Master Thesis

The role of Incubators and Regional Factors influencing the Location Decision of Academic Spin-offs

An exploratory study in Delft and Wageningen

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TU Delft

The Role of Incubators and Regional Factors influencing the Location Decision of Academic Spin-Offs

An exploratory study in Delft and Wageningen

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EXECUTIVE SUMMARY

Regional development has become a key driver for innovation over the years. The last decade has seen a rise in the number of academic spin-offs and other types of startups. Numerous studies have focussed on the support provided by university business incubators to startups and how the incubators contribute to the growth of academic spin-offs and other startups. Nevertheless, there has been a limited study about locations and migration patterns of academic spin-offs. It is therefore necessary to understand the motives behind the movement of these startups. Thus, this research is a case study about the location decision of academic spin-offs in Delft and Wageningen.

To begin with, a literature review was conducted to better understand the perceptions of academic spin-offs concerning location decision and movement of startups. The study involved the investigation of support and activities that were conducted in incubators. A comparative analysis of a previous study done in 2012 tracking the migration pattern to that of 2020 was completed. The study then moved to in-depth research of 191 startups who left previously and or currently incubated in Yes!Delft followed by a research questionnaire. Further, the movement of 29 startups from Wageningen's incubator StartLife was also considered to better understand the migration pattern. Two expert interviews from incubators of both the regions- Yes!Delft and StartLife, Wageningen, aims at recognizing the similarities and differences between incubators. The data collection phase began with desk research for both Delft and Wageningen to recognize a pattern in the type of startups incubated and to trace the stay and exit rates of these academic spin-offs from the incubator and region. The data collection also helped to identify if these incubators were dominated by service-based academic spin-offs or privately owned. The interviews were done to also understand if the incubators had any preference for startups (particular industry type), it's support activities and policies towards startups and if they had any underlying benefits from incubating the startup. The interviews were further summarized and compared based on the region. The factors of location choice of academic spin-offs and types of support by incubators were used as variables for the semi-structured survey and the scope of the study remained to academic spin-offs for two regions- located in the Netherlands (2012-2020.)

A study in 2012 by Khodaei et al shows the incubator support and factors influencing location decisions that included academic spin-offs from Delft and Wageningen. For 13 respondents from Delft and 6 from Wageningen, Qualitative analysis was conducted. Out of the 13 respondents, the 7

startups which were included in the 2012 study who expressed their will to continue being located in Delft were selected and studied individually. To confirm the results, 3 founders from the questionnaire response list (2012-2020) were interviewed. However, for Wageningen, all the 6 responses from the qualitative data were summarized on a whole considering the minimal responses. Furthermore, the most common reasons why startups exit incubators were investigated. The data from 2012 was used to find the mean comparison of different variables of support based on the responses of academic spin-offs in the Delft and Wageningen region.

The study revealed that the migration pattern is influenced by many internal and external factors such as regional and incubator support and the growth of the organization in terms of revenue and the number of employees. The stay and exit rates of the startups from the incubators and the region were derived based on the responses from the questionnaire and also the desk research while the factors were confirmed through interviews and case studies. It is also interesting to confirm that the reasons for migration can be chalked out through a resource-based spin-offs view just as in both the studies conducted in 2012 and 2020 for both regional exit and incubator exit.

Furthermore, it was found that the factors responsible for the exit of startups from the incubator are- organizational growth, market agglomeration and exploration of market opportunities while the factors responsible for the stay rate of startups are- access to social ties, resources, closeness to resources, clients and suppliers and knowledge.

Conclusively, a theoretical framework has been devised for the cities or regions to support the study. The incubators could gain insights from this study and improve in the respective aspects to retain academic spin-offs thereby enabling Regional Development.

Acknowledgement

Being the eventual step towards my graduation, the experience of authoring the thesis has been remarkable. Though it has been challenging to work during a pandemic, the journey studying two years Management of Technology at one of the world's top Universities TU Delft has been a roller coaster of ups and downs with some inspiring memories that has indeed enriched my knowledge and broadened my views. With all the support from the Professors, staff and my peers, the journey has been a lot easier.

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Bhavana Shivalinga Hulivahana

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Chapter 1. Introduction

Innovation has played a major role in the lives of mankind since the beginning of time. May it be the invention of the wheel, shoes, or textiles, for a new problem or an existing solution that has demand. Challenging problems and applicable solutions have both paved the way for continuous innovation. The absence of innovation would have inhibited change and progress in the quality of life that humanity experiences today. Innovation is crucial to different sets of people in different aspects. For a layperson, innovation is important to satisfy his needs and improve his/her lifestyle. For an organization, innovation is necessary for growth and sustainability in the market and the government, innovation is a catalyst for economic growth. Although intentions are varied, to summarize it all, innovation is pivotal to meet the growing needs of society. Innovation requires conscious effort. An idea does not magically transform itself into a product or a service overnight. Innovation is a series of exploration, development and experimentation and this is where entrepreneurship comes into play (Drucker, 2014).

Entrepreneurship has been defined as "the process of designing, launching and running a new business, which is often initially a small business" (Yetisen et al, 2015). Without initiative, ideas would remain contained and would not transform into innovation and thereby, entrepreneurship is necessary. Well established firms like Facebook, Google, began from universities with an idea in a university lab and moved to small room offices or garages and expanded their presence across the globe. Some of the most successful companies such as Crucell, Lycos were academic spin-offs which gradually moved up the ladders of growth.

"Scientia Potestas Est-Knowledge is power", a phrase coined by Francis Bacon back in 1957 (Garcia, 2001), until today is one of the most famous quotes we have all come across over many centuries now. Higher education plays a crucial role not only for the development of an individual but also in the development of regional, and national economies and one of the key drivers of innovation (Lane et al, 2012). Universities have both direct and indirect impact on strengthening the skills, expanding knowledge and also the relationships in the entrepreneurial ecosystem. Going by the study conducted by Porter (1990), the competitive advantage of countries no longer remains dependent on cheap labour and availability of natural resources, but instead on innovations- both scientific and creative.

Over the years, incubators have been playing an important role in shaping up and expediting the success of many entrepreneurial firms, especially in the initial days, providing various kinds of support (Aernoudt, 2004). Universities and incubators are seedbeds for academic spin-offs to grow into high thriving ventures. It is important to understand the different kinds of support that academic spin-offs seek from incubators in the long-run. Therefore, this study aims at studying the migration pattern of academic spin-offs, identifying and analysing the various factors that motivate them to continue to stay with the incubators or to investigate the reasons startups exit from incubators.

1.1 Defining academic spin-offs and incubators

A startup is defined as a corporation or project initiated by an entrepreneur to try, build and validate a scalable business model effectively (Blank, 2010). An academic spin-off, also known as a university spin-off is defined as a company established to commercialise university intellectual property (Hogan, 2010). While in the initial stages of trying to figure out a viable business model, most academic spin-offs are in a state of uncertainty and constant iterations. At this point of time, handling this state of affairs during the initial stage is critical if the start-up can turn the situation to an opportunity. An academic spin-off can use the Minimum Viable Product to establish itself in the market (Moogk, 2012). Academic spin-offs can be categorized into different types based on several factors such as- number of employees, activities, type of technology whether high tech or low tech, people involved etc. (Bazen, 2018). One of the most important factors through which academic spin-offs can be differentiated is the location pattern and establishment status. While few academic spin-offs breeze their way through market success, some of them face insurmountable challenges to establish themselves. Some of the factors that define firm growth are listed as resources- financial, human, access to tools, knowledge- research and development, network links, geographical location (Gupta, 2013). Hence the initial or incubating stage of an organization is considered most crucial.

Incubators have been aiding academic spin-offs over the last few years by providing some elements from the above-mentioned support (Lesakova, 2012). The culture of incubators began in the 1950s in the United States of America and eventually spread around the UK, and Europe (BillBooks, 2015). According to a recent study conducted by the International Business Innovation Association based in the United States of America, there are nearly 7000 incubators around the world; almost 900 in

western Europe (Center for Strategy and Evaluation Services, 2012). The evidence of the rise of the incubation culture is clear as seen in the figure below through the years rolling by.

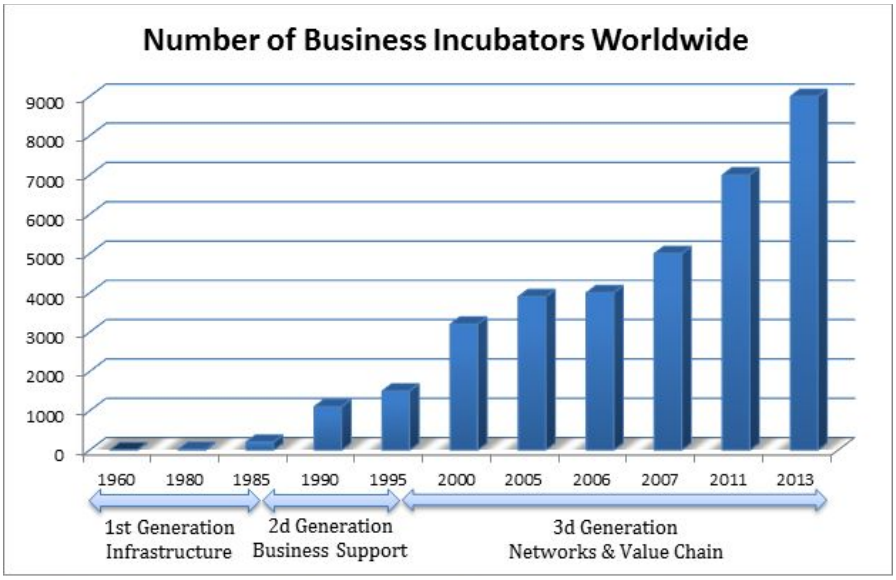


Figure 1.1 - *Rise in the number of incubators around the world with services provided* (World Business Incubation, 2013)

Although incubators cannot replace the initiative, drive to succeed and personal effort, they fill the voids in many places that hold back academic spin-offs from growth. In terms of the kind of support, clients served, types of services offered and organizational structure, incubators vary widely. From the classical business incubators supporting all types of firms to technical incubators purely aiding technology-oriented companies and academic spin-offs essentially, incubators are of different kinds. Despite incubators being of different kinds, all incubators have a close connection with universities, research institutions and are mostly located in and around science and technological parks (Tidd, 2007).

Incubators are often mistaken for accelerators. Despite the similarity, incubators and accelerators differ in the services offered. Though both sound similar and share some commonality, incubators and accelerators differ markedly in the services offered. The common aspects of the services offered are training, mentoring and being selective (Masschallenge, 2020). Accelerators help startups build businesses and are limited to a short period between weeks to months. While accelerators also support startups financially with an investment such as seed funding, incubators do not offer any sort of financial support that has anything to do with investment. While startups

under an accelerator program must "graduate" within a given period, most incubators do not have any such deadlines. During the accelerator program, startups are selected in groups or batches while incubators are not cohort-based (Sepulveda, 2012). Startup accelerators also referred to as seed accelerators, help startups to define and build their initial goods, identify attractive segments of customers and secure resources like capital and employees (Cohen, 2013).

1.2 Support and facilities offered by incubators

To understand the role of incubators in shaping up the growth of academic spin-offs, it is important to be aware of the services offered. Incubators are proving to be the new-age solution for growing businesses from scratch. The figure below depicts the overall services and support provided by incubators in brief-

Figure 1.2 - *Services and support aided by incubators* (Incubatorz, 2020).

When given the right direction and support, academic spin-offs are bound to reach the desired success on a massive scale. Many corporate giants such as Airbnb, Dropbox and Reddit initially began from incubators. In terms of both long term and short term growth, **networking** is an absolute essential. The act of exchanging information and building relationships with other professionals, leaders, and startup entrepreneurs within your industry is networking (Osterle et al, 2012). It is very difficult to develop a strong network without a solid foundation of professional

relationships and connections in the industry, especially in the initial days. Many of the incubators can accommodate dozens of startups and thereby co-working makes networking simpler and much more accessible. More networking means increased contacts, referrals, strategic partnerships and also better opportunities raised (Bollingtoft, 2012).

Partnering with incubators enables **access to different kinds of functional aids,** right from software to business tools. Additionally, many of these incubators hold frequent seminars for the incubators' various startup partners. These seminars also concentrate on subjects such as future projections, company principles, access to funding, legal structures and rapid prototyping. Partnering with an incubator enables **access to professional services** which otherwise would have been inaccessible to the startup, including everything from education to tech and business tools.

To succeed, a certain sense of direction or a set of vision is required. It is difficult for startups to realise their path and estimate the risks. **Mentoring,** being the most influencing aspect, those resources are available either through peers or learned authority and industry leaders at the incubators (Patton, 2011). Mentors can challenge and help further define vision, strategy and roadmap. Learning from the stories of success that other entrepreneurs have experienced, will help startups avoid some of the routine mistakes.

In terms of space, incubators offer different options based on the size of the startup. The services at incubators are usually delivered to the startups in the form of a package where a range of services-space, wifi etc are offered at a nominal range of prices. Moreover, having access to professional resources, mentoring and networking opportunities located in a single place also cuts commute time and eliminates overhead costs. With several workshops facilitated by incubators through a learned set of mentors or experts, incubators can be seen as temples of opportunities. The incubated academic spin-offs can make the most of this opportunity since they have strong ties with universities, research institutions and companies as well. Individuals and companies who supervise the incubator almost always have the opportunity to promote a transfer of funds to help startups to come up with capital required to start a business and thus assist them to fill out any necessary funding requests (Cohen,2013).

Apart from these benefits and forms of support, academic spin-offs also receive forms of support that may or may not influence their location decision which is not well recognized and analysed. Through this study, such location decisions will be recognized and studied in full details.

1.3 Open innovation and entrepreneurial ecosystem in the Netherlands

The concept of open innovation was introduced by Chesbrough (2006), who defined it as "the use of purposive inflows and outflows of knowledge to accelerate internal innovation and to expand the markets for external innovation" (Chesbrough 2006, p1). In a generic notion, open innovation is the practice of exploring and leveraging ideas and resources both within and outside the organization.

An entrepreneurial ecosystem is defined as an interdependent group of actors regulated in such a way as to allow for entrepreneurial action (Stam, 2014). The entrepreneurial ecosystem positions entrepreneurs at the centre stage, but highlights the context through which entrepreneurship is allowed or restricted. To sum it up, the entrepreneurial ecosystem upholds the fact that entrepreneurship is possible through a comprehensive set of resources and actors, which have an important role to play. The pillars of the entrepreneurial ecosystem are listed as accessible markets, human capital, workforce, mentors, funding systems, finance, government and regulatory framework, training and education, universities as an enabler, and cultural support in a study by Stam (2014).

Netherlands has always been known to rank as one of the top countries as a global innovator while the Dutch capital, Amsterdam is said to be Europe's 4th most active startup hub (EU Startups, 2018). With all the recognition Netherlands gets, it can be deduced that the country indeed has an efficient entrepreneurial ecosystem. Meanwhile, the Dutch education system is globally reputed and many cities in the Netherlands provide quality education and the university towns are a platform for a healthy entrepreneurial ecosystem.

1.4 Focus of study- Delft and Wageningen

Being Europe's largest startup ecosystem, the Netherlands is known for its open culture and its focus on business and innovation. Delft and Wageningen are two of the cities located in the Netherlands which are home to renowned universities- Delft University of Technology and Wageningen University and Research. These universities empower and encourage students to move towards innovation and entrepreneurship. Yes!Delft and StartLife Wageningen are two of the most renowned incubators of the Netherlands being seedbeds to several academic spin-offs and other kinds of startups. Located in the southern region of Holland, Yes!Delft is closely related and is near to TU Delft. Founded in 2005, Yes!Delft supports and empowers tech entrepreneurs to put their revolutionary technologies to market as quickly and effectively as possible. With custom systems built around 9 focus areas such as Blockchain, Artificial Intelligence, BioTech, CleanTech, MedTech, EdTech, Aviation, Robotics and Complex Technology, Yes!Delft provides 360-degree support to these startups from full lifecycle services to mentoring. Yes!Delft helps entrepreneurs create complex products in competitive markets, both hardware and digital, often requiring run-up time, lengthy development trajectories and costly prototyping (Yes!Delft, 2020).

Figure 1.3 - Universities from focus regions - Delft and Wageningen (TU Delft, 2020; WUR, 2020)

On the other hand, Wageningen University and Research, StartLife, was set up in 2011 with a mission to foster startups from the food and agricultural sectors. Much like Yes!Delft, StartLife also conducts workshops, events and is also an incubator for many startups helping them grow and succeed with emphasis on community culture. StartHub, founded in 2014 is an entity of StartLife

which is a student startup incubator for academic spin-offs from Wageningen University and Research. Being located in the different regions of Holland, being a supportive platform to startups, Yes!Delft and StartLife differ in many aspects such as policies, type of support and the forms in which the support is delivered.

Therefore, it would be interesting to study how the different kinds of support and policies from these two incubators influence the rate of startups that stay and leave.

1.5 Scientific and societal relevance

The study intends to fill the research gap between the existing literature and the assumptions with the migration pattern of academic spin-offs and the reasons explaining their location decision. Through the results of this study, the factors relevant to the growth of academic spin-offs through incubation can be strengthen ed. This study could also be used to improvise the incubation process in a resource-based view. Meanwhile, this study will also prove to be a great addition to the existing literature - migration pattern, location decision, the intent of academic spin-offs to stay and leave incubators, challenges faced by startups, the impact of incubators in the development of startups, regional clusters, regional innovation systems, and entrepreneurial ecosystem.

On the practical side, the relevance of this study is highly appropriate and beneficial for academic spin-offs and the incubators themselves. The impact of innovation through academic spin-offs on regional development and economic prosperity is not a new concept. Challenges and roadblocks faced by the academic spin-offs during their initial days can be identified and analysed. Measures to improve and support their growth through incubation in an entrepreneurial ecosystem are much needed which can be recognized by the end of this study. On the other hand, this study centres on improving the incubation process and making it more effective to help academic spin-offs. Thereby, incubators can make their system more efficient by understanding the support expected by them and eliminate or curb the factors irrelevant and other barricades. Furthermore, this study can also be insightful for the rise of communities. Creation of communities not only ensures new career opportunities but also increased boundaries of knowledge and learning. Thereby the success rate of both the academic spin-offs and incubators can be improved through this study. Through improving the strength of academic spinoffs and helping them grow better, an impact on the regional activity

leading to economic development and increased career opportunities can be ensured (Burton, 2016).

1.6 Research gap

In both evolutionary and revolutionary forms, innovation has been impacting our lives for years. Any innovation or idea can result in a socially beneficial product only when fostered. Academic spin-offs are not only the source making an impact on regional development they also aid economic prosperity on a global scale at multiple levels. They are also responsible for creating a pool of career opportunities for individuals (Kane, 2010). Many times academic spin-offs and ideas bite the dust due to lack of support and mentoring. Therefore, it is necessary to understand the intention of academic spin-offs to migrate and the kind of support needed by them through incubators. This can be studied by analysing their location pattern.

During my search for literature to identify a problem concerning the relationship between incubators and academic spin-offs, I found two intuitive studies (Tandon, 2019; Gliaubertas, 2019) which caught my attention and motivated me to work on the subject. While the study by Tandon (2019) focuses on academic spin-offs in the university incubators, the study by Gliaubertas (2019) derives insights from a comparison study between two entrepreneurial ecosystems. Reading through these master theses, there seemed to be an unexplored area that could require looking at various incubators and entrepreneurial ecosystems in the Netherlands to determine their influence on the migration of academic spinoffs.

The existing source of knowledge emphasises on the benefits and support provided by the incubators from infrastructure, networking (Lender, 2007), university reputation, university technology transfer and mentorial aspects (Lesakova, 2012) in addition to describing the effectiveness of incubation for the development of startups (Deiddo, 2017). However, there are also different types and forms of support which are unidentified and unaddressed. Different factors play a role in motivating academic spin-offs to no longer stay in the incubators, forms of support that are not offered by incubators and also policies of incubators which lead to the exit of academic spin-offs which are yet to be investigated. There has been a limited study about the reasons influencing the location decision of academic spin-offs from incubators and the role of incubators

impacting the migration pattern. Therefore, this study aims at examining the factors responsible for academic spin-offs staying in the incubators and their exit.

1.7 Research scope

The study will limit its scope to two successful incubators- Yes!Delft and StartLife are located in Delft and Wageningen, the Netherlands. A previous study by Dr.Hanieh Khodaei (2012) in collaboration with Dr Victor Scholten and peers, incubated in Yes!Delft in the year 2012 forms the basis of this research. This research is built on the study done in 2012 by Dr Hanieh, Khodaei and Dr Victor Scholten. and uses the data about the startups from Delft.

To begin with, the stay and exit rate of these startups will be studied to analyse the number of startups that remained and the startups which left despite a decision to stay. The type of support received by these startups previously and between 2012-2020 will be investigated along with the support they expected and did not receive. Thereby, preliminary findings will form a strong base to build through the new data and the findings to be followed. Since the focus of this study revolves around Delft and Wageningen, these two startups will be compared to understand the possibility of different activities, support received, policies, type of startups incubated and other defining variables.

In the second phase of the study, these incubators will be interviewed to understand their expectations and benefits from incubating startups along with their preference for academic spinoffs. Furthermore, the academic spin-offs to be interviewed will be the ones currently incubated in Yes!Delft and StartLife and the startups that have moved out but were previously based in these incubators.

The key objectives of the study are as follows-

- To identify the role of incubators in the location decision of academic spin-offs
- To identify the migration pattern of academic spinoffs in Delft and Wageningen
- To identify the underlying factors influencing the location decision of academic spin-offs

1.8 Research questions and methods

1.8.1 Main research question

How is the migration pattern of academic spin-offs in Delft and Wageningen and what is the role of incubators influencing their location decision?

This research aims at fulfilling the gap in the field of incubation support for academic spin-offs from a Resource-based perspective (Barney, 1991). Firstly, the question intends to recognize the migration pattern of academic spin-offs. Then, the question intends to analyze the *effectiveness of different forms of support offered by incubators* and understand *its role* in the migration pattern of academic spin-offs. The research will be answered with the help of a series of sub research questions through various research methods.

1.8.2 Research methods

Overall, the study follows a mixed approach (Shorten, 2017), wherein both quantitative and qualitative analysis was conducted to answer the research questions. This approach helped to integrate qualitative and quantitative data and answer the main research question.

The qualitative research approach includes a study of text materials, related literature, interviews and desk research that helped us identify the responsible variables (Sekaran et al, 2016) such as technology, number of employees and other defining factors. The desk research helped in forming the questionnaire for the 2020 study.

The quantitative research was implemented through Questionnaires. This was used to collect data and transform it into statistics. The secondary quantitative data from the study by Dr Hanieh et al (2012) will also be analyzed and compared for similarities and deviations from 2012 through 2020 in terms of support factors.

The response data from the 2020 questionnaire was captured into an Excel or Google spreadsheets for analysis. The SPSS data from the 2012 study was exported for use with spreadsheets to produce comparable tables and charts. The quantitative analysis was carried out using the Pivot table and Charts functionality in Google Spreadsheets.

The qualitative investigation for 2020 was conducted through case studies and interviews. The case studies were conducted to focus on the academic spin-offs that were included in the study in 2012 and to understand their current state. The interviews were conducted via phone interviews, recorded and transcribed using Otter AI application. The responses transcribed helped to correlate and validate the quantitative data. Thereby, through this mixed approach, the factors responsible for the movement of academic spin-offs was thoroughly investigated based on the resources offered by incubators.

The mixed approach using various methods will help in an explorative study of the subject.

The study implements exploratory research where the data is quantified using different research methods. The exploratory research is conducted through expert surveys and open-ended questions. The secondary research is conducted through the study of existing research projects on the migration pattern of startups and factors influencing location choice of startups etc. The interviews were conducted for both academic spin-offs and incubators using open-ended questions. The surveys were conducted for academic spin-offs to gain in-depth information and collect quantitative data of factors influencing the choice of location. Conducting exploratory research helped clarify the concepts and formulate the theoretical framework.

1.8.3 Sub-research questions:

1. Do incubators differ in terms of policies, activities conducted and support provided?

Methodology- Initially, content analysis is conducted on the existing literature and evidence and insights or results will be drawn. Existing literature is studied in depth to recognize the resources traditional to incubators. Secondly, a detailed interview is conducted for incubators- Yes!Delft in Delft and StartLife in Wageningen to identify the currently available resources, policies being implemented, activities held for academic spin-offs and other startups.

2. Do incubators have a pattern in the type of academic spin-offs they support?

Methodology- To address this question, the startups currently and previously incubated at Yes!Delft and StartLife were studied and checked to recognize any sort of a pattern in terms of technology, university relation, patent etc. through desk research. The incubators were interviewed about their preferences and expectations from startups that make them favourable. Further, the interviews conducted with startups also included questions about receiving extra support from incubators which were analysed and differentiated.

3. What are the underlying benefits for incubators for supporting academic spin-offs?

Methodology- This question is answered through content analysis from various literature and also the interviews with the incubators- Yes!Delft and StartLife. The purpose of these interviews is to understand the perspective of incubators and their benefits of nurturing academic spin-offs and other types of startups.

4. Does the location decision differ among different kinds of startups?

Methodology- First, the academic spin-offs previously incubated at Yes!Delft and StartLife are categorized into various types based on several variables such *as technology, number of employees and other defining factors* along with the startups from the previous study by Dr Hanieh (2012) based in Delft and Wageningen. Once categorized, the startups are traced between the years 2012-2020 and checked for the location pattern through desk research. The various factors of support are recognized through interviews and the existing factors are ranked as per the responses from the semi-structured questionnaire with academic spin-offs.

5. What kind of support received from incubators is perceived as important or essentially critical by the academic spin-offs? What are the support factors missed by startups leading to their exit from the incubators?

Methodology- To begin with, at least 3-5 startups from startups previously incubated in the Delft and currently incubated at Yes!Delft along with StartLife from each category that incubated in Wageningen and currently incubates at Wageningen are interviewed to identify the critical forms of

support received. These variables are then transformed into a questionnaire and the results analysed.

6. What are the factors that influence the stay and exit of startups from a region?

Methodology- To begin with, a literature study is conducted to identify the already existing reasons that influence the stay and exit of startups from a region. Further, at least 3-5 startups from startups previously incubated in Delft and currently incubated at Yes!Delft and StartLife from each category are interviewed to identify the critical factors that lead to the decision of startups to remain located or move to another city. The factors will be studied and results summarized to hypothesize a theory based on the Resource-based view. (Barney, 1991)

1.9 Research structure

A study can be completed given the right process and planning. The structure of the thesis at hand is divided into 5 chapters.

- Chapter 1 presents the background of the study, the identified problem, the research gap, scope, objectives of the study, the main questions and research methods.
- Chapter 2 presents the literature review conducted to introduce various concepts and frameworks used in the study.
- Chapter 3 presents the Research Methodology starting with Research Design, data collection, Interview design and handling of responses, questionnaire survey design and data analysis.
- Chapter 4 presents the Results and Analysis and is dedicated entirely for the desk research conducted for both the cities - Delft and Wageningen and also the results and findings. It also provides the complete results of the study including the various interviews, case studies and questionnaire discussed in depth.
- Chapter 5 presents the conclusion and discussion with scope for future research.

Chapter 2. Literature Review

This chapter strives to identify the literary content and the steps to review the literature dealing with the core concepts adopted around the thesis such as - incubation, academic spin-offs and entrepreneurship. The literature review will thus help to develop a theoretical conceptual framework derived from the scientific literature to apply and obtain the answers for the research questions.

The literature review was conducted in three phases- locating, reviewing and writing the literature review. The literature search used the keyword search approach. The variety and depth of each piece of literature helped to selectively narrow down the research focus one step at a time. Apart from deriving information from peer-reviewed journals - ScienceDirect (2020), Scopus (2020), the literature on TU Delft repository (2020) were used too.

2.1 Entrepreneurship and academic spin-offs

Innovation has been essential for economic progress, business and the economy as a whole past many centuries (Mokyr 1990; Baumol 2004). New ideas lead to new products and services which in turn bring in the revenue. New ideas must be recognized as opportunities and must be turned into new businesses. Put in simple words, entrepreneurship must be enabled. While Entrepreneurship has been defined as the process of conceptualizing, planning, beginning and running a business (Yetisen, 2015), the term “Entrepreneurs” has been defined multiple times by many different people with differing perspectives. While Schumpter (1965), defined entrepreneurs as individuals who exploit market opportunity through technical and/or organizational innovation, Kirzner (1963) described entrepreneurs as people able to perceive opportunities for entrepreneurial profits; that is, they can see where a good can be sold at a price higher than that for which it can be bought”. Irrespective of the different views, a similar aspect can be recognized which is - recognition of opportunity and utilising it either by discovering it or creating your own.

While Entrepreneurship refers to new businesses, a startup is defined as a company or project initiated by an entrepreneur to seek, effectively develop, and validate a scalable business model (Katila et al, 2012). A startup can be further classified as a spin-off if the new company or an enterprise is a part of the parent organization. On a general note, the term “spin-off” is said to be a

byproduct of a bigger entity or an organization. The definition of the term may vary based on opportunity and necessity. While contributing either in the form of investment, individuals, establishment or licensing, the university is an integral part of any research spin-off (Callan, 2001). A university spin-off often called an academic spin-off is a subcategory of a research spin-off. Academic spin-offs have been defined and categorized in a variety of ways by different scholars.

Despite all the variations, these definitions include the following characteristics.

1. A university or an academic institution is the parent organization of the spin-off.
2. The spin-off must be a separate legal entity and must not be an extension of the university.
3. The spin-off must exploit knowledge from academic activities.
4. The spin-off must aim at commercializing the technology and thereby generate profit.

Smilor and his peers (1996) define academic spin-off as "a company that is founded by a faculty member, staff member, or a student who left the university to start a company or who started the company while still affiliated with the university around technology or technology-based ideas developed within the university". This definition is based on the individuals involved, emphasising their origin from the university. On the other hand, Weatherson (1995) defined the term as "a business venture which is initiated or becomes commercially active, with the academic entrepreneur playing a key role in any or all of the planning, initial establishment, or subsequent management phases" (p. 1). While these definitions highlight multiple factors, the definitions differ accordingly giving rise to ambiguity. This ambiguity was cleared after a study by Pirany and his peers (2003) who defined the term considering an exhaustive list of important aspects from different definitions.

The study by Pirnay and his peers (2003) examines and combines the different definitions of academic spin-offs and conclusively defines academic spin-offs as - “new firms created to exploit commercially some knowledge, technology or research results developed within a university”. This definition covers all the different aspects addressed in disparate definitions such as - novel companies, originated from universities, exploiting knowledge produced and activities from universities, and profit-making approach etc.

2.2 Different lifecycle stages of a startup

Series and cycles of ups and downs are an inevitable part of one's life and that of any organization. Every business experiences a range of ups and downs throughout its life cycle. The definition of growth may differ amongst people and organizations from one to another. An organization's growth is measured based on several parameters such as net profit, revenue, market share etc. The period between the different points of growth which differ by a large boundary can be called as a stage in the case of an organization. An organization's growth can also be identified and defined when it reaches a certain stage during its life cycle. Several scholars (Steinmetz 1969; Churchill 1983; Christensen, 1997; Vohora et al 2004; Clarysse 2007) studied the lifecycle of a startup and defined the lifecycle stages based on their findings.

One of the initial studies made on lifecycle stages is a study by Steinmetz (1969), who defines and describes the various stages through a growth pattern, the now popular S-curve. The growth pattern depicts the different critical stages and patterns of companies. Steinmetz, identified four different stages of growth with three milestones to achieve at the end of each stage to move ahead. The four different stages are- direct supervision, supervised supervision, indirect control, and divisional organization. The three milestones are said to be the critical phases which are- 25-30 Employees, $500,000- 750, 000 in Assets, 250-300 Employees, 750-1,000 Employees, $ 7-10 Million $25-50 Million in Assets respectively. The stages devised are therefore finance centric and lack the sight beyond managerial and financial aspects (Steinmeitz, 1969).

In the year 1982, Galbraith narrowed down the scope and studied smaller firms and startups funded through venture capital. The emphasis of this study (Galbraith, 1982) is the stage-wise process and the inability of the organizational directorate to think in terms of stages leading to failure. He further divided the lifecycle into stages based on financing aspects as well as natural organization. The five growth stages described by Galbraith are- Proof of Principle Prototype, Model shop, Startup volume production, Natural growth, and Strategic Maneuvering. However, this study was much criticized by Churchill, a renowned scholar since it was based on a flawed assumption. The key assumption made by Galbraith is that the startup goes through all the growth stages before it dies is wrong, since it may not always be the case. In a further analysis by Churchill (1983), he criticized Galbraith's study for not capturing the growth and nourishment of the early stage,

non-financial factors such as geographical expansion, changes and convolutions in the product line and other important factors of an organization. Thereby, Churchill (1983) developed a 5 Stage model considering the shortcomings of previous studies (Steinmetz 1969; Galbraith 1982) about the age of the venture and also the dimensions of complexity. This Five 5 Stage model with stages recognized and labelled as existence, survival, success, takeoff, resource maturity was also in the form of an S-curve as shown below-

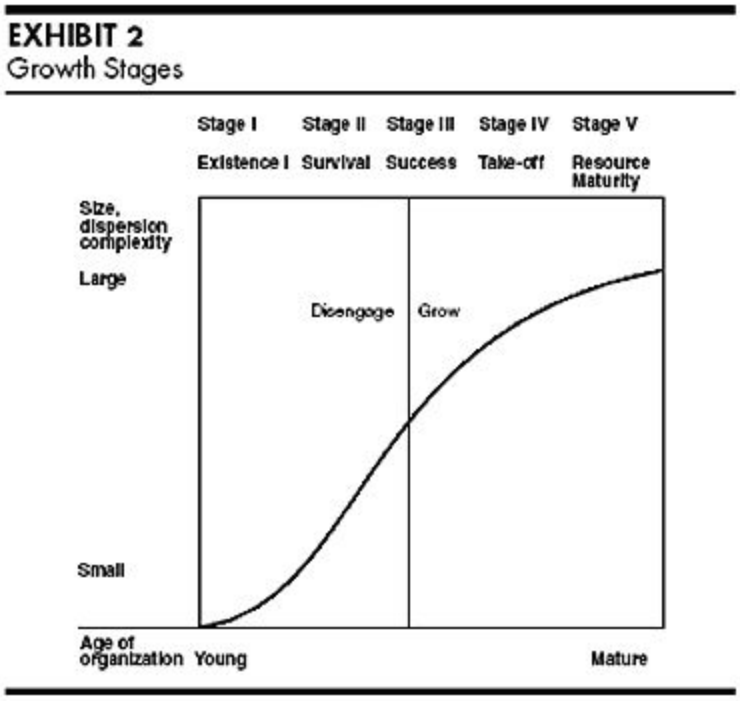


Figure 2.1 - *Growth stage model by Churchill (1983)*

Although the growth stage model devised by Churchill (1983) was being applied on a large scale, with the increase in the number of small businesses, the model turned out to be indistinct and fuzzy. In the year 2004, Vohora et al (2004) developed another 5 Stage model aligned towards university spin-offs, showcasing growth in an academic environment. The correlative relationship between the stages is the highlight of this study (Vohora et al, 2004) and an important contribution to the theory of life cycle. The number of stages identified in the study by Vohora et al is five with four critical junctures between the five stages. The five stages of growth according to this study are - research, opportunity framing, preorganization, reorganization and sustainable return. The four critical junctures acting as milestones between the stages are - opportunity recognition,

entrepreneurial commitment, the threshold of credibility and threshold of sustainability. A set of defined activities help achieve critical juncture and navigate across these stages.

