BUSINESS MODEL DYNAMICS: CASE OF A TECHNOLOGY STARTUP COMPANY

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ABSTRACT

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Business models have drawn the interest of both scholars and practitioners in the last few decades. A growing number of research articles on the topic have emerged but still scholars do not agree what the business model concept exactly is as research has been scattered. Still, scholars seem to agree that the business model concept has significance for the success of companies and for commercializing technologies. Also, many scholars have pointed out that it is crucial to keep the business model evolving and up to date. Therefore, there is a need to understand how business models change.

The purpose of this study was to investigate the business model concept in the context of a technology startup company and to gain understanding about the model’s change in the early stages. In order to fulfill its mission, this research set out to synthesize previous academic knowledge about the business model concept and its connection with technology startups. As a result, this thesis presents a business model framework and describes the case company’s business model and its components. Furthermore, the change that has happened within two years and the drivers behind the change are described and analyzed.

The empirical part of this study was performed as a qualitative case study. Main research data was obtained with semi-structured interviews for the key employees of the case company and secondary data was obtained as documents provided by the company. The first interviews took place in November 2016 and the most recent ones in October 2018. The research data was processed and analyzed with qualitative directed content analysis.

Findings of this research suggest that the business model of a technology startup company is somewhat different than the literature focused on established companies describes. At the early-stages the case technology startup company was still experimenting to find the right business model architecture. Especially issues related to value and value network were important. To conclude, the evolution that has happened with the business model in two years is significant and has been driven by desire to grow, need for focus, and need for capabilities and resources. As a result, the case company has become more established and focused. Furthermore, it has developed consistent processes when emphasis has shifted from product development and launch to sales. The results of this research reinforce previous research on the topic and provide basis for future research in the context of business models and startups.
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1 INTRODUCTION

1.1 Research Background

Business models have been a popular topic in the last few decades as both researchers and practitioners have utilized the concept (Morris, Schindehutte & Allen, 2005; Zott, Amit & Massa, 2011; DaSilva & Trkman, 2014; Nyström & Mustonen, 2017). One main reason for growing interest towards business models in recent decades has been technological development and especially the Internet which began to make an impact on business starting from the 1990’s (Morris et al., 2005, 727; Demil & Lecocq, 2010, 227; Teece, 2010, 174; Zott et al., 2011, 1022). The Internet enabled new ways to do business and led to the emergence of rapidly growing technology companies that had the characteristics of a startup.

Many companies that were startups just two decades ago have rapidly emerged to become some of the most valuable and powerful companies in the world today. This success has been achieved with novel business models that benefitted new digital technologies (Baden-Fuller & Haefliger, 2013; Massa, Tucci & Afuah, 2017). Despite the significance and wide use of the term, the business model concept lacks consensus between the scholar community and research on the role of business models has proceeded in different directions (Morris et al., 2005, 726; Zott et al., 2011, 1034; Wirtz, Pistoia, Ullrich & Göttel, 2016, 36; Saebi, Lien & Foss, 2017, 567; Foss & Saebi, 2018, 10). Moreover, the business model concept has often been misused by both academics and practitioners (DaSilva & Trkman, 2014, 379).

Research and literature on business models has been scattered (Teece, 2010; George & Bock, 2011; Dopfer, Fallahi, Kirchberger & Gassman, 2017). Scholars have explored the concept in multiple different research streams under topics such as strategic management, entrepreneurship and innovation (Nyström & Mustonen, 2017, 123). But notably, the business model research field has paid less attention to business models in the context of startup companies (Spiegel, Abbassi, Matthäus, Schlagwein, Fischbach & Schoder, 2016, 424). This can be due to that the right business model is rarely clear in businesses that are new and evolving (Teece, 2010, 187). But business model thinking can assist startups (Baden-Fuller & Mangematin, 2013, 424). The concept is important for companies
especially in the technology sector as a suitable business model is crucial for commercializing technology (Chesbrough, 2010; Baden-Fuller & Haefliger, 2013).

These days there are many fast developments in technology and consumer preferences so it is crucial for all businesses to keep evolving to achieve sustainable competitive advantage (Zott et al., 2011, 1033; DaSilva & Trkman, 2014, 386; Nyström & Mustonen, 2017, 128). Novel business models have often been credited for success in rapidly changing business environments (George & Bock, 2011, 83). But even novel business models need to be altered when the business environment changes (Jansen, Steenbakkers & Jägers, 2007, 119; Nyström & Mustonen, 2017, 123). Thus, the choice of a certain business model should be temporary, and organizations ought to be curious about developments and transitions to other business models. This applies especially to technology startup companies which are still in the early stages of their development and thus are exploring to come up with the right business model to commercialize their offering.

While business model literature acknowledges that business models should change over time to guarantee success, there is little information about the antecedents needed to achieve this change (Mason & Spring, 2011, 1033; Achtenhagen, Melin & Naldi, 2013, 427; Saebi et al., 2017, 567). Moreover, to date, both practitioners and scholars have little knowledge about how, why and when should business models be adapted to ever changing business environment (Nyström & Mustonen, 2017, 127). Some progress has been made to understand the drivers and facilitators of business model change but there is a lack of research on how companies adapt the business model to external opportunities and threats (Saebi et al., 2017, 567). Overall, there has been a call for more research on business models and early-stage ventures (Dopfer et al., 2017, 235).

This research was performed in order to find out more about the business models of technology startups and how the business model change process unfolds in their first few years in business. The research method used was qualitative case study. The case company was an early-stage technology startup company which was having its first year in business when the research began. The development of the case company’s business model was researched within the timespan of two years. Therefore, the significance of this research is in its attempt to apply the business model concept to a case of a technology startup company and to describe the change process of its model.
There is a need for this kind of research because, despite much attention has been paid to business models, startups, and technology lately, previous research on the topic of technology startups and their business model evolution aspects has been limited (Morris et al., 2005; Foss & Saebi, 2015). This lack of research is remarkable because the widespread use of the business model concept appears to be intrinsically connected with technology companies (DaSilva & Trkman, 2014, 380). Therefore, there is value in finding out how the business model concept can be applied to the context of technology startup company and how the business model change process unfolds.

1.2 Research Objective and Questions

The objective of this research was to describe and analyze the business model of the case company and its dynamic nature within the time period of two years. Thus, the research question is:

*What are the characteristics of the business model of a technology startup company and how does the model change?*

Additionally, there are three sub-questions that elaborate the main research question. The sub research questions are:

*What are the components of a technology startup company’s early-stage business model?*

*How does the business model change?*

*What are the main drivers for the business model change?*

To address these research questions, this thesis presents the theory on the topic of business models and implements it into the context of a case technology startup company. Furthermore, the characteristics of the business model that existed in the early-stages of the case company are depicted with its main components. Then, to understand the dynamics of the case company’s business model, the change that has happened to it within two years is analyzed and discussed. To achieve these objectives a literature review on the topic of business models was performed and empirical data was gathered from the case company’s organization through the methods of qualitative case research.

In order to fulfill its mission, this research set out to synthesize previous academic knowledge about the business model concept and its connection with technology startup
businesses. Based on the theoretical underpinnings of business models, the target was to gain appropriate information for modelling the business model of the case company. That theoretical knowledge was then utilized for studying the case company’s business model and its change processes within two years. First, the early stage business model was constructed and then the changes that have happened during this research were tracked and analyzed accordingly. This is a sound approach because as Spiegel et al. (2016) recognize, the business model is developed at the early-stages of the company and changes significantly and rapidly ever after. As a final report of the research, this thesis covers business model theory conceptualization, description of research methods, early-stage business model of the case company and description of the development that has happened to it within two years.

1.3 Main Concepts and Scope of the Research

The theoretical roots of this research are in the business model literature. The target of the literature review was to find aspects of the business model concept that are relevant in the context of a technology startup company. Thus, two main concepts for the research are recognized as business model and startup. Both of these concepts define this research and create its context.

Business model

Central to this research is the business model concept which lacks definitional clarity between the academic community (Zott et al., 2011). Instead, several different definitions have emerged (Palo & Tähtinen, 2011, 378). But as the topic has been excessively researched, there are some agreements about its characteristics (Wirtz et al., 2016, 39). Common definitions are the ones that understand the concept as some kind of a depiction of how the company conducts its business (Morris et al., 2005; Doganova & Eyquem-Renault, 2009; Casadesus-Masanell & Ricart, 2010; Zott & Amit, 2010; Zott & Amit, 2013). Those definitions are also relevant for this research as the objective is to describe and analyze the business model of the case company.

The business model concept in essence, according to Teece (2010, 173), embodies the organizational and financial architecture of a company. Zott and Amit (2010, 222) define the business model concept as a template of how a company conducts business, how it delivers value to stakeholders and how it connects factor and product markets. It reveals
how a business creates and delivers value to customers and describes the logic and assets behind the value creation (Teece, 2010, 173). This means that the business model is some kind of a tool for understanding the business, which is useful for the purpose of this research. Therefore, one of the most concise definitions has been by Zott & Amit (2013, 404) who delineate business model as “a template depicting the way the company operates and meets the customer needs”. That is the definition adopted for this thesis.

**Startup**

Despite being a widely discussed topic, only a few attempts have been made to define the concept of startup in the academic literature. Startup, according to Fonseca, Lopez-Garcia & Pissarides (2001), can be defined as a venture or a new business organization in the early stages of its development designed to pursue a scalable business model (Antonenko, Lee & Kleinheksel, 2014, 37). Oviatt’s and McDougall’s (1994, 49) definition for startup is: “an international new venture as a business organization that from inception seeks to derive significant competitive advantage from the resources and the sale of output in multiple countries” (Vapola, 2011, 40). Even though these two definitions comprise venture slightly differently, they are not contradictory.

Trimi and Berbegal-Mirabent (2012, 452) recognize that not all startups are international and define technology-based startups after Klofsten (1994) as new ventures where knowledge and technological innovations are commercialized. Non-academic definitions have also emerged and one of the most prominent ones is from the book *The Lean Startup* in which Ries (2011, 18–19) defines startup as a human institution designed to create a new offering under extreme uncertainty. In this research startup is conceived as a new business organization in the early stage of its development pursuing for a scalable business model.

The empirical part of this research is conducted only from the perspective of the case company. The purpose was to gain knowledge about how the business model of a case company can be depicted, how it will shape to be from the focal firm’s perspective and how has it changed within two years. The evolution of the business model is analyzed purely in the context of business model literature. Also, the external relationships or views of the company were not investigated as all of the empirical data was gathered from the case company. This research aims to discover the business model of a technology startup and to understand its change process in the first years in business. That means excluding
some feature of business models that are not relevant for this research and therefore this thesis does not address the concept comprehensively.

This research was conducted as a case study and therefore its results are highly contextual and cannot be directly applied to other companies. The findings of this research represent solely the business model of one particular company and its unique evolution. The empirical data was gathered from the company, which means that it represents merely the way the company’s founders and employees describe its business model and perceive its change. Also, the theory in this research does not represent any general description of business models since the objective was to investigate business models in the context of a technology startup company. Therefore, the literature review focused on business models in an entrepreneurial and startup context. That meant excluding some traditional business model features of large companies. Thus, results of the business model literature analysis can be biased and not pervasive. In addition, the theoretical analysis aims to focus on the descriptive attributes of business models, thus not catering to, for instance, viewing business models as an innovation device.

1.4 Research Process

The research process began by discovering the phenomenon of business models and its significance by exploring previous research on the topic. Because business models have mostly been researched in the context of large established companies there is need to gain empirical material about their purpose in recently founded, small companies. After confirming the interest in business models in the context of companies at their early stages, the quest for finding a suitable research object began. The most prominent one was Alpha (referred in this thesis under pseudonym), which when the research process began was a recently founded startup company on the verge of releasing its educational technology solution for distribution. Alpha was contacted and agreed to become the case company for this research, which aimed to gather empirical knowledge about its business model and its evolution.

The research process continued by drafting the topic of the research and studying further existing research on business models. At that point it became clear that interviews were the only logical choice for obtaining material to answer the research question about business models in the startup context. After gaining basic understanding about the
phenomenon, a meeting with a person in charge of Alpha’s marketing and sales was organized to learn more about the company and in order to be able to prepare adequately for the interviews for gathering the primary data for the research. On the basis of the information from this meeting and the theory studied, the topics for the first interviews were chosen and divided according to each interviewee’s field of expertise in the company.

The interviews for the primary materials were conducted on four separate occasions in November 2016 and July 2018. The interviewees consisted of four company employees who were also the founders of Alpha. The interviews in November 2016 focused on Alpha’s business model at the early-stage and were part of a bachelor’s thesis research of the author of this research. The interviews in July and October 2018 focused on the evolutionary aspect of the business model. Between the interviews more information about business models was studied, and with holistic information from the interviews and the theory, the direction of the research could be re-outlined to better match the purpose of this study. Also, simultaneously during the process, extensive feedback was received from opponents and the instructor of this thesis.

