Understanding influential factors in the choice of the selection process

A neglected aspect of the research literature on business incubators

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Vad påverkar valet av selektionsprocess?

En försummad aspekt i forskningslitteraturen om företagsinkubatorer

av

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Abstract
The purpose of this study is to enhance the understanding of what factors influence the choice of the selection process in government-funded business incubators. The study was conducted as an abductive multiple case-study of selection processes in Swedish government-funded business incubators. Our findings are summarized in a framework illustrating that owners and financiers stipulate important pre-conditions for the opportunities business incubators have in designing and implementing a certain selection process through their impact on the incubator goal and target group, and subsequently the choice of criteria. The regional context (local economics, level of entrepreneurial activity, collaborations and brand awareness) also stipulate a pre-condition for the incubator’s choice of the selection process by affecting the inflow of business ideas and therefore the pool of potential candidates available to the incubator. The amount and quality of the inflow mainly reflects in the rigorousness or flexibility in the application criteria. The design of the process, and thus the practices included, is highly influenced by the orientation of managers and operative staff in the incubator, conditioned upon available resources (organizational capabilities and constraints), and influenced by best practices, investor objectives, and macro trends. The study provides implications for research on selection processes in business incubators by highlighting that prior research has had a limited perspective of selection by primarily focusing on criteria and the flexibility and rigorousness in applying these, thus disregarding other practices and prevailing selection as an event rather than a process. Furthermore, we pinpoint several factors affecting the choice of the selection process, not previously discussed in the research literature. The emerging framework may also be used by stakeholders in order to understand how different factors impact the selection process and identify areas that are weak and need to be improved.

Key-words
Business Incubators; Selection process; National Incubator Program; Organizational factors; External factors; Government-funded.
Sammanfattning


Nyckelord
Företagsinkubatorer; Selektionsprocess; Nationella inkubatorprogrammet; Organisatoriska faktorer; Externa faktorer; Offentligt finansierade
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1. Introduction

Sweden is considered one of the world’s most innovative economies and has for long been fostering a favorable environment for innovation and entrepreneurship. New ventures enter the market, and established ones already operate, with the intention to thrive and become successful. Nevertheless, failure is ever present due to the dynamic environment they operate within. According to evolutionary theorists, the forces of market selection are inevitable and even vital to the maintenance of a healthy population of businesses (Aldrich, 1999). A general agreement among policymakers, however, is that market forces alone cannot be allowed to dictate the number of active organizations in an economy. Therefore, policymakers attempt to reduce the likelihood of firm failure by creating an enabling business environment as well as establishing strong institutions that can assist in this mission (Ayatse et al., 2017).

Business incubators are a widely used policy instrument and institutional arrangement by governments to encourage entrepreneurship and stimulate firm survival as well as support firm growth in a contemporary competitive environment (European Commission, 2002). Business incubators can be described as organizations that assist entrepreneurs to establish and scale competitive businesses by providing active and appropriate management, an enabling physical environment and links to commercial, technical, and financial networks. These business assistance services, aimed at early-stage and innovative enterprises, is the hallmark of business incubators (SISP, 2019; Khalil and Olafsen, 2010). Ultimately, this supportive community infrastructure helps to lower startup cost and limit the effects of liability of newness by nurturing promising firms to become financially viable and self-sustaining once they leave the incubator for the external market environment (Aernoudt, 2004).

Not only do business incubators support the individual client firms, hereafter referred to as incubatees or tenants, but the national innovation system in large. Since they interact with all actors within the system either directly or indirectly, they can effectively communicate the challenges faced by new firms to relevant actors in the system. As such, a critical feedback loop is established, and its benefits extend not only to the incubatees but to entrepreneurial ventures across the economy. Besides, business incubators may provide opportunities for other actors within the ecosystem. For example, they can offer potential high-growth investment opportunities at reduced risk to financiers, a vehicle to commercialize R&D to academic institutions and access to innovative ideas with the potential to increase efficiency or decrease costs to large corporations. Therefore, business incubators have a central role in the innovation system and capabilities to create a more enabling environment for entrepreneurs across the economy (Khalil and Olafsen, 2010). Ayatse et al. (2017, p. 3) summarize the contribution of business incubators as follows:

“...the incubation concept aims at achieving some fundamental objectives which include to create new jobs and businesses, foster a climate of entrepreneurship, commercialize the technology, diversify, revitalize and accelerate the growth of industry and local economies, reduce company mortality rate, reduce unemployment, increase university-incubation interaction and foster technology development”.

There are currently about 40 business incubators in Sweden, and the majority are owned and commissioned by municipalities, regions, and universities (SISP, 2019). Out of these, 24 incubators also participate in the National Incubator Program (NIP), which is a national government-funded support program managed by Vinnova, the Swedish Governmental Agency for Innovation Systems. Since the start of the program in 2003 until 2014, the turnover of the program amounted to 1,2 billion SEK, of which the government financed 800 million SEK. The subsidies from the NIP currently accounts for about 30 percent of the total revenue for the incubators participating in the program (Growth Analysis, 2018a).
Taking into consideration the great trust and substantial amounts of money invested in business incubators by governments, universities, research institutions, municipal agencies, and other stakeholders, the identification of best practices is of substantial interest. Previous research has mainly devoted efforts into investigating the impacts of business incubation on firm performance. This research is somewhat conflicting in terms of results and whilst some validate the positive effects in terms of firm survival, job creation and turnover (see, e.g., Weinberg et al., 1991; Mian, 1996; Headl, 2003; Al-Mubaraki and Busler, 2011; Voisey et al., 2013; Sehitoglu and Ozdemir, 2013), others report that incubation does not significantly contribute to the listed performance measurements (see, e.g. Amezcu, 2010; Schwartz, 2012).

A possible explanation to this discrepancy in research is suggested by Bergek and Norrman (2008) who argue that “performance” in general is vaguely defined and evaluated without regards to the incubator model (how and in what way incubators provide their support) applied in different business incubators. They suggest that identification of best practices requires a holistic approach where performance is evaluated based on the individual goals and practices applied by different incubators. In general, they argue, there is a lack of theoretical basis for both performance evaluation and identification of best practices in business incubators.

A critical component of the incubator model is the selection process, which refers to the decisions concerning which firms to admit as tenants into the incubator and thus also which to reject. In general, the selection process consists of a screening practice of applicants where the choice of incubatees is made based on a set of selection criteria. The ultimate goal of the selection process is to identify an appropriate match between the prospective firm’s needs and capabilities and the incubator’s goal and resources (Cammarata and Erlewine, 2003; Walker, 2004). In other words, the task is to identify firms that are weak yet promising, while avoiding those that do not need incubation or cannot be helped through such support services (Bergek and Normnan, 2008).

Several studies acknowledge the importance of selection, arguing that it is the foundation for efficient resource allocation with respect to the individual incubator (Lumpkin and Ireland, 1988) as well as the economy as a whole (Hackett and Dilts, 2004). Besides, a well-functioning selection process is the basis for the positive impact the subsequent business incubation process may have on firm performance and thus, is a hallmark of a successful business incubator.

Selection processes may differ between business incubators, which induces a level of uncertainty in the development of a standard or best practice in terms of the selection process. According to Walker (2004), differences in goals, type of clients, location and other dynamics, means that incubators must design a selection process appropriate to its unique needs. Other research studies support that the context of the business incubator is an essential determinant of the selection process and thus, the type of selection criteria and practices applied in the individual incubator (see, e.g. Lumpkin and Ireland, 1988; Mian, 1996; Colbert, 2010). However, “context” may refer to circumstances, environment, or overall situation, and several different factors constitute the context of an incubator at any point in time. Which contextual factors that may influence the choice of the selection process and thus, the opportunities or constraints an incubator face in this choice, is not thoroughly examined in the literature.

Based on the discussion above, this study aims to investigate what factors influence the choice of selection process in government-funded business incubators. This knowledge is meaningful for several reasons. Firstly, it contributes to a better understanding of the choices, opportunities, and constraints these business incubators face when designing and implementing a selection process. Secondly, a better understanding of selection processes, in general, contributes to the development of a more holistic perspective of the incubator model, which according to Bergek and Normnan (2008) is required to perform more adequate performance evaluations in the future. Thirdly, these insights have the potential to improve future resource allocation concerning both the individual business incubator as well as the economy as a whole. This is particularly
important in the case of government-funded incubators since governments have a responsibility to allocate resources in the most cost-efficient way. Despite an emerging interest, research on business incubators is dispersed, and scholars are unison that there is need for more thorough research on business incubator models, including the selection process (e.g., Bergek and Norrman, 2008; Colombo and Delmastro, 2002; Lumpkin and Ireland, 1988; Peters et al., 2004). No previous research study has empirically investigated what factors influence the choice of the selection process in business incubators to a greater extent\(^1\), and thus, this research contributes to knowledge in this domain. In order to narrow the academic research gap, this study aims to increase the understanding of what factors influence the choice of selection process in government-funded business incubators in Sweden. In order to fulfill the research purpose, the following research questions were generated:

**RQ1:** How does the selection process differ between business incubators?

**RQ2:** Why do the selection process differ between business incubators?

This thesis is divided into 7 chapters. Subsequent to this introduction and problem formulation, chapter 2 surveys a background including a definition of business incubators and a description of their core activities and processes. Additionally, an overview of Swedish business incubators as well as a description of the National Incubator Program (NIP) is included. In chapter 3, we survey the existing literature on selection processes in business incubators and describe the theoretical framework underpinning our empirical study. Chapter 4 covers the method and treatment of methodological issues. In chapter 5, we describe the four cases comprising our empirical study and specifically focus on their respective selection process. Chapter 6 covers the analysis and findings, where we contrast the cases and point out both the similarities and differences, thus focusing on **RQ1:** *How does the selection process differ between business incubators?* When doing so, we also put forward the factors described as reasons for this, thus also focusing on **RQ2:** *Why do the selection process differ between business incubators?* Our analysis results in an emerging theoretical framework, which is outlined in chapter 6. Chapter 7 covers a discussion regarding the theoretical and practical implications if our study.

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\(^1\) Lumpkin and Ireland (1988) presents one empirical model in which they test the impact of lead organization sponsor, objectives and physical characteristics on the applied screening practices.
1.2 Sustainability

In accordance with the Royal Institute of Technology's (KTH) sustainability policy, this section is devoted to a brief discussion about this study's implications on issues related to social, economic and environmental sustainability. Business incubators can contribute to sustainable development by supporting business ideas that are sustainability oriented or help more conventional firms to become more sustainable. Since sustainability orientated business ideas not always aspire to maximize profits they can have more difficulties than conventional firms to survive and grow in their early stages. Incubators can provide these sustainability oriented startups with the infrastructure they need to survive.

Incubators can offer these startups tangible resources such as an office space and financial support, which allow the entrepreneurs to focus on developing their business idea. Additionally, incubators can give sustainability oriented startups access to networks, where the entrepreneur can learn from other entrepreneurs within the same field or get access to angel investor or venture capitalists. The incubator programs create a community of aspiring entrepreneurs, where sustainability oriented startups can exchange knowledge and collaborate with one another.

Besides the ordinary activities and offering, the incubator can strive to incorporate sustainability into its organizational operations, goals and strategies. As sustainability is becoming important for all types of businesses, incubators have to adhere to this development and accumulate competence about sustainability. This can be done by recruiting expertise within the area that can educate both the incubators internal resources as well as the incubatees.

Additionally, incubators can admit business ideas or projects as tenants that are able to contribute to sustainability development. The process of admission of business ideas to the incubator can be referred to as the incubators selection process. As acknowledged in this study, the selection process is a complex phenomenon that is affected by several factors, both internal and external to the incubator. By investigating the selection process of business incubators in Sweden, this study can help incubators understand how they can alter their selection process to further develop their work with sustainable firms and draw inspiration from other incubators.
2. Background

This chapter provides a definition of business incubators and a description of their core activities and processes in order to increase the understanding of the research area. Furthermore, a description of the National Incubator Program (NIP) and a review of the theoretical rationales underpinning it is provided to further increase the understanding of the relationship between the government and the business incubators.

2.1 Business incubators

Business incubators, accelerators, and science parks all share common features which sometimes make it difficult to distinguish between them. For example, they are all examples of efforts to support the establishment and growth of firms. However, incubators are usually more concerned with companies in early stages, such as startups and spin-offs, and only hosts these companies during a limited period of time. Some of their key features are to offer temporary leases at below market rates, business advisory services, and coaching as well as a network of potential financiers (Vonortas et al., 2015). The terms “accelerator” and “incubator” are sometimes used interchangeably, and in similarity to business incubators, accelerators also offer business advisory services in order to accelerate firm growth. However, companies enter the accelerator posterior to graduation from an incubator. Thus, accelerators provide similar services but to companies in later stages of development (Lewis et al. 2011). Science parks, on the other hand, seeks to attract businesses to co-locate and hopefully collaborate, for example, with a nearby located university. Thus, they can be viewed as an inversion of the incubator model. Furthermore, science park’s usually host mature companies that may be located at the site for as long as they pay rent and usually do not offer any business advisory services (Vonortas et al., 2015).

2.2 Incubator activities and processes

Despite the above clarification of business incubators in relation to other firm establishment and growth initiatives, there is a prevalent discussion in the academic literature about how to define business incubators. A contributing factor to this is that business incubators may be very different from each other in terms of organizational structures, internal processes, and services offered. For example, Lewis et al. (2011) categorize business incubators into different groups depending on their characteristics: “with walls”, “without walls” and international. “With walls” incubators refer to incubators with a multi-tenant facility and onsite management and belongs to the category of incubators discussed in this paper. “Without walls” incubators refer to virtual incubators, which are usually characterized by low costs and a broad geographical spread of incubatees. International incubators help firms that seek to enter foreign markets by providing specialized services for language and cultural training and assistance in visa, accommodation, and integration issues.

“With walls” incubators may also differ in some respects, but are most commonly defined by a handful of jointly shared attributes. According to Bergek and Norrman (2008), business incubator may be defined as an organization that during a limited amount of time offers potential entrepreneurs the following four services:

- Office space: rental is often below market rates.
- Office services: because several companies share reception, printers, and meeting rooms, costs are reduced.
- Business consulting and coaching: support to stimulate the development of companies.
- Networks: the incubator staff communicates contacts to other actors who are essential for business development and can lead to mentoring and financing opportunities
as well as public). Also, the co-location in an incubator means that companies can exchange experiences and learn from each other.

Others argue that the processes, rather than the offered services, should define incubators. Thus, while the above-stated attributes are prevalent for incubators, the following concepts are more accurate to describe them (Mian et al., 2016, Growth Analysis, 2018a).

- Create an inflow of business ideas and selection of business ideas.
- Business consulting: to develop and verify the business idea, scale-up, and develop the business.
- Provide connection and linkages to a network of clients and financiers.

Strid (2006) proposes that firms view incubators as landlords providing extended services to their tenants. Therefore, incubators must be selective in their choice of tenants. In order to identify the firms most suitable for a particular incubation process, the incubator should apply appropriate selection criteria and practices. While the selection criteria can be described as the yardstick used to validate the decision to accept a firm into the incubator, selection practices refer to the inclination of an incubator to apply the criteria in order to select incubatees (Ganamotse, 2011). As mentioned in the introduction, these may vary between different incubators (see, e.g., Lumpkin and Ireland, 1988; Mian, 1996; Walker, 2004; Bergek and Norrman 2008; Colbert, 2010).

Prior to selection, the incubator is faced with issues concerning information asymmetries as well as the applicant’s competence and abilities. Therefore, and in addition to a thorough selection process, some incubators offer a pre-incubator process. Pre-incubation means that firms, usually in an earlier stage of development, receive support to develop and verify their business idea during a limited amount of time. Pre-incubation is a way for the incubator to get to know the entrepreneurs behind the idea and get an understanding of their skills and capabilities.

Subsequent to the selection, firms are settled in the incubator and receive various support services in order to accelerate business development. An individual plan for each incubatee is drafted, including activities and milestones that should be accomplished during incubation as well as a time plan for graduation and thus a plan for when the incubatee should enter the external market environment (Growth Analysis, 2018a). The process of scaling up the business and building a company differs amongst incubators. However, a standard part of the support process includes the recruitment of a competent board and key employees to the firm. Incubators also connect their incubatees to potential clients and investors and arrange networking events where the incubatees can present their business projects to various stakeholders (Growth Analysis, 2018a).

2.3 Swedish business incubators in numbers

According to the Swedish Incubators and Science Parks (SISP) industry association, there are currently about 40 active business incubators in Sweden. These located in nearly all parts of the country, but tend to populate the middle and south parts of Sweden adjacent to the urban areas and universities (see figure 1). During 2017 the incubators reviewed a combined number of 4512 business proposals, of which approximately 10% was admitted. During 2017, 198 companies completed the incubator process and became alumni (part of the alumni network posterior to incubator graduation). On average, these companies were incubated for 19 months, and about a third (27%) of the graduated companies were in the idea stage of their projects when admitted to the incubator. The companies enrolled in the incubator programs had an aggregated turnover of 786 million SEK and employed approximately 20 000 people at the end of 2017 (SISP, 2018).
2.4 The National Incubator Program

The first business incubators in Sweden were established already in the late 1990s. However, the number and scope of business incubators did not grow significantly until the launch of the government-funded National Incubator Program (NIP) in 2003 under the direction of Vinnova. In the program proposal to the government, Vinnova declared that the purpose of the NIP was to stimulate “the start and early development of high-tech and research-based companies, most commonly spin-offs from higher education institutions, research institutes, and companies”. In 2002, the government disposed 30 million SEK to Vinnova in order to establish the NIP.

While several theoretical rationales underpin the NIP and similar selective aid programs, one of the main refers to the concept of liability of newness. New innovative firms face greater challenges than ordinary firms in convincing the market to take on their products. Not only do these firms have to gain validation by the market, but they require more resources than ordinary firms in their quest to do so due to their unusual market offer (Stinchcombe, 1965, Freeman et al., 1983). Incubators can protect these firms from the immediate market pressure, increase their competence and capability through advisory services, and help them to either grow or make a positive exit with the assistance from their extensive networks.

Another central reason is that innovation by the firm often is accompanied by positive externalities such as spillovers and consumer surplus accruing to the rest of society, which suggest that the social return on investment exceed the private return. This in turn creates an incentive problem from the perspective of the firm. From a social point of view, this incurs a risk of the aggregated R&D investments falling below the social optimum (Arrow 1962, Griliches 1979, Jaffe 1998). The purpose of establishing incubators is precisely to create incentives for firms to

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Figure 1: Map displaying the incubator’s locations in Sweden.

2 Source: SISP, 2019.
innovate in order to realize the cases where one has reason to believe that social returns are significant.

Since the launch of the NIP in 2003, the program directory has changed several times, and the objective and course of direction of the program has developed. Between 2005-2011, the NIP was directed by Innovationsbron, and between 2011-2014 it was directed by Almi. In 2014, Vinnova again attained the responsibility for the program and have managed it ever since. In its current form, the objective of the program is to “promote the development of and value creation in new knowledge-intensive companies with great international potential” (Growth Analysis, 2018a).

In an evaluative study of the NIP by Growth Analysis (2018a) it is argued that there has been an expansion of the program’s intention from primarily promoting research-related ideas to prioritizing ideas from the business sector. By utilizing a twin study method, they find that the contribution to economic growth by incubatees in comparison to a control group of non-incubated firms is limited. However, the incubation process indicates a higher degree of innovation in incubatees in comparison to non-incubated firms, as measured in the number of patents. Thus, their results suggest that the objective of incubators should be to promote innovation rather than growth. In accordance with academic literature, they argue that the social rate of return of R&D investments is potentially larger for business ideas related to research, advanced manufacturing, energy, and environmental technology as these areas are characterized by a higher degree of knowledge spillovers than ideas focusing on fast short-term growth. Following these theoretical rationales, Growth Analysis suggests that the role of the government should be to promote ideas and innovations with a high degree of knowledge spillovers in order to increase long-term economic growth. Subsequently, government-funded business incubators should focus on selecting ideas with high potentiality for knowledge spillovers and with limited market access.

Throughout the text we sometimes refer to excellence funding, which is a part of the funding provided through the NIP allocated to incubators of particularly high quality. In order to qualify for excellence funding, the incubator has to have an official mission from the government, be a non-profit organization and be an established incubator according to SISP’s definition of incubators. The incubator must be targeted towards knowledge intensive growth firms. According to Vinnova’s definition, these have unique knowledge, an innovative offering, a scalable business model and are not yet established on the market. The motivation behind the excellence funding is to enable incubators to attract and develop competence and other non-financial support that these knowledge intensive growth firms need. At maximum, Vinnova funds one third of the incubator’s yearly expenses, and the other two thirds must be funded by other actors than Vinnova (Vinnova, 2017). Eighteen incubators received excellence funding in 2015 for the period 2015-2019, and the total funding amounted to 15 million SEK. In 2017, Vinnova decided to continue to fund the incubators and announced an additional offering amounting to 20,4 million SEK. Twelve incubators received excellence funding in 2017 for the years 2018-2019 (Vinnova, 2018).

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3. Literature review and theoretical background

This chapter begins with a literature review of existing research on the selection process in business incubators in order to increase the understanding of the role and importance of them as well as make visible the current research gaps. Thereafter, we provide a foundation for understanding what factors may influence the choice of the selection process in business incubators based on the literature review and reviews of interrelated research. We present two categories of potentially influential factors; internal (organizational) factors and external factors. Internal factors relate to the internal environment of the business incubator and suggest that goals, ownership, financiers, managerial orientation, and organizational constraints may influence the choice of the selection process in business incubators. External factors relate to the external environment of the business incubator and suggest that the local economic environment, level of entrepreneurial activity, industrial organization and dynamics as well as external cooperation, may influence the choice of the selection process. Taken together, these serve as a theoretical background in our research and provide an increased understanding of the chosen research area.

3.1 Selection processes in business incubators

Bergek and Norrman (2008) refer to the incubator model as a description of how and in what ways incubators provide their support. Based on previous research literature, essential components of the incubator model include; selection, infrastructure, business support, mediation, and graduation (see, e.g., Hackett and Dilts, 2004, Peters et al., 2004; Soetanto, 2004). According to Hackett and Dilts (2004), previous research regarding incubator models has tended to focus on the first component, the selection of incubatees. There is a general agreement among researchers within this field that the selection process is of great importance, since it constitutes the foundation for an efficient resource allocation both within the individual incubator and the economy as a whole (see e.g. Lumpkin and Ireland, 1988; Colombo and Delmastro, 2002; Peters et al., 2004, Bergek and Norrman, 2008). In addition, Bizzotto (2003) argues that the success of any incubator ultimately relies on the selection of incubatees. According to him, the number of graduated firms will be proportional to the quality of the selection process.

The role of the selection process is described in more detail by Cammarata and Erlewine (2003) and Walker (2004), who both argue that the ultimate goal of any selection process is to find a proper match between the prospective firm’s needs and capabilities and the incubator’s goal and resources. Thus, it becomes principal for the incubator to provide support to those firms that will benefit the most from it and at the same time have a high likelihood of success. Similarly, Bergek and Norrman (2008) pin down that the aim of any incubator is to identify weak, yet promising firms while avoiding those that cannot be helped by this kind of support or do not need it. This argument is supported by Kuratko and LaFollete (1987), who argue that variability in the screening and selection process may cause either incubatee or incubator failure if the selected incubatees are either too weak or too strong. Subsequently, the selection process aims to assess the prospective firm’s potential capabilities in order to identify new ventures with the potential to grow and succeed in an incubator environment (Lumpkin and Ireland, 1988).

According to Walker (2004), a well-designed selection process has the potential to both attract and identify those entrepreneurs who are committed and capable to grow a business. It also aids the panel of evaluators in the decision about which firms truly benefit from the limited space, equipment, and staff time offered by an incubator. Furthermore, it allows the incubator to pool together a solid mix of incubatees that together may generate fruitful synergies within the incubator. Finally, a well-designed process constitutes the condition for incubation of promising firms and a steady outflow of prosperous graduates, thus securing a smooth flow of firms in and
out of the incubator. In conclusion, selecting and supporting firms that, in turn, support the goal and mission of the incubator helps the incubator to establish a track record, and this is crucial to market the incubator, attract new promising firms and therefore ensure the financial stability of the incubator as well as its longevity.

