UiA University of Agder

Master

Digitalisation of Services in an Accelerator Company

A qualitative case study on digitalisation of processes and services and the related advantages of an accelerator company through Actor Network Theory.

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Abstract

The COVID-19 pandemic has led to an increase in digitalisation which has impacted the operational structure of businesses. It has also led to an increase in innovation, and the digitalisation of start-up assistance organisations, such as business accelerators. Previous literature lacks information regarding the digitalisation of business accelerators.

This master's thesis aims to examine which processes and services of an accelerator company can be digitalised and the advantages of digitalisation from an accelerator company's viewpoint.

The research uses an exploratory case study to gather qualitative data through a set of interviews with the case company, Moment, and four of the start-up companies that the case company is collaborating with. Data were also collected through a table of accelerator services, filled out by the case company.

The interviews were recorded and transcribed, and the results were then evaluated to discover similar themes, which were then compared. The data gathered presents the processes and services offered by Moment and which services can be digitalised. Approximately one-fifth of the services can be fully digitalised, almost half of the services can be partially digitalised, and the remaining one-third of the services should not be digitalised, according to the case company.

The findings also present the five main advantages of digitalisation for the case company, which include systematisation, eco-friendly operations, increased profit, increased success rate, and increased efficiency.

Through the concept of translation from the Actor Network Theory, a suggestion for the implementation of digitalisation of their processes and services is illustrated through the four stages of translation, which include the suggestion of implementing the digitalisation through change management or business process management.

Keywords: Business Accelerators, Start-ups Assistance Organisations, Digitalisation, Digitisation, Digital Transformation, Innovation, Actor Network Theory.

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Before I started writing this thesis, I had no previous knowledge about start-up assistance organisations or business accelerators. Throughout the process of writing this thesis, I have learned a tremendous amount about accelerators and digitalisation of services. Working on this thesis has been quite a journey, with its ups and downs. But in the end, an unforgettable experience.

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1. Introduction

1.1 Background

When the COVID-19 pandemic hit, the effect made an impact on both individuals and businesses worldwide. The pandemic caused substantial impact on many businesses requiring a change in operational structure as well as businesses closing (Fubah & Moos, 2022). Several companies had to figure out how to continue their businesses digitally, from at-home offices to the use of digital communication platforms. The role of digital and virtual solutions became vital for sustaining businesses' daily operation activities. Many had to adapt by introducing the use of increased digital tools and platforms, and numerous had to learn how to use these digital platforms. Businesses had to adapt to fit into an all-digitalised environment, and some businesses were forced to close. It was the beginning of a new digital era.

Business incubators are types of start-up assistance models and are known as instruments to adopt entrepreneurship and regional economic development (Smilor & Gill, 1986; Pauwels et al., 2016). An incubator is designed to support start-up companies (Malek et al., 2014). Business incubators have led to the development of business accelerators (Carvalho et al., 2017). Accelerators and incubators both have the goal of supporting start-ups from the beginning of their growth (Bone et al., 2019). Incubators are not-for-profit organisations, while accelerators are for-profit organisations that bring a return on investment to the sponsors (Del Sarto, et al., 2018). Accelerator programs assist entrepreneurs in turning their ideas into marketable products (Dempwolf et al., 2014).

Start-up assistance organisations such as incubators and accelerators had to stop their physical operations and were forced to implement digital versions of their processes. Before the pandemic, digital accelerators were less relevant, as people were used to working in physical offices. When the pandemic hit, the digitalisation of businesses became vital. The pandemic introduced both challenges and opportunities in the entrepreneurial ecosystems that did not exist before. The pandemic has provided entrepreneurial opportunities as the number of new companies has tremendously increased globally, mainly due to the large amounts of workers who were laid off and started their own businesses (Altun, 2021). On the other hand, ongoing lockdowns in several parts of the world led to decreased entrepreneurial activity, which again led to the closure of companies (Fubah & Moos, 2022).

Innovation is an important aspect in terms of the economic growth of a company, district, or country. Inventions and innovations are essential to the future of any economic unit (Hisrich et

al., 2017, p. 97). Entrepreneurial activity is therefore correlated to economic growth. Accelerators are a part of the entrepreneurial ecosystem and are important to the development of start-ups (Carvalho et al., 2017). The structure of an organisation is significant as it gives the company a specific focus, which creates stability and therefore also coordination of activities (Jacobsen & Thorsvik, 2013, p. 80). By enabling the digitalisation services, one can offer services to a broader spectre of customers, both on a national and an international level. By digitalising services and processes, companies are able to reach a higher number of people and can increase their market, which in turn can increase efficiency – if done right.

Throughout this thesis, the concept of business accelerators will be looked at more in detail, as it is a fairly new concept. Due to business accelerators being introduced as a version of business incubators, there is a lot more theory on incubators than on accelerators. Furthermore, the focus of this thesis will be on the digitalisation of services and internal processes of an accelerator company, more specifically the company Moment, as this is a single case study. The services offered by this company will be looked at in terms of how they can be digitalised, and in turn, make the acceleration process more efficient. There will particularly be a focus on the advantages of digitalisation from Moment's point of view.

The aim of this thesis is therefore to focus on a particular accelerator company that is based in Kristiansand, Norway. Through this case study, the business processes and services will be mapped out as well as an investigation on which of these processes and services can be optimised through digitalisation. Also, the advantages of digitalisation will be analysed. This will in turn contribute to the development of digital transformation strategy.

1.2 Research gaps

Very little is known about the value of accelerator programs, how to define accelerator programs, and the importance of the success of these programs. There is not a lot of research done on business accelerators, as it is a fairly new concept and lacks comprehensive data sources (Cohen & Hochberg, 2014). There are gaps in the literature as there is a lack of understanding of the different types of incubation and acceleration models (Isabelle, 2013). Therefore, little research has examined the influence of learning and development through an accelerator (Harrison, 2019). Another important limitation of the research that has been done, is that very few studies have taken place in Norway. Through this master thesis, I am contributing to research on this particular topic in Norway.

There has also been a lack of research regarding the effectiveness of incubators and accelerators, both physical and virtual (Isabelle, 2013; Bone et al., 2017). Due to a lack of research, there has been a limited comparison of incubators versus accelerators (Bone et al., 2019). There has also been little research effort investigating the characteristics of the co-creation of digital services (Chowdhury, 2017).

Another gap is that many incubator or accelerator programs do not know if they are incubators or accelerators, or which type of start-up assistance program they should identify themselves as (Lang & Johnston, 2019). Accelerators and incubators have very similar characteristics and get mixed up. Companies may see themselves as accelerators, while essentially being an incubator. This is also applicable for incubators characterising themselves as accelerators. In other words, some accelerators are labelling themselves as incubators, and vice versa (Dempwolf et al., 2014). This can also include accelerator companies not knowing what type of accelerator they are.

Accelerators have not been investigated through many theoretical lenses as there is a lack of theoretical lenses used on business accelerators (Mian et al., 2016; Del Sarto et al., 2018), as well as a lack of proper framework for business accelerators (Pauwels et al., 2016). However, some research has been done from an open innovation point of view, such as Battistella et al. (2016) and Richter et al. (2017). There has been some research done using the resource-based view (RBV) as a theoretical lens, such as Hoffman and Radojevich-Kelley (2014).

Actor network theory (ANT) is a theory that is based on how actors form a network or ecosystem. ANT is about "how actors form alliances, involve other actors, and use non-human actors to strengthen alliances" (Hanseth, et al., 2004). ANT is relevant when studying innovation and information and communication technology, and therefore also in the process of digitalisation. ANT has its limitations as it mostly focuses on co-creating consumer products in a business-to-consumer context (Chowdhury, 2017). The research problems being investigated throughout this thesis are to what extent the internal processes and their related services can be digitalised in an accelerator company, and the advantages of digitalisation. There is a limited number of theoretical applications in terms of specific resources and processes needed for entrepreneurs in the digital era. Therefore, the actor network theory (ANT) will be applied as a theoretical lens in this thesis. Throughout this thesis, the services offered by an accelerator company will be examined as well as uncovering the potential for digitalising these. Therefore, the research questions that will be explored are as follows:

RQ1 – Which processes and related services offered by an accelerator company can be digitalised?

RQ2 – What are the advantages of digitalisation from an accelerator company's point of view?

1.3 Outline

The structure of the thesis starts with this introducing chapter regarding the topic of discussion where the research questions and objectives are established. In the next chapter, the literature will be looked at in-depth regarding business accelerators, digitalisation and actor-network theory as a theoretical lens. The third chapter will discuss the methodology of the study, including research design and strategy, description of the case company, data collection, data analysis, and the research quality, thereby explaining how the study was conducted. In the fourth chapter, the results of the research will be presented, and in chapter five these results will be discussed and analysed. Furthermore, the sixth chapter concludes the research and provides implications, limitations of the study, and recommendations for future research.

2. Literature review

In the following chapter, relevant literature is investigated, which describes and presents the identified research area. To reach the purpose of the thesis, this section will give a more profound comprehension of three important concepts, which include business accelerators, digitalisation, and actor network theory.

2.1 Business accelerators

2.1.1 Definition of accelerators

Accelerators are a recent phenomenon, which was originally driven by private investors who wanted to benefit from start-ups in the digital media sector (Malek et al., 2014). They emerged in the early 2000s as "a new type of business incubation model" (Del Sarto, et al., 2018). The first accelerator that emerged was the Y-Combinator, which was launched in 2005. The accelerator model is therefore a relatively new type of business incubation and has received growing attention from practitioners and academics (Pauwels et al., 2016). A business incubator

can be defined as "a business support process that accelerates the successful development of start-up and fledgling companies by providing entrepreneurs with an array of targeted resources and services" (NBIA, n.d.; Isabelle, 2013). Incubators are designed to support start-up companies and have been around for over 50 years (Malek et al., 2014).

Accelerator programs help entrepreneurs with bringing their ideas into products in the market. There is a lack of data on this particular topic as there is little literature about the definition of accelerators and how to distinguish the different types of accelerators (Dempwolf et al., 2014). Business accelerators are a part of an entrepreneurial ecosystem and are important for the development of start-ups (Carvalho et al., 2017). Networking and obtaining connections with potential investors maximise the survival rate of a start-up company (Christiansen, 2009). The most widely used definition for an accelerator program is "a fixed-term, cohort-based program, including mentorship and educational components, that culminates in a public event, or demo day" (Cohen and Hochberg, 2014; Dempwolf et al., 2014). Other definitions include "a learning-oriented program aimed to assist new digital ventures early in their lifecycle by providing mentoring, education, networking opportunities and connections to potential investors" (Hallen et al., 2016), and "a model of intensive mentoring and capital investment, which allow for the effective launch of new ventures" (Smith & Hannigan, 2015; Szczukiewicz & Makowiec, 2021).

Accelerators offer a cohort-based program of limited duration, typically three to twelve months (Bone et al., 2017; Bone et al., 2019). Accelerators are organisations that help start-up companies into the market by supplying them with necessary funds and resources. In return, the start-ups give the accelerator organisation partial equity in their ventures (Regmi et al., 2015). Accelerator programs have six characteristics: they offer upfront investment in return for equity, time-limited support that includes intensive mentoring, open, but highly competitive application process, cohort-based, focus on small teams and not individuals, and ending with a Demo Day (Clarysse et al., 2015). These programs offer networking, educational, and mentorship opportunities (Cohen & Hochberg, 2014). Therefore, an accelerator is an entity that includes a fixed duration, is growth-based, provides seed funding, have cohort-based entries and exits, are highly selective, and offers mentorship, entrepreneurial training, and network opportunities (Heinemann, 2015; Fowle & Tyne, 2017; Garcia-Ochoa et al., 2021). Many accelerators have a Demo Day at the end of the program, where all the start-ups demonstrate their product to investors (Christiansen, 2009). The accelerator business model illustrates how

the accelerator is structured to best attain its goals and how to generate income through the correct pricing of products or services (Dempwolf et al., 2014).

2.1.2 Core components of the accelerator model

The accelerator model has five core components or design elements. These are strategic focus, program package, funding, selection process, and alumni service (Clarysse et al., 2015). These core components are explained in greater detail below.

Strategic focus is shaped by the types of funders and stakeholders (Clarysse et al., 2015), describes the accelerator's strategic choices, and includes industry, sector, and geographical focus. Accelerators focus on knowledge-intensive services (Pauwels et al., 2016), in addition to focusing on cohorts of start-up companies instead of individual companies (Miller and Bound, 2011). Accelerator programs contribute to start-up companies getting in touch with investors and other stakeholders, as well as getting access to relevant resources (Malek et al., 2014).

Program package includes all the services offered by an accelerator company to its portfolio companies and consists of a training program with subjects like finance, marketing, and management. The program package also includes location services and investment opportunities (Pauwels et al., 2016). Accelerators are more suited for finding the 'winning' ideas faster and helping start-ups implement and grow (Dempwolf et al., 2014). The most important part of a successful start-up is getting good mentorship early on in the accelerator program (Bluestein & Barrett, 2010; TechStars, 2010; Hoffman & Radojevich-Kelley, 2012). The accelerator programs include intense education and mentorship, where years' worth of education is compressed into a few months (Garcia-Ochoa et al., 2021). Therefore, network development and mentorship are valuable aspects of an accelerator (Cohen & Hochberg, 2014). The greatest benefit of accelerators is networking (Hoffman & Radojevich-Kelley, 2012).

The funding consists of the funding from the accelerator and the funding that is available to the start-ups (Clarysse et al., 2015). There are multiple ways accelerators can get funding, such as from corporate sponsors, events held, grants by the government, research reports developed by accelerators, or entrepreneur-in-residence programs (Carvalho et al., 2017). Most accelerator programs get the majority of their working capital from shareholders (Pauwels et al., 2016).

The selection process differs among the accelerator programs (Clarysse et al., 2015) and is a process that consists of multiple stages. It usually starts with start-up companies registering and applying for the program online. Afterwards, through a standardised screening process, the

start-up companies "present their ideas and they are screened in person" (Pauwels et al., 2016). Accelerators have an open application process, and most applicants are young start-up teams that want to rapidly grow their business models (Richter et al., 2017). They have digital application processes so that a wide range of people from all over the world can apply (Miller and Bound, 2011). Accelerators are highly selective when choosing start-ups for the programs because the start-ups they choose need to raise funding in a way that is profitable for the accelerator. In other words, the success of the accelerator depends on the quality of the selected start-ups (Yin & Luo, 2018). Due to their selectiveness, there is a high demand for accelerator services (Lange & Johnston, 2019). Accelerator programs create a competitive and controlled environment that generates start-up ideas for a lasting collaboration (Richter et al., 2017).

Alumni services include post-program support, where the accelerators host events for alumni and invite them back so that they can share their experiences. Accelerator companies may take equity in the start-ups, which works as an incentive to further support the start-ups and help them succeed. The alumni network can be a vital source for mentors and investors, as start-ups may "invest back into the community that supported them in the first place" (Pauwels et al., 2016).

2.1.3 Types of business accelerators

There are different types of accelerators and start-up assistance organisations. Accelerators are divided into innovation accelerators, social accelerators, university accelerators, and corporate accelerators. Innovation accelerators are for-profit ventures that help out potentially high-growth start-up companies (Carvalho et al., 2017; Dempwolf et al., 2014) that approach the concept of 'open innovation' (Szczukiewicz & Makowiec, 2021). Social accelerators are interested in profit while at the same time are implementing parts of the business model to accommodate goals. This type of accelerator is quite rare and has the purpose of making an accelerator profit (Dempwolf et al., 2014; Carvalho et al., 2017). University accelerators are educational non-profits that provide grants as assistance to students that are in the process of development. They do not take equity stakes and question the focus on technology (Carvalho et al., 2017). Corporate accelerators provide a plan and financial support for start-up companies so that they can transform their ideas into businesses (Carvalho et al., 2017; Dempwolf et al., 2014). They take part in the supply of seed capital (Dempwolf et al., 2014) and their main goal is to establish a relationship between corporations and start-ups (Del Sarto et al., 2018).