Based on the study by Vohora et al (2004), Clarysse in 2007 devised a new stage model with 3 stages for a startup. This study does not focus solely on academic spin-offs. The 3 stage model devised by Clarysse (2007) relates to the activities important as a part of every stage for a startup- networking, financing and coaching. Not only are these activities a part of a loop, but they also aid in nurturing the start up's growth. As much as the stages seem simple and easy to follow, they seem to be complicated with a large number of activities defined under these stages. In 2017, Picken (2017) redefined the 3 stages devised by Clarysse (2007) by considering the incentives of the firm's growth in addition to the external factors. Picken's stages for the firm's growth are- early establishment, validation phase, growth and sustainability with 8 hurdles. The 8 hurdles transition period help identify and address the reasons for startup failure.

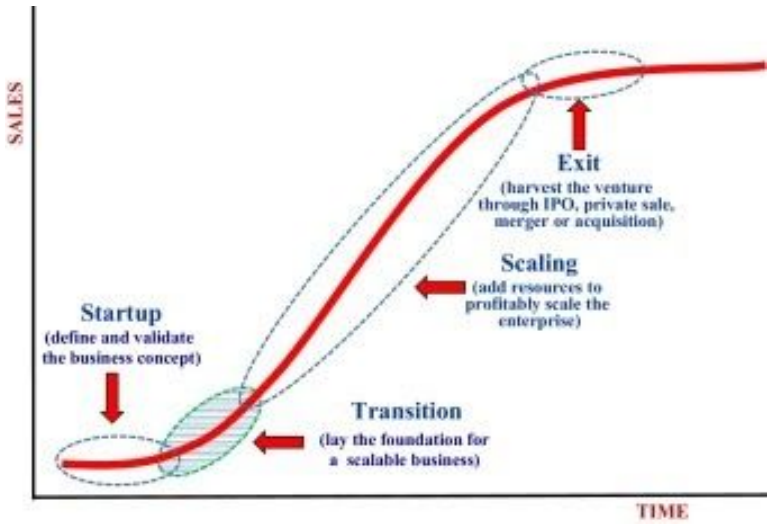


Figure 2.2 - *Growth stage model by Picken (2017)*

To recognize the growth stage of startups involved in this thesis, Picken's model of growth (2017) will be utilised since it is the most recent study.

2.3 Resource-based view

One of the most widely accepted management frameworks, to determine the set of strategic resources to attain sustained competitive advantage, is the resource-based view. Any firm requires an advantage to move forward in the market given the competition. Competitive advantage has been defined as a value strategy that is not being implemented by any of the current and potential competitors (Barney, 1991). For a long time success and survival of the firm in the market, a sustained competitive advantage is to be adopted. Barney (1991), defined sustained competitive advantage as a value-creating strategy that is not being implemented by any of the currents and potential competitors and when the competitors are unable to duplicate the results of the strategy. Consider an industry where all firms possess the same resources. In such a case, sustainable competitive advantage is impossible to be recognized and implemented since all the firms with the same resources will use the same strategy. Although the efficiency and effectiveness of the firm increases, there is very minimal competition in the market. Therefore, resources are the key to managing the position in the market in terms of survival and success and hence the firms need to think from a resource-based view**.**

The concept of resources with consideration to a firm was first introduced explicitly in a study by Penrose (1959), who differentiated resources from capital as land and labour. Based on the differentiation, Mahoney et al (1990) identified resources as both tangible and intangible assets that can play out as both strength and weakness for and against other competitive firms. It was in a study by Wernerfelt(1984) that the resource-based view was explained *as a tool* to differentiate the performances of firms. Further, the study explains how firms can increase their profit by owning these resources and with a logical manner to utilise these resources on how firms can stay ahead in the market. Thereby, the resource-based view provides strategists with a way to determine possible factors which can be used to confer a competitive advantage. A key insight from a resource-based perspective is that not all resources are equally important and do not have the potential to become a source of sustainable competitive advantage.

Meanwhile, similar views were found in a study by Barney (1991), who describes how a firm's strategy is based on the firm's resources. According to this study, resources are all assets, capabilities, organisational processes, firm attributes, information and knowledge. In earlier studies, the assumption was made that firms operate in market conditions in homogenous and

thoroughly mobile resources while Barney (1991) assumed that firm's strategically control resources which are heterogeneous and inert. Through the findings of this study, VRIN framework - Valuable, Rare, Imperfect Imitability, and Non-Substitutability which are the four attributes a firm's resources should qualify as to attain sustainable competitive advantage (Barney, 1991).

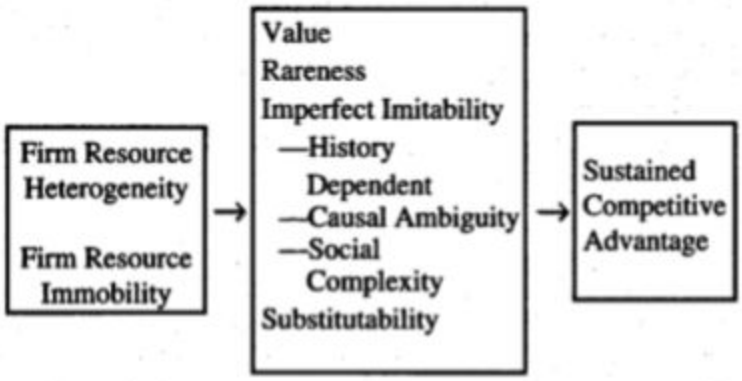


Figure 2.3 - *VRIN framework developed by Barney (1991)*

There exist studies (Prahalad et al, 1990) which were conducted in the same period and align with Barney's study where resources are considered as valuable assets and can be converted to core competencies**.** Other resource-based view studies (Schoemaker et al, 1993) view resources as dynamic capabilities and competencies. However, to remain in the scope of the study, Barney's resource-based view will be considered for the thesis at hand.

2.4 Entrepreneurial ecosystem

The ecosystem that a startup develops and shapes into, is one of the most important aspects of entrepreneurial success. An entrepreneurial ecosystem is defined as a collection of interdependent actors and factors enabling productive entrepreneurship within a certain territory (Stam et al, 2016). With the advent of startup culture in the past few years, many have studied the environment a startup is built and succeeds around. Therefore, the concept of an entrepreneurial ecosystem is still new and ambiguous.

The emergence of the concept of entrepreneurial ecosystems began in the 80s and the 90s where the fundamental ideas were laid out to build the foundation. Clusters, industrial districts and

innovation systems are some of the recognized predecessors of the entrepreneurial ecosystem (Stam et al, 2016). The difference between these predecessors and the entrepreneurial ecosystem is that the latter begins with the focus on entrepreneurial individuals and also points up the role of the social and economic atmosphere revolving around the entrepreneurial process. Initially, with a reference to the definition by ecologists, Moore (1993) defined an ecosystem as "Changes in species A set the stage for natural selection in species B". Species A and B are considered to be organizations in a network while applying the definition of an ecosystem with relevance to entrepreneurship. Through his study, Moore explained how a change in one organization eventually brings changes to other parts of the ecosystem. Therefore, the term "ecosystem" defined by Moore depends on a single industry or a value chain from a geographical perspective and does not apply generally. In the following years, there emerged a different approach to the entrepreneurial ecosystem. The gist of different studies by these scholars, by emphasising the role of the ecosystem in enabling or restricting entrepreneurship and can be linked to other recent 'systems of entrepreneurship' or systemic entrepreneurship research approaches intending to bridge innovation system approach and entrepreneurship studies.

All through the ambiguous discussions on the entrepreneurial ecosystem, ways to improve it have emerged through the years. A renowned study by Feld (2012) has been looked up to as this study is from the perspective of the actors being the main drivers of activities in an entrepreneurial ecosystem. Feld (2012) elaborates on the importance of the participants of the ecosystem and their activities which in turn stimulate the activities in the respective communities. Further, he categorizes the participants into leaders and feeders. While the leaders were the entrepreneurs themselves, the feeders were those who provided resources such as a university, government, investors, mentors, service providers and large companies (Feld, 2012). Meanwhile, in 2010, Isenberg conceptualised the entrepreneurial ecosystem with nine principles to be followed by the leaders to build the system around. Emphasising on local conditions and bottom-up processes, Isenberg's entrepreneurial ecosystem is built from with policy development being the focal point. His model of the entrepreneurial ecosystem has the facilitators classified into 6 sets- policy, support, finance, human resource, culture and market**.** However, the studies until now lacked the description of relationships between the different factors and groups of attributes and their influence on the entrepreneurial ecosystem.

Based on these studies, Spiegel (2015) defined entrepreneurial ecosystems as "*combinations of social, political, economic, and cultural elements within a region"* that support the development and growth of innovative startups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures. Although he studied the entrepreneurial ecosystem from a broader perspective, he narrowed down the attributes and categorised them into 3 sets - *cultural, social and material.* In his study (Spiegel, 2017) showcased the influence of *cultural, social, political and economic elements* on the entrepreneurial ecosystem. Since these influential attributes are *interrelated*, they are subject to constant change with the growth and dynamics of the startup.

Over the last decade, the Netherlands has seen a remarkable increase in independent entrepreneurship (Stam, 2014). The Dutch entrepreneurial ecosystem runs on two dynamics - macroeconomic factors and entrepreneurship. The increase in entrepreneurship in the Netherlands has lowered the unemployment rates boosting the economy of the country. The migration of startups will be analyzed based on the Dutch entrepreneurial ecosystem to understand the reasons motivating their growth and movement from incubators. The two ecosystems considered for this study are in two different regions of the Netherlands. Thus, for our study, we have considered the ecosystems in two university cities Delft and Wageningen.

2.5 Influence of incubators on the growth of startups

Universities are often the seedbeds for innovation and known to foster entrepreneurship. Many technologies have been commercialised enabling entrepreneurs and stimulating innovation. Scientific research being one of the most important facilitators for innovation is an inseparable part of universities. High tech startups which often rely on scientific research benefit the most from universities (Zucker et al, 2006). The process of technology transfer can help startups to a large extent with the proactive involvement of universities without being dependent on public funds (Siegel et al, 2001). The increasing popularity of university entrepreneurship eventually led to the creation of specially designated facilities called the university incubators. These incubators make it possible for researchers, students, professors to develop and commercialise their inventions and discoveries with immense support (Mian, 1996a, 1997; Rothaermel & Thursby, 2005a).

In the entrepreneurial value chain, incubators are considered to be one of the most important links since they add value in the critical stage of a firm's growth- the startup phase (Phan et al, 2005). In the case of technology transfer, risks and complexities are expected with high-tech innovation. An incubator plays a vital role in helping the researchers with translating the developed technology into market conditions, business-relevant skills, business environment and support (Schijf, 2015). Over the years, incubators' support to startups increased in many ways apart from just providing infrastructure services. The most common services provided by incubators are *shared space, common services, training and business networking* (Akcomak, 2009).

In a further study on " The impact of facilitator support on startups growth" by Khodaei et al (2012), the identified support system focuses on 5 fundamental areas. The five types of fundamental and facilitator supports were recognized as- *Infrastructure Support, Business Support, Financial Support, Social Support and Legal Support.* The description of each form of support has been summarized in the table below-

Type of Support (Khodaei et al. [2012]	Description	Knowledge Type (Author's interpretation)
Infrastructure Support	Provision of working space, which includes reception, meeting and conference rooms, laboratories, equipment etc.	No direct Knowledge Support but indirect Tacit support
Business Support	Mentoring/Coaching and Individual Counselling. Facilities can vary from business plan drafting training and providing training to approach potential business investors	Explicit and Tacit Knowledge Support
Financial Support	Direct or indirect access to venture capitalists, assistance in financial planning, grants for growth paid from public funds, seed capital in return of equity	Explicit Knowledge Support
Social Support	Providing a link to professional contacts, stakeholders and networks of individuals and organizations with the goal of building the firm's social capital	Explicit knowledge Support
Legal Support	Development of procedures to protect the academic spin-offs from exploitation, for instance, specialized legal consultancy and advise on appropriate costs of Intellectual Property	Explicit and Tacit Knowledge Support

Table 2.1 - *Description of different types of facilitator support (Khodaei et al, 2012)*

The study conducted in 2012 (Khodaei et al) confirmed the importance of university reputation, business support by the facilitator and access to information and knowledge being developed in other companies as the most important aspects influencing the stay of academic spin-offs in the

parent university region. The thesis at hand will check if the same factors still hold and also the additional factors based on data collected in 2020.

2.6 Factors influencing the location decision of academic spin-offs

Knowledge, ideas and competencies accumulated and generated by founders form a strong foundation of academic spin-offs (Wright et al, 2004). With the initial years being challenging and critical, many academic spin-offs rely on university resources such as labs, infrastructure, joint research etc. Thereby, academic spin-offs start by locating themselves in close vicinity to the university for the most advantageous reasons. The perks of locating around the parent university are not only cost-oriented but also knowledge oriented. Similar to a two-way street, the geographic proximity of academic spin-offs to parent regions is also said to enhance the commercialization of university knowledge leading to the economic development of the region (Heblich, 2013). Along with the cost and knowledge resources, social ties are equally important to impede the other two key benefits of location in close vicinity to the parent region.

Many academic spin-offs tend to move out of the parent university region with passing years and growth of the organization when they get converted into a bigger startup or a firm. The relocation is influenced by several factors apart from just the growth of the organization. Since firms move as based on an optimal solution, cost also plays a role in the location choice. The possibilities of easy access to production resources and reduced costs could also be a valid reason in the location choice of the firms (Brouwer, 2004). The location choice of any organization can be divided into two main sets of factors- *internal and external* factors.

The *internal factors* are recognized as the *organisational structure* such as establishments of a multi-establishment organisation; spatial concentration or dispersion of organisational growth. Second, internal factors are the *organizational goals* e.g. expansion strategy, minimisation of average home-to-work distance as part of a policy of maximisation of employee satisfaction or firm location close to public transport alternatives.

The external factors of location choice are recognized as changes in numbers such as the *composition of suppliers and business customer*s (due to entries or exits in the population of firms), *labour market issues, government policies* (regional policy; subsidies available elsewhere, transport,

environmental and mobility policy), *amount, location and quality* of suitable location sites available elsewhere and other general economic conditions.

Other factors influencing the location choice have been identified as *occupancy characteristics* and *distance to markets, suppliers and clients* (Dijk et al, 2004).

As much as the factors have been recognized, there is a need to strengthen these reasons to influence the location decision of academic spin-offs. Since the studies conducted are also not centric to incubators there is a need to study the exit and stay rate of academic spin-offs from incubators and also the influential factors. Therefore, these reasons can further be investigated through the findings of this research in hand with consideration to academic spin-offs from two university regions- Wageningen and Delft.

2.7 Conceptual framework

The literature review has been conducted to develop a conceptual framework and answer the research objective's main research question. It not only helps us get familiarised with the concepts along with terminologies used but is also a part of the exploratory study. Based on the literature review, the support from the incubators and the factors influencing the location decision of academic spin-offs forms the crux of the study and paves way for further research.

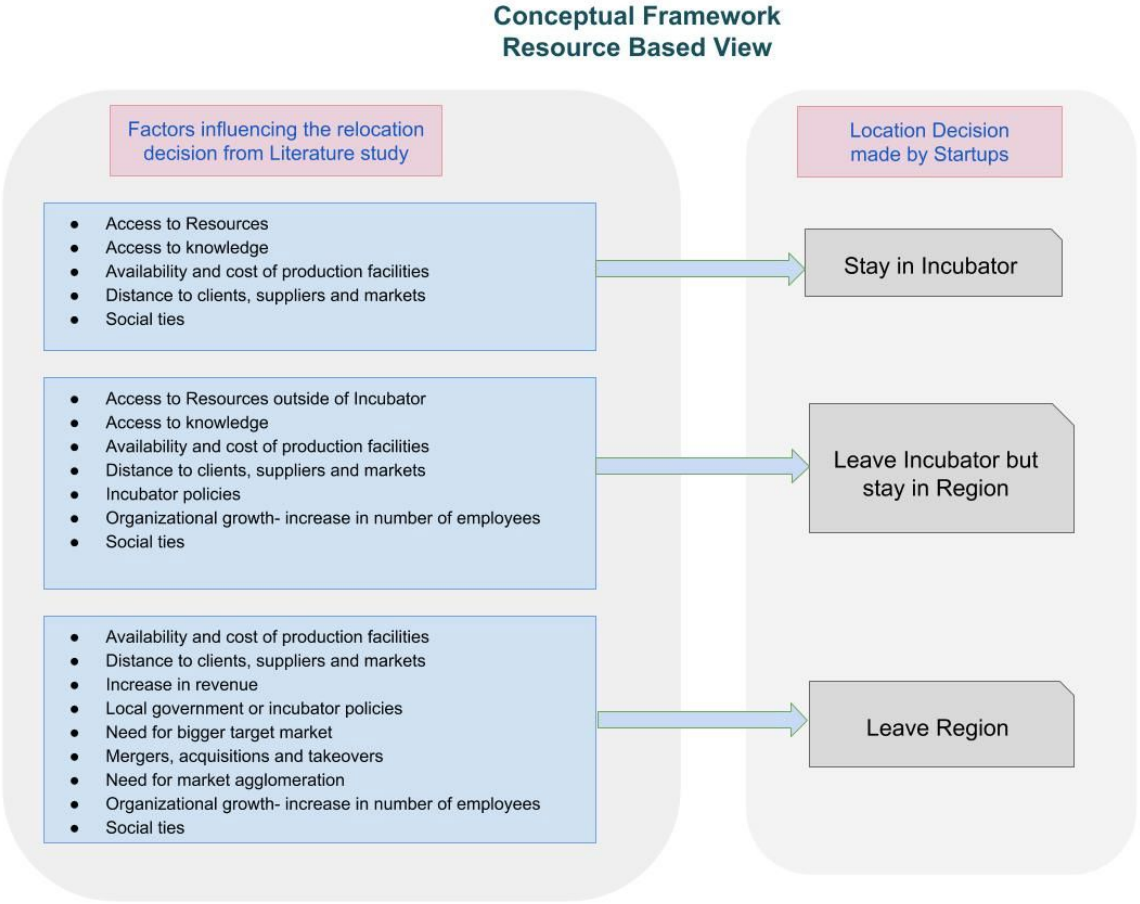


Figure 2.4 - Factors that affect the decision location of spin-offs

The conceptual framework depicted above lists the influential factors along with the decision of the academic spin-off's location choice from a resource-based view. Any organization considers resources as the most important aspect of growth and thereby locates themselves based on the accessibility and availability of resources. Likewise, an academic spin-off's decision to stay in the incubator is influenced by access to resources, availability and cost of production factors, distance

to client's suppliers and markets. More social ties lead to more knowledge and the availability and accessibility to the knowledge through social ties is another important role in the decision of academic spin-offs to stay incubated.

Some startups tend to leave the incubator but decide to stay in the region. This decision is influenced by the same factors governing the decision to stay in the incubator, additionally, these startups are looking for resources outside the incubator. However, it has been discovered from the literature study that some academic spin-offs move out of the incubator when they grow as an organization in terms of increase in the number of employees due to lack of accommodation in the incubator. Some incubators have strict policies concerning the duration for which an academic spin-off can stay incubated. When an academic spin-off decides to migrate to another city it can be assumed that the academic spin-off has scaled up. The factors motivating these startups to move out of the region were identified as- availability and cost of production facilities, distance to clients, suppliers and supermarkets, organizational growth in terms of both revenue and number of employees, seeking out social ties and the need for market agglomeration. Meanwhile, some local policies can also play a role in the migration decision of academic spin-offs.

These factors will further be explored through studies, interviews and questionnaires. Therefore, the literature study is a major aspect of qualitative analysis.

Chapter 3. Research Methodology

3.1 Introduction

This chapter explains the research methodology used for the study. The object of this study has three major goals- identifying and analysing the migration pattern of startups, the reasons motivating the location decisions and also the role of incubators in the location-based decision making of startups. The research deals with two sides of a coin being- startups and incubators. While there exists abundant literature on both these sides individually, there has been a lag in researching and connecting the dots between the two entities. Although most studies connecting these two organizations deal with the support provided there has been very minimal research on what these two organizations lack and need from each other. Also, these studies are focused on a single region making it less generalizable for a wider population. Thereby this research study tries to address the issue of what the two organizations (startups and incubators) need from each other.

3.2 Research design

This research is an explorative study and uses both qualitative and quantitative methods and thereby follows a mixed approach method. Implementing a mixed approach method in the research emphasizes on gathering, analyzing, and mixing both quantitative and qualitative data in a single study (Sekaran, 2016). Thus the usage of a mixed approach method helps us answer the research problem using different types of data. With this approach, the data is triangulated, and the results can be confirmed through different sources and methods. The most evident types of triangulation in this research are- data triangulation and the method triangulation. With both qualitative and quantitative methods used in this study, data method triangulation is done while the data triangulation is being carried out with different sources of data. This data collection happened at different times for the period 2012 and 2020.

While the qualitative analysis is being carried out through literature study and using management tools such as secondary data, desk research, one-on-one interviews, and case studies, the quantitative study or analysis is being carried out through the questionnaire. While the qualitative analysis helps in gathering the data and identifying the factors responsible, the confirmation is done both through qualitative analysis and quantitative analysis. The desk research and the interviews

conducted help gather information concerning identifying the location pattern and factors influencing the location decision of academic spin-offs. The case studies and interviews further help to confirm the factors recognized.

This methodology has been chosen because it helps us understand the nature of evolving subjects whether it be the location or migration pattern and locational decision making of startups.

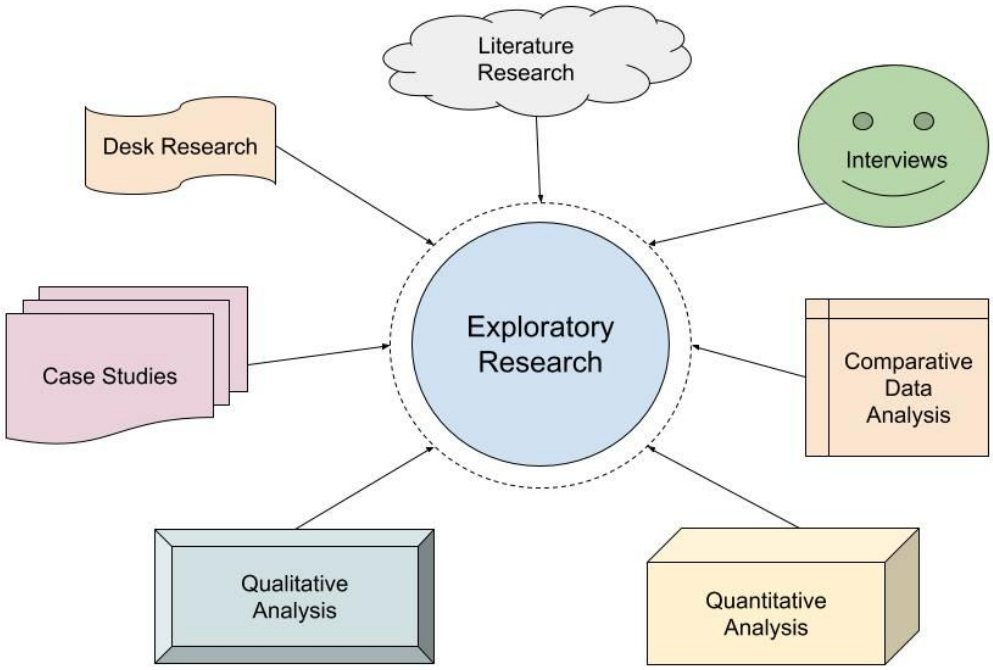


Figure 3.1 - *Research Design*

Meanwhile, a case study methodology is a useful approach when the focus is on a phenomenon like the migration pattern and thereby gives us a holistic view. The case study is conducted and is followed by sought semi-structured questionnaires for identifying the reasons behind the location decision pattern. In this research, 7 startups from Delft and 6 from Wageningen have been chosen

for our study with the main focus on the startups from the Delft region. Multiple informants have been used to build a strong base for the theory from the literature study and create a richer result. Since the focus of the study is Delft, all 7 chosen cases have been studied individually while the cases for Wageningen all 6 chosen cases have been summarized together for the remaining portion.

3.3 Choice of compared regions

The regions chosen for the study are two university cities- Delft and Wageningen. Both these cities are located in different regions of the Netherlands- Zuid Holland and Gederland. Both Delft and Wageningen are student-centric cities with the two of Europe''s top universities- TU Delft and Wageningen University and Research. Nevertheless, incubators Yes!Delft and StartLife differ in terms of the type of startups incubated, activities, policies etc. Moreover, the selection is also based on the fact that these two university incubators have nourished over 200 startups with well-developed institutional infrastructure and a formalized and explicit support program for establishing and developing spin-offs. Therefore, it is interesting to study and observe the similarities and differences of incubators based in two different regions of the Netherlands.

3.4 Data collection

Multiple methods have been used to collect the qualitative data in this research. To begin with, a literature study was conducted extensively to collect information about the influence of incubators in the startups' decision making for locating themselves or migrating to other places. The beginning point was from the different search engines- Google scholar, Science direct, etc. looking out for relevant literature. During the literature search, we recognized several key sources through which we found abundant material on incubators and academic spin-offs and various factors that led to the location decision and the various impacts that arose out of it. The variety and depth of each piece of literature helped us selectively narrow down our research focus. Apart from deriving information from peer-reviewed journals - ScienceDirect, Scopus, we also perused the literature on TU Delft repository. Keywords played an important role in speeding up the process for the literature search. Some of the keywords which helped find relevant papers were- academic spin-offs, facilitator support, location decision, startup migration, incubator support. A combination of different keywords and also the keywords mentioned in different literature helped narrow down the search in terms of relevance. Second, desk research has been conducted to trace different startups incubated in both Yes!Delft and StartLife's StartHub to identify and trace the migration

pattern - location-wise, technology and sector-wise and also trace the owner of the startup and its age.

Furthermore, data was also collected in the form of surveys and semi-structured interviews from the startups as well as 2 incubators (Yes!Delft and StartLife). The founders being the experts from the side of academic spin-offs, the data collected from this end (startups) was used to explore the intention to stay in the incubator region and explore differences in perceptions regarding the support activities the facilitators provided for the startups. Meanwhile, the information gathered from the semi-structured interviews with the experts from the incubators has been used to understand the preference of startups being incubated (if any), activities, support and also policies from the other end.

3.4.1 Importance and Criticality of 2012 Data

This research uses the database from a study in 2012 by Khodaei et al, which serves as a foundation. Through this research, the study is made strong and well established. The study in 2012 by Khodaei et al included 71 startups from Delft, Wageningen and Eindhoven and investigated the factors affecting high tech academic spin-offs to stay in the region of parent university. The data for this study was collected through a survey and analysed based on the responses from the Likert scale ratings in the questionnaire.

For the thesis in hand, the list of startups is used along with their choice to stay in the region or incubator in addition to the Likert scale ratings. Hence, there is a bit of ambiguity in the process of tracking these startups. Since the study was conducted in 2012, many among the spin-offs were either closed or acquired by another firm. This study was purely from the perspective of academic spinoffs and did not involve data from incubators or the university. Another limitation of the study in 2012 was that the analysis was not triangulated and did not involve detailed interviews. There were 70 variables for which the respondents had to rate. These variables were not grouped in terms of the key types of support. Therefore, to overcome the limitation the thesis in hand has used the study from 2012 as a foundation and has changed the process of research conducted to confirm the results.

3.5 Interview design and responses

For collecting qualitative information from people associated with the incubators, the interviews were semi-structured paving way to details. The qualitative information collected from these people revolves around the various support and services provided by incubators, policies and the process of selecting and incubating startups. With the unprecedented situation of Covid-19, only 2 experts were interviewed. Despite the information about the thesis being shared prior hand, the interview questions were asked on the spot to avoid biased responses to an extent.

Within in Delft region, to capture a range market and industry contexts, the startups are categorized into three different groups

1. Those startups that stayed within Yes!Delft
2. Those startups that moved out of Yes!Delft but stayed in the Delft region.
3. Those startups that moved out of the Delft region.

The semi-structured interviews conducted are based on a narrative approach which combined a structured agenda with the flexibility of asking additional questions. The interviewer kept interruptions to a minimum and invited the startups' founders to describe their involvement in a course of time during the spin-offs growth process and investigated the reasons why they moved out or stayed while they initially showed intentions to stay.

3.6 Survey design

The survey was designed to collect both quantitative and qualitative information regarding the most important support received from incubators and to find the areas of improvement according to the startups incubated. Primarily, the survey used a Likert rating scale between 1-5 and the differences between these ratings reflects the magnitude of the influential factors. The survey was divided into 3 different parts. While the first part focused on the general data of the startup and their current status of location and incubation, the second part of the survey involved rating of the key forms of support from the incubator and influential factors of the region. The third and the final part of the survey was open-ended and received responses about the reasons why the startup moved to another region or exited the incubator.

Since most of the information about startups included in the previous study (Khodaei et al 2012) and all the startups from both the incubators were derived from the desk research, the first part of the survey involved limited questions about the startup. The study conducted by Khodaei et al (2012) involves the general data of 71 academic spin-offs from Delft, Wageningen and Eindhoven and hence it was necessary to update the information. There exist many possibilities of the academic spin-off being shut down, acquired or moved to another city or exiting the incubator, the first part of the survey. The current status of the startup was asked in the survey as a confirmation to the desk research conducted.

The second part of the survey is to rate the various forms of support. Based on the literature study, the various forms of support provided by incubators are divided into 5 categories being- network support, infrastructural support, business support, legal support and financial support. Each of these categories further has detailed different types of support. For example, in infrastructural support, the respondents are expected to rate different services such as lab space, equipment and shared facilities on a scale of 1-5 individually with 1 being extremely dissatisfied to 5 being completely satisfied. In the study by Khodaei et al (2012), a Likert scale between 1-7 was used to measure similar variables of support. This part of the survey also includes rating the most important reasons for being located in the region. Therefore, the results of the current survey analysis will help compare and confirm the results either positively or negatively to see if they still hold.

The third part of the survey is to gain insights about the reasons for the startups to stay or move out of the region or incubator. A list of reasons has been added in the form of checkboxes along with a short open answer space if the respondents feel the need to add to the list of reasons. The respondents have also been asked about the types of support they missed from the incubator. Therefore, this part of the survey was more open-ended to explore various factors and variables playing a role in the migration pattern of startups from Delft and Wageningen.

Conclusively, the data sets generated from the survey were not only essential to compare and confirm to previous results from the study in 2012 (Khodaei et al) but also to explore and identify additional reasons for startups to stay or move from a region and incubators itself.

3.7 Data analysis

The questionnaire was used to collect primary data on the most recent decision about location and 13 startups from Delft and 6 startups from Wageningen responded. Quantitative Analysis of the support factor (a comparison between 2012 and 2020) was done for both Delft and Wageningen. The primary data collected in the form of questionnaires for 7 startups from Delft was individually studied as a case study and interviews were conducted with 3 of them for each decision type. (Staying in Yes!Delft, moving out of Yes!Delft but staying in Delft and moving out of Delft). The responses from the questionnaire were analysed both quantitatively and qualitatively. The data from 6 Startups for Waginengen were summarized and a qualitative analysis completed.

Quantitative data that was collected from questionnaires were analyzed using Google Spreadsheets'.
The data of the rating provided for each support factor and its subset was averaged and organized in tables and further into flat tables for detailed analysis. The pivot tables functionality helped in slicing and dicing the data that led to the various decision choices. This helped to obtain a quantitative idea and to build bar charts for visual analysis.

The primary data collected in the form of interview responses with Yes!Delft and StartLife incubators were summarized and a qualitative comparison was made in the form of a table. Findings from the research (Both quantitative and qualitative analysis) helped to determine a pattern of the decision making.

Data was collected using various methods in phases and analyzed iteratively during each phase.

The initial phase involved secondary data collection from research papers of the literature review. The secondary data was then analyzed manually to identify and hand-pick various factors responsible for the location decision making of incubators. These factors were segregated into variables that served as inputs to building a questionnaire for primary data collection.

In the second phase, Desk research was done from publicly available information by visiting the websites of the startups for both Delft and Wageningen regions to gather more details such as year founded, current location, organizational type by ownership and other control variables that could affect decision making. The stay and exit rates were calculated for various startups. The questionnaire used inputs that were analyzed using Desk research.

Data collected from phone interviews and case studies were summarised and analyzed to identify specific patterns in the decision making of the startups. The factors that played a major role in the decision making were selected to see if they correlated with the quantitative data. The interviews helped to confirm the qualitative findings.

Chapter 4 Results and Analysis

This chapter covers data analysis and elaborates the results of the research. The chapter has been divided into two broad sections based on the region- Delft and Wageningen.

Each of the cases is further divided into two parts- Semi-structured interviews from incubators, quantitative and qualitative results from the semi-structured surveys. After discussing the analysis and results of both cases a summary has been drawn presenting frameworks for both the cases, depicting the results.

4.1 Desk Research

This section presents the findings from the Desk Research conducted for the two regions of focus- Delft and Wageningen. The objective is the recognition of the migration pattern of startups in the Delft and Wageningen region located in the country of the Netherlands. This section of the thesis presents the results obtained from studying all the startups incubated in both the cities.

4.1.1 The case of Yes!Delft

Yes!Delft is one of the leading incubators in Europe. Being located close to TU Delft, the incubator has played a critical role in the early days and growth of over 200 startups since the year 2005. To identify the migration pattern of these academic spin-offs, startups that are currently incubating and previously incubated at Yes!Delft was tracked and studied. These startups were also tracked for different factors such as focus area, technology being implemented, the sectors they belonged to apart from their current location and their age.

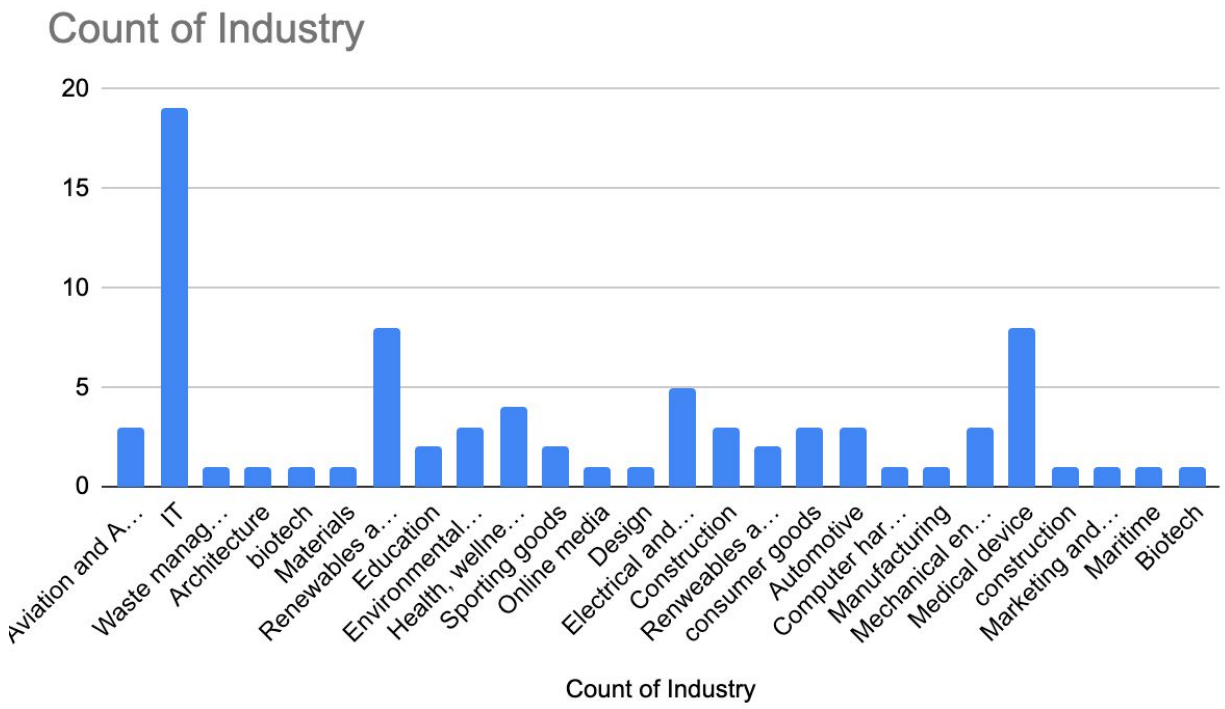


Figure 4.1 - *Count of Industry types*

The type of organization based on ownership plays a major role in the location decision of startups which were identified for each startup. In addition to this, each startup was checked if it was product or service-based.