The majority of previous literature on selection processes in business incubators is concerned with exploring or evaluating selection criteria, as well as the emphasis put on these by different incubators, in order to identify best practices. Lumpkin and Ireland (1988), based on a survey of US incubator managers, performed one of the pioneering studies of screening practices. They utilize a cluster analysis to categorize business incubators based on the selection criteria they apply to select incubatees. They identify four different types of business incubators and conclude that most incubators select incubatees mainly based on market and personal factors (45.5%), followed by criteria regarding financial strength (24.4%) and lastly experience of the management team (15.2%) or no screening practices (15.2%). They conclude that a majority of the US business incubators submit their potential incubatees to extensive screening practices. In addition, they suggest that the applied screening practices are influenced by the lead sponsorship of the incubator, but not by physical characteristics or objectives. Their study provides valuable insights mainly into the variability of the configuration of selection criteria across incubators and proposes the taxonomy mentioned above. However, they do not imply which configurations, if any, are better or worse than others. Nor do they attempt to link the selection criteria analysis to the outcomes of the incubator.

Merrifield (1987) describes the incubatee selection process in a three-stage decision three. In the initial step, the incubator evaluates the prospective incubatee based on six criteria: profit potential, growth potential, risks, competitor analysis, social and political restraints, and industry restructuring. In the second step, the match between the prospective incubatee and the incubator is evaluated based on six criteria: availability of capital, competence, marketing and distribution, technical support, availability of components and material and management. According to Merrifield (1987), it is the combination of the attractiveness of the business and fit with the incubator that determines the likelihood of commercial success and therefore, the expected value added of the incubatee. While no analytical selection scheme can guarantee success, a careful selection of incubatees can increase the likelihood of their success and thus also the success of the incubator.

Mian (1994) investigates the selection practices amongst six university-based, technology-focused incubators and finds that the most fundamental criteria include: early stage technology-based firm, a strategic business plan in place, commercializable product, process or service, qualified team, existing cash flow, ability to pay rent, manufacturing firm preference, high growth potential, match with the resources and goal of the incubator and investor’s commitment. Furthermore, he observes that most of the incubators screen incubatees on a formal or informal basis and that this process of evaluation provides the feedback required to improve performance.

Aerts et al. (2007) outline the landscape of European business incubators and specifically focus on their screening practices. They conduct a self-administered online questionnaire and utilize data sampled from a total of 140 European business incubators. Their main results suggest that a majority of the business incubators (97%) utilize a set of criteria in order to evaluate potential incubatees. Out of this population, 61 percent declare that the market is the most critical screening factor, followed by the management team (27%) and lastly financial factors.

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4 The group of criteria includes written business plan in place, references, persistence, marketability of product/service, creativity, uniqueness of product/service and age of the management team.

5 The group of criteria includes profitability, liquidity, price earnings, debt and asset utilization, personal investment of the management team, and the current size of the firm.

6 The group of criteria includes management, marketing, technical and financial skills, experience, and growth rate projection of the management team.
Furthermore, incubators that screen on a balanced set of criteria are extremely few (only 6%). They also compare their results against Lumpkin and Ireland’s research study from 1987 and conclude that the main similarity between the studies is that most business incubators seem to screen potential incubatees based on an unbalanced set of criteria. However, the authors conclude that a balanced set of criteria should underpin screening practices since incubatee failure rates will be lowered as a consequence. The main difference between the studies, and thus American and European incubator selection policy, suggests that the focus on financial criteria is much more significant in the US whereas the focus on the management team and market criteria is more extensive in Europe. According to the authors, one possible explanation for this is found in differences in the national culture.

Bergek and Norrman (2008) in their empirical study of 16 Swedish business incubators have a similar cluster approach as Lumpkin and Ireland (1988). They suggest that selection can be divided into two overall approaches to selection, either primarily based on the idea or the entrepreneur or entrepreneurial team. In the idea-focused approach, prospective candidates are evaluated based on market potential and projected profitability while in the entrepreneur-focused approach, prospective candidates are evaluated based on the attributes of the entrepreneur, including capabilities, experiences, and skills. Furthermore, selection practices can also be divided into two groups based on the flexibility or rigorousness in applying the selection criteria. While the “survival-of-the-fittest approach” implies less rigid application of selection criteria and therefore usually results in a greater number of admitted tenants into the incubator as well as a reliance on market forces to determine the output, the “picking-winners approach” implies rigid use of criteria in order to identify the most successful firms ex-ante. The two approaches taken together generate four distinct selection strategies into which the studied incubators are categorized. We will refer to this way of categorizing the selection by business incubators in chapter 5, Cases and chapter 6, Analysis and findings.

According to Colbert (2010), the most fundamental selection criteria include predicted viability of the business, coachability, stage of development, industry sector, and growth potential. Furthermore, a best practice incubator selects the top clients through a comprehensive application and screening process, requiring low-performing clients to exit the incubator program while focusing on graduating the most successful businesses. However, they also highlight the existence of variations in the criteria used for admission between different incubators which, according to them, depends on the goal and stage of development of the individual incubator.

Regardless of what criteria and practices an incubator decide upon, selecting firms is a crucial factor for success. According to Wiggins and Gibson (2003), the success of an incubator often relies as much on the selection of incubatees as the development of them. Furthermore, they argue, the selection process may be the most critical consideration that sets different incubators apart because it must be pertinent to the goals and context of the incubator. Likewise, Walker (2004) suggests that differences in goals, type of clients, location, and other dynamics, means that incubators must design a selection process appropriate to its unique needs. However, as stated in the introduction of this paper, “context” may refer to circumstances, environment, or overall situation, and several different factors constitute the context of an incubator at any point in time. Which contextual factors that may influence the choice of the selection process and thus, the opportunities and constraints an incubator faces in this choice, is not thoroughly examined in the literature. Nevertheless, indications in this brief literature review suggest that goals or objectives, lead organization sponsor, as well as location, size and occupancy rate of business incubators, are potentially influential factors in the choice of the selection process (see, e.g. Lumpkin and Ireland, 7

A balanced set of criteria means that the group of criteria (market, team, financial) are either equally important (weighted) or that at least two groups are equally important (weighted) in an evaluation. An unbalanced set of criteria means that one group of criteria (either market, team or financial), ceteris paribus, is always more important in the evaluation than the other two.
1988; Mian, 1996, Colbert, 2010). These suggested factors serve as a foundation for our hypotheses. In the following sections, we present two different groups of contextual factors (internal and external), that are hypothesized to influence the choice of the selection process in business incubators. Taken together, these groups of factors serve as our theoretical basis.

3.2 Internal factors (organizational factors)

Organization theory is perhaps one of the most dynamic and widespread sub-fields within the applied research fields of administration, including, for example, business, public, education, and several other fields. Thus, there is no single organizational theory, but rather many theories that attempt to explain and predict how organizations, and therefore the people within them, will behave under different organizational structures, cultures, and circumstances (Shafritz et al., 2015). Since the selection process applied in an incubator is ultimately a choice or a sum of several choices, it may seem relevant to also draw upon the research area of organizational decision-making, which is a sub-field within organization theory (Clegg et al., 1999). In this section, however, we do not attempt to discuss whole theoretical expositions within the field of organization theory or organizational decision-making theory, but rather factors within the boundaries of the organization that might influence the choice of a specific selection process. More specifically, in this section, we propose that the goal, ownership, financiers, managerial orientation, and organizational constraints are factors that might influence the choice of the selection process in business incubators.

3.2.1 Goals, ownership and financiers

An organization may be defined as “a unit of people that is structured and managed to meet a need or to pursue collective goals” (Business Dictionary, 2019). The commonality of all organizations is the existence of a management structure that decides on relationships between the members of the organization and its different activities by the assignment of roles, responsibilities, and authority to perform specific tasks.

From the definition stated above, we recognize that the goal or mission of the organization, which in this case reflects the incubator, is central in terms of structuring and managing activities and resources to achieve it. However, goals and mission may vary between incubators, and therefore, different incubators may need different selection processes in order to achieve their goals. The universal goal of all incubators is to support firm survival, but the sole purpose of doing so might be to create more jobs, increase social inclusion, diversify the local economy, utilize vacant properties, commercialize research or earn profits. Following this, Walker (2004) suggests that the qualities that define a preferable prospective firm in one incubator may not be the same in another. As an example, he proposes that an incubator that serves a distressed community might strive to reduce unemployment by supporting entrepreneurs that have the motivation to run a business, but not necessarily the skills or experience. An incubator serving the life science sector, on the other hand, might require that a tenant’s business generates products or services that benefit human health. Thus, he suggests that an incubators’ goal or mission is an essential determining factor for its selection process.

Furthermore, an incubator may have several different goals or objectives that are not necessarily hierarchically ordered and therefore, sometimes conflicting. In a study of innovation support programs, Cunningham et al. (2013) find that it is relatively common for program objectives and program rationales to differ between authorities that collaboratively administer the same program. This issue ought to be the case for business incubators as well since ownership of the incubator is often divided between several stakeholders such as a region, municipality, and university. It is plausible that different owners may have different objectives, and thus that the kind
of ownership or ownership mix may influence the goals and subsequently, the selection process. Even in the cases where different objectives are consistent, they may need to be balanced against each other, potentially by supporting different types of projects or firms (Bozeman and Rogers, 2001).

Besides ownership, the interests of the lead organization sponsor or financiers may have an impact on the goals or objective of the incubator and subsequently, the kind of selection process that is implemented. According to Lumpkin and Ireland (1988), the lead organization sponsors may have different interests, which results in different preferences, for job creation, social inclusion, diversification and acceleration of the local economy, utilization of vacant property, commercialization of research, or profits from investment in firms and rents. Naturally, the owner of the incubator and lead organization sponsor may be the same actor. However, the incubators of interest in our research study are all partially funded by Vinnova through the National Incubator Program (NIP), which offers grants and thus do not claim any ownership in the incubator. Thus, owners and financiers do not entirely coincide in this case, and so it is possible that both stakeholders may influence the choice of the selection process in business incubators. Affirmative to this, Growth Analysis (2018a) suggests that the government’s objectives for the program have changed over time. When the program launched in 2003, the objective was to promote commercialization of research and mainly focused on ideas from academia. However, over time, the program directory has changed several times, and new generations of the program have tended to focus more on the growth potential of new entrepreneurial firms. Simultaneously, the type of companies supported by the business incubators has changed. In 2005, 49 percent of the selected ideas came from the business sector while 26.5 percent and 24.5 percent came from the research sector and students, respectively. In 2014, the share of ideas selected from the business sector had increased to 65.2 percent while those selected from the research sector and students had decreased to 23.7 percent and 11.1 percent respectively.

3.2.2 Managerial orientation

Another central organizational factor that may influence the choice of the selection process is the managerial group of the incubator since they act as decision-makers regarding daily operations. While the decision on overall goals and objectives is predominantly a matter of question for the owners of the incubator, how to practically reach these goals is a managerial matter. In other words, managers use formal authority to organize, direct, and control all subordinates so that the aggregated activities of these leads to the attainment of the organizational goal (Tannenbaum, 1950). Therefore, it is plausible that managerial orientation may influence the choice of the selection process.

According to Ballestero et al. (2012), incubator managers may have different orientations and preferences regarding financial, socially responsible, or ethical investments. A financial managerial orientation refers to an inclination of managers to focus on financial performance, such as return on investments, profitability, and expected wealth. A socially responsible or ethical managerial orientation suggests that managers are inclined to invest in clients that address environmental sustainability issues, human rights, health or other similar societal issues (Wulung et al., 2014; Bauer et al., 2005; Hallerbach et al., 2004; Moon, 2002).

The orientation of managerial groups may concern several dimensions of the decision-making process regarding the selection process. For example, it is plausible that preferences may influence what selection criteria should be used to evaluate prospective firms and how strictly or flexible these criteria should be applied. Referring to Bergek and Norrman (2008), managers may be inclined to select primarily based on the business idea or primarily based on the capabilities and skills of the entrepreneurial team. Likewise, managers might be inclined to
implement thorough and demanding screening practices in order to pick the winners early on, or settle for less demanding screening practices and rely on market forces to shake out weaker projects later on in the process. Managerial decision-making theories aiming to explain why a particular decision is made, such as rational choice, bounded rationality, or cognitive bias theories are outside the scope of this paper. However, it is worth to notice that managerial orientation and its influence on the choice of the selection process ought to be a complex matter of degree of managerial power, overall ambition level and motivation, preferences as well as explicit and implicit motives.

3.2.3 Organizational constraints

Organizational constraints may be defined as limiting factors stemming from the organization, including crucial resources and production capabilities. Examples include time, assets, resources, knowledge, and culture. In general, any internal factor considered as limiting in attaining an organizational goal can be defined as an organizational constraint (Medeiros et al., 2017). Naturally, organizational constraints are specific to each organization, which makes it challenging to determine commonalities between incubators of different origins. However, given that the incubators of interest in this study are non-profit, government-funded incubators, we hypothesize that time, monetary resources and path dependency are critical constraints that may influence the choice of the selection process.

Incubators, like other organizations, are subjects to deadlines on decisions. For instance, a selection process needs to be completed within a limited amount of time, and this involves several decisions that must be made quickly in order to keep applicants, investors, and other stakeholder satisfied. Specific deadlines create a time pressure on decision-makers and therefore make it difficult, or even impossible, to gather all relevant information before a final choice of incubates. Thus, there might be time-constraints that limits how extensive such a process is allowed to be. Even if an incubator employs a thorough application process by gathering as much information as possible in order to identify the best candidates for an incubation process, there exists an apparent trade-off in achieving the benefits of a better selection process and the cost of if (Smith and Walker, 1993). Ultimately, there is a constraint in terms of how much that can be spent in terms of time and money on selecting candidates, and this ought to be more prompt in non-profit incubators which in general depends on public financiers. Thus, both time and monetary constraints are likely factors that could affect, or limit, business incubators in their choice of the selection process. Quality is not considered as a constraint but should be notified as a trade-off with both time and money.

The concept of path dependency constitutes another reason for why an organization’s capabilities might be constrained. Path dependency stresses the importance of past events for future action, which in terms of decision-making means that preceding decisions affect current and future ones. Hence, decisions are understood as historically conditioned (Sydow et al., 2009). Organizational learning is typically incremental, rather than pathbreaking. Thus, as an organization seeks to change or improve their operations, it is nearly impossible to disregard past ones, and it is difficult for the organization to conceptualize new processes and routines that are fundamentally different from its existing ones (Besanko et al., 2013). This understanding is a rather broad view of path dependency and merely focusing on past dependence in decision-making leads one to conclude that all human activity and organizational processes are path-dependent since they are all imprinted by their past in one way or another (Sydow et al., 2009). Nevertheless, it is highly plausible that the selection process in business incubators are highly dependent on how they have been conducted in the past, and that the search for improvements in these are path dependent. The inference is that path dependency might inhibit new ideas and decisions that could potentially outperform the old ways, in the view of past actions. Thus, even small path dependencies, such as
utilizing the same individuals as evaluators in the screening practices or the same channels to communicate the incubator offers, may have significant consequences. A narrower view suggests that path dependency refers to more specific patterns such as sustained persistency and lock-in effects. If the incubator has developed significant commitments to a particular selection process and therefore practices and routines, for example by investing much time or monetary resources, the incubator might find it hard to adapt to seemingly minor changes in the external environment. Such changes could, for example, represent new technology trends, significant variations in the number of applicants or other pressures requiring change. Management might be reluctant to take risks in their choice of the selection process due to fear of failure and antagonizing the top management, which is how the organization act as a constraint.

3.3 External factors
Organizations can be described as open systems, which means that they affect, and reversely are affected, by the environment they operate in (Business Dictionary, 2019). The geographical location of a business incubator indicates a certain economic level, institutional context, and business dynamics present in the area, which in turn will probably affect the supply of potential incubatees as well as their characteristics. Thus, it is plausible that the type of selection process, including screening practices and selection criteria, applied in an incubator is adapted to the kind of environment it operates in. In this section, we discuss local economic characteristics, levels of entrepreneurial activity, industrial structure and dynamics, as well as external cooperation as potential factors influencing the choice of the selection process in business incubators.

3.3.1 Local economics and level of entrepreneurial activity
An incubators’ success is reliant upon a steady flow of qualitative business proposals (Patton et al. 2009). Bank and Kanda (2016) suggest that the socio-economic level in the local environment affect the supply of high-quality tenants available to the incubator. A high socio-economic level in the local environment of the incubator more likely induces an efficient supply of high-quality incubatees. Reversely, a low socio-economic level may impair an efficient supply of high-quality incubatees. A low socio-economic level suggests that potential incubatees may lack the experience and capabilities to execute their business idea because they are present in a region that is less endowed in terms of universities or business and innovation centers. In terms of the selection process, lower quality of prospective incubatees may cause incubators to implement less rigorous screening practices and criteria simply because the supply of prospective tenants would not pass a demanding process. Instead, it is plausible that incubators in such regions are inclined to support entrepreneurs in earlier stages, either through a pre-incubation process or in the selection process itself.

In addition, the level of entrepreneurial activity is not the same in all regions. The entrepreneurial activity in a region is affected by various factors such as motivation, behavior, and knowledge, and conditioned upon the opportunities and available resources in the surrounding environment (Stathopoulou et al., 2004). Naturally, this might affect the supply of potential incubatees, but also the number of applicants. Rüffer (2015), finds significant differences between industries and regions when it comes to the probability of applying for innovation support programs. Firms in traditionally innovative industries and regions are more likely to seek support. The number of applicants may, in turn, affect the kind of selection process and practices that applied in an incubator. The larger the number of applicants, or inflow of business ideas, the larger the competition for a spot in the incubator program, which might create a need for more rigorous selection practices in order to be able to evaluate prospective incubatees. This argument is
supported by Lumpkin and Ireland (1988), who observes that occupancy rates can affect incubators’ selections processes, where less rigorous screening procedures are applied in the event of low occupancy rates. They suggest that the pressure to employ less rigorous screening practices is caused by a need for incubators to justify the use of public funds.

3.3.2 Industrial organization and dynamics

The kind of industrial organization and dynamics that exist in a region determines what kind of companies operate in the area and how the business environment in the region develops over time. The research field of industrial organization is primarily focused on the structure of the industry, and thus size and number distribution of firms as well as their competitive surroundings. The research field of industrial dynamics, on the other hand, is focused on industrial transformation processes and the interaction among units in the system (Carlsson, 1992). Patterns of industrial organization and dynamics may also influence what kind of selection process a business incubator chose to utilize. There are principally two factors that we hypothesize are relevant for business incubators in the choice of the selection process, namely the structure of the industry and trends in industrial dynamics.

Firstly, if the industrial structure in a region is built around a specific industry, it is plausible to assume that the same industry imprints on the supply of prospective incubatees in the area. Thus, the inflow of ideas might be related to a specific industry, and the focus of the incubator might be as well, which in turn might require an incubator to pursue a specific selection process. For example, incubators located in the southern parts of Sweden may, to a more significant extent, experience an inflow of ideas related to the life science industry. This is mainly a result of Medicon Valley, a bi-national life science cluster spanning the Skåne region and the island of Zealand in eastern Denmark. Due to the specific characteristics of the life science industry (e.g., strict regulations, long development time and time to market), business incubators dealing with such incubatees might require more thorough screening practices (e.g., specific competence of evaluators, require more information regarding the project) and other selection criteria (patent, experience of incubatee, strict use of criteria etc.).

Secondly, transitory or more permanent business or macro trends might also affect the characteristics of the inflow of business ideas, and subsequently, the selection process that is employed in a business incubator. Examples of such trends could be different waves of digitalization or firms focusing on solving social and environmental sustainability issues. By the same token as before, if such trends affect the type of inflow of business ideas to the business incubator, it is plausible that this may also create a need for business incubators to adapt their selection process to the variations in the inflow of ideas.

3.3.3 External cooperation

External cooperation may refer to all types of cooperation with actors that are external to the business incubator. As suggested in the introduction, business incubators have a central role in the Swedish innovation system precisely due to their broad network with important actors in the local and national business environment. Growth Analysis (2018a) suggests that Swedish business incubators today more than ever are an integral part of the local business ecosystem and that their cooperation with other actors has developed. However, they also notice that there are variations between different business incubators in the level and intensity of external cooperation. Such variations in the level or intensity of cooperation with others may have an impact on the choice of the selection process in different ways.
With regards to the selection process, Growth Analysis (2018b) suggests that incubators coordinate with other actors to increase the inflow of relevant business ideas. The collaboration is not directed at the companies but takes place between the incubators and the actors in the regional networks, innovation offices, or higher education institutions. The affiliated regional actors can support the incubator by referring potential incubatees after providing them with initial support, and they might support each other by regularly informing each other about their current operations, activities, and events. The cooperation with the regional innovation offices (if such exists in the region), or higher education institutions are essential to achieve an inflow of business ideas from the academia. The formality of such cooperation may vary between incubators, but some incubators are obliged to accept a certain amount of companies from the universities (Growth Analysis, 2018b). Naturally, cooperation to support an inflow of business ideas may influence the choice of the selection process in different ways. Formal cooperation, where business incubators are obliged to accept a certain amount of incubatees from an affiliated partner, limits the free choice of incubatees if the partner performs the selection. Such cooperation may also require the business incubator to adapt their existing selection process to serve other, complimentary business ideas. However, the cooperation may also free up resources that can be utilized on managing the business incubator instead. Cooperation that increases the inflow of business ideas to the incubator may also cause incubators to be less engaged in their marketing efforts towards their target group since they can rely on their steady stream of business ideas from their respective regional partners.

In addition to channeling potential incubatees to each other, cooperation between business incubators may also affect the choice of the selection process simply because they inspire each other. There are several formalized venues for incubators to exchange experiences, knowledge, and information which may inspire them to develop their process according to what others are doing. The majority of Swedish business incubators are members of Swedish Incubators and Science Parks (SISP), which is an industry association which offers organized gatherings, annual assemblies and industry conferences, continuous educations and thematically meetups. SISP also develop projects and processes that serve to support value creation, efforts, and environments in the member organizations (SISP, 2019). A part of the NIP also includes meetings for the exchange of experiences where participating business incubators can learn from each other (Growth Analysis, 2018a). Apart from formalized venues, business incubators often have informal collaborations as well. Establishing such relationships allows for informal exchange of best practices and inspiration, which may affect the kind of selection process applied in an incubator.

3.4 Summary

This section provides a visual representation of the theoretical framework presented in sections 3.2, **Internal factors** and 3.3, **External factors** in order to provide an overview and increase comprehension. As can be seen in figure 2, the choice of the selection process is hypothesized to be influenced by both internal or external factors. Internal factors are summarized to the left and constitute of incubator goal, ownership mix, financiers, managerial orientation, and organizational constraints. To the far left, the internal factors are described and exemplified by under categories. Incubator goal, ownership mix, and financiers are connected since ownership and financiers are believed to have an indirect impact on the selection process through the goals of the incubator. External factors are summarized to the right and constitute of local economics and level of entrepreneurial activity, industrial organization and dynamics, and external cooperation. To the far right, the external factors are described and exemplified by under categories.
Figure 2: Visual representation of the theoretical framework
4. Method
In this chapter, we present the methods applied in the research study in order to fulfill the research purpose. The chapter includes a description of and motivation behind the research approach and strategy as well as the choice of context and sample of cases. In addition, a description of the data collection process and data analysis is presented, followed by the quality measures used to ensure research rigor.

