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Seinäjoki's startup ecosystem and a comparison with Vaasa, Pori and Kouvola's startup ecosystems.

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Thesis abstract

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Title of thesis: Seinäjoki's startup ecosystem and a comparison with Vaasa, Pori and Kouvola's startup ecosystems.

Supervisor: Petra Sippola

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The aim of the thesis is to layout a definition for the term startup and define what a startup ecosystem would look like with the goal comparing different region's startup ecosystems within Finland.

The theoretical framework of the thesis deals with defining the terms startup and startup ecosystems. The startup ecosystems contains actors that assist startups at various points of a startup's life and with varied degrees of assistance. The thesis also investigates the difference between early-staged businesses and startups and reasons for startup failures.

The thesis was conducted using qualitative methods. An invitation to partake in the questionnaire was sent to individuals of organisations related or involved in each of the chosen region's startup ecosystem in Finland.

The thesis gives a good baseline for understanding startup ecosystems in general and what actors could exist.

Keywords: startup, start-up, startup ecosystem, startup actor, ecosystem, business, entrepreneurship

SEINÄJOEN AMMATTIKORKEAKOULU

Opinnäytetyön tiivistelmä

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Opinnäytetyön tavoitteena oli asettaa määritelmä siitä, miltä startup-termi ja startup-ekosysteemi näyttäisivät, tarkoituksenaan vertailla eri alueiden startup-ekosysteemejä Suomessa.

Teoreettisena viitekehyksenä opinnäytetyölle toimii termien ’startup’ ja ’startup-ekosysteemi’ määrittäminen. Startup-ekosysteemit sisältävät tekijöitä, jotka tukevat startuppeja niiden elinajan lukuisissa aiheissa, ja auttavat eri tavoin. Opinnäytetyö myös tutkii aloittavien yritysten ja startuppien eroa, ja syitä startuppien epäonnistumiseen.

Työ toteutettiin kvalitatiivisella menetelmällä. Kutsu kyselylomakkeen täyttämiseen lähetettiin henkilöille, jotka edustavat eri alueilla startup-ekosysteemeihin liittyvää tai niiden parissa toimivia organisaatioita.

Opinnäytetyö tarjoaa kattavan alustan startup-ekosysteemin ymmärtämiselle, ja sille mitä toimijoita tulisi olla olemassa.

Asiasanat: startup, start-up, startup-ekosysteemi, startup-toimija, ekosysteemi, yritys, yrittäjyys

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Terms and Abbreviations

AltFi	Alternative Financing
Chartered	A term for a Finnish city that was founded prior to the 1960's.
Dotcom bubble	A financial bubble running roughly from 1995 to 2001 caused by businesses on the internet.
Entrepreneurial Mindset	A specific state of mind which orientates human conduct towards entrepreneurial activities and outcomes.
Fast fail	A strategy of trying something, getting fast feedback, and then rapidly inspecting and adapting.
Lean Startup	The usage of a build-measure-learn feedback loop to develop a minimum viable product.
OECD	Organisation for Economic Co-operation and Development
Startup	A startup is an entity founded on a validated or unvalidated idea with a product or service that has potential and opportunity to significantly gain fast traction or grow large quickly in a market, existing or not.
Startup actor	An organisation that assists a startup throughout any part of its lifecycle.
Startup ecosystem	An ecosystem of people or startups in their various stages and various types of organizations in a location (physical and/or virtual), interacting as a system to create new startup companies.
Scaleup	A scaleup is a startup that has a validated product or service and is looking to exponentially grow and develop its market with strategic collaborations.

Township	A status granted to a city once reaching more than 15 000 inhabitants in Finland.
Unicorn	The term given to a startup that reaches an excess of a billion U.S. dollars or euros in valuation.
U.S.	United States of America.
VC	Venture capitalist

Special Symbols

€	Euro – currency of some European Union members.
$	U.S dollar
%	Percentage

1 INTRODUCTION

It is understood that entrepreneurship is an important aspect for economic development, as was discovered by Schumpeter in 1912 with his process of “creative destruction” or innovation, as described by Sledzik (2013, 89-92). In a more recent period, there have been studies to identify a list of actors in an entrepreneurial ecosystem as described by Isenberg (2013) and Neck et al. (2004, 190-208). This thesis will layout the basis for understanding terms such as startup and startup ecosystem including the actors that possibly could exist in startup ecosystems and as a foundation for potential future studies in the area of startup ecosystems.

1.1 Background of the thesis

In Finland, there are around 4 000 to 5 000 startup companies each year that begin operation according to Valtioneuvoston Selvitys- Ja Tutkimustoiminta (2016) and it is important to discuss and quantify their ecosystems within regions around Finland. By doing this, there is the opportunity to develop this business area and create a better understanding for not only those involved but those who seek to become involved.

My personal involvement over the past 2.5 years within the entrepreneurship societies within Seinäjoki and connections I have made within Finland during that time, has made aware that there is a lack of knowledge within the ecosystems from actors and would be participants in the ecosystems. The topic of startups is current, and the rise of two Finnish unicorns Rovio and Supercell could encourage others to follow the startup dream.

This thesis follows a trend of rapidly growing increase of interest towards startups as phenomena. As seen on ProQuest database, a search conducted using the search word “startup” and English as the chosen language gave a total of 15 491 results. Of these, only 1 409 were published between the years of 1990 to 1999. Entering the 21st century the numbers of publications start multiplying, being a total of 4 464 between the years of 2000 to 2009 and reaching 9 350 from 2010 to 2019

as of 26th of November 2019. The amount of publications using the term “startup” before the 1990’s was limited to a total of under 300.

1.2 Research questions

Wymer and Regan (2005, 1099-1277) state that startups suffer from a lack of tangible and intangible resources, Feld (2012, 1-57) also adds that the entrepreneurial people within the startup community need to lead the ecosystem. So, to better understand these ecosystems in which they operate, it is imperative to see what is available to entrepreneurs, so they can build the ecosystem from within.

The questions proposed in this thesis are:

First Question: What is a startup?

Second question: What actors exist in the regions of Seinäjoki, Vaasa, Pori and Kouvola?

Third question: What are the differences and similarities that exist between each of the startup region’s ecosystems?

1.3 Objectives and limitations of the study

The objective of this thesis is to gather information about potential actors in the startup ecosystems within Seinäjoki, Vaasa, Pori and Kouvola and make comparisons with Seinäjoki. The thesis will only look at four regions from around Finland chosen by the commissioner of the thesis and the actors found within the individual regions do not have their ecosystem’s connectivity explained nor the functions of those actors.

The theoretical framework provides the basis for this thesis, but the purpose is to examine what actors exist within each region. At the conclusion and comparisons within the thesis, it can be understood what actors exist within each region’s startup ecosystems and what areas and attributes need to be addressed from the point of view of the questioned persons and thesis writer’s viewpoints.

The limitations that existed are the selected people chosen and willingness to participate in the questionnaire, there is a probability that not all actors within the regions were noted therefore there is a possibility that actors are missing from the research.

1.4 The structure of thesis

The thesis consists primarily of two sections as illustrated in figure 1, the theoretical and empirical research with sub-sections supporting the main subject.

Figure 1. Structure of thesis

This thesis' theoretical part will look at defining the term startup, explaining the difference between a startup and early-staged business. The thesis will examine the term, startup ecosystem and what attributes and actors maybe present, so that a questionnaire can be produced. The importance of understanding the possible actors requires definitions of each actor as this will assist in quantifying results of the survey. The thesis will present information gathered from questionnaires to establish Seinäjoki, Vaasa, Pori and Kouvola region's startup ecosystems, so that they can be compared with Seinäjoki's, including a comparison of them all together. The final aspect of the theses will be the conclusion and discussion, including possible further studies that could be undertaken to further explore areas that may require further research.

The aim of this thesis is to use a qualitative research method. Qualitative work requires reflection on the part of the researcher, before and during the research process, as a way of providing context and understanding intended for readers in a report with "findings" rather than "results", as the latter term typically implies that the data has come from a quantitative source claims Sutton & Austin (2015).