Once all the interviews were conducted, they were analyzed from the perspective of business model research. The results of the analysis were compared to the theory, and consequently, Alpha’s business model was constructed based on the empirical data. With a comprehensive review of the business model literature and the empirical business model of Alpha constructed, tracking the evolution of Alpha’s business model began. The changes that had occurred were recognized and analyzed. Based on these analyses, conclusions about the research could be made, and this thesis reached its final form. Finally, the language in this report was revised to ensure the quality of the final report.

1.5 Structure of the Thesis

The structure of this thesis is presented in Figure 1 (page 13). In Chapter 1, the background of this research was introduced along with argumentation for the interest towards the research topic. Furthermore, the research objectives and question were laid out. Then the main concepts and scope of this research were explained, followed by a description of the research process. Finally, in this chapter the structure of this thesis is presented.
Figure 1. Structure of this thesis

In Chapter 2 the concept of business models is presented as the theoretical background of this thesis. The concept of business models is discussed and previous research on the topic is presented. Based on relevant business model theory, a business model framework for technology startups with main components is proposed, and its dynamic aspects are addressed. Finally, the theory presented is synthesized.

Chapter 3 presents the research process and discusses the research methodology with an explanation of the methodological choices made during the process. Furthermore, the process of data collection with semi-structured interviews is explained and a table containing the details of the interviews is provided. Also, the nature of the research data is discussed. Then at the end of the chapter, the process of the data analysis and the theoretical assumptions behind the groupings of the results are explained.

In Chapter 4 the empirical findings of this research are reported. First, the case company with its historical and present situation is introduced briefly. Second, based on the empirical findings, the early-stage business model of the case company is presented along with analysis about its main components. Furthermore, the evolution that has happened within two years is presented and discussed. To conclude Chapter 4, the empirical findings are summarized and discussed.

Finally, in Chapter 5 the research questions are answered based on the empirical evidences and this research is summarized and concluded. The empirical findings and the theoretical framework of business models are reflected and discussed. Accordingly, managerial implications based on the research findings are suggested. Lastly, the quality and limitations of this research are assessed and a path for further research is proposed.
2 BUSINESS MODEL CONCEPTUALIZATION

In this chapter, the concept of business models is presented as the theoretical background of this research. Previous research and findings on the topic are discussed, a business model framework with relevant components for this research is proposed, and finally the theory is synthesized.

2.1 What Is a Business Model?

The topic of business models has been widely researched in recent decades and has drawn the interest of both academics and practitioners (Zott et al., 2011, 1019). But the term is not new. When understanding business models as defined in previous chapter, as a description of way the company operates, it can be argued that business models have been around for centuries as the concept has emerged all the way back when societies began trading goods (Teece, 2010, 174). That is because, every company, either explicitly or implicitly, incorporate a particular business model which is somewhat a template or an illustration that presents the way the company conducts its business (Teece, 2010, 191; Fielt, 2014, 86). It is crafted by the focal company’s managers to meet the perceived needs of the customers (Zott & Amit, 2013, 404). To comprehensively address the market opportunity, often the focal company’s business model spans across the company and its industry boundaries. While it is anchored on the focal company, it is market centric and designed to enable the company to enhance total value creation for all stakeholders, and also to capture a share of the value created (Zott & Amit, 2013). The business model decisions characterize the company in a unique way, which allows it to stand out among competitors even in the same target market.

Many scholars recognize that the business model concept has been poorly defined (Bankvall, Dubois & Lind, 2017, 196). Morris et al. (2005) point out that there has been misunderstanding in the terminology, as business model, strategy, business concept, revenue model, and economic model have been used interchangeably. This kind of vague understanding of the concept is not only limited to public discussion because several scholars point out that there has not been a widely accepted common definition for business model in the academic community either (Morris et al., 2005; Zott et al., 2011; Onetti, Zucchella, Jones & McDougall-Covin, 2012; Zott & Amit, 2013). The lack of a
widely accepted concept has limited the business model research as scholars have not been able to draw effectively on the work of others (Zott et. al., 2011, 1020).

This lack of consensus can, in part, be attributed to an emerging interest in the concept from a range of multiple disciplines, all of which have found a connection and an interest to business models (Jansen et al., 2007, 15). Scholars from different fields of science have utilized the same business model term to explain different phenomena (Zott et al., 2011; Foss & Saebi, 2018). Consequently this has produced a heterogenous understanding of the concept (Wirtz et al., 2016, 36). Due to the absence of a universally accepted definition of what exactly constitutes a business model, the theoretical foundations of most business model definitions are fairly delicate and carefully laid out (Nasiri & Gui Shi, 2014, 73). Furthermore, definitions of business models possess a significant variety because they are driven by numerous different points of view.

As discussed, several different business model definitions have emerged over time. In Table 1 (page 16) are listed some of the most cited ones. Nasiri and Gui Shi (2014, 75) point out that the assumption of most definitions of business models, direct or indirect, is that a business model should describe ‘business relations’ behind the value creation of a specific service or product, which is visible in the definitions presented in Table 1. According to Ghaziani and Ventresca (2005) some authors define the business model more broadly as a description of a company’s logic of value creation, most notably Chesbrough and Rosenbloom (2002). Amit and Zott (2001) recognize more broadly that a business model depicts how a company makes money by specifying its position in the value chain and spells out the design of transaction content, structure and governance so as to create value through the exploitation of business opportunities.

According to Magretta (2002, 87), the business model concept has an answer to managerial questions such as: “who is the customer?” “what does the customer value?” “how do we make money in this business?” and “what is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?”. Morris et al. (2005, 727) recognize the descriptive attribute of business models and define the term as a depiction of how an interrelated set of decision variables in the areas of strategy, architecture and economics are addressed to achieve sustainable competitive advantage. Zott and Amit (2010, 222) argue that a business model is essentially a template to present how the company does business, how it delivers value to stakeholders and how it connects
factor and product markets. Most definitions comprise that the business model is some kind of an illustration of the company, as in the definitions by Amit & Zott (2001), Morris et al. (2005), Fiebt (2014), Zott & Amit (2013), and Wirtz et al. (2016).

Table 1. Business model definitions

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amit &amp; Zott (2001, 494–495)</td>
<td>“The business model depicts the design of transaction content, structure, and governance so as to create value through the exploitation of business opportunities.”</td>
</tr>
<tr>
<td>Chesbrough &amp; Rosenbloom (2002, 529)</td>
<td>A business model is “the heuristic logic that connects technical potential with the realization of economic value.”</td>
</tr>
<tr>
<td>Magretta (2002, 87)</td>
<td>A business model “answers Peter Drucker's age-old questions: Who is the customer? And what does the customer value? It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?”</td>
</tr>
<tr>
<td>Morris et al. (2005, 727)</td>
<td>A business model is a “concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture, and economics are addressed to create sustainable competitive advantage I defined markets.”</td>
</tr>
<tr>
<td>Amit &amp; Zott (2010, 216)</td>
<td>A business model is “a system of interdependent activities that transcend the focal firm and spans its boundaries.”</td>
</tr>
<tr>
<td>Teece (2010, 173)</td>
<td>“A business model defines how the enterprise creates and delivers value to customers and then converts payments received to profits.”</td>
</tr>
<tr>
<td>Zott &amp; Amit (2013, 404)</td>
<td>A business models is “a template depicting the way the company operates and meets the customer needs.”</td>
</tr>
<tr>
<td>Fiebt (2014, 92)</td>
<td>“A business model describes the value logic of an organization in terms of how it creates and captures customers value.”</td>
</tr>
<tr>
<td>Wirtz et al. (2016, 41)</td>
<td>Business models are “a simplified and aggregated representation of the relevant activities of a company. It describes how marketable information, products and/or services are generated by means of a company's value-added component. In addition to the architecture of value creation, strategic as well as customer and market components are taken into consideration, in order to achieve the superordinate goal of generating, or rather, securing the competitive advantage.”</td>
</tr>
</tbody>
</table>

Zott et al. (2011, 1032–1033) point out that studies about business models, innovation, and management of technology have asserted that technological innovation is crucial for
companies, but it might not suffice to guarantee success. That is why business models are important features of market economies that have consumer choice, transaction costs, heterogeneity amongst consumers and producers, and competition (Teece, 2010, 176). Chesbrough (2010) points out that in essence companies commercialize new ideas and technologies by utilizing their business models. Business model choice defines the complementarity of the business model and the technology utilized and how it all can be commercialized (Baden-Fuller & Haefliger, 2013, 422). These issues highlight the significance of business models for a technology startup company.

Yet, while companies often make extensive investments and have processes for exploring new ideas and technologies, they often do not have enough ability to innovate the business models through which these inputs will pass (Chesbrough, 2010, 354). That has consequences as the same idea or technology taken to markets through two different business models will result in different economic outcomes. Furthermore, according to Teece (2010, 173) companies with differentiated, effective and efficient business models will be more likely to yield higher profits. Without a purposeful business model, innovators will fail to either deliver – or to capture – value from their innovations (Teece, 2010, 172). The primal purpose of a company’s business model is to exploit possible business opportunities by creating value for the parties involved (Zott & Amit, 2010, 217). In other words that is to fulfill customers’ needs and create customer surplus while generating enough profit for the company and its partners.

There has been a substantial body of literature published about business models, which is a clear sign of the concept’s significance for success (Achtenhagen et al., 2013, 428). Evidence about the connection between the business model and company success exist (Dopfer et al., 2017). After all, a good business model shows the path for the organization or the network and guides how to employ the strategy of the company (Jansen et al., 2007, 30). Moreover, business models are important tools for the communication with stakeholders. That is because the business model describes the architecture of interdependent activities that are performed by the company and its partners and the mechanisms that link these activities together (Zott & Amit, 2010; Foss & Saebi, 2018). This kind of description about the company is useful because entrepreneurship in the technology sector is knowledge-intensive and hence often hard to understand for investors, customers or partners (Doganova & Eyquem-Renault, 2009, 1567).
As discussed, there are several different research streams on the business model literature and according to Demil and Lecocq (2010) broadly two different uses of the concept can be identified, static and dynamic. The static approach recognizes that the business model is essentially a depiction of how the company creates value and it is useful for describing how the organization functions and generates revenues. It can be troublesome for startups because the static nature prevents framing the complexity and uncertainty of the actual business environment (Cosenz & Noto, 2018, 128). The dynamic approach understands the business model as a concept or a tool to be used when addressing change (Demil & Lecocq, 2010). Literature on business models has been increasingly moving towards a more dynamic view which examines phenomena like business model innovation and adaptation (Saebi et al., 2017, 568). This move from static to dynamic perspective of analysis may contribute to overcoming shortages of conventional business model representations (Cosenz & Noto, 2018). Dynamic business model approach has a broader and flexible perspective that can also entail sustainability and environmental elements. The dynamic view is also more relevant for this research which attempts to analyze the change within the business model. The issue of dynamic business models is discussed more in detail in chapter 2.4.

2.2 Business Models and Technology Startup

According to Chesbrough (2010), businesswise technology by itself does not have objective value. Technologies need to be commercialized via working business models or their economic value remains latent. In some cases, an innovation may successfully employ a business model familiar to the company, while, other times, a company will have a model which may make use of the technology by licensing. But often a potential new technology might not have an obvious business model (Chesbrough, 2010, 355). In those cases, managers need to expand their perspectives to find a functional business model in order to be able to capture value from that technology. Chesbrough (2010) points out that possibly a mediocre technology pursued within a great business model can be more valuable than a great technology exploited via a mediocre business model. Without making use of a suitable business model, technologies will yield less value to the company than the actual potential of the technology in question is (Chesbrough, 2010, 355).
The business model concept is relevant for startups in the technology sector and has a vital role in the success of how these companies cope with the constantly changing business environment (Casadesus-Masanell & Ricart, 2010; Dopfer et al., 2017). According to Trimi and Berbegal-Mirabent (2012, 450) the process of starting up a new venture is a complex and challenging task to carry out. In the initial stages, efforts are often focused on building the offering ready to be commercialized. But simultaneously organizational and financial architecture of the firm needs to be developed for harnessing the full potential of the product. Furthermore, according to Onetti et al. (2012), young ventures which develop a new technological platform, are also involved with establishing and growing the company, commercializing a technology for potential markets, and building internationalization capabilities to enable them to compete even globally. Success requires originality, strategic vision, and novel ways of defining the value proposition and delivering it to customers through the innovative development of business models.

Companies operating in a technology-intensive sector can suffer some additional constraints such as big investments for creating the product, very short product lifecycle, or the emergence of competitors that copy their idea (Trimi & Berbegal-Mirabent, 2012, 450). This proposes that technology-based entrepreneurs, who turn inventions and technology concepts into viable businesses, function in an uncertain and evolving environment. Therefore, innovation speed, product development, customer behavior, threat of competition, governmental regulations, suppliers, investors, and many other environmental factors have a significant impact on the organization. Accordingly, the business model should be evolving to respond to the constantly changing business environment (Jansen et al., 2007, 119; Achtenhagen et al., 2013, 427). Technology development can facilitate business model innovation but that innovation can also occur without it (Baden-Fuller & Haefliger, 2013, 419). The topic of business model change is addressed more thoroughly in chapter 2.4.