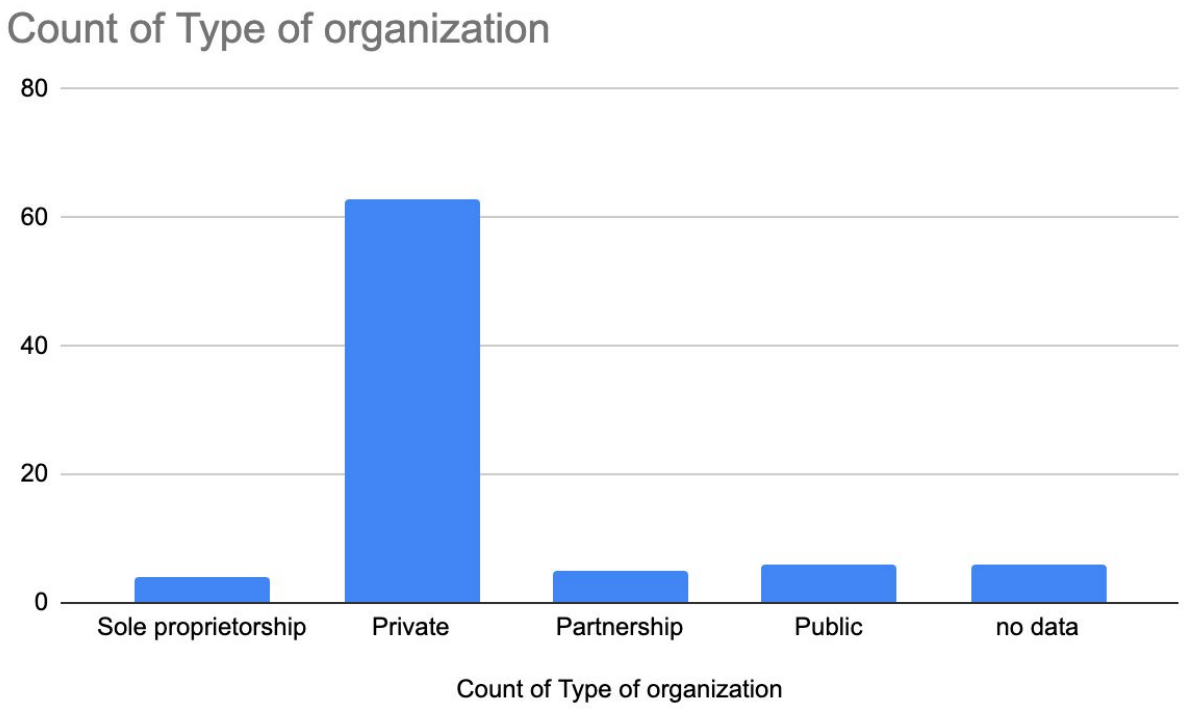


Figure 4.2 - *Count of Organization by types of ownership*

The different types of organization based on ownership have been classified as - private, public, sole proprietorship and a partnership. Yes!Delft segregates its startups based on various focus areas.

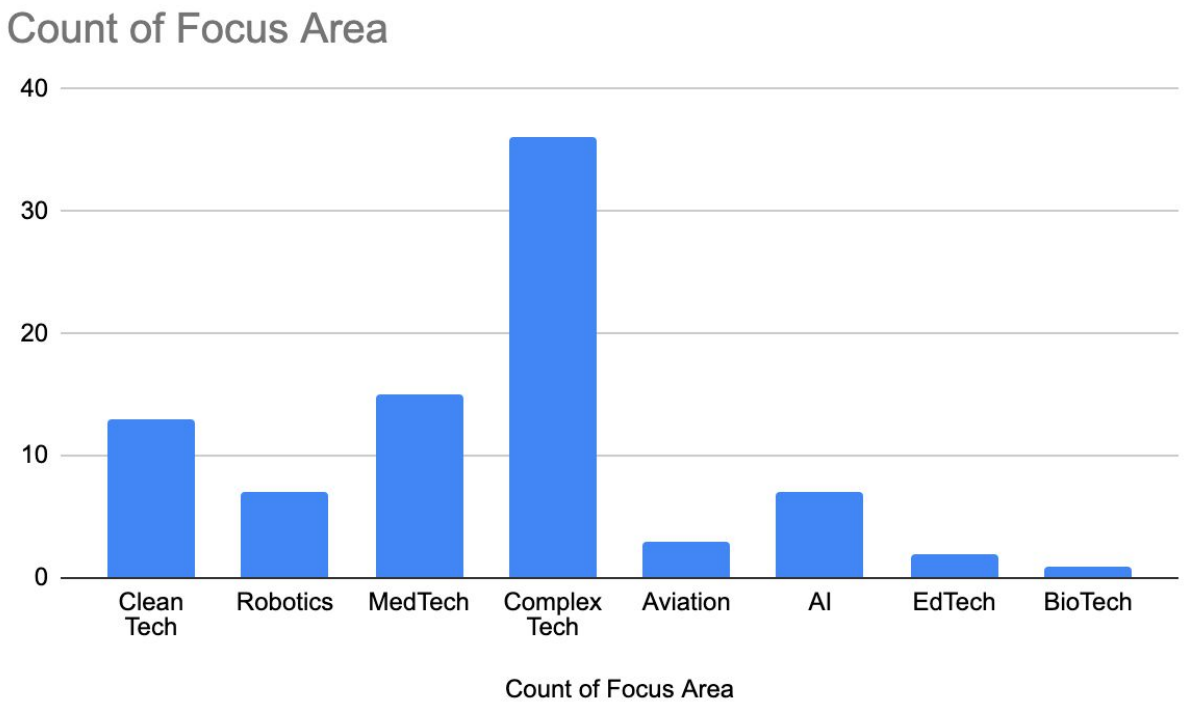


Figure 4.3 - *Count of Organizations by Areas*

The focus areas identified are - Complex Tech, Edtech, Medtech, Aviation, Renewables and Environment, Blockchain, Biotech, AI, Robotics and Cleantech. For startups with more than one focus area, only the dominant focus area was considered for Desk Research.

Amongst the 191 startups, a total of 101 startups have moved out of Yes!Delft over the years either by exiting only the incubator or the region altogether. To better recognize and understand the motives behind the decisions of startups, the data analyzed has been presented below based on their pattern of decision making.

4.1.1.1 The pattern of all startups that began in Yes!Delft

The total number of startups studied were 191 amongst which a majority of them are privately owned. Among these, 154 startups are startups solely owned and only a couple of them are non-profit only startups and the rest all are privately owned. The next factor being the focus area of the startup, we see that among these, 70 of the startups have a focus on complex tech and 31 startups focus on Cleatech which is the second most focussed area. However, there is only one

startup with a complete focus area on Blockchain. Another element that was considered and traced for the identification of migration patterns is the founding year which determines the age of the startup.

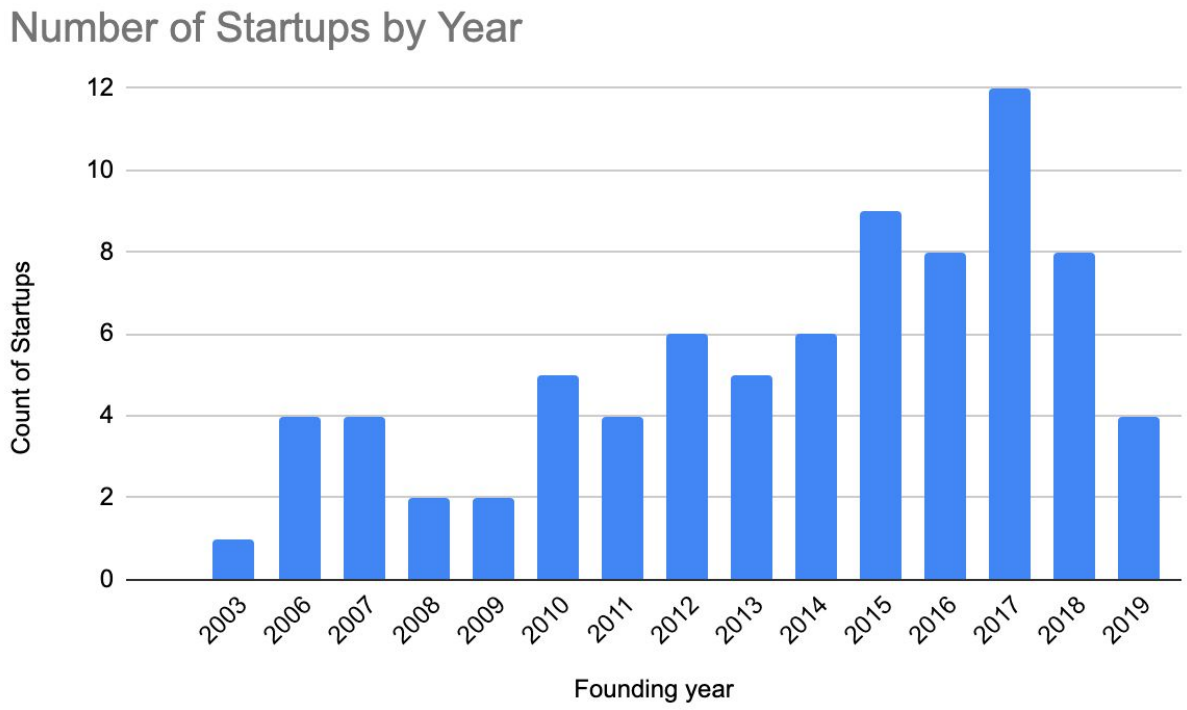


Figure 4.4 - Number of Startups by year at Delft

In the case of Yes!Delft, considering all the startups currently and previously incubated, between the years 2003-2020 the startups that were founded in 2017 is the year depicting the highest number in the case of Yes!Delft. The number of startups found in 2015, 2016 and 2017 are 21, 21, and 23 respectively and are mostly incubated in Yes!Delft. It is interesting to note that IT is the most dominant industry belonging to the startups incubated in Yes!Delft followed by the industry of Renewables and Environment. Although there is an almost equal number of product-based and service-based startups in the Delft region, there are 119 service-based and 65 product-based startups in Yes!Delft.

4.1.1.2 The pattern of all startups that left Delft

Amongst the 191 startups studied, it was discovered that 70 startups have migrated to other cities. The major cities to which these startups initially incubated in Yes!Delft have migrated to Hague, Rotterdam and Amsterdam. Other cities to which these startups have moved also include Abcoude, Breda, Zoetermeer, Schiphol and Leiden. Some of these startups have also moved to cities in other countries and continents such as Singapore, London and Antwerp. Hague, Rotterdam and Amsterdam are the three cities to which most startups have moved, possibly indicating the need for *market agglomeration* and *better market opportunities* and *social ties.* However, the type of organizations that were earlier incubated in Yes!Delft and have moved out of the Delft region remain privately owned. These startups are focused on complex technology and Artificial Intelligence but still belong to the IT sector and are mainly service-based. Startups founded in the years 2017 and 2018 have moved out of Delft and in terms of the number of employees, the count ranges from 50-200 which indicates an increase in staff that corroborates with organizational growth. The following is a geo-chart indicating the spread or relocation of these startups to other regions from Yes!Delft-

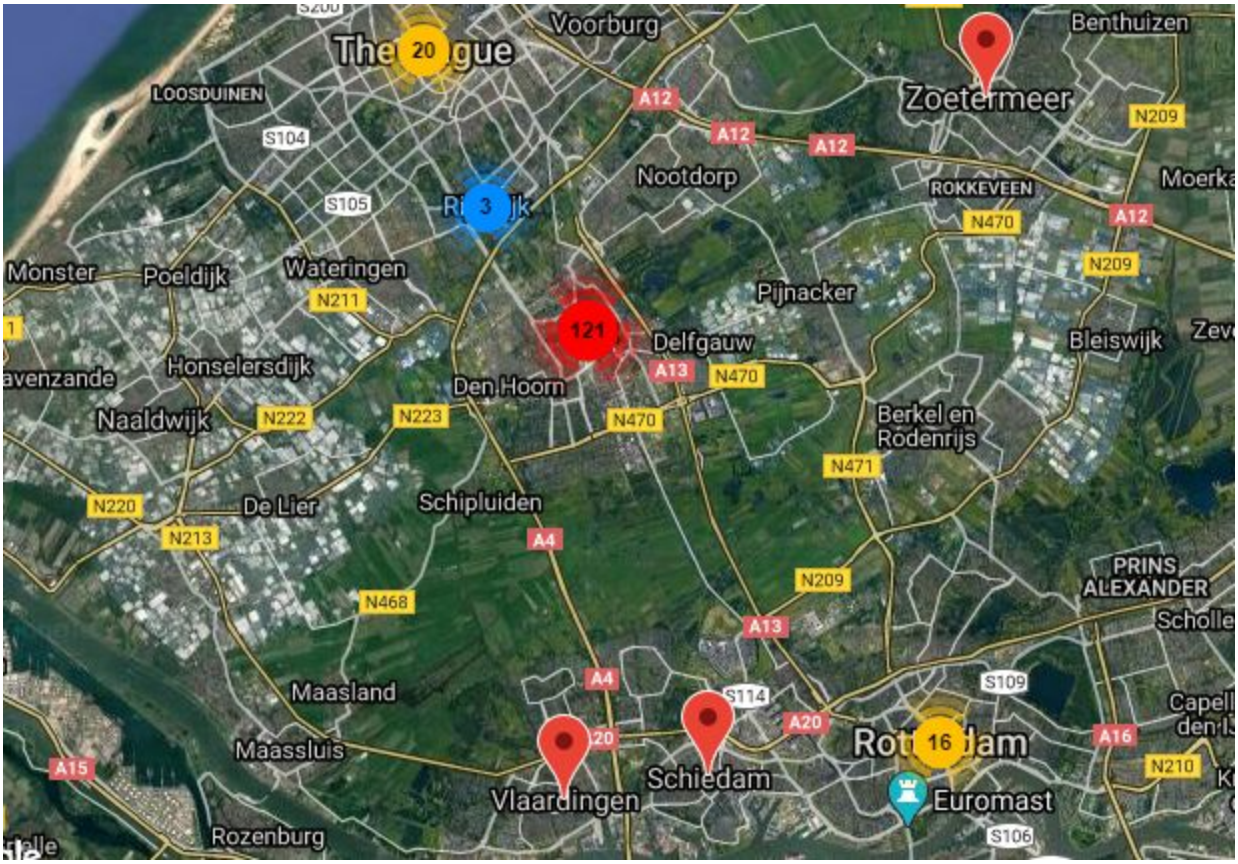


Figure 4.5 - *The distribution of startups that exited Yes!Delft and the Delft region between 2005-2020 in Zuid Holland*

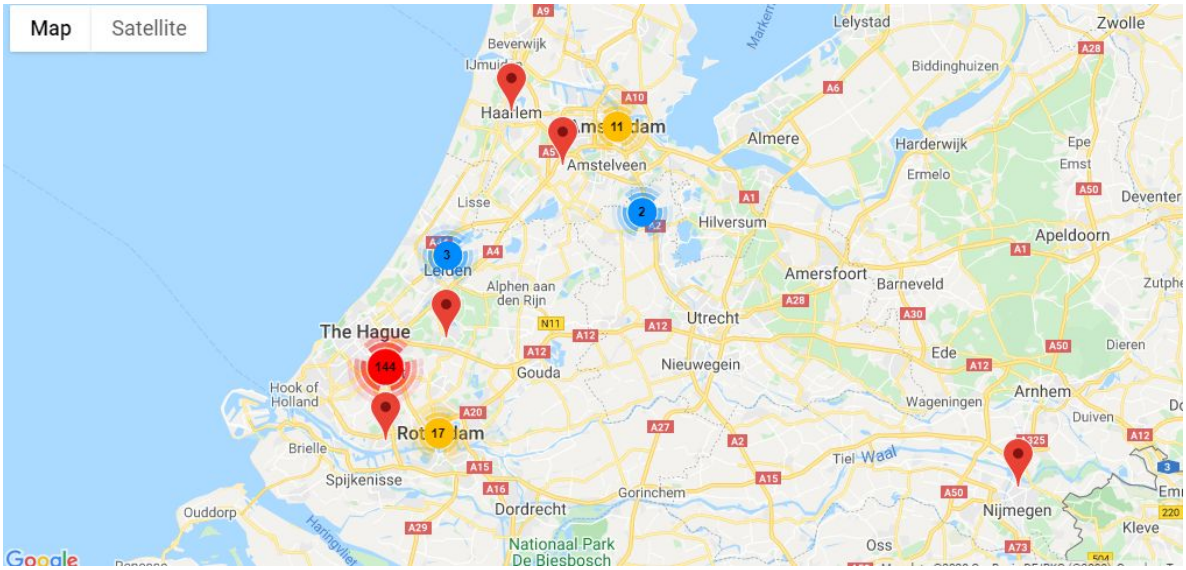


Figure 4.6 - *The distribution of startups that exited Yes!Delft and the Delft region between 2005-2020 in the Netherlands*

The reasons that can be attributed to the startups that moved away from Delft and the Yes!Delft incubators are as follows: *organizational growth- increase in the number of employees* on a significantly large scale with the years passing by, *market agglomeration, need for better market opportunities* and to *reach out to a greater number of target markets.*

4.1.1.3 The pattern of all startups that left Yes!Delft but remained in Delft

In the past few years, some startups have moved out of the incubator Yes!Delft and yet have continued to stay in the same region without moving to another city. As per the collected data, amongst the 191 startups incubated currently or previously in Yes!Delft, a total of 107 startups have remained in Delft and 31 startups have moved out of the incubator but remain located in the region of Delft. These startups that have moved out of the incubator and yet remain located in Delft are privately owned. The focus of these startups are in the areas of complex technology and clean technology and belong to the IT and the Education sector.

Startups founded in 2015-16 are the ones that have moved out of the incubator yet remained in Delft. The average number of employees range between 2-50 which does not indicate a high margin of organizational growth in terms of the staff. From this data, some of the reasons that can be hypothesized for exit from Yes!Delft is - organizational growth with the increase in the number of employees with age. Some of the reasons which can be drawn based on the findings are that the startups belong to the IT sector.

However, it is interesting to note that for the startups that remained in Delft were to maintain social ties and stay closer to their clients and to have easy access to resources.

4.1.1.4 The pattern of all startups that remained in Yes!Delft

Despite the exit of more than 50% of the startups from Yes!Delft, a total of 84 startups have remained in the incubator. When checked for the type of organizations that have remained in Yes!Delft, the ownership still is private. The areas focussed by these startups is dominantly complex tech and Medtech. The startups that have remained in Yes!Delft belongs to the Medical device and Renewables and Environment industry. Apart from this majority of them hail from the IT sector. These startups have an almost equal ratio of the product and service-based startups and have an

average of 2-50 employees. Meanwhile, the startups founded between the years 2015-2018 have remained in Yes!Delft.

Some of the reasons that can be attributed with the findings as to why these startups did not exit can be attributed to - no organizational growth despite an increase in staff, closeness to resources, clients and suppliers cost-efficient facilities and reduced production costs.

4.1.1.5 Summary

From the theoretical framework developed some conclusions and insights can be drawn;

The migration of academic spin-offs over 15 years (2005-2020) is evident. Regional development is one of the driving forces behind the development of University spin-offs and other types of startups. It is not just that the employment levels rise but it also adds up to the economic development of the region. An earlier study (Khodaei et al,2012) depicted the important support factors for startups based in Delft, Wageningen and Eindhoven, and a similar study has been conducted for all the startups from Yes!Delft. Through the Desk research, it was noted that only 84 startups have remained in Yes!Delft while 106 startups have moved out of the incubator which is over 50% of the total number of startups that began with Yes!Delft. Meanwhile, the count of startups that have moved out of Delft itself is 70 which is less than 40% of the total count of startups from Yes!Delft. Therefore, it can be concluded that most startups exit incubators but remain in the same region.

The second conclusion that can be derived is that these startups enjoy the network support, prefer being connected to the parent university, enjoy the reputation of the region and thereby choose not to leave from the established region. Another factor that can be used to narrow down the reasons for the high rate of exit of startups from incubators is the number of employees. In terms of age, startups 2-3 years old (founded between 2017-18) have moved out of the Delft region while most startups that have stayed in the Delft region have also remained in the incubator are 4-5 years old (founded in 2015). This indicates that startups founded recently have a higher migration rate. As seen in the above cases, it is evident that startups with a team grown to 50-200 are more likely to move out of the region and incubator rather than teams below count 50. This confirms one of our factors from the literature review that incubators lack space to accommodate bigger teams with the growth of the organization in terms of the number of employees.

From this study, it can also be observed that the migration happens in small distances. Most of the companies leaving the Delft region locate themselves in cities around Delft such as- Hague, Rotterdam and Rijswijk and very few of them migrate to far off regions like Amsterdam, Breda etc.. This is also a strong indicator as to how these startups still prefer being close to the region of parent university. Meanwhile, considering the industry of startups migrating, it can be seen that IT and Edtech are the highest and the startups are service-based. However, this does not explain the migration of startups since there are no production costs or much R&D resources required for such startups.

Based on the available data, it can be concluded that the majority of the startups do not move from the region despite exiting the incubator. Conclusively, the factors that explain the motives of migration through this desk research are- organizational growth, market agglomeration, and the search for better business opportunities.

4.1.2 The case of StartLife (StartHub)

StartLife is one of the leading national incubators which welcomes and nurtures startups without international boundaries. Located close to Wageningen University and Research, the incubator has played a critical role in the early days and growth of over 200 startups since the year 2011. However, to identify and analyse the migration pattern of these academic spin-offs, startups that are currently incubating and previously incubated at StartHub, the student spin-off incubator were studied. StartHub, the student spin-off incubator was founded in the year 2014. These startups were also tracked for different factors such as focus area, technology being implemented, the sectors they belonged to apart from their current location and their age. The type of organization based on ownership (private, public, partnership or sole ownership) plays a major role in the location decision of startups. In addition to this, each startup was checked if it was product-based or service-based.

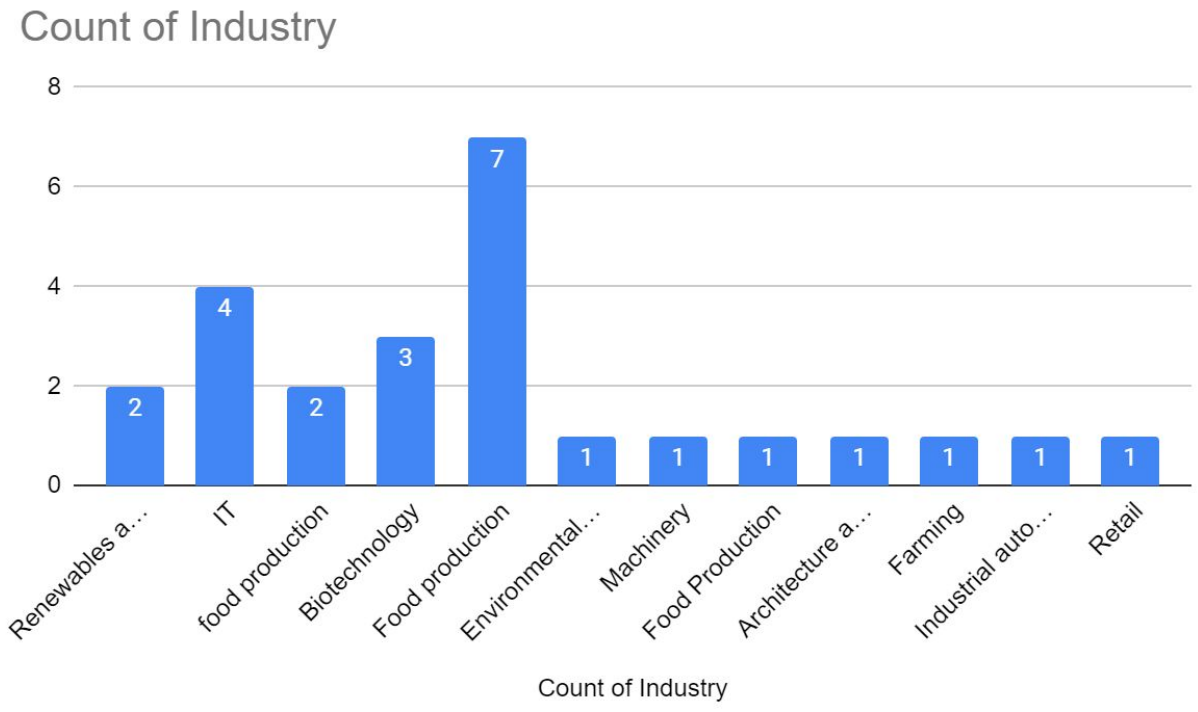


Figure 4.7 - *Count of Startups by Industry Types at Wageningen*

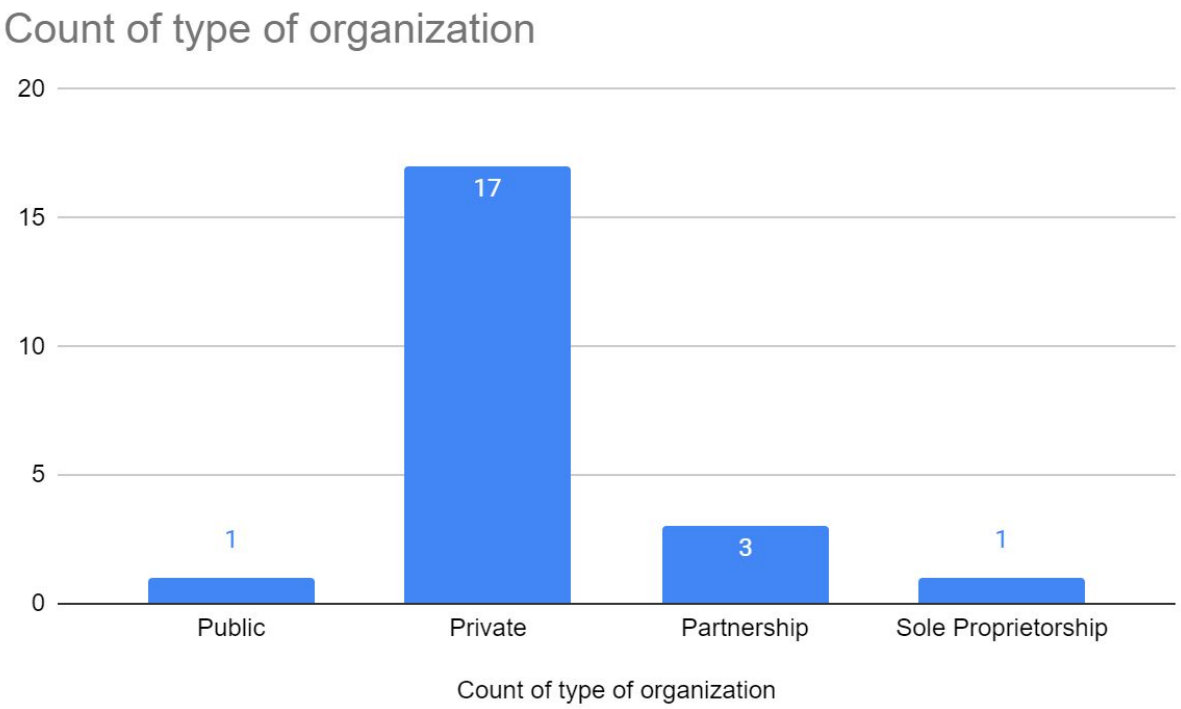


Figure 4.8 - *Count of Startups by Ownership type at Wageningen*

In 6 years, StartHub has incubated 29 academic spin-offs and other types of startups. However, it is very interesting to note that only 3 startups have moved out of the Wageningen region despite 9 startups moving out from the incubator-StartHub.

The following analysis bits depict the pattern of migration of startups from Wageningen region.

4.1.2.1 The pattern of all startups incubated in StartHub

The total number of startups studied were 29, amongst which 20 startups remain in the incubator while 9 of them have turned into alumni startups by moving out of the incubator. Also, the number of startups that have remained in Wageningen is 25. Therefore, it can be observed that the exit rate of startups from the incubator is higher than the exit rate of startups from the region itself. In terms of the type of ownership, the majority of startups incubated in Starhub are privately owned and their focus area lies in the Food production industry. Another important aspect that was considered with an intent to recognize a pattern was the age of startups. Since StartHub is only 6 years old (Founding year-2014), the majority of the startups incubated are fairly new. Most of the startups

incubated either previously or at present at StartHub were founded in the year 2018. An interesting point to note is that most of the startups in StartHub are service-based, which is surprising considering the dominance of food production startups in the incubator.

4.1.2.2 The pattern of all startups that left Wageningen

Even though the number of startups that moved out of Wageningen is extremely minimal, several observations can be made considering the various factors to recognize a pattern and reason it out.

All the 3 startups that have moved out of StartHub were traceable and are privately owned. However, these 3 startups belong to different industries and on average, the number of employees is up to 50. Therefore, one of the many possibilities for startups to move out from Wageningen could be organizational growth. Also, 2 out of 3 startups have moved to Amsterdam and one of them has moved to Utrecht, thereby leading to the assumption that these startups move out for market agglomeration and seeking out better market opportunities. Furthermore, another observation is that all these startups are service-based.

Figure 4.9 - *The distributions of startups previously and currently incubated at Wageningen across the Netherlands*

4.1.2.3 The pattern of all startups that left Starthub but remained in Wageningen

In just 6 years, 10 out of 29 startups have moved out of StartHub which brings the exit rate of the startup from the incubator to nearly 30%. The size of the organization is similar in most of these cases, 2-10, which rules out the possibility of an exit from the incubator because of organizational growth in terms of an increase in the number of employees. Also, these startups are a mix of privately-owned startups and owned in partnership and have been founded just a year or two ago. Unlike other scenarios, the startups that have moved out of the incubator yet remained in the Wageningen region belong to the IT sector and do not cluster around food tech.

4.1.2.4 The pattern of all startups that remained in StartHub

As mentioned above, the number of startups that have remained in StartHub is fairly high compared to the number of startups that have moved out of the incubator. The stay rate is 70% and therefore some motives could explain the startups' decision to stay incubated in StartHub. To begin with, most of the startups still incubated in StartHub belong to the Food industry and have an employee count of 2-10 on an average. This explains one of the factors why the startups chose to stay as no organizational growth concerning the increase in the number of employees. Also, most of these startups are privately owned and some of the startups have chosen to stay incubated despite expanding to other cities such as Rotterdam and Amsterdam. This leads to another factor to stay being- closeness to clients, products, resources and suppliers considering the mix of technologies being implemented despite a similar focus of industry being- Food technology.

4.1.2.5 Summary

This theoretical framework above helps us derive some conclusions.

The dominant migration of academic spin-offs for 6 years (2014-2020) is absent. Many startups have chosen to stay incubated in StartHub and only a few have chosen to exit the incubator and fewer have chosen to exit the region itself. Unlike the observations made from the desk research focused on Yes!Delft, the exit rate is not very high. The exit rate from the incubator is less than 30%

and amongst the ones exiting the startup, the migration rate to other cities is less than 15%. Therefore, one of the possible factors explaining the low exit rate could be the value of resources. As known, Wageningen University and Research are oriented to innovating in the Food tech industry and thus, the startups would prefer staying close to the University or at least the region to access these resources and most importantly the knowledge being developed. Also, staying close to the area of research helps startups increase their client's and stay close to their suppliers at the same time.

Although minimal, the observations show that when startups move out of the Wageningen region, they move to bigger cities like Amsterdam, Rotterdam and Utrecht. These cities are not very closely located to Wageningen but open up new market opportunities and provide startups with the options of market agglomeration.

In conclusion, the factors explaining the exit of startups from the incubator and Wageningen region are- organizational growth, market agglomeration and exploration of market opportunities while the factors explaining the stay rate of startups in Starhub are- access to social ties, resources, closeness to resources, clients and suppliers and knowledge.

4.2 Interviews

The purpose of conducting interviews to collect data as a part of qualitative analysis was to confirm the findings from the desk research, literature study and also the questionnaire responses which were open-ended. The interviews were conducted on both the ends- incubators and the academic spinoffs from both Delft and Wageningen and they were semi-structured type interviews via Skype, Zoom calls and also a telephone for a few. Additionally, to gain in-depth information about the research, the interviews also helped identify new variables of interest relevant to our study.

4.2.1 The case of Delft - Interviews

Being home to one of the world's most renowned universities - TU Delft, Delft is one of the most famous student cities with a diverse set of students hailing from different countries around the globe. The city is best known for university education and its reputation and is a hub of innovation with Yes!Delft, the largest tech incubator of Europe. Founded in 2005, Yes!Delft has helped nurture over 300 startups in 15 years, and build a strong entrepreneurial ecosystem in the region.

4.2.1.1 Summary of interview with an expert from Yes!Delft Incubator

The University of Delft (TU Delft) located in the Delft region is considered one of the best in the world. Yes!Delft is an incubator that started as a separate legal entity located close to the university in Delft region. It was started in 2014 with a focus on Information technology. It has now become a national program of the Netherlands and of late the incubator has got interests from startups all over the world. The Delft region or ecosystem in Yes!Delft is focused on Information Technology.

Yes!Delft believes in technology verticals and offers expertise both online and through events and conferences. Yes!Delft focus area includes Biotech, Blockchain or AI and prefers startups that can fit into focus area verticals. Sometimes a startup that does not fit into one of the vertical boxes may also be admitted. Yes!Delft offers two types of programs, one is the Startup incubator program, and another is the Market of accelerator programs. The graduates or PhD students from TU Delft play an important role in Technology transfer per the Director of the incubator and TU Delft is a

shareholder. The TU Delft plays an important role in scouting or selection thus having an indirect influence over a board-level meeting and while Yes!Delft scrutinizes and looks for startups, they look for ones that have a technological edge in the area of product or service they want to develop or sell. Yes!Delft can accommodate about 20-30 startups both in the validation and or accelerator programs every year.

The different types of support activities that Yes!Delft provides academic spin-offs including the validation program or lab sessions and accelerator program. They offer coaching with program management perspective, content perspective, mentoring perspective and from an expert perspective. Yes!Delft has entrepreneurs and residents who are successful with a certain level of seniority and expertise and who believe certain startups will take off and take them on board and help them in any kinds of challenges these startups or spin-offs face. And then there is a network of experts who offer legal advice or HR-related questions to startups. Yes!Delft offers networking support in the form of constant meetings every other week with 4 or 5 startups and discusses with them the challenges they face. So Yes!Delft offers consultancy on a needed basis and has expertise in marketing, program management, coaching and mentoring with about 20-25 full-time staff working for them. While in the past Yes!Delft was unstructured, over the years they have learnt to be more organized with offices and teams getting smaller and smaller. However, it is interesting to note that Yes!Delft does not offer any finance to the startups and does not take equity in startups as well.

In terms of policies, the startups must sign up a contract and Yes!Delft expects them to use the years they have in names and brands in most communications. And even if the startups publish anything on their websites, Yes!Delft expects its name to be attributed. While there are no rigid policies for the startup to exit, most of the validation apps that Yes!Delft provides are available for about 8 weeks. And the other programs provided online is for about 6 months, but startups can always tap into the resources or expertise provided by entrepreneurs and residents. Besides that, all the events the incubator organizes are always available for startups during the year. The startups can stay in the building whose ownership lies with another legal entity for any length of time and there is no incubation period. But most startups are expected to exit the incubator program once they reach a million-euro sales and are expected to abide by contract without extreme conflict of interest. If the startup is scaled up they move on their own since office spaces are not suitable for companies that grow. While some of the companies that scale up soon move out in two-three years then there are others which need a lot of validation and are there for a longer time. (5-8 years.). Finally, as a policy

of Yes!Delft the things that are not favourable to them are when startups are not willing to share Intellectual property IP or their IDs completely. If they are in the incubator not willing to attend meetings and share or disclose information for about two months, then Yes!Delft would expect the startup to leave the incubator. Per the founder, a few startups that run out of funding and with teams that are not energized liquidate in about 2-3 years and leave anyway.