The commissioner of the thesis is Into Seinäjoki Oy, they would like to know what the current state of their startup ecosystem in the Seinäjoki region looks like and how does it compare with their chosen cities of similar attributes, such as population, tax, city status and region size. Into Seinäjoki Oy is a development agency for the Seinäjoki region and deals with aspects such as the regional workforce, regional investment, entrepreneurship, tourism, business services and real estate. With such a varied area of concern it places them in a critical position for making sure the business environment is active, diverse, trending and innovative, to help draw investments into the region and overall increase the population and longevity of the region's main city Seinäjoki.

Into Seinäjoki Oy (2019) has a commitment to achieve over a billion euros in business investment to grow the Seinäjoki region. There has been much work done with traditional early-staged businesses as the Seinäjoki city has earn the title of the most entrepreneurial city of Finland in 2018 from The Federation of Finnish Enterprises (Into Seinäjoki Oy, 2019). Currently Into Seinäjoki offers a business ideas course, called Liikeideat Lentoon which helps people with business ideas develop their ideas through the standard early-staged business formation procedures, an explanation of early-staged business as discussed later in this thesis.

2 STARTUP

2.1 Defining the term ‘startup’

The term startup does not have an official definition anywhere in the world, according to Startup Commons (2019a), therefore the purpose of the following is to set the boundaries for what meaning the term will have for this thesis. There are two spelling variants according to the Merriam-Webster Dictionary (2019), ‘startup’ (variant) or ‘start-up’. As shown in figure 2 the variant version ‘startup’, has been utilised more since 2004 as according to a Google Trends (2019) comparison, thus this thesis will use ‘startup’.

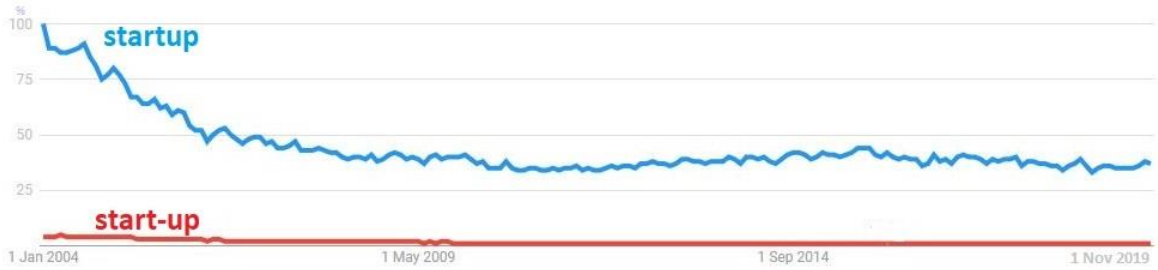

Figure 2. Usage of the term 'startup' vs 'start-up' (Google Trends 2019).

A startup as defined by Grant and Kenton (2019), “…is a young company founded by one or more entrepreneurs in order to develop a unique product or service and bring it to market.” Startup Commons (2019a) gives the definition, “A startup is a venture that is initiated by its founders around an idea or a problem with a potential for significant business opportunity and impact.” Startup Commons adds the extra aspect of “potential for significant business opportunity and impact” to specify the potential of a product or service to gain traction and/or sales quickly.

An important aspect that defines startups are their innovativeness, small size and aim for rapid growth with an entrepreneurial orientation and international mindset as described by Sapienza et al. (2006, 914-933) and Knight & Cavusgil (2004, 124–141). Sapienza et al. (2006, 914-933) also suggests that the rapid growth and internationalization in a startup is attributed to the entrepreneurial mindset of the startup.

Within Finland there is a definition guideline set out by the Valtioneuvoston Selvitys-Ja Tutkimustoiminta (2016) that describe the five aspects in which criteria quantify a startup in Finland, these are described below.

1. Age: Up to 5 years old. This is calculated from the oldest established point of the current company's existence.

2. Small: There must be a minimum of one employee and maximum of 49 employees.

3. Legal framework conditions: The company must be a Limited Liability Company, as this would show that there is intent to employee staff and grow as opposed to a sole proprietor.

4. Ownership: A startup must be independent and private, and not owned by municipalities or the state.

5. Only one startup: A company will only receive a startup status once the previous four criteria have been met.

The above Finnish governmental criteria's as compared to Grant and Kenton (2019) and Startup Commons (2019a) are more restrictive in definition so to keep with an international criteria and an simplify for the practicality of this thesis, the term 'startup' can be defined as the following; A startup is an entity founded on a validated or unvalidated idea with a product or service that has potential and opportunity to significantly gain fast traction or grow large quickly in a market, existing or not.

2.2 Difference between an early-staged business and a startup

A misconception arising from entrepreneurs as described by Wallace (2018), is their belief that a startup is an early-staged or young business, those early-staged and young businesses focus on maximising profits whereas startups focus on the development of their new solutions. This is supported by Pope (2019) explanation of a startup focusing on the next big idea, a scalable entity that could transform the industry it is to operate in or even create a new market. Blank (2014) describes a

startup as a temporary organisation that searches for a business model that is scalable and repeatable, whereas an early-staged or young business must execute a scalable and repeatable business. The difference is also noted by Startup Commons (2019a) with traditional business measurements of success being that of revenue or profit until possible or feasible only, whereas startups measurements will include measurements such as, active users and market share. This can be seen in figure 3 from Startup Commons (2019a), where it shows the business model without validation, high ambition and scalable.

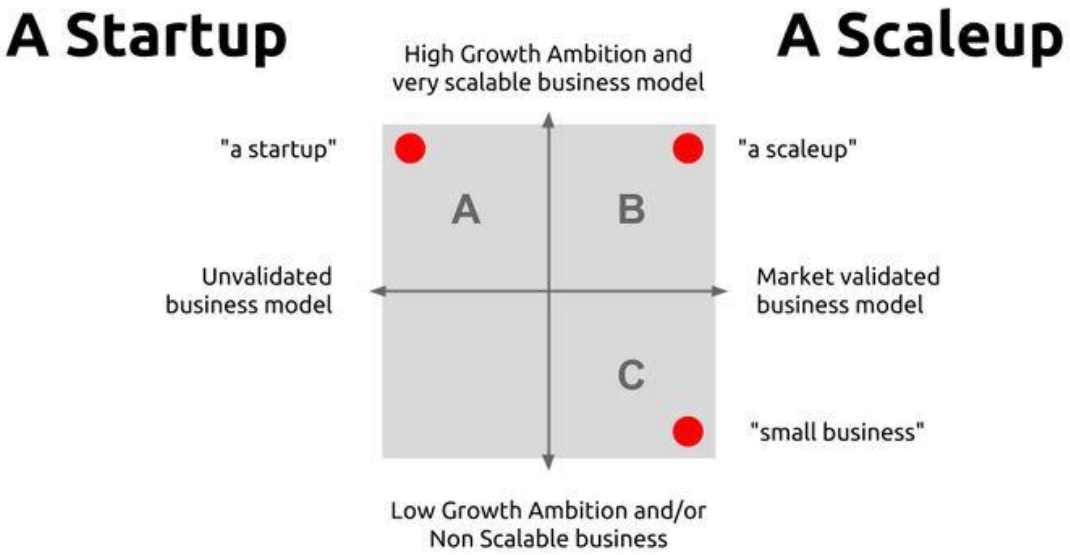

Figure 3. Comparison between 'startup' and 'scaleup' (Startup Commons, 2019a).

Figure 3's diagram locates startups and small business models with their relative characteristics to explain the differences of a startup, scaleup and small business. The diagram depicts four axes, on the vertical axis the 'High Growth Ambition and very scalable business model' which shows the potential in both growth and drive, and to the opposite side 'Low Growth Ambition and/or Non Scalable business' of which there is very little potential or will to grow the business. On the vertical axis there is 'Unvalidated business model' which is where a business model is not understood, and functionality is questionable. To the opposite side is 'Market validated business model' where the business is understood and is clear.