For new companies the capabilities and resources at hand have significance for their success (Andrén, Magnusson & Sjölander, 2003; Dopfer et al., 2017). Resources constrain what is possible for startups and thus have consequences for the business model. That can be one reason why many companies begin with partially formed business models and incomplete strategies which may be developed by exploiting and exploring new opportunities (Morris et al., 2005). The entrepreneur will reflect on the functionality and
the results of the partially formed business model as it emerges. The end-result should be a basically sound model which will typically withstand economic downturns and modest disturbances. However, it can become dysfunctional if external changes undermine the model and if tweaking the existing model is not enough to address the discontinuities. Technology startups are operating in continuously evolving environment where there are numerous variables imbedded in business models. Thus, countless combinations of business models are not only possible, but also applied in practice (Jansen et al., 2007, 15).

2.3 Business Model Components for a Technology Startup

Despite numerous different perceptions of the concept it has been common to conceptualize business models in terms of business model components that have connection to one another (Cosenz & Noto, 2018). The components represent the contents of the model. Next, the theory regarding business model components is presented and relevant components for a technology startup are introduced.

2.3.1 Literature on Business Model Components

As discussed, there is a lack of consensus about business model definitions but certain common themes exist. Many scholars have conceptualized business models in terms of business model components that have connection to one another (Wirtz et al., 2016, 39; Dopfer et al., 2017, 234; Cosenz & Noto, 2018, 128). The components comprise the contents of a model and represent how value is created. In the business model literature there has not been consensus about the key components of a model (Palo & Tähtinen, 2011, 378). As business models are context related the purpose and depth of the analysis performed should dictate what kind of components are applied. Also, in literature the contents of a business model are frequently expressed with subordinate components (Demil & Lecoq, 2010, 227; Wirtz et al., 2016, 41).

Scholars have introduced various business model frameworks where the proposed components usually reflect the context of their studies (Zott et al., 2011, 1020). Lack of previous research about technology startups means that there have not been any clear propositions about what business model component are crucial for technology startups.
Being a startup in the technology sector today involves strategizing processes that are very different than those described in the traditional strategic management literature where time and space, in terms of geographies, play a large role (Onetti et al., 2012, 363). New startups benefitting the Internet do not have to focus on these geographies, and accordingly their business models will be different. Therefore, there has been research on the issues that companies and their business models face in rapidly changing environments (George & Bock, 2011, 87).

Achtenhagen et al. (2013, 439) have recognized three necessary business model elements as strategizing actions, critical capabilities and detailed actions. Based on these elements, they propose that business models which continue to create value in changing environment are embedded into a multi-dimensional organizational and strategic setting of capabilities, which are formed by sets of activities (Achtenhagen et al., 2013, 439). Fielt (2014, 99–100) suggests that a business model framework should include four components that address the customer, value proposition, organization structure and economics. Together these four dimensions cover the basic aspects of creating and capturing customer value. Also, the value proposition is considered as a central dimension of the framework. Multi-level structure, with the business model components as high-level elements, can be found in many frameworks. Additional components can be included depending on the purpose and the context that the concept is applied to. Dividing the higher-level business components into sub-elements can provide more flexibility for the use of the concept in practice. This perception by Fielt (2014) is adopted in this research as the case company’s business model is illustrated.

Demil and Lecoq (2010, 231) argue that introducing too many business model components in a framework assumes that the same elements are equally important in different companies. Therefore, in the business model framework by Demil and Lecoq (2012), only three components were included to avoid the disadvantages of generalization and to still be able to make a comparison between different companies. Their assumption is that a business model can essentially be portrayed with three interconnected core components: resources and competences, organizational structure and proposition for value delivery.

According to Demil and Lecoq (2010) even a startup will have resources that can come from external markets or are developed internally and competences that refer to the
managers abilities. Furthermore, in their framework, the organizational structure encompasses the organization’s activities and their relations with stakeholders. Thus, it includes the value chain of activities and the value network which is a web of relations with external stakeholders. The third component, the value proposition, the company delivers to customers in the form of its offering. These three components introduced in the business model framework by Demil & Lecoq (2010) each encompass several elements (resources, partnerships, offerings, etc.) and the structure and volume of the organization’s costs and revenues are derived from them.

Literature review about different takes on business models performed by Morris et al. (2005) recognizes that a total of 24 different items are mentioned as possible components, with 15 being mentioned multiple times. According to Morris et al. (2005, 727) The most cited ones are the value offering, economic model, customer interface/relationship, partner network/roles and internal infrastructure/connected activities. On the basis of their research, Morris et al. (2005, 729) propose a business model framework consisting of six key questions which have been derived from the commonalities of components found in the literature. The six questions reflect the six basic decision areas that every company should address, and they are the components of the authors’ proposed business model framework.

The framework by Morris et al. (2005) features the most consistently emphasized components in the literature. The components are very similar to the most cited ones and consider the value proposition, the customer, internal processes and competencies, and the manners in which the firm creates profits. Additionally, a competitive strategy and growth and time elements are added to complete the framework for their model. In the framework of Morris et al. (2005, 729–731) the first component is addressing factors related to the offering and thus asks “How do we create value?”, whereas the second component is taking the market factors into account and encourages to determine “Who do we create value for?”. The third component inquires “What is our source of competence?”, and it addresses the internal capabilities and skills that the company performs relatively better than the competition. These core competencies provide the fundamentals for market positioning, and thus the fourth component “How do we competitively position ourselves?” challenges to find salient points of difference that can be maintained in the markets. Morris et al. (2005) reckon that the economic model is at the core of the business model concept and the fifth component “How will the firm make
money?” is concerned about the way in which the company earns profits. Finally, for the framework to be applicable in all types of ventures, the sixth component captures growth and time objectives of the venture and asks “What are our time, scope, and size ambitions?”

According to Morris et al. (2005) sustainability of the business model requires consistency between its components. The components should have an internal and external “fit” where the configuration of the company’s activities matches the external market conditions. Each component affects and is affected by the other components; therefore, it is important to make sure they all serve the same purpose. This notion about the need of constant alignment of the components is shared by many other business model scholars as well (Fielt, 2014, 96; Teece, 2018, 41).

In the article “Internationalization, innovation and entrepreneurship: business models for new technology-based firms” Onetti et al. (2012) studied 48 relevant definitions of business models to discover the most common components proposed in the literature. Some of the discovered components were overlapping or had similar significance, which is why they could be grouped into one single component without losing their meaning (Onetti et al., 344). After a comprehensive screening of the proposed components, they found a total of 26 components from which the most recurring ones are: “value proposition”, “processes/activities/value chain” and “value network (partners/alliances)” (Onetti et al., 2012, 357). Based on their literature review, Onetti et al. (2012) have derived a generic business model framework.

The framework by Onetti et al. (2012) is composed of three main elements, firm’s focus, modus and locus. Accordingly, the authors define the business model as the way a company has structured its own activities in determining the focus, locus and modus of the business (Onetti et al., 2012). Focus decisions answer to questions about allocation of company’s resources between the different activities it performs. Consequently, the business model identifies what activities the company is focused on and what are their relevance for the business. Locus decisions refer to geographical allocation of the company’s resources which are decisions made at the business model level. Also, locus decisions are being made for each activity the company has chosen to focus on and as a result the business model delineates the geographical configuration of the value chain. The modus decisions refer to the way a company operates in choosing adequate
management methods for each activity. It contains decisions regarding which activities to manage in-house and which ones to outsources, how the company should approach these activities and choices about partners and the level of involvement in partnerships (Onetti et al., 2012).

According to Onetti et al. (2012), on the basis of these three levels of choice making, the level of company integration, its internal structure and its external architecture are being determined. Because the company value chain consists of different activities and choices of focus, locus and modus apply to all of them, multiple different business models can emerge. Hence the business model decisions characterize the company in a unique way which allows it to stand out among competitors even in the same target market. Onetti et al (2012) point out that here we can see the difference between strategy and business model concepts because business model decisions are likely to result in companies executing the similar strategy but in different ways. The success of the company is depending on effective business model design, where the core activities and focus of investments are interconnected to decisions about location of activities and relationships with other stakeholders. The combinations of the three dimensions of the framework (focus, modus, locus) along with the different business model activities provide a framework which entrepreneurs can utilize for creating novel strategic designs (Onetti et al., 2012).

As pointed out above, there has been countless different business model frameworks with multiple different components presented. Many of these components are intended to be used in the context of large, established companies. Because this research was focused on a technology startup, the most significant business model components for this context were identified from the literature review. Taking into account the multiple views about business models from a variety of scholars and particularly the encompassing literature review works of Demil and Lecocq (2010), Morris et al. (2005) and Onetti et al. (2012), the most significant business model components for a technology startup are proposed as Value, Value network, Activities and Capabilities & Resources. These four components have a clear connection since value for customers is created and captured with the input of capabilities and resources via activities that the company’s internal and external stakeholders perform.
2.3.2 Value

Value is a result of the activities performed by the organization that is offered to the customer (Jansen et al., 2007, 33). In the business model literature, the centrality of the notion of value is apparent in the various proposed conceptualizations of the business model (Magretta 2002; Ghaziani & Ventresca, 2005; Morris et al., 2005; Teece, 2010; Zott & Amit, 2010; George & Bock, 2011; Zott et al., 2011; Teece, 2018). Morris et al., (2005, 729) point out that the creation of value provides a justification for the existence of the company. In this framework, the value component is considered to comprehend the value proposition, value creation, and value capture of a company.

The business model is not only focused on creating value, but also promotes a dual focus on value creation and capture (Zott et al., 2011, 1037). According to Teece (2010, 172) the cornerstone of a business model is that it defines the manner by which the enterprise delivers value to customers, entices them to pay for it, and turns those payments to profit. By doing so it reflects the management’s hypothesis about what customers want, how they want it, and how the company should be organized to best meet those needs, get paid for doing so and earn a profit (Teece, 2010, 172). Jansen et al. (2007, 37) concede that in the process of choosing an effective business model, it is first and foremost necessary to reflect on which values one wishes to offer and receive. Furthermore, Zott and Amit (2010, 218) point out that the reciprocal aspect of values should be considered as a firm does not create value alone nor only for its customers. Therefore, business models are geared towards total value creation for all participants involved.

To create value for all stakeholders, the company has to offer a combination of value propositions to fulfill the perceived needs of different parties. Business models do not only describe value creation, but value can also be created with revolutionary business models which represent potential sources of competitive advantage (Zott et al., 2011, 1029). However, creating value in its own is not enough as the company also needs to attempt to pinpoint the unique values that only they can offer (Jansen et al., 2007, 34). Thus, it is not sufficient to create and capture value as there is also the need to communicate the value proposition that is essential for every company (Morris et al., 2005, 729).

Entrepreneurs should find the right balance between value creation and capture because an emphasis on either one would put the economic viability of the focal firm at risk (Amit
According to Zott and Amit (2010, 218) the business model presents the antecedents for the focal firm’s value capture by co-defining with the firm’s products and services the total value created in transactions, which can be seen as the upper limit of the firm’s value capture potential. The business model also co-determines the focal company’s bargaining power as greater total value creation leads to greater bargaining power and ability to capture more value. However, the amount of the total value the firm actually captures is depending on another component, its revenue model.

How value is appropriated by the company is defined by its revenue model (DaSilva & Trkman, 2014, 385). The revenue model thus presents the company’s means to capture value. It refers to the specific practices in which a business model enables revenue generation for the focal firm. From that perspective, a revenue model complements the business model design. In some cases, the revenue model can be such a dominant aspect of the business model that it is misconceived as being the business model (Zott & Amit, 2010, 218). Although the concepts may be closely related and sometimes even intertwined, business models and revenue models are conceptually distinct. The revenue model is also often seen as one of the business model components, but as it does not define entirely how the company creates value, it is not sufficient as a standalone component (DaSilva & Trkman, 2014, 385). Therefore, the revenue model is included as a part of the value component in this research.

2.3.3 Value Network

Value network is a constantly recurring key element in business model frameworks (Bohnsack, Pinkse & Kolk, 2014, 285). In the context of this research it comprises the market segments relevant to the company, the customers and other stakeholders. These all have consequences for the business model of a technology startup company despite that at the early-stages the value network of such a company is merely emerging (Spiegel et al., 2016).

Important part of the business model is determining which market segments the company should target (Teece, 2018, 42). Therefore, the business model makes an implicit assumption about the customers and their needs (Teece, 2010, 173-174). Customer types, their geographic dispersion, and their interaction requirements resonate to the business model configuration (Morris et al., 2005). Customers are essential for every company as
they are the purpose of the existence of the business. Thus, customers is a frequent component in different business model conceptualizations (Wirtz et al., 2016, 41).

Also, stakeholders are imbedded in many business model definitions. Stakeholders are a fundamental part of most business model frameworks since an important antecedent for business model design is the goal to create value for all business model stakeholders (Amit & Zott, 2015). Creating value for all participants in the business model enhances their commitment to the focal firm. But not only are stakeholders the object of value creation, as they can also help to realize the goal of value creation. The numerous different combinations of stakeholders and the activities that they could perform offer a vast solution space for designing the business model (Amit & Zott, 2015).