A venture development organisation (VDO) is a type of start-up assistance organisation. A venture development organisation is a "public or non-profit organisation that contributes to

economic development by providing a portfolio of services". A VDO draws on the strengths of the innovation system and is developed to overcome the system's weaknesses. VDOs help create high-growth companies, provide expert assistance and make investments in these companies, and accelerate the commercialization of technology (Dempwolf et al., 2014).

Out of the above-mentioned types of accelerators and start-up assistance organisations, three of them are seen as more relevant, which are: corporate accelerators, innovation accelerators, and venture development organisations. These accelerator types are summarised in the table below.

Table 1: Comparing Corporate Accelerators, Innovation Accelerators, and VDOs (Sources: Dempwolf et al., 2014; Pauwels et al., 2016)

	Corporate accelerators	**Innovation accelerators**	**Venture Development Organization (VDO)**
Characteristics	Ecosystem builder.	Deal-flow maker.	Welfare simulator.
Program package	Mentoring by internal coaches. No equity engagement.	Mentoring by serial entrepreneurs and angel investors. Seed investment and equity engagement.	Mentoring by serial entrepreneurs and business developers. Mostly seed investment and equity engagement.
Value / benefits	Access to existing network and contact with customers.	Focuses on the specialization in a specific industry and the associated knowledge of the accelerator team.	Advanced training program, hands on mentoring.
Selection process	Competitive. New ventures in later stages.	Competitive. New ventures in later stages.	Competitive. Very early-stage new ventures.
Funding structure	Corporates	Private investors (angel investors, venture capital and corporate)	Various funding schemes. Mainly governmental.

Another type of accelerator, which does not fit into any of the above-mentioned categories, is the hybrid accelerator. In a study done by Bergmann and Rothausen (2020), there were identified three main types of accelerators: corporate accelerators, public accelerators, and hybrid accelerators. Hybrid accelerators have multiple funding sources, which can be from private sponsors, public sponsors, and multiple corporates. The strategic goals of hybrid accelerators are economic growth and regional development by focusing solely on a specific

sector or topic, establishing cooperation between start-ups and corporates, developing explorative and novel technologies, attracting entrepreneurial talent, and brand enhancement and marketing. This type of accelerator program focuses more on one or several related industry sectors or topics. In terms of location, the accelerator takes place at a specific location where it is funded. The program takes in new start-ups in all development stages. It does not include providing funding in the program package and does not take any equity in the venture. Still, it offers coaching and mentoring services just like a typical accelerator program (Bergmann & Rothausen, 2020). The main characteristics of hybrid accelerators can be described as a program that lasts between three months to two years, they do not have cohorts, the selection process is competitive and ongoing, and the venture stage is typically early-stage start-up companies. Also, the education process consists of various incubator and accelerator practises, the venture location is on-site, the mentorship is composed of staff expert support and some mentoring, and lastly, the business model consists of investments (Hathaway, 2016).

2.1.4 Types of acceleration programs and accelerator archetypes

There are also different types of acceleration programs. Pre-acceleration programs focus on first-time entrepreneurs, recent graduates, and unemployed people. Generic programs focus on start-ups that are developing something that meets a customer's needs or wants in market niches. Vertical programs are similar to generic programs, but they also provide start-ups with domain experts and certain resources (Carvalho et al., 2017).

Furthermore, there are three accelerator archetypes: the investor-led, the matchmaker, and the ecosystem archetype. The investor-led archetype "receives funding from investors such as business angels or venture capital funds". The matchmaker archetype "has typically been set up by corporates who want to provide a service to their customers or stakeholders" and they do not offer to fund the start-ups participating in the accelerator program. Finally, the ecosystem archetype of accelerators "typically have government agencies as a main stakeholder" and have "the most in-depth developed curriculum among the three archetypes". These three archetypes show how the accelerator programs implement varied structures and the way the program is run depends on its stakeholders. Even though there are three accelerator archetypes, there are some accelerator programs that have hybrid elements and do not fit just into one of the archetypes (Clarysse et al., 2015).

2.1.5 Criticism and benefits

Even though the accelerator phenomenon is fairly new, it has received some criticism. In particular, there is a lack of research regarding the effectiveness of accelerator programs and

how they are improving the survival and success rates of a start-up (Dempwolf et al., 2014). This means that companies can still fail after participating in an accelerator program. Accelerators have been criticised for appealing to later-stage start-ups that are struggling. Other criticisms include accelerators diverting talent from other high-growth ventures, start-up founders being exploited, and only building small companies (Miller & Bound, 2011; Elsner, 2020). A more recent criticism that accelerators face is that job creation does not give an accurate measurement of success (U.S. Government Publishing Office, 2017). A challenge of a business accelerator is that they are so highly selective, with only a few start-ups getting to enter the program. This means that out of all applicants, only a small number of start-ups are chosen to enter the accelerator program (Bone et al., 2019).

On the other hand, accelerators create value, not only for the team and the product but also for the ecosystem (Haines, 2014). They have a "positive spill-over effect on the wider business ecosystem" (Bone et al., 2019). Accelerator programs create an ecosystem, as the number of companies increases, so will the employment rate (Christiansen, 2009). The programs help start-up companies build their initial products, identify customers, and secure resources (Cohen, 2013). Recent studies have shown that accelerators have a positive effect on venture development (Fedher & Hochberg, 2014; Battistella et al., 2017; Smith et al., 2017; Garcia-Ochoa et al., 2021). Accelerators are said to increase the success rate of start-up companies (Bank & Kanda, 2016; Butz & Mrozewski, 2021). Start-ups that have gone through an accelerator program, have a 23% higher survival rate than other start-up companies (Regmi et al., 2015). Accelerators function as a way to shorten the journey of start-ups. However, this may lead to a faster growth or a faster failure for the nascent ventures (Clarysse et al., 2015).

2.2 Digitalisation

2.2.1 Digital entrepreneurship

Digital entrepreneurship is an essential part of innovation (Satalkina & Steiner, 2020), and was developed as a result of technological assets such as the internet and information and communication technology (Le Dinh et al., 2018). Entrepreneurship is linked with the actions of other entrepreneurs that are coordinated across platforms (Srinivasan & Venkatraman, 2018; Sahut et al., 2019). Digital entrepreneurship "is a subcategory of entrepreneurship in which some or all of what would be physical in a traditional organisation has been digitised" (Hull et al., 2007) and can be seen as "the reconciliation of traditional entrepreneurship with the new

way of creating and doing business in the digital era" (Le Dinh et al., 2018). Digital entrepreneurship can be defined as "the process of entrepreneurial creation of digital value through the use of various socio-technical digital enablers to support effective acquisition, processing, distribution, and consumption of digital information" (Sahut et al., 2019). Digital entrepreneurship consists of "the sale of digital products or services across electronic networks" (Guthrie, 2014). The terminology of digital entrepreneurship is not used in the same way in all articles. Some refer to digital entrepreneurship as 'digital venture', 'digital innovation', 'digital enterprise' or 'digital business' (Kraus et al., 2018). Entrepreneurial knowledge is an important part of digital entrepreneurship as it shapes the processes within digital and business engagement (Satalkina & Steiner, 2020). Digital entrepreneurship has different degrees, and it is possible to differentiate between mild digital entrepreneurship, moderate digital entrepreneurship, and extreme digital entrepreneurship when looking at digital business models. It describes the degree to which businesses operate in the digital world (Hull et al., 2007; Liao et al., 2013). Mild digital entrepreneurship may focus on digital products, while extreme digital entrepreneurship does its whole business online (Kraus et al., 2018).

Digital entrepreneurship "builds on the existence or development of a digital ecosystem" (Kraus et al., 2018). A digital ecosystem is "a self-organising, scalable and sustainable system composed of heterogeneous digital entities and their interrelations focusing on interactions among entities to increase system utility, gain benefits, and promote information sharing, inner and inter cooperation and system innovation" (Li et al., 2012). Users of a digital ecosystem are everyone that has access to connected devices (Kraus et al., 2018), which in this time and age is nearly everybody. In this sense, digital ecosystems present terrific opportunities for entrepreneurs (Sussan & Acs, 2017). Even though digital entrepreneurship helps developing ventures, there are still some challenges. An obstacle is that there are high levels of uncertainty for nascent ventures. Other challenges include the difficulty of finding investors and establishing trust among market participants (Kraus et al., 2018).

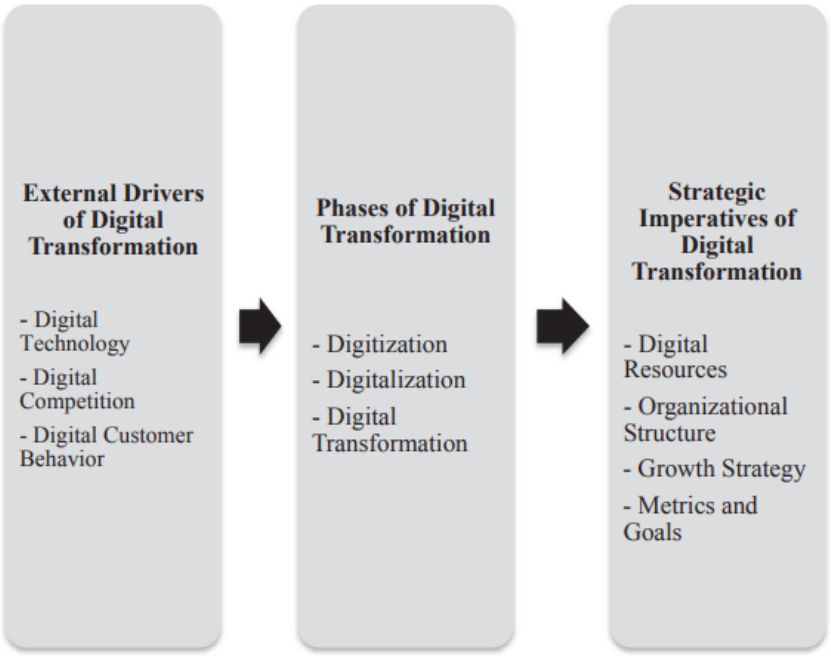
2.2.2 Digital transformation

Today, businesses are mostly digitalised as we live in a world where you can order almost everything online, both products and services. There are very few businesses today that are not operating digital in some way. The processes of digitalising businesses started in 2000 after more and more people got computers at home. By having access to the Internet, there is a massive amount of information that one has access to. As businesses will become more and more digitalised, there will not be a need to use the term 'digital' as digitalisation will be a norm

(Cassia, 2017). Digital transformation and business model innovation has changed expectations and behaviour in consumers as the access to information has increased. Consumer behaviour is changing as more online purchases are taking place, as opposed to physical purchases. This is affecting the sales of both digital and physical sales (Kannan & Li, 2017). With the increase of digital technologies, such as artificial intelligence (AI), there are more and more firms that transform their business digitally. Due to new digital technologies, the competition in the market is transforming rapidly. An increased number of digital businesses means that there will be increased competition and harder for nascent ventures to succeed (Verhoef et al., 2019).

Digital transformation can be defined as a "holistic effort to revise core processes and services of government beyond the traditional digitisation efforts" (Mergel et al., 2016). There are three stages of digital transformation: digitisation, digitalisation, and digital transformation (Verhoef et al., 2019). Digitisation involves becoming more effective and efficient in terms of processes and outputs (Mergel et al., 2016). It is defined as "the action to convert analogue information into digital information" (Mergel et al., 2016; Verhoef et al., 2019). It mainly "digitalises internal and external documentation processes but does not change value creation activities" (Verhoef et al., 2019). Digitalisation focuses on "potential changes in the processes beyond mere digitising of existing processes and forms" (Mergel et al., 2016). It describes how IT or digital technologies are applied to improve a company's internal processes (Li et al., 2012). In other words, firms apply digitalisation to improve existing business processes, which in turn may improve customer experiences (Verhoef et al., 2019). And lastly, digital transformation accentuates the "cultural, organisational, and relational changes" that are highlighted from the results (Mergel et al., 2016). In the process of digital transformation, many companies implement business model innovation (Verhoef et al., 2019).

Figure 1: Digital transformation (Source: Verhoef et al., 2019)



The figure above summarizes the concept of digital transformation and shows its external drivers, phases and strategic imperatives. Digital transformation introduces new business logic which creates and captures value. An important part of digital transformation is increased focus on IT and analytical functions (Verhoef et al., 2019).

2.2.2.1 Stages of digital transformation

Digital transformation can be seen as a technical revolution (Perez, 2010; Mergel et al., 2016), and consists of six stages, which help to understand the term better.

Business as usual - This is the first stage, where businesses follow a specific plan that has little room for experimentation. In this plan, there are certain goals to be achieved as well as a fixed set of key performance indicators and business models. For a business to undergo a digital transformation, this plan has to change. Instead, a flexible approach may be implemented.

Present and active - This stage consists of conducting experiments to assess whether the processes of the company work or not. If they do work, and the company is closer to its goals, then the experiments have been successful, and the specific processes may be implemented in the whole organization.

Formalized - During this stage, experiments are more common and become more of a habit, which in turn leads to higher confidence and thus a higher success rate. This stage inhabits the starting point for the best outcomes.

Strategic - In this stage, there are collaborations across departments which in turn creates various perspectives and angles. These insights make it beneficial for everyone and can create new strategic plans for the organization.

Converged - During the penultimate phase, the team has to be focused on specific customer-oriented goals. This is where the new organizational structure begins to form, and where the business is ready to transform digitally as roles, processes, and expertise are at work.

Innovative and adaptive - Lastly, in this stage, the efforts of the digital transformation display its real benefits as it becomes an essential part of the business (Hassan, 2020).

2.2.2.2 Digital transformation barriers

Digital transformation occurs when innovation problems are solved through using telecommunication technology. The key building blocks for accelerating digital transformation are guiding innovation dynamics, building innovation capacity, and integrating information and communication technology into key sectors. However, there are many barriers to digital transformation, such as the lack of processes or methods to create policies supporting digital innovation and entrepreneurship, unclear roles of stakeholders, missing innovation capabilities, the incorporation of innovation ecosystems into the economy is not optimal, and lastly the impact of rapidly moving information and communication technology (ITU, 2018).

2.2.2.3 Information and communication technology

Information and communication technology (ICT) is about "wireless and wired communications, the hardware and software related to them and their applications" (ITU, 2018). ICT is "a collection of technologies and applications which enable electronic processing, storing and transfer of information to a wide variety of users or clients" (Cohen et al., 2002). The term ICT "refers to various technological elements and solutions, which are used for the creation, transmission, storage, sharing and exchange of information" (UNESCO, n.d.; Damastichas & Daskalakis, 2020). ICT can therefore be defined as "electronic technologies and services used to process, store and disseminate information, facilitating the performance of information-related human activities, provided by, and serving the institutional and business sectors as well as the public-at-large" (Cohen et al., 2002). Another definition is "a diverse set of technological tools and resources used to transmit, store, create, share or exchange information" (UNESCO, 2009).

ICTs are characterised by containing dynamic technological changes, diminishing costs for new equipment, the fast growth of applications and penetration in several areas of professional and

personal life, an interconnected marketplace, and product and services depending on a broad spectre of qualities and skills from human resources (Cohen et al., 2002). ICT ventures may achieve their true capacity if they expand beyond their niche, which in turn enables transformation across other industries. Integration of ICT systems includes the development of innovation networks, supporting demand-side innovation, endorsing the right solution development, and encouraging cluster formation regarding related industries (ITU, 2018). Evidently, there are multiple benefits of ICT. However, there are yet challenges and barriers concerning the use of ICT. The challenges of ICT are consumer attitude, corporate responsibility, cooperation and trust, data uncertainty, environmental impact, information use, lack of capacity, policies, product design, and security (Demestichas & Daskalakis, 2020).

2.2.3 Transformation of internal processes

2.2.3.1 Change management

Change is an important aspect when talking about digitalising parts or whole processes of an organisational structure. Change management is therefore relevant when discussing the digitalisation of processes of an accelerator program. Change management has been defined as "the process of continually renewing an organisation's direction, structure, and capabilities to serve the ever-changing needs of external and internal customers" (Moran & Brightman, 2001). Even though this definition may be old, it is still relevant and has been cited in recent years such as by Hornstein (2015). There have also been other definitions of change management such as "the application of a structured process and set of tools for leading the people side of change to achieve the desired business outcome; it is both a process and a competency" (Creasy, 2018), and "the process of collecting the right information about the impediments to change and removing them by assuaging organizational members' fears and uncertainties" (Graetz & Smith, 2010). Therefore, change management is "a task that is primarily directed inward (…) towards the members of the organization or company undergoing change". The aim is to internally apply an ideal adjustment to the external changes (Lauer, 2021, p. 4).