Yes!Delft's primary goal is to be an enabler of technology and encourage people to become entrepreneurs. In the last 15 years Yes!Delft has with all the companies and entrepreneurs contacts they have, has helped many startups grow. Finally, per the founder, this becomes a "Word of mouth".

In the long run, Yes!Delft has the ambition to partner with other universities in the region or world.

4.2.2 The case of Wageningen- Interviews

Located in the central region of Netherlands Wageningen is renowned for its focus on food-centric technology, innovation through Wageningen University and Research. One of the national incubators, StartLife is closely associated with Wageningen University and Research. Founded in 2011 StartLife has helped over 300 startups to grow in different fields with a focus on Agriculture and food technology. To remain within the scope of the study startups from StartHub, a student incubator of WUR, an entity of StartLife has been chosen. Unlike the case of Delft, the startups selected for the case study from Wageningen are divided into two categories-

1. Left StartLife and stayed in Wageningen
2. Left StartLife and moved out of Wageningen

Considering the limited number of startups, instead of individual case analysis, all the cases have been summarised to form an overall picture.

4.2.2.1 Interview with an expert from StartLife (StartHub)

The Wageningen region or ecosystem is focused on food and agriculture technology. The University of North-Western Europe located in the Wageningen region is considered one of the best in the world for agriculture. StartLife is a separate legal entity located close to the university in Wageningen region and was started in 2010. The focus was to do something in Agriculture. It became a truly national program of the Netherlands soon and in 2018 the incubator opened for

startups from all over the world. And StartLife is 50 per cent public-funded and 50 per cent privately funded.

The different types of support activities that StartLife provides to academic spin-offs include early-stage venture building activities. Besides, StartLife also provides mentoring in the form of an accelerated 3-month program to academic spin-offs. Finally, StartLife also provides what is known as Corporate engagement program where they connect startups (academic spin-offs) with larger corporates.

The 3-month accelerator program is conducted for about two times in a year and adopts about 8-10 startups in a batch where they are given intensive training and coaching. This is the classical model or approach. StartLife can coach 16-20 startups in a year with this approach.

StartLife also provides a more customized program for startups where the startups have a collaboration agreement with the StartLife. Coaching and mentoring is more customized and not a group or cohort but more balanced approach. Some of the policies of StartLife for the startups to work in this kind of a program is that the startups should focus on food technology, have an intention to join or collaborate with StartLife or it's ecosystem and offer innovation. The academic spin-offs can stay with StartLife for more than two years and StartLife is flexible regarding this policy. It takes about seven years for some startups to hit the market and have any revenue. And in the meantime, the startups will be able to lay seed and attract funding.

While a 3 month accelerated coaching program has a clear started date and an end, it is not so with customized programs. Every year the collaboration agreement is reviewed, and an extended patent agreement provides StartLife with an opportunity again to offer more customized training. But overall StartLife has a capacity of 20 to be accommodated a year in this customized program.

As far as funding or capital support is concerned the first 100K comes in the form of a loan for the startup. StartLife with its contact from venture capitalists around the Netherlands helps the startups to network with venture capitalists, informal investors or even subsidize them with investment grants. While there is no commission offered to StartLife from startups a lot of startups not only sign the corporate partnerships but offer an annual fee for the training and coaching and networking provided. With this fee, StartLife can double its capacity. The remaining (about 50 per cent) of the money comes from university provinces as a subsidy.

While StartLife managed to establish basic functionalities in the beginning, over ten years they now managed to establish network organization and support programs. The StartLife support towards startups or spin-offs has not changed much in ten years but an interesting point to note over the years is the involvement of program partners, lawyers, military officers, consultants etc. who mingle around the ecosystem and strengthen it. And it is no longer a simple relationship between a coach and mentor.

StartLife offers a technology transfer office and they are a part of the echo system. When StartLife scouts' new companies in universities and when they see an economic opportunity. StartLife designs an optimal transfer route. Optimal transfer route could be patents and licensing, or the invention might be ideal to build a large research program when or if StartLife decides. While StartLife may itself not benefit directly from the services they offer, it is the ecosystem that benefits. StartLife quotes "We are a small wheel in the system." and eventually the ecosystem needs innovation which is richer and more sustainable. One example that StartLife cites is that when Unilever was looking to move out of Germany or England. The reason being, looking for talented personnel, did not want to be in an isolated place and were looking to scale up the business. And the reason being that "Innovation is no longer an internal business but an 'Open model '". Per StartLife, it's maybe only now starting in food and agriculture. Meaning that food companies are willing to spin out activities and are willing to spin in activities, know, adopt startups or buy them or partner with them. Food companies now start relying on startups and scallops are part of their innovation.

StartLife is not a profitable business program. While the incubator is seen as a project, the finance has its base from the university. Finally, one thing that differentiates StartLife from other incubators is that they are super focused on a specific domain. Though theoretically, the incubators are global or international, the interviewer admits its outreach is predominantly Europe.

4.3 Case Studies

The thesis in hand includes Case studies of few academic spin-offs. The case study was conducted around academic spin-offs from Delft University of Technology and Wageningen University and Research. This method is useful when researchers aim to understand complex phenomena and when existing theories or current phenomena are incomplete. In the case of Delft, multiple case studies were conducted and focused on the 7 startups that were a part of the study in 2012 (Khodaei et al.) and 2020. Multiple case studies provide a stronger base for theory building in comparison with single case studies. (Eisenhardt and Graebner, 2007, Yeoh, 2009). The data was drawn from cases of comparable spin-offs across two university cities in the Netherlands. The two technical university campuses considered for the study were Delft University of Technology(TUD) and Wageningen University and Research. These two universities were selected considering the entrepreneurial ecosystem and environment and also the explicit support program for establishing and developing spin-offs and have spun out many new academic spin-offs each year (Khodaei et al, 2020).

4.3.1 Individual case study- Yes!Delft

This section presents the results of a longitudinal study of TUDelft spin-offs cases (tracing the period of 2012-2020. The startups established in Yes!Delft have been tracked for their current location, technology or concept being mainly implemented, sector and also the area of focus. The number of employees and the age of the startups is also some of the key elements traced. Amongst the 71 startups studied by Khodaei et al in 2012, 54 startups belonged to Delft and were incubated in Yes!Delft during their initial years. Through the research conducted, it has been found that amongst the 54 startups only 41 startups remain active. In the study conducted in 2012, 45 startups from Delft had expressed their strong desire to remain in the Delft region and stay incubated in science tech park is- Yes!Delft. Due to several reasons, amongst the 45 startups, 10 startups have been shut down and are now inactive. Moving on to the active startups based at Delft, 11 startups have moved to another city, 11 startups remained in Delft but left Yes!Delft and 13 startups remained in Yes!Delft. Therefore to better understand the reasons for migration, a research questionnaire was sent to all the 41 active startups despite the migration status. 7 responses were

received and each of them was studied individually to understand the reasons behind the location decision and identify a pattern if any in terms of technology, type of organization and the focus area.

The following are the startups that responded.

1. Aanmelder.nl
2. Ampelmann operations BV
3. Holland container innovations
4. Intespring BV
5. Medishield
6. NewCompliance
7. Tribess

1. Aanmelder.nl

Aanmelder.nl is a startup that was founded in 2007 and belongs to the industry of event services. Aanmelder.nl uses complex technology and the organization delivers its service in the form of software. Aanmelder.nl is a service-based private organization founded by an alumnus of TU Delft with 11-50 Employees. In the study conducted in 2012, aanmelder had expressed a strong desire (6) to remain in Delft and the organization has continued to do so. However, the organization has moved out of Yes!Delft due to the organizational growth with the increase in the number of employees. In the study conducted in 2012, aanmelder was indeed unsure (4) about continuing in a science park. Aanmelder expected better facilities for the startups in terms of the environment such as- better cleaning and stronger internet connection from Yes!Delft which the startup did not receive during its stay.

2. Ampelmann Operations

Ampelmann operations BV is a privately owned startup founded in 2008. With a focus in the area of cleantech, the 12-year-old startup is still active and is currently located in Delft but no longer incubates in Yes!Delft. The startup is again service-based and belongs to the energy industry. Yet again, this startup-like many others in Yes!Delft has been founded by an Alumni of TU Delft and currently has around 500 employees. From the study conducted in 2012, it has been noted that Ampelmann had a very strong desire (6) to stay incubated in a science park but has exited Yes!Delft a couple of years ago. The key reason for the startup to leave the incubator has been recognized as organizational growth with an increase in the number of employees. It can, therefore, be assumed

that it was for the organization to accommodate 201-500 employees considering the limited amount of space rented at Yes!Delft.

3. Holland Container Innovations

Holland container innovations is a 12-year-old organization founded in 2008. It is a privately owned organization which uses complex technology. With the expertise of making foldable containers, the organization belongs to the transportation industry and is thereby a product-based startup. In the study conducted in 2012, HCI had responded with uncertainty (4) when asked about both remaining in the Delft region and as well as staying in a science tech park. When traced, Holland container innovations remain in Delft, however, the startup is no longer incubated in Yes!Delft. The key reasons for the startup to continue in the Delft region have been recognised as social ties and easy access to the TU Delft's resources. Meanwhile, Holland Container innovations exit Yes!Delft due to organizational growth-increase and an increase in the number of employees. The startup perceives coaching and networking events to be the areas of improvement for Yes!Delft.

4. Intespring

Founded in 2006 as a partnership, Intespring is a 14-year-old startup with a focus on MedTech. The startup is an expert in movement technology and belongs to the industry of Healthcare. It is also a service-based startup which was found by a student from TU Delft. Intespring held a positive attitude (5) when asked about remaining in the Delft region and staying incubated in a science park in the study conducted in 2012. The startup has stuck by its opinion and is still incubated in Yes!Delft and thereby has also remained in the Delft region. Some of the reasons for the startup's decision to remain in Delft are -social ties, closeness to clients, suppliers and distributors distance which is reasonable and accessibility to resources. Despite being incubated in Yes!Delft, the startup considers the rent of the facility building to be high and the need to improve R&D facilities offered by the incubator.

5. Medishield

Medishield is a privately owned academic spin-off founded in the year 2010. This 10-year startup has a focus on MedTech and belongs to the Healthcare industry. This privately owned startup is product-based and was co-founded by a Professor from TU Delft. With expertise in Biotechnology, Medishield is still incubated in Yes!Delft and hence remained in the Delft region. In the study conducted by 2012, the startup responded positively (6) when asked about remaining in Delft and was uncertain (4) about to stay incubated in Yes!Delft Despite the uncertainty, the startup has not left Yes!Delft. The reasons for Medishield to remain in Delft have been identified as- social ties and accessibility to resources. Since the startup has been found by a Professor at TU Delft, the incubation at Yes!Delft has been extremely convenient as per the startup experience. The networks and proximity to TU Delft are some of the recognized motivational reasons for Medishield to remain incubated in Yes!Delft.

6. NewCompliance

Founded in 2006, Newcompliance is a privately owned startup with a focus on MedTech. The expertise in MedTech narrows down the startup's industry to Healthcare. It is a service-based startup with 11-50 employees. Responding to the questions concerning the continuation of being located in Delft and a science park, the startup responded positively to being incubated in a science park (6) and was however uncertain about remaining in Delft (4). Confirming the confusion, NewCompliance has moved out of Delft and is now located in Hague which is the neighbouring city of Delft. The startup needed bigger storage facilities and was also growing in team size. NewCompliance perceived the areas of the capital and venture support as areas of improvement in the case of Yes!Delft.

7. Tribess

Tribess is a service-based startup founded in the year 2014. With a focus area in Artificial intelligence, Tribess belongs to the Information and communications technology industry and is service-based. It is also a privately owned startup with telecommunications as their service. Just as the startup expressed its desire to continue being located in Delft (6) and was also neutral about being incubated in a science park (5), Tribess has continued to do so by still being incubated in

Yes!Delft and remaining in the Delft region. Social ties and cheap rent are the motivational factors for Tribess to stay in Yes!Delft and not move from the Delft region.

4.3.1.1 Conclusion- Case study Delft

Summarising the above cases, one of the most compelling reasons for startups to move out of the incubator is organizational growth- increase in the number of employees apart from Yes!Delft's lack of expertise in some subject matters. Startups perceive the entrepreneurial atmosphere, network support and affordable facilities as motives to stay incubated in Yes!Delft. Meanwhile, when it comes to the regional characteristics, lack of space with a home office or a laboratory is still an issue in the region of Delft despite the cost-efficient lifestyle and resources from the TU and reputation. Thereby, many startups are forced to move to neighbouring cities despite the willingness to stay located in Delft. Some of the other reasons why startups migrate are to target a wider market, search for business opportunities and professional ties along with skilled labour. Following is a table that presents 3 cases of the 7 with quotations from the interview participants-

Name of the startup	**Aanmelder.nl**	**NewCompliance**	**Intespring**
Current location status	Left Yes!Delft, Staying in Delft	Left Delft	Staying in Yes!Delft
Reasons they moved out of Yes!Delft	-Organizational growth -Noisy environment	-Organizational growth- increase in the number of employees	
Quotes	"*Essentially, we need good engineers. And another big factor is that we had established Families and or social networks in this area. So moving to another city." - Founder*	*"Warehouse capacity, couldn't find anyplace with warehouse capacity. That is why we decided to move." - Founder*	"*And I think the physical room is too small to sustain large groups of entrepreneurs.." - Founder*
Reasons they stayed in Yes!Delft	Affordable rent	Personal convenience	-Great atmosphere -Network -Professional ties
Quotes	*"cost of living in Delft is a bit lower" - Founder*	*"Easy to reach by car although it wasn't so easy to reach by public transport. " - Founder*	*"One of the first things that always comes to mind is this great atmosphere of being in between other entrepreneurs." - Founder*

Reasons they moved out of Delft	To Build own organizational culture	Unavailability of warehouse Looking for technical people and students with software development skills or interns.	NA
Quotes	*"The best reason is that they outgrow the .. need more space and need to find their way in the world." - Founder*		*"Now, I think there is enough all available if you're brave enough to make use of it. So, I don't feel there's a missing component."- Founder*
Reasons they stayed in Delft	-Local job market -Network -Established families	*"So there's much more technology in Delft and we figured we needed to have access to these technical people.* *And this proves to be in the end that proves to be also. We needed software development.* *There was this college-going students or interns there was this idea that we could get a lot of interns" - Founder*	-TU Resources from a research perspective -Low costs
Quotes	"*The Delft area in itself is a bit too small to sustain the most viable network of interconnecting businesses that you can get in a larger metropolitan area. " - Founde*r	*"And we didn't get any support regarding healthcare, how the healthcare market is like" - Founder*	*"We have been also looking actively to Delft, to find a place because our personnel are often living around the Delft, of course. So that's a good reason to stay." - Founder*

Table 4.1 - *Quotes on decisions by Startups*

4.3.1.2 Theoretical Framework applied to Delft

For the case of Delft, the following groups were formed-

1. Startups the left the incubator and remained in Delft
2. Startups that left Delft
3. Startups that remained in Yes!Delft

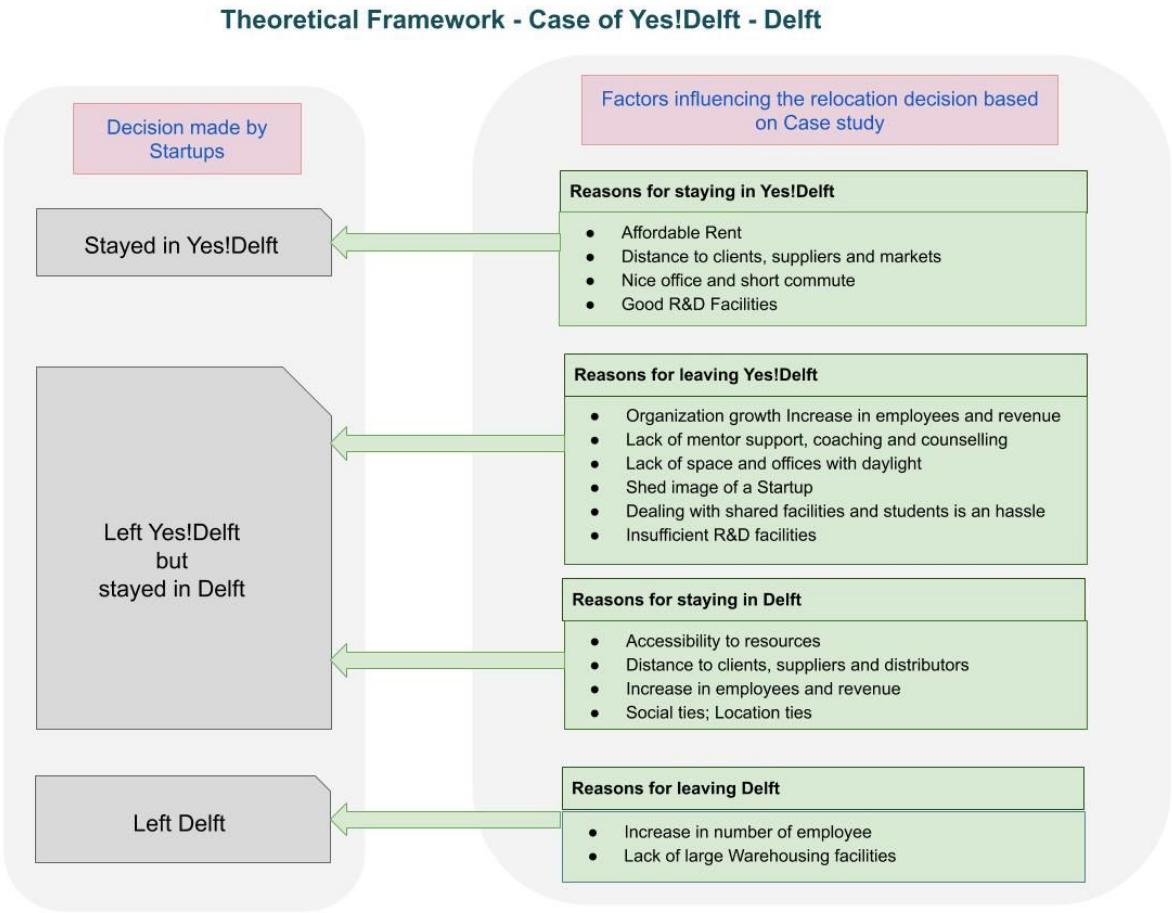


Figure 4.10 - *Theoretical Framework - Factors influencing location decision - Case of Yes!Delft - Delft*

The above theoretical framework depicts the regional and incubator factors influencing the location decision of academic spin-offs from Delft. From the interviews conducted with the incubator experts, it was revealed that there are no exit policies in Yes!Delft and it is the choice of the startup to exit the incubator. The factors that motivate the startups to stay are affordable rent, commute and distance to client's and resources and also good R&D facilities. From the desk research conducted it was observed that the majority of the startups that exit from Yes!Delft remained in

Delft and most of the startups that exit Delft remain clustered around Delft. The reasons for these startups to exit Yes!Delft was- organizational growth (increase in the number of employees and revenue), insufficient mentor support, insufficient infrastructure support with lack of bigger accommodation and issues with the shared facilities. While both the startups that remained in Delft despite leaving Yes!Delft and the startups that left Delft appreciated scale up, both these categories of startups appreciated the social ties, accessibility and availability of resources considering Delft being a university town, and the distance to their client's, distributors and suppliers. Also, the only reasons why the startups that exit delft decided to was due to lack of affordable and workshop accommodation in Delft, were keen on creating their own work culture with the increase in employees apart from finding larger space. The clustering of the academic spin-offs that exit Delft confirms the importance and benefits of resources available in Delft. Therefore, the above framework explains the factors influencing the location decision of academic spin-offs in Delft and the role of Yes!Delft.

4.3.2 Summarised case study from qualitative responses- Wageningen

Considering the minimum responses from the semi-structured questionnaire in the case of Wageningen, two categories were made-

1. Left the incubator and stayed in Wageningen region
2. Left the incubator and left Wageningen region

The startups involved in the case study for Wageningen are-

1. B-mex B.V
2. Foodcase international
3. Microserve laboratorium
4. PectoCof BV
5. Track32
6. Vaversa

While the two startups, B-Mex and Microserve laboratorium were part of the study conducted in 2012 (Khodaei et al), the rest of the startups are the recently founded startups. It is interesting to note that most of these startups are privately owned and are Food technology-based. These organizations also have an average of 2-50 employees and are service-based academic spin-offs. Meanwhile, these startups were found between the years 2012-2019. Among the 6 startups, none of them is located in the incubator currently. However, it is interesting to note that 4 out of 6 startups have moved out of Wageningen and only 2 have remained in the region. It is very important to note that the startups that have moved out of the region are located in proximity to Wageningen.

When investigated, it was found that what these startups liked about StartLife was the atmosphere and getting the "Validation" was extremely valuable. The motives for Startups during their stay at the incubator was affordable rent, mentor support. However, these startups had to exit the incubator due to personal reasons and most importantly due to lack of space since they were growing in numbers. The regional motives for Startups to remain in the Wageningen region are- social ties, university reputation, Distance to clients and markets and also personal convenience in terms of location. On the other hand Distance to clients is also a reason why the startups moved out of the Wageningen region apart from personal reasons. The startups also missed some support

factors from the incubator being- More space and higher seed capital. Conclusively, it can be noted that startups liked the mentor support and the affordable rent at the incubator during their stay and found the university reputation, distance to markets and clients as motives to remain located in the Wageningen region. With the organization growing in terms of staff, the startups wanted bigger space that was lacking at the incubator and thereby it was the key motive to exit the incubator apart from the financial support apart from personal reasons.

4.3.2.1 Theoretical Framework applied for Wageningen

For the case of Wageningen, the startups were categorised into two-

1. Startups the left the incubator and remained in Wageningen
2. Startups that left the incubator and left Wageningen (moved to another city)

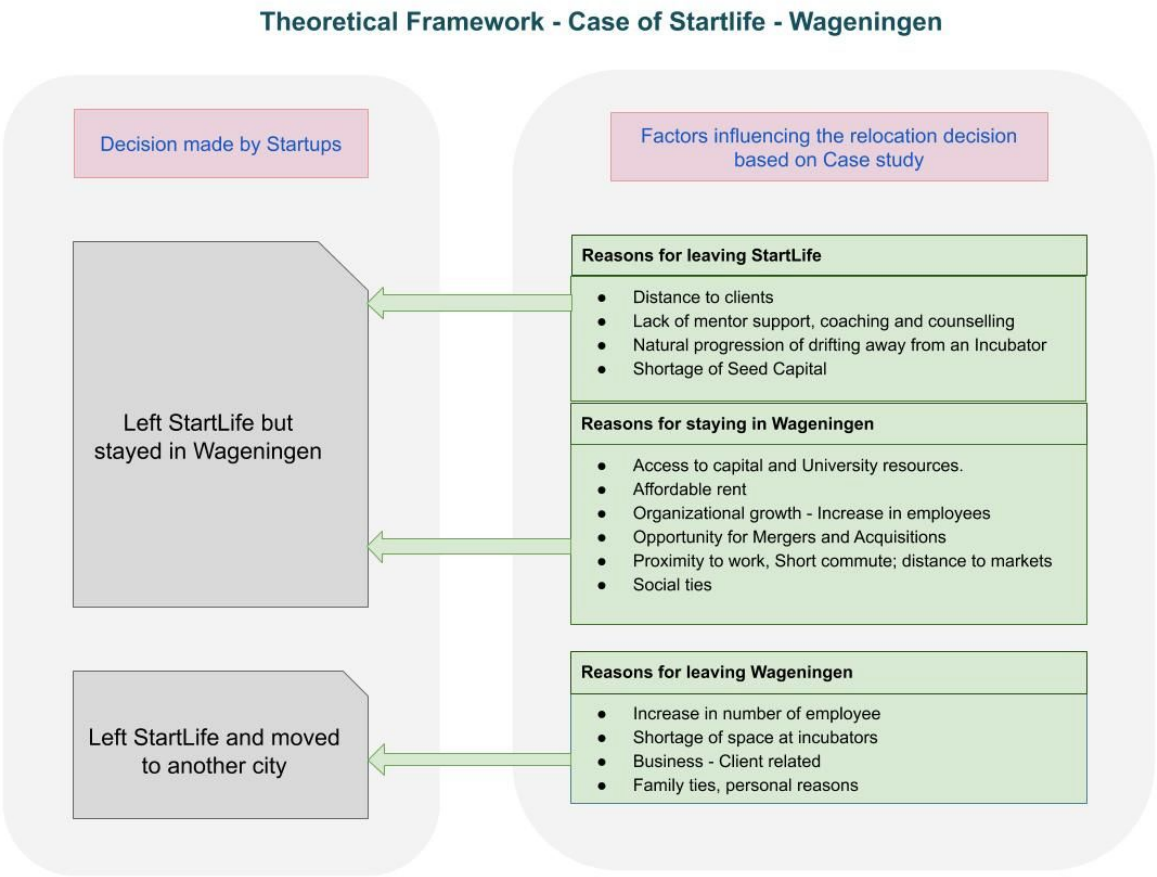


Figure 4.11 - *Theoretical Framework - Factors influencing relocation decision - Case of StartLife - Wageningen*

The above theoretical framework depicts the factors influencing the location decision of academic spin-offs in Wageningen from both the ends being region and also StartHub, a student spin-off incubator, an entity of StartLife Wageningen. None of the cases in the summarized case study stayed back in the incubator and therefore only 2 categories were devised for Wageningen- startups that left StartLife Wageningen and startups that left StartLife but remained in Wageningen. Since StartHub is still in the early years, the reasons why the academic spin-offs left the incubator were lack of mentor support and also the lack of seed capital and shortage of space in the incubator. The startups that chose to stay in Wageningen despite the exit from StartHub were access to the university's resources, social ties and the affordable rent in the region. However, from the desk research conducted it was recognized that most startups that left Wageningen did not cluster around the region like in the case of Delft but instead moved to bigger cities such as Rotterdam, Amsterdam and Utrecht. This pattern can be understood and confirmed with the factors derived from the case study- Business and client-related reasons could lead to the assumption that these academic spin-offs sought bigger opportunities and client's with another key factor being personal reasons and family ties. Therefore, the above framework explains the role of StartHub and regional factors in influencing the location decision making of academic spin-offs from Wageningen.

4.4 Results from Quantitative findings

This section consists of analysis from the longitudinal study of TUDelft spin-offs cases based on the quantitative inputs. The data from the study in 2012 (Khodaei et al) was analysed to identify a pattern relevant to the factors influencing the stay and migration of startups from incubators or the parent university region. In the previous study (Khodaei et al, 2012), 71 startups were interviewed to understand the importance of various factors affecting the location decision of startups in incubators and parent-university regions. Among the 71 startups, 54 startups were based from Delft and 14 startups belonged to Wageningen. To date, only 32 of these startups from Delft remain active and have expressed a positive response to staying in the Delft region being located close to a science tech park. Meanwhile, amongst the startups from Wageningen only 11 startups remain active During the same study (Khodaei et al, 2012), the 71 startups were asked to rate 33 different factors and variables or support influencing the stay of startups in the region as well as the incubator in the form of statements on a scale of 1-7. The Likert scale of 1-7 with the rating of 1 meaning completely disagree and 7 meaning completely agree.

To begin the analysis, the active startups are divided into 3 categories based on the current location status as following-

1. Stayed in Yes!Delft
2. Stayed in Delft but left Yes!Delft
3. Left Delft region

Similarly, for the Wageningen, 2 categories were made-

1. Left the incubator and stayed in Wageningen
2. Left the incubator and left Wageningen

The mean values were calculated both across the table for each of the active academic spin-off and down the table for each of the statements representing the influential factors and variables. Once the mean values were generated they were further categorised as LOW, MEDIUM and HIGH based on the mean values-

- LOW - Below 3
- MEDIUM - 3 and above- below 5
- HIGH - 5 and above

Further, the support variables can be categorised into 5 types -

1. Regional support
2. Infrastructure support
3. Network support
4. Business support
5. Financial support

4.4.1 Comparison of support factors by decision at Yes!Delft

When seen from a bigger perspective on a general aspect, it can be observed that the most appreciated support by all the 3 groups of startups is theRegional support and the type of support. The least appreciated is the Infrastructure support.

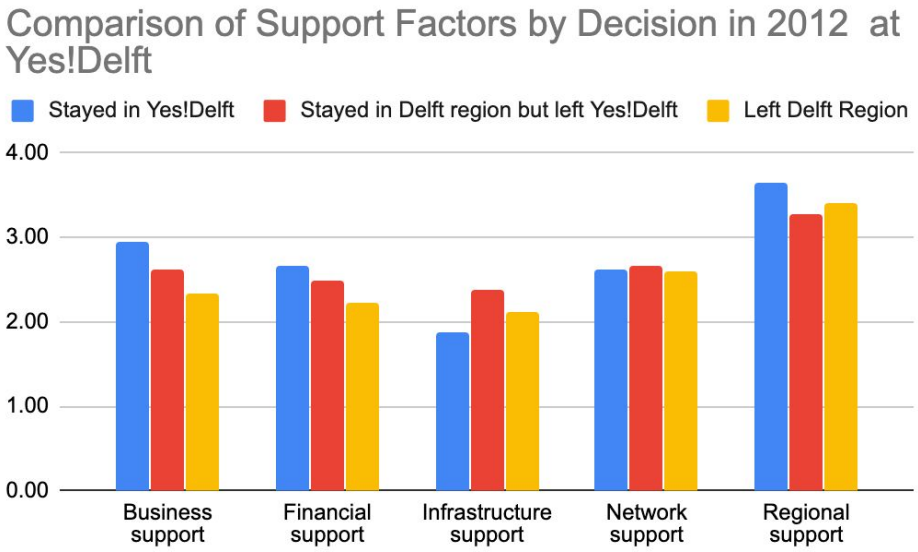


Figure 4.12 - *Comparison of Support Factors Rating by Decision in 2012 at Yes!Delft*

During the 2012 study of support factors, Infrastructure Support was considered to be the lowest by all Startups. Regional Support was rated as High by all startups indicating that the region was an important factor in their decision to stay as well. Business Support, Financial Support and Network support were considered to be average. However, Business Support was comparatively rated amongst the medium factors.

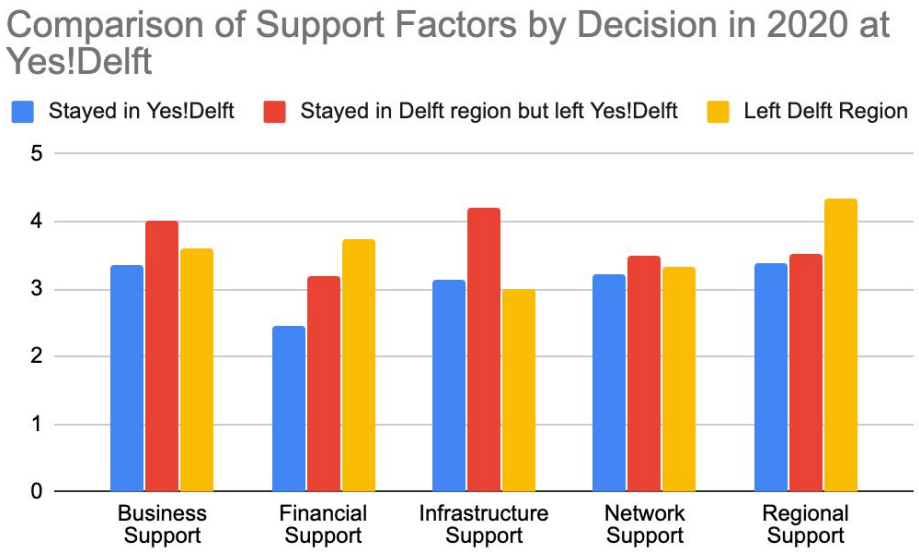


Figure 4.13 - *Comparison of Support Factors Rating by Decision in 2020 at Yes!Delft*

The study in 2020 reveals that the Infrastructure Support has improved since 2012 as can be seen by the improved ratings and matches the ratings provided for the other factors. While Regional Support remained close to the 2012 ratings, the other factors namely Business Support also improved. Financial Support ratings have improved but those who stay at Yes Delft marginally.

Close observation shows that the startups that continue to stay at Yes!Delft rate the incubator support at lower levels than their counterparts who left the Incubator.

Combining the ratings of the support factors from 2012 and 2020, it can be seen that Yes!Delft has improved overall, but there are areas of improvement in Financial, Infrastructure and Network Support to make the incubators more attractive.

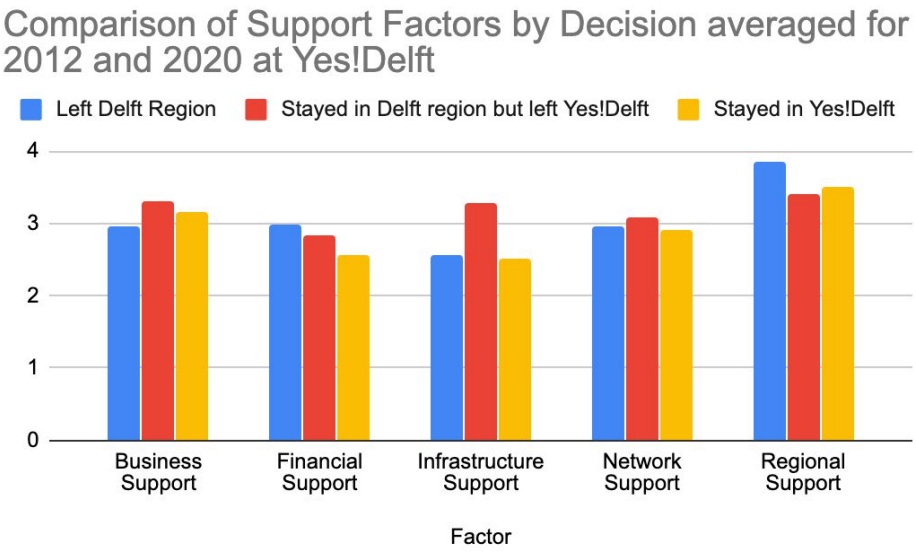


Figure 4.14 - *Average of Rating by Support Factors in 2012 and 2020 at Yes!Delft*

Most companies that leave rate the Infrastructure and Financial support from Medium to Low.

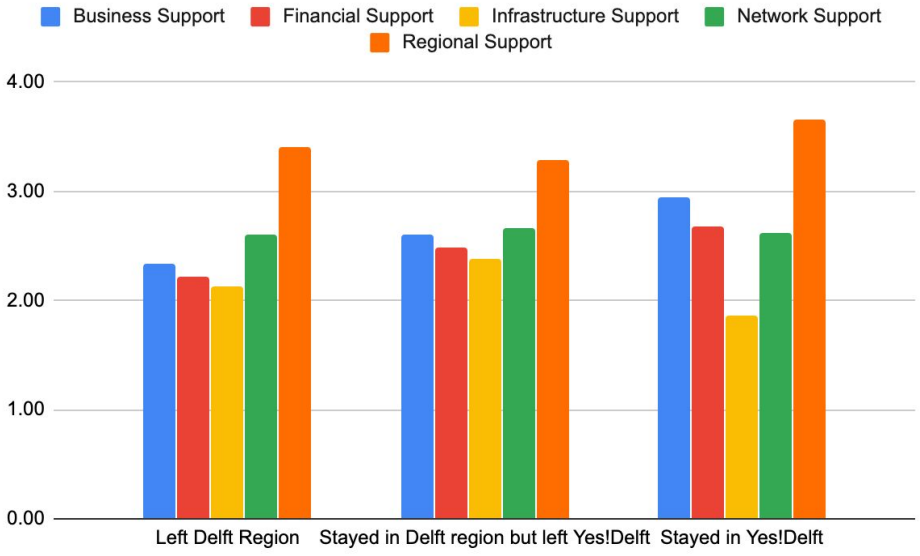


Figure 4.15 - *Comparison of Support Factors Rating by Decision in 2012 and 2020 at Yes!Delft*

Regional support continues to be rated highest by all startups regardless of their decision while Infrastructure remains to be the lowest appreciated and needs improvement.