According to Trimi and Berbegal-Mirabent (2012, 453) the process of starting a new venture is a complex task that depends on the transactional links with the external stakeholders of the venture which are customers, suppliers and partners. But these transactional links are often hard to form as Spiegel et al. (2016, 427) argue: the value network of a startup is typically non-existent at the beginning phases of the company. Consequently, from the viewpoint of the stakeholders, a newly found business has a lack of legitimacy at the early stages of the venture that it needs to overcome (Amit & Zott, 2015). Once reputable stakeholders are on board and committed to perform activities within the focal firm’s business model, a critical threshold is reached, and signing up further partners becomes easier (Amit & Zott, 2015). Furthermore, stakeholders are not only a component of business models, but business models are also important to stakeholders. As previously mentioned, technology entrepreneurship can often be hard to understand for investors, customers or partners, and the business model can present the company’s way of creating value for them in short (Doganova & Eyquem-Renault, 2009). In such a way, the business model can enhance the process of gaining trust among stakeholders.

Stakeholders have usually been seen as a part of a value network, or in some cases only the customers have been the only stakeholders included in the business model (Chesbrough, 2010; Onetti et al., 2012; Nasiri & Gui Shi, 2014). Amit and Zott (2015) list partners, customers, suppliers, and financiers as stakeholders in the business model. That view is relatively common in researches that have included stakeholder as a distinct element of business models. The inclusion of stakeholders as a sub-component of the
value network in this business model framework is reasonable as many emerging technology startup companies often begin with a phase of product development before they have any sales. At that phase the role of stakeholders and customers is different than once the business is established and sales have begun. At early-stage the company might not have customers at all if their product is still under development and thus other stakeholders have an important role.

2.3.4 Activities

Activities are a frequent component in business model conceptualizations (LaRocca & Snehota, 2017, 399). Some scholars even define the business model in terms of activities (Casadesus-Masanell & Ricart, 2010; Zott & Amit, 2010; Wirtz et al., 2016). Often activities have not been a standalone component as it has been incorporated to other business model components. For instance, Demil & Lecoq (2010) recognize activities as part of the organizational structure component of their business model framework. According to Zott et al. (2011, 1020) and George and Bock (2011, 98) the focal firm’s and its partners’ activities have an important role in the various different conceptualizations of business models proposed by scholars. Especially at extremely small companies the core value creating activities can be closely tied to organizational structure (George & Bock, 2011, 100).

An activity in a company’s business model is understood as the engagement of human, physical and/or capital resources of any party to the business model (the organization, end customers, vendors, etc.) to serve a specific purpose for fulfilling the overall objective of the company (Zott & Amit, 2010, 217). Onetti et al. (2012) define the business model as the way in which a company has structured its own activities. Therefore, the business model acts as a support for the implementation of the company’s strategy. In other words, companies work towards the realization of their strategies by engaging in numerous activities, and the architecture of those activities is described in their business models. Amit & Zott (2012, 42) argue that a business model is a bundle of specific activities, which is why it is an activity system conducted to satisfy the perceived market demand.

The focal firm’s activities may transcend the organization and span its boundaries, but they are still firm-centric to enable the focal firm not only to create value in cooperation with partners, but also to capture a share of the value created itself (Zott & Amit, 2010,
217–218). The business model identifies the activities that the company is focused on and their relevance for the business (Onetti et al., 2012, 360). It contains decisions regarding which activities to manage in-house and which ones to outsource, how the company should approach these activities, and choices about partners and the level of involvement in partnerships (Onetti et al., 2012, 361). Activities can also be the subject of business model innovation which can be achieved by adding novel activities, by connecting activities in novel ways, or by changing one or more actors that perform the activities (Amit & Zott. 2012, 44).

2.3.5 Capabilities and Resources

Capabilities is a core component in business models and capabilities are frequently used to explain company success and management (Nysröm & Mustonen, 2017, 128). The design and functionality of business models depend on the capabilities of the firm (Teece, 2018, 40). For a startup the capabilities and resources are not only used to realize the customer value proposition, but they also limit what is possible for the company (Andrén et al., 2003). Capabilities can be defined as the know-how that the organization retains, maintains and develops over time (Mason & Spring, 2011, 1035). Furthermore, capabilities are a basis for deciding who does what, or who could do what in the company and its business network. Therefore, deployment of different capabilities creates value for customers (Achtenhagen et al., 2013, 428). Both, capabilities and resources, can be internal or external from the focal firm’s point of view.

Internal factors have a major role for shaping the business model (Pucci, Nosi & Zanni, 2017). Thus, the design and operation of a business model depends on the capabilities of the company (Teece, 2018, 40). Existing design and capabilities influence the organizations capability to change its business model (Foss & Saebi, 2015). Achtenhagen et al. (2013, 429) pay attention to critical capabilities that they conceptualize as dynamic capabilities which enable companies to modify their business models to create value in a sustainable way. These critical dynamic capabilities are being formed by strategic and organizational activities (Achtenhagen et al., 2013, 429). Dynamic capabilities have an effect on the competitiveness of the company (DaSilva & Trkman, 2014, 386). Teece (2018) has researched dynamic capabilities and recognizes that the strength of the capabilities the company possesses has consequences for the ability to maintain
profitability over time. According to Teece (2018, 40) dynamic capabilities are the ability to integrate, build and reconfigure internal competences to address or to create changes in the business environment.

According to Teece (2018) the organization can be thought of having two levels of capabilities, the base level capabilities and dynamic capabilities. At the base level are operational and ordinary capabilities which include routine activities, administration and basic governance that allow the company to pursue its purpose somewhat efficiently. Above these is a level of dynamic capabilities that can be divided into two layers (Teece, 2018). The first layer of dynamic capabilities includes the adjustments and recombination of the base capabilities as well as the development process of new ones. They are capabilities which include for instance product development, expansion of sales and other actions that constitute astute managerial decision making in uncertain environment. Guiding those is a layer of dynamic capabilities that enable the management to sense likely future developments, configure the business model to seize opportunities and determine the best organizational structure to address the change.

There is evidence that managerial capabilities are a key element for the performance of businesses (Pucci et al., 2017, 232). One of the critical capabilities is the company’s managers skill to utilize and modify the business model (Teece, 2018, 43). This is challenging because once the business model is established, it is immensely difficult to change (Teece 2010, 181). According to research by Spiegel et al. (2016) in startups the founding team has a crucial role for the business model development, and their social capital in the form of connections has a positive impact for the success of their companies. Moreover, the contacts stemming from the team’s earlier career are the most important sources of social capital (Spiegel et al., 2016). The resource structure of early-stage companies seems to be closely connected with the founder’s capabilities to enact on opportunities (George & Bock, 2011, 100). Therefore, it is justifiable that the team can be seen as an important capability or resource of the company.

Based on their research, George & Bock (2011, 99) have recognized resource structure as one of the components of business models. Resource structure means the static architecture of the organization, production technology and core resources that are leveraged to create value for customers (George & Bock, 2011, 99). In the business model literature capabilities and resources have a connection. According to Makadok (2001,
388) capabilities are a distinct type of resources whose purpose is to increase the productivity of other resources that are at the company’s disposal. Business decisions regarding operational efficiency and the use of scarce resources are especially important for technology-based startups (Trimi & Berbegal-Mirabent, 2012, 462). Therefore, capabilities are crucial for startup company success (Makadok, 2001, 388). Capabilities are information-based, tangible or intangible processes that are unique in every company. They develop over time through complex interactions of company’s resources.

2.4 Business Model Dynamics

Conventional business model representations are designed to offer a static perspective on how the company functions and creates value (Spiegel et al., 2016, 435; Cosenz & Noto, 2018, 128-129). This is problematic for startup entrepreneurs because it prevents framing the complexities, uncertainties, and unpredictable nature of business. Those competitive dynamics have an influence for the viability of the business model (Baden-Fuller & Haefliger, 2013, 422). Therefore, to succeed in today’s technology intensive industries with continuous and fast changes, companies must introduce flexible and rapidly changing business models (Nyström & Mustonen, 2017, 123). The business models need to be constantly modified to comply with external discontinuities and disruptions (Achtenhagen et al., 2013, 428; Saebi et al., 2017, 567).

Recent progress in business model research has recognized that business models need to change over time if companies want to achieve sustainable value creation (Achtenhagen et al., 2013, 427; Foss & Saebi, 2015). Business models cannot be static. There is a widely shared view in the literature that dynamic business models are important for success (DaSilva & Trkman, 2014; Foss & Saebi, 2015). Thus, scholars have increasingly been moving from the static standpoint towards a dynamic view of business models (Saebi et al., 2017). According to Foss and Saebi (2015) recently more attention has been given to business models in the context of entrepreneurial and emerging startup organizations. Saebi et al. (2017, 568) point out that there has been different concepts and terms used to describe the change in business models.

In response to the dynamic business environment, companies should constantly re-evaluate and re-negotiate their business models (Nyström & Mustonen, 2017, 127). This happens by either adapting to the business environment or by trying to direct and shape
it. Literature review by Saebi et al. (2017) recognized two main research streams of business model change. One group of researchers has referred to changes in business models as adaptation that happens in existing models over time and is often caused by external reasons (Saebi et al., 2017, 568). In contrast, other researches discussing innovation presume that there is a somewhat internal need to create innovation and innovative business models. Important difference between these is that business model adaptation does not necessarily need innovation despite it might be a likely outcome. Also, while business model adaptation happens as a response to external causes, business model innovation can be driven by both internal and external factors (Saebi et al., 2017).

The motivation behind business model adaptation and innovation differs as well (Saebi et al., 2017). When adapting a business model, a company aims to conform to the business environment whereas business model innovation is motivated by a desire to reshape the environment with disruptive innovations. But even when the business model is geared towards disruptive innovations, the importance of achieving coherence between the business model components is important as emphasized by Morris et al. (2005) and Teece (2018). Thus, it is important to take alignment and coherence into account when the business model changes in order to make sure the components are still mutually reinforcing (Teece, 2018).

According to Achtenhagen et al. (2013) to achieve business model change over time there are three necessary elements that are required: strategizing actions, critical capabilities and detailed activities. Sustained value creation can be achieved with strategizing actions that combine organic growth and strategic acquisitions, search for expansion in different strategic dimensions simultaneously and focus on optimizing quality and costs (Achtenhagen et al., 2013). Different critical capabilities support these strategizing actions. Capabilities of experimenting and exploiting new business opportunity activities, utilizing resources in a balanced way and achieving coherence between a strong organizational culture, active leadership and employee commitment, are important. These capabilities and strategizing actions are mutually supported by the complementarities between them. These capabilities are contextual and vary in different companies as they are formed by somewhat different sets of activities.

As discussed, there is plenty of evidence that managers should make sure that the business model is evolving over time in order to guarantee success in changing business
environment. Zott & Amit (2013, 404) argue that the business model is crafted by the focal company’s managers. But according to Demil & Lecocq (2010, 239) managers have only limited power to adjust the business model because the emerging changes are unintended and partly beyond their control. The complexity and uncertainty of the change process along with many interrelated elements of the business model impede the process of business model innovation (Foss & Saebi, 2015).

According to Saebi et al. (2017) companies are more likely to adapt their business model in response to perceived threats than in response to likely opportunities. Furthermore, strategical emphasis towards market development promotes the business model adaptation more effectively than an orientation to defend the company’s existing market position. In a literature review by Saebi et al. (2017) three important drivers for business model adaptation were recognized. The drivers recognized are the need to adapt to external stakeholders, changes in the competitive environment and opportunities offered by new technologies. To be able to react and adapt, the company should have capacity to receive and interpret signals from the business environment and adjust the business model accordingly (Nyström & Mustonen, 2017, 128).

Previous studies have highlighted the difficulties that occur when managing the adaptation process (Saebi et al., 2017). Company’s willingness to experiment and abilities for developing leadership and organizational capabilities have been found to be decisive for business model adaptation. Also, the existing business model can constrain the change as firms have an interest to maintain the core components of the existing business model (Chesbrough & Rosenbloom, 2002). This suggests that the change that happens to business models is somewhat path dependent (Saebi et al., 2017).

But in the case of startup companies, there is no pre-existing business model and therefore a completely new one can be developed (Chesbrough & Rosenbloom, 2002). Thus, business model innovation in startup ventures is a defining process. In early-stage ventures, the process of business model innovation is often comprised of experiments and responses to their outcome (Chesbrough, 2010). For entrepreneurial startups the main objective of business model innovation is to tap into new partner’s and their complimentary assets to create a unique value proposition (Bohnsack et al., 2014).

There is a consistent recognition in the business model literature that business model innovation happens through the interactions of individuals in social groups, within the
company and within the wider business network (Mason & Spring, 2011, 1033). But when the business model changes, so must the organizational processes (Chesbrough, 2010, 361). Organizational inertia and the uncertainty that comes with change means that firm’s do not change their business model unless there are strong incentives to do so (Saebi et al., 2017).