The placement of the red dot "a startup" is locating the position of a startup within the criteria of that to be called a startup, it is a high growth ambition and very scalable

but unvalidated business model as in the previously defined term ‘startup’ describes. A scaleup is a high growth company as described by Logan (2019) and the criteria to be classified as a scaleup as described by the Organisation for Economic Co-operation and Development (2007, 61) is that they have to minimum of 10 employees from the beginning observation period, and achieve 20% growth in either employment or turnover year on year, over a three year period. The scaleup criteria is for a business that has high growth ambitions and is very scalable with the experience over time and being able to prove its business model, hence the location on graph in ‘market validated business model’.

A ‘small business’ is in the segment where there is low growth ambition, or the business is non scalable and the area of a market validated business model. Startup Commons (2019a) also notes that the terms like Small and Medium Enterprise (SME) and Large corporations do not fit within the startup terms description, since a startup can have an unregistered company with a team of a few cofounders, to hundreds of staff in a several years old startup.

Startup Estonia (2019) gives a simplistic four step visual to understanding the natural progression of a startup as represented in figure 4 below. The first step being the ‘startup mindset’, having the ability to discover and understand those discoveries through organisations such as schools and hackathons. Secondly the ‘pre-startup’ step, where an idea or ideas are conceptualised, and have clear milestones and prototypes are the next phase.

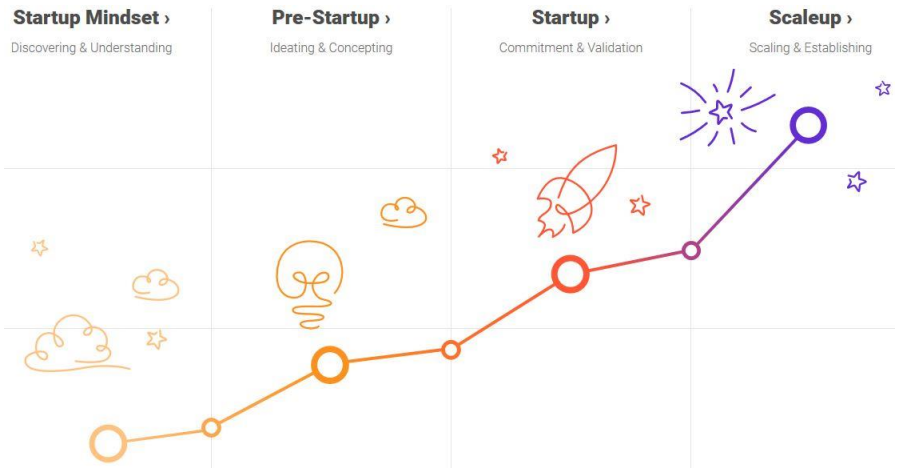

Figure 4. Progression of a 'startup' (Startup Estonia 2019).

Then there is the ‘startup’ step where there is the requirement to commit to the startup and seek validation from the ecosystem by creating agreements between shareholders and founders and finally ‘scaleup’ step, this involves the startup being able to scale up and show clear measurable growth with the outlook for globalisation.

The ‘Startup Mindset’ as shown in figure 4 is the beginning of startup life, Startup Estonia (2019) describes this phase to be that of the individuals or people whom are to create ideas, the understanding on how to think about things in a different way or more commonly knowns as entrepreneurial mindset. Entrepreneurial mindset as defined by the Financial Times (2019) is “a specific state of mind which orientates human conduct towards entrepreneurial activities and outcomes.

The ‘pre-startup’ phase is the creation of an idea that contains a product or service however has an unvalidated business idea and will require resources to fund prototypes, recruit team members and begin testing. Once this pre-startup phase has be accomplished and shareholder agreements have been signed between founders the entity now becomes a startup.

The ‘startup’ phase is where investments are sort after from sources such as banks, Angel investors, peer-to-peer lenders, Venture capitalists (VC), and personal investors as described by Bernstein (2018) and accelerators or incubators. Cremades (2019) explains that an accelerator or incubator are programs that foster the growth of startups by funding the startup, forcing the startups entrepreneurs to focus solely on the startup, and give them guidance and new networks on which they can build up the startup.

The final phase in figure 4 is the ‘scaleup’, this phase is where products or services show clear measurable growth and have secured large sums of funding, according to Onetti (2014) a scaleup is searching for market development through strategic collaborations, normally with existing corporate entities. Onetti (2014) also furthers Startup Estonia’s progression of a startup to include an extra step called scaler, this term refers to the startup now reaching the limits of being called a startup, were startups would be searching for sustainable market leadership and growth.

The differences between the early-staged businesses and the startup process can be compared between in figure 5 from the U.S. Small Business Administration (2016) and figure 6 from Startup Commons (2015a). Figure 5 shows a ridged structure towards what steps must be performed for an early-staged businesses to begin operating; the market is researched, a business model and plan created and financing for the business to begin, and as previously compared with startup and scaleup in figure 3 showing that the small business does not require large growth ambitions or scalability.

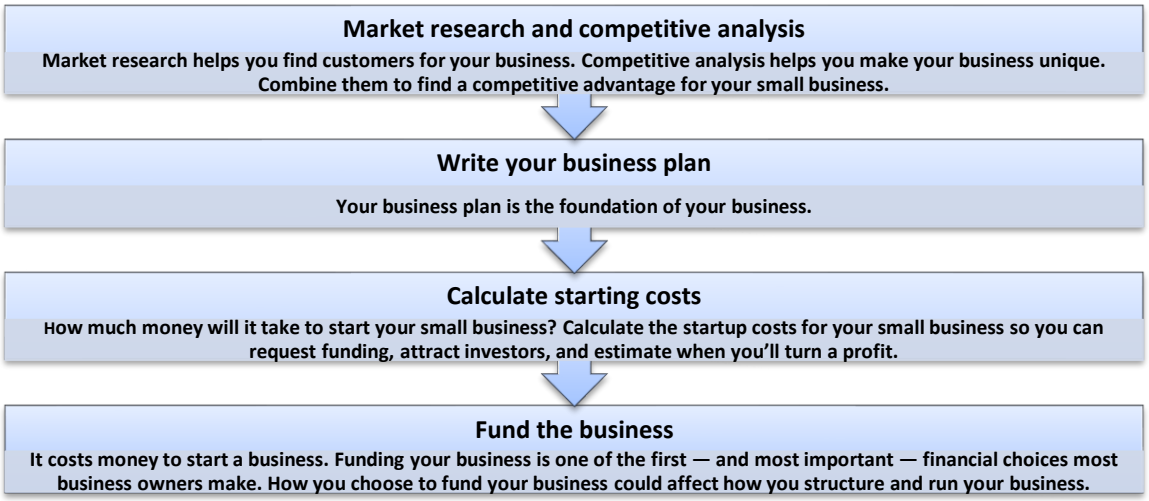

Figure 5. Starting a small business (U.S. Small Business Administration 2019).

Both process structures begin with different characteristics, an early-staged business is searching for a business model that has potential to be initiated and begin making money, whereas a startup focuses on the idea and conceptualising the potentiality that the idea will enter rapid scale up. Feld (2012, 1-57) also implies the startups are implored to fail fast, a way to continuously try new things to get quick results leading to the modifying their approaches or doubling down.