4.4.2 Comparison of support factors by decision at Wageningen

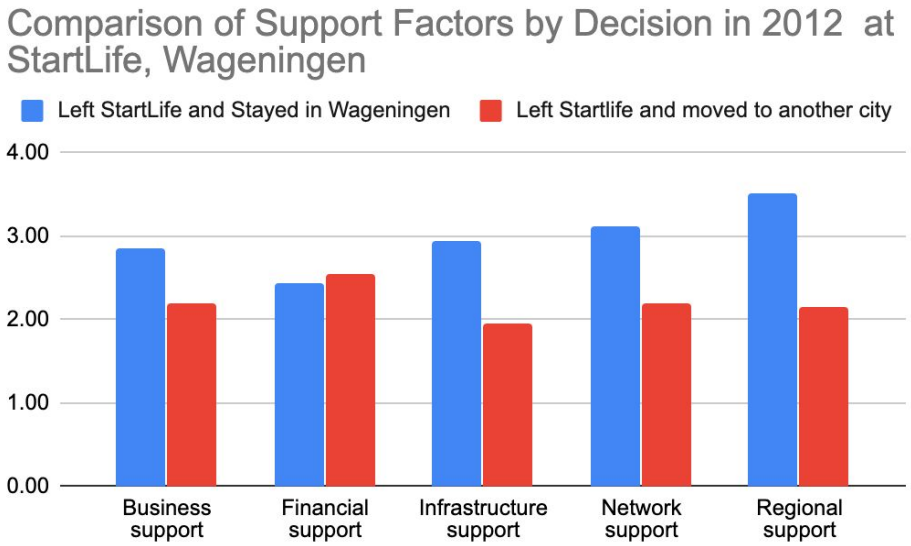


Figure 4.16 - *Comparison of Support Factors Rating by Decision in 2012 at Wageningen*

During the 2012 study of support factors provided at StartLife, the companies that left the incubator perceive that the Infrastructure support as very low while rating other support factors also as low.

The latest study shows that the companies who have left have a greater appreciation and rank the support factors at a higher level than in 2012, indicating that there has been a step improvement at the StartLife Incubator.

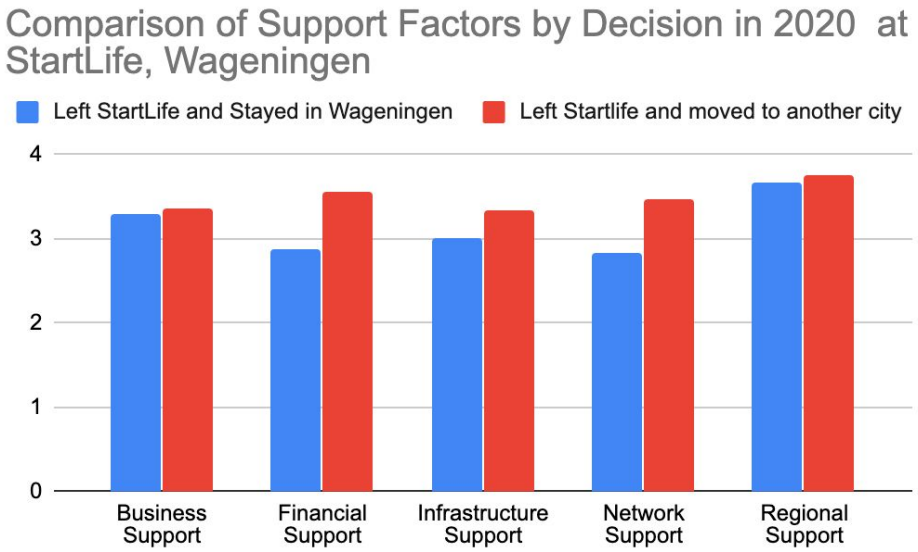


Figure 4.17 - Comparison of *Average Rating by Support Factors in 2020 at Wageningen*

The data, however, lacks the perception of the startups who continue at StartLife.

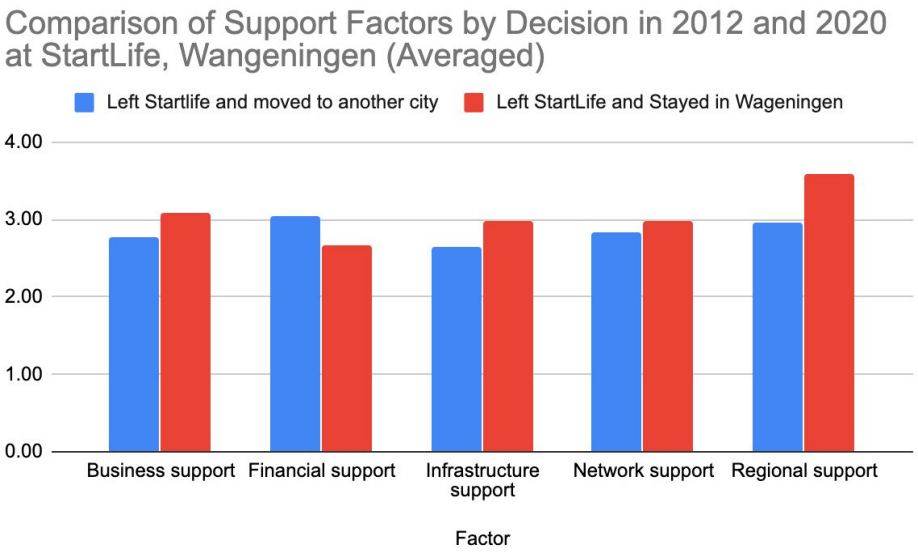


Figure 4.18 - *Comparison of Average rating of Support Factors in 2012 and 2020 at Wageningen*

As seen from the above diagram, the Regional Support at Wageningen has improved. Companies still rate the other factors as improved to Medium level.

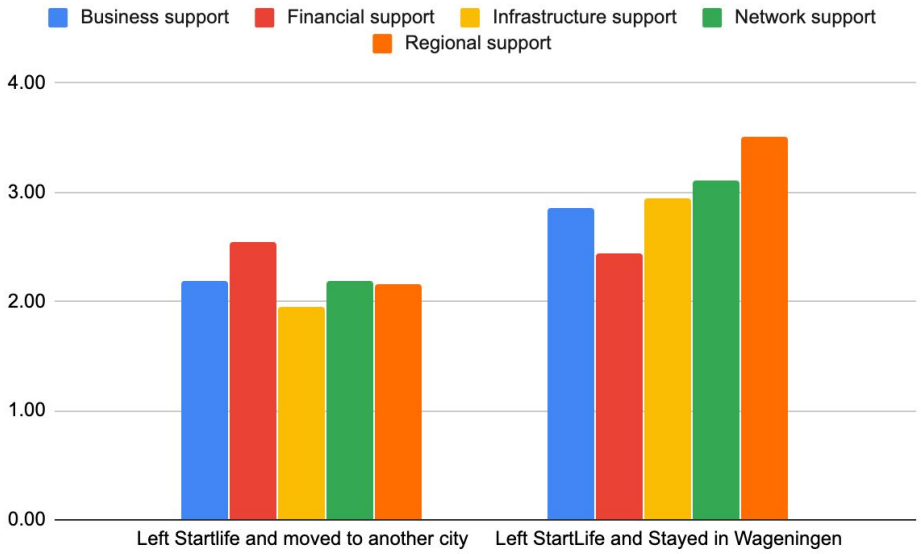


Figure 4.19 - *Comparison of Average rating of Support Factors in 2012 and 2020 by Decision at Wageningen*

The Startups who stay in the Wageningen region still have a high appreciation of the support factors provided by StartLife.

4.5 Conclusion

From the above two cases, it can be noted that in both the cases of Delft and Wageningen the migration of few startups remains in the neighbouring cities of the parent university which leads to a conclusion that these startups enjoy the reputation and do not want to break the local ties. One of the most cited reasons why the startups have moved out of the incubator is the lack of space. With the growing number of employees, it becomes extremely difficult to manage people in a small area and therefore startups prefer bigger space and better infrastructural facilities. Moreover, with growth, startups prefer having their place. Considering the regional motives, both Delft and Wageningen are student cities, the costs are affordable and are cost-efficient seedbeds for innovation and entrepreneurship. The universities also give startups the advantage of easy access to resources and social ties. Also, distance to client's, employees and markets differ for each kind of startup based on the actor and technology and thereby different startups have different opinions

concerning this factor. Therefore, despite the distance and differences, the location choices of startups from these two different cities remains the same.

The following tables summarise the insights from the interviews with incubator experts from both the regions-

Factors	**Yes!Delft incubator**
Strategy (the process of accepting startups)	*"The TU is a shareholder in yourself. So they will always play a role in it because they sit on the board and they have an important say, in a lot of the process and a lot of decisions, of course." - Founder*
Activities	*"Basically what we do in this validation program in six weeks of two days a week, we take them through very quick problem solution bits."- Founder*
Policies	*"if a company grows very big and it's in a very fast and they need more office space and say the building cannot facilitate it, or we don't have the space suitable then normally they will move out of the program"- Founder*
Benefits	*"The goal of yourself is being an enabler of technology development and also employment in the region… It becomes a word of mouth"- Founder*
Preferred industry	*"Prefer startups with a strong say technology, focus or technology background. And then we have a couple of focus areas, for instance, .biotech, we have blockchain, AI, the types of technologies, so preferably a startup that can be placed or fitted into the existing focus area. Verticals" - Founder*

Table 4.2 - *Insights gathered from Interviews with Yes!Delft*

Factors	**StartLife**
Strategy (the process of accepting startups)	*"Our programs decided to take over the same focus just university so we only do it for the EdTech startups"*
Activities	*"Two times per year, we adopt between eight and 10 startups, which go to our super-intensive high-pressure system. This is to accelerate, so, so they join us for three months".*
Policies	*"There should be some existing relationships with our ecosystem or an intention to connect your ecosystem, meaning that you either want to collaborate with the university or you want to collaborate with other startups"- Founder*
Benefits	*"The benefits eventually arise for consumers. We need innovations. Yeah, richer and more sustainable… We don't have to benefit you know, we are a small wheel in the system." - Founder*
Preferred industry	*"We're doing something around agriculture. So we like to be co-incubated by you because you guys are all about the food" - Founder*

Table 4.3 - *Insights gathered from Interviews with StartLife*

Chapter 5 Conclusion and Discussion

In this chapter, the main research question and objectives formulated in Chapter 1 are revisited to conclude the study confirming that the objectives of the study have been reached.

5.1 Revisiting main research question and research objectives

The objectives of this research are:

- To identify the pattern of startups incubated and the benefits of helping startups to the incubators.
- To identify the migration pattern of academic spin-offs from Delft and Wageningen.
- To find out the reasons and factors behind the location decision of academic spin-offs from Delft and Wageningen.
- To understand the role of incubators in influencing the decision making of academic spin-offs in the form of support or policies.

Thus, the main research question is created as follows:

How is the migration pattern of academic spin-offs in Delft and Wageningen and what is the role of incubators influencing their location decision?

In the previous chapters, several sub-research questions were framed to answer the main research question. In chapter 4 the answers to these sub research questions have been answered. Thus, the answer to the main research question will be revisited to form recommendations to help incubators improve their support to retain academic spin-offs, especially in Delft and Wageningen. The recommendation will focus on which support factors are to be improved by the incubators.

From the desk research, it was discovered that most academic spin-offs locate themselves around the parent university region despite exiting the incubator or moving out of the university town. This reflects the importance of benefits of the social ties, reputation and also the access to resources of the parent university region. The migration pattern has been depicted in the form of a map after

tracing the current locations during the desk research. Meanwhile, the exit rate of the startups in the Delft incubator is comparatively low compared to that of Wageningen. The pattern recognized through the desk research was that startups exit the incubator after a certain age and also with the increase in the number of employees.

Based on the interviews conducted it was found that, although none of the incubators has a certain preference of startups and is welcome to all the startups from different focus areas, Wageningen, in particular, is a hub for encouraging food tech and agricultural tech startups. While the activities and the support given remains similar for both the case of Yes!Delft and Wageningen, the policies remain similar with no rules concerning termination of the incubation period of any academic spin-off unless lack of transparency. Both the incubators are focussed on regional development and are also welcome to startups from different regions and also internationally.

The case studies conducted for both regions helped gain a lot of insights concerning the reasons why startups leave and stay in incubators and also the region. As far as the exit from the incubators is concerned, organization growth, need to build a better work culture are the key reasons why academic spin-offs leave incubators in both the case of Delft and Wageningen. Meanwhile, the motives for academic spin-offs to remain in the parent university region are recognized as - social ties, access to resources and also the university reputation as mentioned earlier. The only factors that lead to academic spin-offs migration from the parent university region are- lack of workspace close to the office, market agglomeration, better market opportunities, distance to clients and job markets and also some social factors such as family location and personal convenience.

To confirm the data collected in 2012, a new questionnaire was generated to analyse the factors based on the Likert scale. In conclusion, the most important factors of support for academic spin-offs to be retained in the incubator are infrastructural support, network support. As far as the region is concerned, the academic spin-offs truly appreciate the social ties, availability and access to affordable resources and the market opportunities as key factors while making location decisions.

5.2 Theoretical framework

Based on the study, an overall framework has been generated covering the Delft and Wageningen universities and regions. The first columnar portion of the framework lists the influential factors for

location decision making based on the literature study conducted while the third section of the framework depicts the factors that have been confirmed from the case studies conducted. The section in the middle represents the group's current location status and connects sections 1 and 2 accordingly.

For the case of Delft, the following groups were formed-

1. Startups the left the incubator and remained in Delft
2. Startups that left Delft
3. Startups that remained in Yes!Delft

For the case of Wageningen, the startups were categorised into two-

1. Startups the left the incubator and remained in Wageningen
2. Startups that left the incubator and left Wageningen (moved to another city)

5.2.1 Theory - basis and description

From the earlier studies conducted it has been understood that the migration of any organization is relevant to its growth and arises from the need for better resources (Barney, 1991). From a resource-based view, organizations tend to locate themselves based on the availability and accessibility to these resources. The performance of any firm is influenced by locational characteristics (Dohse, 2004). With the results of this study conducted some motives were derived based on the data collected and the analysis carried out.

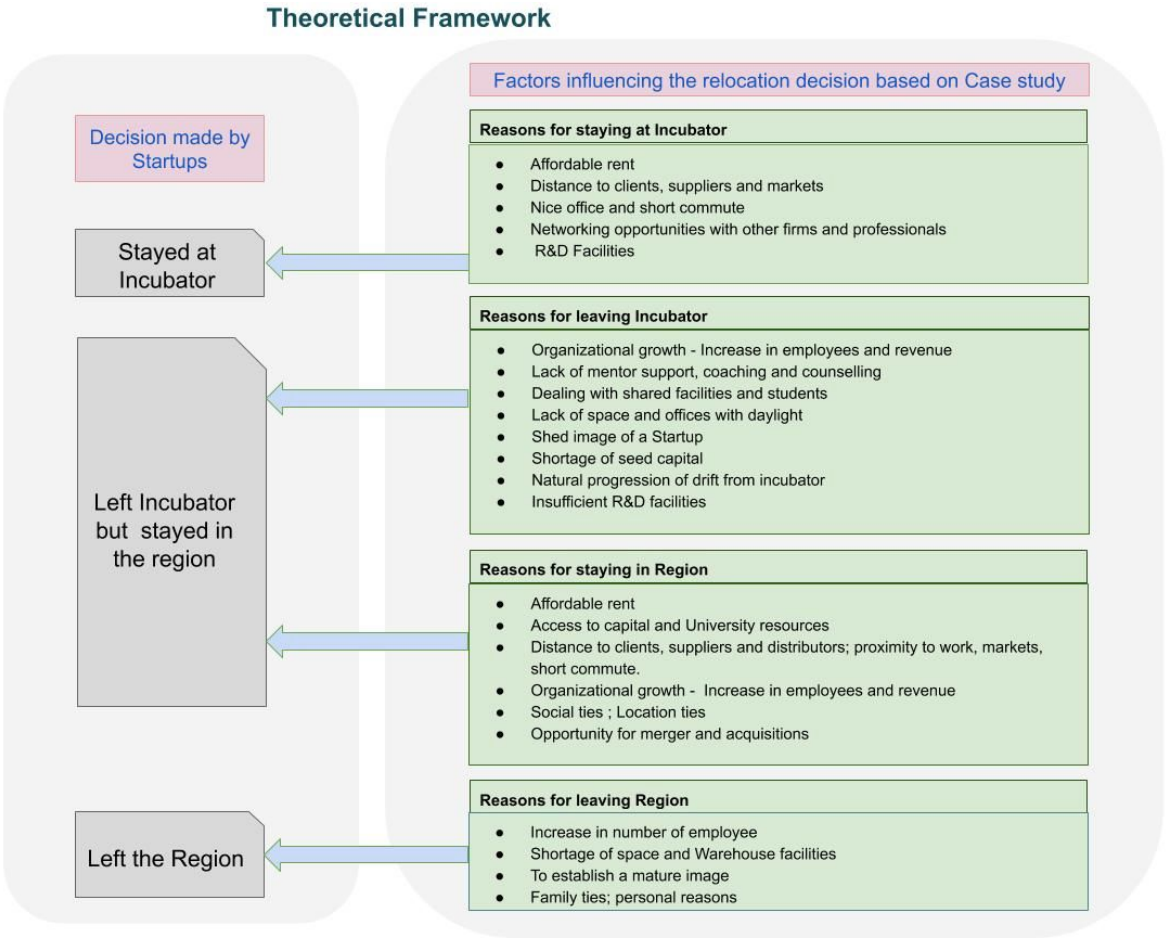


Figure 5.1 - *Overall Theoretical Framework*

From this study through the **desk research**, it has been observed that most of the academic spin-offs that exit Delft are still located around Delft while the academic spin-offs that exit Wageningen moved to bigger cities. This pattern of clustering both around and away from the parent university region can be explained by the findings through the qualitative and quantitative analysis conducted.

From the **qualitative analysis**- social ties, accessibility to resources and also the distance to client and suppliers were some of the elements identified as influencing the locational choice of academic spin-offs from Delft. The clustering of academic spin-offs around Delft exhibits the benefits of the Regional support received from the parent university region.

Good R&D facilities provide an exceptional competitive advantage to spinoffs as the spin-offs activities in the early stages of growth are focused on research and development.

Networking and social ties are most appreciated by academic spin-offs as it opens up windows of opportunities in various forms like funding support, knowledge exchange, seek merger and acquisitions. Startups presented with network connections have a higher probability of success moving out of the incubator. Incubators offering valuable social ties are likely to churn out successful spinoffs. University resources, akin to social network enhances the knowledge base and recruitment of talented resources. Access to University resources encourages the spinoffs to stay in the region even if they leave the incubator.

In conclusion, startups move out if they do not find sufficient R&D facilities, and networking within the incubator especially during their growth phase. Furthermore, spinoffs aspire to have a reputable image as they grow and value it the most for maintaining competitiveness.

The data collected from the interviews revealed that the academic spin-offs exit the incubator or the region itself when they are scaling up. These academic spin-offs also expressed the lack of incubator support in terms of mentoring during the scaling stage. Spinoffs value the mentor support, coaching resources very high early in the lifecycle and will expect to benefit from it through maturity and will stay in the incubator if made available.

Lastly, organizational growth in terms of the number of employees is the most stressed motive during the study. Workforce increase relates to the need to house more people and forces the startups to move out of the incubator or a region. If rent is not affordable, the startup will need to move to keep costs down.

Therefore, the study conducted shows the importance of regional support and the lack of infrastructural support which is the key area of improvement.

5.2.2 Inferences from Theoretical Framework

Incubators strive to help spinoffs succeed. A spinoff leaving an incubator soon with substantial growth in revenue and recognition is a sign of a successful incubator. If a spinoff chooses to leave the incubator before reaching a maturity stage due to the factors such as rent, insufficient infrastructure, network, etc, then the Incubator needs to focus on those areas.

Incubator support factor(s) influencing decision (Yes!Delft) - Validating Quantitative data with Qualitative data

	Quantitative Results (**2020**)	Qualitative results (**2020**)		
Decision of Spinoff	**Questionnaire responses**	**Interviews**	**Stage**	**Confirms to Quantitative Responses/Theory**
Stay at Incubator	Rate the Business, Network and Regional support high over Infrastructure and Financial Support	Great atmosphere, network and professional ties, access to University resources keeps them at Delft. (**Network Support**) However, the workspaces/garages are too small (**Infrastructure Support)**	Scaling up	Yes
Stay in Region	Consider the Infrastructure and Business support to be better than the Financial network and Regional Support	Left Incubator looking for a professional environment. Staying in the Region because of access to the job market, family ties (**Network support**)and lower cost of living outside the incubator (**Infrastructure Support**)	Scaling up	Confirms for Network Support. Does not confirm for Infrastructure Support.
Leave Region	Consider the Regional, Financial and Business support better than Network and Infrastructure Support	Seeking market agglomeration (**Network Support**), availability of skilled talent outside Delft and distance to markets, Increase in employee and need for space (**Infrastructure Support)**	Scaling up	Yes

Table 5.1 - Confirming quantitative and qualitative findings

Based on the above table, the following are the findings :

1. Spinoffs that stay at the incubator value the network access and resource access provided by the incubator being in a university setting.
2. Spinoffs staying in the region consider the regional support better but appreciate the Infrastructure at the Incubator.
3. The qualitative support points to high value being assigned to network support that arises from family ties as a reason to stay in the region.
4. Spinoffs exiting Delft leave seeking better resources and opportunities that the Delft Region or the Incubator do not offer and is primarily the Network
5. They are also seeking better infrastructure support outside of the region.

Many factors were investigated during the literature study which forms a strong base for the thesis in hand. The key concepts studied in the literature review are- resource-based view, entrepreneurial ecosystem, the influence of incubators on the growth of startups, and also existing literature on the factors influencing the location decision of academic spin-offs. With the adoption of Barney's VRIN framework (1991) for the current study, the theory of the firm's strategy is dependent on the firm's resources and has been one of the pillars on which the study stands. Also, with the encouragement of universities in the Netherlands, the number of startups has been on a rise over the years leading to a significant decline in the unemployment rate (Stam, 2014). Many universities have university-business incubators located closely, such as Delft and Yes!Delft, Wageningen and StartLife, Erasmus university and Yes!Delft etc.

The various categories of support studied in the literature review are business support, infrastructural support, finance support, network support and legal support. These have been implemented through the questionnaire used for data collection. Regional support is another category which has been added to the support categories studied from the literature and covers the regional factors of support which are beneficial to the growth of a startup such as university reputation, availability of production facilities, costs etc. A study by Khodaei et al (2012) confirms that Business support was the most important support sought by academic spin-offs which were re-studied through the thesis at hand.

Two different types of factors were recognized from the existing literature which influences the location decision of academic spin-offs- internal, and external. The internal factors recognized

were- changes in the organizational structure, organizational goals, and the external factors recognized were changes concerning suppliers and distributors, labour market issues, economic factors, quality of location and also policies.

The study conducted in 2020 checks if the existing factors still hold strong in influencing the location decision of academic spin-offs from both incubators and the region. In terms of the regional exit, the factors affecting the location choice are- social ties, resources from TU, availability of human resources, low costs and personal reasons such as commute to work and established families. Social ties, availability of labour resources are some of the factors which were recognized during the literature study and it still holds. Since there has been no study concerning reasons for exit from the incubator, the thesis in hand makes efforts to find out the exit choice factors.

The identified reasons for exit were organizational growth, lack of mentor support, labour market issues, need for better work culture and environment, market agglomeration. While these were reasons that led to the exit of academic spin-offs from both incubators and regions there are also factors which bind academic spin-offs to the region and incubator and make them stay thereby playing an important role in the location choice.

The quantitative study involved a comparison analysis between the data collected in 2012 and the new data. It was found that although regional support and business support were much appreciated in 2012 and infrastructural support was the least appreciated, currently (in 2020), the regional support is the most appreciated with infrastructure support still being one of the key drivers to exit academic spin-offs out of the incubators. This explains the clustering of academic spin-offs happening around the Delft region despite moving to another city.

5.3 Discussion and Academic contribution

From the study conducted, the differences in the migration pattern of academic spin-offs are evident despite the similar forms of support offered by their respective incubators. It was learnt that incubators do not have strict exit policies for academic spin-offs but aim at contributing to regional development by helping them grow.

Based on the findings, the following are the recommendations for incubators to ensure the success of spin-offs.

1. Provide better R&D facilities.
2. Enhance infrastructure support to offer expandable space.
3. Improve Networking between stakeholders for the ecosystem.
4. Regulate the environment to promote a professional image.
5. Address the needs of academic spin-offs from all the growth stages.

However, incubators cannot remain seedbeds for academic spin-offs forever. Some academic spin-offs scale-up seeking bigger accommodation, different work culture and environment, hassle-free shared facilities etc. The importance and benefits of social ties and regional resources were also highlighted in the findings of this study. Thereby, incubators can still support these academic spin-offs through network support, business support and mentor support encourage the academic spin-offs to stay located in the region itself.

Moreover, it is also the responsibility of the university and the entrepreneurial ecosystem and not just the incubators to influence academic spin-offs to stay in the region. Hence, regional development can be enhanced if the support appreciated and required by the academic spin-offs are fulfilled by not just the incubators but also the whole entrepreneurial ecosystem.

Furthermore, this study fills the research gap recognized in the initial stage by tracing the migration pattern of academic spin-offs of two regions and investigating the reasons that play a major role in influencing the location choice both regional and incubator based. Earlier studies reflected the factors influencing the location decision of startups and firms from only region-based perspective. Apart from being a conformational resource to the existing, the thesis has additional findings. The study investigated the migration pattern of two university towns thereby narrowing down the focus to academic spin-offs. The incubator related factors responsible for the migration pattern of academic spin-offs were recognized since they play a major role in regional development and innovation. Therefore, the study is a good addition to the existing literature on migration patterns of startups, location choice of startups, important incubator support and regional factors enhancing regional development.

5.4 Practical Relevance

This research studied the migration pattern of academic spin-offs and also investigated the factors influencing the location decision choice. In terms of migration, the stay and exit rates were derived from the region as well as the incubator.

Firstly, the study confirms the importance of regional support and the influence of it on the stay and exit decision of academic spin-offs. Availability and accessibility to resources, university reputation and knowledge gained about companies located in the region and social ties are the essential drivers of migration of academic spin-offs. While the business support from the incubator still holds as important for the stay of academic spin-offs in incubators, infrastructural support has been recognized as an area of improvement.

Conclusively, the findings of the study align with the resource-based view and academic spin-offs locating themselves in resource-rich environments. If incubators do not help the startups that scale up with larger accommodations and a regulated environment, these startups are more prone to leaving the incubator. On the whole, incubators must focus and engage in startups from all growth stages.

5.4 Study limitations

Due to the outbreak of Covid-19, the study encountered some roadblocks, especially during the data collection phase. It was initially decided to interview at least 10 of the academic spin-offs from both Wageningen and Delft which were involved in the study. However, it was not achieved due to the evolving pandemic situation. It was only later on that it was decided to send out questionnaires which were also delayed due to the situation.

Apart from the hurdles that arose without warning from the pandemic, tracking the startups involved in the 2012 (Khodaei et al) study was time-consuming due to the 8-year gap. Moreover, StartLife had just begun as an incubator during the 2012 study and therefore the decision to do desk research for StartHub, an entity of StartLife which was founded in 2014 was a crucial step. As far as the qualitative analysis is concerned, there were many missing values, which was handled by assigning a neutral value of 4 for the 1-7 scale. This step helped to obtain a complete data set with numerical values enabling the complete quantitative analysis.

The data collected in 2012 included the academic spin-offs from Delft in the majority. The sample must be balanced to achieve a generic result for the framework. The study limits to two locations of Netherlands- Delft and Wageningen. There could be other influential factors when studied from a bigger perspective at a regional level by clustering the incubators from different parts of the Netherlands such as- Zuid Holland, Noord-Holland, Gelderland etc.

Furthermore, the data collected in 2012 and 2020 may both be slightly biased. One of the research methods being case study is based solely on the respondents for data collection. This data is utilised to complete the study neglecting the opinions of the non-respondents. The neutrally worded questionnaire helps us reduce bias to a large extent. However, since the questionnaire consumed quite some time, the process of receiving responses was stopped after a few weeks and thereby this could introduce non-response error and also sample bias.

5.5 Future research and recommendations

a) While the intention to stay in Delft is considered a dependent variable with the assignment of numbers on Likert scale (1=completely disagree, 5= completely agree), this study for 2020 the 3 cases of startups (that stayed in Yes!Delft, moved out of Yes!Delft and remained in Delft region and moved off Delft entirely) a quantitative analysis in terms of ranking assigned to each kind of support has been gathered by interviews and questionnaires. However for the case of Wageningen, only 2 cases were considered (left Starthub and stayed in Wageningen, left StartHub and left Wageningen). Future research may consider 3 scenarios as in the case of Delft for new results.

b) This case study of the thesis focuses mainly on academic spin-offs from Delft and Wageningen which were included in the study in 2012. Future research can focus on all the spin-offs associated with Yes!Delft and StartLife and study the location decision in depth through interviews and questionnaires for more confirmation of the hypothesis.

c) The quantitative data used for the study can further be analysed with IBM SPSS or other statistical analysis tools to derive the correlation between the various factors etc.

d) The study included an interview from an expert from StartLife Wageningen but the desk research was conducted based on StartHub, an entity of SatrtLife due to the current COVID situation. Following studies can consider interviewing StartHub experts for insights in depth.

e) The factors influencing location choice can be identified and discussed from the perspective of the growth stage of the academic spin-off by collecting data concerning their exit year and correlating it to a growth model and recognizing the growth stage at which academic spin-offs exit the incubator or the region.

Appendix

6.2 Appendix A: Tables

6.2.1 Tables used for quantitative analysis of Delft and Wageningen

6.2.1.1 Yes!Delft FACTORS with HIGH Ratings leading to Startup Decision

Variable	Startups that left Delft region	Startups that stayed in Delft but left Yes!Delft	Stayed in Yes!Delft	Grand Total
Being located in Delft gives us a positive image on our activities	**1**	**1**	1	3
Being located in Delft gives us a stronger reputation		**1**	1	2
Being located in Delft gives us an inspiring environment to innovate			1	1
Being located in Delft gives us easy access to the knowledge being developed at other companies			1	1
Being located in Delft gives us easy access to the knowledge being developed at the university	**1**			1
Grand Total	**2**	**2**	**4**	**8**

Table A.1 - *Yes!Delft FACTORS with HIGH Ratings leading to Startup Decision*

6.2.1.2 Yes!Delft FACTORS with MEDIUM Ratings leading to Startup Decisions

Variable	Startups that left Delft region	Startups that stayed in Delft but left Yes!Delft	Stayed in Yes!Delft	Grand Total
Being located in Delft gives us a stronger reputation	**1**			1
Being located in Delft gives us an inspiring	**1**	**1**		2

environment to innovate				
Being located in Delft gives us easy access to the knowledge being developed at other companies	**1**	**1**		2
Being located in Delft gives us easy access to the knowledge being developed at the university		**1**	1	2
Being located in Delft gives us more chances for the firm to succeed	**1**	**1**	1	3
Being located in Delft gives us more ease to maintain an academic status	**1**	**1**	1	3
Being located in Delft gives us the opportunity to maintain social ties	**1**	**1**	1	3
how to convince and contact financers, banks and VC	**1**	**1**	1	3
how to negotiate or convince clients	**1**	**1**	1	3
The management of Yes!Delft has helped us with or pro - ..how to convince and contact financers, banks and VC		**1**	1	2
The management of Yes!Delft has helped us with or pro - ..how to negotiate or convince clients		**1**	1	2
The management of Yes!Delft has helped us with or pro - ..to evaluate the appropriate market or applications for our technology		**1**	1	2
The management of Yes!Delft has helped us with or pro - ..to find expertise in the university	**1**	**1**	1	3
The management of Yes!Delft has helped us with or pro - ..to further develop our technology know-how and research		**1**		1
The management of Yes!Delft has helped us with or pro - ..to get in contact with people in the industry	**1**	**1**	1	3
The management of Yes!Delft has helped us with or pro - ..to synthesize scientific knowledge with an understanding of markets		**1**	1	2
The management of Yes!Delft has helped us with or pro - ..to think about building the management team and hire people		1	1	2

The management of Yes!Delft has helped us with or pro - ..to think about the ways we can generate income		1	1	2
The management of Yes!Delft has helped us with or pro - ..to write down our financial application		1	1	2
The management of Yes!Delft has helped us with or pro - ..to write down our subsidy application		1	1	2
to evaluate the appropriate market or applications for our technology	1	1	1	3
to find expertise in the university	1	1	1	3
to further develop our technology know-how and research	1	1		2
to get access to important labs, machines and equipment	1	1		2
to get in contact with people in the industry	1	1		2
to synthesize scientific knowledge with an understanding of markets	1	1	1	3
to think about building the management team and hire people	1	1	1	3
to think about the ways we can generate income	1	1	1	3
to write down our financial application	1	1	1	3
to write down our subsidy application	1	1	1	3
Grand Total	**20**	**29**	**23**	**72**

Table A.2 - *Yes!Delft FACTORS with MEDIUM Ratings leading to Startup Decisions*

6.2.1.3 Yes!Delft FACTORS with LOW Ratings leading to Startup Decisions

	Decision			
Variable	Startups that left Delft region	Startups that stayed in Delft but left Yes!Delft	Stayed in Yes!Delft	Grand Total

The management of Yes!Delft has helped us with or pro - ..how to convince and contact financers, banks and VC	**1**			1
The management of Yes!Delft has helped us with or pro - ..how to negotiate or convince clients	**1**			1
The management of Yes!Delft has helped us with or pro - ..to evaluate the appropriate market or applications for our technology	**1**			1
The management of Yes!Delft has helped us with or pro - ..to further develop our technology know-how and research	**1**		1	2
The management of Yes!Delft has helped us with or pro - ..to get access to important labs, machines and equipment	**1**	**1**	1	3
The management of Yes!Delft has helped us with or pro - ..to synthesize scientific knowledge with an understanding of markets	**1**			1
The management of Yes!Delft has helped us with or pro - ..to think about building the management team and hire people	**1**			1
The management of Yes!Delft has helped us with or pro - ..to think about the ways we can generate income	**1**			1
The management of Yes!Delft has helped us with or pro - ..to write down our financial application	**1**			1
The management of Yes!Delft has helped us with or pro - ..to write down our subsidy application	**1**			1
to further develop our technology know-how and research			1	1
to get access to important labs, machines and equipment			1	1
to get in contact with people in the industry			1	1
Grand Total	**10**	**1**	**5**	**16**

Table A.3 - *Yes!Delft FACTORS with LOW Ratings leading to Startup Decisions*

6.2.1.4 Comparison of Support Factors by Decision in 2012 at Yes!Delft

	Stayed in Yes!Delft	Stayed in Delft region but left Yes!Delft	Left Delft Region	Average
Business support	2.94	2.61	2.34	2.63
Financial support	2.67	2.49	2.22	2.46
Infrastructure support	1.87	2.38	2.12	2.12
Network support	2.61	2.66	2.60	2.62
Regional support	3.65	3.29	3.40	3.45
Average	2.75	2.68	2.54	2.66

Table A.4 - *Comparison of Support Factors by Decision in 2012 at Yes!Delft*

6.2.1.5 Comparison of Support Factors by Rating in 2020 at Yes!Delft

	Stayed in Yes!Delft	**Stayed in Delft region but left Yes!Delft**	**Left Delft Region**	Average
Business Support	3.37	4.00	3.60	3.66
Financial Support	2.46	3.20	3.75	3.14
Infrastructure Support	3.14	4.20	3.00	3.45
Network Support	3.21	3.50	3.33	3.35
Regional Support	3.38	3.53	4.33	3.75
Average	3.112	3.69	3.60	3.47