4.1 Research approach and strategy
Our research relies on an abductive approach referred to as systematic combining presented by Dubois and Gadde (2002). This approach implies to move between theory and empirical observation iteratively. More specifically, we utilize the framework outlined in section 3.2, *Internal factors*, and section 3.3, *External factors* as a preliminary preconception about the selection process in business incubators. The framework is developed according to what is discovered through our empirical research as well as through analysis and interpretation. This method is based on the idea that theory is understood in the light of empirical observation and vice versa. As such, the evolving framework continuously guides the search for further empirical data. This approach is appropriate, given that the objective of the study is to discover new things and thus contribute to the literature by developing existing literature on the selection process in business incubators. As discussed above, the existing literature on the selection process in business incubators is relatively limited with regards to why a particular selection process is decided upon and subsequently implemented. Utilizing this approach allows us to build on the interrelated and more developed research area of selection processes in general, which rather concerns how business incubators select tenants as well as other research fields such as organizational theory and industrial organization. Hence our research is based on a combination of prior research and empirical data collection, which enables us to increase the understanding of the phenomenon of the selection process from both the empirical and theoretical perspective.

The chosen research strategy for this study is the multiple case-study approach. A case study is best described as an in-depth study of a particular topic or phenomena in its original setting (Yin, 2014). According to Dubois and Gadde (2002), “the interaction between a phenomenon and its context is best understood through in-depth case studies”. Case studies are considered to generate rich and empirical descriptions, which can help identify what is occurring and why, and understand the effects of the case and consequences for action (Saunders et al. 2015). A central argument favoring multiple-case studies is that it improves theory building (Bryman and Bell, 2007). By using a multiple-case study, researchers can compare and contrast several cases and get a more comprehensive understanding of under which circumstances the theory holds and not (Yin 1994, Eisenhardt 1989). Moreover, the comparison may suggest concepts that are relevant to emerge theory. This strategy is suitable given that we aim to better understand what factors influence the choice of the selection process in business incubators. In addition, the multiple-case study strategy is appropriate since the theory within this area is underdeveloped.

4.1.1 Research context and case selection
The research context in this study is the selection process in government-funded business incubators. The business incubators of interest are participating in the NIP, which offers grants and arranges meetings for the exchange of experiences given that the incubators fulfill certain requirements. The funding may include project funding (operations) and funds for verification of the potential of ideas (for instance seed funding). The funding of operations has a direct
consequence in that the incubator can spend more time managing the incubator instead of seeking additional funds to support operations. Meetings for exchange of experiences support the development of the incubators. The rationale behind the support is that business incubators support Swedish business policy and therefore, have an essential role in the Swedish innovation system (Growth Analysis, 2017). Business incubation itself is a form of selective support, and therefore, business incubators are required to actively select which firms and R&D projects to invest in, and thus also which not to invest in. While government-funded business incubators are required to fulfill specific requirements inflicted by the responsible authority in order to receive funding, they are independent legal entities with individual goals, organizational structures, and contextual backgrounds. How to design and implement a selection process is therefore decided by the business incubator and which factors may influence such choice is the objective of this study.

The cases included in this study involves four selection processes in four different business incubators. The business incubators chosen as units of observation are the following: Gothia Science Park Business Incubator (GSP), Stockholm Innovation and Growth (Sting), Uminova Innovation and the Business Factory. The selection of cases is based on achieving as much variation as possible concerning both contextual and organizational factors. The contextual factors include geographical distribution, whether it is a metropolitan area, regional business structure, regional collaborations, and whether there is a university with a technical faculty. Organizational factors include overall goals, ownership and if it has a focus on a specific line of businesses. All incubators included in this study participates in the NIP. There are two main arguments for this. Firstly, the government agency Growth Analysis has recently published a report series titled “How can the state foster innovation in young and small firms through incubators.” The reports investigate and evaluate the effects of the NIP through both qualitative and quantitative studies. Their results indicate that the development of the NIP over time has caused incubators to select companies with high growth potential, mainly from the business sector, even though research suggests that incubators should focus on the development of innovative ideas with significant spillover effects, mainly found in academia. Focusing on incubators participating in NIP allows us to build on the previous report series, and more deeply investigate what factors affect the choice of the selection process, which may complement the previous studies. Secondly, since the incubators of interest are primarily supported by public funds, it is vital to understand how their processes work and which factors that may pose as opportunities or constraints, in order to allocate public funds most efficiently. The final selection of incubators was discussed with a referral group at Growth Analysis.

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8 Selective support is targeted towards a certain type of company, and can be used to stimulate companies’ development into a certain direction. In accordance with, EU regulations about the inner market, support targeted towards a specific type of companies or companies within a certain region should be considered selective, as the recipient firms obtains a competitive advantage towards other firms. All public selective support is forbidden according to the EU treaty, if not approved by the commission or in other exceptional cases (Growth analysis, 2016).

9 It should be noted that GSP business incubator has two orientations, IT/tech and games, and therefore utilizes two separate selection processes. We note this and describe their different practices, but in general refer to GSP as one case.

10 An important disclaimer for readers to take in consideration is that in connection with the publication of this thesis, the authors where made aware that Gothia Science Park is undergoing a reorganization, also including the incubator. As a part of this, Gothia Science Park changes name to Science Park Skövde. This was not yet official when the interviews where performed and the thesis was written, which is why it has been decided to maintain the previous official names in the thesis and refer to Gothia Science Park and Gothia Incubator respectively.
4.2 Data collection

Data were collected through interviews with incubator employees who have designed, executed, and evaluated the selection process. Interviews represent our primary source of data because not all aspects of the selection process are sufficiently documented to fulfill our research purpose. Furthermore, by doing interviews, we can access observations and reflections from employees experiencing the situation of inquiry (Gioia et al., 2013). The interview data was collected through semi-structured interviews. In total, we conducted 10 separate interviews ranging from 30 to 60 minutes. An overview of the respondents is presented in table 2. As a second step, we performed confirmation checks by allowing representatives at the incubators read the written material regarding their operations in order to verify that we did not misinterpret the information entailed during the interviews. In total, 4 persons representing each of the incubators read and verified the material.

4.2.1 Semi-structured interviews

As a first step, semi-structured interviews were conducted to gain an in-depth understanding of the research questions and thus allow us to fulfill the research purpose. The semi-structured interview approach is suitable, given that the research is both descriptive and explanatory. By asking prepared questions, we were able to maintain a structure that yielded comparable results between the cases. At the same time, allowing for additional questions prevented us from missing out on potentially valuable discussions (Saunders et al., 2015), which is of particular importance since theory in this area is underdeveloped and therefore based mainly on our hypotheses. Observations and reflections from people with in-depth knowledge about the selection process in business incubators helped to lead the discussion into areas not previously considered by us. An interview guide (see Appendix A1) was used as a support during the interviews. The guide developed continuously as the research progressed. The interviews were performed in Swedish, and the interview guide in Appendix A1

<table>
<thead>
<tr>
<th>Business Incubator</th>
<th>Region</th>
<th>Municipality classification</th>
<th>Industry focus</th>
<th>University</th>
<th>Science Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Business Factory</td>
<td>Kronoberg</td>
<td>Växjö, larger town</td>
<td>Unspecified</td>
<td>Linnaeus University*</td>
<td>Yes</td>
</tr>
<tr>
<td>GSP Business Incubator</td>
<td>Västra Götaland</td>
<td>Skövde/ Skaraborg, smaller town</td>
<td>IT/Tech and Gaming Industry</td>
<td>University of Skövde*</td>
<td>Yes</td>
</tr>
<tr>
<td>Sting</td>
<td>Stockholm</td>
<td>Stockholm, city</td>
<td>Unspecified</td>
<td>Royal Institute of Technology (KTH)*</td>
<td>No</td>
</tr>
<tr>
<td>Uminova</td>
<td>Västerbotten</td>
<td>Umeå, larger town</td>
<td>Unspecified</td>
<td>Umeå University*</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* Technical faculty present at the university.
has been translated after the interviews. During this stage, 10 interviews were conducted with respondents at the 4 business incubators included in the research. The respondents were selected based on their knowledge about the selection process in the respective incubator as well as through snowball sampling\textsuperscript{11}. All 10 interviews were recorded and transcribed.

Table 2: List of interviews

<table>
<thead>
<tr>
<th>ID</th>
<th>Position</th>
<th>Incubator</th>
<th>Date</th>
<th>Duration</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>Business developer</td>
<td>The Business Factory</td>
<td>2019-04-24</td>
<td>60 min</td>
<td>Telephone</td>
</tr>
<tr>
<td>R2</td>
<td>Operations manager</td>
<td>Uminova Innovation</td>
<td>2019-04-25</td>
<td>30 min</td>
<td>Telephone</td>
</tr>
<tr>
<td>R3</td>
<td>Business developer</td>
<td>GSP Business Incubator</td>
<td>2019-04-26</td>
<td>45 min</td>
<td>Telephone</td>
</tr>
<tr>
<td>R4</td>
<td>Head of business development\textsuperscript{12}</td>
<td>The Business Factory</td>
<td>2019-04-29</td>
<td>60 min</td>
<td>Telephone</td>
</tr>
<tr>
<td>R5</td>
<td>Board member, Uminova holding</td>
<td>Uminova Innovation</td>
<td>2019-04-29</td>
<td>60 min</td>
<td>F2F*</td>
</tr>
<tr>
<td>R6</td>
<td>Community Manager</td>
<td>Sting</td>
<td>2019-04-29</td>
<td>50 min</td>
<td>Telephone</td>
</tr>
<tr>
<td>R7</td>
<td>Business Developer</td>
<td>GSP business Incubator</td>
<td>2019-04-30</td>
<td>60 min</td>
<td>Telephone</td>
</tr>
<tr>
<td>R8</td>
<td>Business developer</td>
<td>KTH Innovation</td>
<td>2019-05-02</td>
<td>35 min</td>
<td>Telephone</td>
</tr>
<tr>
<td>R9</td>
<td>Business developer</td>
<td>Uminova Innovation</td>
<td>2019-05-02</td>
<td>30 min</td>
<td>Telephone</td>
</tr>
<tr>
<td>R10</td>
<td>Business Developer</td>
<td>Sting</td>
<td>2019-05-14</td>
<td>60 min</td>
<td>F2F*</td>
</tr>
</tbody>
</table>

* F2F is an abbreviation for Face to Face.

4.2.2 Reconciliation and confirmation

As a second step, we conducted audits in order to confirm and consolidate the findings. During this stage, we reached out to one respondent from each incubator and requested validation of the information concerning the incubator. This was done by email between the 16th - 29th of June, where each respondent received the sections that concerned their incubator and were asked to

\textsuperscript{11} Snowball sampling means that a primary data source (interview subject) nominate or suggest other potential primary data sources to be used in the research study.

\textsuperscript{12} The respondent left this position in February 2019.
inform us if something was misinterpreted or factually incorrect. The respondents were among the previous interview subjects and selected based on their knowledge about the selection process, and with respect to the time they could devote to this process.

4.2.3 Documented material
Documented material was used to support the selection of cases and to complement the data from the interviews. This material consisted of general information about the contexts in which the business incubators operate, their selection process, core activities, and yearly organizational reports. Respondents distributed the material, and complementary information was found on their respective websites as well as in previously published reports.

4.3 Data analysis
In order to analyze the collected data, we utilized thematic analysis as our data analysis method. Thematic analysis is a method used for identifying, analyzing, and communicating patterns within a data-set (Braun and Clarke, 2006). The allowance for flexibility in the analysis makes the thematic analysis method useful for qualitative studies. As the aim of this study is to build and develop on the existing theory about the selection process of business incubators by iterating the empirical data analysis with current literature, the proposed method is appropriate for this study. Braun and Clarke (2006) propose a five key step process for thematic analysis, which was adopted in this study.

Five key steps, according to Braun and Clarke (2006):
1: Familiarizing with data
2: Generating initial codes
3: Searching for categories and themes
4: Reviewing categories and themes
5: Defining categories and themes

Step 2-4 were performed iteratively in our analysis in order to ensure that no essential details were disregarded.

4.3.1 Familiarizing with data
Following the completion of all semi-structured interviews, we gathered all data and began to familiarize ourselves with the entire data-set in order to get a perception of its content and obtain a broad overview. Each researcher read through the transcripts from the interviews several times thoroughly and individually in order to get a better understanding of the content. During the phase of familiarizing with the data-set, both researchers took notes and highlighted content relating to the research questions (RQs), which allowed for an overview of the selection processes as well as the factors influencing the choice of such processes.

4.3.2 Generating initial codes
In the following step, notes and transcripts were re-studied, and initial codes (first order codes) were developed that seemed interesting, given the purpose of this study. Data concerning each incubator was analyzed separately in order to capture the differences between actors. The data was coded to match our RQs. As such, data associated with RQ1 were grouped and coded separately from data belonging to RQ2. The separation of data was performed from step 2 in the thematic analysis as described by Braun and Clarke (2006) and onwards. For RQ1, the codes were named to
mirror the business incubators choice of selection process, and for RQ2, codes were labeled to
mirror the factors behind the choice of selection process. For instance, the first order codes
regarding RQ1 were ‘Method of applying’ and ‘Extent of verification’ while codes regarding RQ2
were ‘Path dependency’ and ‘Inspiration’. This part of our analysis resulted in categorizing and
sorting of the data, however, circumjacent data was saved to ensure a holistic context.
Representative quotes underpinning the first order codes and categories (A and B) are presented in
Appendix A2 and A3 in order to provide an understanding of how the thematic map emerged.

4.3.3 Searching for categories and themes
After generating the first order codes, we began to analyze similarities and differences between the
codes and arranged them into themes and categories. Regarding RQ1, we took inspiration from
existing literature on selection processes to develop appropriate categories to underpin the practices
of business incubators. For example, the categories ‘Application’ and ‘Business review’ underpins
the differences connected to the theme ‘Screening practices’. Codes and categories regarding RQ1
were named ‘First order codes A’ and ‘Categories A’. Both the categories and codes express
differences between the incubators selection process.

Since the existing literature concerning RQ2 is limited, we used a more explorative
approach when trying to fit codes. The categories emerged inductively from the empirical data. For
instance, the categories ‘Resources’ and ‘Managerial orientations’ was generated as factors affecting
the theme ‘Screening practices’. The codes and categories belonging to RQ2 were named ‘First
order codes B’ and ‘Categories B’. These codes and categories assert the factors which influence
the selection process of business incubators.

This phase of our thematic analysis resulted in a first thematic map with three initial
themes, which mirrored the entire selection process. The three themes were: ‘Inflow’, ‘Screening
practices’ and ‘Pre-incubation and Verification’. The themes are based on the respondent’s
description of the selection process.

4.3.4 Reviewing categories and themes
In the following step, the initial codes, themes, and categories were reviewed and developed, and
we made sure that our codes and categories followed the principle of Mutually Exclusive and
Collectively Exhaustive (MECE) and accurately displayed the data from which they were generated
from. Codes and categories were changed to better represent the differences (RQ1) and influential
factors (RQ2). The three initial themes were divided into five themes. For instance, the theme
‘Screening practices’ was divided into ‘Mission’, ‘Criteria’ and ‘Screening practices’, and ‘Pre-
incubation and Verification’ were incorporated as categories under ‘Screening practices’ instead.
Additionally, the theme ‘Entry’ was created to better reflect the categories ‘Arrangement’ and
‘Organizational capabilities and constraint’.

4.3.5 Defining categories and themes
The last step involved confirming and further refining the categories and themes in the thematic
map. By confirming and refining, we refer to the process of identifying the essence of what each
theme is concerning and what theme the data capture. This lead to additional changes to and inputs
in our thematic map. For instance, the categories ‘Application’ and ‘Business review’ underpinning
the theme ‘Screening practices’ were altered to reflect the data better. This final step resulted in the
final thematic map illustrated in figure 3. Our analysis in chapter 6 is based on the final thematic
map, where we relate our findings to the existing literature and theoretical framework presented in
chapter 3, as well as present an emerging theoretical framework representative of our findings. A summary of the thematic map is also presented in chapter 6, *Analysis and Findings.*
Figure 3: Final thematic map
4.4 Establishing the quality of the research design

In a qualitative study such as this, the reliability and validity of the results must be considered. Therefore, we must critically evaluate the choice of research design and strive to get the highest degree of reliability and validity as possible with our resources and available time (Björklund and Paulsson, 2012). Reliability concerns replication and consistency of our study. In order for this study to be reliable, another researcher has to be able to replicate our research design and achieve the same results. Validity refers to the relevance of the measures used, the accuracy of the analysis of results, and how well the findings can be generalized.

Researchers have suggested that instead of ensuring reliability and validity, qualitative research can uphold trustworthiness and quality by satisfying the criteria of credibility, transferability, dependability, and confirmability (Guba and Lincoln, 1985). These can be seen as methodological strategies to uphold rigor. Credibility is in preference to internal validity and concerns that the results of the research are corresponding with the reality (Shenton, 2004). We ensure credibility by interviewing subjects with different positions in the incubators, e.g., board members, business developers, and operation managers. When analyzing the data, we verified (triangulation) the different respondent’s answers against each other, to ensure that the data were telling us what we believe it was conveying.

Confirmability, as a mean for objectivity, ensures that the finding is based on the experiences of the interview subjects and not on our preferences (Shenton, 2004). To deal with objectivity in our findings, we transcribed all of the interviews and analyzed the respondents’ answers based on what they said instead of the feelings the interview subjects were conveying. In situations where we were unsure about the respondents’ answer, we contacted the respondents for clarification and thereby minimized misinterpretations.

How well a case study can be generalized depends on how similar the case is to others of its class and how well the case study includes sufficient details about the comparison between the case and others in the group. This argument is essential for enabling the reader to make an informed judgment about how well the findings can be relevant to other occurrences (Denscombe, 2010). Even though case-studies are unique in some respects, it is also an example within a broader group (Denscombe, 2010). In order to enhance transferability, dealing with generalizability or external validity, we provide a detailed description of the context of each case, in order to give the reader the ability to evaluate how well the study can be applied in other context and situations.

Dependability, in preference to the reliability, is how well the study is repeatable in the same context, with the same methods and participants, and without obstacles to achieve similar findings (Shenton, 2004). We ensure this by giving an in-depth methodology description and having high transparency in our work process by including our interview guide and the data which our findings build upon.

Morse et al. (2002) are critical towards the ad hoc measures proposed by Guba and Lincoln (1985) and instead suggest that methodological coherence can address rigor by using additional verification instruments in the process of conducting a study (Morse et al., 2002). The verification strategies outlined by Morse et al. (2002); methodological coherence, appropriateness of the sample, concurrent data collection and analysis, conceptualization (thinking theoretically), and theoretical development, were essential to our research process and urged us to modify our research approach in order to confirm that the results from our study satisfied the criteria for rigor. To fulfill the requirements of methodological coherence, we matched our research question with the appropriate research method. Since our research question requires a method where we can describe and compare the selection processes of business incubators, a multiple-case study approach seemed to be suitable. To address the appropriateness of the sample, we selected
individuals for our interviews that were knowledgeable and could describe the selection process in detail for the multiple-case study. The data collection and analysis proceeded jointly. By implementing these strategies, we could use developing theoretical ideas to improve our data collection concurrently.
5. Cases
This chapter describes the four cases included in this study: Gothia Science Park’s business incubator, Stockholm Innovation and Growth (Sting), Uminova Innovation, and the Business Factory (Företagsfabriken). The description of each case begins with background information regarding location, ownership and funding, and is followed by a section about the incubators’ activities and offer, in order to provide a better understanding of the context. Each case description also contains three separate sections describing the incubator’s goal, target group, and subsequently, the selection process, which is the foundation for the analysis. All cases are based on data from our interviews and complementary information found in documented material.

5.1 Gothia Science Park Business Incubator
Gothia Science Park (GSP) is a technology and research park located in Skövde, Västra Götaland region. GSP was founded in 1999 and is considered to be the industry node in the triple helix constellation together with Skövde municipality and the University of Skövde (The Game Incubator, 2019a). The motivation to establish a science park in the region was to strengthen and secure the future regional business environment. At the time of the establishment, the most significant local job providers were Volvo, the military, the local hospital, and the agriculture sector. When Ford acquired Volvo in 1999, regional actors worried that production would move elsewhere. Also, Skövde municipality was dealing with the issue of migration from the area and struggled to retain the university-educated population due to the low demand for university-educated labor. Thus, the initiation of GSP was a result of the possible dislocation of Volvo’s production and the lack of possibilities for the educated workforce (Growth Analysis, 2018b).

GSP Business Incubator is an integrated unit of the Science Park. The incubator is a non-profit organization managed by Gothia Innovation AB. Gothia Innovation AB, in turn, is owned by Gothia Interest Association (51%) and Skövde Municipality (49%) (Skövde Municipality, 2017). The incubator receives its basic funding from the Västra Götaland region, Skövde Municipality and Vinnova as well as private funds. In 2018, the share of public and private funds was 96 percent and 4 percent respectively. The private funds constitute of fees from the companies situated in the incubator. The fee depends on the size of the company and ranges between 100 - 2100 SEK per month. As GSP is a non-profit organization, the revenue from the fee is reinvested in the incubators’ operations. In addition to the basic funding, the incubator receives project funding from the European Regional Development Fund (EURF) through the Swedish Agency for Economic and Regional Growth and Västra Götalands region. The total funding amounts to about 4 million SEK for three years and lasts until 2020 (Growth analysis, 2018b).

5.1.1 Activities and offer
Gothia Science Park incorporates several different functions such as innovation management, science park, and business incubator. The GSP business incubator is divided into two specializations; Gothia, which is mainly focused on IT and tech companies, and the Game Incubator, which is exclusively focusing on game-based startups. Their core functions are located

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13 It should be noted that GSP business incubator has two orientations, IT/tech and games, which have two separate selection processes. We note this and describe their different practices, but in general refer to GSP as one case.
14 The triple helix model of innovation refers to the cooperation between academia, industry, and governments.
15 The members of the Interest Association are Volvo Cars, Volvo Powertrain Sweden, AB Eletrotlux, Länsförsäkringar Skaraborg, Unionen, IF Metall Ostra Skaraborg, Västra Götaland region, ALMI Väst AB, Business Forum Skövde and Skaraborgs local authorities’ association (Kommunalförbund).
16 Mainly games for PC or mobiles.
at GSP in Skövde. However, some of the tenants from the game division are also located at Lindholmen Science Park in Gothenburg (The Game Incubator, 2019b).

Due to the two different orientations of the business incubator, the content and length of the incubator programs differ somewhat. Both divisions offer business support divided into three different stages: verification phase, business phase, and venture phase. The verification phase addresses startups in earlier phases, and the focus is to verify that there is a market for the idea. The verification process is characterized by investigation of markets, defining potential customers’ need of the product or service and verification of the idea, in order to find an appropriate business model. The entrepreneur or team participate in workshops and receive some individual coaching and tools in order to perform market research, get in contact with potential customers, and validate their product. The duration of the verification phase is three months in both the IT/tech division and the game division. The main difference between the two divisions in this respect is that the projects are admitted in batches of about 7-9 projects 2-3 times per year in the game incubator17, whereas the admission takes place on an ongoing basis to the IT/tech division. In 2018, 15 business projects were admitted to the verification phase to the game division (referred to as start-up phase), and zero business projects were admitted to IT/tech18.

The incubator phase, combining the business and venture phases, aims at startups in later phases when a limited liability company is founded, and the idea has received some “proof of concept”. The business phase focuses more on developing the business based on the outcome of the verification phase and contains relevant education within areas such as leadership, board, finance, strategic marketing, IP-strategy, gender equality, and sustainability. Pitch-training toward different stakeholders is also included. The venture phase is focused on scaling business and sales, and thus focus more on increasing the customer base and product portfolio.

The incubatees receive coaching and mentorship from experienced business coaches. The business coaches at GSP have competencies ranging from sales and finance to HR as well as extensive experiences from starting and managing startups. External consultants are brought in if specific competencies, such as legal, are needed (Growth analysis, 2018b). Besides coaching, incubatees are offered office space at discounted rates in Gothia Science Park, and Lindholmen Science Park in the case of game-based startups. Incubatees may stay in Gothia incubator (IT/tech) up to 36 months and up to 15 months in the Game incubator (Growth analysis, 2018b; the Game Incubator, 2019b). In 2018, 419 companies were admitted to Gothia Incubator and the Game Incubator respectively, summarized to 8 companies in total.