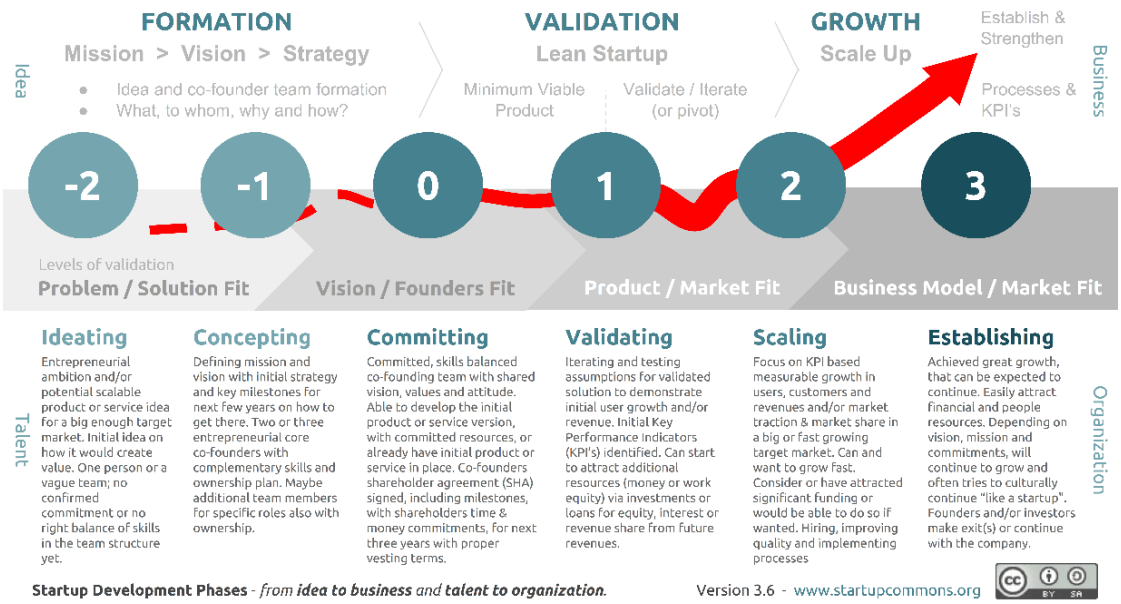

Figure 6. Formation of a startup (Startup Commons 2019b).

Startup Commons (2019b) expands on Startup Estonia's 'progression of a 'startup' as seen in figure 4 with the addition of more specific content. The three areas of the startup formation are; formation, validation and growth. Formation of a startup is based around the mission, vision and strategy with the emphasis on creating the idea from a problem or better solution and having the idea or better solution's vision formulated and realised with a founder or founders and searching for investment to begin the startup.

The validation of a startup occurs as described in figure 6 during the beginning of the startup coming to market, this crucial phase according to Startup Commons (2019b) seeks to validate the idea or better solution and attract more investment. This validation phase is where the fail fast concept takes place as described earlier by Feld (2012, 1-57), the strategy of trying the idea or better solution, getting fast feedback from the validating process, and then rapidly inspecting and adapting the results be improve the startup's offering. This can be done utilising the lean startup methodology created by Eric Ries and described by Kenton (2019) as the usage of a build-measure-learn feedback loop to develop a minimum viable product (MVP).

The growth phase of a startup in figure 6 is a transformative stage for a startup were they transition to a scaleup as describe from figure 4, the scaling of the idea or better

solution leads to the scaleup becoming established, with the market and idea validated and a push towards stabilising its existence for the long term.

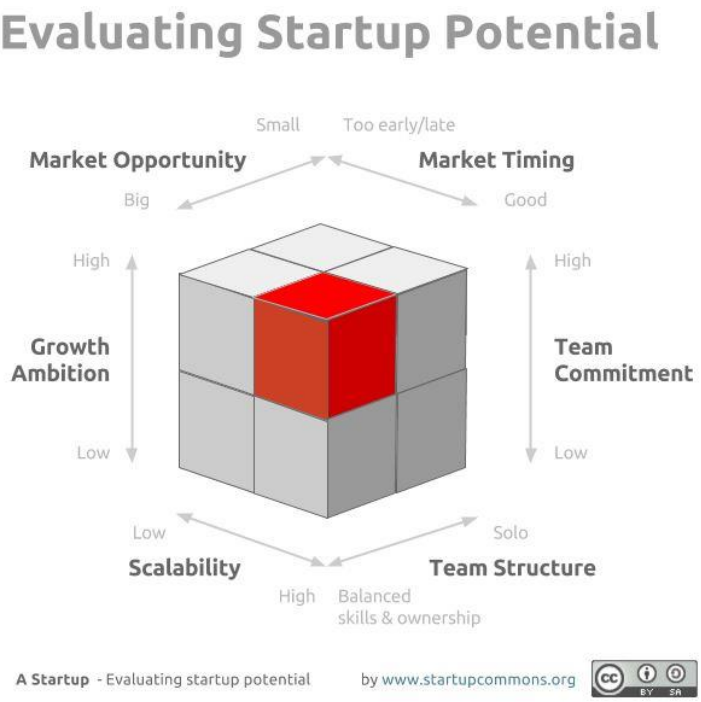

Figure 7. A Startup - Evaluating startup potential (Startup Commons 2019a).

There is also a way to elaborate further from what is represented in figure 3 by turning the 2-dimension graph into a 3-dimensional graph, allowing for the ability to recognise the attributes of a startup to show the differences between early-staged business can be seen in figure 7 from Startup Commons (2019a), the attributes as describe by Wallace (2018), Pope (2019) and Blank (2014) are highlighted by the red square. This corner of the cube is fundamentally were startups occupy, outside of that red zone, the viability of a startup is not fulfillable.

With the addition of market timing, team commitment and team structure in figure 7, a startup can be evaluated according to Startup Commons (2019a) in a way that looks at all attributes. As seen in figure 3, the omittance of team and timing creates a question over whether the committing aspects of founder or founders will help lead the startup to proceed and continue driving an unvalidated idea towards validation. It is good to note that market timing is crucial, as similar ideas may have already launched or there is a practical impossibility not realised. This allows investors and the startup's team to realise the startup's potentiality and validity to go to market.

An important attribute for a startup according to Macaulay (2019) is its exit strategy, this terminology relates to the startup life cycle ending as described by Blank's (2014) reasoning that a startup is a temporary organisation. The purpose of the exit strategy according to Startup Decision (2019) is to effectively transfer the ownership; this can be done through either two main processes. The first is an Initial Public Offering (IPO), where the startup becomes listed on a public stock market and the second is selling all or majority ownership to a large organisation. Startup Commons (2019a) points out the miss information about what startups are and why they exist in the follow quote;

> As such, it's logical that startups are being referred more commonly just "startups", to help make separation to non-growth oriented new SME companies, as high impact startups or innovative startups, especially in the areas or among people, where startup as a term is still less familiar or relatively new in context.

2.3 Startup failure

The research thus far has been based off the creation of startups, however it is important to note that not all startups succeed, startups do fail. The speed at which startups grow and the unrealistic ideals of any startup becoming a unicorn creates an illusion of building a startup and getting rich is easy. Erin (2014) describes that most failures come from financial issues, such as a lack of funds within the early startup phases and the inability to validate within their market.

Figure 8. Top five of 20 reasons startups fail (CB Insights 2019)

In a study conducted by CB Insights (2019) there was a review into the failures of 101 startups, to ascertain what are the main cause for startup failures. The study produced a top 20 reasons although this thesis will look only at the top five. The percentages are not accumulative, so the results show the what percentage of each cause was most likely to attribute to each failure reason.

The results as in figure 8 showed that pricing or cost issues attributed to 18 percent of startup failures, this was according to the study because of startups overpricing their products or services and therefore not receiving enough revenue to sustain the expenses of running the company, and cost issues arising from the inability of customers to sustainably pay for the products or services of the startup. The fourth placed reason was outcompeted, this was purely down to the inability of startups to monitor their competition, even though CB Insights (2019) points out that it is not healthy to obsess over the competition, however it is 19 percent of the reason for startup failures.

The third reason for startups failing at 23 percent was due the team, CB Insights (2019) cites that having a diverse team with a variety of skill sets can be a success for startups. This is attributed to the startup team's dynamics and requires the right people in the startup, within the correct roles. The second reason for a startup to fail is from running out of cash, 29 percent of those 101 failed startups reported that they ran out of cash and failed to attract extra funding from investors, this issue of no funds as explained in the report, was notably caused in part due to product to market fits and failed decisions.

The number one reason for startups failing as studied by CB Insights (2019) is 'no market need' at 42 percent, this is due to the product or service not becoming validated as described from both figures 4 and 6. Startups were seen to tackle problems that were interesting but lacked an ability to serve a markets, the lack of focus on products or services that were wanted, required or desired needed to be the focus point.