Change management consists of three aspects: organisations, people, and projects (Galli, 2018). It aims to increase economic efficiency (Lauer, 2021, p. 4). Change management usually indicates that the management of change, can be related to three points: 1) Individuals: change is not possible without the smallest social elements of organizations. 2) Corporate structures: include the formal structural and process organizations, strategies, and resources. 3) Corporate culture (Lauer, 2021, p. 6-7). An important part of change management is communication, as communication is the key to transporting information (Lauer, 2021, p. 70). However,

communication alone is not enough for the success of the implementation of change (Lauer, 2021, p. 122). There have been identified two main success factors of change management: 1) Delivering a clear direction for change, and 2) The motivation of the employees. If there is a clear vision for where the change will lead, and the employees of the company are intrinsically motivated, then the change will be successful (Lauer, 2021, p. 109-110). Another research has identified six critical factors so that the implementation of change will be successful in an organizational context. These six factors are: "shared change purpose, effective change leadership, powerful engagement processes, committed local sponsors, strong personal connection, and sustained personal performance" (Errida & Lotfi, 2021).

2.2.3.2 Business process management

Business process management (BPM) is a management idea that focuses on the processes of a business and how to change these for the better. Organisations perform better when they pay attention to their business processes (Reijers, 2021). BPM dates back to the beginning of the 1990s when organisations began to realise the value of IT investments from changes in business processes and work practices (Van der Aalst et al., 2016).

A business process can be regarded as "an activity that links the operations of an organisation to the requirements of its customers" (IMI, 1994). BPM aligns the business processes with the objectives and needs of the customer (Lee & Dale, 1998), and is an "approach to analyse, improve, control, and manage processes with the aim of improving the quality of products and services" (Elzinga et al., 1995). BPM can be defined as "a structured approach to analyse and continually improve fundamental activities such as manufacturing, marketing, communications and other major elements of a company's operations" (Zairi, 1997). Furthermore, BPM is a "software system that is driven by explicit process designs to enact and manage operational business processes" (Van der Aalst et al., 2003), and supports "business processes using methods, techniques, and software to design, enact, control, and analyse operational processes involving humans, organizations, applications, documents and other sources of information" (Van der Aalst, 2004). There are many definitions of BPM, but the main characteristics are that BPM is structured, analytical, cross-functional, and a continuous improvement of processes (Lee & Dale, 1998). BPM is a customer-focused approach that offers options for an organisation to improve (DeToro & McCabe, 1997). The drivers for adopting BPM are globalisation, changing technology, regulation, the action of stakeholders and the eroding business of boundaries (Lee & Dale, 1998). In recent years, BPM has become more of a mature discipline

that has well-grounded methods and tools that are a part of improving business processes (Van der Aalst et al., 2016).

2.3 Theoretical lens: Actor Network Theory

2.3.1 Defining Actor Network Theory

Scholars are increasingly using actor network theory (ANT) when investigating aspects relating to digital production (Othman, 2019; Stalph, 2019; Ryfe, 2022). ANT was developed in the 1980s in the context of the sociology of science, technology and innovation. ANT claims that technology and society are essentially interconnected (Waldherr et al., 2019), and is relevant in relation to innovation and the use of information and communication technology (ICT). As there is a lack of knowledge about the digitalisation of services (Chowdhury, 2017), the concept of ANT is applicable in this case. Actor network theory is a version of semiotics, which states that entities take their own form and attain their properties due to interaction with other entities (Law & Hassard, 1999, p. 3). Many claim that ANT is not a theory at all, due to its descriptive rather than explanatory nature (Law, 2008). Rather, ANT is a type of ethnomethodology (Latour, 1999; Ryfe, 2022). In terms of measurement in the ANT perspective, the vicinity within networks of time and space is an important aspect (Murdoch, 1998; Wang & Yau, 2018). Law, who is a contributor to ANT, stated that "entities achieve their form as a consequence of the relations in which they are located" and that "they are performed in, by, and through those relations" (Law and Hassard, 1999, p.4).

ANT is an important perspective in terms of looking at digital media environments and communication, as well as technological changes. It goes beyond focusing on technology as a power tool that shapes social behaviour, as ANT assumes that technology has a life of its own. Technology is seen as an independent actor that can take its own actions. In other words, the ANT perspective "indicates that we study technical actors as actors in their own right who participate in and bring change to social interactions" (Waldherr et al., 2019).

2.3.2 Actors and mediators

Actors and networks are considered categories that are opposites of each other. A network can be defined by its actors and associations, and an actor is therefore defined by its network (Latour, 2011; Waldherr et al., 2019). The difference between actors and mediators is determined based on their stance in a network. An actor can be a human or a non-human entity, which uses mediators (Outila & Kiuru, 2021). ANT explains how actors form alliances, involve

other actors, and use non-human actors to strengthen alliances (Chowdhury, 2017). In terms of ANT, an actor can be defined as "any thing that does modify a state of affairs by making a difference" (Latour, 2005, p. 71), and "something that acts or to which activity is granted by others" (Latour, 1996; Waldherr er al., 2019). A mediator can be a text, artefact, human entity, materials, or bodies which define the roles of entities (Leskinen, 1994; Outila & Kiuru, 2021). Mediators have the ability to "transform, translate, distort, and modify the meaning or the elements they are supposed to carry" (Latour, 2005, p. 39; Outila & Kiuru, 2021). Therefore, central parts of ANT are actants or actors, intermediators and mediators, translations, and networks. Networks are seen as dynamic entities where actors and actions are created (Leskinen, 1994; Outila & Kiuru, 2021).

2.3.3 Translation in ANT

Furthermore, a network in ANT can be regarded as a series of translations (Latour, 1999, p. 15) or a "mechanism by which social and natural realities are shaped continuously" (Leskinen, 1994; Outila & Kiuru, 2021). Translation involves the connections between entities in networks (Callon, 1991, p. 143), and leads to mutual alterations of actions in the network (Waldherr et al., 2019). ANT requires an act of translation (Ryfe, 2022). This process can be defined as "the method by which a main actor enrols other actors to form an actor-network" (Lee & Oh 2006). Another definition of translation is "the process or the work of making two things that are not the same, equivalent" (Law, 1999). It is argued that "every act of translation is also a traduction, or betrayal" since actors can gain allies to their cause by committing acts of betrayal by "convincing others that their account is the truth" (Ryfe, 2022) or by competing to turn "matters of concern into matters of fact" (Latour, 2005; Ryfe, 2022).

The phases of translation consist of problematisation, interessement, enrolment, and mobilisation (Callon, 1986; Chowdhury, 2017; Sage et al., 2020). Problematisation introduces a problem or an opportunity by the main actor, and other actors are supposed to find solutions to this problem (Chowdhury, 2017). Interessement consists of getting other actors interested in the solutions suggested by the main actor (Rodon et al., 2008), stopping competing associations, and forming alliances (Callon, 1986; Mähring et al., 2004; Rodon et al., 2008; Chowdhury, 2017). Enrolment includes a multitude of negotiations, in order to achieve success (Callon, 1986; Rodon et al., 2008; Chowdhury, 2017). Lastly, mobilisation is about finding ideal representatives as the spokespersons for the entire actor-network (Callon, 1986; Chowdhury, 2017), and involves the existence of a stable network of actors (Callon, 1986; Sage et al., 2020).

2.3.4 Relevance of ANT

ANT presents a complete and comprehensive perspective of the social by highlighting "the need to turn away from exclusively analysing humans by integrating nonhuman actors into our understanding of social order". This theory has become more relevant in the present as ANT has "gained strong relevance in our contemporary mediatised, datafied, and algorithmitised societies" (Waldherr et al., 2019).

2.4 Theoretical framework

The concept of a business accelerator has been explored through the literature review based on previous research. Since the case study company can be seen as a type of accelerator or start-up assistance organisation, the different types of accelerators that are relevant have been explained. Another aspect that has been looked at in more detail, is digitalisation. By using digitalisation, analogue processes can be transformed into digital processes. Therefore, digital entrepreneurship, digital transformation, ICT, and other related theory has been discussed as it is vital in the investigation of to what extent one can digitalise processes in an accelerator company. Lastly, actor network theory (ANT) has been explained and will be used as the theoretical lens in this thesis. Through the concept of translation from ANT, a suggestion for the implementation of digitalisation will be discussed.

There are few digital business accelerators out there, especially in Norway. By investigating how a particular accelerator company can digitalise its processes and services, the efficiency of the accelerator may increase and in turn provide knowledge to other accelerator companies wanting to digitally transform their business.

3. Methodology

The purpose of this chapter is to present the methodology of this study, which in turn will make it easier to answer the research questions. The procedure of the study will be explained by discussing the research approach, research design, research strategy, data collection, data analysis, and the research quality.

3.1 Research design and strategy

3.1.1 Research approach

This study aimed to investigate which processes and related services can be digitalised in an accelerator company. The purpose of this research was to examine the experiences related to the collaboration between the accelerator company and the start-up companies. To conclude whether it is possible to digitalise the processes and their related services fully or partially, knowledge about these services needed to be mapped out through primary data collection. The type of research methodology used in this thesis is exploratory research approach. Exploratory research is often used when the existing research results are unclear or have limitations, or there is not enough theory available in order to develop a theoretical framework. This type of approach is often used in terms of qualitative data collection, such as through interviews (Sekaran & Bougie, 2016, p. 43). The type of data gathered was qualitative data and was conducted under controlled observation since data was gathered through interviews. Qualitative data is "data in the form of words" (Sekaran & Bougie, 2016, p. 332).

Furthermore, inductive reasoning was used as a research approach in this thesis. Inductive reasoning is a process where specific phenomena are being observed, and from this basis, one may formulate general conclusions (Sekaran & Bougie, 2016, p. 26). Since interview data is collected, an inductive approach was suitable in terms of looking for patterns across the interviews. The purposes of using an inductive approach are to get short summaries of comprehensive information out of the raw data gathered, establish links between research objectives and findings from the data gathered, and develop a framework from the findings. Compared to an inductive approach, a deductive approach focuses more on the analyses of experimental and hypotheses testing. Since an inductive approach is more suitable for this study, there will not be any hypotheses to be tested as the primary data gathered will be used to extract concepts and themes (Thomas, 2006).

This study will contribute to information regarding accelerator companies and start-up assistance organisations, particularly in the Agder-region of Norway, and improve the general knowledge about this. Furthermore, mapping out the processes and services offered, use of resources, and analysing what parts may be digitalised, can make an important contribution to the research literature on entrepreneurship, digitalisation, business development and innovation. The purpose of this study is to identify opportunities for the digitalisation of accelerator companies.

3.1.2 Research design

A research design is a "plan for the collection, measurement, and analysis of data, created to answer the research questions" (Sekaran & Bougie, 2016, p. 95), and is what "links the data to be collected to the initial questions of study" (Yin, 2009, p. 24). The unit of analysis of the research is organisations. The unit of analysis is the "level of aggregation of the data collected during the subsequent data analysis stage" (Sekaran & Bougie, 2016, p. 102). In other words, the unit of analysis is where the data is being gathered from. Organisations as a unit of analysis is therefore evident due to the research being a case study. The time horizon of the research was a cross-sectional study as the information gathered through the interviews took place over a couple of days.

Kristiansand is a city with few accelerator companies. The company Moment was therefore chosen for this case study as they seemed like a different sort of accelerator company than the others one may find in this area. The data collection would therefore be gathered at the location of the case company's offices. Interviews were used as a method of gathering data, as this method is the most common (Jamshed, 2014) and effective type for qualitative research. When choosing which start-ups to interview, the case company contributed with four of the start-up ventures they were collaborating with and therefore were assumed to be the best ones to interview. The interview questions were made some time in advance and sent to NSD (Norwegian Centre for Research Data) for approval in terms of research topic and method of data collection. After the approval from NSD was received, the interviews could be scheduled and conducted.

3.1.3 Research strategy

Research strategy is an element of research design and is about having a plan to achieve a certain goal (Sekaran & Bougie, 2016, p. 97). The research strategy was chosen based on the limited time of the thesis and the resources available. In this research, a case study was used as a strategy due to focusing only on one accelerator company. Case studies are a type of research strategy that collect information about a particular object, event or activity. An example of a case study is an organisation (Sekaran & Bougie, 2016, p. 98). A case study may be defined as a research strategy that contains an empirical investigation of a specific phenomenon that uses multiple data collection methods (Yin, 2009; Sekaran & Bougie, 2016). The methodology of this thesis is small scale since the approach is a case study. Primary data was going to be collected through in-depth interviews. Interviews are a great way to obtain information on a particular subject. Interviews can "establish rapport and motivate respondents" as well as

reading nonverbal cues from the respondents (Sekaran & Bougie, 2016, p. 113-123). Furthermore, by investigating this particular case company, their internal processes and related services may be mapped out as well as looking at how they can digitalise these processes and services. Also, looking at how digitalisation may make their processes more effective, as well as the advantages of digitalisation from the case company's point of view.

3.2 Case company

The company chosen for this case study is the Kristiansand-based company Moment, which is a private organisation that helps nascent ventures in terms of the growth and prosperity of their ventures. They help innovative companies to reach "their full potential through active ownership, networks, and capital". Working alongside the nascent ventures, Moment makes their process a little more hands-on during the growth process (Moment, n.d.).

Moment is a fast-growing accelerator environment for start-up companies and established companies with scaling potential. They exercise active ownership in their portfolio companies, where they combine different competencies, networks, access to capital, and office facilities (Moment, 2019). Their collaboration/program begins with a recruitment pool, where small and medium-sized companies, entrepreneurs, and start-up companies file applications, and from there they select the companies that are entering their portfolio. Moment is "always looking for the most exciting and innovative growth and start-up companies" that want to develop their company or ideas further. They are looking for start-up companies that "enjoy working as a team and are willing to adjust their needs and achieve set goals" (Moment, n.d.). Their consulting services start by defining the problem and the opportunity of a start-up company. Afterwards, they validate the customer needs, and further help develop ideas into solutions. This first phase usually lasts for about four weeks. The next phase is validating the start-up's business model, which normally takes three months. Finally, the last phase is about scaling the company by the use of a dedicated team. The last phase does not have a set ending date, and the cooperation may therefore continue until no longer needed (Moment, 2020).

The main services Moment has to offer are application writing, capital, goal achievement, and competence. Moment holds competence in application writing, helping start-up companies write applications for national and international policy instruments/support systems. They invest their capital and time in the start-ups and work on a hands-on approach to find the right financial basis for the start-ups' growth. This includes private investor capital, public grant

schemes and financial institutions. Goal achievement is reached through the right competence and continuous momentum. Hence, Moment offers a different type of innovation environment where expertise from entrepreneurship, business development, project management, and growth strategies are combined (Moment, n.d.).

3.3 Data collection and analysis

3.3.1 Data collection

In this study, qualitative data analysis was used. As this is a case study, the scope is fixed on one particular company. The method of gathering information was through interviews, particularly focused interviews where participants are interviewed for a short period of time. Interviews are "one of the most important sources of case study information" (Yin, 2009, p. 106-107), and contribute to rich sources of data gathering in a case study. Interviews may offer information from a diverse set of perspectives (Singh, 2014), and is also a type of primary data collection method (Sekaran & Bougie, 2016, p. 111). Interview as a type of data collection method also seemed more suitable than a focus group as one may gather more information and details through a set of interviews (Sekaran & Bougie, 2016, p. 122). The explicit assumptions made in this study were that the case company wanted to become more digital in a pandemic era where almost everything takes place online, what processes and services can be digitalised, and how the digitalisation of processes can increase efficiency.