Besides the incubator programs, incubatees have access to the GSP network consisting of experienced entrepreneurs and investors through events, meetings, workshops, and lectures arranged by the incubator or the science park (GSP, 2019a; The game incubator, 2019b). As the incubator is co-integrated in the science park, they can offer incubatees an extensive network. There are currently about 85 companies in the science park, out of which about 80 percent are alumni from the GSP incubator. In addition to this, the Game Incubator provides a network consisting of 150 company founders and leaders within the game industry. A unique characteristic of GSP is that they bring their incubatees to meet with potential international customers early on in the incubator process. In the gaming industry, deals are often made at major fairs around the world, and GSP brings the companies with them to such fairs in order for them to develop their ideas in early phases. The incubator also receives inquiries from

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17 The ambition is to have 3-4 batchers per year.
18 Due to a reorganization of the Science park and the incubator, including the closure of the previous pre-incubator program Framtiden in the turn of the year 2017/2018, the intake to the verification phase was zero in 2018. In the last quarter (Q4) of 2017, about 60 business projects were admitted to the previous pre-incubator program Framtiden. Gothia incubator has established a temporary verification program, running 2018/2019, until a new one is in place, meaning that they do help companies in early stages and that the zero intake in 2018 should be seen as an exception.
19 Due to the re-launch of the program in 2018, only 15 projects were admitted to the start-up phase and out of these only 10 made a pitch before the turn of the year 2018/2019 which is a contributing factor to the low admission rate to the incubator phase.
larger companies about specific knowledge or solutions, after which they become mediators of business for the newly started companies, and this applies to both Swedish and international companies.

GSP is also the principal of Sweden Game Arena, a collaboration platform which focuses on profiling the computer game industry in Skövde on an international market. The platform helps the municipality to appear in otherwise difficult-to-access contexts and creates communicative values. Sweden Game Arena is a collaboration between GSP and the University of Skövde, funded by the municipality and the Västra Götaland region (Skövde Municipality, 2019). Another initiative by GSP is the Sweden Game Conference, a yearly event that brings together over 900 national and international actors from the academy and industry (Growth Analysis, 2018b).

In 2013, Gothia Innovation AB, together with Länsförsäkringar Skaraborg, founded Skaraborg Invest, a local venture capital firm operating in Gothia Science Park. The motivation behind the initiative was to increase the local offer of venture capital, which is an essential component for the companies located in the incubator. Today, Gothia Innovation AB owns 18 percent, and the remaining shares are owned by Länsförsäkringar and a group of business angels (Growth analysis, 2018b). Additional funding for incubatees may be admitted from Almi Företagspartner Väst and Västra Götalands region as well as from private investors in their network (GSP, 2019c).

5.1.2 Goal and strategic objectives
The mission of GSP Business Incubator is to strengthen Skövde and Västra Götaland's competitiveness through the revival and improvement of the local business sector and labor market. This mission is attained by providing entrepreneurs with a stimulating environment to rapidly develop an idea to a marketable product and generate knowledge-based growth startups. GSP's strategic objectives are to attract a sufficient inflow of startups to their incubator program, contribute to job creation, deliver positive exits, deliver alumni companies to Gothia Science Park, attract funding from external investors and increase incubatee revenues.

5.1.3 Target group
The target group of GSP business incubator is mainly researchers and students at the University of Skövde and SLU (in Skara) as well as spin-offs from the business sector and individuals. Due to the orientation of the incubator, businesses based on gaming or IT/tech (software development) are the primary target group. Today, about 50 percent of the incubatees operate in the gaming industry, and the other 50 percent are IT and tech companies. In order to be admitted to the incubator, entrepreneurs and entrepreneurial teams must have a scalable business idea with international growth potential, as well as innovation- or knowledge height.

5.1.4 Selection Process
According to GSP, the incubator offer is communicated in various channels such as events, meetings, networks, and digital communication channels. A unique characteristic for GSP is that they also market their offer internationally, for example, during international game fairs, since they aim to attract international teams and market Skövde as a cluster for game based startups. Notably, the selection process differs somewhat between the two divisions of the incubator (IT/tech and game). The selection process utilized in the Game Incubator is new since per last year (2018). In order to get in contact with the game incubator, entrepreneurs submit an electronic application on their website. There are no fixed application rounds, meaning that entrepreneurs
may apply any time of the year. In the application form, the entrepreneurs are asked to answer questions regarding company vision, user description, competing games, and needs.

Entrepreneurs with ideas perceived as compelling are contacted for an initial meeting, which can take place physically, over Skype or the phone. The initial meeting is described as informal, and the purpose is to get to know more about the idea, the motivation behind it, if the entrepreneurial team have the skills and capabilities to fulfill their business idea and if they can participate in the next round of the pre-incubator program. As described in the above section, the start-up phase takes place 2-3 times per year, and the incubator utilizes a batch intake of 7-9 business projects per round. The duration of the program is 3 months, and in the last stage of the start-up phase, the business projects are trained to make a pitch which should focus on how well they have verified the product. Since the product is digital, a lot of the focus in the pitch evolves around different metrics such as KPIs, number of hit rates, downloads, traction, and active users.

At the end of the start-up phase, entrepreneurs pitch their idea in front of a panel consisting of business developers from the incubator and external actors such as representatives from the industry, publishers, and investors. Afterward, the panel discusses whether or not they should accept the project into the incubator. As support for this decision, the entrepreneurs and the panel each make a SWOT-analysis. The analysis is discussed together with the team, and a decision is made whether the project should be admitted to the incubator and in that case, what kind of support the firm needs in terms of business development. In other words, and as described by the literature, the goal of the selection process is to find an appropriate match between the prospective firm’s needs and capabilities and the incubator’s goal and resources (Cammarata and Erlewine, 2003; Walker, 2004)

Apart from the target group, the main difference between the selection process in the game division versus IT/tech is that the latter do not admit tenants in batches but case by case throughout the year. Entrepreneurs seeking to become incubatees may get in contact with the business incubator by calling or e-mailing one of the business developers or submit an application of interest on their website. After that, ideas perceived as compelling are invited to an initial meeting with one of the business developers at the incubator where the focus is to get to know more about the idea and the team. According to Gothia Incubator, entrepreneurs may be asked to develop parts of the idea before they are invited to a second meeting referred to as a business review. The business review primarily gathers business developers from Gothia incubator but might include external evaluators if in-house competence does not cover the whole aspect of the business project. Entrepreneurs present their business idea and should be prepared to answer questions from the panel of evaluators. After the review, the panel discusses whether or not they should accept the project into the verification phase. The focus of the review is if, and in that case, how GSP can contribute to the business development of the company as well as how likely it is that the entrepreneur or team can leverage on their business plan. If the business project fulfills essential criteria such as matching the target group, being committed to the idea, and have the potential to meet the fundamental criteria described more in detail below, the project may be selected to participate in the verification phase.

Subsequent to passing through the verification process, the entrepreneurs pitch their business project to a panel of evaluators. In order to be accepted to the incubator phase, business projects must meet a certain number of criteria on a business readiness scale developed by GSP. The assessment covers the areas of market adaptation, customer offer, business plan, personality analysis of individuals, team composition, and coachability (Growth Analysis, 2018b). In other words, entrepreneurs must be able to verify that their project is on the right track. The exact milestones that should be reached are based on the individual case. Projects that do not fulfill criteria may be asked to iterate and develop their project further and may stay in their facilities if there is vacant space, however, not as part of the program.
It should be noted that Gothia Incubator previously had another pre-incubator program prior to the verification phase referred to as Framtidén, where entrepreneurs during a 10-week crash course learned about the business development process in a light format. Framtidén was an initiative that aimed at the development and conversion of Skaraborg’s business sector and was carried out in collaboration between the University of Skövde, IDC West Sweden AB, and Gothia Science Park. The initiative was funded by the Västra Götaland region and the Skaraborg Municipal Association. According to GSP, the closure of the pre-incubator program was partially because it was no longer funded. However, GSP also notes that their primary target group is research-based ideas, and so the previous pre-incubator program had another purpose which presents a second reason for the closure of the pre-incubator program.

The most fundamental selection criteria, on which projects are evaluated, are potential to scale and potential to export (international growth potential). Innovativeness is perceived as hard to evaluate and rest upon well-performed market analyses to ensure that the product does not already exist or that the market for the product is not already saturated. In accordance with Bergek and Normman (2008), this resembles an idea-based approach rather than an entrepreneur-based approach. However, the entrepreneur or entrepreneurial team (drive, passion, motivation, and capabilities) is of significant importance. According to GSP, the idea is the foundation but becomes secondary as the entrepreneur starts working with the idea more structured. Diversity is also acknowledged as of growing importance, and is not only utilized in assessment, but incorporated in their strategy as a means to stimulate growth and competitiveness in the region by identifying new target groups. The fundamental criteria in the IT/tech and game division are similar, however, discrepancies occur due to the different orientations. In the IT/tech division, the business project must solve a significant problem for customers, and thus focus on impact. In the game division, the focus revolves around the entrepreneur’s capability to create and build games as well as on what kind of platform the game is applicable.

5.2 Stockholm Innovation and Growth (Sting)

Stockholm Innovation and Growth (Sting) business incubator has its headquarters in A House, Stockholm as well as co-location with several other startup hubs in Stockholm. Initially, Sting was located in Kista (Stockholm), but as of today, the incubator functions are mainly facilitated at several startup hubs in the central parts of Stockholm (Sting, 2017). Stockholm is characterized by a large number of actors in the regional business promotion system, and apart from Sting, several other non-profit business incubators such as Karolinska Innovation and the incubators of Stockholm School of Entrepreneurship and Stockholm University, are located in the area. Besides, there are a large number of private initiatives with similar incubator functions, such as Ericsson One and WeWork lab. (Growth Analysis, 2018b).

Sting was founded in 2002 by the Electrum Foundation, which is still the sole owner of Sting. The Electrum Foundation is funded by both public and private actors such as Stockholm municipality, Royal Institute of Technology (KTH), Ericsson, the research institutes and industry and real estate owners in Kista (Sting, 2019a). Sting is a non-profit organization and receives its basic funding from the owners Electrum Foundation as well as Stockholm municipality, Stockholm County Council and Vinnova. In 2018, the owners accounted for a little more than 13 percent of the funding, while Vinnova, Stockholm City and the Stockholm County Council accounted for the remaining 87 percent. Between 2016-2018, Sting also received project funding from EURF, which amounted to a total of 21 million SEK (Growth Analysis, 2018b). Sting also receives private capital from their partners as well as revenues from ownership in their incubated companies. An increasing

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20 Out of the public financiers, Vinnova accounts for the main part of the funding.
share of the total funding is their own. Unlike the other cases presented in this study, Sting takes equity in the incubated companies. The ownership stake may amount to a maximum of 5 percent in incubated companies or 2 percent in accelerator companies, but according to Sting, it is usually between 0.5-2.5 percent in each, after dilution due to following rounds of funding (Sting, 2019c; Growth Analysis 2018b). If ownership is not an option, they require a fee from their incubatees. Since Sting is a non-profit organization, revenues from the equity as well as the fees are reinvested in the incubators’ operations. According to Sting, it is a way for each participating startup to help future startups by paying it forward (Sting, 2019b).

5.2.1 Activities and offer

Sting offers three main business support programs; an inspiration program, an incubator, and an accelerator21. The inspiration program, also referred to as Test Drive, is described as a training program aimed at startups in early phases and focuses on evaluation and development of the business idea. The activities include 4 evening workshops, covering business-critical topics like business models, sales strategies, funding options, internationalization, and leadership. Tasks and as well as some individual coaching is provided between the occasions. The duration of the program is 2 months. The inspiration program has fixed application rounds, and business projects are admitted in batches, including about 12-15 projects per round. In 2018, 54 business projects were admitted to the inspiration program22.

The incubator, also referred to as Sting incubate, aims at startups in later stages with longer development cycles. Later stages refer to having launched a prototype and received some “proof of concept”. In contrast to the inspiration program, application and selection are continuous over the year, where 15-20 companies are admitted on a yearly basis. The focus in the incubator is to develop, iterate, and scale the company. In order to do so, the incubator offers personal meetings and individual coaching 4-6 hours per week from business developers with broad competencies, sector-specific expertise, and experiences from building companies themselves. In addition to coaching, the incubatees are offered expert help to recruit complementary competencies and work with team development, PR/media, and investor relations in Europe. The incubatees are also offered 6 months of free office space at Stings headquarter, A House. After 6 months, they may be offered office space during another 6 months at a discounted rate in one of Stings hubs23. An incubatee may receive active support and coaching between 6 to 18 months24 (Sting, 2019c; Growth analysis 2018b). In 2018, 16 companies were admitted to the incubator.

The accelerator program is not the main focus of this study. However, it is worth noting that the program accepts startups in an even more mature phase where development cycles are shorter. The focus of the program is to iterate and scale the company, rather than develop it as in the incubator program. The accelerator accepts a batch of 8 companies twice a year which participates in the accelerator program for 4 months. Apart from coaching, advisory services, and free office space, participating projects are guaranteed funding amounting to 300 000 SEK25 (Sting, 2019d).

Besides these services, the incubatees receive access to Stings networks and may participate in workshops, seminars and other events arranged by Sting. An example of an event arranged by Sting is Sting day, which is a venue for selected Swedish startups, as well as incubatees

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21 Stings main focus areas is the incubator and accelerator programs (Sting, 2019).
22 Sting offers four thematic pre-incubator programs within AI/Blockchain, Edtech, Digital, and Digital Health.
23 The hubs H2, THINGS, and SUP46 are shared office spaces initiated by Sting. In addition to office spaces, they also arrange network meetings and events. The hubs have different industry focus where H2 is devoted to digital health and MedTech, THINGS are devoted to IoT, energy technology, 3D printing, etc. and SUP46 is devoted to digital companies only. Incubatees must apply for a spot in one of the hubs, and those perceived to have the same industry focus and fit in may be admitted. Sting are minority owners in all three hubs.
24 The incubator program, excluding pre-incubator and accelerator, is 12 months.
25 Funds are provided by Propel Capital.
to meet with international investors. The event gathers 170 investors from 70 different countries. Sting night is a similar event, but with an industry-specific focus. Sting Demo is an event where the incubatees may pitch their projects to investors in connection to their graduation from the incubator.

Sting is also one of the initiators of the national matchmaking event Ignite Sweden, where incubatees from any Swedish incubator may participate. During the event, incubatees get to meet with large companies in order to verify their idea or product. The event has been held 25 times so far, engaging almost 300 startups and 60 companies. More than 1300 organized matchmaking meetings have been held, which has resulted in about 50 commercial collaborations. Ignite Sweden is led by SISP, THINGS and some incubators, among others Sting and Uminova Innovation. Ignite Sweden is co-funded by Vinnova, The Swedish Agency for Economic and Regional Growth (Tillväxtverket), and the Swedish Energy Agency (Energimyndigheten) (Ignite Sweden, 2019).

Sting offers three different kinds of investment alternatives for their startup companies. The network Sting Business Angels are made up of 35 private investors mainly from the tech industry and may support the incubatees with both funding and advisory services. Propel Capital is a network of 40 business angels and may offer funding to incubatees spanning between 300 000-500 000 SEK. As stated above, companies admitted to the accelerator program are guaranteed funding from Propel Capital. Luminar Ventures is an equity fund and backed by investors such as the European Investment Fund, Saminvest, KTH holding, Sting, and other private Swedish and international investors. They offer significant investments, spanning between 5-10 million SEK per company, to digital and scalable ventures. Luminar Ventures is supposed to be a next step for the incubatees after initial investments from Propel Capital (Sting, 2019e; Growth Analysis, 2018b).

5.2.2 Goal and strategic objectives
Sting’s primary mission is to stimulate growth in the Stockholm region by supporting young innovative companies with international growth potential to turn their ideas into viable businesses and accelerate their operations internationally. Sting’s strategic objectives are to maintain a sufficient inflow of ideas and projects to the incubator, increase total company value of incubatees, attract public and private investments to Sting companies, contribute to job creation, deliver positive exits and increase exports as a share of revenue in incubatees.

5.2.3 Target Group
Sting’s target group includes spin-offs from the business sector and individuals in the Stockholm region26 as well as researchers and students from any of the Stockholm based universities such as KTH, Stockholm School of entrepreneurship or Karolinska Institutet. However, as Sting has a close relationship to KTH Innovation27, the academia-based projects in the incubator are most often from KTH. The estimated distribution of incubatees from the business sector versus academia is 80 percent and 20 percent, respectively. The incubator is not specified to a particular industry but has a clear focus on business projects based on information and communication technology (ICT), health, cleantech, internet, and media. The target group is described as business ideas that involve considerable risk, but at the same time, are scalable and have international growth potential. The idea should also have innovation- or knowledge height.

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26 Sting also welcomes international teams.
27 KTH innovation office runs a pre-incubator program engaging students, researchers, and employees at KTH.
5.2.4 Selection process

Sting’s incubator offer is communicated in various channels such as events, meetings, networks, and digital communication channels. The prospective incubatees come to Sting from other business support actors in the system, apply on their initiative, or get involved through outreach efforts by Sting. There are several pathways to become an incubatee at Sting. The entrepreneur or entrepreneurial team may get in contact with Sting by e-mail or telephone. Usually, they are advised to apply through an electronic application on Sting’s website where they answer questions about the solution/product, the problem it addresses, if it addresses any Sustainable Development Goal (SDG), market potential, team and diversity, traction, sales/progress, competition, revenue model and more. Applicants are also encouraged to include a video pitch in the application. Another pathway is to book an open-coaching meeting with Sting. Available dates for open-coaching meetings are published on Sting’s website, and entrepreneurs may book an individual meeting for 15-30 minutes where they can present their idea and receive feedback.

After the initial contact, Sting may invite business projects perceived as compelling to an initial meeting with one of Sting’s business developers. The initial meeting is usually about an hour long, and the prospective incubatee is expected to present the business idea and answer questions about the business model, potential market, and team. At the end of every week, all available business developers gather and discuss which business projects that should be invited to a second meeting. If the business project is invited to a second meeting, they meet with another business developer who follows up the first meeting with additional questions. According to Sting, usually about 2 or 3 meetings take place, but there might be as many as 6 meetings during an average period of 2 months. Each meeting involves feedback to the entrepreneurs. The primary purpose of this is to get familiarized with the entrepreneurs and to test the coachability of the team before a decision to admit the company is made.

Sting does not employ a business review or screening where the company pitches their idea before a panel. Instead, it is the business developers who have met with the company that pitches the idea to the rest of the group. If all business developers agree to admit the project and essential criteria are fulfilled, the business project may be admitted to the incubator program. Sting defines the stage of development of companies admitted to the incubator program as when the company is at the breakpoint between a minimum viable product and the first customer. Besides the fact that a limited liability company must be founded, a prototype should be launched and have received some “proof of concept”. If the stage of development is still premature, entrepreneurs may instead be encouraged to develop the idea before applying again or apply for the next round of their inspiration program, Test Drive.

The most fundamental selection criteria according to which projects are evaluated are innovativeness (idea, business model, technology), potential to scale (the potential revenue exceeds SEK 50-100 million / year) and potential to export (International growth potential). In accordance with Bergek and Norrman (2008), this resembles an idea-focused approach rather than an entrepreneur-focused approach. However, the team and coachability of the team are also considered to be essential. Sting requires a team of at least two people, with the drive and ambition to build a successful growth company and skills within both technology and business. Sting emphasize that the majority of the ownership must be held by the people who work actively in the company and that ownership should be divided equally between members in order to create incentives. Furthermore, the diversity of the team has become increasingly important over the past years, and they reward mixed teams in terms of gender and ethnicity. SDG goals have also increased in importance, and while it is not yet a critical criterion, entrepreneurs are encouraged to think about how they may contribute to these in their work.
5.3 Uminova Innovation

Uminova Innovation is a business incubator located in Umeå, Västerbotten region. It is situated in Uminova Science Park and has its HQ close to campus where the Swedish University of Agricultural Sciences (SLU), Umeå University and Norrlands University Hospital are located. Its predecessor, Uminova Center, was a part of the administration at Umeå University until the early 2000s and worked broadly to support collaboration between the university, society, and business sector. Uminova Center was also supported by Umeå municipality at the time. One of the tasks was to help researchers and students to develop their business ideas. However, both the university and the municipality acknowledged that there was a need to clarify and refine the mission in order to better stimulate the local and regional business environment. In 2003, Uminova Center was divided into two separate units; the business incubator Uminova Innovation, focusing on entrepreneurs and spin-offs from Umeå University and “Enheten för näringsliv och samhälle” (ENS), a separate unit at Umeå University focusing on stimulating collaboration between the University, society and business sector (Uminova Innovation, 2019f).

Today, Uminova Innovation is principally owned by Umeå University (50.3%), together with SLU (8.5%), Umeå Municipality (25.2%) and Region Västerbotten (16%) (Uminova Innovation, 2019a). Uminova Innovation is a non-profit organization and receives its basic funding from the owners Umeå University, SLU, Umeå Municipality, and Region Västerbotten as well as Vinnova and Västerbotten County Council (Growth Analysis, 2018b). Uminova Innovation has also received project funding from EURF, amounting to a total of 15 million SEK during 2018-2021.

Besides Uminova Innovation, Umeå Biotech Incubator (UBI) with an industry focus on biomedicine and diagnostics, eXpression Umeå with an industry focus on culture and arts as well as BIC factory focusing on young entrepreneurs are located in the nearby area. UBI is a subsidiary, and eXpression is a sister company to Uminova Innovation, and they closely collaborate.

5.3.1 Activities and offer

The business support offered by Uminova Innovation is divided into three phases: a pre-incubator, an incubator, and an accelerator. The pre-incubator, also referred to as Start-up, aims at entrepreneurs in early phases. The pre-incubator process is characterized by investigation of markets, defining potential customers’ need of the product or service and verification, in order to find an appropriate business model. The duration of the Start up-program is 3 months, and the activities include workshops and some individual coaching. The pre-incubator program has two application rounds per year and projects or firms are admitted in batches including about 8-12 projects per round. In 2018, 28 projects were admitted to the pre-incubator, 5 of which continued in the incubator.

The incubator, also referred to as Scale-up, aims at startups in later stages when a limited liability company is founded, and there is a team in place. The idea should have received some “proof of concept” or have customers. According to Uminova innovation, Scale-up is suitable when the entrepreneurial team has an appropriate business model and a viable solution that can be transformed into a business. The focus in the incubator is to develop, iterate, and scale the company. In order to do so, each company is assigned a business developer/coach with whom the incubatee has one-on-one meetings with and receives individual coaching. In addition to the coaching, the incubatees are offered expert help to recruit complementary competencies, develop the team, define customer needs, and develop strategies regarding IPR, market, sales and investments. According to the incubator, methods such as Lean and Customer development are central in their work with business development in the incubatees (Uminova Innovation, 2019b). The incubatees are also
offered office space at a discounted rate in the incubator. Companies are permitted to stay in the incubator for 30 months. However, deep tech and researchers may be permitted to stay longer. In 2018, a total of 10 companies were admitted to the incubator.

The accelerator program is not the main focus of this study. However, it is worth to notice that the program accepts startups in a more mature phase when a prototype or alpha is in place, and the startup has verified the fulfillment of an essential need for a defined target group. The accelerator accepts a batch of 5 companies per year which participates in the accelerator program for 6 months. The program begins with a kick-off followed by five workshops with themes that are critical before a launch. Apart from workshops, the entrepreneurial team with help from business developers and external experts works out strategies, tactics, and action-plans on critical business issues (Uminova Innovation, 2019c).