3 STARTUP ECOSYSTEM

3.1 What is a startup ecosystem

As described by Moore (1996), a business ecosystem is “an economic community supported by a foundation of interacting organisations and individuals”, Startup Commons (2019c) defines a startup ecosystem as network of interactions amongst people, organisations and their environment being in a specific city or an online community. The startup ecosystem is as shown in figure 9 from Startup Commons, gives the outline for the categories that actors within a startup ecosystem exist, which are support organisations, big companies, universities, funding organisations, service providers, research organisations, with each of these areas focusing on specific parts in the ecosystem and startup stages.

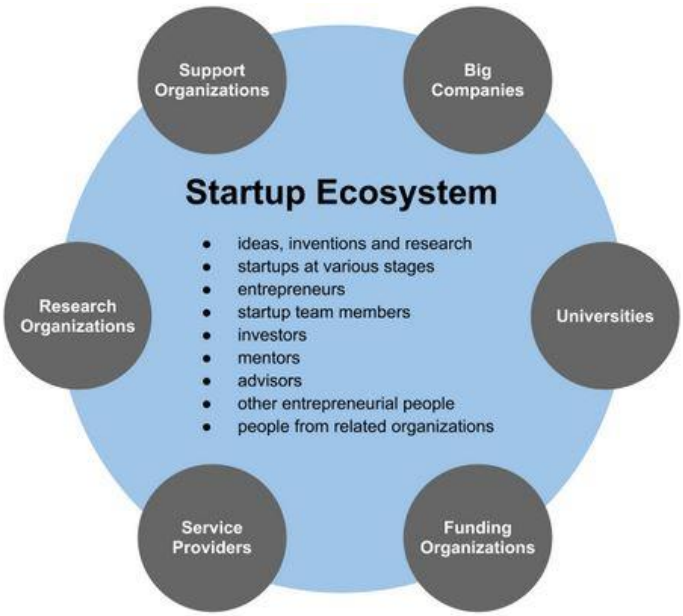

Figure 9. Startup Ecosystem (Startup Commons 2019c).

The role of research organisations and universities in the startup ecosystem as described by Basso, Baltar and Andonova (2018) is important, the impact is felt in the early stages for startups where technical and business support help validate ideas. They also contain existing infrastructure for testing and assisting with proof of concept, along with the added aspect of placing theories into practise utilising international academia. Support organisations in the forms of accelerators and incubators,

create the mentorship that helps team members in startups take up a more full-time role within their startups. The role of big companies integrated into the startup ecosystem according to Basso, Baltar and Andonova (2018) is that of necessity, the big companies allow for solution development, mentoring, financial support, distribution channels and technology that startup can get access to.

Service providers are a collection of actors within a startup ecosystem, Startup Commons (2019e) explains that they can be public or private support functions that are usually free with some charging a fee. The existence of these support providers is primarily for the support however they may contain overlying roles in venture building; such as investor and accelerator provider and ecosystem development; such as incubator, bank or university. Support providers work at a multitude of levels to assist in the variedness of startups stages and requirements, this is where you will find support in everything from finance to developer, sales and design.

The role of funding organisations is relative to the age and requirement of the startup, Basso, Baltar and Andonova (2018) explains there are four funding organisations; Banks and Alternative finance, Startup incubators and accelerators, Angel investors and Venture capital funds. Banking institutions provide support for startups by providing them loans and support programs, whereas an emerging sector known as alternative financing (AltFi) is growing in popularity. AltFi includes peer-to-peep lending; a practise where individual or business lenders are match with borrowers, and crowdfunding; the practice of raising funds through many people, typically via the internet.

Startup accelerators and incubators are a combination of technology, capital and know-how as described by Basso, Baltar and Andonova (2018). Accelerators are important for startups to raise investment and look for potential leads and exits, the corporate involvement acts as a testbed for a startup’s product or service and with the decline of ‘cash-for-equity’ model due to issues over short term profitability for accelerator programs, it becomes a more attractable option for startups. Angel investors are private equity investors who personally invest in businesses that maybe high risk but may come with a high return reward, the exchange for investment requires the startup to offer shares, a capital gain and/or income percentage.

Basso, Baltar and Andonova (2018) explains that Venture Capital funds (VC) are equity investment funds targeting pre-startup and startup phases, with the majority entering in the scaleup phase. Within the centre of figure 9 lies the actors that move throughout a startup ecosystem community, such as ideas, startups, investors, mentors and people for example. They are not bound to any one place and can be found more than one area of a startup ecosystem, such as big companies and investors. Ketola (2019) breaks down Startup Commons (2019c) figure 9 to more specific roles within the startup ecosystem as shown in figure 10.

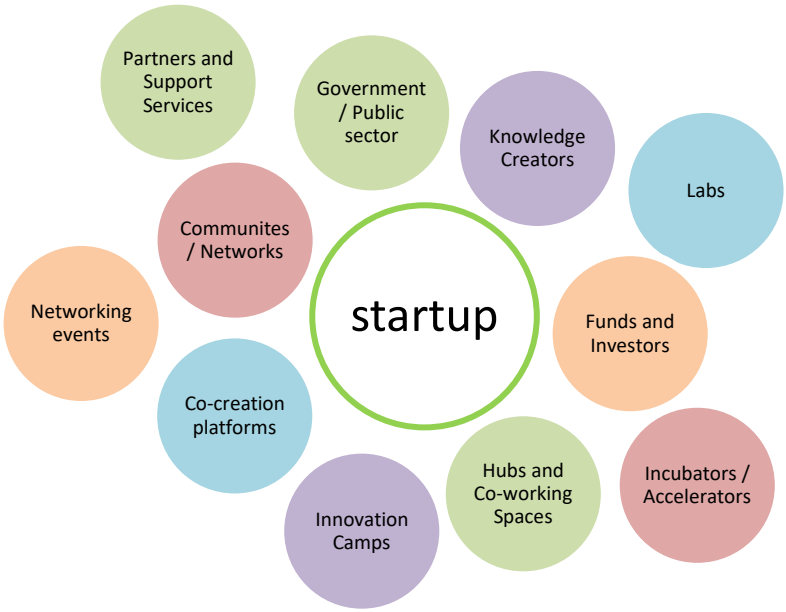

Figure 10. Startup ecosystem (Ketola 2019).

At the heart of the ecosystem is the startup and the actors that exist in assisting the startup surrounding it, some of these actors have already been explained previously and therefore do not require explanation. Government and publics sector actors as described by Startupblink (2019) are central to providing a healthy startup ecosystem, by creating policies that favour the startup ecosystem, reducing tax burdens, the creation on favourable infrastructure and facilitating the ability of talented workers to migrate.

Hubs and co-working spaces are actors within the startup ecosystem that provide a collective place for startups to work in, without the need for startups to open their own office space according to Startupblink (2019), these actors can also act as a guide on the health of a startup ecosystem due to an increase of networking in these

locations. Labs are similar to that of accelerators and incubators, however as described by Sukherman (2017) they will invest early into a startup taking equity for money and coach the startup with a talented group of specialists; such as engineers, lawyers and designers and foster the startup's growth toward the scaleup phase, which is a more structured system for startups than accelerators or incubators.

Innovations camps as described by Rissola, Kune and Martinez (2017, 23-26) are a discover process that challenges perspectives, issues and problems with the ability to explore new opportunities that arise from the challenges and forming prototype solutions. These prototypes can then be presented to the organisers of the camp to discuss and judge results and possible adopt or allow continuation of the idea with funding. Co-creation platforms play a similar role in the ecosystem as Innovation camp however, they target industry professionals rather than anyone with an idea according to Demos Helsinki (2019) and places the concept of the event on solving a set challenge.

Communities and Networks are places where people and companies can interact without the requirement for leadership, communities hold individuals captivated if the individual is interested and there are no restrictions on what type of relationship may or may not exist (Feld, 2012). Networks also assist in building connections that maybe lacking in communities, by supplying a line between other communities with skills or knowledge that is deficient in another community (Feld, 2012). The following table 1, lays out a basic quick reference guide for the startup ecosystem actors.

Table 1. Definitions of startup ecosystem actors (Startup Commons, 2018b., Startup Commons, 2019c., IGI Global, 2019).