To prepare for the interviews with the start-up companies, as well as the case company, the interview guide was created from relevant topics found during the making of the literature review of the thesis. From the specific research questions of this thesis, the interview topics were formulated, and from there, the interview questions were made. The interview guide was reviewed, and issues were identified and revised into a finalised set of interview questions based on recommendations from Bryman and Bell (2015) (see Appendix A). The interview guide (see Appendix B) contained both general questions for the participants to answer to get more information regarding answering the research questions. The interview questions were categorised by topic, which includes services and resources received, digital tools, and digitalisation. Additionally, the process of sample selection was done in terms of getting handed the contact information of several start-up companies, that were collaborating with the case company at the time of the research period, from the case company. As a result, there was no need to go through the procedure of selecting volunteers because they were given. Before the

interviews, the participants were sent an e-mail where the purpose, background, and topic of the study were explained. They were also sent the letter inviting them to voluntarily participate, as well as the interview guide so that they could have some time to prepare before the interview.

The interviews started with an introduction of the problem statement of the thesis, followed by informing that the interviews were being recorded. They were also informed about the process of making participants anonymous, as well as reminding them that their participation is voluntary and that they can withdraw from the research at any point. As mentioned earlier, the research method used is an exploratory approach. Furthermore, the interviews were conducted in a non-contrived setting. Non-contrived settings are "natural environments where events proceed normally", such as an office (Sekaran & Bougie, 2016, p. 100). The interviews were conducted in private meeting rooms in the offices of the case company, where we wouldn't be disturbed, and the participants could take their needed time answering the questions. A Dictaphone was used to record the interviews and was placed in the middle of the room, being able to record each individual. At the end of the interviews, the participants were asked if they wanted to summarise the most important points being discussed, as well as if they had any concluding remarks.

There was conducted one interview for each of the start-up companies, in total four interviews with the start-up companies. Each interview lasted on average 35 minutes, no longer than one hour per interview. There were also conducted two recorded interviews with the case company, which lasted approximately one hour each. There was also a table containing a list of services generally being offered by accelerator companies, that was sent to the case company so that they could map out the services they offer to start-up companies.

There are three types of interviews in terms of structure. Unstructured interviews are interviews that do not contain a planned sequence of questions that are going to be asked. Structured interviews, on the other hand, are interviews that are conducted knowing the information that is needed. There is typically an introduction, a set of topics with questions, as well as follow-up questions which are planned and written beforehand (Sekaran & Bougie, 2016, p. 113-115). The third type of interview is a semi-structured interview where there is an outline of topics to be covered as well as suggested questions, but the questions are not asked in a particular order (Kvale & Brinkmann, 2009, p. 130). The types of interviews that were conducted were structured interviews with the four start-up companies, as well as one semi-structured and one structured interview with the case company. The first interview with the case company was done semi-structured as they wanted to explain what their company does before beginning to

answer questions. In this process, they ended up answering many of the questions intended to be asked, without having asked these. Therefore, this interview was semi-structured. The second interview with the case company consisted of asking the remaining questions that were not asked in the first interview, and which were needed to answer the research questions. The interviews were conducted face-to-face, except for one interview with a start-up company that was done through Microsoft Teams. All interviews were intended to be conducted face to face, if possible. The purpose of the interviews was to gather information from the participants that distinguished their experiences from each other so that data could be compared.

3.3.2 Data analysis

The interviews were recorded using a Dictaphone. After the interviews, the audio files were uploaded to the University of Agder's external drive. After the files were uploaded to OneDrive, the files were deleted from the memory card of the Dictaphone. The Dictaphone was borrowed from the University and therefore returned after being used for the interviews where the University destroyed the memory card. Furthermore, the audio files were transcribed manually into unstructured data and translated from Norwegian to English. When gathering qualitative data, there are three steps: data reduction, data display, and drawing conclusions from this data. Data reduction is the "process of selecting, coding, and categorising data". This means that the information from the interviews was gathered together and rearranged to form theory (Sekaran & Bougie, 2016, p. 333-334). Afterwards, the transcribed and translated unstructured data was gathered into one file where the information was structured and categorised in terms of the order of questions from the interview guide, which is common practice when utilising an inductive approach. Furthermore, data display refers to presenting data and involves taking the reduced data and displaying it in an organised way (Sekaran & Bougie, 2016, p. 333 & p. 347). The data from the interviews was therefore condensed without losing context and displayed in a table by sorting the data based on the interview questions. In other words, the structured data was collected into an Excel file so that each answer could be compared in a structured table. The final step of gathering qualitative data consists of drawing conclusions from the data gathered from the interviews, which will be presented in the next chapter regarding the findings. In terms of analysing the second research question, the research followed the Gioia method, analysing the inductive and qualitative interview data, as the Gioia method tends to be used in single case studies. The transcripts were analysed by highlighting the most important parts to further analyse this. Thereby, the data was selected, coded and categorised based on RQ2. The

data was then organised into first-order categories and second-order themes, and then the aggregate dimensions were identified through those categories and themes (Yong et al., 2021).

3.4 Research quality

3.4.1 Reliability and validity

When analysing the quality of the research, it is important that the conclusions made in the study are verified in some way. The conclusions need to be plausible, reliable and valid (Sekaran & Bougie, 2016, p. 348). Reliability refers to how the same researchers can observe the same event and get the same results, on separate occasions (Sekaran & Bougie, 2016, p. 137), and is therefore about stability and consistency of measurement (Sekaran & Bougie, 2016, p. 220). The goal is to reduce the errors and biases as much as possible in a research project (Yin, 2009, p. 45). By describing the details of how this research was conducted, other researchers can replicate the study, and in turn, prove reliability of the case study process. Any form of bias was also diminished as I had not met the participating start-up companies beforehand thereby establishing a process and recognizing any potential biases that may emerge throughout the interview processes. Furthermore, the description of the case study was structured in terms of the research questions, which makes it easier for the reader to discover the conclusions correlated to the empirical evidence (Singh, 2014).

Trustworthiness is another aspect of reliability. There are four types of trustworthiness in qualitative research: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). In the process of collecting the data through a set of interviews, we were two students working together. When transcribing these interviews, we each transcribed half of the contents of the interviews. Afterwards, we combined our parts of the transcripts and read through everything independently while listening to the audio again. This way we provided a quantified reliability check, which in turn strengthened the trustworthiness of the study (Kvale & Brinkmann, 2009, p. 183-184). Furthermore, all participants had administrative roles in their own companies and the answers seemed more credible and reliable. By describing all the stages of the research in detail, the transferability of the study is strengthened, which in turn provides increased trustworthiness and reliability to the thesis.

Validity refers to the accuracy of the recorded data gathered (Sekaran & Bougie, 2016, p. 137). In other words, validity is about measuring the right concept (Sekaran & Bougie, 2016, p. 220). In terms of interview transcripts, finding the validity is more complicated than finding the

reliability (Kvale & Brinkmann, 2009, p. 185). Providing a detailed description of the methodology of this research project enhances the validity of the research (Sekaran & Bougie, 2016, p. 349). Validation of the data collection through interviews can be broken down into seven stages: thematizing, designing, interviewing, transcribing, analysing, validating, and reporting (Kvale & Brinkmann, 2009, p. 248-249). As mentioned earlier, the data gathered through the interviews was categorised and structured into a table where it could be analysed, validating the information, and from there being able to draw conclusions, which in turn supported the validity of the research methodology.

Through the interviews, the start-up companies answered similarly to a lot of the same questions, and therefore the communicative validity was strengthened (Kvale & Brinkmann, 2009, p. 253). By comparing the various answers from the interview questions, it increased the validity of the results due to the overlapping answers. There was also made a table listing different accelerator services, sent to the case company so that they could list the services they provide, thereby being able to cross-reference the services listed from the start-up companies and increasing the validity of the research. The interview study is perceived to be reasonably reliable and valid. As the results of the study may benefit a variety of accelerator companies in terms of which processes may be digitalised, the results seem to be transferable to other situations (Kvale & Brinkmann, 2009, p. 260-261).

3.4.2 Ethical considerations

When conducting interviews as a method of data collection, there are some ethical considerations to take into account such as the "importance of informed consent, confidentiality, consequences, and the researcher's role" (Kvale & Brinkmann, 2009, p. 61). After getting approval from NSD (Norwegian Centre for Research Data), the interviews were scheduled. When contacting the start-up companies, they were sent an informed consent, which consisted of a request or invitation for participation in the research project which each company had to sign, as mentioned earlier. The informed consent stated the purpose of the study and its research objectives. It also gave interviewees information about who is conducting the interviews (myself and a co-student), who the supervisor of the thesis is, what it means to participate and why they are being asked to participate, as well as information about confidentiality. Confidentiality implies that the data gathered than can be used to identify participants, will not be disclosed. Interviewees were informed that it is completely voluntary to participate and that they can withdraw their participation at any time in the research period (Kvale & Brinkmann, 2009, p. 70-73). They were informed that the interviews were going to

be recorded, but that the recordings were going to be deleted by the end of May. Furthermore, the participation of the start-ups would be completely anonymous as companies and personal names would not be mentioned in the thesis.

Another ethical consideration is the consequences of a qualitative research study. Consequences involve that the "benefits to a participant and the importance of the knowledge gained should outweigh the risk of harm to the participant", referring to the responsibility of the researcher (Kvale & Brinkmann, 2009, p. 73). As this was a case study investigating the processes of an accelerator company, the participating start-ups were not asked questions about their own companies, and they were therefore not disclosing any potentially sensitive information about their own ventures. Furthermore, the focus of processes and how these may be digitalised did not require any sensitive information regarding individuals or the case company in focus of this study, thereby decreasing any potential consequences in the execution of the data collection. Additionally, the role of the researcher is critical in terms of research quality. The interviews were conducted with as much integrity and reliability of ethical decisions (Kvale & Brinkmann, 2009, p. 74). The interviews were conducted in private rooms in the offices of the case company so that no one would disturb and potentially listen in on the interviews, in turn, not making the participants feel nervous or uncomfortable. As a result, ethical interview considerations were made. The participants were also made sure that the transcripts would not mention any names, thereby making them anonymous, and in turn respecting their privacy, confidentiality, and voluntary participation, as previously mentioned. Finally, another ethical consideration that was taken into account includes that I had personally no previous contact or relationship with the case company, decreasing any potential bias in this context, and therefore being able to mentally withdraw from the field of study. I had not met the participating start-ups before conducting the interviews, which made me fair and impartial.

3.4.3 Limitations

The chosen research approaches selected for this study seemed to fit the best in terms of the research objectives of the thesis. However, they possess some limitations. An exploratory research approach is ideal when conducting a case study as it is flexible in nature (Sekaran & Bougie, 2016, p. 43). Exploratory research can narrow down challenging problems and be a good guide for future research. On the other hand, it does not have conclusive results, bias may occur, and is typically not generalisable (George, 2021). Moreover, qualitative research is used when the analysis is composed of "data in the form of words" as previously mentioned and is aimed at making implications from a large amount of collected data (Sekaran & Bougie, 2016,

p. 332). Also, the framework of the data gathered can be done effortlessly. On the downside, a qualitative research approach can become problematic to demonstrate, data analysis may take a longer time compared to a quantitative approach, and answers from participants may be affected by the researchers (WeeTech Solution, n.d.).

There are both strengths and limitations to the methods one may choose in terms of a research paper. Choosing interviews as a form of collecting data, there are both advantages and disadvantages to this method. The strengths of interviews are that they are targeted in terms of focusing on a particular case study topic and that they are insightful in terms of providing causal interpretations and explanations. On the downside, the weaknesses of interviews are that bias may arise due to poorly formulated questions, there may be response bias, inaccuracies, and reflexivity – meaning that the interviewee says the things that the interviewer wants to hear (Yin, 2009, p. 102). If we are looking at different types of interviews, it seems that face-to-face interviews are the best to conduct. First, the advantages of choosing a face-to-face interview are that one may read more into the non-verbal cues, people might answer more than the questions, one may clear any doubts, add follow-up questions, and rich data can be attained. However, the disadvantages of face-to-face interviews include that it takes longer time than a digital interview, confidentiality may be a concern of the participants, and it may introduce interviewer bias. On the other hand, there are telephone interviews, which cost less and take less time. The disadvantages of these types of interviews, however, are that one cannot read non-verbal cues, interviews must be kept short, and there will not be the same personal connection and feeling as face-to-face interviews (Sekaran & Bougie, 2016, p. 123).

Some limitations regarding research in the business field, such as with a case study, are that the results might not be exact or free or errors as the interviewees' emotions, feelings and/or perceptions might make it difficult to attain the data sample (Sekaran & Bougie, 2016, p. 27). Using a case study as a method has other limitations as well, and great concern has been over a lack of rigor. Rigor means establishing trust in terms of the research being conducted. The case study investigator may be sloppy and not follow procedures systematically, or the findings of the study may be prone to bias (Yin, 2009, p. 14). There is also a limitation with focusing on a single case company, compared to multiple cases. Single cases have limitations such as generalisability and multiple information-processing biases (Eisenhardt, 1989; Singh, 2014).

4. Findings

The data collected was gathered through four interviews with the start-up companies, and two interviews with the case company. All six interviews were recorded and transcribed. There was also collected data from a table of services offered, which was filled out by the case company, as mentioned in the methodology. The transcripts are not entirely like the audio as pauses and unnecessary words were removed but written with the same sense, not losing any context of what was being said. Direct quotations from the transcripts are italicised. The data gatherings are being presented in this chapter and will be further discussed in the next chapter.

4.1 Data gathered from interviews with the start-up companies

The following subchapter presents the data collected from the structured interviews with the four start-up companies. The data is presented in terms of each company, followed by a list of the services they all received.

4.1.1 Start-up company 1

The first start-up company that was interviewed wanted to collaborate with Moment as they *"lacked the business construction, knowledge of investment, and the economical aspect"*. They got a lot of *"advice in the beginning about the setup and how to deal with it in the market"*, as well as getting in touch with Moment's network. They got advice on how to *"communicate better and in an easier way"*.

The services offered were composed of three phases. The first phase was an advisory or counselling phase that consisted of a *"workshop that took place over three days"*. This was a condensed workshop that Moment usually conducts over the time span of a couple of weeks, but which they did intensely for three days instead. In this workshop, the facilitator took their *"thoughts and specified them"* and illustrated this as a simplified map on the whiteboard. From there *"a message was formulated"* which they could *"present and be proud of"*. The first phase also consisted of mainly *"market communication and business approach"*, such as how to *"make better presentations and investor presentations"*. They also received already-made presentations from Moment that they could use. The second phase consisted of the financial part where there was more financial advice, business and investor pitches, share issues, investor money, support schemes and helping to write applications to support schemes, such as Innovasjon Norge (Norwegian innovation funds). Moment also invested in them, owning shares in their company, and getting in touch with Moment's network. In terms of pitching, the input

received was about sparring. Moment has also *"participated in meetings"* with them, taking the roles of *"advisor and facilitator"*. Finally, the third phase was about *"the customer approach and the customer access"*.

The first phase was more of a standardised program, where they followed a certain structure and methodology. While the other phases were more adapted to the start-up company's own context and knowledge, and therefore not so standardised. The company was *"not in the earliest of start-up phase"* when the collaboration started, but rather in the next stage after that. The collaboration with Moment has been *"an eternal learning process"*. They have collaborated with Moment for *"approximately one year, and the services received were very crucial"* for each phase they were in. In terms of how much of the growth of their company is due to Moment's services as opposed to natural growth, *"you'll be able to halve the time if you're going to be a little specific"*. In other words, they *"halved the time to get to a final result"*. The start-up company *"would still be messing around in the same context, spending much longer getting to where"* they have come now if they did not collaborate with the case company. The collaboration is ongoing.

In terms of digital tools, they were not recommended anything particular from the case company. Moment did not use any digital tools either when they were delivering the services, as everything happened in physical meetings with maps on the whiteboard. They perceive Moment as a company that *"is not very digital"*. The case company could have *"digitalised the whole exercise on the whiteboard"*, as it was difficult for the start-up venture *"to take pictures of the board all the time and trying to understand the lines"* that were drawn. It would be more efficient to have this map on a digital platform, where it would be easier to access and easier to interpret. They believe that Moment could have run a standardised and digital *"financial program on what is recommended around share issues"*, the parts with investors, what tools to use, opportunities that exist, and more effective online communication. Thereby having more digital tools and programs, but also having the physical meetings as one cannot digitalise *"human communication, chemistry and openness"*. Everything can essentially be digitalised. However, if all the services were offered in a digital form, they would not be as useful as some things cannot be digitalised.