Table A.5 - Comparison of Support Factors by Rating in 2020 at Yes!Delft

6.2.1.6 Comparison of Support Factors by Rating in 2012 and 2020 (Averaged) at Yes!Delft

Decision	*Factor*	AVERAGE of Rating
Left Delft Region	Business Support	2.97
	Financial Support	2.99
	Infrastructure Support	2.56
	Network Support	2.96
	Regional Support	3.86
Stayed in Delft region but left Yes!Delft	Business Support	3.31
	Financial Support	2.84
	Infrastructure Support	3.29
	Network Support	3.08
	Regional Support	3.41
Stayed in Yes!Delft	Business Support	3.16
	Financial Support	2.57
	Infrastructure Support	2.50
	Network Support	2.91
	Regional Support	3.52

Table A.6 - *Comparison of Support Factors by Decision in 2012 and 2020 (Averaged) at Yes!Delft*

6.2.1.7 Comparison of Factors by Rating in 2012 and 2020 (Averaged) at Yes!Delft

AVERAGE of Rating	*Decision*			
Factor	Left Delft Region	Stayed in Delft region but left Yes!Delft	Stayed in Yes!Delft	Average
Business Support	2.97	3.31	3.16	3.14
Financial Support	2.99	2.84	2.57	2.80
Infrastructure Support	2.56	3.29	2.50	2.78
Network Support	2.96	3.08	2.91	2.99
Regional Support	3.86	3.41	3.52	3.60
Average	3.07	3.19	2.93	3.06

Table A.7 - *Comparison of Rating by Support Factors in 2012 and 2020 (Averaged) at Yes!Delft*

6.2.1.8 StartLife Wageningen FACTORS with HIGH Ratings leading to Startup Decisions

COUNTA of Rank	***Decision***	
Variable	**Left StartLife and Stayed in Wageningen**	Grand Total
Being located in Wageningen gives us a positive image on our activities	**1**	**1**
Being located in Wageningen gives us a stronger reputation	**1**	**1**
Being located in Wageningen gives us an inspiring environment to innovate	**1**	**1**
Being located in Wageningen gives us easy access to the knowledge being developed at other companies	**1**	**1**
Being located in Wageningen gives us easy access to the knowledge being developed at the university	**1**	**1**
Being located in Wageningen gives us the opportunity to maintain social ties	**1**	**1**
Grand Total	**6**	**6**

Table A.8 - *StartLife Wageningen FACTORS with HIGH Ratings leading to Startup Decisions*

6.2.1.9 StartLife, Wageningen FACTORS with MEDIUM Ratings leading to Startup Decision

COUNTA of Rank	***Decision***		
Variable	**Left StartLife and moved to another city**	Left StartLife and Stayed in Wageningen	Grand Total
Being located in Wageningen gives us a positive image on our activities	**1**		1
Being located in Wageningen gives us a stronger reputation	**1**		1
Being located in Wageningen gives us an inspiring environment to innovate	**1**		1
Being located in Wageningen gives us easy access to the knowledge being developed at other companies	**1**		1
Being located in Wageningen gives us easy access to the knowledge being developed at the university	**1**		1
Being located in Wageningen gives us the opportunity to maintain social ties	**1**		**1**
how to convince and contact financers, banks and VC		1	1
how to negotiate or convince clients		1	1
The management of StartLife has helped us with or pro - ..how to convince and contact financers, banks and VC	**1**	**1**	2
The management of StartLife has helped us with or pro - ..how to negotiate or convince clients	**1**	**1**	2
The management of StartLife has helped us with or pro - ..to evaluate the appropriate market or applications for our technology	**1**	**1**	2
The management of StartLife has helped us with or pro - ..to find expertise in the university	**1**	**1**	**2**
The management of StartLife has helped us with or pro - ..to further develop our technology know-how and research	**1**	**1**	2
The management of StartLife has helped us with or pro - ..to get access to important labs, machines and equipment	**1**	**1**	2
The management of StartLife has helped us with or pro - ..to get in contact with people in the industry	**1**	**1**	2

The management of StartLife has helped us with or pro - ..to synthesize scientific knowledge with an understanding of markets	**1**	**1**	2
The management of StartLife has helped us with or pro - ..to think about building the management team and hire people	**1**	**1**	2
The management of StartLife has helped us with or pro - ..to think about the ways we can generate income	**1**	**1**	2
The management of StartLife has helped us with or pro - ..to write down our financial application	**1**		1
The management of StartLife has helped us with or pro - ..to write down our subsidy application	**1**		1
to evaluate the appropriate market or applications for our technology		**1**	1
to find expertise in the university		**1**	1
to further develop our technology know-how and research		1	1
to get access to important labs, machines and equipment		**1**	1
to get in contact with people in the industry		**1**	1
to synthesize scientific knowledge with an understanding of markets		**1**	1
to think about building the management team and hire people		**1**	1
to think about the ways we can generate income		**1**	1
to write down our financial application		**1**	1
Grand Total	**18**	**21**	**39**

Table A.9 - *StartLife, Wageningen FACTORS with MEDIUM Ratings leading to Startup Decision*

6.2.1.10 StartLife, Wageningen FACTORS with LOW Ratings leading to Startup Decisions

COUNTA of Rank	***Decision***		
Variable	**Left StartLife and moved to another city**	Left StartLife and Stayed in Wageningen	Grand Total
Being located in Wageningen gives us more chances for the firm to succeed	**1**	**1**	2
Being located in Wageningen gives us more ease to maintain an academic status	**1**	**1**	2
how to convince and contact financers, banks and VC	**1**		1
how to negotiate or convince clients	**1**		1
The management of StartLife has helped us with or pro - ..to write down our financial application		**1**	1
The management of StartLife has helped us with or pro - ..to write down our subsidy application		**1**	**1**
to evaluate the appropriate market or applications for our technology	1		1
to find expertise in the university	1		1
to further develop our technology know-how and research	**1**		1
to get access to important labs, machines and equipment	**1**		1
to get in contact with people in the industry	**1**		1
to synthesize scientific knowledge with an understanding of markets	**1**		**1**
to think about building the management team and hire people	**1**		1
to think about the ways we can generate income	**1**		1
to write down our financial application	**1**		1
to write down our subsidy application	**1**	**1**	2
Grand Total	**14**	**5**	**19**

Table A.10 - *StartLife, Wageningen FACTORS with LOW Ratings leading to Startup Decisions*

6.2.1.11 Comparison of Support Factors by Decision in 2012 at StartLife

	Left StartLife and Stayed in Wageningen	Left StartLife and moved to another city
Business support	2.86	2.19
Financial support	2.44	2.54
Infrastructure support	2.95	1.95
Network support	3.11	2.19
Regional support	3.51	2.15

Table A.11 - *Comparison of Support Factors by Decision in 2012 at Wageningen*

6.2.1.12 Comparison of Support Factors by Rating in 2020 at StartLife

	Left StartLife and Stayed in Wageningen	Left StartLife and moved to another city
Business Support	3.3	3.35
Financial Support	2.88	3.56
Infrastructure Support	3	3.33
Network Support	2.83	3.46
Regional Support	3.67	3.75

Table A.12 - *Comparison of Support Factors by Rating in 2020 at Wageningen*

6.2.1.13 Comparison of Support Factors by Rating (2012 and 2020) at StartLife

AVERAGE of Rating	*Decision*	
Factor	Left StartLife and moved to another city	Left StartLife and Stayed in Wageningen
Business support	2.77	3.08
Financial support	3.05	2.66
Infrastructure support	2.64	2.97
Network support	2.82	2.97
Regional support	2.95	3.59

Table A.13 - *Comparison of Support Factors by Rating in 2012 and 2020 (Averaged) at StartLife, Wageningen*

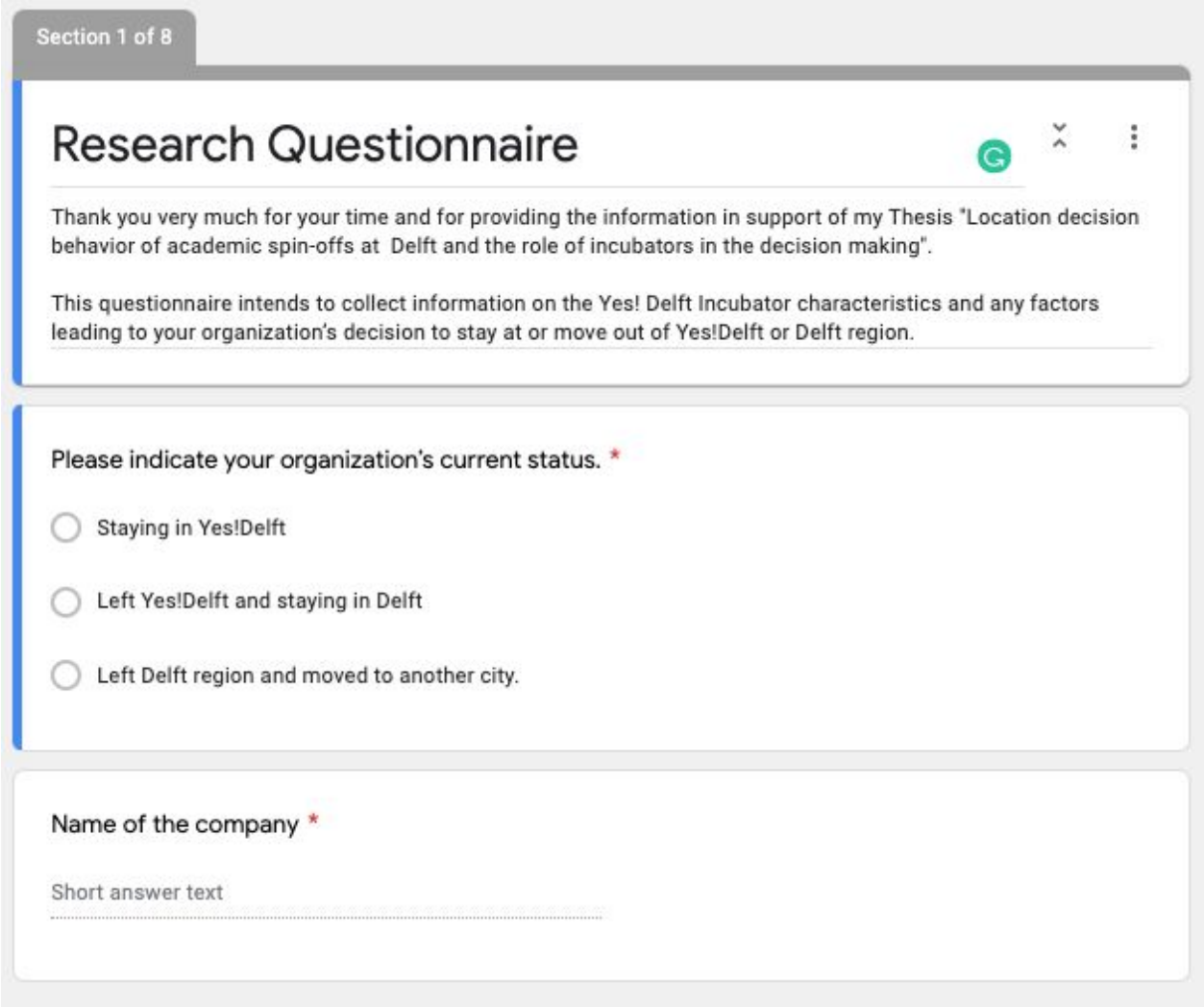
6.2.1.14 Comparison of Support Factors Averages by Decision (2012 and 2020) at StartLife

AVERAGE of Rating	*Factor*				
Decision	Business support	Financial support	Infrastructure support	Network support	Regional support
Left StartLife and moved to another city	2.19	2.54	1.95	2.19	2.15
Left StartLife and Stayed in Wageningen	2.86	2.44	2.95	3.11	3.51

Table A.14 - *Comparison of Support Factors by Decision in 2012 and 2020 (Averaged) at StartLife, Wageningen*

6.3 Appendix B: Research questionnaires

6.3.1 Research questionnaire administered to Yes!Delft, Delft Startups



Section 1 of 8

Research Questionnaire

Thank you very much for your time and for providing the information in support of my Thesis "Location decision behavior of academic spin-offs at Delft and the role of incubators in the decision making".

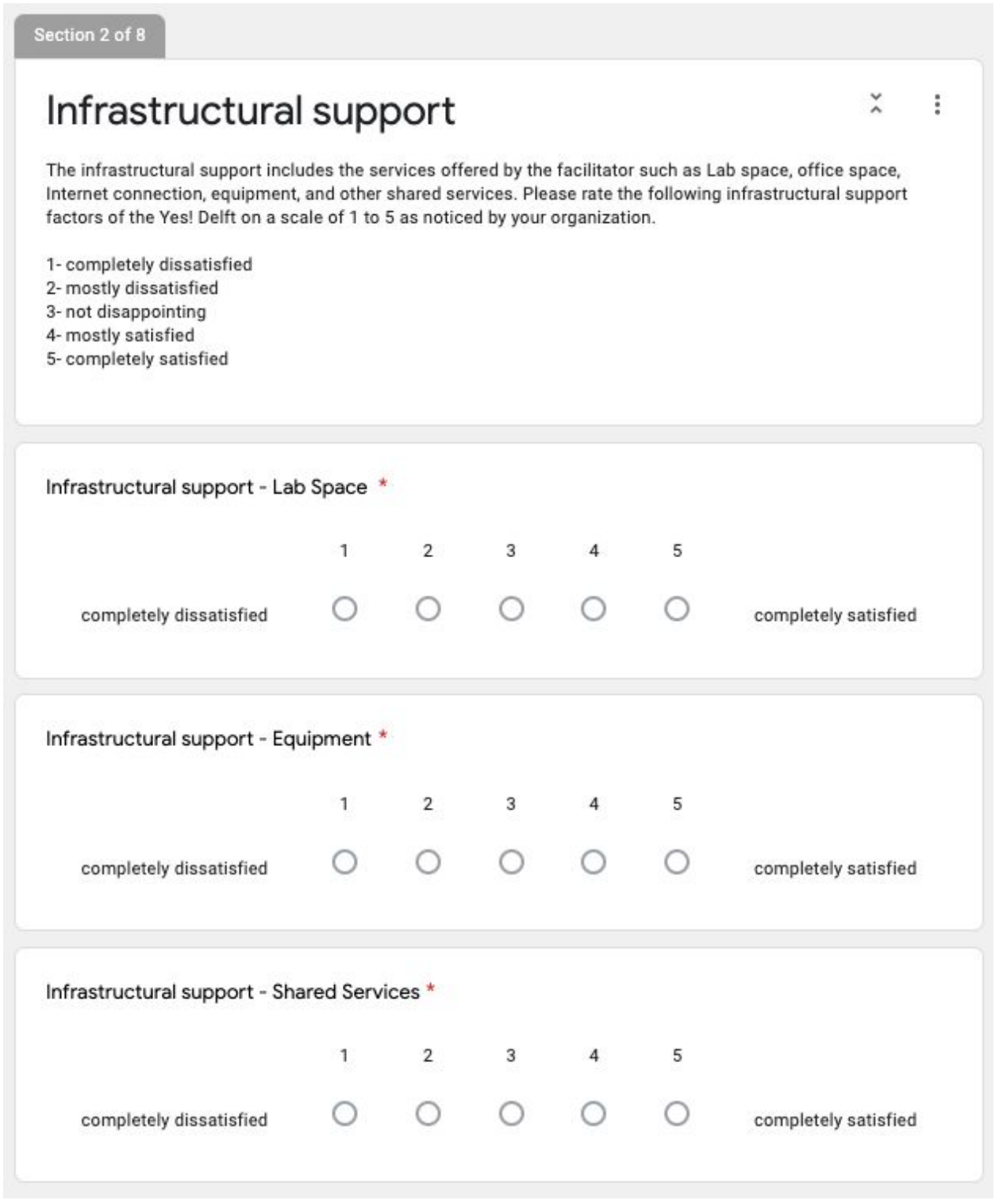
This questionnaire intends to collect information on the Yes! Delft Incubator characteristics and any factors leading to your organization's decision to stay at or move out of Yes!Delft or Delft region.

Please indicate your organization's current status. *

- Staying in Yes!Delft
- Left Yes!Delft and staying in Delft
- Left Delft region and moved to another city.

Name of the company *

Short answer text



Section 2 of 8

Infrastructural support

The infrastructural support includes the services offered by the facilitator such as Lab space, office space, Internet connection, equipment, and other shared services. Please rate the following infrastructural support factors of the Yes! Delft on a scale of 1 to 5 as noticed by your organization.

1- completely dissatisfied
2- mostly dissatisfied
3- not disappointing
4- mostly satisfied
5- completely satisfied

Infrastructural support - Lab Space *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Infrastructural support - Equipment *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Infrastructural support - Shared Services *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Section 3 of 8

Financial support

The financial support represents the facilitator's support to academic spin-offs in terms of seed capital, venture capital, and funding. Please rate the following financial support factors of the Yes! Delft on a scale of 1 to 5 as noticed by your organization.

1- completely dissatisfied
2- mostly dissatisfied
3- not disappointing
4- mostly satisfied
5- completely satisfied

Financial support - Seed capital *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Financial support - Indirect funding *

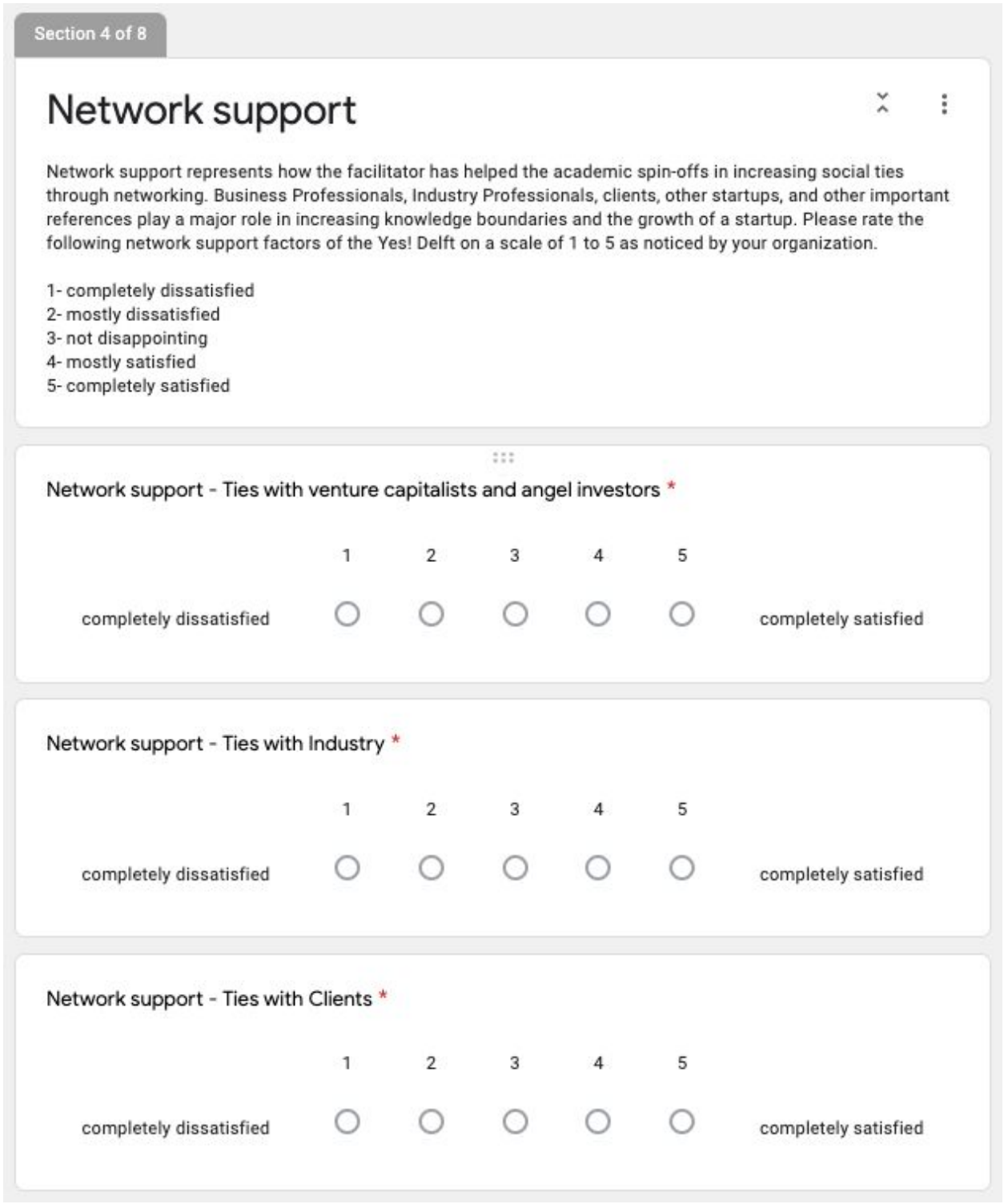
	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Financial support - Direct funding *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Financial support - Venture capital *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied



Section 4 of 8

Network support

Network support represents how the facilitator has helped the academic spin-offs in increasing social ties through networking. Business Professionals, Industry Professionals, clients, other startups, and other important references play a major role in increasing knowledge boundaries and the growth of a startup. Please rate the following network support factors of the Yes! Delft on a scale of 1 to 5 as noticed by your organization.

1- completely dissatisfied
2- mostly dissatisfied
3- not disappointing
4- mostly satisfied
5- completely satisfied

Network support - Ties with venture capitalists and angel investors *

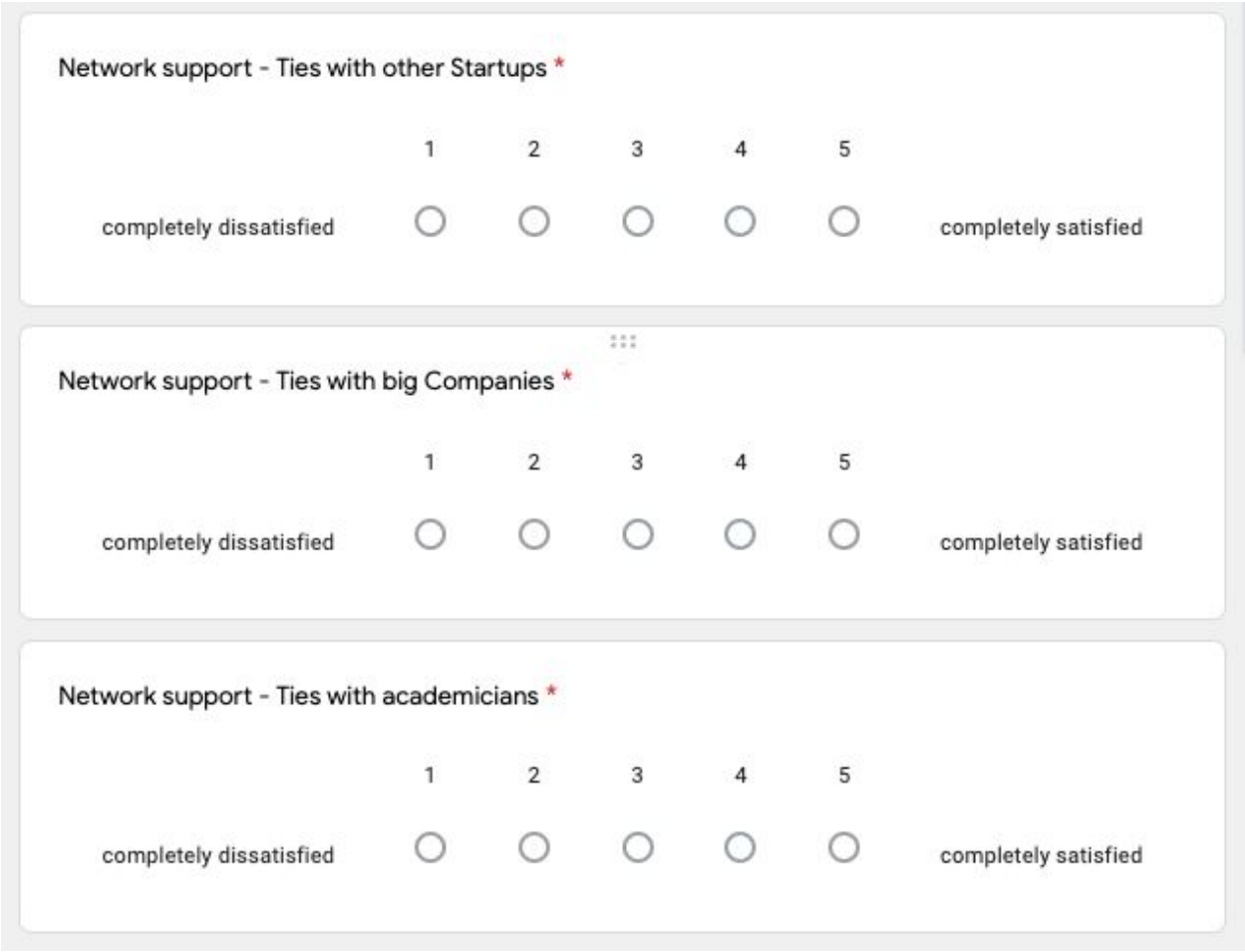
	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

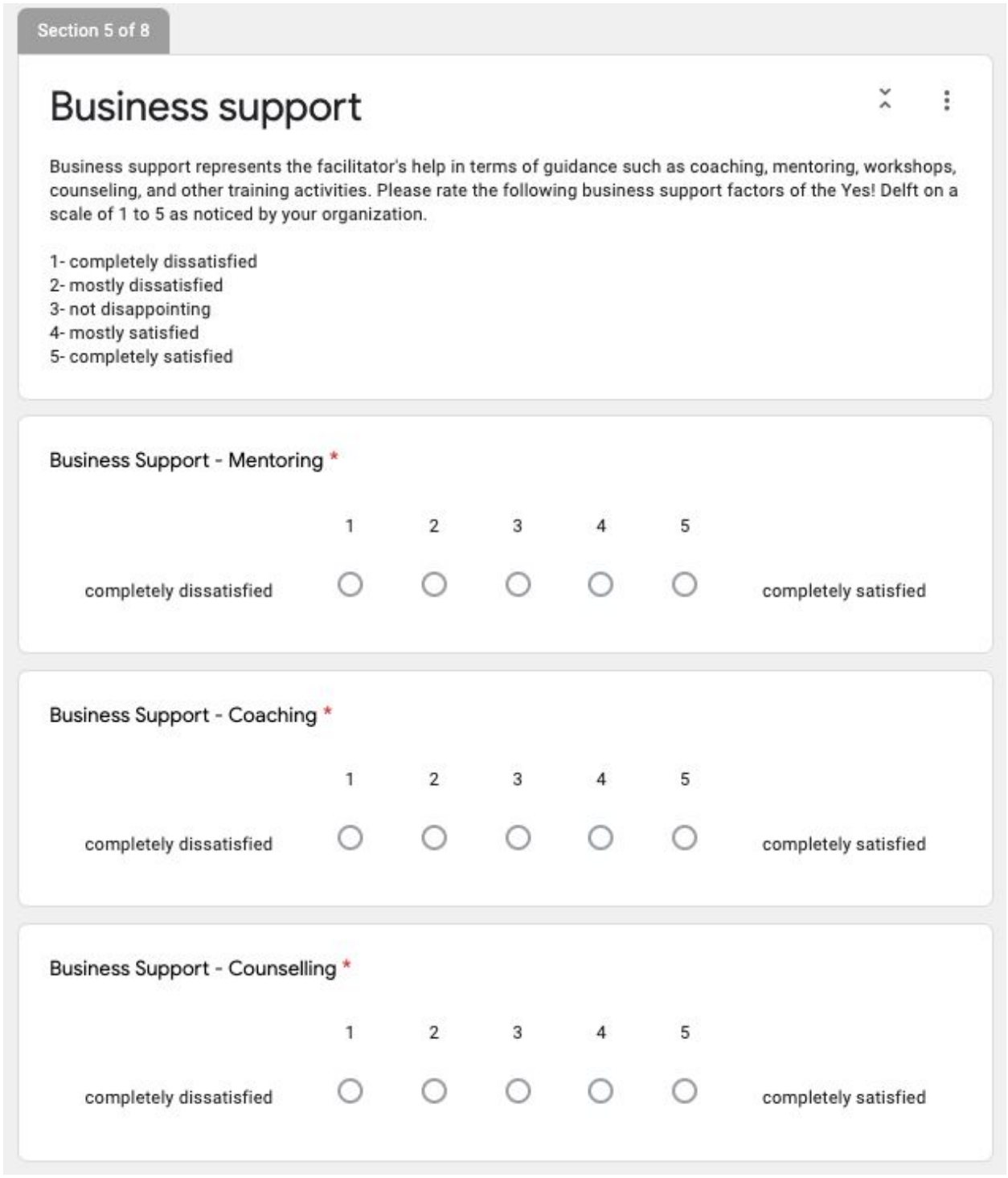
Network support - Ties with Industry *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Network support - Ties with Clients *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied


Network support - Ties with other Startups *
1
2
3
4
5
completely dissatisfied
completely satisfied
Network support - Ties with big Companies *
1
2
3
4
5
completely dissatisfied
completely satisfied
Network support - Ties with academicians *
1
2
3
4
5
completely dissatisfied
completely satisfied



Section 5 of 8

Business support

Business support represents the facilitator's help in terms of guidance such as coaching, mentoring, workshops, counseling, and other training activities. Please rate the following business support factors of the Yes! Delft on a scale of 1 to 5 as noticed by your organization.

1- completely dissatisfied
2- mostly dissatisfied
3- not disappointing
4- mostly satisfied
5- completely satisfied

Business Support - Mentoring *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Business Support - Coaching *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Business Support - Counselling *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Business Support - Business plan development *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Business Support - Personal training *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

After section 5 Continue to next section

Section 6 of 8

Legal Support

Legal support includes the facilitator's help to the academic spin-off in terms of advising about policies, regulations, government rules for a particular technology, etc. Please rate the following legal support factors of the Yes! Delft on a scale of 1 to 5 as noticed by your organization.

1- completely dissatisfied
2- mostly dissatisfied
3- not disappointing
4- mostly satisfied
5- completely satisfied

Legal Support - Advice on IP Regulation *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Legal Support - Explanation of rules governing the exploration of technology *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

After section 6 Continue to next section

Section 7 of 8

Regional support

How relevant and impactful were the following regional factors of the parent university for the growth of your startup?

Importance of University reputation *

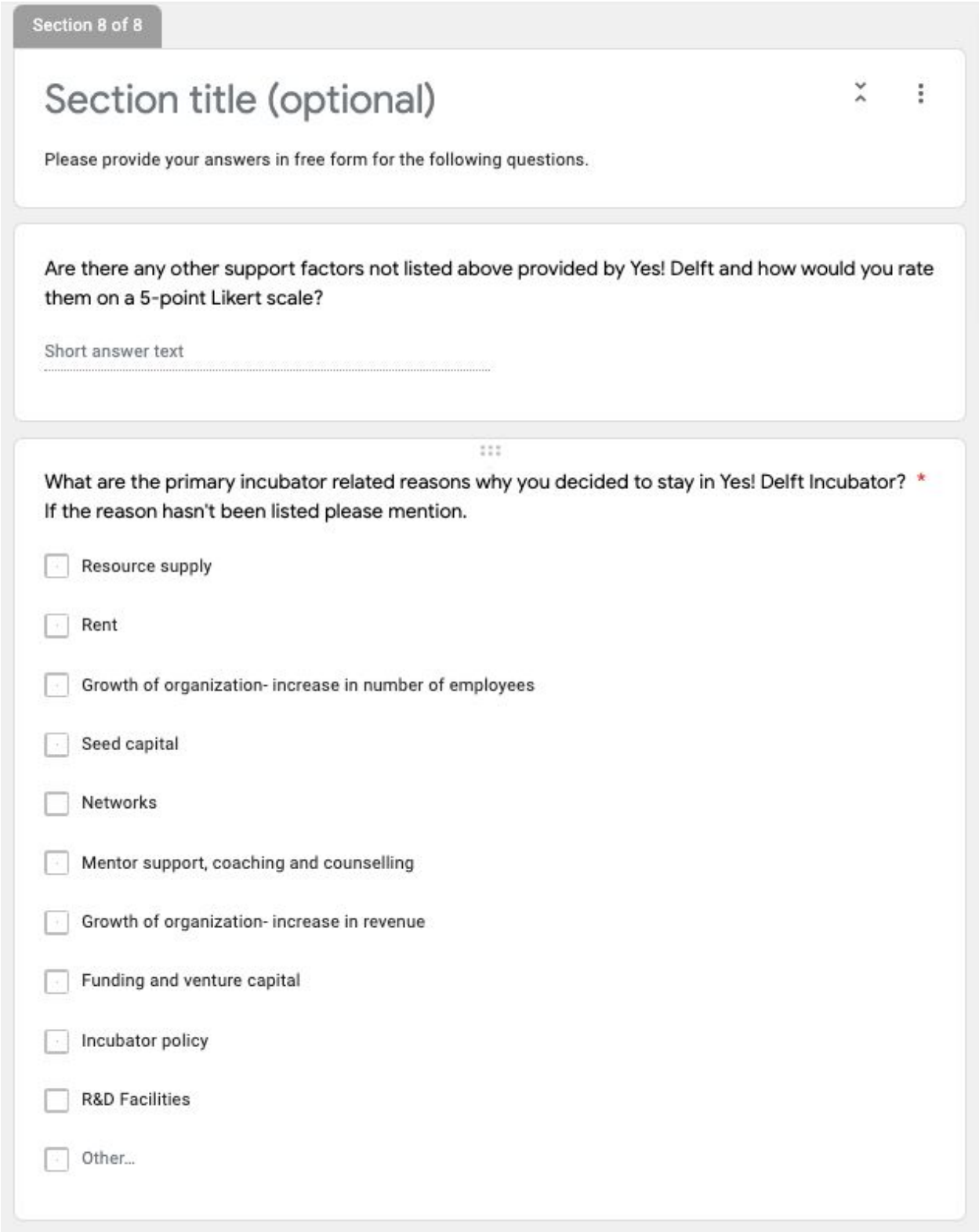
	1	2	3	4	5	
Least Important	○	○	○	○	○	Very Important

Access to university knowledge *

	1	2	3	4	5	
Least Important	○	○	○	○	○	Most Important

Access to regional companies *

	1	2	3	4	5	
Least Important	○	○	○	○	○	Most Important



Section 8 of 8

Section title (optional)

Please provide your answers in free form for the following questions.

Are there any other support factors not listed above provided by Yes! Delft and how would you rate them on a 5-point Likert scale?

Short answer text

What are the primary incubator related reasons why you decided to stay in Yes! Delft Incubator? *
If the reason hasn't been listed please mention.

- [ ] Resource supply
- [ ] Rent
- [ ] Growth of organization- increase in number of employees
- [ ] Seed capital
- [ ] Networks
- [ ] Mentor support, coaching and counselling
- [ ] Growth of organization- increase in revenue
- [ ] Funding and venture capital
- [ ] Incubator policy
- [ ] R&D Facilities
- [ ] Other...

What are the region related reasons that led to your decision to stay in Delft? If the reason hasn't been listed please mention. *

- [ ] Organizational growth- increase in number of employees
- [ ] Organizational growth- increase in revenue
- [ ] Need for agglomeration
- [ ] Acquisitions or mergers
- [ ] Social ties
- [ ] Accessibility to resources
- [ ] Distance to clients
- [ ] Distance to suppliers and distributors
- [ ] Distance to markets
- [ ] Local government policy
- [ ] Market Situation
- [ ] Local ties with firms
- [ ] Cost of production and development factors
- [ ] Other...