Government / Public sector	**Government provides the supporting policies and regulatory environment and organised taxed systems**
Knowledge creators	Universities, Polytechnics, schools, researchers
Funds and Investors	Financial assistants of the ecosystem
Labs	Places where ideas can be tested
Incubators / Accelerators	Programs designed to assist startup conceptualise and grow
Innovation Camps	Programs designed to test and strengthen creativity
Hubs & Co-working spaces	Locations that allow communities and individuals to gather and work on projects
Co-creation platform	Technology where the owner, usually a company, invites users with specific skills and knowledge to contribute ideas that can help to conceptualize a product
Networking event	An event that allow communities and individuals to gather and meet each other.
Partners and support Services	These actors are not the facilitators, they assist others in doing their roles, examples are finance to management, to designers, developers, sales.
Communities / Networks	These are groups that share, work and/or create together or separately for a mutual cause

3.2 International outlook on startups

It’s important to look at the international outlook of startups since their aim is to internationalise, Startup Genome (2019) states that the total value creation of the global startup economy between 2015 and 2017 had reached $2.3 trillion United States dollars, with the top four startup sub-sectors with highest growth being, Advanced Manufacturing and Robotics, Blockchain, Agricultural technology and New Food, and Artificial Intelligence according to the Startup Genome report (2019, 45-46).

As previously noted in chapter 2.2, the differences in the fundamentals of an early-staged business and startup, there is still the ability for them to seek finance through similar avenues as described in an article by Oberbeck (2018). The article describes the need for startups to source funding outside of their traditional avenues of venture capitalist and private equity firm, due to a down-turn in startup capital deals being closed and a reduction in the amount of funding startups attracted, lowest since the dotcom bubble ended. The search for funding from business development companies for startups which also support early-staged businesses is suggested, as they are noted to be generally stable with great transparency.

4 STUDY OF ECOSYSTEMS

4.1 Seinäjoki's background

Known for several popular events such as music festivals Provinssi and Tango-markkinat, Seinäjoki is a growing city located in the plains of South Ostrobothnia. According to the City of Seinäjoki (2019) the city's population was at 63 000 people, was founded as a township in 1960 and has a municipality tax of 21 percent. Seinäjoki advertises itself as an entrepreneurial-friendly city being a home for 4 400 companies.

4.2 Seinäjoki's startup ecosystem survey results

The questionnaire was offered to actors within the region such as Into Seinäjoki Oy, Seinäjoki Entrepreneurship Society – SeiES ry, Seinäjoki University of Applied Sciences, Seinäjoen Yrittäjät and the respondents came from the organisations, Seinäjoki University of Applied Sciences, Into Seinäjoki Oy, and Seinäjoen Yrittäjät.

Defining the term startup, led to a variance in response, with innovation, new idea, growth potential and risk taking being included, as described in the definition of startup in chapter 2.1 of this thesis, no respondents managed to respond with a complete definition. The responses to what organisations exist that assist the startups can be seen in the following table 2.

Table 2. Seinäjoki's questionnaire results for actors.

Governmental	ELY-Keskus, Etelä-Pohjanmaan Liitto, TE-Palvelut, Uusyritys-keskus, Into Seinäjoki Oy
Knowledge creators	SeAMK (& Yrittäjyystutkimus), Yliopistokeskus, Into Seinäjoki Oy, Leader – Liiveri,
Labs	Foodwest, 4H Business lab, Testing Lab
Funds & Investments	Business Finland, Finnvera, Banks, FiBan, Fundu, Liiveri, Local angels
Incubators & Accelerators	KasvuOpen, SeAMK Yritystalli
Hubs & co-working spaces	Yliopistokeskuksen tutkijahotelli, SeAMKPro, Yritystalli, Y-Zone, 4H Hub Business Lab, Frami, Rytmikorjaamo, Törnävän Sairala
Innovation camps	Komia Camp, Tampere Y-kampus
Co-creation platforms	No results
Networking events	Seinäjoki Entrepreneurship Society - SeiES, Into Seinäjoki Oy, SeAMK, Yliopistokekus, Etelä-Pohjanmaan Kauppakamari, Yrittäjät, Nordic Business Forum, Food Business Summit, KasvuOpen, SeAMK Grow Up Student, Seinäjoen Yrittäjät
Communities / Networks	Etelä-Pohjanmaan Kauppakamari, Seinäjoki Entrepreneurship Society - SeiES

From the above table 2, many of the responses have been from a miss understanding or lack of knowledge for what specific organisations exist in each category. There is also the ability for the above information to be incomplete for the region's

ecosystems as there is no guarantee that all combined respondents would know all actors within the ecosystem. The highlighted organisations have been disqualified as a response since there placement in the ecosystem is correctly noted.

The governmental results received should not include TE-Palvelut, Uusyrityskeskus and Into Seinäjoki Oy as these organisations are not policy makers, so therefore are disqualified as a response. The lack of or unknown co-operation platforms in Seinäjoki is notable, since an ecosystem requires all areas to be populated by at least one actor. Networking events results also require Seinäjoki Entrepreneurship Society - SeiES, Into Seinäjoki Oy, SeAMK, Yliopistokekus, Etelä-Pohjanmaan Kauppakamari, Yrittäjät, SeAMK Grow Up Student and Seinäjoen Yrittäjät to be disqualified from the results in this category as these do not fit into the definition of a network event, they may hold events, however no specific events were given.

The most important connections within a startup ecosystem according to those questioned were customers, access to funding, ideas, mentors and communities. There were areas in the startup ecosystem that were viewed as holding back its functionality, such as funding, knowledge creators, fragmentation of ecosystems service provider’s services and an overall response that the startup ecosystem does not exist. The responses on what aspects of the regions startup ecosystem operates effectively showed varied opinions, there was a response that nothing work effectively, to everyone is willing to assist, to facilities are available, with no common aspects noticed.

There were many parts of the startup ecosystem missing as were noticed by questioned participants, they were aspects such as internationalisation, a lack of accelerator programs, an open common platform of services and more chances for those with ideas to process further with mentors and assistance. Plans for growing the startup ecosystem received a response, that was hopefully things will change to make this region attractive for a startup culture.

4.3 Vaasa's background information

According to the City of Vaasa (2019), the city's population was at 67 552 people and was chartered in 1606 and has a municipality tax of 19.5 percent. The Ostrobothnian city prides its reputation as one of the most innovative areas of Finland – this has to do with the city's and the region's businesses', educational facilities' and public sector's ability to cooperate. 6 249 companies call Vaasa, the historical city located on the coast of Gulf of Bothnia, their home.

4.4 Vaasa's startup ecosystem survey results

The questionnaire was offered to actors within the region such as Vaasa University of Applied Sciences, Vaasan-seudun Kehitys Oy, Vaasa's Entrepreneurs Association and the respondents came from the organisations, Vaasa University of Applied Sciences, Vaasan-seudun Kehitys Oy, Platonic Partnership and Kanvas Launch.

Defining the term startup led to a varied response, with early-staged company, scalable and requiring finance being included, as described in the definition of startup in chapter 2.1 of this thesis, no respondents managed to respond with a complete definition. The responses to what organisations exist that assist the startups can be seen in the following table 3.

Table 3. Vaasa's questionnaire results for actors.