Besides these services, the incubees receive access to Uminova Innovations networks and may participate in workshops, seminars, and other events arranged by the incubator. An example is Umeå Tech Arena; an event focusing on innovation within tech where startups may pitch their idea to a jury of investors and experts. The event gathers 450-500 actors and is held two times per year (Umeå Tech Arena, 2019). In addition to a forum for pitches, the event includes lectures and networking sessions. Another event is Match up, where incubees can meet with experienced business managers, entrepreneurs, investors, and other business-related international contacts. Match up is a yearly event, focusing on network-building, investments, and collaborations. Another one is a monthly breakfast event and a venue for actors within the tech industry. Different stakeholders, actors, and startups meet over breakfast, have a lecture, and discuss how the region can be further strengthened and developed in terms of tech. In similarity to Sting, Uminova Innovation also arrange a demo day for the startups participating in the start-up program. Demo day is arranged in connection to Umeå Tech Arena. Uminova Innovation is also a part of the Enterprise Europe Network (ENN), which is EU’s official network for industry development. Through this network, incubees are offered business consultancy services focused on internationalization (Uminova Innovation, 2019d).

Uminova Innovation also initiated the process that led to the founding of the regional business angel company Northern Light Capital (NLC) in 2016. NLC gathers 20 founding partners who invest both capital and competence in startups in the early stages. The amount of the capital investments may range between 500 000 SEK up to 2 million SEK. Besides NLC, Uminova Innovation also works closely with other investors, such as Fort Knox and PartnerInvest Norr as well as other national and international investors in order to support their incubatees (Uminova Innovation, 2019e).

5.3.2 Overall incubator goal

The incubator has a close relationship to Umeå University and was initially established to reach new knowledge-intensive growth startups, primarily with a background in academia. However, their mission today is broad and extends outside the university to stimulate growth in the whole Västerbotten region. The mission is achieved by generating knowledge-based growth startups that are scalable and have international growth potential. Uminova Innovation’s strategic objectives are to generate a continuous and sufficient inflow of ideas, generate positive exits, stimulate job creation, attract external capital to incubees from investors and establish agreements of cooperation between incubees and international actors.
5.3.3 Target Group

The target group of Uminova Innovation business incubator is researchers and students at Umeå University and SLU (Umeå) as well as spin-offs from the business sector and individuals in the Västerbotten region. The incubator is not specified towards a specific industry but has a clear focus on business projects based on information and communication technologies (ICT). In order to be admitted to the incubator, entrepreneurs and entrepreneurial teams must have a scalable business idea with international growth potential. The idea should also have innovation- or knowledge height.

5.3.4 Selection Process

According to Uminova Innovation, before any selection process takes place, the incubator offer is communicated in various channels such as events, meetings, through networks, and digital communication channels. There are several alternative pathways to becoming an incubatee in Uminova Innovation. Firms may apply to the start-up program through an electronic application in which the firms present their business idea. The application round takes place two times a year, one in the spring and one in the autumn. An alternative way to apply is through the so-called idea drop-in, where entrepreneurs can visit the incubator and present their ideas to a business developer. The idea drop-in takes place once a week. According to Uminova Innovation, most commonly the entrepreneur is asked to develop parts of the idea and formulate a business proposal according to a specific template that is later emitted to the incubator.

After an application round for the start-up program or an initial meeting through the idea drop-in, firms perceived as compelling are invited to a business review. The business review is a meeting where the firm presents their idea or project more thoroughly and are expected to answer potential questions from a panel consisting of business developers. In total, a business review lasts for about 90 minutes\(^2\). The business review gathers all available business developers in the incubator, but usually no external participants. After the review, the panel sits down together and discuss whether or not they should accept the project into the incubator. The questions in focus during the business review are if and in that case, how they can continue work with the project. Whereas the if-question regards fulfillment of the necessary criteria, the how-question refers to what kind of support the firm needs in terms of coaching, funding, team-building, positioning, branding or anything else regarding business development within a broad spectrum. In other words, and as described by the literature, the goal of the selection process is to find a suitable match between the prospective firm’s needs and capabilities and the incubator’s goal and resources (Cammarata and Erlewine, 2003; Walker, 2004).

Representatives at the incubator state that it is preferable that the firm participates in the start-up program before the incubator program. However, if the firm in question has already worked on the idea for a while and verified the product or service to the extent that it meets the criteria for participating in the incubator, it may be admitted directly to the incubator program. Thus, the main difference between being admitted to the pre-incubator program versus the incubator program is the stage of development of the firm. Uminova innovation note however that it is challenging to determine entrepreneurial capabilities and viability of the business based only on a business review, and in order to be able to be admitted to the incubator directly the firm has to be able to “prove itself” to the panel of business developers. A project that has participated in the pre-incubator program participates in a second business review, where it is decided if the project should also be admitted to the incubator program.

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\(^{2}\) 45 minutes with the companies, and 45 minutes for internal discussions.
The most fundamental selection criteria according to which projects are evaluated are innovativeness (idea or business model), potential to scale and potential to export (international growth potential). In accordance with Bergek and Norrman (2008), this resembles an idea-focused approach rather than an entrepreneur-focused approach. The drive, motivation, and capabilities of the entrepreneurial team are criteria that have increased in importance over the years. As an example, Uminova Innovation previously allowed one-person companies in the incubator, but now requires a team of at least two persons working a minimum of 50 percent (covering one full-time job). They have also hired a person to work full time with team and talents in order to help incubatees to recruit and develop the team.

5.4 The Business Factory (Företagsfabriken)

The Business Factory (Företagsfabriken) is a business incubator located, in the city of Växjö, Kronoberg region. The incubator was founded in 2009 and was then called the Incubator in Kronoberg AB, which was changed in 2013 to the Business Factory as a part of their branding strategy. The Business Factory has its base in Videum Science Park, where the incubator contributes to support the development of knowledge-intensive and growth-oriented ventures. Videum Science Park is the industry node of Växjö’s triple helix system and connects the regional business sector with research and education from the closely located Linnaeus University.

The Business Factory is a non-profit organization owned by Videum AB (the municipality), Region Kronoberg and Linnaeus University Development AB. Each owner holds an equal share of 33% in the business incubator (Kronoberg region, 2019). The Business Factory receives its basic funding from Videum AB, Region Kronoberg, Linnaeus University, Vinnova, as well as private investors and private funds. In 2019 public financiers accounted for 90% of the funding, and private investors as well as own funds (consisting of accumulated incubator fees) accounted for the remaining 10%. The Business Factory do not take equity or ownership in the incubator companies, however, incubatees pay rent for their office space. The rent is based on a staircase model, and the longer companies are situated in the incubator, the more they have to pay in rent. The rent ranges between 700 and 2500 SEK per month, and as such, is heavily subsidized.

As the Business Factory is a non-profit organization, the revenue from the rent is re-invested in the incubator’s operations.

5.4.1 Activities and offer

As of today, the business support offered by the Business Factory is divided into two phases, a verification phase, and an incubator phase. The verification phase is aimed at entrepreneurs in the early phases and is similar to what is described as a pre-incubator in other cases. In this phase, business projects validate their idea by investigating the market potential and confirm their customer offer, most commonly by creating and testing a simple prototype. The verification phase includes some individual coaching and business advisory services from their partners. It also contains education blocks within areas such as finance, marketing, business model canvas and value creation forum. The duration of the verification phase is 6 months. In 2018, 4 companies were admitted to the verification phase, 3 of which continued in the incubator program.

The incubator phase aims at startups in later stages when a limited liability company is founded, a business model is in place and a product, at least on a prototype stage, is developed. The idea should have received some “proof of concept” and agreements or relationships are established with business-critical partners. If there are several team members, a partnership contract should be in place. The focus in the incubator is to develop, iterate, and scale the company. In order to do so, each company is assigned a business developer/coach with whom the incubatee has
ongoing reconciliations and receives individual coaching. In addition to the coaching, the incubatees are offered expert help to recruit complementary competencies and other services within business economics, branding, IPR-strategy, market strategy, sales, and investor relations. According to the Business Factory, methods such as Business Model Canvas, NABC, Value Creation Forum, and development plans according to Fokus Affärsutveckling are central in their work with business development in the incubatees. The incubatees are also offered office space at a discounted rate in the incubator. If companies grow beyond the Business Factory's capacity, they establish contact with the property owners and help to find locations nearby, most commonly in the same house complex, also at a discounted rate. This enables companies to stay in the incubator process, even though they are not located in the same facility. Incubatees are permitted to stay in the incubator process for up to 30 months(29)(The Business Factory, 2019a).

Besides the verification and incubator phases mentioned above, the Business Factory offers its incubatees a wide range of activities. Incubatees become a part of the Business Factory community of entrepreneurs, both digitally and physically, and have common breakfasts every Friday as well as monthly breakfast seminars. Incubatees are offered specific educational blocks, for example, about how to best pitch an idea to potential partners or investors and how to lead a company. They may also participate in workshops about sales, financing, and investments arranged by the Business Factory.

The Business Factory cooperate with Business Sweden, which offers the incubatees education and advisory services regarding international expansion. For a fee of 3500 SEK in total, incubatees may travel to international events. For the second year in a row, the Business Factory travels with incubatees to Canada and New York together with Business Sweden and three other incubators, where the incubatees get to meet with potential investors and learn about market-entry in North America. Furthermore, incubatees are introduced to the Business Factory extensive network of potential clients and collaborators, investors, and advisors such as Fortnox, Rosholm and Dell, Ekonova and Griffel (The Business Factory, 2019b). Incubatees are also potential funding the Business Factory partners Sparbanksstiftelsen, Investerare Sydost, and Länsförsäkringar.

Besides the incubator, the Business Factory has a more open offer in the form of a co-working space called Bravo entrepreneurial hub. The hub was established in 2016 and offers membership to all tenants in Videum Science Park and companies in the Business Factory, as well as businesses and individuals that want to be a part of the innovative environment and expand their network (Kronoberg region, 2016). Membership is divided into three levels: Networker, Member of the Community, and Entrepreneur limited. The highest level, Entrepreneur limited, is for entrepreneurs or businesses consisting of a team of three people with a scalable business idea. To gain access to this membership, the team has to pass an initial screening by the Business Factory and can stay in the hub for a maximum of 12 months. As a part of the membership, the team gets unlimited access to the Bravo hubs office spaces, business development meetings with the community manager, events and boot camps, as well as fast track to apply to the incubator program (Bravo entrepreneurial hub, 2019). Besides a physical hub, the Bravo Entrepreneurial Hub has developed the Hub, a virtual incubator and a digital community for entrepreneurs. In the virtual incubator, entrepreneurs in different geographical locations can exchange knowledge and receive support to develop and get started with their business ideas from experts at the Business Factory (Kronoberg region, 2016). The initiative is a cooperation between the Business Factory and all municipalities in the county of Kronoberg and enables the incubator to increase the inflow of ideas and support startups in the whole region.

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29 This includes the verification phase and the incubator program.
5.4.2 Overall goal
The Business Factory's mission is to generate tax revenues to the region by contributing to the establishment of viable and scalable knowledge-intensive businesses. The mission is achieved by cooperating with the region of Kronoberg, Videum Science Park and the Linnaeus University, in order to find startups and academic spin-offs that are scalable and have the potential to reach international markets. The Business Factory's strategic objectives are to create a sufficient inflow of business ideas to the incubator, increase the number of incubatees, attract ideas from all municipalities in the region, stimulate job creation, accelerate incubatees' businesses as well as increase incubatee revenue.

5.4.3 Target group
The Business Factory is a broad incubator and not specified towards a specific industry. The target group consists of academic spin-offs from the Linnaeus University and entrepreneurs or spin-offs from the business sector in region Kronoberg that wants to grow and scale up their business as well as have international ambitions. To be admitted to the incubator program, entrepreneurs must have a business idea with high predicted viability and growth potential.

5.4.4 Selection process
The Business Factory's offer is communicated in various channels such as meetings and events, digital communication channels as well as through their partners in the innovation support system and the Linnaeus University. The prospective incubatees come to the Business factory from other business support actors in the system, apply on their initiative, or get involved through outreach efforts by the incubator. There are several pathways for entrepreneurs to become incubatees at the Business Factory. The Bravo entrepreneurial hub is a gateway from which a part of the inflow of incubatees historically has come from. Companies may also call, e-mail, or get in contact through an application of interest on their website. There are no formal application rounds to the incubator, and instead, selection takes place case-by-case continuously throughout the year.

Ideas perceived as compelling may be invited to an initial meeting where they meet with the community manager of the open co-working space (the Bravo entrepreneurial hub). The entrepreneurs are asked to prepare a presentation of their business idea and an NABC thirty before the meeting, and the discussion during the first meeting revolves around this. Besides this, an effort is made to appreciate entrepreneurial skills, capabilities, and motivation. Subsequent to the initial meeting, the community manager together with the business developers make an overall assessment of whether the company has the potential to fulfill essential criteria, such as engagement to the idea and being internationally scalable (potential revenue of 30 million SEK, five years after market introduction).

If so, companies are invited to a screening. Prior to the screening, business projects may receive support from an advisor or business developer as well work on adjustments in order to ensure that the business project adhere to fundamental criteria and can pass a screening. The screening is a 2-hour meeting where the firm presents their idea or project more thoroughly and are expected to answer potential questions from a panel consisting of one or two business developers from the Business Factory as well as an external representative from Almi. After the review, the panel discuss whether they should accept the project to the verification phase. The questions in focus are if, and in that case, how they can continue work with the project. The Business Factory points out that the evaluation goes both ways. They require projects to fulfill

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30 NABC is a model or description displaying need, approach, benefit and competition.
specific criteria, but likewise, they must perceive that they can contribute to the development of the company. In accordance with the literature, the goal of the selection process is to find a suitable match between the prospective firm’s needs and capabilities and the incubator’s goal and resources (Cammarata and Erlewine, 2003; Walker, 2004).

Companies that do not meet the requirements are referred to other support actors in the regional innovation support system or may be asked to develop their idea further before applying again. Companies that fulfill criteria are accepted to the verification phase. Subsequent to the 6-month verification phase, a second screening takes place. The screening practice is similar to the first one and a panel consisting of external and internal evaluators assess whether the business project meets with required criteria for entry into the incubator phase or if they should do an early exit of the project. If accepted, a new agreement is signed, and the company can enter the incubator program and stay for up to 24 months.

The criteria for entry into the verification phase and incubator program are applied differently depending on the stage of development of the business project. The stage of development is evaluated based on a checklist of milestones that needs to be accomplished in order to move to the next phase. If the business project fails to develop accordingly, they can either make an early exit or work on their project outside of the incubator for a couple of months and apply for a new screening later. However, the most fundamental criteria according to which projects are evaluated are potential to scale (potential revenue of 30 million SEK, 5 years after market introduction) and potential to export (international growth potential). This resembles an idea-based, rather than an entrepreneur-based approach, according to Bergek and Norrman (2008). The entrepreneur’s capabilities and motivation are also essential criteria for entry into the incubator. For example, the Business Factory requires that one-person companies devote 100 percent of working hours to build the company, and a team of two persons to devote at least 50 percent of working hours (corresponding to one full-time job) in the company. These requirements are to ensure that the entrepreneurs are truly invested in the development of the company, and not just consider it as a hobby. Without the dedication of the entrepreneur or team, the company is perceived as less likely to progress and develop.
6. Analysis and findings

This chapter presents our analysis and findings and thus aims to fulfill the research purpose of enhancing the knowledge about the selection process in government-funded business incubators by explaining how and why they may differ. The chapter is divided into 8 sub-chapters, of which the first 6 (6.1-6.6) represent a generic selection we were able to identify based on our case descriptions from chapter 5. Within each sub-chapter, corresponding to a step in the selection process, cases are contrasted with respect to their differences, thus answering RQ1: How does the selection process differ between business incubators? Where differences have been identified, we also describe the motivation behind them as put forward by the respondents, thus answering RQ2: Why do the selection process differ between business incubators? In addition, sub-chapter 6.7, depicts how the business incubators work to develop the selection process and what may motivate such work, providing further understanding relating to the research questions. Lastly, this chapter ends with a section where we outline an emerging theoretical framework and provide a summary of the contextual factors found to influence the choice of selection process.

One of the main findings based on the descriptions of the selection processes presented in chapter 5, is that the design of the process, or rather the process flow, do not differ between the incubators to a great extent. The selection process follows the same order of events to such degree that we have been able to identify a generic selection process model incorporating a chain of common activities. This model is outlined in figure 4 below. The main differences between business incubators with regards to the selection process are instead found within each of the identified steps, and we describe these, as well as the factors contributing to or causing these differences in the following sub-chapters representing the steps outlined in the model. Recognizing that there are several similarities amongst the business incubators included in our study, we discuss reasons for this as well. Finally, we also observe that while activities or processual flows may be similar, the motives behind them may vary between different business incubators, which is also discussed in the following sub-chapters.

![Figure 4: A generic selection process](image)

6.1 First interaction between the incubator and potential incubatee

The first step in the generic selection process model addresses the first interaction between potential incubatees and the incubator. The first interaction refers to how the incubator first gets in contact with potential incubatees as well as with whom and how many. Thus, the remaining of this sub-chapter is connected to the theme we identified as ‘Inflow’ displayed in figure 3, chapter 4. We acknowledge a critical difference between incubators in this regard to be the amount and quality (stage of development) of inflow of business ideas. Comparing the inflow of business ideas to the
incubators, we find significant differences. Sting has the largest inflow, amounting to between 500-600 business ideas per year. Uminova Innovation estimates their inflow of ideas to 100-150 ideas per year and GSP estimate their inflow to about 100 ideas per year. The Business Factory has a much lower inflow in comparison to the other incubators, where 17-25 business projects constituted the total inflow to the incubator in 2018.

6.1.1 Offer
Naturally, the most obvious determinant of the amount of inflow is the incubator’s offer. The more attractive an offer is perceived to be, the higher inflow. However, such perceptions are highly subjective and not possible to measure. Even though the offers differ somewhat between the incubators, for example, in the cost of office space or amount of individual coaching, the provided services are similar. The main deviation from this is GSP, which has an explicit specialization towards games and is situated in a region considered to be a game cluster. Moreover, all incubators included in this study have qualified for excellence funding from Vinnova, which imply that the quality of their offers, at least to some extent, is comparable to each other. It should also be noted that the main part of the inflow to all four incubators originates from the local surroundings of the incubator rather than from other regions or countries. Thus, even though the incubator offer has an impact on the inflow, the similarity of the offers suggests that external factors, to a larger extent, contribute to the significant differences observed in the inflow.

6.1.2 Local economics and level of entrepreneurial activity
The variations in inflow can partially be attributed to differences in the regional context a business incubator is operating in. A frequently mentioned reason by the respondents are the differences in the number of inhabitants in the municipality and region. GSP business incubator is located in Skövde, the smallest municipality out of the four cases, inhabiting only 56 thousand people. This can be compared to Stockholm, where Sting is located, inhabiting about one million people. The Business Factory and Uminova Innovation fall in between the two extremes, being located in municipalities with about 90 thousand and 125 thousand inhabitants respectively. Naturally, the pool of potential entrepreneurs is much larger in Stockholm only due to the number of inhabitants.

However, conditions for entrepreneurship also varies between regions. For example, GSP acknowledge that access to capital is constrained in comparison to larger cities like Stockholm or Gothenburg and the innovation support system, in general, is of much smaller scale which gives the incubator a more critical role in helping local entrepreneurs. Uminova Innovation note that while the innovation support system in the region is well-developed, it is of smaller scale than of those in larger regions or cities and forums for entrepreneurs are not as many in numbers. As a result, it can be harder for entrepreneurs, for example when trying to put together a team with the required skills and capabilities. Sting recognizes that one of the reasons for their large inflow of business ideas is the fact that Stockholm, considered to be a unicorn city, has a well-established and supportive startup ecosystem, as well as large capital assets and a growing number of angel investors and venture capital firms. Stockholm is viewed as providing more or less ideal conditions for entrepreneurs, where the largest drawback is the price levels. According to a report by the Global Entrepreneurship Monitor (GEM) (2018), entrepreneurial levels are higher in Stockholm than in any of the other investigated regions, and as much as two times higher than in Kronoberg where the Business Factory is located. However, we cannot determine what kind of entrepreneurship that dominates in the different regions and therefore, whether it is a match with the target group of the incubators. Nevertheless, one cannot ignore that the size of the region or municipality, access to capital, and scale of the entrepreneurial ecosystem has a partial impact on the amount of inflow of business ideas to a business incubator.
6.1.3 Collaborations

All four incubators recognize that a critical channel of inflow is from their collaboration partners in the region, most often other support functions for entrepreneurs in early stages or local universities. Other incubators are also mentioned as valuable referrals since they have different profiles and can refer entrepreneurs to the incubator most suitable for the entrepreneurs’ need. Connecting to the above section, the more developed entrepreneurial ecosystem in the region, the larger are chances of a natural inflow from others, and this is further strengthened if collaborations with the other functions are well developed. In addition, it is acknowledged that other support functions, such as Drivhuset and Companion as well as hubs and other startup communities contribute to leverage business projects in more mature phases or, at least in less need of support in the early stages. Subsequently, the more developed the system of business support functions in a region, the larger are chances to receive better-developed business proposals and the less need for business incubators to provide such services.

The scope of this paper does not allow us to investigate all partnerships or informal relations an incubator may have. However, we do note an essential difference regarding the university an incubator is connected to. Apart from the fact that incubators may have different missions defining to what extent they are obliged to work with academia-based business projects, the inflow also depends on the focus or specialization of the partner university. Technical faculties to a greater extent leverage scalable business ideas due to the characteristics of technology (low production costs). High level of scalability, in turn, corresponds to the target group of all business incubators qualifying for excellence funding through NIP. While all of the studied incubators are connected to a university with a technical faculty, there are differences in the magnitude and acknowledgment of the technical faculties at their partner universities.

The Linnaeus University, being the partner university of the Business Factory, is broad in terms of research and education, and rather focused on social sciences and humanities. As such, the Business Factory is constrained in terms of inflow of scalable ideas from the university in comparison to for example Sting, despite the fact that they are about the same size in terms of the number of students\(^\text{31}\), because the latter is connected to KTH which is a well-renowned and technical university. Furthermore, due to the close collaboration with the innovation office KTH Innovation, Sting has a constant inflow of ideas from the university and may also have from the three additional universities\(^\text{32}\) Stockholm is endowed with. Notably, Linnaeus University has an innovation office, however, it is shared with three other universities and not coordinated locally by them. In similarity to the Business Factory, GSP business incubator is also constrained by the size of the municipality. Moreover, their partner university, University of Skövde, is the smallest university in Sweden\(^\text{33}\). However, in contrast to the Linnaeus University, it is acknowledged for its specialization towards technologies such as informatics, system biology, and virtual systems which contributes to the inflow of scalable business ideas to the incubator. Skövde does not have an innovation office, yet the incubator has a well-developed collaboration with the university due to their common history and GSP acknowledge their dependency on the inflow from them to overcome the constraint of the small-sized municipality. Uminova Innovation is connected to Umeå University, which is also broad in terms of research and education, yet much larger than the other three\(^\text{34}\). They too have a well-developed collaboration with the university’s innovation office and a common history, contributing to a natural inflow of ideas from academia.

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\(^\text{31}\) Both Universities have about 13 000-14 000 students.

\(^\text{32}\) Stockholm School of Business, Stockholm University, and Karolinska.

\(^\text{33}\) University of Skövde has about 7000 students.

\(^\text{34}\) Umeå University has about 34 000 students.
Thus, levels and intensity of collaboration, both with other actors in the region as well as with the university, is important to stimulate the amount of inflow. The number of other support actors and entrepreneurial communities in the region contributes to leverage more developed ideas to the incubator, and the orientation of the partner university affects the access to scalable business ideas.