2.5 Theory Synthesis

Despite the topic of business models has been of interest in the last decades, research on business models has been fragmented. Multiple scholars recognize that there has been no widely accepted definition of the concept (Morris et al., 2005; Zott et al., 2011; Wirtz et al., 2016; Bankvall et al., 2017; Foss & Saebi, 2018). Zott et al. (2011) argue that this has held back research on the topic. Also, consequently there have been numerous attempts to define the concept of business models, and the nature of the definitions usually reflects the purpose or context of the study where the concept is being applied. The scattered nature of research on the field of business models is demonstrated by the work of Onetti et al. (2012) and Morris et al. (2005) who found 24 and 26 proposed business model components with their content analyses on the existing literature about the topic.

Overall, at the moment it seems that the field of research for business models is in a consolidation phase (Wirtz et al., 2016, 51). Therefore, despite it has been under debate what exactly the business model can be considered as, there are some agreements about the topic among scholars (Baden-Fuller & Mangematin, 2013, 419; Wirtz et al., 2016, 39). Firstly, the literature review pointed out that there seems to be a consensus that the business model is de facto a distinct concept and a purposeful unit of analysis (Zott et al., 2011; Zott & Amit, 2013; Wirtz et al., 2016; Massa et al., 2017; Saebi et al., 2017). Secondly, it is also significant for the company’s success (George & Bock, 2011; Achtenhagen et al., 2013; Massa et al., 2017; Cosenz & Noto, 2018; Teece, 2018). This proves that the concept is indeed viable despite the fuzziness of the term has led scholars to question its importance (DaSilva & Trkman, 2014, 382).

Also, there seems to be a growing consensus about the definition of the business model concept. Many scholars recognize that it is some kind of an illustration, template or depiction of the company’s operations (Morris et al., 2005; Casadesus-Masanell & Ricart, 2010; Teece, 2010; Mason & Spring, 2011; Baden-Fuller & Haefliger, 2013; Zott & Amit,
2013; Fietl, 2014). Also, many scholars have pointed out that the concept should link inside workings of the company to outside elements (Zott & Amit, 2010; Baden-Fuller & Mangematin, 2013; Wirtz, 2016; Foss & Saebi, 2018).

There is plenty of evidence why the business model has importance for technology startup companies. First of all, technology by itself does not have any value if it is not commercialized via a suitable business model (Chesbrough, 2010). Therefore, business models are crucial for commercializing technologies. Furthermore, business models are important tools for communicating with stakeholders (Jansen et al., 2007). Also, as startups are functioning in a constantly changing environment, the capability to modify the model is crucial and can predict future performance of the company (Teece, 2018). Overall, there is evidence that the business model has significance for the company’s performance (Casadesus-Masanell & Ricart, 2010; Dopfer et al., 2017).

In the business model literature, a common way to present business models has been with its components that are interconnected (Wirtz et al., 2016; Dopfer et al., 2017; Cosenz & Noto, 2018). But there is no mutual agreement between scholars about which components are the most significant ones (Palo & Tähtinen, 2011). Instead, the business model should be always evaluated in its own unique context as no general models exist (Teece, 2010). In this research the focus was on business models in the context of technology startup companies and the business model component framework was constructed accordingly. Thus, main components of the business model for a technology startup company are proposed as Value, Value network, Activities and Capabilities & resources. The framework is presented in Figure 2 (page 36).

Literature review suggests that value is a central component of business models and is included in majority of definitions (Magretta 2002; Ghaziani & Ventresca, 2005; Morris et al., 2005; Teece, 2010; Zott & Amit, 2010; George & Bock, 2011; Zott et al., 2011; Teece, 2018). In the business model framework of this research, the component of value covers the value proposition, value creation and capture, and the revenue model for capturing value. Also, the component of value network has been embedded in some form in most business model frameworks (Bohnsack et al., 2014). In this framework, it is considered to include the market segment, customers, and other stakeholders as business models are geared towards creating value for all stakeholders. (Amit & Zott, 2015). Stakeholders are not only receiving value, but they can also perform value creating
activities in cooperation with the focal firm. Furthermore, the business model should present the architecture of the activities which are a fundamental for the company and therefore, in the framework of this research, activities is included as a component of the concept (Zott et al., 2011). Finally, for a startup the capabilities and resources are not only used to realize the customer value proposition, but they also limit what is possible for the company (Andrén et al., 2003). Thus, the fourth component is proposed as capabilities & resources and it includes base level capabilities for routine business activities, dynamic capabilities for innovating the business model and resources which constrain what is possible for the company. The four components proposed are consisted of several sub-elements that can vary according to the context.

![Diagram of Business Model Components](image)

**Figure 2. Business model components for a technology startup**
Another shared view in the literature is that entrepreneurs and managers should keep their business models evolving through time, which is especially true in the rapidly progressing technology sector (Jansen et al., 2007, 119; Chesbrough, 2010, 362). Thus, the business model literature has proceeded from a static viewpoint on business models towards a dynamic view (Saebi et al., 2017). That is reasonable because the constantly changing environment has intensified the need to keep the business model up to date (Trimi & Berbegal-Mirabent, 2012, 461). Therefore, entrepreneurs need to design flexible business models that can be efficiently re-shaped.

Two different research streams of business model change can be recognized as adaptation and innovation (Saebi et al., 2017). Business model adaptation happens when the business model is modified to comply with externalities and innovation refers to the ways the company innovates the model due to internal motives. According to Saebi et al. (2017) three main drivers for business model change have been recognized in the literature. These drivers are the need to adapt to external stakeholders, changes in the competitive environment, and opportunities offered by new technologies.

When considering the issue of business models, one has to bear in mind that a business model should not be assessed in the abstract because its appropriateness can only be determined against particular business context (Teece, 2010, 191). This is especially true in the case of a technology startup company which conducts its business in a very distinct way compared to established industrial companies. The proposed business model framework and its dynamic aspects will be discussed later in Chapter 5 alongside the empirical findings of this research.
3 RESEARCH METHODOLOGY

This research was conducted as a qualitative case study. This chapter discusses the methodological choices made and how the research process unfolded. To begin with, the choice for the research method is discussed. Following is a description of the process of data collection and the research data. Finally, the data analysis methods utilized are explained.

3.1 Qualitative Case Study

The choice for the research method is usually dictated by the nature of the information needed and from whom and where it is gathered (Hirsjärvi, Remes & Sajavaara, 2009). The objective of this research was to describe and analyze the business model of a technology startup company and its change. Research data was to be obtained solely from the research object. Thus, this research focused on a company which can be referred to as a ‘case’, and the research objective was pursued with appropriate research questions to understand its business model, both of which are fundamental features of case study research (Eriksson & Kovalainen, 2008). Moreover, when taking into account the abstract nature of the business model, interviews were a crucial method to gain adequate data for this research. In qualitative research interviews are often perceived as a remarkable data source as the object is investigated from the perspective of its participants (Koskinen, Alasuutari & Peltonen, 2005).

Qualitative research is used for describing real world phenomena (Hirsjärvi et al., 2009). It can be broadly defined as research that is not producing numeric results (Koskinen et al., 2005). Instead, using research questions as a tool, qualitative research interprets meanings (Eriksson & Kovalainen, 2008). It offers a way to understand and investigate phenomena in their respective context and enables to discover new perspectives of the research object (Koskinen et al., 2005). As a case study, qualitative research aims to reach a holistic understanding of the research case. Typically, the researcher confronts many choices and subjective observations in the research process. Thus, in qualitative research, the researcher cannot reach total objectivity (Hirsjärvi et al., 2009).
Case study enables to approach complex issues that are difficult to fathom (Eriksson & Kovalainen, 2008). It is in essence about a person, group, or organization that has been studied to find out information about its certain aspects. Usually, multiple cases are preferred as they provide richer data, but also practical and contextual matters need to be taken into consideration (Eriksson & Koistinen, 2014). A single case is suitable when a detailed, intensive description of the research subject is desired, as in this research (Saarela-Kinnunen & Eskola, 2010). According to Eriksson & Koistinen (2014, 5) there are few conditions under which case study is an appropriate approach: How, what, and when questions are pivotal, the researcher has little control over the incidents, there is a lack of empirical research on the phenomenon, or the phenomenon is contemporary. All of these conditions were met in this research.

### 3.2 Data Collection

#### 3.2.1 The Process of Data Collection

In this research, primary research data was obtained by interviewing people familiar with the investigated phenomenon. Alpha could also provide few documents concerning its strategical choices but those were not sufficient for gaining comprehensive understanding of Alpha’s business model and thus were included only as secondary data material. Therefore, when taken into consideration the time and scope of this research, semi-structured themed interviews were a rational choice supported by the theory of qualitative research (Hirsjärvi & Hurme, 2008, 35-36).

In qualitative research, the interviewees should be selected based on their suitability for the research (Eriksson & Kovalainen, 2008). The primary data regarding Alpha’s business model and strategical choices was gathered with themed interviews initially for four key employees of the company in 2016. Later in 2018, only two persons, Manager B and Manager D, were interviewed as they possessed all the relevant knowledge about Alpha’s business model. All the four interviewees were also founders of the company. The interviews were conducted as semi-structured and each of the interviewed was asked questions about their own expertise areas in the company. For secondary data, Alpha provided documents regarding its strategy, plans and competitive landscape.
The language used in the interviews was Finnish, except for Manager A who was interviewed in English. The interviews were recorded and transcribed. Finnish interviews were translated to English in a way that maintains the original meanings. The transcribed text was processed and analyzed through the methods of qualitative content analysis. Based on the analysis of the first four interviews, the early-stage business model of Alpha in 2016 was constructed. The results of the two interviews in 2018 were utilized for understanding the nature of the change Alpha’s business model has gone through.

3.2.2 Primary Material: Semi-Structured Interviews

This research was conducted from a focal firm’s perspective. Thus, interviews for the organization’s members was a practical way of gathering data. Interviews give the researcher a possibility to lead the interview and gain the insight that their research would most benefit from (Hirsjärvi & Hurme, 2008). That was significant since in this research the research topic and the case company were not yet established, which is why the results could have been unexpected and surprising. Moreover, interviews can be recommended for material collection when the research topic has been explored fairly little (Hirsjärvi & Hurme, 2008). In this case, using interviews was the only reasonable way to obtain information about Alpha because the company was recently founded and there was no third-party information available about the company. Also, the documents Alpha could provide were not sufficient to be accepted as primary material.

In this research, semi-structured interviews were used. Semi-structured interviews involve a prepared outline of topics but still offer the chance to alter the wording and the order of the questions in the interview (Eriksson & Kovalainen, 2008). The method of semi-structured interviews can be very efficient because it allows the interviewer to control the direction of the interview and allows freedom for the interviewee. It can be an appropriate method for asking both what and how research questions (Eriksson & Kovalainen, 2008; Hirsjärvi & Hurme, 2008). Since there was hardly any former information about the case company when preparing for the interview, the interviews needed to be open to enable the emergence of new topics.

As discussed, the primary material for this research was obtained with interviews for four of the company’s founding employees who work in key positions within Alpha. The interviewees were the CEO, the Product Manager, the Head of Sales and Marketing, and
the Head of Business Development. Their areas of expertise covered thoroughly the operations of Alpha and could provide enough information to form the company’s business model.

The outline for the interview topics in November 2016 was based loosely on the article “The entrepreneur’s business model: toward a unified perspective” by Morris et al. (2005) that was discussed under topic 2.3.1 along with the different business model components proposed by the authors in the article. Outline for the interview topics in 2018 was based on literature review regarding business model dynamics and especially on the work of Achtenhagen et al. (2013) and the results of previous interviews. Adjustments to the topics were made based on consideration about the case company and the expertise of the interviewees. Also, the interviews were not strictly focused on the specific proposed topics. Therefore, other issues arose in the discussions, some of them overlapping with the other interviews. Table 2 (page 42) presents the duration and the outline of the discussion topics for the interviews. The interviews were conducted in November 2016, July 2018 in four separate occasions at Alpha’s offices in Helsinki and Tampere. Each of the key persons was interviewed separately and they were also offered a chance to speak freely about other matters outside the proposed discussion topics.
Table 2. The interviews in chronological order

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Date and duration</th>
<th>Discussion topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager A</td>
<td>16.11.2016</td>
<td>value creation offerings customers &amp; market</td>
</tr>
<tr>
<td></td>
<td>35 minutes</td>
<td></td>
</tr>
<tr>
<td>Manager B</td>
<td>16.11.2016</td>
<td>capabilities &amp; competence economic model</td>
</tr>
<tr>
<td></td>
<td>34 minutes</td>
<td></td>
</tr>
<tr>
<td>Manager C</td>
<td>18.11.2016</td>
<td>market factors value creation competitive strategy</td>
</tr>
<tr>
<td></td>
<td>20 minutes</td>
<td></td>
</tr>
<tr>
<td>Manager D</td>
<td>18.11.2016</td>
<td>stakeholders future strategy competence</td>
</tr>
<tr>
<td></td>
<td>19 minutes</td>
<td></td>
</tr>
<tr>
<td>Manager B</td>
<td>2.7.2018</td>
<td>value &amp; value network activities company development</td>
</tr>
<tr>
<td></td>
<td>39 minutes</td>
<td></td>
</tr>
<tr>
<td>Manager D</td>
<td>3.7.2018</td>
<td>value &amp; value network activities capabilities &amp; resources company development</td>
</tr>
<tr>
<td></td>
<td>49 minutes</td>
<td></td>
</tr>
</tbody>
</table>

The interviews for the primary data resulted in a total of 196 minutes of recordings and 44 pages of transcribed text for the final analysis. Despite the open nature of the conversations, the interviews succeeded in covering the investigated characteristics of Alpha’s business model and how its evolution process has unfolded.