Governmental	ELY-Center, VASEK -Vaasa Region Development Center, Startia, NY (nuoriyrittäjyys), Team (Business) Finland
Knowledge creators	University of Vaasa, Vaasa University of Applied Sciences (VAMK), Svenska Handelshögskolan, Åbo Akademi i Vasa, Yrkeshögskola Novia, Startia and Vasek
Labs	Vaasa Energy Lab, InnoLab, Universities and Polytechnics
Funds & Investments	Harry Schauman Stiftelse, Nissi foundation, Angels, Team FIN-LAND, Finnvera, banks, Business Angels
Incubators & Accelerators	West Coast Startup in MUOVA, Vaasa Region Enterprise Agency STARTIA, EnergySpin, KanvasLaunch, HankenLab
Hubs & co-working spaces	Vaasa Airport Park, Wärtsilä, Bock's Innovation Center / Wasa Innovation Centre
Innovation camps	KanvasLaunch bootcamp, EnergySpin program, Digitalization Academy
Co-creation platforms	Wasa Innovation Centre and Hanken Business Lab
Networking events	Vaasa Energy day, Vaasa Energy week, Harvest, all events organised by VES, Startia, Yrittäjät & Bock's Innovation Center, IGDA Vaasa monthly gatherings
Communities / Networks	VES - Vaasa Entrepreneurs Society (Vaasa University Students association), Vaasa Entrepreneurs association, Hanken Entrepreneurship Society, Vaasa Industrial Innovation Academy (VIIA), IGDA Vaasa

From table 3, some of the responses have been from a miss understanding or lack of knowledge for what specific organisations exist in each category. There is also the ability for the above information to be incomplete for the region's ecosystems as there is no guarantee that all combined respondents would know all actors within the ecosystem. The highlighted organisations have been disqualified as a response since there placement in the ecosystem is correctly noted.

The governmental results received should not include Startia, NY (nuoriyrittäjyys), and Team (Business) Finland as these organisations are not policy makers, so therefore are disqualified as a response. The most important connections within a startup ecosystem according to those questioned were the government organisations, knowledge creators, funding and networking, however there is the perception from those questioned that knowledge creators are not effectively road mapping for students and that there is a lack of hubs and co-working spaces.

The effective aspects of the regions startup ecosystem come from student communities that have joined knowledge creator and governmental organisations to form their own network, and the ability for companies and people from all levels and backgrounds to connect. The respondents also gave example of growth and investment in the startup ecosystem, with a new technology hub being built with large business backing the project and a new company beginning to increase the game development and creativity sector.

4.5 Pori's background information

According to the City of Pori (2019), the city's population was at 84 318 people and was chartered in 1558 and had a municipality tax of 18.75 percent. Being on the coast of Gulf of Bothnia Pori, while also having a rich history, it still is an important seaport of Finland. With the help of a recent EU-run project, this Satakunta city aims to develop especially the utilisation of digital technologies in industrial businesses.

4.6 Pori’s startup ecosystem survey results

The questionnaire was offered to actors within the region such as Satakunta University of Applied Sciences, Prizztech Oy, and Pori Entrepreneurship Society (PoriES), and Satakunta Entrepreneurs Association and the respondents came from the organisations, Satakunta University of Applied Sciences, Prizztech Oy, and Pori Entrepreneurship Society ry. Defining the term startup, showed a collective understanding from questioned individuals, as described in the definition of startup in chapter 2.1 of this thesis, and compared to respondent’s replies, they managed to respond with similar definitions. The responses to what organisations exist that assist the startups can be seen in the following table 4.

Table 4. Pori's questionnaire results for actors.

Governmental	Satakunta University of Applied Sciences, Prizztech Oy, Pori Entrepreneurship Society (PoriES), Satakunnan ELY-keskus, Finnvera, Business Finland, Satakuntaliitto
Knowledge creators	Satakunta University of Applied Sciences, Prizztech Oy, Pori Entrepreneurship Society, Enter and Yrittäjät, Crazy town, Porin yliopistokeskus
Labs	Satakunta University of Applied Sciences (SAMK) enterprise accelerator, Living labs
Funds & Investments	Local FIBAN network, BF, SAMK, ELY-Keskus, Pori Entrepreneurship Society, Finnvera, Satakuntaliitto (EAKR)
Incubators & Accelerators	SAMK accelerator, PoriES, Prizztech Oy
Hubs & co-working spaces	CT, Opiskelijatalo, Crazy Town Pori, Yrittäjyystalo Kööri, Prizztech Oy
Innovation camps	Insomnia, Pori Hack, Prizztech Oy, SAMK
Co-creation platforms	Crazy Town, Pori Entrepreneurship Society, SAMK enterprise accelerator, Prizztech Oy, SAMK, Porin Yliopistokeskus
Networking events	Prizztech Oy, Pori Entrepreneurship Society, Satakunnan Yrittäjät
Communities / Networks	Prizztech Oy, Crazy Town, PoriES, SAMK enterprise accelerator, Satakunnan Yrittäjät, Satakunnan ja Rauman Kauppakamarit

From table 4, many of the responses have been from a miss understanding or lack of knowledge for what specific organisations exist in each category. There is also the ability for the above information to be incomplete for the region's ecosystems as there is no guarantee that all combined respondents would know all actors within the ecosystem. The highlighted organisations have been disqualified as a response since there placement in the ecosystem is correctly noted.

The governmental results received should not include Satakunta University of Applied Sciences, Pori Entrepreneurship Society (PoriES), Finnvera, Business Finland as these organisations are not policy makers, so therefore are disqualified as a response. There are more disqualified results based off prior set definitions, PoriES and Prizztech Oy are not Incubators & Accelerators. This is repeated throughout the follow categories, where Prizztech is classed as an Innovation camp, Co-creating platform and networking event.

The most important connections within a startup ecosystem according to those questioned were the ability for people to find each other in the ecosystem, including the startups being able to meet with more experienced businesses or people. The ecosystem is seen to have issues around knowledge to create startups and the startup ecosystem, as well as the regions actors not actively increasing the functionality of their ecosystem. This have led to the belief that there is a low threshold to meet and collaborate and once opportunities been to appear more keep appearing. The business development organisation is noted for having effective platforms for startups.

It is believed that internationalisation is lacking in the startup ecosystem and that idea creating processes of the startup ecosystem are missing, and there is a shortage of funding for the ecosystem. The startup ecosystem has been added to with the addition of a student community and networking platform, knowledge creators have planned an international accelerator, more chances to network and better access to knowledge.

4.7 Kouvola's background information

According to Kouvolan kaupunki (2019), the city's population was at 82 000 people and was founded as a charter in 1922 and had a municipality tax of 20 percent. With its location in Kymenlaakso, this south-eastern Finnish city considers its connections and logistics as some of the strengths it has to offer for businesses – one of Kouvola's ongoing project aims is to develop the railway and road terminal.

4.8 Kouvola's startup ecosystem survey results

The questionnaire was offered to actors within the region such as South-Eastern Finland University of Applied Sciences (Xamk) and Patteri Entrepreneurship Society (PatteriES), Kouvola Innovation Oy and Kymen Entrepreneurs Association, with the respondents coming from the organisations, South-Eastern Finland University of Applied Sciences and Patteri Entrepreneurship Society.

Defining the term startup, led to a varied response, with innovation, new idea, growth potential and risk taking being included, as described in the definition of startup in chapter 2.1 of this thesis, no respondents managed to respond with a complete definition. The responses to what organisations exist that assist the startups can be seen in the following table 5.

Table 5. Kouvola's questionnaire results for actors.

Governmental	Ely Center, Kouvola Innovation (Regional Development Company), XAMK University of Applied Sciences
Knowledge creators	Xamk RDI departments, Patteri Entrepreneur Society
Labs	Makers LabGame lab, Cyper Security Lab, Paja design, Lab Meduusa Studio, Game Design, XAMK University of Applied Sciences have physical labs at their Kouvola Campus, Sekoittamo (XAMK), XLAB
Funds & Investments	Otsakorpi Startup Fund, Otsakorpi Fund, private angel investors, FIBAN, *ship – The Startup Festivali, ELY, Business Finland, Kymenlaakson säätiö, Kymi100
Incubators & Accelerators	Startup Summer Camp, *ship startup festival
Hubs & co-working spaces	Viiraamo, Porukkatalo, PatteriES, Urban Office at Kouvola Library, XLAB
Innovation camps	Startup Summer Camp (Patteri ES), From Idea to Innovation course in Xamk, Startup Connect Innovation Camp, Startup Passion MOOC
Co-creation platforms	Game lab, student hubs in Xamk, PatteriES
Networking events	Patteri Stage, Startup Aura, *ship – The Startup Festivali by PatteriES
Communities / Networks	Patteri ES, Kymen Yrittäjät, Playa Game Industry Network, Tikki, Virta, Kauppakamari Startup Section

From table 5, some of the responses have been from a miss understanding or lack of knowledge for what specific organisations exist in each category. There is also the ability for the above information to be incomplete for the region's ecosystems as there is no guarantee that all combined respondents would know all actors within the ecosystem. The highlighted organisations have been disqualified as a response since there placement in the ecosystem is correctly noted.