4.1.2 Start-up company 2

They started with an idea in their very early start-up phase and went to another accelerator company that helps out start-ups in the earliest phase. Then they were introduced to Moment. In the beginning, Moment was not as helpful. But after having complained to the management,

they *"adjusted their work methodology and communication"* between them. From there, it turned, and they got the guidance and advice they were expected to get.

The services they received consisted of business development and financial consultation. The business development services consisted of *"identifying the market, differentiating"* where they should go, *"specifying things, and how to tackle their growth"*. Another service was *"having access to sparring partners that are at the offices"*, which has been *"of great value"* for them. The financial services have also been of great value to the company. The relationship between them and the case company consists *"more of a colleague relationship"* than a collaboration. They have offices at Moment, which they pay for, and if there is something they are struggling with internally in their company, they can just "*knock on Moment's door and ask for advice"*. They *"work very closely together"*.

There are not any structured or planned meetings. *"Strategy meetings take place spontaneously around the office"* when the start-up company requires advice and guidance. Furthermore, the services received were *"not standardised at all"*. There was *"not a specific program"* that was run. *"More structure and planning"* would be something that could improve the services received. The follow-up from Moment is also something that is lacking from their point of view, as there are *"no structured follow-ups"*. Moment is more of an accelerator for start-up companies that have gone past the very earliest stage of being a start-up, and therefore collaborating with companies that are in the second stage of their company's development and growth. The company has worked with Moment for about two years, but *"the second year has been of more value"* in terms of the growth of the company. They pay for having their office there, which *"includes advice and guidance"*. Moment also owns shares in the company. The collaboration has been of great value, as they would not have come as far without the services delivered by Moment.

In relation to digitalisation, Moment made *"an attempt to offer digital services through a portal called Moment Digital, but this was never fully carried out"*. In terms of digitalisation of the services, they would like to have "*some sort of diagnostic service that could check the financial health of the company"* instead of sitting down in a physical meeting *"using three hours to figure out how the company is doing financially"*. However, the physical strategy meetings that *"were mapped out on the board should be kept physical as they are very tangible and work very well"* for them. Some digitalisation is good, such as digitalising CRM (customer relationship management) systems, but not everything should be digital as there is still a need

for human connection etc. Therefore, they do not think the digital services they received would be as useful in digital form, as Moment are *"a little more hands-on"* in their methodology.

4.1.3 Start-up company 3

The third venture that was interviewed began the collaboration with Moment due to being in *"the start-up phase of the company"*, and they *"needed an investor"*. They also wanted someone they *"could spar with along the way"*. Moment has shares in this company, as well as "*being on the board"* and advising them on internal matters. Their *"input is based on meetings, activity, telephone conversations and board meetings"*. The collaboration has resulted in increased capital and has met their expectations of Moment. However, they have not received as many services as other start-up ventures as Moment has been helping them more with the financial parts.

In terms of digital tools, they *"haven't used many, except the usual"*, such as the Microsoft Office Suite and Microsoft Teams. Since they haven't used many of the services that Moment offers, they can't specifically answer which services could have been changed in their point of view. In terms of which services that can be digitalised, they mentioned that *"services around shareholder agreements and share issues can be digitalised"*, such as maybe having already-made templates in terms of shareholder agreements that one can just fill out with their own information. There could also be a *"common portal of registering hours where one can see how many hours the company has used"* with Moment, which includes a system that allows you *"to keep track of consumption, and what to do next"*. Also, there *"could be a platform with investors, such as LinkedIn just that it is with investors"*. If there would be a digital platform for the start-ups, it would not increase the risk of knowledge of their company as their *"financial information is public*, and they *don't have any patented products"*.

4.1.4 Start-up company 4

In the beginning, they *"were looking for some offices and visited Moment"* and thereby got information regarding what they do. The start-up wanted to get *"access to more customers and sparring partners"*, and from there the collaboration started. Before collaborating with Moment, they went through another accelerator program, which was more of a typical accelerator program.

Moment got them established by helping them *"narrow down their market and working on their business model"*. They had a *"workshop in the very beginning that lasted for three to four weeks, which was more intense"* than the rest of the guidance they received. They were handed

out assigned tasks which they had to do, such as *"contacting customers and working with strategy within the team"*. There were also many strategy meetings, and they were offered *"project management services, networking as a service, strategic or business development services, figuring out their value proposition, and customer communication approach"*. The value proposition process was composed of delivering *"services within innovation, sustainability, and digitalisation"*. In terms of networking services, Moment put them *"in contact with potential customers, which again lead to other potential customers, thereby creating a snowball effect"* in terms of customer access. Regarding the project management services, they were "*handed a project to work on and complete"* on behalf of Moment. The strategic business development services consisted of *"workshops conducted with different people from Moment that had a different range of skill sets"*. Furthermore, the workshops received from the beginning, were *"the only standardised services. The rest were not as standardised, as it was more dynamic"* and adapted to their particular context. If the services were to be changed, they would like more structure in the strategy phase.

In terms of digital tools, they used some digital tools, such as the Microsoft Office Suite, "*business model canvas, digital whiteboards, and CRM systems"*. Otherwise, they were not recommended to use any digital tools concerning their assigned tasks. In terms of digitalising the services, Moment could *"have a platform where you could find people with different expertise around Norway"*, thereby expanding your network. Moment could also have a fundraising platform. On the other hand, *"it is difficult to digitalise Moment's experience and know-how"*, as well as their method of market communication. If the services offered would be in a digital form, some of them would be just as useful, but not the previously mentioned, i.e., the experience and know-how.

Digitalisation would not increase the risk of unique knowledge in their company so much, as their *"company is at risk already"* in a way since they *"offer services in the form of knowledge and competence"* from their employees. Their concern is rather keeping their employees, as they are the primary resource. They have collaborated with Moment for approximately two years, and the services they received were useful as they *"would not have made it without the collaboration"*. The delivery of Moment's services resulted in increased customers, as *"the networking services were of most value"* for them. Moment also owns shares in their company.

4.1.5 List of services received from Moment

From the four interviews, the collected data was gathered, structured and condensed. The services they received were identified and put into a structured table.

Table 2: Services received from Moment

Service	Company 1	Company 2	Company 3	Company 4
Access to potential customers	✔	✔	✔	✔
Access to round A funders	✔	✔	✔	✔
Pre-seed investments	✔	✔	✔	✔
Access to market	✔	✔	✔	✔
Encouragement	✔	✔	✔	✔
Increase credibility of startups	✔	✔	✔	✔
Office space	✔	✔	✘	✔
Internet Access	✔	✔	✘	✔
Access to meeting room	✔	✔	✘	✔
Access to physical resources (such as printer, scanner, boards...)	✔	✔	✘	✔
Office space or co-working space	✔	✔	✘	✔
A full passion competitive startup ecosystem place	✔	✔	✘	✔
Business model innovation	✔	✔	✘	✔
Sparring Partners	✔	✔	✘	✔
Share issues	✔	✘	✔	✔
Access to financing	✔	✘	✘	✔
Mentoring	✔	✘	✘	✔
Coaching	✔	✘	✘	✔
Preparation to pitch to investors during demo-day	✔	✘	✘	✔
Access to a wide network of experts, investors, mentors, advisors, business, entrepreneurs, etc.	✔	✘	✘	✔
Workshops	✔	✘	✘	✔
Creating and submitting all the company formation documents on the behalf of the participants	✘	✘	✔	✘
Transforming ideas into workable concepts	✘	✘	✘	✔

The table above shows the type of services the start-up companies have received from the case company. This information was extracted from the interviews and categorised into types of services. The results are based on each company's answers and do not mean that they were not offered more services, but that these are the services that were disclosed during the interviews. Also, the start-ups were in the middle of collaborating with Moment and therefore may not have been offered all the services yet. Furthermore, all four start-up companies answered that they have received services including access to potential customers, access to round A funders, pre-seed investments, access to the market, encouragement, and increased credibility of the start-ups. The majority of the start-up companies received services including office space, internet access, access to meeting rooms, access to physical resources, office or co-working space, a competitive start-up ecosystem place, guidance in terms of business model innovation, access to sparring partners, and guidance regarding share issues. Two of the four participating start-ups mentioned they received access to financing, mentoring, coaching, preparation to pitch to potential investors, access to a wide network, and workshops. Few said they received guidance regarding transforming ideas into concepts as well as creating and submitting documents on behalf of the start-up companies.

4.2 Data gathered from interviews with the case company

The first interview with the case company consisted of a semi-structured interview, where the case company provided information about their organisation and how they work. This interview took place before the interviews with the start-up companies. The second interview with the case company was more of a structured interview, where a few of the remaining questions from the interview guide were asked. This interview took place after interviewing the four start-up companies and was a concluding interview with the aim of getting the last answers needed to complete the thesis. In addition to the two interviews conducted with Moment, there was also sent a table in Excel where the case company could fill out the list of services they offer, which services are digital as of today, and which services can be digitalised. The findings from the interviews and table will be presented in this subchapter.

4.2.1 About Moment

"Moment is a private, small investment company that mainly does three things: invest in growth companies, do a lot of project work, and have a good application process". Most of the projects that they have, are *"about improving the framework conditions for growth companies"*. They currently *"have 18 companies in the portfolio and partake in a high level of expertise in obtaining grant funds for portfolio companies or growth companies"*. *"Moment works in a way that is very hands-on and goes very deep into each case and are able to deliver qualitatively very good and relevant services to each company's different business development needs"*. They are not very digital but would like to transform digitally to increase their efficiency.

Moment *"is a company that accelerates other companies"*. Their task is *"to do this in the most appropriate and effective way"*. They work with business development by *"accelerating growth companies through a series of sprints"* and coaching. Moment captures *"more of the knowledge that may be silent or implicit, to improve the way services are developed and delivered"*. A challenge which Moment faces in their *"interactions with the portfolio companies is primarily an educational challenge"*. *"A typical accelerator program is often defined as three or six months, and has a very standardised implementation, while Moment is constantly in acceleration processes with different cases at different levels at different times"*. Therefore, Moment is not a typical accelerator. They see themselves as a continuous accelerator and have used both accelerator and sprint methodology. They go *"very deep into each individual"* start-up company, which is *"a bit unique or rare in the way"* they work.

4.2.2 Moment's selection process

The first phase consists of the potential participating start-up companies coming to pitch their ideas. Out of all these companies pitching their ideas, only a small percentage are seen as ready for collaboration with Moment. The percentage of *"the investment rate is one to two per cent of a venture capital environment"*. Before the pandemic hit, they had 74 pitches with start-up companies. In 2020, they *"had 66 companies that came in and pitched"* their ideas to Moment. *"Only one company was chosen,* as *the rest were not ready"* for collaboration yet. However, *"some of the companies come back to pitch again*. *Sometimes there are companies that are brand new, just established last week, and that is too early"*. Moment work with start-ups that are past the very early start-up phase.

4.2.3 Digital transformation

Moment would like to have a digital system that can replace most of the physical meetings they have with portfolio companies and *"imagine a combination of a project management system and portfolio management system where the services and different races, tailored to each company, are laid out as a path through this system"*. By systematising their knowledge and digitalising it, making *"it accessible and put into a methodology or a path that makes you have pretty good control over what to go through"* is the goal of this process as *"the whole point is to shorten the process time"*. In this digital system, you could have *"budget tools, forecasting, where you can enter numbers, make projections, run scenarios"*, etc. Today this is done in Excel by manual operation.

The goal of the platform they envision *"is a flowchart that is standardised in the sense that the vast majority of companies have to go through the same topics in the same order, but it is individualised in the sense that they will have different needs in the different categories or themes, and the progression will be different"*. *"The worst thing for an accelerator company, is that the initiation of processes happens too late"*. And this occurs often. Having a system on this, and standardising the services Moment offers, may decrease this problem. From the selection process many of the start-up companies *"have different businesses and different approaches to things, as they have to go through many of the same issues, but they may have to solve them at different times"*. By digitalising this *"from the selection process, collecting these experiences and getting the right triggers and questions as early as possible"*, will be a great feature in the assistance of each start-up company. Furthermore, an important aspect is that *"there are synergies of learning"* and that these can *"be transferred between companies"*.

Moment would like to systematise and streamline their processes and services to increase efficiency. *"The goal is to streamline the processes"* that they *"do not want to spend so much time on"*, but instead spend more time on tailored sales processes to get customers, which is the most important part of increasing the growth of a company. Most start-up companies *"do not have a good understanding of what the market looks like"* and how to sell. By being able to provide information about *"how big a market they can take, both tactically and realistically, Moment can use this as a starting point when analysing the potential value of the product or service they [the start-ups] are going to sell"*. Having a digital model on this would be incredibly valuable for the case company, as well as efficient in terms of time spent.

As of today, before the collaboration begins, the *"start-ups fill out a form with their information through Microsoft forms. If that information went into this system and could be reused"*, then you could get financial calculations and business plans already made from this system, which would increase efficiency as it would no longer be done manually. In this system, you could also have KPIs (key performance indicators) and link these together with the financial information.

"Financial control and financial understanding are something growth companies are far too little able to systematise and spend their time on. Today you can build very good liquidity budgets, but it takes an incredible amount of time to follow these liquidity budgets on a day-to-day basis. Therefore, being able to have a good liquidity planner is very essential". Moreover, one could have *"an extended portfolio management system where one can be specific at task, service, and process-level"*. As of today, they have *"developed a database for connecting growth companies that are going to sell internationally with relevant experts, which is a resource that can be plugged into such a system"*.

4.2.4 Services offered by Moment

"The typical accelerator is cohort-based, but Moment does not take in cohorts like a regular business accelerator". Instead, they have *"a rolling entry, which is more of a dynamic and case-centred way of working"*. They *"customise each journey based on where the portfolio company is located"* in terms of company growth. The services offered by Moment are listed in the table below and are sorted into categories of services.

Table 3: Services offered by Moment

Category	Service
Access to facilities	Office space
	Internet Access
	Access to meeting room
	Access to physical resources (such as printer, scanner, boards...)
	Office space or co-working space
Bank, financial and legal services	Access to financing
	Creating and submitting all the company formation documents on the behalf of the participants
Educational services	Mentoring
	Coaching
	Boot-camp training over a fixed period
	Teambuilding
Funding services	Preparation to pitch to investors during demo-day
	Access to round A funders
	Pre-seed investments
	Seed funding
Innovation services	Transforming ideas into workable concepts
	Idea generation and creativity management support
	Prototyping and MVP building support
Networking services	Selecting participants and organize in cohorts
	Events
	Access to a wide network of experts, investors, mentors, advisors, business, entrepreneurs, etc.
	Access to industry experts
	Access to market
	Access to potential customers
	A full passion competitive startup ecosystem place
Other services	Encouragement
	HR support (personnel selection, evaluation, personnel audit, preparation of development programs, etc)
Public relations services	Media exposure
	Brand recognition
	Internet marketing
	Increase credibility of startups
	A public pitch event or demo day to help attract capital
Strategy services	Workshops

In terms of access to facilities, Moment offers services including office space, internet access, access to meeting rooms and physical resources, as well as office and co-working space. The case company also offers services in the bank, financial and legal category, which consists of creating and submitting documents on behalf of the portfolio companies, as well as offering access to financing. The financial part includes *"financial analysis consisting of return of investment analyses, budget analysis"*, etc. However, Moment does not offer typical legal

services. Furthermore, in terms of educational services, they deliver mentoring, coaching, team building, and boot-camp training, but regarding boot-camp training, they *"do this partly as it is called a sprint"*. Moment offers funding services, which include preparation to pitch to investors, access to round A funders, pre-seed investments, and seed funding. Their innovation services consist of transforming ideas into workable concepts, idea generation and creativity management support, and prototyping and MVP (Minimum Viable Product) building support. Regarding their networking services, they offer access to a wide network, market, industry experts, and potential customers, as well as offering a competitive start-up ecosystem place, events, and selecting participants and organising them into cohorts. Additionally, Moment delivers public relations services that consist of media exposure, brand recognition, internet marketing, increased credibility of start-ups, and a public pitch event to help attract capital. Their strategy services are structured in the form of workshops. Finally, other services they deliver consist of encouragement and HR support.