3.2.3 Secondary Material: Documents

As mentioned, when the research began Alpha was a recently founded company that had not yet captured public attention. Therefore, no third-party material, such as news or previous research of the company, was not available or used. Thus, the secondary material about the company and its competitors was provided as documents by Alpha and is specified in Table 3 (page 43).
Table 3. Secondary material

<table>
<thead>
<tr>
<th>Content</th>
<th>Document type</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finnish educational market &amp; Alpha’s positioning</td>
<td>Powerpoint presentation</td>
<td>8</td>
</tr>
<tr>
<td>Challenges and values of the educational market</td>
<td>pdf-document</td>
<td>2</td>
</tr>
<tr>
<td>Strategic planning content</td>
<td>Picture</td>
<td>3</td>
</tr>
<tr>
<td>Competitive landscape</td>
<td>Excel worksheet</td>
<td>5</td>
</tr>
<tr>
<td>Alpha’s business plan 2017</td>
<td>pdf-document</td>
<td>16</td>
</tr>
</tbody>
</table>

The documents contained information about Alpha’s competition, market placement, offerings, stakeholders and strategy. This information was used for preparing for the interviews and for deciphering Alpha’s business model and understanding its change process.

3.3 Data Analysis

According to Hirsjärvi and Hurme the qualitative analysis is a three-step-process that consists of classification, description and combination (2008, 145). Following these principles, the analysis process was undertaken with the purpose to discover the early-stage business model of Alpha and to understand what has happened to it in the timespan of two years. Earlier knowledge, which in this research stems from the literature review, directs the analysis and therefore the method used was theory driven directed content analysis (Hsieh & Shannon, 2005). In this method existing theory is used as a basis for the analysis but as the process proceeds, the codes and categories can be modified. The main purpose of the analysis is not to test previous theoretical knowledge, but to create new observations. The goal of the analysis in qualitative case research is to create a thorough description of the case (Koskinen et al., 2005, 166). In this research the analysis method was the same for both primary and secondary material.

The analysis process began by reading through the transcribed material in order to gain a comprehensive understanding of the gathered data. Simultaneously notes were taken to create understanding about the phenomenon and the scope of the research data was evaluated. Then, on the basis of the interview results and the business model literature review, the six key questions presented in the article by Morris et al. (2005) and featured
in chapter 2.3.1 were further modified for classifying and combining the data into seven main categories. These categories were stakeholders, revenue, customer and value offered, product, competence, processes and future scalability.

After the research data was coded and classified into seven categories, essential parts of the transcribed raw text were interpreted and described in order to further understand their meaning. This phase, the interpretation of the semi-structured interviews performed, is partly speculative, because the intentions and the latent content is analyzed as well (Hirsjärvi & Hurme 2008, 137). After the essential parts of the interviews had been interpreted and described, the results of the interviews and further findings in the theory suggested modifying the seven categories used for classification. Therefore, another categorization was made by combining and renaming some of the categories. In the final categorization the categories were value network, value creation, activities, capabilities, business model change, and change drivers. Also, the relationships between these different categories were identified.

Based on the final categorization the research data was interpreted and Alpha’s early-stage business model was drafted following the most prevalent themes. Furthermore, research data considering the business model change and its drivers was combined in its own category. These final categorizations allowed to understand the components of the early-stage business model of Alpha and the change that had happened within the time period of two years. The results of this research are featured in the next chapter alongside raw data quotes of the interviews to support the conclusions made.
4 EMPIRICAL FINDINGS

This chapter discusses the key empirical findings about the case company of this research. First, the case company and its offering are briefly introduced. Second, by moving on to the components of regarding value, value network, activities and capabilities & resources, the case company’s early-stage business model is laid out and the changes that have occurred within two years are discussed. Finally, the empirical findings are summarized and the research results are discussed.

4.1 Introduction to the Case Company

Alpha is a technology startup company founded in January 2016 that has developed a software solution for mobile device management. Initially the software was intended to be used for communication and collaboration between students and teachers in comprehensive education. Key benefit and source of uniqueness of their software was the integration of mobile device management capabilities to learning management systems. The software serves as a platform, on which students and teachers can work together, for example, by sharing content or by doing exercises. It also enables teachers to have control over the students’ own personal mobile devices. Moreover, the software also offers tools for the schools’ IT departments to have control over the devices. With the actual software product, the company offers different services (included or additional) that complete and support the software. During the course of this research, benefitting similar value proposition and advantages than for schools, Alpha’s solution became available for business and health care organizations as well.

When this research began in late 2016, the software was at its final stages of development and Alpha was running beta tests with its partner schools before launching sales at the beginning of 2017. At the initial stages, when there were no revenues, the company was relying on an outside funding by Tekes (Finnish Funding Agency for Innovation) and also seeking to find investors. After that first year in business, in the two years until this research finished in late 2018, Alpha has successfully gained market share and the company has expanded its operations and sales. Initially, the founders of the company were the only employees, but since then Alpha has recruited employees to software programming and sales. In the course of the two years examined in this research, many
of Alpha’s plans for their business model have been realized and others have not. As the company has started sales it has undergone major changes. These changes have had consequential meaning for Alpha’s business model which has altered accordingly. Still some aspects of Alpha’s business model have remained virtually the same. Next, Alpha’s business model is laid out with its components and the change that has happened within the researched time period of two years is discussed.

4.2 The Business Model of Alpha

Business model in this research was defined after Zott & Amit (2013) as “a template depicting the way the company operates and meets the customer needs”. Next such a template is crafted of the case company’s business model. Alpha’s early-stage model from the end of year 2016 will be laid out with four different components. The components, value, value network, activities and capabilities & resources were presented in the theoretical part of this thesis. Alongside these components the change that Alpha’s business model has undergone in the period of two years until late 2018 is investigated and the resulting business model is proposed. The drivers for the change and their antecedents are analyzed and discussed in chapter 4.3.

4.2.1 Value

At the early stages of the company in 2016, Alpha operated only in the educational technology market. Their mobile device management product was set to offer value for end-users by providing an excellent user experience without incorporating unnecessary features. However, the end-user was not the only target of Alpha’s value creation because the purchase decision for their device management product involves many parties in the educational technology markets. The customer comprises of multiple different actors who were all looking for different kind of value from Alpha’s offering. The teachers and students were interested in the educational aspects of the software, whereas the IT department and school management had more interest in controlling devices. For them Alpha created value with the device management capabilities of their software. This meant that Alpha had to offer different value for multiple parties. Additionally, there were challenges to communicate different value proposition for each actor on the customer side and get them to realize they need Alpha’s product, as pointed out by Manager A:
There’s two wars you need to fight. First is that we need to work with the IT-department or whoever the buyer is, and then we also need to think about their customer, because their user is our customer. We need to fight that war as well. So basically, it’s really challenging to find value for students and teachers as well and convince them of the benefits of our product and let them know and see the potential of the benefits. (Manager A, November 2016)

Alpha was planning to create value to different actors in the customer side with different value propositions. Alpha’s priority was the end-users, students and teachers. Value for students was created by enabling them to use their own devices and by facilitating learning and collaboration. For the teachers, Alpha’s software was set to offer an easier and more straightforward way to manage classes, a discussion forum for communicating with other teachers, and control over what the students are doing with their devices. But in the educational market, the end-users were not the ones making the decision about purchasing and implementing Alpha’s software. Therefore, Alpha had to convince those who make that kind of purchase decision, and their implementers. For them, Alpha’s value proposition consisted of advanced device management, services supporting the software, enabling the students to bring own devices (the school does not need so many devices), and service for the deployment of the product. This was explained by Manager A:

[About device management] The need is driven by whoever purchases and manages the device. For example the city or the principal who spent money. Of course they want to know what’s happening to the device. And that’s why IT needs to manage those devices. So the need comes from there and for the students and the teachers they don’t care about device management at all. So that’s why thinking about from the deployment point of view we must offer something for the students and teachers. Otherwise they don’t see why we have this solution because basically it’s to control our device. (Manager A, November 2016)

In late 2016, Alpha was still finalizing and adjusting its offering based on the experiences received from piloting. Primarily Alpha offered only the software product. Still, the plan was to not just offer the software solution, but also product support and deployment services that complement it. Furthermore, Alpha had different visions to facilitate digitalization and learning. There was a plan to encourage conversation amongst teachers
by creating a community where they could create value for each other. According to Manager D services were an important part of Alpha’s business model and product support can create value in many ways:

_If I think about our business model, I see support services as being an important part of it because we are also building a kind of community for teachers where they can have conversations even across borders. [...] Our product support is built in a way that it gathers feedback for product development. Things like, where we need to go, what works, what doesn’t. Support can be seen also as a sales effort, because the better you perform at it, the happier the customers will be, and thus they’re more likely to renew their subscription._ (Manager D, November 2016)

After two years, in terms of value creation and proposition by the software, Alpha’s early-stage business model has not gone through major changes despite Alpha has expanded to new market segments, organizations and health care. The software’s value proposition is still mainly consisted of easiness and efficiency for the end-user and advanced device management features for those responsible of the devices,

_ [About the software offering] It is simple and easy to use. Quite affordable or I would say affordable. It is Finnish. Also, another good thing is our fast product development. We support many devices and when there’s changes from the manufacturers we are quick to implement them to our end-users. Therefore, we are agile. There’s many things, not just the product but also what is around it, support and everything._ (Manager D, July 2018)

But the mostly unchanged software product is not the only way Alpha creates customer value as besides product support, Alpha has added more services to complement it. Despite the plan to create a community has not realized, there are services that aim to facilitate the change that comes with digitalization, as was planned at the early-stage:

_The software itself has not changed. Maybe more we have brought services to be offered with it. For example, how the deployment is done, how to register the devices and how to start using the software. That’s what we have introduced to complement the software. That has been the biggest thing that has happened._ (Manager B, 2018)
Initially value for other stakeholders than customers was planned to be created in many ways. The society was to benefit from the enhanced education that prepares students for the digital world of the future. Also, content creators and other companies working within the same field of business could have partnered or integrated their product with Alpha’s offering and in that way participate in mutual value creation. Financial value for investors and for the society was depending on the possible success of the company. After two years, Alpha has more stakeholders to offer value for and to partnership with in value creation. Alpha has found ways to create value both for and with stakeholders. A concrete example of this is that Alpha’s software is being integrated in some level to their partners offering:

*We made a partnership deal where we are going to offer our customer integration.* (Manager D, July 2018)

Besides that, partnerships for distribution are another example of mutual value creation. Overall, in late 2018 Alpha has a more established position and sales, but the company is still in such an early-stage that it has not yet reached a position where it can create significant financial value for its investors and society.

In the interviews in November 2016, it was discovered that because Alpha was a new company that had not begun to sell their product yet, their complete revenue model was still emerging and under consideration. According to Manager D, yearly subscriptions were planned to become the main source of revenue:

*We pretty much know what kind of subscriptions we are going to offer. It is going to be a yearly subscription added with support.* (Manager D, November 2016)

Manager B recognized that later on, a kind of freemium-model with free basic software features and chargeable extra features and product support could be tempting choice for Alpha:

*The subscription-based model is the easiest way. I feel that nowadays maybe some kind of a freemium-based model would be the most attractive, giving the software for free and charging for extras.* (Manager B, November 2016)

In the course of two years, a subscription-based revenue model has been the main source of revenues for Alpha. Thus, in financial aspects of value capture, the resulting main
revenue model is what was planned in late 2016. Still, Alpha may charge additional fees for services:

*It is basically licensing [revenue model]. We have licensing and then we have an implementation fee. Also, we might have a fee for training.* (Manager B, July 2018)

At the early-stages, Alpha captured value also from the reported user experiences that were used for developing their offering. Because Alpha’s solution was designated to be used constantly in education, it was important for the company to learn more about their users and the situations where the solution was utilized. By operating in this way and developing their offering according to user’s experiences, the company and the customer created value together, which benefitted both. This product development philosophy is called user-driven product development as explained by Manager C:

*Quite common way for user-driven product development is to try to build a whole R&D pipeline in a way that there is mechanism to constantly gather feedback. Not trying to make everything complete by ourselves, but instead listening what the customers say.* (Manager C, November 2016)

This turned out to be a good way to capture value for product developed and in late 2018 Alpha is still using the same approach to product development.

### 4.2.2 Value Network

Back in late 2016 when this research began, Alpha was focused in the educational technology market segment. As pointed out, a significant characteristic of that market are multiple stakeholders, who each expect to receive different value from the company. The stakeholders involved can be broadly categorized as customers and non-customers. Multiple stakeholders have an effect of the purchase decision and thus comprise the customer. These stakeholders in the customer side include students, parents, teachers, principals, school management or board, the IT department and the representatives of the city or municipality, despite most of them do not use, pay or buy Alpha’s solution.