The governmental results received should not include Kouvola Innovation (Regional Development Company) and XAMK University of Applied Sciences as these organisations are not policy makers, so therefore are disqualified as a response. There are more disqualified results based off prior set definitions, PoriES and Prizztech Oy are not Incubators & Accelerators. This is repeated throughout the follow categories, where Prizztech Oy is classed as an Innovation camp, Co-creating platform and networking event.

The most important connection within a startup ecosystem according to those questioned was the most noted to be the community, also of importance was the knowledge creators, and ability to network. These areas showed strongly in the replies as emphasis was mainly stressed towards the people being the heart of the startup ecosystem.

The areas seen as the regions ecosystems issues were the vast distance between organisation in the region, a lack of co-operation and co-ordination, a lack of investment and funding to increase the entry level startups. Aspects noted that operate in the startup ecosystem effectively were, knowledge creators and communities with their ability to offer networking, events and competition to keep the ecosystem attractive.

Mentoring is seen as the missing part in the startup ecosystem and the ability to be able to collaborate with different actors within the ecosystem. There is a consensus about the future of the startup ecosystem with building co-ordination and co-operation to strengthen the community. Funding is always seen as important so there need to be an active search for it.

5 COMPARISON OF ALL ECOSYSTEMS

There is clearly a noticeable difference in the ecosystems, from what is answered shows that there is a wide range of understanding about what startups are and what each region's ecosystems look like and how actors are perceived.

By looking at the difference in the quantity of incorrectly placed actors within the questionnaire's results, there is a region the clearly has a good understanding of their actors and their places within the ecosystem, which is Kouvola. Vaasa is on a very similar level as Kouvola in understanding its ecosystem, whereas both Pori and Seinäjoki seem to struggle in correctly place actors in their correct categories and their definitions of startup are also deficient from the establish definition in this thesis.

From the results of each of the cities in table 6, we can compare the amount of organisation that exist in their respective regions with each other, to search for any patterns.

Table 6. Startup ecosystem results by city.

	Seinäjoki	Pori	Vaasa	Kouvola
Governmental	2	2	1	1
Knowledge creators	4	5	7	2
Labs	3	2	2	8
Funds & Investments	7	7	7	9
Incubators & Accelerators	2	1	5	2
Hubs & co-working spaces	6	5	3	5
Innovation camps	2	2	3	4
Co-creation platforms	0	1	1	1
Networking events	3	0	5	3
Communities / Networks	2	6	5	6

The green in table 6 represents the city with the greatest number of organisations in their ecosystems for each segment, even if they are tied with another city with the same value. Vaasa and Kouvola recorded highest numbers in their results, in areas

of the ecosystem that are driven by participants rather than the organisers which is a confirmation Feld's (2012, 1-57) concept of entrepreneurs being the leaders of ecosystem. Vaasa and Kouvola both demonstrated their understanding of startups and the startup ecosystem even with respondents coming from different companies and affiliations.

The high number of labs, innovation camp, funds and investments, networking events and community or networks are likely contributing to the knowledge disseminated about startups and the startup ecosystem's actors. It is also important to take note that the size, population, age and tax rates have no connection with the successfulness or underperformance of a startup ecosystem.

For Seinäjoki to increase the activeness and understanding of its region's startup ecosystem, it would be wise to first map the region's ecosystem more in depth than this study has been. The mapping will allow Seinäjoki region to capture all the links and networks it currently possesses, and by doing so will highlight the strengths and weaknesses within the startup ecosystem's connectivity. This connectivity is an element to gaining collaboration and accessibility to knowledge about Seinäjoki region's startup ecosystem as discussed with Meier (2019). Further to the mapping, there is good reason to look at finding a way to open source information about actors' abilities and assistance they could provide to other startup ecosystem actors and startups.

Loikkanen (2019) describes that a one stop location for startup ecosystems does not work or fix startup ecosystems, the way to change or improve is to open the communication and connections between actors that operate within the region. A theme of communication, connection and collaboration needs to be highlighted as the focus to improve Seinäjoki region's startup ecosystem.

6 CONCLUSIONS

There is a need for more information to all organisations within an ecosystem, so that those who are involved or even viewing from the outside, can understand or have access to knowledge about what happens, who with, where, why and how. Feld's (2012, 1-57) concept of entrepreneurs leading the ecosystem comes to the forefront of the conclusion, startup ecosystems need to be populated and driven by the users rather than the organisations. The high number of labs, innovation camp, funds and investments, networking events and community or networks are likely contributing to the knowledge of startup ecosystems and it is wise to note that a city's attributes are not a constraint to a city's ability to achieve a functional startup ecosystem.

6.1 Discussion and Limitations

The definition of 'startup' was probably one of the hardest areas of the thesis, due to a varied view in the sector, and no solid definition. Creating a definition from the available knowledge was important, so that the thesis would have a solid foundation to classify future questions. This was less of an issue with the ecosystem functionality and actors involved.

Many of the cities were still positive towards creation and improving their startup ecosystems, however it would be important to discuss about whether the actors in regions know or understand what it is they are planning to create or improve. Since many had problems defining 'startup', and classification of actors inside a startup ecosystem.

The results gave an insight in the possibility for areas that startup ecosystems could focus on in order to grow and be more understood, as seen with the results from Vaasa and Kouvola. A quote from Startup Commons (2019a) explains the reasoning behind not getting to caught up on having to define 'startup', or what city is better than another because;

> “Regardless of the terminology, the more there are entrepreneurship and innovation, the more there are startups. And the more there are startups, the more there are great companies, scaleups and positive development in the economy and society at large. And that's why developing a healthy startup ecosystem is a holistic exercise.”

It is important to be reminded that the study would only be as good as the survey results received, as there was no extra research done by the thesis writer to search for any missing actors within the regions, this was partly done to establish whether there was an active and healthy startup ecosystem.

6.2 Proposals for Further Studies

There is a requirement for an independent organisation, that will not control the ecosystem and to link all actors, so that information is centralised for anyone to access it and partake in its functions. There is much improvement to be had on the topic for all regions and the dissemination of information needs to be more open and available to all, this will assist regions to grow their ecosystems and cities struggling can model themselves off similar cities. Below is a list of possible further studies that could be undertaken.

Individual study of each of the cities and a detailed map of how each of the actors interact within their ecosystems.

A study into what areas of communication are lacking within ecosystems and what solutions could be implemented to solve those issues.

What defines a startup and history?

Possible ideas to encourage growth within a startup ecosystem.

Mapping the startups and actors in a region.

How to encourage co-operation within a startup ecosystem?

How to implement communication, collaborations and collaboration in Seinäjoki’s startup ecosystem?

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APPENDICES

APPENDIX 1. Startup Ecosystem Questionnaire

APPENDIX 1. Startup Ecosystem Questionnaire

Section 1

1.Your name

2. In your own words - How do you define the term “startup”?

3. What organisations exist that facilitate or help startups within your region?

Section 2

4. What organisations exist that facilitate or help startups within your region?

(The following questions require you to list as many examples as possible in each category. Name them within each of their respective categories)

Governmental –

Knowledge creators –

Labs –

Funds & Investors –

Incubator & Accelerator –

Hubs & Co-working spaces –

Innovation camps –

Co-creation platforms –

Networking events –

Communities / Networks –

5. Are there any examples known to you that do not fit into the previous categories? And what are they?

Section 3 - Startup ecosystem

6. In your opinion, what are the most important connections within a startup ecosystem?

7. What areas within your region’s startup ecosystem do you see as holding back its functionality?

8. What aspects of your regions startup ecosystem operate effectively, and why?

9. Is there an action or part missing from your startup ecosystem and why?

10. Are there plans to grow the ecosystem in near future and why?