4.2.5 Digitalisation of services

From the table that the case company filled out, they checked off which of the services they offer can be digitalised, either partially or fully. If they should not be digitalised, they would simply not check off any of the boxes (see Appendix C). The table below illustrates the list of services that can be digitalised fully, partially, or should not be digitalised at all, according to the case company.

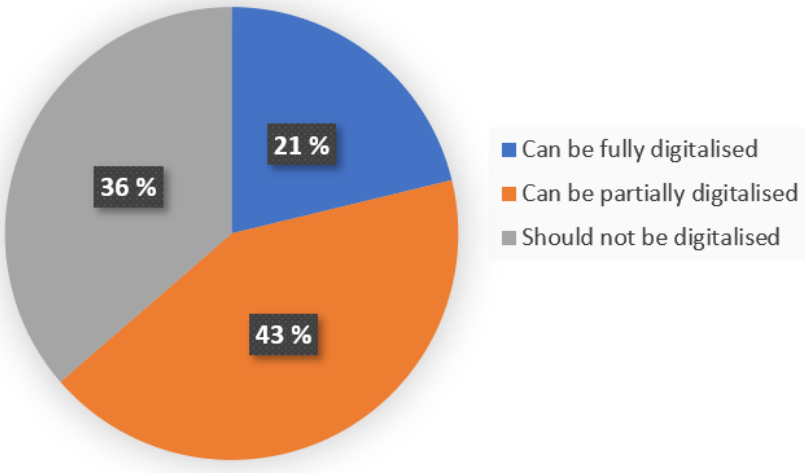
Table 4: The services that can be digitalised fully, partially, or should not be digitalised

Category	Service	Can be digitalised fully	Can be digitalised partially	Should not be digitalised
Access to facilities	Office space	☐	☐	☑
	Internet Access	☐	☐	☑
	Access to meeting room	☐	☐	☑
	Access to physical resources (such as printer, scanner, boards...)	☐	☐	☑
	Office space or co-working space	☐	☐	☑
Bank, financial and legal services	Access to financing	☐	☑	☐
	Creating and submitting all the company formation documents on the behalf of the participants	☑	☐	☐
Educational services	Mentoring	☐	☐	☑
	Coaching	☐	☐	☑
	Boot-camp training over a fixed period	☐	☐	☑
	Teambuilding	☐	☑	☐
Funding services	Preparation to pitch to investors during demo-day	☐	☐	☑
	Access to round A funders	☐	☑	☐
	Pre-seed investments	☐	☑	☐
	Seed funding	☐	☑	☐
Innovation services	Transforming ideas into workable concepts	☐	☐	☑
	Idea generation and creativity management support	☐	☑	☐
	Prototyping and MVP building support	☐	☑	☐
Networking services	Selecting participants and organize in cohorts	☐	☐	☑
	Events	☑	☐	☐
	Access to a wide network of experts, investors, mentors, advisors, business, entrepreneurs, etc.	☑	☐	☐
	Access to industry experts	☑	☐	☐
	Access to market	☐	☑	☐
	Access to potential customers	☐	☑	☐
	A full passion competitive startup ecosystem place	☐	☑	☐
Other services	Encouragement	☐	☑	☐
	HR support (personnel selection, evaluation, personnel audit, preparation of development programs, etc)	☐	☑	☐
Public relations services	Media exposure	☐	☑	☐
	Brand recognition	☐	☑	☐
	Internet marketing	☑	☐	☐
	Increase credibility of startups	☐	☑	☐
	A public pitch event or demo day to help attract capital	☑	☐	☐
Strategy services	Workshops	☑	☐	☐

According to the case company, the services that can be fully digitalised include creating and submitting documents on behalf of start-ups, events, access to a wide network, access to industry experts, internet marketing, a public pitch event to attract capital, and workshops. Additionally, the services that can be digitalised partially refer to the increased use of digital tools in relation to the delivery of the services.

The figure below summarises the digitalisation of services offered by the case company. It shows that 21% of the services Moment offers can be fully digitalised, 43% can be partially digitalised, and 36% should not be digitalised at all.

Figure 2: The digitalisation of services offered by Moment



Furthermore, even though Moment is not as digital, they do use some digital tools. They *"use a lot of online tools to apply for money, as well as the different portals for the funding sources"*. In the *"interaction with the portfolio companies, it's very old fashioned"* as they use digital tools *"such as Word, Excel, and PowerPoint. Some of the documents are stored in Dropbox, some are only online, and some are only on email"*. In relation to pitching they use digital tools as they have PowerPoint templates that they use. They deliver *"mentoring services which are partly digitalised",* which includes the use of video meetings.

On the other hand, *"there are a number of processes that cannot be digitalised, such as person or personality, hidden knowledge, everything that lies in the implicit, chemistry, dynamics, charm, enthusiasm, and language"*. These are human characteristics that you cannot get from digitalised services, such as an AI (artificial intelligence). Furthermore, when start-up companies are pitching their ideas to accelerator companies, it is better to do this in person as charm and other components are difficult to display during a video call. It is therefore *"difficult to get through online"* than it is when you pitch in person.

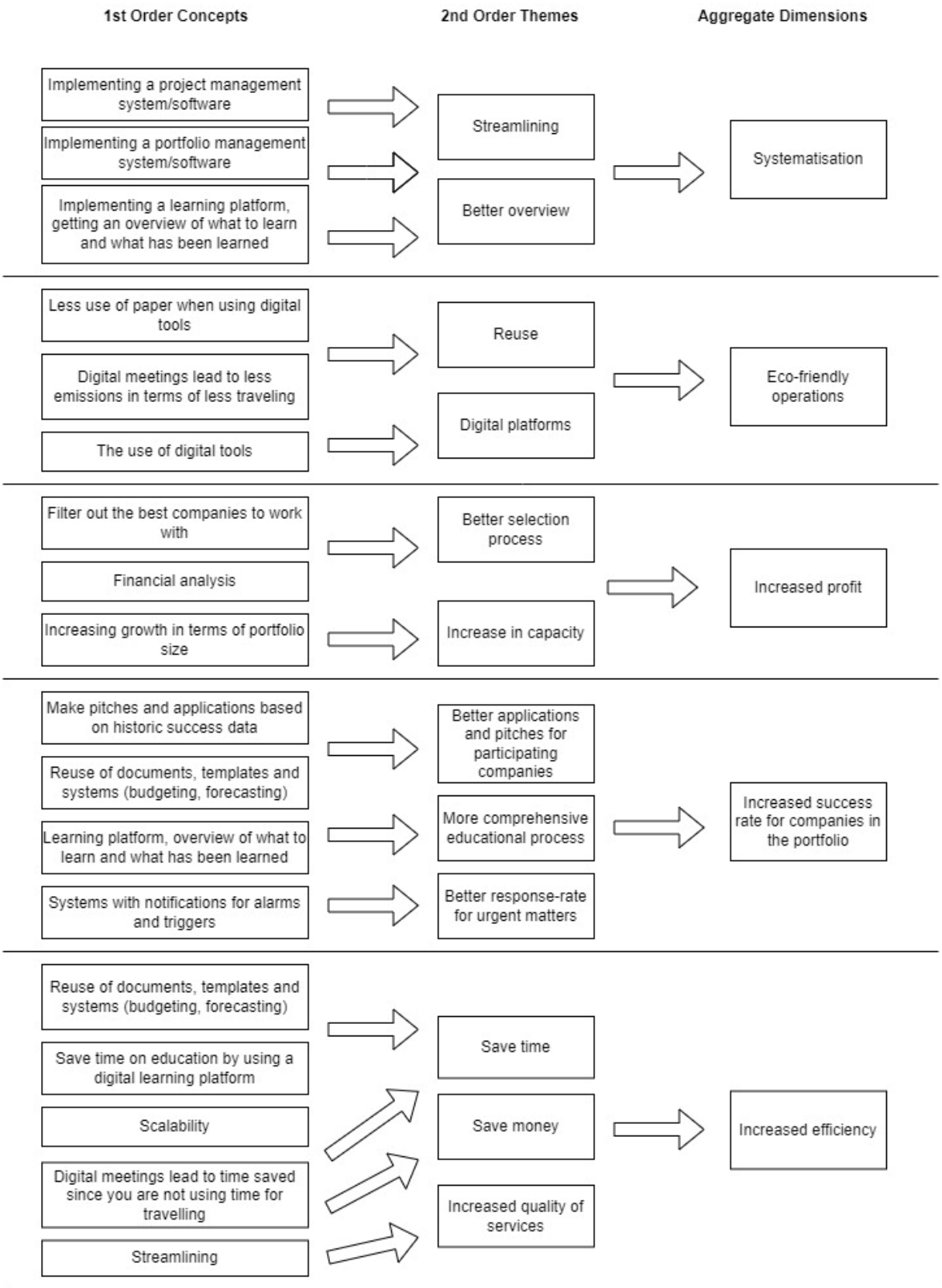
In terms of reusing knowledge and data from previous projects, *"there is a great potential for recording and capturing much more of the knowledge"* that they are generating. In other words, they have not been as good at reusing knowledge and data from previous projects. They have a *"potential for delivering better value and quality to more portfolio companies"* by reusing data, but it is *"difficult to unlock that potential due to not learning enough from their past activities"*. However, they *"have used some previous work as a basis for a template"* for new collaborations. They *"use the old contracts to make a new contract and have some inherited knowledge that is in the system in form of documents and templates, but not in an organised*

way". Regarding standardisation, the services offered by the case company *"are not so standardised"*. Some of the services are *"standardised to an extent, which includes the workshop"* at the beginning of the collaboration. In the workshop, they *"try to get an idea of what the problems are"*, and how to fix these.

4.3 Advantages of digitalisation from Moment's viewpoint

From the data gathered from the interviews with the case company and the four start-up companies, information regarding the advantages of digitalisation from Moment's viewpoint was extracted by using the Gioia method. The data was selected, coded and categorised into a coded tree of findings. The figure shows the advantages of the digitalisation of services for the case company in terms of the data collected. The selected data was put into first-order concepts which show the information gathered through the interviews. The first-order concepts were condensed and put into second-order themes, and further categorised into aggregate dimensions which initially show the overall advantages of digitalisation from Moment's viewpoint.

Figure 3: Advantages of the digitalisation of services for Moment



4.3.1 Systematisation

During the interviews with Moment, it was revealed that they would like to digitalise their business in terms of implementing a digital system that is composed of both a project management system and a portfolio management system. They would also like to have a learning platform where they could get an overview of what the start-ups need to learn and what they already have been taught in terms of education. Implementing these systems gives a better overview of the whole process of delivering services to the portfolio companies in addition to streamlining the services. Moreover, these concepts lead to increased systematisation as they may help in terms of delivering services to start-up companies and can provide an understandable and straightforward business model.

4.3.2 Eco-friendly operations

By digitalising processes and services, there will be less use of paper as there will be an increase in the use of digital tools. Also, having digital meetings, as opposed to physical meetings, reduces emissions in terms of less travelling. The implementation of digital platforms is beneficial in relation to sustainability as it promotes reuse, which is advantageous as it encourages eco-friendly operations.

4.3.3 Increased profit

The digitalisation of services can make financial analyses easier as this would be done through a digital system instead of doing this manually. A digital system could also filter out the best companies to collaborate with, and therefore also increase growth in terms of portfolio size. These benefits of digitalised processes can be categorised into a better selection process and an increase in capacity, which in turn leads to increased profit.

4.3.4 Increased success rate for the companies in the portfolio

In terms of pitching and application processes, there could be a standardised system based on previous success data, thereby reusing documents, templates, and systems. This process can be beneficial as there would be better applications and pitches for the participating start-up companies. Another benefit of digitalising the case company's services correlates to having a learning platform, as previously mentioned, that would make the educational process more comprehensive. Furthermore, there would be a better response rate for urgent matters in terms of implementing a digital system with notifications for alarms and triggers relating to each start-up company's development need. All of these benefits increase the success rate for the portfolio companies, which in turn may increase the success rate for Moment, which is another advantage.

4.3.5 Increased efficiency

Finally, the digitalisation of processes and services can lead to the reusing of documents, templates, and systems, and saves time on education by using a digital learning platform. Other benefits include scalability, streamlining, and saving time by having digital meetings instead of physical meetings, as discussed earlier. These benefits lead to saving time and money, as well as increased quality and overall results of the services. In the end, this results in increased efficiency as an advantage and is an important aspect of any business.

5. Discussion

The previous chapter displayed the findings from the interviews conducted with the case company and the four start-up companies. The findings provide a basis for answering the research questions. In this chapter, the findings will be discussed further in relation to the research questions as well as actor network theory as a theoretical lens.

5.1 Moment as a business accelerator

Through the six interviews with the four start-up companies and the case company, the term 'accelerator' was hardly used as something they would describe the company Moment. The term 'collaboration' was a term more appropriate for describing the relationship between the start-up companies and the case company. Furthermore, the start-up companies would not refer to the services received by Moment as 'a program' when they rather saw the relationship as a collaboration, cooperation, or even a colleague relationship. The interview questions were originally formulated differently as the questions were based on asking about the services offered in an 'accelerator program'. This was changed during the interview process, as no one referred to the services as 'a program', but rather just 'services', 'collaboration', 'guidance', 'counselling', or 'advice'. The interview questions were therefore rewritten to fit the answers from the respondents.

In terms of the duration of the collaboration between the start-up companies and Moment, it is more of a continuous relationship than a program with a set end date. A typical accelerator program usually lasts for three to six months, whereas Moment's collaborations may last for years. Moreover, the selection process of the case company is competitive as it is highly

selective, just like a typical accelerator program, as they select approximately two per cent of their applicants. They select start-up companies that are not in the very early start-up stage and can be viewed as a second-stage accelerator since they focus on more mature start-ups (BDC, n.d.), thereby being categorised as a vertical type of acceleration program. In relation to values, the collaboration consists of hands-on mentoring, which corresponds to the characteristics of a venture development organisation (VDO). However, besides sharing the selection process and the values as characteristics, Moment does not fit into the category of a VDO. Moment's strategic focus and program package mainly consist of the same aspects as a typical accelerator program, but they do not offer alumni services. In terms of their program package and funding structure, they have the same characteristics as innovation accelerators. Nevertheless, although Moment shares some similarities with different types of accelerators and start-up assistance organisations, they fit best in the category of hybrid accelerators. They offer coaching and mentoring services just like a typical accelerator, but their education consists of various accelerator and incubator practices and the duration is longer than a typical accelerator. Additionally, the case company has the same type of business model, venture location, and funding sources just like a hybrid accelerator. In terms of accelerator archetypes, the case company does not fit just into one of the archetypes, but rather an accelerator with hybrid elements.

5.2 Digitalisation of services

In the previous chapter, the services that Moment offers were mapped out, presented, and categorised by type of services. Since the processes and services offered by the case company are not delivered in a particular order, but rather in terms of each company's individual needs, a process map would not be relevant to use in order to map out their services and were instead mapped out by listing them in a table (see Table 3). Furthermore, from the data collected from the start-ups and the case company, the services both received from the start-ups and offered by Moment correlate in terms of similarities as they have listed almost the same type of services. However, when collecting information through a table as well as the conducted interviews, the case company was able to provide a greater list of services. Due to time constraints, the start-up companies were not given a table of services to fill out, limiting the data collection regarding listing the services that are delivered by the case company. The start-ups still managed to provide an adequate amount of data, being able to map out more than half of the services that Moment provided. Also, the start-ups are still collaborating with Moment, therefore making

them unable to list all of the services that are offered as they have not been through all of them yet.

