefore, additional founding is needed for growth. Furthermore "business as usual" can hinder collaboration as well as potential distrust of startups' services and products.

4.3. Supporting mechanisms

Strategic mechanisms

The strategic alignment to prepare and support entrepreneurs is evident for all three entities. As mentioned above, the partnership between Beyond Form and IFA Paris is crucial in the joint goal of supporting startups. While Reimagine Textile at TecnoCampus draws support from strategic plans like the "Urban Agenda Mataró 2030" and "TecnoCampus 2027", the University of Borås focuses on its strategic goals, such as creating an attractive learning environment and fostering innovation. Their commitment lies in turning ideas into reality, ensuring a dynamic ecosystem for students, faculty, and entrepreneurs alike.

Structural mechanisms

The cooperation agreements play crucial roles in ensuring a supportive ecosystem for ventures within the three institutions' respective communities. For instance, the cooperation agreement between both Borås University College and Drivhuset, as well as between the university and BoråsINK streamlines the support to entrepreneurs. Hence, the cooperation agreement ensures a smoother journey from idea to successful implementation within the university community.

Operational mechanisms

Both TecnoCampus and Borås University College embrace operational mechanisms that foster entrepreneurship. These mechanisms involve shared responsibilities across various components of their ecosystems. At TecnoCampus, the Reimagine Textile Innovation program stands on four cornerstones. These cornerstones form an intricate operational system that supports entrepreneurs. Responsibilities are distributed among different functions, including the annual program and the incubator. Similarly, at Borås University College, seamless cooperation exists between various areas of responsibility. These include Drivhuset, the GIO, and the incubator BoråsINK. At an individual level, coordination meetings occur between the incubator, the innovation advisor, Science Park Borås, and the University of Borås itself.

4.4. Context

The three institutions provide essential support to entrepreneurs within strategically positioned infrastructures in thriving fashion and textile ecosystems, utilising their strategic location in robust textile and/or fashion regions. For instance, TecnoCampus is suited in the Maresme territory, a historical stronghold in the Catalonian textile sector. IFA Paris, on the other hand, is centrally located in the heart of the French fashion heritage.

Borås University College, in conjunction with The Swedish School of Textiles, plays a pivotal role within the nationally significant Science Park Borås. This collaborative ecosystem fosters a seamless integration between entrepreneurial endeavours and the academic milieu. Additionally, The Reimagine Textile innovation program finds its home at the TecnoCampus University Center, a multifaceted campus that not only houses academic departments but also accommodates several corporate entities. This coexistence of academia and industry serves to invigorate entrepreneurial spirit among students. Consequently, the strategic localization of

these three entities facilitates synergies among students, researchers, startups, and local/regional textile and fashion enterprises.

5. Conclusions and lessons learned

The following lessons can be extracted from the experiences of Borås University College, TecnoCampus/Reimagine Textile and Foundry Powered by IFA, on the topic of starting up and operating an incubator/infrastructure in support of entrepreneurs and innovators.

- The societal interest in sharing academic knowledge plays a crucial role in realizing the practical benefits of research. When academic content and research have the potential for practical application and commercialization, they contribute to collaborative efforts between academia and businesses within innovation and incubator programs.
- There is a great opportunity to align strategically to support entrepreneurs. Beyond Form and IFA Paris collaborate to boost startups. Reimagine Textile at TecnoCampus leverages plans like 'Urban Agenda Mataró 2030' and 'TecnoCampus 2027'. Meanwhile, the University of Borås strategically prioritizes an attractive learning environment and innovation, fostering a dynamic ecosystem for students, faculty, and entrepreneurs.
- External organizations and public institutions, like city councils, play vital roles in launching and managing innovation programs and incubators. Unlike HEIs, they might have greater independence, local business networks, and a stronger drive for local and regional economic growth. However, connecting with an independent incubator can be more challenging for students and researchers. Therefore, cooperation agreements between HEIs and incubators can ease the transition of ideas from universities to incubators.
- Moreover, the experience with cooperation agreements underscores their pivotal role in fostering a supportive ecosystem for ventures within the respective communities of the three institutions/entities. For instance, the collaboration agreements between Borås University College and Drivhuset, as well as between the university and BoråsINK, effectively streamline support for entrepreneurs. Consequently, cooperation agreements have potential to facilitate a seamless journey from initial idea to successful implementation within the university community.
- Operating innovation programs for entrepreneurs requires navigating complex national regulations while fostering research-driven innovation.
- In balancing academic perspectives with business development, an individual advisor, such as Borås University College's/the GIO's innovation advisors, understanding of researchers' motivations and incentives can be crucial. The innovation advisors play pivotal roles in supporting research advancement and business preparation, especially before market entry, while navigating these challenges.

6. Source

This case study was prepared by Malin Nilsson Strandberg from Faugert & Co Utvärdering, Technopolis Group, Stockholm, Sweden, through collection and analysis of documentation and information about Borås University College, Foundry/IFA Paris, and Reimagine Textile/TecnoCampus.

The status of information provided in this case study is March 2023.

7. Contacts

Emma Feriche, Reimagine Textile/TecnoCampus, Head of strategic projects of dynamization and competitiveness

Peter Jeun Ho Tsang, Foundry/IFA Paris, CEO Beyond Form

Anders Karlsson, Borås University College, Innovation Advisor

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