In late 2016, it was somewhat unclear to Alpha who the actual customer that they should reach was, because the purchaser and the end-user were different. The company was in the stage of piloting with first customers and communications with stakeholders were
crucial for them to thrive. Thus, Alpha wanted to reach the right target audience of decision makers who to communicate with:

*Currently our primary target sectors are primary schools and secondary schools and they don’t have to be public. They can be private schools as well. And basically whoever makes the decision about spending the schools budget. It can be municipality level or some kind of alliance of some schools that makes the decision* (Manager A, November 2016)

The time of two years has brought a significant change to Alpha’s value network. First of all, Alpha now has paying customers who are using their solutions. Therefore, the role of the customer has changed and they have become the most important stakeholders. Regarding the educational segment, experience gained along the way has helped Alpha to understand how the customers and markets work. Now they know who to communicate with and have been able build tools and processes which make sales more efficient. Also, despite Alpha started with a focus on educational solutions, they recognized that their solution could be useful for other uses as well. That potential has been capitalized as Alpha has expanded to organizations and health care segments:

*We have expanded to health care and small and medium enterprises segments as well. There the service operators are the most important ones for us. Then I would say that at the moment 80% or close to 90% of our sales is in Finland* (Manager B, July 2018)

Experience revealed that the educational market was challenging due to the causality and slow pace of decision making in schools and their background organizations. With the help of partners and distributors, Alpha expanded its offerings to organizations and healthcare segments:

*Actually this happened: when the Christmas holiday season began the municipalities and schools were closed. But we needed sales anyways and our product could be scaled to other customers too as it was not customer segment specific. Then we started calling Finnish distributors. From there we found out that they sell to schools, municipalities, business organizations and to health care. That way we learned that we can offer our solution to other sectors as well. It kind of started from the distributors.* (Manager D, July 2018)
In late 2016, Alpha’s plan was to rapidly expand their sales globally and therefore they had to consider the differences between the desired target markets. Alpha was considering to customize its products to different customers only superficially to remain scalable. But they had taken into account the need for localization and local customer service that would also work as a sales tool if done well. In late 2018, the plans to rapidly grow sales around the world have been abandoned. Instead of modifying the offering for different geographical markets, it has been modified to suit different customers segments. This change in plans was recognized by Manager B:

*Then, if we think about internationalization. [...] In many ways we have taken perhaps a step back in our plan and are not going to conquer the whole world at once.* (Manager B, July 2018)

Originally, in late 2016 the non-customer stakeholders who were not affiliated with the purchase or the usage of the product were possible investors and financing institutions, alliances, possible partners, content providers, government and ministries, other software companies and competition. Since Alpha was operating under the funding of Tekes (Finnish Funding Agency for Innovation), and it was expected to take some time before constant revenues would have started to come in, an important non-customer stakeholder group that Alpha was targeting for were investors. Manager D described Alpha’s stakeholders in late 2016 in the following way:

*Outside the schools our stakeholders include teacher’s education and the teacher’s union who have to know about our product and support it just like the education board and the ministry of education. [...] Then, of course, investors and other partners like content creators and publishers who produce e-books. Then, for example, Microsoft with its Office 365 is important. Then there’s also all the other educational services that we need to integrate with and also learning management solutions like Moodle and Google Class.* (Manager D, November 2016)

In Late 2016 Alpha was considering to integrate with other software solution to be able to provide a better package especially for the end-users. Therefore, they were interested in content providers and possible partners offering learning solutions. Alpha was also interested in operating in alliances that include multiple companies which could together offer a bundled service package for education:
There’s these alliances and consortiums which we would also like to join to get our product included in some kind of a package. (Manager B, November 2016)

However, back in late 2016, Alpha’s most noteworthy partner for value creation was a company run by ex-colleagues of Alpha’s founders who were in charge of their software programming as a subcontractor. Alpha had been forced to resort to outsourcing because finding skilled programmers was hard. There was a desire to insource the programming work as soon as it is possible.

Besides new customer segments, by late 2018 Alpha had gained also other new stakeholders. They had succeeded in finding distributors, partners and were integrating their software to one of their partner’s offerings. Additionally, Alpha had managed to recruit their own team of programmers and thus did not need the services of the subcontractor anymore:

[About recruiting programmers] We have managed to pull it off and it was one also one of our successes. Outsourcing was very expensive so gladly we could insource. (Manager B, July 2018)

Furthermore, Alpha had managed to attract few investors who besides money, bring additional value and have useful connections.

[About investors] They all also work to develop the company. So, there’s nobody who has just put a check in. (Manager B, July 2018)

Back in late 2016, Alpha was participating in plenty of events and programs targeted to help startups grow. Alpha was hoping to gain useful information and to find investors and other useful stakeholders by participating in these events and programs. But in 2018 they made a decision to basically not to participate in any of these events because they did not find them worth the effort:

During this spring I have eliminated everything. We went to free events and other similar ones. We spent time on them. The city of Tampere arranges them and there’s more in the Helsinki metropolitan area. These days we are not participating in any of these. Because all that effort is taken from sales, every single hour. If we put resources in these events for a whole day, it’s a day of sales wasted. (Manager D, July 2018)
Regarding competitors, in 2016 there were plenty of companies operating in the educational technology space, offering similar value propositions as Alpha’s solution. But Alpha’s managers reckoned that their product offer such a unique value that there were not any competitors offering the same kind of value:

*There are no single competitors offering similar value. To get close to what we offer, one has to combine the offerings of different service providers.* (Manager C, November 2016)

In late 2018, Alpha’s offering is still unique in the educational segment and no competitors with the same value proposition have emerged. But as Alpha has entered other market segments, they now face significantly more competition. Decision to stick to home markets first can help because that way they can partly avoid the ferocious competition that takes place in larger global markets.

### 4.2.3 Activities

At the early-stages of the company in late 2016, Alpha’s organizational structure was still emerging. The company was focusing on launching sales and main activities were user-driven product development, exploring market opportunities and a quest to find relevant stakeholders like investors:

*About priorities* At the moment its definitely launching the product. Of course there’s this piloting first and then launching the product. Then there’s the licensing deals in Finland and abroad. Then of course finding investors. (Manager D, November 2016)

Alpha wanted to bring their software product to market as soon as they were able to do so, leaving final adjustments to be made when they have more user experiences and feedback. That is one of the reasons why the company was looking to do most of the selling and the customer service activities by itself at the initial stages as gaining insight about the customers’ experiences and needs was important for product development. Thus, one of the key activities and sources of competitiveness for Alpha’s solution was the user-driven product development where field-user experiences gathered by the product support and the sales team were utilized for developing the offering to better answer the customers’ needs. In spite of the outsourcing of the programming of the
software, Alpha was managing the product development process by itself. The user-driven product development was discussed as part of value capture in topic 4.2.1.

At the early-stage in late 2016 Alpha’s aspiration was to be an agile organization that could make rapid changes of direction and adjust to the ever-changing business environment. Alpha was a startup that had not yet developed any general business practices and the operations of the company had not been established. Therefore, the company was naturally agile and could rapidly react and implement changes. Alpha had clear targets for the future but no established processes and thus were moving on somewhat unorganized. Alpha’s plans were in constant flux and it was important for them to be ready to respond to signals from the markets:

_We don’t have any big picture and I would say that we are moving on in the midst of some kind of a chaos._ (Manager B, November 2016)

In order to scale operations in the future, Alpha’s managers were originally planning to automate some of the activities, such as product support or sales as much as they can. But after two years in late 2018, no large-scale automation has happened. Still, after almost two years of sales, Alpha has developed a streamlined online sales process and comprehensive CRM about educational markets. These both take the company steps closer to automation.

After Alpha had launched their offering, sales became a priority and the role of product development was not as significant anymore in late 2018. But still, Alpha is benefitting the user-driven product development process as they further develop their offering. Moreover, the company has insourced the whole product development process as the programming is done in-house. In late 2018, Alpha’s business model is basically consisted of two main activities: sales and product development including the programming of the software. Sales have emerged to become the most important and time-consuming activity of the company:

_Basically, we have two functions, product development and sales. That’s it. Pretty much nothing else. Of course, we have board as well, but..._ (Manager D, July 2018)
Lot of emphasis had been put on sales and as a result the process has been streamlined and is executed online. The same process is applicable to all of Alpha’s market segments, so the aspect of scalability has been considered as well:

*We have built distance sales process that we pretty much follow. Basically, it’s the same process for every sector.* (Manager B, July 2018)

Besides the main activities sales and product development, administrative duties and board work are supporting activities that need to be taken care of as Alpha now has more employees and a board with investor members. But these activities are mostly supportive and therefore do not directly affect the value creation. Still in 2018, being agile and ready to react to changes in the business environment is important to Alpha. They have also recognized that planning too far in the future is not smart:

*We don’t make plans for distant future for no reason because it’s been noticed that if I now think about and plan August it just might happen. If I now begin to plan September, most likely those plans won’t happen in bigger picture.*

(Manager B & Marketing, July 2018)

Also, as it came out in the previous chapter, in the early stages when Alpha was launching sales, they spent much energy on different kinds of events and tried to pursue leads that afterwards seemed foolish. That is one example of how, overall there was a lack of focus about Alpha’s business activities. In 2018, they claim that focus has been found and the company is more organized in regards of processes like sales. Also, sales are not anymore handled entirely in-house as Alpha has agents and distributors. Furthermore, Alpha does not waste its resources on events and discussions with irrelevant parties anymore. Alpha’s current focus with sales processes was recognized by Manager B:

*The change has been that now we clearly know who to call, what to say and what they do. That’s pretty clear. We know how to tell our story to the right listeners. The biggest deal for us are customer deals and we also have few agents as our distribution channel. One is in Brazil and one is in Columbia. Then we have a pilot hopefully starting at Indonesia. And then we have sales in Finland.*

(Manager B, July 2018)
More focus and established processes mean that Alpha should be able to utilize its resources more wisely and as a consequence the company should now be working more efficiently.

4.2.4 Capabilities and Resources

To enable the rapid growth that Alpha’s entrepreneurs were targeting for, the business had to be easily scalable and agile. These capabilities can be recognized as having considerable significance for Alpha’s business model in late 2016. For example, there were decisions to not to customize the product and to offer a general solution for every country. Also, Alpha was seeking to automate processes as much as they can. These were supporting the idea of scalability which along with agility were frequent topics in the interviews:

*Scalability is the key to everything. Every process has to be designed in a way that they can be automated.* (Manager C, November 2016)

*Startup entrepreneurship means that you have to be agile in your operations and try to find sensible solutions.* (Manager D, November 2016)

According to Alpha’s managers, it was typical for a startup company that the plans for the future are highly uncertain and in a constant flux. This was clearly visible in late 2016 when this research began. The company was looking for different possibilities in the markets. It was important to be agile as they needed to be able to change course easily if needed. This was an important capability because the plans were fuzzy:

*For a startup the future plans are like... If you ask something today in the morning and in the afternoon, the story might have changed in the meantime. [...] It is nice and also great about startups that you actually can change the direction.*

(Manager B, November 2016)

Thus, back in late 2016 Alpha’s managers thought that they knew what markets they want to operate in but were looking for the right approach. It was evaluated that one of the key reasons for the possible success of Alpha would be the experience of the team that had previously worked together in creating similar kinds of applications for business users. This experience was seen as a vital capability influencing Alpha’s activities via leadership
and management practices that control the value creation processes which Alpha and its partners perform:

_We have been operating in this business before and we have made many mistakes in the past. We have had big companies who could pay for these mistakes so we have had the chance of learning by trial and error. That’s why we know the things that can go wrong [...] And we have a sort of clear vision of how things should be done to get them right._ (Manager B, November 2016)

After two years in late 2018, Alpha’s managers still think that the experience of the team has been and continues to be a valuable asset. The assessment is that an experienced team knows how to do things in a right way. Nevertheless, there have been mistakes and time has been wasted on things that retrospectively seemed useless. Still, running a startup company is a tough and stressful duty and the experience of the team has helped in coping with the pressure. Also, the backgrounds and maturity of the team brings credibility which has benefitted Alpha in building business relations:

_[About the team] It does have a big impact. You can notice that when you meet new people and give them your business card. They will check your Linkedin profile and the comment usually is that you have a credible background. It helps to take the conversation to another level._ (Manager D, July 2018)

Furthermore, in late 2018 Alpha’s team and its capabilities have become more comprehensive. Also, the team has more experience about Alpha’s business and thus with the help of the CRM they have more capabilities especially in the educational technology markets. To combat the lack of capabilities and resources in sales and software development, Alpha has recruited more staff. With successful recruitments the company has gained capabilities that open new opportunities as the example of one recruitment demonstrates:

_We have hired an employee to business development that speaks Spanish. So, for example our possibilities in Columbia are now in a different level because previously the language was an issue as their English skills aren’t that good. So, now that we can communicate with them in Spanish it’s totally different._ (Manager D, July 2018)
At the end of this research in late 2018 Alpha was still perceived as agile by its managers. The company has been able to realize some of its scalability potential but not so much in terms of geographical markets. Instead Alpha has taken advantage of its solutions scalability by taking it to other market segments as discussed. Not all capabilities are internal as external partners and investors bring both base-level capabilities to conduct daily business and dynamic capabilities to innovate the business model by working at Alpha’s board of directors:

[About investors] They all work for us in a way or another. We have a separate board where everyone is an investor. (Manager D, July 2018)

The resources of a newly founded startup are typically limited particularly in terms of time and money, as was in the case of Alpha in late 2016 when the company was under one year old. Therefore, Alpha was searching for partners and investors to complement their own resources and capabilities. In late 2018, as Alpha has succeeded to find investors, they now have more financial resources. Thus, they have been able to recruit more staff that brings more resources and also capabilities. This enables Alpha to better take advantage of the opportunities in the markets or offered by partners.