In terms of digitalisation of services, the data collected showed that the interviewees, both the start-ups and the case company, would not want all of the services fully digitalised as this would lose the human interaction that is still sought. Nevertheless, they would want to have digital systems and platforms to increase efficiency and save time. The case company want to digitalise their services and envision a platform or digital system that will replace many of its manual operations. They want to digitally transform their processes, including the process of filling out information from the start-up companies at the start of the collaboration. By digitally transforming this process, the information that is entered could be put into a platform or system where it could be generated to a business plan for the portfolio companies, as well as getting financial calculations, linking together KPIs (key performance indicators) and financial information. By implementing change management in the process of digitalisation, the case company's processes and services can be digitally transformed from their current analogue state.

Moment has stated that they use digital tools in relation to most of the services they offer. This means that their processes and services are more digitised rather than digitalised. The case company want to streamline and systematise their processes and services, increasing the amount of digitalisation. Furthermore, the majority of the start-ups used typical digital tools which include the applications in the Microsoft Office Suite. Otherwise, the case company could not recommend using any other digital tools, according to the four start-up companies. In terms of the results of the services received from Moment, the participants were satisfied with the collaboration, and the majority found the financial services the most valuable. However, they would like some digital platforms or systems to save time and thereby increase efficiency instead of having physical meetings. Therefore, the case company could implement digital tools to the services that the majority wanted to be kept physical, making the services more digitised. Also, they could implement these digital platforms or systems in terms of the services that can be fully digitalised, which contributes to digitally transforming their business.

Concerning the standardisation of services, two of the start-ups did not regard the services as standardised, while the other two said that the workshop in the beginning, was the only standardised part of the services received. From this information, it is clear that not all start-up companies go through the same type of services as only two of the start-ups went through a standardised workshop at the start of the collaboration with Moment. Standardised services are

much easier to digitalise, which would make the workshop one of the easiest processes to digitalise. However, as only two of the four interviewed start-ups received the workshop as a service, it is assumed that not all start-ups need this workshop as it is based on where the company is located in terms of growth.

5.3 Advantages of digitalisation from Moment's viewpoint

The advantages of digitalisation are several, and the five overall advantages of digitalisation in terms of Moment's delivery of services were illustrated in the previous chapter. These advantages are systematisation, eco-friendly operations, increased profit, increased success rate, and increased efficiency. Systematisation is the process of putting together several systems that operate together to help the organisation scale more effectively (Brooks, 2022). Systematisation is therefore important in terms of scalability, structure, and organisation within the company. Moreover, eco-friendly operations consist of implementing actions that are sustainable and environmentally friendly. In today's day and age, businesses will demand a certain level of eco-friendly operations in order to conduct their day-to-day business. Eco-friendly operations lead to good business ethics. Business ethics attract customers, resulting in increased sales and profit and encouraging employees to stay in the company, resulting in increased productivity. Business ethics also attract investors (Ezenwakwelu et al., 2020). Furthermore, the most important of the advantages presented is the increase in efficiency as this leads to higher profits and growth. The quantity of work a firm or organization can generate concerning the amount of time, money, and resources required, is referred to as business efficiency and relates to how well a company can turn resources like materials, labour, and capital into revenue-generating products and services (Indeed, 2021).

Through digital innovation or digital entrepreneurship, analogue processes may be digitalised to form e-services. In relation to the degree of digital entrepreneurship, which describes the degree to which businesses operate in the digital world (Hull et al., 2007; Liao et al., 2013), the case company could go from mild to moderate digital entrepreneurship by digitalising the majority of their services. If they were to fully digitalise all the processes and services, they could achieve extreme digital entrepreneurship where everything would be in digital form. However, the majority of participating interviewees did not wish for this as they would want partial digitalisation to keep the human interactions. The existence or growth of a digital ecosystem is required for digital entrepreneurship (Kraus et al., 2018).

5.3.1 Disadvantages of digitalisation

However, some disadvantages may appear when digitalising the services and are worth mentioning. Firstly, a weakness of digitalisation is regarding data security. Digitalisation means that the information and knowledge are gathered in one system or platform, which may come into the wrong hands if left unprotected. Hence, there is a risk of intellectual property being spread and going astray, which can lead to privacy concerns from the portfolio companies. To solve this issue, the case company can implement digital systems such as information protection systems or internal control systems. Secondly, another disadvantage consists of work overload. Digitalisation may lead to having access to all of the processes digitally, which means that one can work from any location. This may lead to bringing your workload home, thereby personally working too much and risking burnout and not making time to disconnect from work. Furthermore, the majority of the participating interviewees mentioned they would like to keep human interactions, chemistry, etc., which they get from the physical meetings. The digitalisation of services would lead to physical meetings being replaced with digital meetings, or even replacing human labour with an AI (artificial intelligence), depending on the degree of digitalisation. However, this may lead to losing the context when the human component is removed. For example, in terms of pitching, entrepreneurs can be very charming in real life and present well but cannot get through the same message when pitching online as the human connection and chemistry are lost through a computer screen.

5.4 Digitalisation from an Actor Network Theory point of view

As previously stated in the Literature Review, the actor network theory (ANT) claims that technology and society are essentially interconnected (Waldherr et al., 2019). To understand the network of relationships between individuals and organisations, ANT needs to be applied in order to illustrate the connections and benefits these convey.

5.4.1 ANT's concept of translation

In terms of actors, each start-up company collaborating with the case company can be seen as actors forming a network in relation to the companies in Moment's portfolio. The case company, which consists of its employees and resources, make up actors to form their own network within the accelerator company. In an organisation, actors consist of people, devices, texts, digital tools, and inter-organisational relations, which are important materials in networks (Law, 1994, p. 23). These networks, which consist of both human and non-human actors, can

be combined to form a bigger network where services and resources are interconnected. The connection between these actors or entities in the networks corresponds to the concept of translation (Callon, 1991), and is composed of problematisation, interessement, enrolment, and mobilisation (Callon, 1986; Chowdhury, 2017; Sage et al., 2020).

5.4.1.1 Problematisation

Problematisation introduces a problem or an opportunity by the main actor (Chowdhury, 2017). The main actor in this circumstance is the accelerator company Moment, which introduces an opportunity for their portfolio companies to digitalise all of their processes and services in order to increase efficiency. In this problematisation phase, the main actor, Moment, has to present this opportunity to the start-up companies they collaborate with. However, not all of these companies would like the exact implementation of digitalisation and may have other interests regarding this. In turn, they may propose other solutions (Chowdhury, 2017), such as digitalising a number of services instead of all of them or implementing certain types of software or systems instead of processes that are currently by manual operation. As long as the interests of both the case company and start-up companies are met, the opportunity may be implemented with certain adjustments.

5.4.1.2 Interessement

The interessement phase consists of getting the other actors interested in the solutions presented by the main actor and supports the problematisation phase (Rodon et al., 2008). The goal of this phase is to break up any potential competing coalitions and build a system of alliances (Callon, 1986; Mähring et al., 2004; Rodon et al., 2008; Chowdhury, 2017). The identifying actors, which are the portfolio companies and Moment, have common interests that consist of increasing the efficiency and saving time spent on processes and services, which in turn leads to cooperation that can benefit all actors. Furthermore, in this phase, it is common that the start-up companies can be sceptical and lack trust in terms of the proposed opportunity (Callon, 1986; Chowdhury, 2017). The main actor must present the advantages of digitalising the processes and services, both for the case company and the start-ups. As previously mentioned, there were identified five main advantages of digitalisation for the case company, which include systematisation, eco-friendly operations, increased profit, increased success rate, and increased efficiency. These advantages, especially the increase in success rate, are applicable not only for the case company but also for the portfolio companies. As the advantages apply to the case company, it affects the start-ups too. An increased success rate for the portfolio companies

means an increased success rate for the case company, and vice versa. Due to the nature of the collaboration, the effect on Moment also affects the start-up companies.

5.4.1.3 Enrolment

Enrolment consists of achieving a desired outcome, where the actors have to negotiate the terms of the implementation of the problem or opportunity (Callon, 1986; Chowdhury, 2017). In this phase, the plan of implementation and each actor's role in the proposed cooperation is presented. The details of the implementation of digitally transforming the processes and services will emerge here, as it is important to state how this will affect each human and non-human actor. By applying the concept of change management, digitalisation can take place by changing the direction and structure of the organisation (Moran & Brightman, 2001) to get the anticipated business outcome (Creasy, 2018). In order to change the processes and services from analogue to digital, information and communication technology (ICT) is important in the operation of transporting and transforming the information. ICT would process, store, and transfer information through an assortment of technologies and applications (Cohen et al., 2002). Another way to digitally transform the services would be through business process management (BPM) that aligns the processes with the needs and objectives of the customers (Lee & Dale, 1998), which in this case, are the portfolio companies. BPM is a way to improve the processes (Zairi, 1997), which involves increasing the efficiency of services through digitalisation. It helps firms boost profitability in the short run, by reducing waste and costs, and helps firms be receptive to business changes in the long run (Turban & Volonino, 2012, p. 394).

5.4.1.4 Mobilisation

The mobilisation phase is concerned with identifying appropriate representatives for the actor network. In this phase, the actor network is stabilised, with the network becoming a single actor with irreversible and long-lasting relationships (Callon, 1986; Chowdhury, 2017). In the implementation of digitalisation, the case company could enable co-creation by getting an external actor to develop a digital system or platform. Co-creation involves external parties being brought in as a part of the ideation and development process (Livescault, n.d.). Through ANT, the digitalisation of services leads to the co-creation of services, meaning that customers may customise the services in relation to their needs or wants (Chowdhury, 2017). Moreover, the case company could cooperate with the portfolio companies which makes it possible to use the information and resources of each company and put it into a digital system. This creates a

digital ecosystem, which connects systems and processes consisting of technology, people, strategy, and channels (Hardin, 2018).

In sum, ANT presents the relationship enabling the digitalisation of services (Chowdhury, 2017). By discussing the findings from the collected data from an Actor Network Theory perspective, all the phases of translation were completed.

6. Conclusion

6.1 Concluding remarks

This thesis illuminated which processes and services that are offered in the accelerator company Moment, investigated which these processes and services that can be digitalised and presented the advantages of digitalisation from the case company's viewpoint. The research completed offered a foundation for responding to the problem statements:

RQ1 – Which processes and related services offered by an accelerator company can be digitalised?

RQ2 – What are the advantages of digitalisation from an accelerator company's point of view?

The study gathered primary data through a set of interviews, initially contributing to existing literature regarding the digitalisation of business accelerators by conducting an exploratory case study.

The findings displayed that Moment is not seen as an accelerator program provider by the start-up companies, as they rather refer to the relationship between them as a collaboration. In terms of the characteristics of business accelerators, Moment can be seen as a hybrid accelerator. Furthermore, all the processes and services that Moment offers can be digitally transformed or fully digitalised. However, this is not ideal for neither the case company nor the start-up companies in their portfolio as they would want to keep physical human interaction. A solution to this may be to digitalise a majority of their services or digitising the processes and services by implementing digital tools in relation to the delivery of the services. These digital tools may include programs and online resources.

According to the case company, the services that could be fully digitalised include services within bank and financial services, some networking services, public relations services, and strategy services. Furthermore, there were twice as many of the services that they offer that can be digitalised partially, which consists of the delivery of services with the use of digital tools. These include services within bank, financial, and legal services, some educational services, funding services, innovation services, networking services, public relations services, and other services, which includes encouragement and HR support. Lastly, the services that should not be digitalised are related to the services Moment offers that are physical, such as access to facilities, and those that should not be digital due to human interaction and chemistry being an important factor that you cannot get through the digital counterpart.

Moreover, the findings presented the advantages of digitalisation from the case company's viewpoint, which included: streamlining, better overview, reuse, digital platforms, better selection process, increase in capacity, better applications and pitches for participating start-up companies, more comprehensive educational process, better response-rate for urgent matters, saving time and money, and lastly, increased quality of services. These advantages were condensed into five main advantages which were: systematisation, eco-friendly operations, increased profit, increased success rate, and increased efficiency.

The discussion presented the concept of translation from Actor Network Theory as a process to implement the digitalisation of the case company's services. The portfolio companies are interpreted as actors of a network, while the employees and resources of Moment form another network, which in turn makes a bigger network or ecosystem of networks. Additionally, translation consists of four stages. Problematisation introduced the opportunity of digitalising the services offered, which is presented to the start-up companies. Interessement consists of getting the start-ups interested in the presented opportunity of digitalisation, thereby being shown the advantages of the digitalisation of services, for both the case company and the portfolio companies. Enrolment contains the plan of implementation of the digitalisation by stating the effect this has on each human and non-human actor in the network, which can take place through the application of change management or business process management. Finally, the mobilisation stage identifies appropriate representatives of the execution of digitalisation, which can be done through co-creation where an external actor would develop the desired digital system or platform.

6.2 Implications

The aims of this master's thesis were to map out the processes and services offered by an accelerator company and investigate which of these processes and services can be digitalised, as well as examine the advantages of the digitalisation from the accelerator company's viewpoint.

The relevance of this study relates to the increased degree of digitalisation caused by the COVID-19 pandemic. The majority of businesses experienced the need to adapt to an increased use of digital tools, and the problem statements were formulated on this basis. Another result of the pandemic was the increased interest in innovation, which also contributed to the foundation of the research aims as it sparked interest in the investigation of the fairly new concept of business accelerators.

The results from the study presented the type of services that can be digitalised, either partially or fully, as well as the advantages of digitalisation for the accelerator company. The research contributes to the existing literature on business accelerators and other start-up assistance organisations, as well as the effect of digitalisation and the development of digital transformation strategy. The results of the research can be a guide to future research regarding the same topic as stated in the limitations below.

6.3 Limitations and further research

This study has some limitations. The main limitation is the time constraint, as the research was conducted over a short period of time due to the master's thesis being written during the time frame of one semester. Due to lack of time, it was not doable to interview all the start-up companies in the case company's portfolio, but rather only four of the 18 portfolio companies. To increase the reliability, it would be more advantageous to conduct interviews with all the portfolio companies, increasing the number of participants. Therefore, in terms of further research, one may be able to provide more data by conducting a study over a longer period of time, having the time and resources for this, and being able to interview an increased number of participants.

Another limitation was that this is a single case study. By having multiple case studies as a basis for the research, the results would be more accurate in terms of investigating which processes and services that can be digitalised. This would again require an investigation over an extended

time frame. In future research, the research can be completed by doing a multiple case study or multiple-case design. Furthermore, an additional limitation consists of only interviewing start-up companies currently in collaboration with the case company. Former start-ups that have been in collaboration with them could also be investigated to get a more detailed understanding of all the services the case company delivers. Moreover, the method of collecting data was through a series of interviews. In future research, one could conduct interviews as well as having anonymous questionnaires online for the start-up companies. By gathering data through questionnaires, the data could contain less bias and more details as participants are aware their answers will remain unidentified.

Finally, there was a limitation regarding the data collection as the case company was given a table to fill out the services they offer. Due to the time limitation, the start-up companies were not given such a table to fill out, which meant that the start-ups could have received more services than what they stated during the interviews, however not mentioned. For further research, the start-up companies could have filled out the same table with the list of services that the case company filled out to make the data gatherings more accurate.

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Appendix

Appendix A – Formulating the interview guide

Source: Bryman & Bell, 2015

Appendix B – The interview guide

Start-up companies

Introduction

Hello and thank you for being willing to be a part of our research project. The interview will take up to an hour and we would like to remind you that it is completely voluntary to participate. As the pandemic had a major impact on individuals and businesses, many everyday activities had to be limited and new digital alternatives had to be used to reduce physical meetings/attendance. Therefore, many companies were affected by this. The research question of our master's thesis is thus "What services and related processes can be digitalized in an accelerator company?"

If you agree, we will audio record the interview using a dictaphone which is not connected to the internet. The interview will thereby be transferred to the University of Agder's OneDrive server. After it has been analysed, transcribed, and transferred to written form in the assignment, the audio file will be deleted. Furthermore, we will only use anonymised data in our thesis.

Interview questions

1. What made you seek collaboration with Moment?
2. What did you expect out of the collaboration?
3. What kind of guidance and advice did you get through the collaboration?
4. What kind of services were you offered?
5. What was Moment's input in the delivery of those services?
6. What was your input and how active were you in the delivery of those services?
7. What was the result of the services you received?
8. How satisfied are you with the delivery of these services?
9. Which services were the most valuable for your company?
10. How standardized were the services?
11. Did the collaboration with Moment meet your expectations?
12. How much of the growth in your company do you think is due to Moment's services as opposed to natural growth?
13. Is the competitive advantage of your company related to unique knowledge developed internally? How?