6.1.4 Brand Awareness
The amount of marketing activities strengthens the brand awareness of business incubators and therefore contributes to the inflow of business ideas. The scope of this paper does not allow us to investigate all channels through which the incubators may communicate or how potential incubatees hear about the incubator offer, but as far as is recognized in our interviews, there are no substantial differences in the type of channels the incubators communicate through. In short, the incubators communicate their offer on their website, other digital communication channels (Facebook, LinkedIn, Instagram), events, meetings, and directed advertisement (e.g., towards students or other groups). However, it should be notified that incubators, due to their location, participate in different local events and that they, due to their mission, advertise towards different groups to some extent. The most significant difference in this regard is GSP business incubator, actively marketing themselves internationally in order to offset the constraints of being a small municipality, connected to a small university. This is also part of a broader strategy to revive and increase growth in the region by attracting a more diverse group of entrepreneurs.

The number of marketing activities differ between incubators, and there are also differences in the amount of activity in their digital channels, what kind of information is provided on their websites and the amount of directed advertisement. Marketing activities are conditioned upon available resources to the incubator. Since the incubators in our study are non-profit organizations, they need to be endowed with resources by owners and financiers in order to perform marketing activities beyond informal meetings or representation on events. However, we acknowledge that different incubators have different needs for marketing activities. Resources to promote the incubators are seemingly more crucial in smaller regions where the natural inflow of business ideas is constrained by the size, population, and scale of the entrepreneurial ecosystem.

6.1.5 Summary
In summary, there is a significant difference between the incubators in terms of the amount, and to some extent, also quality, of inflow of business ideas. The difference in incubator offers is not perceived to be the primary determinant in reference to the inflow. Instead, regional characteristics such as the size (number of inhabitants), scale and development of the entrepreneurial ecosystem and capital endowments stipulate factors that affect the amount of inflow. As will become evident in the subsequent sections, the amount of inflow has an impact on the choice of the selection process. This supports our hypotheses about how local economics and entrepreneurial levels to influence the choice of the selection process, however, indirectly through the amount and quality of inflow. We also note that our initial hypothesis about local economics should be understood in the light of access to capital and population size, rather than high and low socio-economic levels, since the investigated regions do not display variance to the extent that we can determine such relationship.

Regional, and sometimes national collaborations stimulate the amount inflow of business ideas. Other support functions and entrepreneurial communities also contribute to leverage more mature business projects, here understood as of higher quality, to the business incubators. Naturally, regions endowed with a more developed or larger scale of such communities have access to more and better-developed ideas. The orientation of the partner university may also affect the inflow of business ideas to the incubator, where universities endowed with acknowledged or extensive
technical faculties leverage on scalable business ideas to a larger extent than unspecified universities. This, in turn, matches the target group of incubators qualifying for excellence funding through the NIP. These observations support our hypothesis that external collaborations influence the choice of the selection process, again indirectly through the inflow of ideas, which also supports prior research by Growth Analysis (2018b).

Lastly, marketing activities performed in order to strengthen brand awareness may also influence the amount of inflow to the business incubator. This was not acknowledged in the initial theoretical framework but will be added in the emerging framework as a factor influencing the choice of selection process indirectly through its impact on inflow.

6.2 Application

The second step of the generic selection process model addresses how entrepreneurs apply to become tenants in the incubator. Thus, the remaining of this sub-chapter is connected to the theme we identified as ‘Screening practices’ displayed in figure 3, chapter 4.

There are seemingly small differences in how entrepreneurs may apply to the different incubator programs. Potential incubatees can either call or email a business developer in order to be invited to an initial meeting. Electronic applications are also utilized in all incubators except Gothia Incubator (GSP), and the Business Factory. Sting and Uminova also offer entrepreneurs to visit the incubator during open coaching and idea drop-in. These may correspond to an application as they might lead to a screening of the business idea. Thus, the channels through which entrepreneurs may apply are similar, however, some utilize several different channels in order to increase accessibility.

One difference is whether or not the incubators utilize fixed application rounds or continuous admissions over the year. Uminova Innovation and Sting have fixed application rounds for their pre-incubator programs and continuous admission to their incubator program. In the Game incubator (GSP), it is possible to apply anytime at the year, however, the admission to the pre-incubator program takes place 2-3 times per year. Gothia incubator (GSP) and the Business Factory both utilize continuous admissions over the year. Utilizing fixed or continuous application rounds mainly reflect whether the admission occurs in batches or individual case by case. We will get back to this in section 6.5, Pre-incubator, or verification phase.

The application step is perceived as rather informal by all incubators, and it is described as a way to gather some information before the initial meeting, rather than information used to evaluate the business projects. The reason for inviting entrepreneurs to an initial meeting instead is that it is hard to evaluate business projects based on a written application only, and especially the team. However, requiring this kind of information allows incubators early on in the process turn down or refer to other business projects that are outside their target group. As an example, the Business Factory note that while competencies in the incubator are broad, business projects within MedTech are better off in other regions such as Lund, Stockholm or Copenhagen (Denmark) due to the limited amount of MedTech competencies and infrastructure in the region in general. Likewise, Sting declares that they refer to business projects within pharmaceuticals to Karolinska Innovation due to the lack of in-house competencies within this area.

None of the electronic applications requires an extensive amount of information or knowledge to apply through. However, there are slight differences in the extent of information required in a submitted electronic application. Sting provides two different application forms depending on if the application is directed at the pre-incubator program or the incubator program.

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35 Gothia and the Business Factory provide applications of interest on their websites.

36 Questions asked in general focus on the idea, target group, market potential and stage of development of the company, which is known by the people working in the company.
Their application form for the incubator program is also the most extensive one in terms of the amount of information required out of the four incubators.

A reason for this is that the other incubators utilize one generic application form which is directed towards business projects also in earlier phases applying for the pre-incubator program or verification phase. Since pre-incubator programs are directed toward business projects in earlier phases and allow for a larger group of business projects to participate, this step of the process is less selective in comparison to the admission to the incubator program, and therefore less information is required.

Another reason is that the inflow of ideas is much larger in Sting than in any of the other incubators, rendering them to gather more information early on in order to discern which business projects that may meet with their criteria. Thus, it is a reflection of how selective they are. According to Sting, whilst some of the questions are necessary in order for them to make an informed decision, some questions are intended to signal to the applicants what issues are important to them and thus, already in an early stage impact the way incubatees reflect upon questions regarding, for example, diversity and sustainability.37

6.2.1 Summary
In conclusion, the application step is similar in all incubators and only differ slightly in terms of the method to apply, the information required in the electronic application and whether or not one utilizes fixed or continuous application rounds. Projects perceived to be far outside the target group are rejected already in this step, which indicates that some screening takes place. However, the application step is, in general, perceived as rather informal by the incubators. It is a way to gather information prior to an initial meeting, rather than used to evaluate business projects. This reflects the incubators way of working with selection primarily through interaction with entrepreneurs. Notably, the decision to work with selection primarily through interaction is a managerial one and is, therefore, a foremost a reflection of how managerial orientation influence the choice of the selection process. This supports our initial hypothesis about managerial orientation impacting the choice of the selection process and is further dwelled on in the next section.

6.3 First meeting and additional work by applicants
The third and fourth step of the generic selection process model addresses the initial meeting between the incubator and the applicant and the subsequent work by the latter prior to the screening. Thus, the remaining of this sub-chapter is connected to the theme we identified as ‘Screening practices’ displayed in figure 3, chapter 4.

6.3.1 First meeting
All four incubators state that they invite ideas perceived as interesting to an initial meeting after an application or initial contact with the incubator. Notably, there are differences in the share of applicants the business incubator meets with, and the share decrease with the amount of inflow.38 However, all incubators state that they meet with as many applicants as possible, as long as they match the target group. Thus, the discrepancy is a reflection of the amount of selection taking place in the application step of the process, however it is rather caused by constrained resources in relation to the amount of inflow as well as applications falling outside the target group, than evaluation based on the application.

37 Diversity and sustainability are not requirements, but Sting may reward business projects taking these into consideration.
38 The Business Factory and GSP meet with all (100%), Uminova meet with most but not all applicants (>90%), Sting meet with 80-90% of applicants.
The initial meeting resembles a first screening of the business project, and the procedure of the meeting is similar in all four incubators. The initial meeting is about 45-60 minutes long and is usually held by one business developer from the incubator. All incubators state that the meeting takes place physically at the incubator. The exception is GSP, who also allow for phone or Skype interviews, which is a service provided to increase accessibility. All incubators state that the entrepreneur or entrepreneurial team should be prepared to present or pitch their idea, and even if it is not explicit in all cases, the information entailed during this stage of the process revolves around the NABC model.39

The main purpose in all cases is to find out more about the idea, market, the entrepreneur or entrepreneurial team behind it and stage of development of the business project in order to determine the compatibility between the business project and the incubator. Moreover, to find out if the idea or business project has the potential to meet the respective incubators’ criteria, for example of being innovative, scalable and at the right stage of development. Business projects outside of the target group that was not identified in the application stage are most often identified at this point and may be referred to other business support instances or rejected.

According to the incubators, another significant opportunity provided during an initial meeting is to make a first assessment of the entrepreneurial skills, motivation, and capabilities. All incubators emphasize that the capabilities of the team, as well as coachability, are some of the most critical criteria in order to be accepted to the incubator program and all incubators make an effort to evaluate these traits during the initial meeting and subsequent work by prospective incubatees. Uminova Innovation, as well as the Business Factory, points out that in practice, they are sometimes faced with business projects that fulfill criteria regarding the idea, but not the team at this point. Both state that they instead give way for such criteria or even provide support in order to help the firm fulfill this criterion, rather than turning a business project down because of this at this point.

6.3.2 Additional work by applicants
All incubators state that business projects receive feedback and advice at the initial meeting and are encouraged to make some adjustments before returning for a more thorough screening. Notably, the adjustments do not only refer to the team as described in the above section but may concern anything regarding the idea, prototype, or business model. According to the incubators, the number of adjustments required depends on the stage of development of the firm, as do the number of follow up meetings.

Sting has developed a more extensive process, where up to six meetings may take place before a decision. According to Sting, the meetings followed by feedback and adjustments are a process for getting to know the entrepreneurs and testing the coachability of the team. Business projects that adapt and work to progress according to their advice may continue in the process. However, it should be noted that Sting does not utilize a business review as the other incubators (according to the definition in section 6.4, Screening process), which explains their much more extensive practice in this step.

6.3.3 Summary
In summary, there are no substantial differences between the incubators in this step of the process. The purpose of this step of the process is seemingly the same in the incubators, to establish if the basic conditions for success according to their criteria exists and decide if the individual incubator can help the business project in question. This is partially done by better getting to know

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39 Need, Approach, Benefit and Competition.
entrepreneurial needs and see if their resources and competencies correspond to these. However, it is also done by evaluating how well prospective incubatees respond to feedback provided by the business incubators. The flexibility in the utilization of criteria in this step, demonstrated by the fact that all incubators allow firms to make adjustments or even provide some business support in this process, reflect the business incubators way of working with selection through interaction with entrepreneurs.

Again, this is a managerial decision and motivated by the fact that the support provided by business incubators to a large extent, is characterized by hands-on work. Incubators need to know if their competence and capability match with the needs of the entrepreneur, whether the team is coachable and whether they can make a difference in the outcome of the business project, and these traits are hard to evaluate based on an application. To what extent one can work with evaluating entrepreneurs through interaction is conditioned upon the resources available to the individual incubator, and balanced against the amount of inflow, which determines the amount of selection that takes place in this step. In conclusion, this supports our initial hypothesis that managerial orientation affects the choice of the selection process, however, also that there are organizational constraints in terms resources, inclining incubators to be more selective as inflow is increasing. We acknowledge that our initial hypothesis about how time may act as an organizational constraint rather should be understood as the time that can be devoted to the selection, rather than time inquires by applicants and other stakeholders pressuring the incubators to perform shorter selection cycles. Notably, time in this sense may also be understood as monetary resources.

6.4 Screening process
After the initial meeting and adjustments by applicants, the incubators employ a screening practice, also referred to as a business review, where the applicants present their idea or business project to a panel of experts, which evaluates the project based on a set of criteria. The practice is similar in all incubators and aims to investigate further whether there is a match between the prospective firm's needs and capabilities and the incubator's goal and resources. The exception is Sting, which instead utilizes several initial meetings as a screening practice, and has an internal discussion about admission instead. However, criteria are applied in the same way as in the other incubators. Apart from this, the main difference between the incubators in this regard is the composition of the panel of evaluators. We also observe discrepancies between incubators in the applied criteria and discuss both similarities and differences below. The remaining of this sub-chapter is connected to the themes we identified as 'Screening practices', 'Mission', and 'Criteria' displayed in figure 3, chapter 4.

6.4.1 Composition of panel
In terms of the composition of panels, incubators may utilize an internal panel consisting of business developers from the incubator or a mixed panel, also including external evaluators. While Sting and Uminova utilize an internal panel only, the Business Factory and GSP business incubator both utilize a mixed panel of evaluators. According to the latter two incubators, the choice of including external experts in the evaluation is motivated by receiving second opinions by people with other perspectives and knowledge than the internal. GSP (game division), include external industry experts and declares that they have an essential role in verifying the project as they have the first-hand experience of what it takes to succeed in the gaming industry. The Business Factory, including their partner Almi in the screening, also notes that this is a way for prospective incubatees to establish initial contact with a potential financier as well as facilitate communications between the incubator and Almi since information shared by prospective incubatees is subject to confidentiality. Whether to include externals or not is decided by the operative staff in the incubator,
and thus, is foremost a matter of managerial orientation and based on the perceived capabilities of the incubator staff to evaluate the range of business ideas applying to the incubator program.

### 6.4.2 Mission and Criteria

The most fundamental criteria as stipulated by all four incubators is that the idea or business project is innovative, scalable, and have international growth potential. Notably, there may be discrepancies in what is perceived as scalable, innovative, or international potential. For example, according to the Business Factory, scalable refers to potential revenue of 30 million SEK\footnote{Within 5 years after market introduction.}, while according to Sting, it refers to 50-100 million SEK\footnote{Within 10 years after market introduction.}. This may reflect the different opportunities incubators have in imposing requirements on potential incubatees, and thus how selective one is allowed to be, due to the differences in inflow. Nevertheless, this resembles an idea-based focus, rather than an entrepreneur-based focus, according to Bergek and Norrman (2008).

These criteria coincide with the NIP criteria as stipulated by Vinnova, the main financier apart from the owners in all four incubators. Vinnova offers to fund the support of “new knowledge-intensive growth companies that have the potential to become internationally successful”\footnote{Criteria: Business project have unique knowledge = builds on knowledge/teams that give the company necessary lead in the market; have an innovative offer = has a news value in the market segment one addresses; is not established in the market = young companies that are not established in the market when accepted to the incubator program; have a scalable business model = is considered to have potential for a business model that can provide international growth.}. The incubators acknowledge that funding received by Vinnova require compliance with their criteria, and thus, that the funding is reserved to support innovative and scalable business projects with international growth potential. However, Vinnova does not fund the entire incubator operation, and therefore, it is possible to make concessions from these criteria.\footnote{However, it should be noted that Vinnova evaluates the composition of the incubator portfolio, and therefore, it may be tempting to include as many projects as possible that comply with their criteria.}

Incubators highlight that the companies one chooses to work with is also influenced by the mission as stipulated by owners. This may refer to both types of companies and the origin of the business idea. As an example, GSP declares that the specialization towards games is a directive from their owners Skövde Municipality and Västra Götaland region. Likewise, Uminova Innovation declares that it is a desire by their owners, Uminova Holding, for them to work with academia-based business projects and the share of inflow from the academia has been constant during the past 10 years. Notably, such owner directives do not necessarily oppose Vinnovas’ objectives. Since the overall goal as stipulated by the owners of the incubators included in this study is to support growth in the environment they operate in, they align quite well with Vinnovas criteria, and thus no significant discrepancies were detected.

However, incubators acknowledge that different owners and financiers might have different objectives. For example, it is noted that preferences regarding the companies’ location may differ. While the municipality is mainly concerned with creating local jobs and tax revenue, the regional owners have the same objective but for the whole region. Since the incubator offer to a large extent is based on physical presence in the incubator and participation in a community, it may be hard to balance these two objectives. Entrepreneurs in the surrounding municipalities would perhaps have to move closer to the incubator, and at the same time, their dislocation is a loss for the municipality they were originally based in. The Business Factory has solved this problem by a collaboration with the surrounding municipalities where they offer a virtual incubator, allowing for entrepreneurs to stay in their respective municipalities and still participate in the incubator program.

Another goal conflict may appear between partner investors and owners. While investors prefer to supply funds to companies with low risk and potentially high return on investment (ROI), owners may be more concerned to support companies that provide local job
opportunities and support growth in the region. Being adherent to the investor’s objective provide opportunities for the best companies which attracts applicants to the incubator, but may at the same time exclude companies that could have grown organically without investors. Despite not being highlighted as a significant problem by the incubators, this implies that efforts sometimes need to be made in order to balance several objectives and this might be especially critical for incubators with multiple owners and financiers.

Besides the fundamental criteria, the team (drive, motivation, capabilities, and skills) are also described as an essential criterion by all four incubators. As an example, Uminova Innovation has imposed stricter requirements on teams⁴⁴ and describe the reason for this as twofold. From experience, they have learned that one-person companies, in general, take too long to develop. In extension, this means that resources are devoted to fewer companies over time, which may imply lesser numbers of positive exits as well as a greater risk, which opposes incubator goals. Another reason is the fact that private investors evaluate firms based on the team, and thus, in order to help their incubatees to receive funding, they adapt to these inquiries.

All incubators also note that criteria such as diversity and fulfillment of the UN’s Sustainable Development Goals (SDG) are becoming increasingly important. Even though they are not yet decisive, both Sting and Uminova has incorporated these in their assessments. Sting notes that their increased focus on diversity was realized subsequent to incorporating more females on their team, and thus, is a result of engaged people within the incubator. However, they also acknowledge that macro trends and desires by financiers have also influenced this. Likewise, Uminova Innovation notes that there is an increasing pressure from the surrounding world and financiers to work with impact-companies. The Game Incubators’ (GSP) re-launch of the incubator program is also a manifest of the increased pressure to consider diversity. They aim to attract new target groups to support their goals of increased regional growth and competitiveness by offer needs-oriented and gender-integrated business development methods as well as new processes for evaluating game ideas and startups. Notably, contributions to the fulfillment of SDG and stimulation of female entrepreneurship are both evaluated by Vinnova.

6.4.3 Summary
In summary, the criteria adopted in the incubators are strikingly similar, most likely because they have one of the main financiers, Vinnova, in common. However, there are differences between incubators in the companies they work with, which at least partially reflects the influence of different ownership. This supports our hypotheses that both financiers and owners influence the choice of the selection process, however, indirectly through their influence on the target group of the incubator. The target group, in turn, reflects in the criteria applied in the individual incubator. The fact that both financiers and owners influence the target group of the incubator does not necessarily imply that their objectives are inconsistent. Nevertheless, the objectives of different owners and financiers not always coincide, and even if it is not highlighted as a significant problem, they sometimes have to be balanced against each other by the incubator. In addition, we find that managerial orientation and macro trends have a direct influence on the criteria applied in the business incubator, supporting our initial hypotheses. Notably, the influence of investor’s objective on criteria was not perceived by us in our theoretical framework, and thus, is added as an influential factor in the emerging framework.

⁴⁴ At least two persons, working with the company 50% of their time amounting one full time.
6.5 Pre-incubator or verification phase

All the incubators offer a pre-incubator program or a verification phase. Sting refer to theirs as an inspiration program rather than a pre-incubator program which is described more in detail below. There are two important differences between the incubators in this step of the process. The first one refers to whether the admission occurs in batches or case by case. The second one refers to the amplitude of the programs, and thus the length and amount of business support provided at this stage. The remaining of this sub-chapter is connected to the theme we identified as ‘Screening practices’ displayed in figure 3, chapter 4.

6.5.1 Admission in batches

All incubators, except for the Gothia Incubator and Business Factory admit tenants in batches to their pre-incubator program. All four incubators similarly describe the benefits of utilizing admission in batches. Tenants are usually concerned with similar challenges in early phases, for example, issues concerning the business model, team, leadership, and funding. This creates a foundation for business projects to help and learn from each other. In the long-term perspective, they become parts of the same community or at least create valuable business contacts for the future. Being able to provide a vivid business community, in turn, may attract other aspiring entrepreneurs. Admission in batches also allows for lower marginal costs since one can provide for common activities, fewer hours of individual coaching and accommodate facilities.

As mentioned in chapter 5, *Cases*, Gothia Business Incubator previously provided for another pre-incubator program (Framtidén), which was funded by the Västra Götaland region and Skaraborg Municipal Association. As this funding was withdrawn, the incubator could only provide for the verification phase and therefore had to change its processes somewhat in order to bridge the gap previously filled by the pre-incubator. The pre-incubator program utilized admission in batches, and according to Gothia incubator, this will be the case again as soon as the transition period from the old to the new arrangement is in place. Notably, this also exemplifies that the possibility to provide for a pre-incubator program is also a matter of resources.

The Business Factory declare that they aspire to utilize admission in batches. However, they are currently constrained by a low inflow of business ideas. In turn, this suggests that they cannot practice the “survival-of-the-fittest” philosophy as described by Bergek and Norrman (2008) in a credible way, where one allows the market forces to shake out weaker projects out of many. On the other hand, they may not have a sufficient inflow of high-quality business projects to “pick winners” in that sense either. Thus, they have had no other choice but to work more hands-on with their incubatees from an early stage which, in turn, has caused them to stipulate stricter criteria in order to ensure they work with high-quality business projects.

6.5.2 Amplitude of pre-incubator programs

There are significant differences in the amplitude of the programs, and thus the length and amount of business support provided at this stage. As stated above, Sting offers an inspiration program, containing 4 workshops during evenings, some individual coaching and tasks in between. This can be contrasted with the Business Factory, offering a 6-month verification phase, in which they work hands-on with business coaching in order to help their incubatees to verify their ideas on the market. Both Uminova Innovation and GSP fall somewhere in between these two extremes.

Sting state that their main focus is to provide for an incubator and accelerator program, rather than a pre-incubator program. Their inspiration program is a tool to inspire and attract future prospective incubatees, rather than a way of working with verification of ideas, which

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45The terms are often used interchangeably and do not necessarily refer to different processes.
is different from the other incubators. It is also used to identify new trends and areas of interest for the incubator, which is why they apply thematic programs. In fact, the incubator program does not naturally follow from the pre-incubator, or rather inspiration program, because the difference in the required stage of development of business projects is too significant between the two programs.

A condition for this way of working is the high inflow of business ideas, and particularly, high-quality business ideas in more mature phases. Due to the characteristics of the Stockholm region, such as relatively high entrepreneurial levels, a well-developed ecosystem of entrepreneurial support functions and communities, and several universities offer pre-incubator programs, there is not the same need for Sting to provide for pre-incubator services as for incubators in less endowed regions. Therefore, Sting can select already verified ideas to a greater extent, resembling a “picking winners approach,” as described by Bergek and Norrman (2008).

This may be contrasted to the motivation provided by the three other business incubators of why a pre-incubator process is valuable. The pre-incubator process allows the incubator to familiarize themselves with the entrepreneur (capabilities, skills, motivation, drive) and therefore, more adequately evaluate the entrepreneurial team. Secondly, the pre-incubator process allows for verification of the product or service, which lends the incubator to better evaluate the market potential and viability of the product or service. Lastly, a pre-incubator process allows the incubator to work with several projects at once, and rely more on the process itself to either strengthen the case through verification or “shake out” weaker business projects. Referring to the selection-framework described by Bergek and Norrman (2008), this philosophy resembles the “survival of the fittest approach” rather than “picking winners”.

6.5.3 Summary
In summary, all incubators offer a pre-incubation or verification phase. However, they differ in their motives to provide for such a program as well as in the extension of it. In Uminova Innovation, GSP business incubator, and the Business Factory, it is described as a tool to improve the identification and selection of the best businesses by allowing entrepreneurs to test and iterate their ideas. The amount and quality (stage of development) of the inflow of business ideas allow Sting to specialize their services and be more selective from the beginning.