What are the region related reasons that led to your decision to move out of Delft? If the reason hasn't been listed please mention. *

- [ ] Organizational growth- increase in number of employees
- [ ] Organizational growth- increase in revenue
- [ ] Need for agglomeration
- [ ] Acquisitions or mergers
- [ ] Social ties
- [ ] Accessibility to resources
- [ ] Distance to clients
- [ ] Distance to suppliers and distributors
- [ ] Distance to markets
- [ ] Local government policy
- [ ] Market Situation
- [ ] Local ties with firms
- [ ] Cost of production and development factors
- [ ] Other...

What support services did you not receive adequately during your stay at the Yes! Delft? *

Short answer text

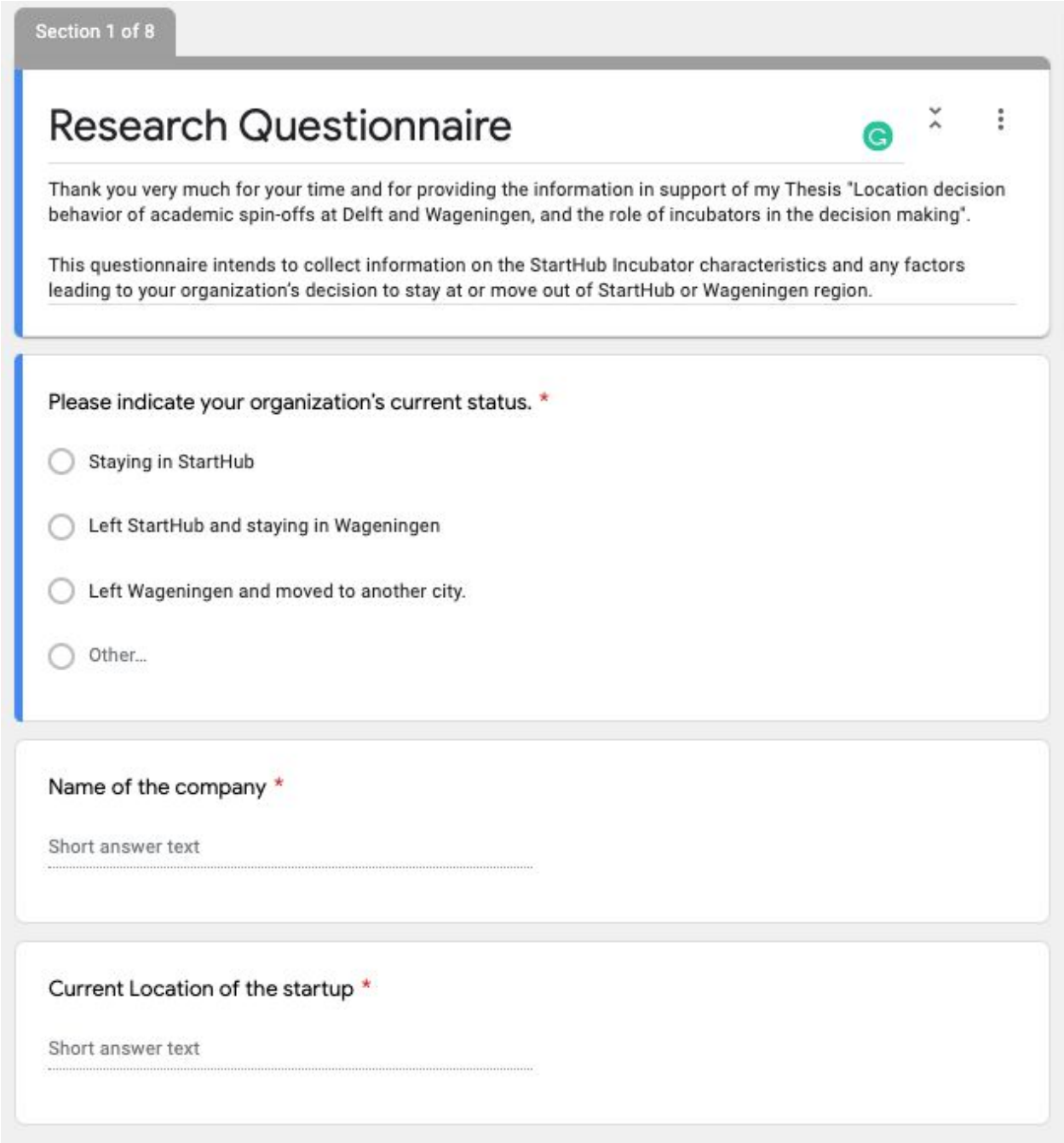
Would you be willing to participate in a short interview (10 minutes)? If yes, please suggest your preferable date(s) and time. *

Short answer text

Do you have any questions or comments? Thank you very much for your responses.

Short answer text

6.3.2 Research questionnaire administered to StartLife, Wagenenen Startups



Section 1 of 8

Research Questionnaire

Thank you very much for your time and for providing the information in support of my Thesis "Location decision behavior of academic spin-offs at Delft and Wageningen, and the role of incubators in the decision making".

This questionnaire intends to collect information on the StartHub Incubator characteristics and any factors leading to your organization's decision to stay at or move out of StartHub or Wageningen region.

Please indicate your organization's current status. *

- Staying in StartHub
- Left StartHub and staying in Wageningen
- Left Wageningen and moved to another city.
- Other...

Name of the company *

Short answer text

Current Location of the startup *

Short answer text

Section 2 of 8

Infrastructural support

The infrastructural support includes the services offered by the facilitator such as Lab space, office space, Internet connection, equipment, and other shared services. Please rate the following infrastructural support factors of the StartHub on a scale of 1 to 5 as noticed by your organization.

1- completely dissatisfied
2- mostly dissatisfied
3- not disappointing
4- mostly satisfied
5- completely satisfied

Infrastructural support - Lab Space *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Infrastructural support - Equipment *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Infrastructural support - Shared Services *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Financial support

The financial support represents the facilitator's support to academic spin-offs in terms of seed capital, venture capital, and funding. Please rate the following financial support factors of the StartHub on a scale of 1 to 5 as noticed by your organization.

1- completely dissatisfied
2- mostly dissatisfied
3- not disappointing
4- mostly satisfied
5- completely satisfied

Financial support - Seed capital *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Financial support - Indirect funding *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Financial support - Direct funding *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Financial support - Venture capital *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Network support

Network support represents how the facilitator has helped the academic spin-offs in increasing social ties through networking. Business Professionals, Industry Professionals, clients, other startups, and other important references play a major role in increasing knowledge boundaries and the growth of a startup. Please rate the following network support factors of the StartHub on a scale of 1 to 5 as noticed by your organization.

1- completely dissatisfied
2- mostly dissatisfied
3- not disappointing
4- mostly satisfied
5- completely satisfied

Network support - Ties with venture capitalists and angel investors *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Network support - Ties with Industry *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Network support - Ties with Clients *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Network support - Ties with other Startups *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Network support - Ties with big Companies *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Network support - Ties with academicians *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

After section 4 Continue to next section

Section 5 of 8

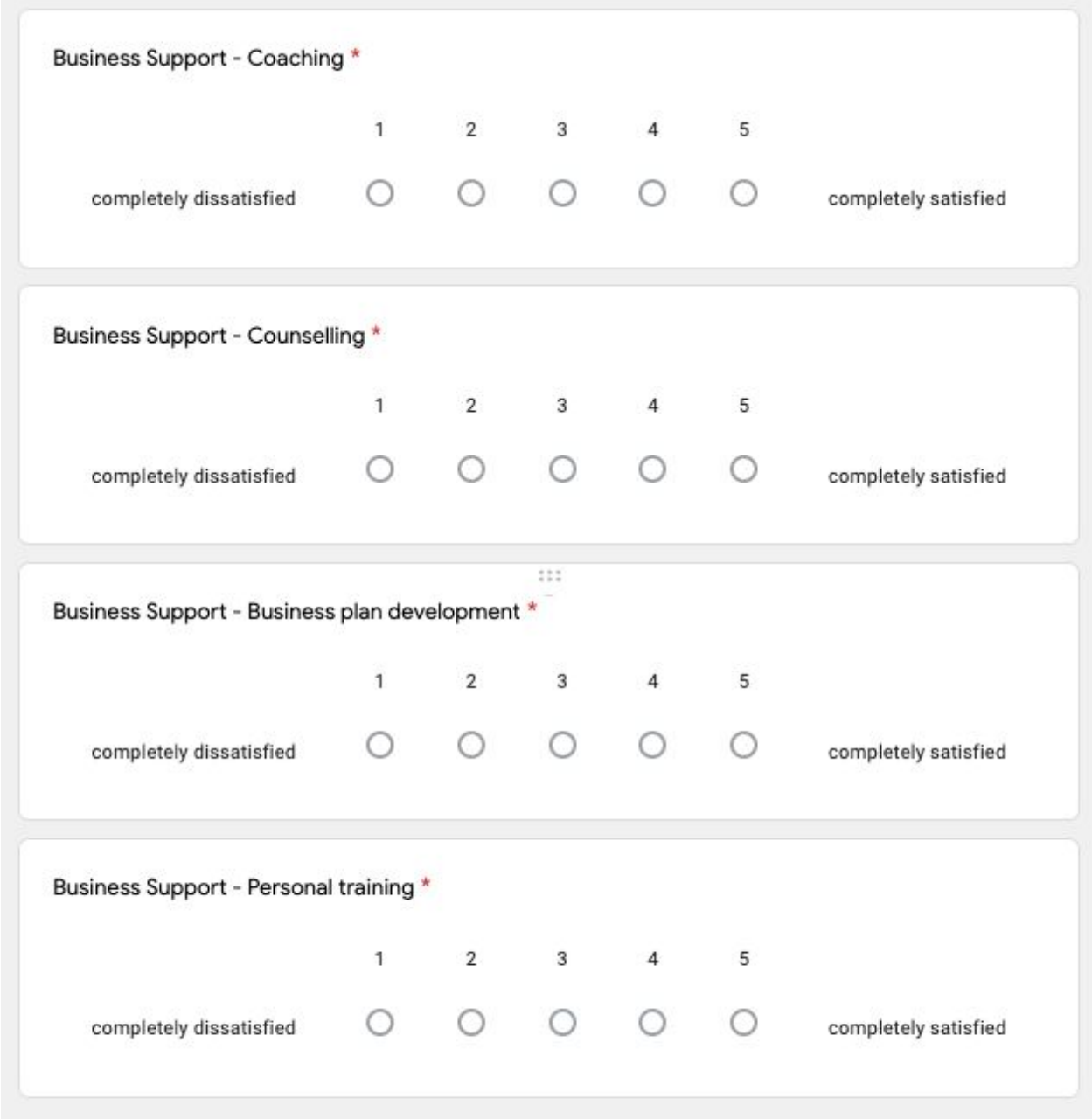
Business support

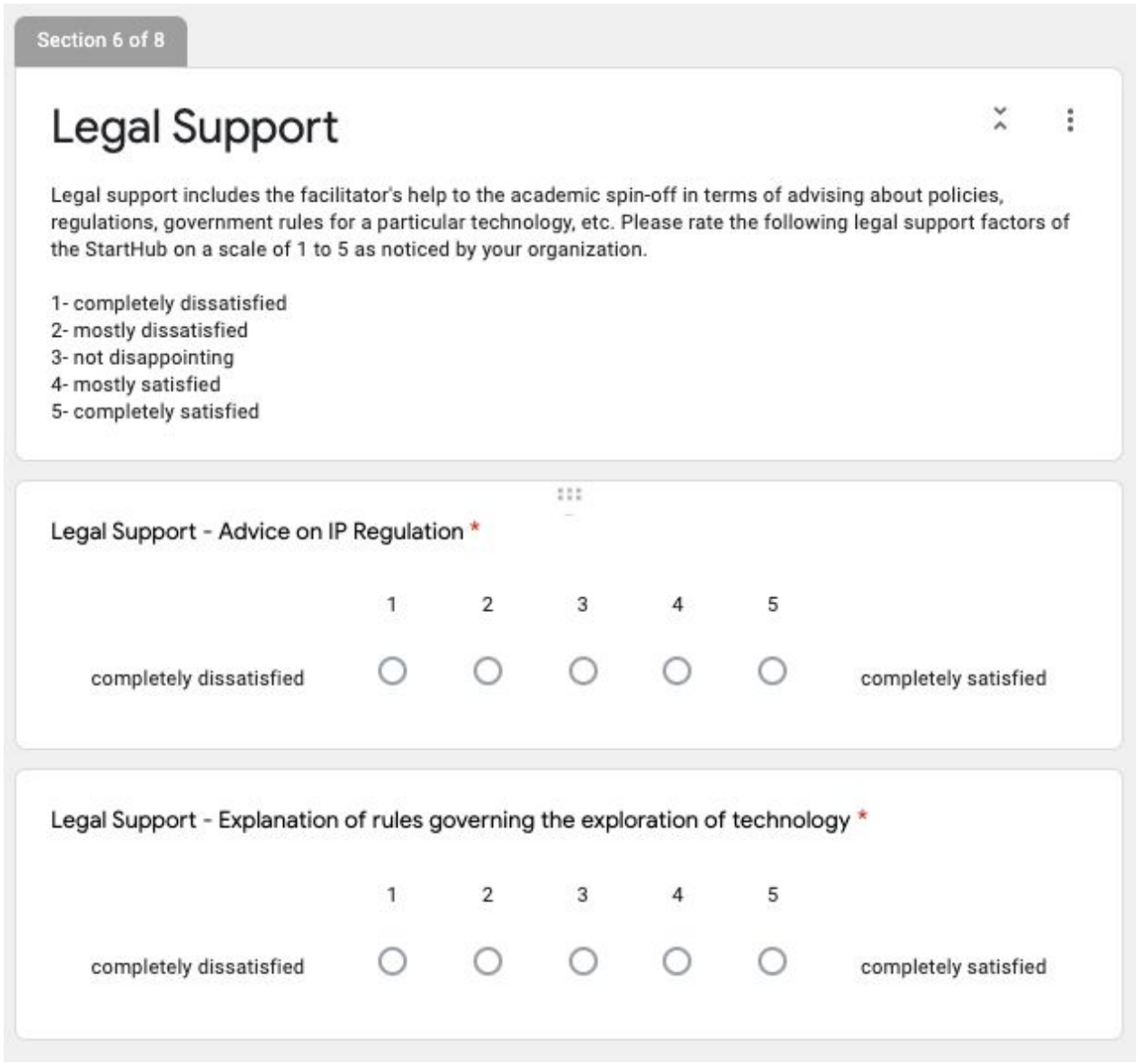
Business support represents the facilitator's help in terms of guidance such as coaching, mentoring, workshops, counseling, and other training activities. Please rate the following business support factors of the StartHub on a scale of 1 to 5 as noticed by your organization.

1- completely dissatisfied
2- mostly dissatisfied
3- not disappointing
4- mostly satisfied
5- completely satisfied

Business Support - Mentoring *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied


Business Support - Coaching *
1 2 3 4 5
completely dissatisfied
completely satisfied
Business Support - Counselling *
1 2 3 4 5
completely dissatisfied
completely satisfied
Business Support - Business plan development *
1 2 3 4 5
completely dissatisfied
completely satisfied
Business Support - Personal training *
1 2 3 4 5
completely dissatisfied
completely satisfied



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Legal Support

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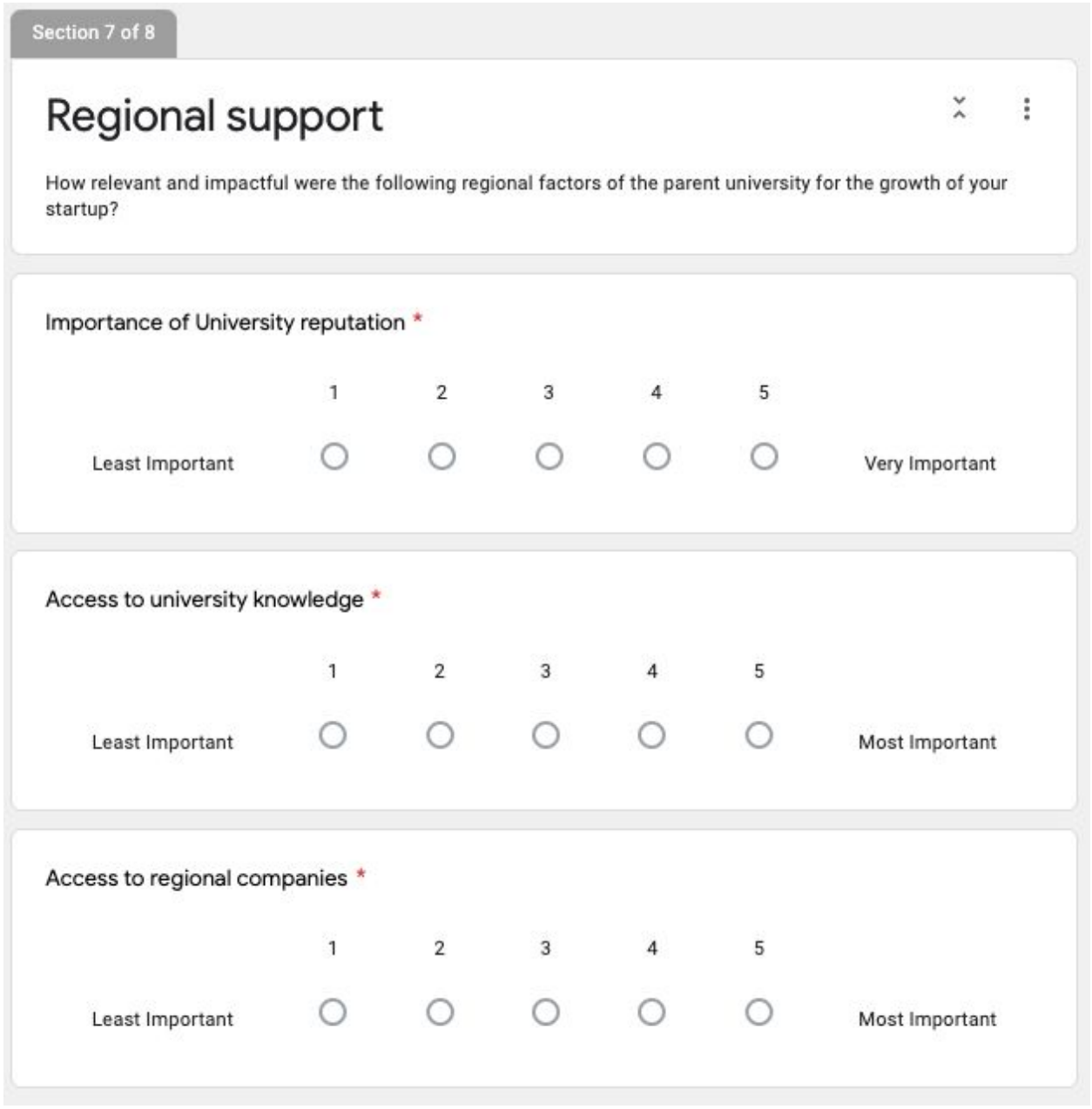
1- completely dissatisfied
2- mostly dissatisfied
3- not disappointing
4- mostly satisfied
5- completely satisfied

Legal Support - Advice on IP Regulation *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied

Legal Support - Explanation of rules governing the exploration of technology *

	1	2	3	4	5	
completely dissatisfied	○	○	○	○	○	completely satisfied



Section 7 of 8

Regional support

How relevant and impactful were the following regional factors of the parent university for the growth of your startup?

Importance of University reputation *

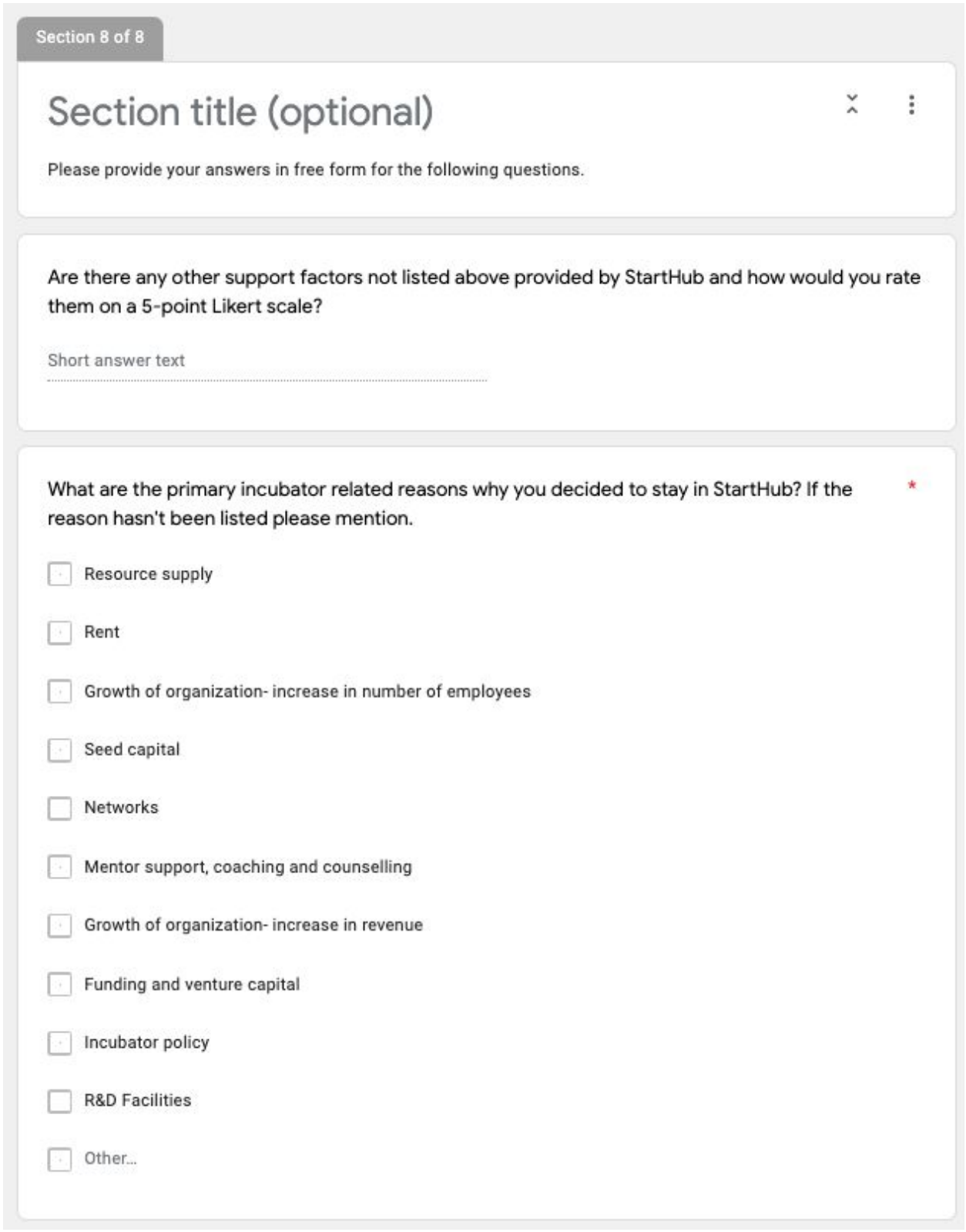
	1	2	3	4	5	
Least Important	○	○	○	○	○	Very Important

Access to university knowledge *

	1	2	3	4	5	
Least Important	○	○	○	○	○	Most Important

Access to regional companies *

	1	2	3	4	5	
Least Important	○	○	○	○	○	Most Important



Section 8 of 8

Section title (optional)

Please provide your answers in free form for the following questions.

Are there any other support factors not listed above provided by StartHub and how would you rate them on a 5-point Likert scale?

Short answer text

What are the primary incubator related reasons why you decided to stay in StartHub? If the reason hasn't been listed please mention. *

- [ ] Resource supply
- [ ] Rent
- [ ] Growth of organization- increase in number of employees
- [ ] Seed capital
- [ ] Networks
- [ ] Mentor support, coaching and counselling
- [ ] Growth of organization- increase in revenue
- [ ] Funding and venture capital
- [ ] Incubator policy
- [ ] R&D Facilities
- [ ] Other...

What are the region related reasons that led to your decision to stay in the Wageningen region? * If the reason hasn't been listed please mention.

- [ ] Organizational growth- increase in number of employees
- [ ] Organizational growth- increase in revenue
- [ ] Need for agglomeration
- [ ] Acquisitions or mergers
- [ ] Social ties
- [ ] Accessibility to resources
- [ ] Distance to clients
- [ ] Distance to suppliers and distributors
- [ ] Distance to markets
- [ ] Local government policy
- [ ] Market Situation
- [ ] Local ties with firms
- [ ] Cost of production and development factors
- [ ] Other...

What are the region related reasons that led to your decision to move out of the Wageningen region? If the reason hasn't been listed please mention. *

- [ ] Organizational growth- increase in number of employees
- [ ] Organizational growth- increase in revenue
- [ ] Need for agglomeration
- [ ] Acquisitions or mergers
- [ ] Social ties
- [ ] Accessibility to resources
- [ ] Distance to clients
- [ ] Distance to suppliers and distributors
- [ ] Distance to markets
- [ ] Local government policy
- [ ] Market Situation
- [ ] Local ties with firms
- [ ] Cost of production and development factors
- [ ] Other...

What support services did you not receive adequately during your stay at the StartHub? *

Short answer text

Would you be willing to participate in a short interview (10 minutes)? If yes, please suggest your preferable date(s) and time. *

Short answer text

Do you have any questions or comments? Thank you very much for your responses.

Short answer text

6.4 Appendix C: Interview transcripts

6.4.1 Transcript of interview with incubator - Yes!Delft

Question 2:06
Thank you so much. So let's start with the interview. Yeah. How long have you been a director in Yes!Delft? How long have you been associated with Yes!Delft?

Answer 2:20
Yeah, I started in February this year. And I've about one month of say, overlap with my predecessor. And so for the last four and a half months, that's now been responsible for the Operations Director should be here.

Question 3:01
So ever since you have started working as a Director at Yes!Delft, how many academic spinoff startups have you had? And have you taken in?

Answer 3:13
And we've been attending the selection, sessions for, say startups to participate. On selection, our selection sees wherever pitches of startups, and one line selection day. Because of the go with the lockdown situation, you have to get online in total. So the total number of startups that I've seen pitching or I've seen, interested in, say, to participate in our validation program, or in the accelerator program itself is around, let's say, I think around 25.

Question 3:53
That's pretty nice.

Answer 4:00
regular meetings, we call it check-ins. So it's a status update that we do with startups every two weeks to check if they have any challenges that we can help them with, or if they're encountering issues or problems, or it's basically to see if there are recurring issues that we see recurring with multiple startups, and how we can best help them solve those challenges or situations. So for around, say, 10 startups in the program regularly.

Question 4:29
Oh, that's pretty nice. So how often do the check-ins happen?

Answer 4:35
It's already taken place once every second week I first started and I have six or seven weekly

Question 4:51

So could you please brief me about the process that you take in the spin-offs through, you know, the validation program.

Answer 5:05
So basically what we do in this validation program in six weeks of two days a week, we take them through very quick problem solution bits. So what we there's the startups that applied for the validation startup that sometimes don't even have incorporation in many cases, there are one or two founders with an idea or have a concept of a service or a product or technology that they think and work and some that they leave or they think they also have a market where they can apply it to or say a problem in a market they think they can solve. What we do in the validation process is help them through the logical steps of the problem-solution fit and then also define some headlines about say, for instance, addressable markets or the privatization parts, etc. So that's the headline structure that we take them through.

Question 6:11
So do you have any precedents of startups that when you read to come to selection in terms of technology, say more biotech or it is there any particular preference that you have?

Answer 6:31
Yes, we prefer startups with a strong say technology, focus or technology background. And then we have a couple of focus areas, for instance, biotech, we have blockchain, AI, the types of technologies, so preferably a startup that can be placed or fitted into the existing focus area, verticals. But I have to say we're also quite flexible. So if we believe there's a good say fine, in which say the right complementary background and skills for the startup founders, and if they have strong technology, sometimes also a startup that does not exactly fit in the box of saying one of the existing verticals can be admitted. What we see if you look there in, say, the market of the accelerator programs and incubator startup incubator programs, you see, there will be a lot of accelerators and incubators that focus on every type of digital development. And what we try to say, startups to scout and to acquire and to admit setups in the program that are not only based on the application so we also always try to find, say, a bit more say over technological edge actually, in the idea or concept or the product that they want to do.

Question 8:04
Does the university play any role in the selection process? Any professors invited or DelftCenter for Entrepreneurship or people from the organization invited?

Answer 8:16
Yeah. So the TU is a shareholder in Yes!Delft. So they will always play a role in it because they sit on the board and they have an important say, in a lot of the process and a lot of decisions, of course. So from that perspective, they're presented. And we see, of course, a lot of teams, do they have X students who are applying for Yes!Delft as a startup accelerator program to participate in either accelerator programs or in a validation approach to be part of the ecosystem. So a lot of I would say indirect influence both from a board-level decision making. As far as I know, we don't have any professors directly stating the Delft program.

Question 9:18
Okay. Does the technology transfer office play any role in the selection of startups?

Answer 9:26
I'm not aware of it. But I think not in the selection of startups with a lot. Of course, graduates and PhD researchers are ex-PhD researchers meaning working on different disciplines or different faculties and to do so from that perspective. It plays a role.

Question 9:48
So can you give an idea about the maximum number of startups that you take in for you or how does it work, the number of startups that you decide to incubate?

Answer 10:00
Yeah, if you look at the validation lab sessions, And we have around at the moment we have eight into we're currently running in Kosovo, deep tech validation that we have eight that are participating in it. So there are things with this COVID lockdown thing, definitely changed a bit, because we could not do all the Life program parts and training parts and mentoring sessions, etc. On-site. So we've changed everything we say to online.

Answer 10:36
And we also had a bit of delay because we had to make everything digital and do everything online. So we had a bit of delay also in the say, the applications and the admitting and starting of the processors, so a bit of time, but I would say on average, we have about I think, between 25 and 30 startups in our validation EPS on an annual basis. The accelerator program, two or three ventures every year and it's a one that is run by 10 startups So between 20 and 30 for the accelerator.

Question 11:16
Um, so, in terms of the support, what are the forms of support that you provide these academics because apart from providing the infrastructure and the other services?

Answer 11:30
I think one of them if you look at it in a different substance, we say the first course that we offer in our program, we do we start with scout so we scout to the right startups that we believe fit in the existing technology verticals and areas of expertise of yours now, we do both online and also do events and conferences, etc. So we also actively scout events and conferences, then they go into the Admission or the selection process. It's something that we normally do in a combination of, yes, they have staff, and also some entrepreneurs in residence. So we have some, say, successful entrepreneurs who have been, we're associated with the ESL program, and they also participate in the selection process. Then they go either into the validation app or they go into the accelerator program. They're all on the same kind of chain of people that are both on the program management perspective, from a content perspective, from a mentoring and coaching perspective, from an expert perspective. So there's a lot of different areas of disciplines of expertise that we apply to the startups in the process. So in our office, we have people who are mentors and coaches for startups. People are doing activities in managing the programs and the content of the programs, we have trainers. And then kind of associated with Delft. We also have

entrepreneurs and residents, we call them successful entrepreneurs with a certain level of seniority and skill sets and expertise that we believe fit well into those startups that we take on board. And they help out the startups say, with all kinds of challenges, especially related, preferably related to the areas of expertise or skill sets that the entrepreneur also has encountered or has onboarding.

Answer 13:40
And then we also have a network of experts we call it so we have people who can advise startups in legal questions or even incorporation questions or even HR questions. So there's also a whole area of expert senior experts that are associated with Yes!Delft, that can also help the status.

Question 13:56
That's nice. So do you have any networking events? How often are these networking events and mentoring events? How often do they take place?

Answer 14:06
Basically, for instance, entrepreneurs in residence depend on availability when they're there. Say how often a canvas, we have entrepreneurs or residents will do, for instance, a kind of constant on a consultation basis, one day, every second week. So they're sitting in the office, and when they're meeting with four or five startups in one day to discuss with them what are the challenges and how they can help them. The experts are always available. So if it's, I don't know if it's a legal adviser, or someone who helps with incorporation helps with finance questions or someone who helps with any areas of expertise, HR. They are basically on a call basis available for the startup. So there's nothing to do that we offer as like a session or a half a day or anything like that. It's more than they can be consulted when necessary. People in the office. So we have marketing, scouting, program management, mentoring and coaching in our office. We are helping students with finance. They are always available also. So we have about 20 full-time staff and 25 full-time staff in the office on a full-time basis. And then we have this whole network of experts and entrepreneurs in residence, etc, who can be consulted on an availability basis.

Question 15:34
It's nice. And can you give me an idea of the support and services that have changed over the years? Are they different now? Are you providing more support now?

Answer 15:47
So now we have good structure and process in place actually for scouting for online marketing, activities and programs. We have our program management. In the past, it was a bit more unstructured. So the office was smaller, so the team was a lot smaller. And basically, we're only helping the startups connect to people from the network like entrepreneurs or experts, but there was not this whole structured setups of all the different services that we can offer to the startups.

Question 16:35
Okay. So yet does Yes!Delft provide any financial support to these startups?

Answer 16:43

No, not directly. So we do not finance directly and we also do not take equity in startups. That's very different from a lot of others, commercial accelerator and incubator problems where they provide startup funding. Sometimes They also normally take equity of this house in return for it. But we have a lot of the experts both in our office and also in our network who help startups acquiring funding or getting subsidies or grants from the government or on a national or on a local level. So there's a lot of ways, or we connect startups to funding options and possibilities. Both from our office perspective and also indirectly to the network. Get help as an exploited program. We do not save directly from the startups.

Question 17:39
Oh, okay. All right. So in terms of policies, or do you have any key policies that these startups have to follow?

Answer 17:52
If they are being selected, and they want to participate in the validation network in their area in the accelerator program, they sign a contract. In return to the services we provide, we expect them to use the years they have names and brands in most of their communications. So if they do publish or if they do anything on their websites that could be worth 50 years of being mentioned, we ask them to also mention our brands and say what they've experienced in the program. Of course, if they want to, for instance, take part and want to make use of our funding advisor services, then sometimes we will request them also to pay a small commission to have the funding that they return.

Question 19:06
So do you have any idea about the Go no-Go rules for these startups? How long do these startups stay? And are they new? Any policies that make them leave in a certain amount of time?

Answer 19:22
Well, for the validation apps, it's six to eight weeks on each. So that's a very short timeframe. Right, the programming takes about six months. A lot of it is done saving the live sessions or if we do online sessions. But that's the timeframe or time window that we normally describe in the program. And then next to that, they can sit in the building, they can, they will be part of this ecosystem for a much longer time. So they will basically, they can still tap into a lot of areas of expertise, they can tap into the note of the entrepreneurs and residents, they can still make use of a lot of facilities and conferences and events that we're organizing, for instance. So there's a lot, a lot more of those facilities and expertise areas and events that we make available to them and for that big part for at least 10 years.

Answer 20:49
I can't tell you honestly that I think some startups have been in a building for a much longer time already. Yeah. And the building is the ownership of the building is with another legal entity. Also so we do not officially many say that lease contracts with a startup. So I think it's more related to the availability of office space. And at the decision of the owner of the building you say if the startup is still in the building

Answer 21:26
I think in the past, they have new startups where they have been requested actually to leave the program or the building, but I've never encountered that myself.

Answer 21:49
I think if there's a situation where they really would say they are in breach of the contract that they signed, it would be an extreme conflict of interest situation. Getting every startup signs up with multiple accelerator programs. And it's not at all taking into account the kind of contractual commitments that we have with them, I can imagine that they will be excluded from the problem. But the thing is that it's kind of a natural selection in most startups because we are good at helping startups grow from say, validation or very early stage to scale means that they have a commercially viable product that they have several commercial clients in the market and they do say a minimum annual revenue of around $1 million. That's what we consider scaled up and then they normally say exit the accelerator program if they have scaled up. And the other part is that if a company grows very big and it's in a very fast and they need more office space and say the building cannot facilitate it, or we don't have the space suitable then normally they will move out of the program.