14. How do you protect unique knowledge within your company?
15. Did you use your own digital tools in relation to your assigned tasks?
16. Did the accelerator company recommend or provide you with any digital tools in relation to your assigned tasks?
17. Is there something you think should be changed about the services you received?
18. Which parts of the services could be digitalized?
19. Which parts should not be digitalized?
20. Are there any services that should not be digitalized to protect the knowledge in your company?
21. Can the digitalization of these services increase the risk of your unique knowledge / competitive advantage in any way? If yes, how?
22. Do you think the services you received would be just as useful in digital form?
23. How is the follow-up from Moment's side? Did you get enough follow-up?

Concluding remarks

24. If you were to pull out three things of this interview that were the most important aspects we have talked about, what would they be?
25. Is there something else you would like to say or add at the end?

Thank you for participating!

Accelerator company

Introduction

Hello and thank you for being willing to be a part of our research project. The interview will take up to an hour and we would like to remind you that it is completely voluntary to participate. As the pandemic had a major impact on individuals and businesses, many everyday activities had to be limited and new digital alternatives had to be used to reduce physical meetings/attendance. Therefore, many companies were affected by this. The research question of our master's thesis is thus "What services and related processes can be digitalized in an accelerator company?"

If you agree, we will audio record the interview using a dictaphone which is not connected to the internet. The interview will thereby be transferred to the University of Agder's OneDrive server. After it has been analysed, transcribed, and transferred to written form in the assignment, the audio file will be deleted. Furthermore, we will only use anonymised data in our thesis.

Interview questions

1. How would you describe the services that you provide?
2. Could you describe the process the entrepreneur / team / business is going through once they approach your company in different stages?
3. What are the most efficient stages/parts of the accelerator program?
4. What does the start-up selection process look like?
5. What do you think are the most valuable services that you offer?
6. How many individualised versus standardised assistance services do you provide for your clients?
7. Is there anything within the services that should be changed to increase effectiveness?
8. How do you gather data and information relevant for specific services when working with start-up companies?
9. How are the related resources allocated?
10. To what extent is it possible to reuse knowledge and data from previous projects for future projects?
11. How do you reuse the information?
12. What are the most important elements that are reused?
13. Do any of your offered services follow a framework or a "recipe"?
14. Which digital tools do you use in relation to the different services you deliver?
15. What does digital transformation mean for your company?
16. Are there any inefficient processes related to a specific service?
17. Do you think the implementation of digital solutions for the delivery of the services would solve inefficiency issues?
18. Do you think that digital tools could improve knowledge transfer?

19. Are there any services that are especially valuable in terms of the growth of the company?
20. Do you have any thoughts on where your company could be more digitalised?
21. Could you see any disadvantages of digitally transforming the services you offer?
22. Are there any processes or services that you think shouldn't be digitalised? Why?
23. Are there any new digital initiatives that you believe are beneficial for entrepreneurs?
24. How do you work with networking and external partnerships?
25. What are your thoughts on working in the physical environment, compared to working in a virtual environment?
26. What are your thoughts on working in a virtual environment in the future?
27. Have you noticed any differences in entrepreneurship due to the changing digital context?
28. What are your thoughts on the entrepreneurial ecosystem and digital ecosystem?

Concluding remarks

29. If you were to point out three things of this interview that were the most important aspects we have talked about, what would they be?
30. Is there something else you would like to say or add at the end?

Thank you for participating!

Appendix C – Raw data

Service Category	Service type	Category	Moment offers	Can be digitalized fully	Can be digitalized partly
Least common services which include limited bundle of service					
	Workshops		☑	☑	☐
	Legal and financial services		☐	☐	☐
	Video lectures and case studies		☐	☐	☐
	Transforming ideas into workable concepts		☑	☐	☐
Typical services offered by an accelerator in exchange for equity					
	Mentoring		☑	☐	☐
	Coaching		☑	☐	☐
	Selecting participants and organize in cohorts		☑	☐	☐
	Boot-camp training over a fixed period		☑	☐	☐
	Preparation to pitch to investors during demo-day		☑	☐	☐
	Access to financing		☑	☐	☑
Additional services to typical services based on participants needs					
	Office space		☑	☐	☐
	Building a product		☐	☐	☐
	Stipends		☐	☐	☐
	Teambuilding		☑	☐	☑
	Media exposure		☑	☐	☑
	Brand recognition		☑	☐	☑
	Exposure to relevant and timely R&D		☐	☐	☐
	Post-program support to graduates without cost		☐	☐	☐
	Internet marketing		☑	☑	☐
	Creating and submitting all the company formation documents on the behalf of the participants		☑	☑	☐
	Offering free access to online platforms		☐	☐	☐
	Internet Access		☑	☐	☐
	Encouragement		☑	☐	☐
	Assistance and help with technical issues		☐	☐	☐
Business Services					
	Advertising on accelerator medias		☐	☐	☐
	HR support (personnel selection, evaluation, personnel audit, preparation of development programs, etc)		☑	☐	☑
	Idea generation and creativity management support		☑	☐	☑
	Increase credibility of startups		☑	☐	☑
	Prototyping and MVP building support		☑	☐	☑
Educational services					
	Events		☑	☑	☐
Funding services					
	A public pitch event or demo day to help attract capital		☑	☑	☐
	Access to round A funders		☑	☐	☑
	Pre-seed investments		☑	☐	☑
	Seed funding		☑	☐	☑
Networking services					
	Access to a wide network of experts, investors, mentors, advisors, business, entrepreneurs, etc.		☑	☑	☐
	Access to industry experts		☑	☑	☐
	Access to market		☑	☐	☑
	Access to potential customers		☑	☐	☑
Office services					
	A full passion competitive startup ecosystem place		☑	☐	☑
	Access to meeting room		☑	☐	☐
	Access to physical resources (such as printer, scanner, boards...)		☑	☐	☐
	Access to R&D facilities and equipment		☐	☐	☐
	Housing		☐	☐	☐
	Office space or co-working space		☑	☐	☐

Table of services offered, filled out by Moment

Appendix D – Christina Ditmansen Discussion Paper on 'Responsible'

The COVID-19 pandemic led to an increase in digitalisation and innovation, which became the basis for the research. This master's thesis aimed to examine which processes and services of an accelerator company can be digitalised and the advantages of digitalisation from an accelerator company's viewpoint. Through an exploratory case study, qualitative data was gathered through a set of interviews with the case company and four start-up companies in their portfolio. Data were also collected through a table of accelerator services, filled out by the case company. The interviews were recorded and transcribed, and the results were then evaluated to discover similar themes, which were then compared. The data gathered shows the processes and services offered by Moment and which services can be digitalised. Approximately one-fifth of the services can be fully digitalised, almost half of the services can be partially digitalised, and the remaining one-third of the services should not be digitalised, according to the case company. The findings also present the five main advantages of digitalisation for the case company, which include systematisation, eco-friendly operations, increased profit, increased success rate, and increased efficiency. Through the concept of translation from the Actor Network Theory, a suggestion for the implementation of digitalisation of their processes and services is illustrated through the four stages of translation, which include the suggestion of implementing the digitalisation through change management or business process management.

Responsibility

Responsibility can be defined as "the ability and moral obligation to respond to normative questions concerning the rightness and wrongness of actions or states of affairs" (Becker, 2019, p. 78), and is one of the basic ethical principles (Becker, 2019, p. 3).

Before starting the writing process of the master's thesis, there was a certain responsibility in relation to selecting a problem statement and research questions that were viable to perform in order to create results that would benefit society as a whole. The problem statement was chosen based on the little previous research conducted on the concept of business accelerators, especially digital or virtual accelerator programs. The master's thesis could thereby contribute to the existing literature on the phenomena.

Furthermore, the writing process of the thesis was responsible in the matter of making sure the thesis does not contain plagiarism and correctly citing the sources. Plagiarism is "the use of another's original words, arguments, or ideas as though they were your own" (Sekaran & Bougie, 2016, p. 59). Information gathered from articles and books was rewritten, using my

own words to describe the same context, or directly quoted, followed by referencing where the information was taken from. The thesis was written following the guidelines of APA 7th, which was done using websites such as Kildekompasset. Moreover, the literature search for the literature review was conducted in a responsible matter, as the articles were found by using Google Scholar, where one may find trustworthy academic articles. Also, the articles for the literature review were chosen in regard to the quality and context of the title and abstract, and it is, therefore, important to be critical of sources. It is also important not to misinterpret the work of other authors (Sekaran & Bougie, 2016, p. 59), and the articles were thereby read several times to fully comprehend the contents.

The methodology was responsible in relation to conducting the research as the details of the study were sent to NSD (Norwegian Centre for Research Data) for approval. After receiving the approval, the interviews could be scheduled and conducted. Due to the processing of personal data, the student and the supervisor are responsible for covering the duty of confidentiality (UiA, n.d.). Furthermore, regarding the research quality, the thesis had to be reliable and valid. Reliability refers to how the same researchers can observe the same event and get the same results, on separate occasions (Sekaran & Bougie, 2016, p. 137). By describing the details of how this research was conducted, other researchers can replicate the study, and in turn, prove the reliability of the case study process. Trustworthiness is another aspect of reliability and relates to the concept of responsibility. All of the interviewees had administrative roles in the companies, making the answers more credible and reliable. In the methodology chapter, all the stages of the research were described in detail, which provided increased trustworthiness and reliability to the thesis.

The data collected was presented responsibly as the findings from the transcribed interviews were presented truthfully, thereby not lying about any of the information collected. This can be shown by the use of direct quotations. By interviewing both the start-up companies and the case company, information was gathered from two perspectives.

Furthermore, responsibility states the fact that someone is responsible or accountable for something. In recent years, there has been an increased focus on the environment and what can be done to be more sustainable. Businesses try to increase their eco-friendly operations, as it is important for firms to do the right thing when conducting their business activities (Thomsen & Conyon, 2019, p. 199). This can be related to corporate social responsibility (CSR), which is a management concept where “companies integrate social and environmental concerns in their business operations” (Becker, 2019, p. 102). CSR includes economic, legal, ethical, and

philanthropic responsibilities (Becker, 2019, p. 100). The findings presented the advantages of digitalisation. One of the main advantages was eco-friendly operations, which relates to sustainability and the responsibility of businesses. Another aspect relating to this is that by digitalising the services, the company can reduce the use of paper, thereby being more sustainable. The thesis also discussed some of the disadvantages of digitalisation, which include privacy concerns, work overload, loss of human interaction, connection and chemistry.

The thesis examines the extent to which the case company's processes and services can be digitalised and concludes that the majority of the services can be digitalised. Digitalisation leads to multiple advantages, such as increased efficiency. However, the digitalisation of services leads the company to be responsible for protecting the knowledge and information they have digitalised and protecting their digital assets to "ensure that sensitive information is protected against unauthorised access", thereby being faced with ethical challenges (Lerzynski, 2021).

Ethical challenges

Ethics is "the systematic reflection on values and norms" (Becker, 2019, p. 15), and asks the "questions of what is right and what is good" (Becker, 2019, p. 11). Investigating ethical issues can help uncover new markets, prospects, and competitive advantages in a business. Ethics is therefore very important for businesses (Becker, 2019, p. 7). While conducting research, "ethics in business research refers to a code of conduct or expected societal norms of behaviour" (Sekaran & Bougie, 2016, p. 13).

When choosing the topic of the research study, the research questions were chosen and formulated based on the ethical challenges that may arise. Laws, cultural values, and religious beliefs should not be in contradiction with the research. Moreover, when choosing to investigate digitalisation, there are some ethical issues regarding this as digitalisation may lead to privacy concerns, information may go astray, etc. There are also ethical challenges regarding using a single case study, as opposed to multiple case studies. Single cases have limitations such as generalisability and multiple information-processing biases (Eisenhardt, 1989; Singh, 2014). The unit of analysis of this research is therefore organisations as information is gathered from interviewing the case company and some of its portfolio companies.

Regarding the methodology, there were ethical considerations that had to be taken into account. When choosing to collect data through a set of interviews which are being recorded and transcribed, there are ethical issues arising in terms of processing personal data. Since people can be identified by their voices, the research project must be reported to NSD (Norwegian

Centre for Research Data), regardless of whether all reporting from the research is anonymous (UiA, n.d.). The research project reported to NSD consists of designing an information letter for the participants and an interview guide (NSD, n.d.). The information letter consisted of information about the purpose of the study, its research objectives, who is conducting the interviews, who the supervisor is, what it means to participate, why they are being asked to participate, and information about confidentiality and anonymity. After getting the approval from NSD, the participants were contacted and sent the information letter and the interview guide, and the interviews were scheduled. They were informed that the interviews were going to be recorded, but that the recordings were going to be deleted by the end of May. Interviewees were also informed that their participation is voluntary and that they can withdraw from the research at any point.

An ethical issue which usually presents itself when introducing gathered data from transcribed interviews is that interviewees from each company are labelled I1, I2, etc. By doing this, one may be able to identify the participants in terms of each individual's answer and the context of the company. Therefore, by presenting the findings from the interviews and not disclosing which interviewee said what, there is a higher degree of anonymity and essentially solves this particular ethical issue. Correspondingly, the names of the start-up companies, as well as the names of the employees of the case company, were not disclosed. The start-ups were not questioned about their own companies, thereby not revealing any potentially sensitive information about their ventures. During the interviews, ethical interview considerations were made as the interviews were conducted in private rooms so no one would disturb or be able to listen to the conversations, which can make participants nervous or uncomfortable.

Another ethical issue that may arise during the data collection is bias. I had personally no previous contact or relationship with the case company, decreasing any potential bias in this context, and therefore being able to mentally withdraw from the field of study. Also, I had not met the participating start-ups before conducting the interviews, which made me fair and impartial. Moreover, bias may arise due to poorly formulated questions, there may be response bias, inaccuracies, and reflexivity – meaning that the interviewee says the things that the interviewer wants to hear (Yin, 2009, p. 102). We were two students working together on formulating the interview questions and conducting the interviews. By being two people working on the same topic, the degree of bias is reduced as individuals differ in beliefs and viewpoints.

There were also considerable limitations regarding the time frame. Due to time constraints, four out of 18 start-up companies were interviewed in this research. If all of the start-ups in the portfolio could have been interviewed, there would be a greater amount of data to compare and could increase the accuracy and reliability of the answers as well as decreasing bias.

Finally, from the findings and discussion, the services that can be digitalised were presented, along with the advantages, as previously mentioned. The digitalisation of services has multiple advantages, which contribute to the increase in the efficiency of an organisation. However, it contains some ethical challenges, such as privacy concerns and regarding the evaluation of information. Digital systems can store a lot of information, but in terms of information evaluation, human judgement is an important factor (Lerzynski, 2021).

Concluding remarks

The term 'responsible' consists of having the responsibility of doing the right thing. There is a certain responsibility that goes with writing a master's thesis from the very beginning where the topic needs to be chosen to the conclusion of the research. Moreover, there is a responsibility in terms of the writing process to eliminate any plagiarism, as well as correctly citing and interpreting the sources. Furthermore, I had a responsibility to report the research to NSD for approval, as well as the responsibility to present the findings from the data collection in a reliable and truthful way. Additionally, responsibility can also be linked to CSR, which relates to sustainability.

Ethics is important in business as it reflects values and norms. There are, however, ethical challenges that arise when conducting research, such as with this case study. When choosing interviews as a data collection method, there are ethical issues arising in terms of processing personal data. Interviewees were therefore informed that interviews were being recorded and that their participation is voluntary, confidential, and anonymous. Also, names of employees and companies were not disclosed, except for the company name of the case study. Furthermore, bias was decreased by having no previous contact with the interviewees and conducting the interviews with a co-student.

By taking ethical considerations and following guidelines on how to write an academic paper, which I have learned through a five-year long master's degree in Business Administration, reliable and valid research has been conducted. This has essentially created a responsible thesis.

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