Thus, the “picking winners” and “survival of the fittest” approaches, resembling the rigorousness or flexibility in applying criteria, may be two different philosophies of how to work with selection. However, they are also clearly pre-conditioned upon the amount and quality of inflow of business ideas an incubator has. Only a sufficiently high inflow of high-quality ideas lends the picking winners approach to be a credible selection practice, or even available. A significantly low inflow may leave neither approach credible, forcing incubators to work differently in order to pursue selection. The amount and quality of inflow, in turn, depends on the incubator offer, local economies, level of entrepreneurial activity, collaborations and brand awareness as described in section 6.1, First interaction between the incubator and potential incubatee. This is how the inflow stipulates as a pre-condition for the choice of the selection process. We acknowledged in our theoretical framework, that a higher inflow of ideas might lead to more rigorous screening practices since the competition for a spot in the incubator is more significant. However, our study also points out that the quality of the business projects matters for the possibility to apply a “picking winners approach”, at least in a credible way.

In addition, another direct influence on the choice of the selection process is resources to provide for a pre-incubator or verification phase. Naturally, a pre-incubator process is not as demanding in terms of resources as an incubator process due to the lesser amount of individual coaching. However, as exemplified in Gothia incubator, monetary constraints may

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govern the opportunities one has to provide for such process which support the hypothesis about how resources may act as an organizational constraint.

6.6 Pitch/ reconciliation and entry incubator program
Subsequent to a pre-incubator program or verification phase, the incubators apply either a pitch or a second business review, alternatively an informal reconciliation in order to decide whether the business project should be admitted to the incubator program. Since we have already described the main differences between the business incubators with regards to business reviews in section 6.4, Screening process, we refer to this also in this subchapter. Thus, the remaining of this subchapter is connected to the theme we identified as ‘Entry’ displayed in figure 3, chapter 4.

6.6.1 Entry conditions
Referring to all incubators, the main difference from the initial business review prior to the verification phase or pre-incubator program, is the stage of development business projects are required to be at. As this is the final step before entry into the incubator program, incubators require business projects to be more mature and entrepreneurs to be dedicated to building their company. Thus, the same fundamental criteria still apply, however, prospective incubatees must have reached certain milestones in terms of maturity in order to proceed to the incubator program. As an example of a milestone, all incubators require ideas to have received some “proof of concept” from customer and market. Thus, criteria can be said to be applied more rigorously in this step of the process in all incubators. Nevertheless, and as notified in sub-chapter 6.4, Screening process, not all incubators have the same perception of the criteria, and this is true also for the perception about what is acknowledged as mature. For example, “proof of concept” may refer to one customer as well as ten customers. The incubators express that a part of this evaluation is also subjective, meaning that even though there is a checklist of what should be achieved in order to be accepted to the incubator, there are different perceptions about how well a business project, in fact, correspond to this.

Not all projects are selected to participate in the incubator program. The incubators acknowledge that the amount and type of business projects the incubator admits are also conditioned upon resources such as staff (expertise and knowledge), resources (time and monetary) and available facilities. The incubators participating in our case study, in general, do not perceive themselves to be constrained by their resources to accept tenants. In contrary, both GSP business incubator and the Business Factory express a desire to increase their inflow of business ideas, where the latter also express a desire to accept more incubatees. Uminova Innovation describes the flow of business projects as consistent and manageable. Sting is the only incubator that expresses that they would like to be able to accept more applicants than their current resources allow for, which again is a result by their large inflow of high-qualitative business projects and the reason for why they apply more rigorous screening practices.

Thus, occupancy rates are not all-time high in all the incubators. The Business Factory, and to some extent also GSP business incubator, acknowledge that they sometimes have available capacity. This suggests that whilst selection practices and the appliance of criteria may be more or less rigorous depending on the amount and quality of inflow, the incubators included in this study preserve minimum requirements, pointing out that there is a lower bound of the extent to which one applies the “survival of the fittest” approach. As stipulated in section 6.5.1 Admission in batches, the Business Factory has de facto raised the requirements for admission, despite having

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* In innovativeness, scalability, and international growth potential
* Flexibility in application of criteria
low inflow and occupancy rates. This, in turn, is unsupportive of the theory presented by Lumpkin and Ireland (1988), that less rigorous screening procedures are applied in the event of low occupancy rates which is caused by a need for incubators to justify the use of public funds. A potential reason for the observed discrepancy may be the extensive requirements inflicted on incubators by authorities, such as Vinnova, to account for all public spending. These requirements are probably more prevalent today than in the late 1980s when Lumpkin and Ireland performed their study.

We acknowledge that there are other differences in entry conditions, such as what is stipulated in the contract of agreement and what is included in an incubator program. However, since the selection process is the main focus of this thesis, such details are outside the scope of this paper and left for future research.

6.6.2 Summary
In summary, the main differences between incubators in terms of screening practices is primarily described in sub-chapter 6.4, Screening process, and apply in a second screening as well. The main difference between the first and second screening is the stage of development a business project is required to be in. Resources in terms of staff, time, funds, and facilities are perceived to be a condition to admit tenants into the incubator program. We summarize these resources as organizational capabilities and constraints, as they include both capabilities (knowledge and expertise) and constraints (physical resources). However, the incubators, in general, do not express that they are constrained by theirs to an extent where they turn down valid business projects. Only Sting acknowledges that their resources act as a constraint, which in turn cause them to be more selective in the admission of tenants. This observation suggests that the amount and quality inflow affect the choice of selection practice as suggested in section 6.5, Pre-incubator and verification phase and furthermore, that this is balanced against the resources available to an incubator to provide for tenants subsequent to admission into the incubator. However, we do not support that low occupancy rates contribute to less rigorous screening practices caused by a pressure to justify the use of public funds as suggested by Lumpkin and Ireland (1988). This, in turn, is likely to be an effect of the extensive requirements on accounting inflicted on incubators by authorities, which perhaps was not as prevalent in the late 1980s.

6.7 The selection process- a work in progress
The design of the selection process has changed over time in all four incubators, and the work to develop the process is described as continuous. In all incubators included in our study, the work with developing the process takes place through continuous reconciliations and by teams foremost including the operative staff and management in the incubator. In the remaining of this sub-chapter, we present examples provided by the incubators of their way of working to develop the selection process, and what has motivated such work, to further increase the understanding of the factors influencing the choice of the selection process. As such, this sub-chapter is connected to the theme we identified as ‘Screening Practices’ displayed in figure 3, chapter 4.

6.7.1 GSP business incubator
GSP business incubator declares that they continuously tweak the selection process in order to improve the quantification and acknowledgment of the potential of the ideas as well as receive better business proposals. They have recently changed the way they measure and quantify the leverage of their incubatees, and thus clarified what should be accomplished in order to move from one phase to the next in the incubator process. It is described that developments sometimes are
inspired by others or even occur in collaboration with others, but more commonly is influenced by
the accumulated experiences of working in the incubator over time as well as the desire to improve
that is prevalent among the group of employees. GSP emphasize that learning by doing characterize
their way of working with development rather than identifying best practices applied by others. A
reason for this is the regional conditions, stipulated to be different from the larger regions. As
mentioned in sub-chapter 6.1.2, **Local economics and level of entrepreneurial activity** the inflow of ideas
is limited due to the size of the region, the scale of the entrepreneurial support system as well as
regional capital constraints relative to larger cities. These challenges require ways of working that
are adapted to those conditions. Among other things, this lends the collaboration with University
of Skövde to be crucial in terms of inflow of ideas and has spiked the ambitions of attracting
international teams and business projects.

Furthermore, in 2018 the game division of GSP re-launched an updated version of
the incubator program, including their selection process. Their new program is funded by EURF
and Västra Götaland region and designed by the operative staff in the incubator. The purpose of
the re-launch was to find new and better ways to contribute to the creation of more and growing
computer gaming companies that create jobs and strengthen Västra Götaland’s attractiveness and
competitiveness. Again, this included efforts to attract new target groups by offer needs-oriented
and gender-integrated methods and processes for both evaluation and development of game ideas
and startup companies. One of the largest differences is that their screening practices have become
more digital, and reliance on observed data generated by platform users greater. Thus, their practices
rely less on subjective perception by evaluators and more on hard facts, which is also enabled by
the fact that they work with entirely digital products (games).

### 6.7.2 The Business Factory
The Business Factory has continuous reconciliations in order to find new angles of approach and
tweak the selection process to fit with current conditions. In similarity to GSP, they too have
undergone large changes in terms of their selection process over the past year and will re-launch
their incubator program during the autumn of 2019. The main difference from their current
program includes additional distinctive phases in the incubator program, gateways, and checkpoints
as well as rewards linked to the checkpoints for the incubatees. Furthermore, they have developed
a new framework for working with selection. The motivation behind the development of the
process was the observation that they deviated from their previous process description and worked
more by informal processes established through organizational learning, culture, and habits. Thus,
a desire to become less discretionary, clearer, and more transparent motivated the development.
An internal team performed the work to establish the updated process in the incubator, and an
important part of the process was to exchange experiences with other incubators, which they
previously have engaged in informal collaborations with, about their selection criteria and processes.
Based on this information, they subsequently identified similarities and differences in missions and
offer and adapted their process accordingly.

### 6.7.3 Uminova Innovation
According to Uminova Innovation, continuous reconciliations regarding the development of the
selection process takes place, and they have tweaked the process somewhat on a yearly basis. When
it comes to processual developments, incubator staff are regarded to have significant power to
influence. As already described in section 6.4.2, **Mission, and Criteria**, a recent change they have made
is the stricter criteria imposed on teams. Another example of a work in progress is the development
of their screening practices (application and business review). They currently explore different
approaches, for example, how to incorporate digital tools, in order to streamline the process. The
motivation for this is to increase resource efficiency and improve the evaluation of business ideas. Uminova Innovation also notes that the type of ideas encountering the incubator change over time. This may be a result of macro trends like digitalization or sustainability and call for adaption by incubators in the way they work. Different firms face different challenges, and the services they provide as well as how they evaluate business projects need to be adapted accordingly.

6.7.4 Stockholm Innovation and Growth (Sting)
In similarity to the other incubators, Sting also describes their work with the selection process as continuous, having reconciliations regarding process development on a weekly basis. In the work with developing their process, one influence is inspiration from others, such as best practice incubators internationally. However, practical experience in the individual incubator environment is emphasized as an important factor influencing the way of working with selection. A recent work they have pursued is the development of a new tool to evaluate teams. The tool enables objective measurements of the team’s or entrepreneurs’ potential, strengths, and weaknesses before engaging in entrepreneurship. This, in turn, enables adjustments and development of the team early in the business development process. They emphasize that the tool is inclusive, and the motivation to implement it is to reduce unconscious bias in the evaluation of entrepreneurs and teams. The tool has the potential to contribute to increased diversity in the teams included in the incubator process, and therefore, the diversity within the tech scene in the long-run.

6.7.5 Summary
In conclusion, the selection process is continuously scrutinized and tweaked by all four incubators. Thus, the risk of path dependency in reference to the narrow perspective, ruling the process by sustained persistency and lock-in effects is considered to be small and not the main determinant of the choice of the selection process. This is further supported by the fact that not only incremental but also larger development processes concerning the selection process take place in the incubators. Another potentially supportive factor is that specific processes and programs are often project-funded over a certain amount of years, forcing the incubator to change when the funding expires. However, the design of the selection process, and thus, the associated processual development of it, is described as initiated and realized by the operative staff in the incubator. All respondents describe that the operative staff has a large influence in deciding how such process should be outlined and executed. In extension, such work is highly influenced by prior experience from working with the process and the learning that evolves through this. As such individual and organizational learning seems to be an important, influential factor in the choice of the selection process, which may act as both a capability or a constraint. It is a capability if incubators learn from mistakes, develop the process, and perform better selections in the future as a result. On the other hand, it is a constraint if incubators become streamlined to the extent where their learning causes them to perform selection based on what is known or familiar to them. As such, we cannot dismiss that small path dependencies may still influence the selection process. Furthermore, it is described that owners are oriented in or told what changes or updates are upcoming or already implemented, as long as it corresponds to the goal of incubator. Therefore, in terms of operations, the relationship resembles one of bottom-up and owner directives do not stipulate a large direct determinant in the design of the selection process. This supports our hypothesis about managerial orientation as an important factor influencing the choice of the selection process. Even though our analysis does not allow us to investigate what drives managers on a deeper level, experiences or organizational learning is an important factor which may also imply path dependencies to some extent. Lastly, when incubators seek to develop or update their process, inspiration from other incubators here referred to as best practices may influence the choice of process. Resources stipulate a condition
for larger processual changes, and constrained ones may motivate incubators to streamline or
digitalize the process, both aspects affecting the choice of the selection process.

6.8 An emerging framework

The analysis resulted in an emerging framework presented in figure 5. The framework illustrates the
factors found to influence the choice of the selection process in business incubators based on our
study. Notably, some of the factors referred to as internal factors and external factors in chapter 3,
Literature review and theoretical background remains in the emerging framework, and additional factors not
acknowledged at that stage was added according to what was discovered in the study. For example,
‘Owners’ and ‘Financiers’ were referred to as internal factors, while ‘Level of entrepreneurial activity’
and ‘Local economics’ were referred to as external factors. ‘Investor objective’ and ‘Brand awareness’
are examples of factors that were added to the emerging framework as influential in the choice of the
selection process in business incubators. In the emerging framework presented in this chapter, an
attempt is also made to unravel the complexity of how different factors affect the choice of the
selection process in business incubators.

In the proposed framework, ‘Pre-conditions’ stipulate the opportunities or
impediments business incubators face when designing and implementing a certain selection process.
The ‘Owners’ and ‘Financiers’ formulate a ‘Mission’ that determines the ‘Target group’ of
the incubator. Simultaneously, factors such as ‘Level of entrepreneurial activity’ and ‘Local economics’ in
the region as well as ‘Collaborations’ and ‘Brand awareness’ influence the amount, quality and variety
of ‘Inflow’ to the incubator. The ‘Inflow’, in turn, constitutes the ‘Pool of potential incubatees’, which
is compared to the ‘Target group’. In an ideal world, these would perfectly coincide. Both the ‘Target
group’ and ‘Pool of potential incubatees’ reflects in the choice of ‘Criteria’ and the ‘Screening
practices’. In this way, the pre-conditions indirectly affect the choice of the selection process.
However, the choice of the selection process is also directly influenced by several factors. ‘Criteria’
are influenced by ‘Trends’, ‘Managerial orientation’, and ‘Investor objectives’. ‘Screening practices’
are influenced by ‘Managerial orientation’, ‘Best practices’ and ‘Organizational capabilities and
constraints’. In the end, ‘Criteria’ and ‘Screening practices’ together lead to a ‘Selection’ of incubatees.
Notably, the ‘Selection’ itself may influence the ‘Pre-conditions’ as the ‘Owners’ and ‘Financiers’ may
modify the ‘Mission’ based on the outcome of selection. Likewise, ‘Selection’ may also influence
‘Managerial orientation’, since they are provided with experiences and learning from the outcome,
which may cause them to change ‘Screening practices’ or ‘Criteria’. In addition, the outcome of the
‘Selection’ might be new entrepreneurs in the region as well as increased experience and capabilities
of entrepreneurs, new firm establishment or enhanced reputation of the incubator, which in turn may
affect any of the factors ‘Level of entrepreneurial activity’, ‘Local economies’ or ‘Brand awareness’
and therefore the ‘Inflow’ of business ideas to the incubator. As such, ‘Selection’ can initiate a
feedback loop, causing the process to continuously change and develop and therefore remain
dynamic.
Figure 5: An emerging framework
7. Discussion and conclusion

This study has enhanced the understanding of what factors influence the choice of the selection process in government-funded business incubators by the development of a framework that illustrates the pre-conditions and direct factors affecting the choice. This knowledge is of importance because it highlights both opportunities and constraints incubators face when designing and implementing a selection process. In turn, such understanding may improve future resource allocation of public funds. Furthermore, the fact that both internal and external factors affect the choice of the selection process strengthens the suggestion by Bergek and Normann (2008), that identification of best practices requires performance to be evaluated in relation to the individual goals and practices applied by different incubators. As such, our research contributes to essential implications to the literature on the selection process in business incubators as well as for incubator managers, owners, and financiers.

7.1 Revisiting the research questions

Before presenting the essential theoretical and practical implications of this study, a revisit of the research questions presented in the introduction of this paper as well as a summary of these is in place. Regarding RQ1: How does the selection process differ between business incubators? we found the process flow to be similar between the incubators included in the study and we identified a generic selection process model presented in figure 4. Within each of the steps outlined in the model, we found both differences and similarities in design of the selection process. Regarding RQ2: Why do the selection process differ between business incubators? we pinpointed several different influential factors which was summarized in figure 5, an emerging framework. In short, we found large differences in the first interaction between the incubators and potential incubatees, which was mainly discussed in the light of the amount of inflow of business ideas to the business incubators. We concluded that these differences were effects of potential differences in offers, but mainly local economics and level of entrepreneurial activity, collaborations and brand awareness. We found minor differences in terms of the application step, first meeting and additional work by applicants, but concluded that incubators work with selection primarily through interaction with entrepreneurs and that this is mainly an effect of managerial orientation. We found both similarities and differences in terms of the screening process of the incubators and concluded that both financiers and owners may have an impact on the target group of the incubator. The similarities in the criteria applied by the different incubators was discussed to be an effect of the incubators having the main financier, Vinnova, in common. However, differences in ownership between the incubators was found to have an impact on what type of companies they work with, thus also impacting the selection criteria. We also highlighted that criteria and screening practices were influenced by macro trends, investor objectives and managerial orientation. We found all incubators included in the study to provide for a pre-incubator or verification phase, however, that there were differences in the motivation behind it and the amplitude of such programs. We concluded that differences in the inflow of business ideas, connecting back to the very first step of the selection process model, as well as resources available to the incubator to be influential in this matter. In the last two steps, pitch/reconciliation and entry incubator program, we mainly focused on the latter one and concluded that resources in terms of staff, time, funds, and facilities were a condition to admit tenants into the incubator program. Furthermore, we discussed that such resources were balanced against the inflow of business ideas to the incubator, ultimately influencing how the selection process may be designed. Lastly, we devoted a sub-chapter to discuss how the different incubators work to develop their processes and what motivates such changes where we pointed out organizational capabilities and constraints, managerial orientation and best practices as influential factors.
7.2 Theoretical implications

Our research provides theoretical contributions along three lines. Firstly, the perspective on the selection process as described by previous literature is rather narrow. Selection relating to business incubators has foremost been studied through the means of criteria and the flexibility or rigorousness in applying them (see, e.g., Merrifield, 1987; Mian, 1994; Bergek and Norrman 2008). Other selection practices are, to a large extent neglected, conveying a perspective of selection as an isolated event taking place at one point in time in a chain of other events. However, as our research points out, the selection is not an event; it is a process. It begins already with a goal or mission, and selection continuously takes place as an incubator makes decisions about what should be included in their offer, how a to communicate this offer and to whom, whom to collaborate with and how to respond to variations in the external environment. Thus, in order to understand the selection process in business incubators, and by extension, be able to improve future resource allocation, one must look beyond the narrow perspective as described by previous literature. Our research contributes to an expansion of the literature by suggesting a broader perspective on the selection process in business incubators in general.

Secondly, previous literature acknowledges that contextual differences between business incubators influence the type of selection criteria and practices applied in the individual incubator (see e.g. Lumpkin and Ireland, 1988; Mian, 1996; Colbert, 2010) as well as implies that business incubators must design a selection process appropriate to its unique needs (Walker, 2004). However, as described in the introduction of this study, contextual factors are vaguely described or not defined at all in the previous literature. Our research pinpoints several different factors that influence the choice of the selection process in business incubators. Our main findings suggest that the ownership or ownership mix together with financiers affect the goal or mission in the incubator, reflecting in the target group and subsequently, the criteria applied in the individual incubator. Regional characteristics, such as local economics and level of entrepreneurial activity as well as collaborations and brand awareness, influence the inflow of business ideas to the business incubator. Taken together, these stipulate pre-conditions in terms of the possibilities business incubators have in designing a selection process that reflects the goal of the incubator and identifies the most appropriate incubatees out of a pool of potential ones. However, managerial orientation, organizational capabilities and constraints, as well as best practices and trends, also directly influence the choice of the selection process in business incubators. We expand the literature on selection in business incubators with empirical findings and illustrations on what factors influence the decision of the selection process in business incubators. In that way, we advance the discussion on the selection process in business incubators from conceptual conjectures towards empirically grounded theory.

Thirdly, our research also indicates some discrepancies to prior research. The study by Lumpkin and Ireland (1988), described in section 3.1, Selection processes in business incubators, is one of the most in-depth studies in defining and testing contextual factors and suggest that the lead sponsors, but not physical characteristics or objectives, have an impact on the applied screening practices. Our research study supports that lead sponsor (financiers), in this case Vinnova, does influence the screening practices applied in the business incubator. The influence is foremost manifested in the criteria applied by the incubator, rather than the practices or activities performed to select. However, in contrast to Lumpkin and Ireland (1988), we also support that the ownership or ownership mix does have an impact on the choice of the selection process. The differences in ownership between the government-funded incubators create the observed discrepancies in what type of companies they aim to work with and therefore, their practices to select these companies. Again, the influence by owners is mainly manifested in the criteria applied by the incubator. To reconcile the findings, the power of any owner or financier to influence the selection process rests
upon whom the incubator perceives as its principal commissioner. This is not necessarily based on
the amount of funding, but may be a result of the amount of power exerted by owners in the
organization or the history of the incubator and therefore, relational factors. Since public financiers,
such as Vinnova, to a large extent provide project funding, meaning that is targeted at specific projects
in the incubator, it is usually possible to align objectives from both owners and financiers should they
be conflicting.

This implies that factors provided by previous literature may be used as a foundation
for understanding what factors influence the choice of the selection process in business incubators.
However, the research on this matter is still on an embryo stage and additional factors, perhaps
conditioned upon specific contextual settings, are still to be revealed. Ours, as well as prior research,
is also yet to be revisited, validated, or reconsidered before a theoretical framework for understanding
the selection process in business incubators is established.

7.3 Practical implications

Our research provides important implications for the management and operative staff in business
incubators as well as for the primary stakeholders as owners and financiers. Business incubators and
the role they enact in local and regional business environments as well as in the national innovation
system has increased in importance over the past decades and seize to grow. Today, great trust and
substantial amounts of money are invested in the business incubators by governments, universities,
research institutions, regional and municipal agencies, and other stakeholders. In reference to this,
not only how business incubators select incubatees, but why, becomes a pressing question.

Our research suggests that operative staff in the incubator largely influences the
design and implementation of, as well as compliance to selection practices in the incubator. While
our data entails that the selection process is continuously scrutinized and evaluated in the investigated
business incubators, this might not be the case for all organizations. Business incubators must be
aware that the capabilities an organization has to execute a selection process are established in a path-
dependent learning process. This means that capabilities to select are developed over time through
learning and experience. While such learning might play in the hands of the organization, meaning
that their experiences allow them to perform better selections, it might also pose as a risk because
incubators select based on what is familiar to them, without reflecting on why. Thus, it is essential
for business incubators to continuously evaluate their process and be aware of the pitfalls of path
dependency for organizational learning to affect selection in the most desirable manner. In order to
minimize the risks of potential path dependencies and trade-offs between better selection and support
practices, resources also devoted for the purpose of business development must be allocated by
owners and financiers.

Selection practices implemented by operative staff in the incubator reflects the goals
and missions stipulated by owners and financiers. The business incubators included in our study are
publicly funded, and the main financier is the governmental agency Vinnova managing the National
Incubator Program (NIP). Our results point out that they have a significant influence on what type
of companies the incubators choose to work with through their impact on target group and criteria.
Thus, they have significant power to affect the allocation of public funds, even when incubators act
as intermediates. Therefore, and in similarity to the business incubators, they too have a responsibility
to continuously scrutinize their evaluation processes and criteria in order to ensure public funds are
allocated to the kind of business projects in which they make a significant impact. This is supportive
of the previous findings by Growth Analysis (2018a), suggesting that the mission and criteria stated
within the framework of the NIP seem to have had an impact on the type of companies’ business
incubators choose to work with. In addition, our study also points out that different incubators face
different opportunities and constraints depending on the local environment they operate in. Thus, all
incubators cannot, and should not, be evaluated based on the same yardstick, but in relation to their individual goals and practices, and thus, how they well they respond and adapt to conditions that are beyond their power to influence. Best practices are not applicable in all contexts but must be adapted to the individual incubator.