Question 23:05
Okay, as I've mentioned before, so you don't have a preference for the startups that you take in but do different startups get different support?

Answer 23:22
Once we request them to do at least bi-weekly check-ins to continue it for as long as they are part of the community so if they reinstate, they move out of the building after two or three years after founding or if they scale up extremely fast. Sometimes we are of course flexible with the number of check-ins and the frequency of the check-ins as we do more. It depends sometimes you see startups that are very research-oriented and they keep the team quite small for a long time. They need to do a lot of validation. This whole concept development and piloting etc takes a very long time. And then you see normally that the team remains very small. And they are extremely focused, for instance, on certain products or services development. And I'm not focusing on those times on market development and business development type of activities, or methods or building biotech startups. validation to commercial products might take 5, 6, 7, or 8 years, and even then they need to go through a lot of regulatory and legal procedures for the country or for the market where they want to enter. So for that type of setups, it might take a very long time, and in most cases, they don't scale up the team very fast, because the only thing they need is to kind of say, optimize their concepts are there, but they don't need to be seen for marketing and business development and product management, etc. It depends. So those startups stay in the program for a long time. We still, even after doing three years, might do a bi-weekly checkup with them to understand the challenges they're facing. But if you ever, I don't know, say you started developing drones and they say within six months they've developed a viable product and they start building the team, they are hiring marketers, and they're hiring, development staff etc. And then they are out of the accelerator program then they might either go to their own office somewhere there would still be considered a part of the community so we still invite them for

conferences and events. And we sometimes ask them to repeat for instance or to be barred for a peer learning session where they explain to them their whole learning curve. If they grow and feel that fast in most cases, they don't need those bi-weekly check-ins for advice and say expertise also anymore they can find their advisor expertise. So it depends a lot on the type and displays To activate the type of products or services that are developing, or how fast they're growing their organization and team and yeah,

Question 26:10
okay. So when it comes to selection, do you have any that don't work or you know something that does not that's not favourable to you when you're selecting startups.

Answer 26:23
Yeah, one thing that's knockoff is if they are not willing to disclose their IP or their IDs completely, or if they're basically if they're not willing to be transparent on their content or ID or product that they want to develop. Sometimes you see researchers' evening ID or technology, but they're not willing to share it. And that's not working for us, because we always request them to explain both technical sides and IP, on the finances.

Question 27:01
Okay, and what about startups that are already in your building incubated and already a part of your program? Have you faced or have you come across any? Have you heard about any unfavourable situations or circumstances that are not that has made the startup leave or no, you have asked them to leave?

Answer 27:23
I haven't personally so for me, that would be a new situation. But I can imagine every startup for longer periods is not willing to come to the meetings, not willing to personally have their financial situation or product development, etc. So basically, if they are in our incubator, but they are not communicating with us, they are not disclosing any information and they're not preparing for meeting requests or not even replying to meeting requests, then I couldn't think of a situation after a couple of months that we would request them to leave actually. But if a startup is that basically if they're that difficult to manage then sometimes I think most cases, we would see them drop off naturally also because they would run out of funding or they don't have a team that is energized or has any encouragement actually to continue activities anymore. So in most cases, I would say there's a natural selection already taking place. Because if they're not focusing on their funding, for instance, or if they're not focusing on their investor patents, or if they're not focusing on getting the right people on the team on board, then in most cases after one or two or three years, they will liquidate or they will anyways.

Question 28:45
So this is the last-how does Yes!Delft benefit by incubating in the startups how by all the validation programs - connection programs and helping these startups? How does Yes!Delft benefit?

Answer 29:06

So primarily, the goal of yourself is being an enabler of technology development and also employment in the region. So always to encourage more people to become entrepreneurs and to develop more say technology, successful technologies, and build companies around it. That's yet to become successful from a commercial perspective and also from say, an employment or perspective for the region. And then secondarily, I would say we also with all the successful entrepreneurs and companies and startups that we have, in the last 15 years have helped grow their business and their products and services. It becomes a lot of a word of mouth. Promotion and communication can also. So it also helps make the whole networking effect very big because we've been helping or under the committee, even thousands of entrepreneurs and startup companies in the last 15 years. So we've also built a very good reputation, especially in the technology incubation and acceleration activities. And yeah, that I mean, the reputation helps a lot with everything.

Answer 30:28
And then I think in the long run, of course, we also have the ambition to have chances to partner with other universities. So we're currently standing with Erasmus University in Rotterdam for a partnership and instance, for our meta program. We also partnered with almost all the medical faculties of medical universities in the Netherlands. With the government, lockdown we've taken over activities online and digital. And we also see a lot more interesting from startups from other countries now, we decided needs to be incorporated in the Netherlands and if the founders also need to sit in the Netherlands if they want to participate in the accelerator program with, at least with all the digital communication and everything around us we see a lot more interest now also with international startups. Yeah, that's nice.

6.4.2 Transcript of interview with incubator - StartLife

Question 0:06
So what is the entire ecosystem like? What is it like in Wageningen in other startups that are more drawn towards software or are it biotech? What is the main technology that is there and functioning?

Answer 0:30

Very good Question. Okay. So Wageningen is all about food and agriculture. So it's a very specific domain. I think Wageningen is probably one of the most focused Universities in Northwestern Europe. There's no other university in Europe, which is so focused on food and agriculture. We have the strongest with UC Davis from California.

Answer 1:14
We always flip the benchmark for being the best agrifood university in the world. We're either number one or number two, you should California. It's already been number one for subsequent years recently. So it's generally regarded as the best university in the world in agriculture.

Question 1:36
Okay, that's, that's wonderful. So do you have any preference for the startups that you adopt? Do you prefer startups that are more on food or food technology-oriented? Or do you accept all types of academic spin-offs into your incubator?

Answer 1:51
Okay, so two years ago, we started the program. We are a foundation, we're not part of the university. We have a certain distance from university we have been found by University.

Answer 2:06
So in that way we do resemble Yes!Delft too. So also a separate legal entity has been founded or has the university as a state.

Answer 2:16
So our programs decided to take over the same focus just university so we only do it for the edtech startups. We were originally designed as the canvassing, meaning that we will adopt and support startups coming from the university. Okay. But after that already soon, we started attracting companies from all over the country. Because, you know, when there was a startup from the house or Amsterdam and they said, you know, we're doing something around agriculture. So we like to be co-incubated by you because you guys are all about food in everything, you know, your network knowledge, everything. So, we opened up a program formally in 2014 for startups beyond our campus. And from that point on, we incubated much more companies from outside of our campus than from inside. So we truly became the first national program in the Netherlands. And then, two years ago, we made our second transition. We also opened up for startups International.

Question 3:40
So what are the different types of support activities that you provide to academic spin-off?

Answer 3:48
I think the same as Yes!Delft. Did you know we have early-stage venture building activities, meaning that we are in a super early stage? There's nothing more than just a good idea and entrepreneurial scientists, we start to build the venture from scratch. This is a co-production between StartLife as a foundation and the university. Shall we do this together? Huh? Yeah, no,

it's okay. And once, once the company is there, the company can enter into any of our programs. So we have a mentoring program and we have a three months pressure cooker accelerator program. We have what we call a corporate-startup engagement program where we connect startups with larger corporates. And so in that sense, we have programs quite like the ones in Yes.

Question 4:49
And so when you do your support activities to different startups. How does it start?

Answer 5:05
Yeah, so we're, so we can run two cohorts a year. So two times per year, we adopt between eight and 10 startups, which go to our super-intensive high-pressure system. This is to accelerate, so, so they join us for three months. very intensive, and they get a lot of coaching in these three months. And they also spend a lot of time with us, okay. That's the classical model. You see it all around the world, and we do it twice a year. So we can process between 16 and 20 startups a year very intensely. And then next to that we're able to process maybe another 20 a year on more customized support, meaning that we have a collaboration agreement and we provide them with coaching and mentoring quite customized. So not so much in a class not in a cohort, not in a group, but more balanced.

Question 6:09
Okay, that's wonderful. So what are your key policies? Do you have any go or no go for startups that are incubated?

Answer 6:18
For sure. So it has to be something in the food. And that's one. Secondly, there should be some existing relationships with our ecosystem or an intention to connect your ecosystem, meaning that you either want to collaborate with the university or you want to collaborate with other startups, or you want to collaborate with companies, you know, network, you know, if there's no you know if there's no intention to collaborate or to, you know, become active in our network, and it doesn't make sense to work with us. So the second vision is, you know, is there a link with our ecosystem and then the third is, it should be technological innovation. Sure, to open up a restaurant that's no. If you want to make a cricket new burger, it's a no go because they're already three of them. So it should be something new and it should be technological innovation. quite similar to Yes!Delft tell us so we also don't accept service companies or consultancy type of companies to startup a scalable business model based on innovative technology,

Question 7:29
Yeah. So few incubators have this rule that the academic spin-off doesn't stay with them and start working on staying with them for longer than two years. So they started rocking out after two years. So do you have any exit rules?

Answer 7:48
Well, if I hear you say that you probably mean in the physically Yeah.
When they rent a room to move into Yes. Yeah.

So no We're not that strict, because many of the startups have a long time to market you know, it may take seven years before they hit the market and have any revenue. And in the meantime, they might be able to attract funding and grow the seed.

Answer 8:18
So, we have a different concept of the building that we work with has multiple floors, and the building is exploited by a private company, except for the ground floor, which is exploited to start a program. Okay? So they often start at the ground floor, and then they work their way up. So when they get a little bit bigger, they decide to move to the first floor, and when they get even bigger, they decide to move to the third floor.
But we don't have a specific, you know, we don't throw them out.

Question 8:56
Okay. There have been no instances though as in when you have asked the startup to leave your program or the incubator?

Answer 9:19
Yeah, the accelerated program has a head and a tail. It's a three-month program. So you can tail and you run out. So it's a three month program period, so we don't have to throw them out. Okay? Because the program always ends. Okay, and if we give more customized support, we can support an additional 20 startups a year. So every week, we just set our priorities. And if we want to, let's say if we're coaching today, a specific company, and at the end of the year, we always work with collaboration agreements with which you know, are valid for a year. So if we decide to prolong them An extended patient agreement that means that we're going to provide the specific startup with customized bilateral coaching. And we and we set our priorities. So every year we re-evaluate and we say, okay, which 20 companies, are we going to close this year?

Question 10:31
But you do expect a lot of transparency from the startup, right? Sure. Again, you do expect a lot of transparency. You want those startups to be very transparent with you guys.

Answer 10:46
Yeah, of course.

Question 11:43
Okay. And in terms of seed capital and funding, how do you help the startups?

Answer 11:50
Exactly like any other accelerator, so we do have around pre-seed funds, meaning that we can throw in the first hundred K as a loan. It's often the first money.

Answer 12:05
And then we move them towards a network of a venture capitalist, informal investors, subsidy instruments. And we have a lot of partners which are formally connected to our incubator, which helped us to move towards an investment grant. So, we have very intimate and close relationships with all the venture capital firms in the Netherlands who are actively involved in

agriculture. They know us, visit us, we have meetings with them. structure to discuss startups. So we can do the first hundred K and the rest has to come from the network.

Question 12:44
Okay. So when you connect these startups with your company connections or venture capital capitalists, then any benefit for a StartLife do you guys get any commission?

Answer 13:00
No, we don't And I know Yes, Delft is experimenting with revenue models to go enjoy some of the successes of startups. We always hesitate to do so. I mean, it's not wrong, you know. But I think our model is more based so we have a lot of corporate partnerships with existing companies and multinationals and they pay as an annual fee. Okay to be very close to not only ourselves, but we also have two full-time scouts, we're doing nothing else and grazing around Europe for startups. Okay, building up the base, and setting up matches with these corporates. So this is for other natural activity because it's about startups. It's about photonic and it's about driving innovation. So this is an activity we like to do. So we, they pay us for that. And based on that money, we can double our capacity and double our coaching. And the other half of the money still comes from subsidies from our original stakeholders like the university province, which is about the same as with yourself. They still receive money from the university and instability. So, we have 50% public funding and 50% private funding, and we don't take any questions. We don't take any upstarts from the start. Okay. And I'm not saying it's wrong. Yeah. Just have a different model.

Question 14:47
Definitely. Yes. So how would you say the incubation process has changed over the years ever since the past 10 years from the day you started, and until now, how do you think the process of intaking status has changed over the years?

Answer 15:06
Well, if I look at the Technical University campus, there are four of them. I guess Delft is one of them. We are one of them. All four have managed to establish the basic functionalities in the past, the owner to establish a physical incubator space and managed to establish network organization they managed to establish early-stage funding in men who establish support programs. And it was not there 10 years ago. Yeah. And, and yes, yes, the office was one of the
Earliest and also probably one of the most successful ones in terms of scaling up their business and But that has changed in 10 years. I mean, there was nothing 10 years ago. I know every technical campus has two basic functionalities in place.

Question 16:09
How has your support towards startups changed ever since you started to StartLife?

Answer 16:19
Well, one thing always stays the same until all about personal relationships.

Answer 16:25

Listen to the entrepreneur and then help. It's as simple as that. And, but what has changed, I think is the involvement of third parties. So we do have corporates that also become part of the support programs and the startup incubator system and the involvement of program partners, you know, military officers, lawyers, type of consultants, which also hit the floor, and also mingle around with the ecosystem to provide the services and strengthen them. So it's no longer, you know, a simple relationship between the startup and the coach. There's a lot of parties around. And then so I think that's, that's something that has changed in the past few years.

Question 17:28
Okay. Do you involve the technology transfer office, when you are accepting a startup?

Answer 17:38
Yes. So the guys from the tech from the technology transfer office, they are friends. When they do the early scouting in universities for the new companies to use to finance they see them first. And then when they see a certain, let's say business opportunity Faculty they will try to design the optimal transfer route.

Answer 18:09
Optimal transfer route could be patents and licensing or the invention might be ideal to build a large research program when or if they may decide, oh, this invention is a good material for a spin-off. And when they decide together with the entrepreneurial scientists that spin-off is the preferred option. Then they paint the doors then they bang the doors spotlights Hmm. You say, Hey guys, for stock lines, we found something in the university we think a startup is the best way to transfer this to society and the economy. Please help us and then we start helping them with building the venture. And then adopting the venture in our programs. But we don't interfere with it with the technology transfer process itself. You know, we're, so we always choose the entrepreneur. So we're very founder centric. Okay. Well, while the technology transfer isn't a university, that's wonderful.

Question 19:57
So how do you think Answer benefits by helping the startups?

Answer 20:08
the ecosystem benefits

Answer 20:13
two years ago, you know, the Unilever company? Yeah. So two years ago, Unilever decided to move all its r&d facilities from Europe from Germany and England to work to campus. And if you ask them, why did you do that? They said, okay, three reasons. The first reason is talented personnel. We have trouble getting talented personnel where we are at the campus and it is mostly an issue for us to attract smart students who want to come work for us. The secondary is they want to be not at some, you know, isolated place, they want to be somewhere where you know that something is happening on campus, there's always something happening and you know, you can connect to other companies. etc.

Answer 21:02

Reason number three is startups and scale-ups to be close to startups and scale-ups, why? Because innovation, in general, is no longer in it's no longer an internal game.

Answer 21:23
It's moving towards the Open Innovation Model, which was designed 50 years ago. But it's maybe only now starting in food and agriculture. Meaning that food companies are willing to spin out activities and are willing to spin in activities, you know, adopt startups or buy them or partner with them. They start relying on startups and scallops are part of their innovation. So that then was a very successful company in the Netherlands, which was called the vegetarian butcher. So they will probably be the most successful meat replacement. Isn't that you know, vegetarian burgers and stuff like that. And, and usually, if you've ever tried it as well, you know, this is a $10 billion company, they just didn't meet because they're old school. And so they, they just waited until the vegetarian route became successful and we're scaling up and they just bought the company.

Answer 22:33
So, that's the way innovation works in food and agriculture nowadays. And so your original question was how to StartLife to benefit from helping. We don't have to benefit you know, we are a small wheel in the system.

Answer 22:54
We facilitate
I mean, the benefits eventually arise for consumers. We need innovations. Yeah, richer and more sustainable.

Question 23:11
So does StartLife have separate facility management and incubation management?

Answer 23:22
So we divided the support programs from the risk of exploitation of the physical incubator is with the university. Okay? University is much more resilient. A larger organization can afford to take bigger financial risks and take the risk of exploiting a physical incubator you know, you can lose maybe 100 or 200 or 300 k per year, physically exploiting a physically big space. And that's not something you like to do. It's not a profitable business period. Hmm. I mean, the physical incubator space, you suggest sales are not a profitable basis. Yeah. It needs an investment every year from the stakeholders. And so I think in Delft we decided to deliver separately. And here is just a project. So the physical incubator space is a project which eventually financially has its base at university.

Question 24:40
Yeah, understandable. How do you StartLife differ from the other incubation programs in the Netherlands?

Answer 25:01
You know, with the hyper-focus on specific domains, which is also the explanation for success and also the explanation that we have been able to go through these transitions. First of all, being

a national program and also being an international program, because we are so focused, it's interesting for a startup from Portugal or Italy or Denmark to work with us.

Answer 25:37
StartLife is very welcome to all the other nations. And I mean, theoretically global, but I must admit that our reach is predominantly Europe.

Question 26:14
I think I've got all my answers to the interview.

Answer 26:18
Yeah. Cool. Very efficient.

Question 26:22
Do you have any suggestions or questions in your mind?

Answer 26:27
No, not at all. I mean, if you at some stage something. If we have a report at some stage, we'd be happy to receive it.

Question 26:40
So isn't the entire idea of my thesis is regarding the migration pattern of academic spin-offs and the role of incubators and if you have something to add you in, you're free to say anything you want right now.

Answer 26:54
Yeah. Well, you know, I think you asked very relevant questions.
Again, I would be very interested in the results. So if you, if you make up your report, please let us know.

Question 27:24
Yeah, definitely. Yeah. Okay. Excellent. I will send a copy of my thesis report.
Thank you so much for your time. And thank you so much for accepting the invite in such short notice. And I think the interview is very, very helpful.

Answer 27:42
Yeah. Yeah. Thank you so much. Yeah, yeah. Take care. Good luck to you. Bye. Have a nice day.

6.4.3 Transcript of interview with a startup - Aanmelder

Question

Hello, hi I'm calling regarding the interview. Is that a good time to talk?

Thank you so much. First, thank you so much for participating in the interview.

Answer

No problem. I understand that your research needs to continue. And I guess that's, yeah, this is a good time for that.

Question

Yeah. This is this, though your input will be of great insight from my thesis, and we'll add up a lot of value to it.

So, yeah, let's begin. Sure. Is it okay with you? We finally caught the interview. Yeah, thank you so much.

So, the questions are regarding your stay in Yes!Delft. Sure. So, at which year did you exit from the incubator? Do you remember?

Answer

Well, actually, oh, yeah, I remember it was 2015.

Question

Okay. And do you sort of realise at which stage you were in when you left Yes!Delft?

Answer

Yeah. We were about 12 people, I think.

Answer

And we were just shy of about a million euros in revenues.

Question

So, you'd already passed the opportunity framing phase, right?.

Answer

Could you repeat that?

Question

You were already giving services you had already begun your services.

Answer

Definitely.

Answer

We were very much established in our market.

Question

Okay, that's great. Um, so why did you decide to leave the incubator,

Answer

To be honest, sort of fed up with the mesh in the noise. Some of our younger entrepreneurs were making sometimes during lunch,

know that there were never enough issues and sort of the records at lunch and we were also sort of outgrowing our office.

Was getting quite small. And the next step in office was not immediately available.

So, we are thinking, well, this is a good time with me to find a more spacious office.

Kitchen and our facilities

Question

Oh, that's great. So, you have also grown in terms of revenue right during that time.

What did you like about Yes!Delft?

Answer

Well, what is fantastic about yourself is the energetic atmosphere. You are.

I felt whenever I was in the building that I was surrounded by very ambitious people all working super hard.

Receive the super special, special atmosphere achievement.

electrifying Really?

Well, it's stimulating as an entrepreneur to be in such an environment.

Then again, it also has a downside and since that, I've seen quite a few people reach burnout and sort of

overwork themselves. So, there's no one relaxing in the building and that's very good, but it shall be missed.

Some people are suffering there.

Question

Okay. So, when it comes to support, we can always divide it into categories as infrastructural support and business support and financial support and next time support and legal support. So which type of support did yesterday benefit you with?

Answer

I think the best support that they provided was the first facilities, of course, it's a good base around the atmosphere.

And there was an entrepreneurial education program when we are in the program, beneficial. So quite a few courses on entrepreneurship, negotiations, legal issues. That was helpful. When we were in the early stages of our startup, I don't think the practical support measures were for every developer everything

And there were some fighters but to be honest, fighters were not much help.

We had quite a lot of benefits from the educational program. fighters were mixed back.

Question

Okay. That's nice. And so, you guys moved out of the incubator, but you are still in that.

So why don't you stay in Delft?

Answer

Well, being a tech company, we were benefiting from the job markets, the local job market is

In our favour, essentially, we need good engineers.

And another big factor is that we had established Families and or social networks in this area.

So, moving to another city with disrupting that, huh

Question

What do you think of the backdrops about not moving to a bigger city like about or he would just be remaining in the Delft region?

Do you think there are any backdrops to it?

Answer

Well, we're in the services, software services industry. And I believe that a lot of markets are in Amsterdam. So, if I would have to choose again,

I think that Amsterdam is a much better place to establish a business like this.

A more similar business, more clients and outreach to them.

So, in that sense, this is not the best to establish this and again,

The rent, cost of living in Delft is a bit lower should it isn't.

Question

That's nice. So, coming back to the incubator, what type of support Did you miss during your ski...?

Answer

I think that some of the other startup environments are a bit better at fostering cooperation between startups.

So, in delft supports was geared towards sort of business in general but the not

subject matter. combinations of promising startups and promising teams.

So, my general opinion is that Delft was lacking in sort of software expertise or subject matter expertise and a lot of entrepreneurial areas.

To put it a bit bluntly, I think that many of the workers at utilities were good public surface workers are sort of good administrators, but they weren't entrepreneurs themselves,

And they were not very experienced in some of the high-tech areas.

So that's sort of church Increase the character and experience values and all sort of advice was general business-related but not specific to software, software startup world. There were a few good mentors but it was compared to say startup impairments like the San Francisco Bay area that are just completely different pictures.

Question

Okay. So, if there's an area of improvement for yesterday, what do you think that is? What sort of support and oh Yes, that improves.

Answer

I think that my opinion is more than three years old with

Answer

I believe that increasing the special software x properties.

And so first started around expertise in the US the team would help a lot of companies

because I believe that a lot of those startups are also doing a lot of software work.

Mm-hmm. Yeah. In several other areas, they can also

benefit from having more

experts or retired entrepreneurs in their network, huh?

Question:

Okay. So, this is the last question. I don't want to take too much of your time during your vacation. So, what do you think the general reasons are for why startups leave incubators?

Answer

help. The best reason is that they outgrow the formula, need more space and need to find their way in the world. And I think that to just have this pretty successful as an incubator, I see a lot of companies that can sustain themselves for a few years with relief, the formula for a successful wage, and it's pretty good. Yeah.

Question

And why do you think you should stop leaving the Parent University region?

Why do you think they might need some cities?

Answer

I think that some companies are migrating to these high-tech hubs. Amsterdam is, of course, a financial technology open source. For Rotterdam as a pretty good business environment, so perhaps the Delft area is a bit too small to sustain the most viable network of interconnecting businesses that you can get in a larger metropolitan area, huh?

6.4.4 Transcript of Interview with Startup - Intespring

Question:

So, as far as I have learnt, Intespring was in Yes!Delft and then now is it still existent?

Answer: Yes, still existent. I have started several companies and Intespring is still situated in Yes!Delft. I did a spin-off company Label, label and then we went out of business.

Question:

Okay, so is Intespring is still yet? Or is it something else in Delft?

Answer:

No, it's still in Yes!Delft, though. Yeah. Okay,

Question:

That's good.

Answer:

Label is outside of Vaig, which is officially outside of Delft. That's outside of Delft

Question:

Pretty close to ... alright. Um, so how do you like being incubated in yet?

Answer:

So, one of the first things that always comes to mind is this great atmosphere of being in between other entrepreneurs.

So that's nice and important. And another thing is the network with our entrepreneurship

which is, which is important too. So, I think the main, the main, main thing I was saying is that it's nice that there are recently often visitors from corporates or other companies' stuff that doesn't help them, it's easy to go by combine and you get inspired by our company. That's all very nice.

Question:

Oh, that's nice. And oh, what do you think is missing in Yes!Delft?

What do you not like about Yes!Delft?

Question:

Let's put this question in two ways. What do you not like about Yes!Delft

Answer:

I think Yes!Delft is changing very fast (Yes!Delft) which makes it hard to stay connected with entrepreneurs.

So that's one thing that's missing. And I think the physical room is too small to sustain large groups of entrepreneurs which means that you'll get disconnected from the main activities I think after a year or three, which is not bad, of course, because you should be incubated to some extent already.

Answer:

But that's something that for cooking is to extend in some way.

Question:

I assume that you guys started with yes!Delft.

So, for how many years? Have you been incubated there?

Answer:

Since 2006, we have existed since 2006.

Question:

So, what do you like about being in the Delft region?

Answer:

Yeah, I like Delft because it's very close to the University of Delft and I like bonding with the University of Delft also, from a contractual sense, it's getting harder and harder to be themselves.

This is a very difficult university to work with. But from a researcher's fair perspective, and, and the students themselves, they're there they're made very nice, very smart, which is very, very, very nice to work together with.

So, to go great with the University of Delft is important about the health

I like it though personally because it's not too small or too big so it's nice. As a nicer city centre for me. We think it's a good environment for our kids to grow up.

Question:

So, could you please elaborate on why it's difficult to work with Delft university?

Answer:

Yes, that's because they're contracting, use may make use of a lot of interest

and they are very strict and changing their contracting and changing the policy all the time.

This is difficult to make good contracts

using mutually balanced contracts with you first.

Question

And so, when we talk about the report we have we can categorize and do is types like business support, network support,

financial support, infrastructure and support and our legal support. So, what support?

Do you think? Are you getting the most out of yesterday?

Answer

I think network support is number one.

The second one is the facility support. Especially for startups,

Question

And what support do you think is missing from yesterday?

I mean, what do you do? What Aren't you getting much out of?

Answer

Now, I think that I think there is enough all available if you're brave enough to make use of it. So, I don't feel there's a missing component.

Question

And so just Oh, Last, just last two questions, and we'll be done. I'm sorry if I'm taking up too much of your time. Yeah. So, do you think that any areas of improvement for Yes!Delft?

Answer

Yeah, I think that the connection?

So, the connection with the different levels of startups to maintain that over the years is important, so to illuminate yourself, alumni escape startups. So, most of the focuses I feel on the first three years started young startups and I think that this connection to the scale of should, should be better. Okay. are programs for that, but for some reason, I didn't connect to them. So maybe, it's me and not that.

Question

So, here's his last question. What do you think are the general reasons why startups leave incubators?

Question

Oh, what is it? What do you think are genuine reasons why startups need incubators? Hmm.

Answer

Very practically we are pushed out to so much sense, so you're actively asked to, to quit the physical incubator.

So that's, that's the main reason, of course, the mobile is active. Another thing is that if you grow out of that space, and maybe also the atmosphere, so for so much time for a startup, it's a very good atmosphere. And I like it personally a lot. But for a growing company, it's sometimes important to start to have your own culture.

And that's easier in your domain or space.

Question

And what do you think are general reasons why startups change their locations and you know, they move out of a certain region?

Answer

Yeah, well, there are many good reasons to do that.

Because one of the main reasons might be that your customers are in another area depending also on your business model.

For example, do you have strategic partnerships, investors with specific locations?

So, there are many, many, many, many possibilities here. One of the main things So we've been considering, to move out the region is for, for finance, customers. And sometimes there's like a centre of excellence in a specific technology space.

Sometimes it's good to move to that specific Center of Excellence. Yeah, finding good employees is possible and, yeah. But also, sometimes it's challenging maybe for specific companies that are challenged in other areas to do so.

Question

So, do you plan on continuing in? Yes. Delft for a couple of me or a couple of more years. Yeah at Intespring?

Answer

InterSpring I think the main plan would be to move out of the Yes!Delft,

as well as soon as financing allows that.

I think the same reason because it offers some time added value is getting less and

better to start building your own culture in the sense

Question

Is it all student noise?

Answer

Student noise is something that I don't personally mind at all. So, I couldn't put my finger on it. It has to do with the thing that you do the atmosphere you have when you invite with some martial art or investors that's that sense

it's their field that you that there are limited possibilities to grow and that you will

must move out at some points to grow long

Question

Are you considering moving out of delft to another city like Hague or you know, a bigger city or a smaller city?

Are you considering going out of Delft?

Answer

Well, we're officially out of the Delft in April.

Basically. Practical very close, it is healthy because it's nice. I know very close, but

efficiently the most out of.

All places are safe as well to them, the Hague, just the whole area has been considered.

But we have been also looking actively to Delft, too, to find a place because our personnel

is often living around the Delft, of course. So that's a good reason to stay.

But in Delft, it's hard to find office space, it also has workplace space connected to it.

And that's been a real challenge for us to find. Yeah, office space also connected to, to workplace space where you can build.

Question

So more Like a garage right

And is this one of the reasons why Label moved out of Delft because of the workplace not being close to home like a garage.

Answer: Yeah

Question

okay that's wonderful

Answer

And the price of course. Prices of the office areas that are available sometimes are a bit higher and though of course also a consideration the square-meter the price basically

Question

But you do before preferring Delft as region right for in spring if given the workplace you would prefer, Delft right

Answer

Are the same regions so close for the same reason but if you're looking like from a legal perspective for Richmond municipality? For me, it's the same reason so yes I prefer this region.

Question

Okay, that's wonderful. All right.

So, thank you so much for participating in the interview.

And do you have any questions for me? Or do you have something to say about yesterday as well?

As a region?

Answer

No. Okay.

Question

All right. All right.

Thank you so much for participating in the interview and you know, this interview will add a lot of value to my thesis. And thank you so much for accepting in the last minute and on such short notice.

6.4.5 Transcript of interview with a startup - NewCompliance

Question:

So, I have a couple of questions for you regarding your stay yesterday.

The incubator. Yeah, so I won't take much of your time. I'll keep it short.

And so, let's begin. Yeah.

So, do you remember that you left the incubator?

Answer

That was in 2012.

Question

At which growth stage you were in?.

Answer

We were growing. We also needed Warehouse capacity and couldn't find itself without any warehouse. That's why we decided to move. At first, we were looking for that. But we couldn't find it. And so finally we ended up going into the mayor.

Question:

That's nice. And so, this was one of the main reasons for you to leave the incubator

Answer:

For six years, I guess 2012 and I think it was also a time It was also like it reminded me of my student housewife's moment you've outgrown it, although that was like older students and we have outgrown. So, I think it was the way it was. It was the reason but also the fact that we were just, I mean, we weren't participating in it anymore. We were just we had our own company. Like, the incubator is especially useful for the first

Question:

So, when you also grow as an organization in terms of the number of employees.

Answer:

Yeah, we were also growing in the organization back then we already have like, I think we had something like two of us together that we had like maybe five employees, including us.

Question:

And so, the only reason why you left Delft is that you couldn't find a warehouse in Delft.

Right. Is there any other reason why you left that region?

Answer

No, because at first we were looking at Delft and couldn't find any warehouse.

I think we would've rather stayed in Belfast back then.

And because Delft is like a technology town, so there's much more technology in Delft and we figured we needed to have access to these technical people. And this proves to be in the end that proves to be also. We needed software development. There were these college-going students or interns there and there was this idea that we could get a lot of interns you could get from. So, in the end, I think it was a better choice to leave and go here because of the chance we could get there. But we hadn't, we hadn't.

Question:

So that just happened to be

Answer:

Yes, it was just around that the college was around the corner

Also, like a university but they do which means like, not the university but

a little bit lower than yours. Okay.

Question:

So, what did you like or appreciate from Yes!Delft?

Response:

The reputation he said well we are a spin-off to do Delft and all the coaching we'd like to see and all the other companies that were there.

So, it was really like being part of a bigger Business I think reputation consultancy and we get to be part of that team. You know, with networking and all the other companies these were the three main routes.

Question:

What did you like about being in Delft?

And what are the advantages that he got valuable located in best?

Answer:

When it was nearby. Where I was living, it was quite close by and it was easier,

easy to reach by car although it wasn't so easy to reach by public transport.

That was the disadvantage but a procedure to reach by car.

Question:

Oh, that's nice. And what did you not like about being in Yes!Delft?

What do you not like about it?

Answer:

Transportation was quite bad. Remember the connection to public transportation wasn't that good?

I think they are; they might have improved it by now. But when we left in 2012, it wasn't so good.

The fact that they didn't have anywhere else in the capacity.

That was we, we found it next to our that we needed warehousing capacity, and we couldn't find it there. And those are the two things. And the fact that I mean, we ...

I think you're like if you're at a startup company, and it's very good, but once you're becoming a scale-up you don't want to stay there, baby.

Now the other buildings are down, maybe that's more for scaleups effect then I mean, there are still a lot of students and young people.

And with a net sometimes you'll have these crates of beer in the, in the corridor and bridges and people running over. They're running over there in the corners.

It was just like; you can blame them. Just Yes!Delft

I made it as a scalar company.

We now have 40 people employed just different reputation and a different

Yeah, so it was quite messy when you wouldn't know with all the students making all the noise and you know, yeah, I get it because

I mean the level I think the bottom line is the level of professionalism.

Question:

So just a couple of last few questions, and then we'll wrap it up.

So, when they talk about support, we have business support in terms of the incubator helping you get your clients and commercialization in the scales and then we have infrastructure support, and then we have financial support, network support and the region supported according to you was given the most during your stay yesterday.:

So, what are the flavours you wish to support, you have the region support and then the network support, financial support and legal support?

Answer:

I think the financial and legal support that was the most.

At that time and I, I saw other companies, and they increased the level of support now.

Yes, I know that. But back then there weren't that many supports.

So, it was mainly legal and financial.

Question:

And what was the support that you missed?

Answer:

And, funding supports or we, we've been in close contact with. Yes.

Question

That's wonderful. And what was the support that you missed during your stay?

Answer

Yeah, well, and they have increased that now because I'm pitching a product that supports but like the real, more practical market, market.

Market Specific support. So, I mean, we're in healthcare.

And we didn't get any support regarding healthcare, how the healthcare market is, like everything that you see that you encounter in your business and legal like how you do sales?

How do you do your sheet? He should have a vacation. How do you do your preclinical validations that there wasn't any specific healthcare-related support?

And I know there is now because we 're one of the persons that are teaching it but that wasn't there back then.

Question:

And do you think that any areas of improvement for Yes!Delft

Answer:

Any improvements for yourself? No, I think yourself has changed over the last few years. And I think the changes they have made to them will be very, very good. And I think you're on the right track in the Netherlands.

Question:

So, what do you think are the genuine reasons why startups leave incubators and the Parent University region?

Answer:

Once you get bigger than you're leaving the incubator. But the place to be if you are a startup.

Question:

Hmm. And what do you think are the reasons why startups leave, or you know, migrate, move their locations from one city to another? So, what do you think the reasons are why startups need a certain region and move to another city?

Answer:

A reason why we ended up in, I mean, we got a professional. I mean, we're a professional company. And we had to add like, reputational so we wanted to get like a lot of professional people on board.

People that are very experienced like 40 bucks per hour to get educated people on board.

That's why we moved to the big city.

So, because they are more because it's easier to get these professional vehicles, it's part of your goal reputation that you have.

So, I think they're moving to another region because that region has more access either to, to customers or maybe to technology or employees.

And I think, in the beginning, you're looking for access to technology.

That's why you're in the TU Delft. But later, your access to customers into aggregation becomes more important.

So that's why you change your region, I would say.

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