Our study also highlights that incubators often have multiple ownership, consisting of several different institutional owners, where each stakeholder may have different views on which objectives that should be prioritized. Goal conflicts do occur to different extents between owners, financiers, and investors in the investigated incubators, in turn affecting the efforts and work incubators exert in order to fulfill desires by different owners. Thus, in order to provide the incubator with the best possible prerequisites to devote its time and resources to their primary function of supporting the development and establishment of new ventures, it is essential for different stakeholders to communicate and cooperate in order to agree on a clear objective.

Lastly, as already pointed out above, our study highlights that the regional business and innovation ecosystem an incubator operates within affects the inflow to the business incubator, and therefore, the applied selection process. However, the business incubator may contribute to the development of the local business environment by sharing knowledge and expertise, creating entrepreneurial communities, and support the establishment of new firms in the region. In this way, incubators may at least partially induce their own success. The emerging framework can be used by all stakeholders in order to understand how different factors impacts the selection process and identify which sections are weak and needs to be improved.

7.4 Limitations and further research

Our study is constrained by limitations which provide opportunities for future research. Firstly, despite the fact that our findings rest on empirical data from respondents with in-depth knowledge about the selection process in four incubators in different contexts, our research is still limited by numbers. We have found both ownership mix, financiers, and regional context to stipulate pre-conditions, as well as managerial inclination to have a substantial direct impact on the choice of the selection process. This suggests that the choice of the selection process is context specific, which pose a concern to the generalizability of the study. Future researchers are encouraged to validate the findings in other contexts than of ours, as well as unveil additional factors that may have an indirect or direct influence on the choice of the selection process in business incubators. We believe that additional factors may be revealed by investigating further cases of government-funded business incubators, tentatively with different ownership mixes, external environments as well as main financiers. As an example, in the theoretical framework presented in section 3.3.2, Industrial organization and dynamics, we suggest that industrial organization might imprint on the businesses in the regional area and subsequently affect the choice of the selection practices. The different regional contexts included in our study did not display variances in terms of industrial organization to such extent that we could confirm this. However, it is plausible that this might still be the case, which can be unveiled by investigating business incubators located in regions with a specific and prominent industry sector. Furthermore, investigating both publicly and privately funded business incubators may provide for more significant variations in the cases, which in turn may lead to the determination of specific factors concerning only one or the other type of business incubator.

Secondly, since no previous studies deeply investigate which factors that influence the choice of the selection process in business incubators, our study is mainly based on our hypotheses and interrelated research. As such, the presented framework should be viewed as emerging, and as a foundation for further research, rather than as established. Even though we have aimed to be as explicit as possible, it is outside the scope of this paper to deeply investigate which factors are more determinant than others in the choice of the selection process and which are marginal in comparison.
It is also likely that these vary to a great extent between business incubators. Thus, future researchers are encouraged to investigate the strength of different influential factors as well as the link between them and how they may interplay, to gain a deeper understanding of which factors affect the choice of the selection process in business incubators.
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Appendix

A.1 Interview guide

Background questions
1. What is your formal position in the incubator?
2. How involved are you in selecting companies for the incubator program?
3. Who are the owners of the incubator?
4. Who are the financiers?
5. Do you receive project funding?
   a. If yes: From who?
6. Do you collaborate with other actors?
   a. If yes: Which and how?

Questions concerning the selection process
7. How is the selection process designed?
8. How does the incubator (representatives) motivate this type of design?
9. Are there any factors you have to take into consideration when designing this type of selection process?
   a. Are there any internal factors you have to take into consideration when designing this type of process?
   b. Are there any external factors you have to take into consideration when designing this type of process?
10. Do you perceive that your selection process differs from how others have designed it?
11. Do you work to develop the design of the selection process?
    a. If yes: How?
12. What would an optimal selection process look like?
    a. What prevents you from implementing that selection process?
13. Have you changed the selection process in one or more occasions?
    a. If yes: what motivated such change?

Questions regarding assessment
14. How do you determine the applicants need for incubator support?
15. What exactly is it assessed in an application?
16. What determines the limit for how many projects can be accepted?

Questions regarding the selection process
17. What are the goals and subgoals of the incubator?
18. Are any goals higher prioritized than others?
    a. If yes: why?
19. Are there any goal conflicts between stakeholders?
20. Are there different views among stakeholders on how to best achieve the goals? (operational)
21. What is your target group?
22. Are admitted tenants compared to the incubator goals?
23. What companies are outside of your target group?
    a. Do they apply to the incubator?

Concluding question
24. Is there anything we have not addressed during the interview that you would like to highlight to clarify the choice of the selection process?
### A.2 Representative quotations underpinning codes and corresponding categories to RQ1

<table>
<thead>
<tr>
<th>Resp.</th>
<th>Representative Quotation</th>
<th>Code A</th>
<th>Category A</th>
</tr>
</thead>
<tbody>
<tr>
<td>R4</td>
<td>...And the dilemma is that we have had such a low inflow [of business ideas] to the incubator lately.</td>
<td>High/low inflow of business ideas</td>
<td>Amount</td>
</tr>
<tr>
<td>R10</td>
<td>We get around 500-600 incoming business proposals each year.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>When we bring them into the incubator, they must have verified their idea and be further along in their development [...] and they should have received interest from customers.</td>
<td>Stage of development</td>
<td></td>
</tr>
<tr>
<td>R8</td>
<td>To be accepted, they must, for example, have tested their prototype in the field, they should have users and received some financing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>...But it is also about the people behind the idea, what background to they have? Do they have the right competencies to do this?</td>
<td>Motivation and capabilities</td>
<td>Quality</td>
</tr>
<tr>
<td>R8</td>
<td>...The team has the necessary skills in place and there is a champion that is motivated and [passionate] about the idea, and that person is not alone.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>It is about finding a mix of the right people who has the potential to deliver on their promise/.../Young people who really shouldn’t fly, but do.</td>
<td>Innovation height and potential of succeeding</td>
<td></td>
</tr>
<tr>
<td>R9</td>
<td>There must be a potential to scale internationally and grow...The idea must be innovative in some way, something groundbreaking or innovative, which adds value to the [society].</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>We are supposed to work with university ideas, i.e. students and researchers.</td>
<td>Origin (academia, industry, individual)</td>
<td>Variety</td>
</tr>
<tr>
<td>R10</td>
<td>Less than 30% of our incoming ideas are from academia, the majority originates from the [industry sector] and entrepreneurs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>We have a specific profile and it is IT and tech, as well as computer game development.</td>
<td>Industry or branch specific</td>
<td>Target Group</td>
</tr>
<tr>
<td>R2</td>
<td>We are not targeted towards a specific industry. We see ourselves as a broad incubator, and our target group is scalable tech companies.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R9</td>
<td>Our goal is to create and build good growth companies.</td>
<td>Growth companies</td>
<td></td>
</tr>
<tr>
<td>R4</td>
<td>In our case we had to go back to our mission where we have the task to working with companies [and/or] startups with growth and international potential.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>Our overall goal is to generate tax revenues for the Kronoberg region.</td>
<td>Job creation and tax revenues</td>
<td>Overall goal</td>
</tr>
<tr>
<td>R7</td>
<td>Our mission is to create jobs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R4</td>
<td>To build a healthy environment where entrepreneurs can be inspired by others, [that] is one of our goals.</td>
<td>Entrepreneurial environment</td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>Our mission is to strengthen Skövde and Västra Götaland’s competitiveness through an improved and renewed businesses and labor market.</td>
<td>Development and revival of the local business sector</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>We focus on the uniqueness. What is unique with the idea or business model. Is there already something like this? Also, can this [idea] make a difference?</td>
<td>Idea based or entrepreneurial focused</td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>We make an assessment on the idea owner's motivation and passion, since we view this as some of the most important components [for us] to consider.</td>
<td>Diversity and/or sustainability</td>
<td></td>
</tr>
<tr>
<td>R5</td>
<td>We are more and more using the [SDG] goals when evaluating companies to make sure we are not selecting companies that [harm] the environment.</td>
<td>Evaluation matrix</td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>I would rather admit an idea owner who is driven but has a half-decent idea, than a great idea but a not so driven [entrepreneur].</td>
<td>Rigorous or flexible</td>
<td></td>
</tr>
<tr>
<td>R8</td>
<td>…And Xing has a good reputation and is very selective, they usually meet with more than 300 new project ideas per year and only select 15, so it is tough to get in.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R4</td>
<td>Our mission is to [capture] ideas from all surrounding municipalities and be the entire region of Kronoberg's business incubator.</td>
<td>Regional catchment area</td>
<td></td>
</tr>
<tr>
<td>R9</td>
<td>…You can submit an application digitally where you present your business idea or you come to our idea drop-in.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>Usually, the application does not occur formally, since we have no application rounds nor an application form. Often, they are referred to us through one of our regional partners.</td>
<td>Method of applying</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N/A information found in digital application forms.</td>
<td>Amount of information</td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>We have continuous admission to the Gothia Incubator and 2-3 batches per year for the Game Incubator.</td>
<td>Batch intake or continuous admission</td>
<td></td>
</tr>
<tr>
<td>R9</td>
<td>Every semester, we have one batch intake to the start-up program…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>At the screening it’s me, our CEO, internal business developers and representatives from the industry.</td>
<td>Internal/ mixed panel</td>
<td></td>
</tr>
<tr>
<td>R9</td>
<td>We have an internal business review… No [external] representatives are present.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R7</td>
<td>At the pitch, we include investors from the gaming industry that can help in verifying the product.</td>
<td>Investors</td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>I usually have the first contact with [applicants] and arrange the first meeting. Then, depending on how the first meeting goes I might give the applicants some homework or something that they should improve and/or [develop].</td>
<td>Business review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Initial meeting and additional work by applicants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R9</td>
<td>First, we let them go through the start-up program because then they get a good knowledge base, and we get a better understanding of their business idea.</td>
<td>Pre-incubation</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>R4</td>
<td>Our verification phase is the first six months after the initial screening.</td>
<td>Length</td>
<td></td>
</tr>
<tr>
<td>R7</td>
<td>The next step in the process is what we call start-up phase, and it lasts for about three months…</td>
<td>Verification</td>
<td></td>
</tr>
<tr>
<td>R10</td>
<td>Our pre-incubator is more of an inspiration program than a preparation for the incubator program.</td>
<td>Extent of verification</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>Our verification phase is a three-month crash course in business development where we go through the basic things like the business model, financing, as well as going outside of the building and actually talk to the customers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>We begin the verification phase with a [soft landing] were we during the first three months give a little extra support and have some workshops with the idea owners so they can move forward in their development.</td>
<td>Ownership in incubates</td>
<td></td>
</tr>
<tr>
<td>R5</td>
<td>We take ownership of our incubated companies. It usually ranges between 0.5-2.5 percent, depending on how long they stay.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>We do not take ownership of the incubated companies…</td>
<td>Length of program</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>Companies can stay in our incubator up to three years, but Deep Tech and research projects can stay longer.</td>
<td>Arrangement</td>
<td></td>
</tr>
<tr>
<td>R10</td>
<td>Our incubator program lasts for 12 months.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>Information found in documented material.</td>
<td>Level of support</td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>We bring [our] incubates to different events globally […] For example, last year we went to Canada with a couple of companies together with Business Sweden.</td>
<td>Amount of activities</td>
<td></td>
</tr>
<tr>
<td>R5</td>
<td>Incubates can participate in “Sting day,” “Sting night” and “Sting Demo,” where they can pitch and meet with potential investors.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### A.3 Representative quotations underpinning codes and corresponding categories to RQ2

<table>
<thead>
<tr>
<th>Resp.</th>
<th>Representative Quotation</th>
<th>Code B</th>
<th>Category B</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3</td>
<td>Many Swedish incubators come and look at our business development process [...] and wonder how we can have this inflow of ideas, in Skövde with only 56,000 inhabitants.</td>
<td>Number of inhabitants</td>
<td>Local economics</td>
</tr>
<tr>
<td>R10</td>
<td>We are located in a region with 1.5-2 million people [...] of course this will influence our inflow of ideas.</td>
<td>Number of inhabitants</td>
<td>Level of entrepreneurial activity</td>
</tr>
<tr>
<td>R6</td>
<td>The local, regional environment creates conditions for what becomes interesting for the incubator. There is not a lot of companies in Umeå, and that affects the density of companies. Biotech, IT and digitalization are the most prominent industries in Umeå.</td>
<td>Number of businesses</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>It is not the same mindset to work with startups here regionally as it in Stockholm. It is definitely a different [entrepreneurial] mindset.</td>
<td>Culture</td>
<td></td>
</tr>
<tr>
<td>R6</td>
<td>The culture plays a role in how the selection process looks like, it does. But in [...] the actual selection, the process does not differ so much here from elsewhere. Here everyone wants to sort out the wrong ideas.</td>
<td>Local economics</td>
<td></td>
</tr>
<tr>
<td>R5</td>
<td>Stockholm is an advanced startup city, so there are very many business ideas here in total.</td>
<td>Access to capital</td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>We are located in a small town with only 56,000 inhabitants, and we do not have access to the same capital as in Stockholm or Gothenburg ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R9</td>
<td>Umeå is a city, a small version of a big city, I think everything we need is here, and it is [easy] to get help because we have a very good network of support functions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R7</td>
<td>[...] We have a large inflow of ideas from the University. It occurred naturally after the University started the game education.</td>
<td>University</td>
<td></td>
</tr>
<tr>
<td>R5</td>
<td>We have a good cooperation with KTH’s innovation office, where [projects] naturally come to Sting after they have gone through KTH innovation’s pre-incubator program.</td>
<td>Innovation support system</td>
<td></td>
</tr>
<tr>
<td>R9</td>
<td>We collaborate with our partners so that people end up in the right place. [For example] if it is a young entrepreneur who may not have a particularly innovative idea but wants to develop a company there is something called BIC factory here in Umeå that works with young entrepreneurs.</td>
<td>Collaborations</td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>We get an inflow of projects from the municipality’s various entrepreneurship support systems, such as Nyföretagarcentrum and [the like].</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R5</td>
<td>We work a lot with different incubators in Sweden, [...] we are part of SISP [and] we often share best practices and meet regularly and help each other, [for example], if we have had a very good project or something that has worked well we usually help them to do similar or find contacts.</td>
<td>Incubators</td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>Then it may be companies such as MedTech, where we do not have the skills or networks that are suitable. So, if they come to us, we refer them to the incubator in Lund or tell them that we are not the right partner for them.</td>
<td>Incubators</td>
<td>Collaborations</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>R7</td>
<td>Applicants have usually heard about us or met us at an event. We are always at fairs, where people interested in gambling are present. It creates an interest in people and increases our visibility.</td>
<td>Marketing activities</td>
<td></td>
</tr>
<tr>
<td>R10</td>
<td>…Even if we did not perform any marketing activities at all, we would probably still have around 200-300 business ideas per year.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R5</td>
<td>Absolutely, we are quite well-known, we have been active for many years and have extensive networks that of course affects the amount of incoming ideas.</td>
<td>Reputation</td>
<td></td>
</tr>
<tr>
<td>R7</td>
<td>Per capita there is no city in Sweden, maybe even in Europe that beats Skövde on how many game companies there are per person […] We are known for our gaming community.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>The idea is that we should represent the whole region of Kronoberg, but the companies that we have right now, for example, seven out of eight are from Växjö, so we are working on how we can attract ideas from other parts of the region to the incubator. Here our public owners have influenced our level of ambition.</td>
<td>Municipality and/or region</td>
<td>Ownership mix</td>
</tr>
<tr>
<td>R4</td>
<td>…it depends on what owners you have and their purpose, or what they experience is the purpose of the incubator. We have universities, municipalities and regions to obviously different things are important for the municipality, the region of Kronoberg and perhaps different for the university. For the municipality, it can be enough to establish a healthy entrepreneurial environment that creates jobs and taxes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R10</td>
<td>Our owners are a foundation [but] we do not notice them so much. […] Our owner does not really have any opinions regarding our operation but rather say continue doing what you are good at.</td>
<td>Foundation</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>The inflow has been quite constant during a long time with an equal distribution between researchers, students and spinoffs, but should the inflow decrease very drastically from student and researchers, then our owners [the University] would undoubtedly question it and perhaps be able to influence our practice.</td>
<td>University</td>
<td></td>
</tr>
<tr>
<td>R6</td>
<td>The holding company can influence how to best achieve the incubator goals…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R9</td>
<td>We have Vinnova’s excellence funding that focuses heavily on scalability and innovation. So, the ideas we admit focus on it, our criteria are that there should be a potential to scale internationally because we want to build growth companies, and the ideas should be innovative …</td>
<td>Vinnova</td>
<td>Financiers</td>
</tr>
<tr>
<td>R6</td>
<td>…well the incubators have to report to Vinnova that they have achieved their requirements for excellence founding. Thus, Vinnova can influence which type of companies the incubator should work with.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R10</td>
<td>Vinnova is by far the most important [financier], and Vinnova definitely has opinions on which companies they think we should work with, what type of company we should work with. But we are in complete agreement about that.</td>
<td>Vinnova</td>
<td></td>
</tr>
<tr>
<td>R7</td>
<td>...But then the financiers influence our [selection] to a great extent. For example, the game incubator in Gothenburg has a project funded by EU, that involves working on trying to get more women to start game companies, [and] more people with foreign origin, people with different disabilities. So, yes, it affects how we choose because our financiers want us to focus on a [specific thing].</td>
<td>EU</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>We do not only work with the companies we receive funding from Vinnova to work with. We can, of course, deviate from their criteria, but when it comes to [project] funding, we have to stick to their criteria and work with the type of companies we have received funding to work with.</td>
<td>Private or public actors</td>
<td></td>
</tr>
<tr>
<td>R5</td>
<td>...we want more diversity in the tech world and, studies show that diversity in [teams], if you look at age, ethnic background, and [gender], affects startups to become more successful and that is why we include these as [criteria] in our selection.</td>
<td>Diversity</td>
<td></td>
</tr>
<tr>
<td>R8</td>
<td>I believe that the selection process is influenced by the political trends, how the wind blows as well. What is the engine right now? If it is gender equality, sustainability, such aspects.</td>
<td>Sustainability</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>In the companies we work with, we of course look at the impact and how they work with the global [sustainability] goals, but it is not the most important requirement, but we will work more with [defining] those goals.</td>
<td>Trends</td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>We look a lot at macro trends to make our environment attractive to other social groups than those we traditionally have [in the incubator].</td>
<td>Macro trends</td>
<td></td>
</tr>
<tr>
<td>R8</td>
<td>Previously, we have only focused on researchers with innovative ideas, but this has changed [...] now it is a little more focus on social innovation [meaning] that we have opened up a little more and not only accept technically innovative ideas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>Now we are harder on the team [criteria], one reason is that it is what investors look at. They evaluate [companies] based on the team's capabilities and we want to work with companies that they want to invest in.</td>
<td>Evaluation of teams</td>
<td></td>
</tr>
<tr>
<td>R10</td>
<td>What the investors are looking at [affects] our selection process, because the [investors] want to invest in companies with a good balance between risk and return.</td>
<td>Investor objective</td>
<td></td>
</tr>
<tr>
<td>R4</td>
<td>The amount of inflow you have control how you design your selection [...] Either you select companies that are qualified, or you use more relaxed criteria, let the companies in, run a program and then let those who do not meet your requirements exit.</td>
<td>Prospects with high ROI</td>
<td></td>
</tr>
<tr>
<td>R7</td>
<td>I wish it was a larger inflow [of business ideas], because then we can say no.</td>
<td>High/ low pressure</td>
<td></td>
</tr>
</tbody>
</table>

Application rate
### Quality

#### R10

Our threshold is high. [...] If someone comes with a great idea, but we don’t believe that the idea has a significant potential in an international market, then we say no, but in other cities, they say yes thank you. We can have stricter requirements on the companies we accept.

### Application rate

#### R7

We have a [desire to improve] in our organization and are continuously working on developing our selection process.

### Different orientations and preferences

#### R5

The initiative to attract more female founders came from a business coach who wondered where all women were. So, we put extra emphasis on this and are [currently] working on becoming better at attracting women to our incubator and accelerator.

### Managerial orientation

#### R1

How to select companies is dependent on [accumulated experience] in that this has worked before, so it will [work] this time.

### Path dependency

#### R1

We look at different ways to [develop] the selection process because it is very easy that us who work with the companies become too streamlined. So, when it comes something new, then maybe we start to compare too much with existing companies. It's about trying different things, for example, KTH's business readiness innovation model.

### Inspiration

#### R5

There is certainly plenty that can be done with developing our selection process [...] we can look at how others are working and see if there something we could do in a better way and get inspired by other [incubators], who have been successful and have the experience from working with startups.

#### R10

For instance, we went to Silicon Valley and visited a startup facility [...] and that is where we realized how important it is with an inspiring community. That's why we now urge our [incubatees] to sit in our facilities during the first six months.

### Best practices

#### R3

We have many international actors who come to us to learn from our process and are inspired by how we do it.

#### R4

Yes, we cooperate with others, including other incubators and try to learn from each other. Also, we have SISP, where we can exchange experience [...] and we [learn] how others work with selection of companies.

### External cooperation

#### R3

...there is always a desire that we should do more and be involved in more projects, but then we need more funding because we have limited resources

### Financial

#### R4

How many we accept is a question of how many we can bundle resource-wise and what we have funding for. That is what limits us.

### Resources

#### R7

Time [and] overload ... there is almost no time for the [process development] at all.

### Organizational

#### R3

...there is always a desire that we should do more and be involved in more projects, but then we need more funding because we have limited resources

#### R4

How many we accept is a question of how many we can bundle resource-wise and what we have funding for. That is what limits us.

#### R7

Time [and] overload ... there is almost no time for the [process development] at all.
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<th>What is most limiting in our selection process is resources. We would like to have more time with the teams in order to better evaluate the ideas and the team’s potential.</th>
<th>Organizational</th>
<th>Resources</th>
</tr>
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<tbody>
<tr>
<td>R9</td>
<td>Making the selection process more efficient is [simply] a question of resources, it takes a lot of time to sit in one-to-one meetings, and there are digital aids that enables us to do it more effectively, I think.</td>
<td>Organizational</td>
<td>Resources</td>
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<td>R10</td>
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<td>Organizational</td>
<td>Resources</td>
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<tr>
<td>R1</td>
<td>What makes us refrain from accepting a company in such cases is if we feel that we cannot help that company, it may be that we do not have the competencies in-house [...]. Then we tell them to apply to Lund, Copenhagen or Stockholm, because the [general knowledge] in the region is too small.</td>
<td>Knowledge and expertise</td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>We have no physical limitations, if we get an exceptional inflow of ideas, we have vacant space in our neighborhood, in the same building actually.</td>
<td>Physical space</td>
<td></td>
</tr>
<tr>
<td>R7</td>
<td>Right now, I think we have around 37 or 36 [incubates], and we work with each company, and that creates an administrative burden in different ways. So yes there is, of course, there is an [limit] on how many we can accept.</td>
<td>Organizational capabilities and constraint</td>
<td></td>
</tr>
<tr>
<td>R5</td>
<td>We have limited resources [...]. We have 8 [business] coaches, and there is very much coaching during the entire program. If you compare our [program] with the world’s best accelerator program, then they can carry out more coaching, because they have a bigger team.</td>
<td>Operational resources</td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>What limits our admission of companies is a balance between our resources and what we have funding for.</td>
<td>Organizational</td>
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