4.3 Drivers for Business Model Change

As demonstrated in previous chapter, Alpha’s business model has gone through various changes within the two years this research was performed. These changes have had consequences for every component of Alpha’s business model. Furthermore, the overall business model has become more established than it was in late 2016 when this research began. Many uncertainties regarding the business model’s architecture have vanished as Alpha has sales, a functioning revenue model in place and concrete processes for conducting business. The nature of these changes has been emergent, but the reasons behind them can be categorized to three main themes. Thus, overall, three drivers for change in the business model of Alpha can be recognized. The drivers are the need for focus, need for capabilities & resources and desire to grow. All of these drivers have had consequences for each business model component and have connection to one another. Next these drivers are discussed alongside examples from the interviews.

The need for focus can be recognized as one main driver for change in Alpha’s case as the company has become more established. In an early-stage startup, like Alpha, the
resources are scarce and therefore should be utilized efficiently. But at the early stages the business model was merely emerging and the company was proceeding towards their vision in an unorganized way. Thus, time and money were wasted in things that were not worth the effort. But gradually with more experience from the business, Alpha has been able to create concrete processes and focus more on relevant issues and stakeholders. To achieve this focus, Alpha has learned through somewhat trial and error to recognize what are the main priorities of their business. The end result is that Alpha has a more established business model with functioning processes and more focus on core activities, partners and markets.

Regarding the business model components one of the most notable effects of increased focus in the two years has been for the value network as Alpha has decided to mostly focus on home markets first, instead of rapid global expansion. Further focus has concerned customers and other stakeholders as Alpha knows who to sell to and has found partners and investors who support their ambitions. Instead of trying to reach a wide range of different stakeholders, Alpha has decided to focus on the ones that they perceive as the most significant. At the early stages the most important stakeholder was the subcontractor for software development, but as Alpha has insourced that activity they can focus on other stakeholders. This means that also the activities component has changed, and Alpha has clear processes for its two main activities, sales and product development.

Need for focus has a clear connection to another driver, the need for capabilities and resources. As an early-stage company Alpha had to start from ground up and acquire relevant capabilities and resources needed to execute the business plan. Primary ways to gain more capabilities and resources has been recruiting more staff for sales and product development and finding investors who provide financing and dynamic capabilities to develop the business model. Also, partnering with relevant stakeholders lets Alpha to tap into their capabilities and resources.

One of the most critical capability and resource shortages for Alpha was the lack of own software programming team. Within two years, Alpha has been able to recruit its own team of programmers which has been a considerable addition to capabilities and especially base level capabilities. Also, Alpha has recruited more staff for sales which has become a core activity for the company. As discussed, these recruitments have changed the activities they are affiliated with and added more capabilities and resources. During
this research, Alpha’s core team remained virtually the same, despite one departure, and
the company is still perceived agile by the managers. Furthermore, investors who have
joined the company provide financing and enhance the dynamic capabilities of the
company. The result is that Alpha now has a comprehensive team with enhanced dynamic
capabilities and more resources at hand.

The third change driver, desire to grow, is a primary reason behind the need for
capabilities and resources because they are needed to achieve growth. As Alpha is a
startup company that since its inception has pursued for rapid growth and its offering is
designed to be scalable, the desire for growth is essential for the company. The results of
this driver have been that Alpha now has more capabilities and resources to achieve the
growth and partners who provide opportunities to expand value proposition and creation.
This has been achieved by integrating with partners which has expanded the value
proposition and taken Alpha to new market segments. Also, distributor partners have
offered new possibilities for Alpha. Thus, the desire to grow has made Alpha to acquire
more capabilities and resources and as a result it now has a more comprehensive value
proposition and creation. But still Alpha’s resources are scant and they are for instance
looking to recruit more employees.

4.4 Summary of Business Model Dynamics in the Case Company

Within the course of this research in the two years from late 2016 to late 2018, Alpha’s
business model has undergone changes as the company has evolved and expanded
operations. Alpha started as an educational technology startup with a solution at piloting
stage and has proceeded to achieve global sales in few different customer segments. At
the early stages of the company, when this research began, the business model was under
development as Alpha had not launched its product yet. Originally, the company was
focused on the educational technology markets, but it has since expanded to organizations
and health care segments and offers services that complement the software offering.
When Alpha was less than a year-old startup in late 2016, its business model presented in
Figure 3 (page 62). was rather internal and emerging partly because the company did not
have any sales yet.
Figure 3. Early-stage business model of Alpha in late 2016

At the early-stages of the company, Alpha had a comprehensive value creation and distinct value propositions for different stakeholders that comprise the educational market segment. They were trying to communicate that value proposition to stakeholders and aiming to extract value for user-driven product development. The revenue model was still emerging as subscription-based licensing and value was captured from piloting to be benefitted in product development. The value network was scarce as Alpha was piloting their offering with first potential customers and their most notable partner was a subcontractor for programming. But Alpha’s managers had delineated what markets they want to operate in and were looking for the right approach to achieve rapid global growth. Therefore, they wanted to gain more customer understanding and business experience
which both had an affect for their business model. Furthermore, there was a search to find partners and investors that would complement Alphas capabilities and resources.

Right from the beginning Alpha has had an experienced team with knowledge of the software industry and relevant leadership skills. They recognized that the company should be agile and the offering should be scalable so that they can react to changes and opportunities in the business environment, and grow the business as desired. Also, there was an understanding that the company was at a phase when it is still rather unorganized and experimenting to find the right business model. Plans were in constant flux. Besides product development, other main activities were the efforts to launch sales and establish a value network that supports Alpha’s mission. To achieve success, Alpha needed further resources and capabilities, and thus recruiting an in-house software development team and finding investors were desired important next steps.

Alpha’s business model at the end of this research in late 2018 is presented in Figure 4 (page 64). The model has evolved as the drivers discussed in previous chapter have had an effect on all of the components. To begin with, the model seems to have become more external due to sales and partnerships. Moreover, the model is now more established but the company still remains agile. For the value aspects of Alpha’s business model, the two years in business has brought only minor changes as services have been added. Despite Alpha has expanded from the educational segment to health care and organizations, their value proposition for customers is virtually the same and plans regarding the revenue model were realized. Furthermore, Alpha is still extracting value from customers with customer-driven product development, but mostly the company now captures financial value with their subscription-based revenue model. For other stakeholders than customers Alpha can now offer more value because they have an offering that can be integrated with partners’ solutions. Also, as the company is more established and has sales, they have more potential to create value for example for investors.

During the two years researched, Alpha’s value network has substantially expanded. Most notably in late 2018 Alpha has paying customers in different market segments. Thus, instead of the rapid global expansion the company was aiming for, they expanded to other market segments. Furthermore, Alpha has found relevant partners to collaborate with and distributors for their offering. Also, the company has attracted investors that provide financing and offer their capabilities for Alpha to tap into. Mostly due to investors,
recruitments and experience gained, at the end of this research Alpha has more comprehensive set of capabilities and more resources at hand. Also, these capabilities and resources are utilized more effectively as the company has more focus and established processes for their two main activities, sales and product development.

![Diagram](image)

**Figure 4. Alpha's business model at the end of the research in late 2018**

Overall, the change that has happened to Alpha’s business model can be attributed to three main drivers discussed in the previous chapter, the need for focus, need for capabilities & resources and desire to grow. These drivers are linked as the need for focus is largely driven by limited capabilities and resources that are needed because of desire to grow the business. The drivers have produced changes to each business model component and the end-results of their effects in late 2018 are a more established business model with concrete processes and focus on core activities.
But the changes that have happened within the business model cannot be only attributed to the three main drivers because various other issues have had an effect as well. In Alpha’s case some business model components can also be perceived as change drivers themselves or at least antecedents for the three main drivers. For instance, stakeholders like investors, customers and partners have opened new possibilities, that have had an effect on the business model choices Alpha’s managers have made. Another example is how scarce time and money resources have contributed to the need to focus and need for capabilities and resources. The components of the business model are linked and changes in one component usually lead to changes in other components as well as all the components are interconnected. For instance, in Alpha’s case added resources have enabled the company to enhance value creation and reach more customers. The most central component is the value components as all the other components are designed to support the value creation.

At the early stages in late 2016 Alpha’s business model was rather internal as the company’s external value network was merely emerging. Alpha’s main activities were product development and efforts to launch sales and to build value network. Value was created mostly in-house. After two years, in late 2018, Alpha has partners and distributors that participate in value creation and sales has emerged to become top priority. Therefore, Alpha has more external interaction that has consequences for the business model which has been modified accordingly. One example of the external effect is that partners have offered opportunities to expand to new market segments and that way Alpha has been able enter health care and organization segments and expand their value network.

Empirical evidence revealed overlapping between some business model components in the case company. In Alpha’s business model there are similarities between the value network and capabilities & resources components as some sub-component could be categorized under both high-level components simultaneously. An example is how Alpha’s partners have offered an opportunity to expand to different market segments or to integrate their software to the partner’s offering. In these occasions Alpha’s partners could be categorized under the value network component as a stakeholder group and also, as an asset on capabilities and resources component. Also, Alpha’s investors can be considered in a similar way as a stakeholder or as an asset. Furthermore, a sub-component of the business model can move under a different high-level component and even transform as in this case has happened with investors. At the early-stage Alpha had no
outside investors and thus they were merely a stakeholder group that the company aimed to attract. Later Alpha has gained investors that let the company benefit their experience and contacts. Thus, they can now be regarded as part of Alpha’s dynamic capabilities.

Also, the sub-components seem to be mutually interchangeable between the value network and capabilities and resources components as for example a stakeholder can substitute a lack of capabilities or resources and vice versa. At the early-stage Alpha’s most important stakeholder was the subcontractor for software programming, a solution that they were forced to resort to because of an equivalent deficit of software capabilities and resources in that component. As Alpha succeeded to fulfill that deficit with recruitments, they do not need the subcontractor stakeholder anymore which has been replaced with in-house capabilities and resources. This change was desired and cost-effective. This way, an addition to one component can mean reduction in another. But the components of value network and capabilities and resources also mutually reinforce each other. In Alpha’s case, additional capabilities and resources produce more opportunities to expand the value network. With more capabilities and resources, Alpha has enhanced its value proposition and creation, and attracted partners that have expanded their value network in a purposeful way.

Overall, despite an increasing amount of external effect on the company, Alpha’s managers reckon that they have been able to guide the direction of the company and its business model. Alpha has been able to seize external opportunities that have taken the company towards their goals. Furthermore, they have been able to react to difficulties by modifying the business model for example when the causal nature of the educational markets encouraged to expand to other market segments. Changes that reflect the drivers need for focus, need for capabilities & resources, and desire to grow have been made to each business model component. Surprisingly, the most significant component, value, is also the one that has least changed. That, with the experienced team, may have contributed to Alpha’s success in controlling the development of their business model. Many plans that Alpha’s managers had in late 2016, for example regarding the revenue model and recruiting programmers, have realized. Others, like the vision to create a forum for users to discuss or rapid global expansion have not. Overall, Alpha’s managers seem to be satisfied with the direction the company has taken and recognize that it is typical for startups to have plenty of ideas and many of them will not be executed.
5 DISCUSSION AND CONCLUSIONS

This chapter discusses the main empirical and theoretical findings of the research. Emphasis is put on the findings that are supplementary or conflicting to earlier research on the topic. Furthermore, the managerial implications derived from this research are presented and the trustworthiness of the final results is evaluated. Finally, a proposed agenda for future research is laid out.

5.1 Summary and Conclusions

The research questions of this study were:

*What are the characteristics of the business model of a technology startup company and how does the model change?*

Additionally, there were three sub questions that elaborated the main research question. The sub research questions were:

*What are the components of a technology startup company’s early-stage business model?*
*How does the business model change?*
*What are the main drivers for the business model change?*

In order to address these questions, a literature review about the theory of business models from technology startup perspective was conducted. On the basis of the theoretical findings, a qualitative case study was undertaken to gain further empirical knowledge about the phenomenon and to be able to depict the business model of the case company. Furthermore, the change that the case company’s business model had gone through in two years was studied and the reasons for the change were analyzed. The business model of Alpha and its change was summarized in chapter 4.4.

The literature review revealed that previous business model literature has diverse ideas about the business model concept and a consistent view is missing while there is proof that it is a distinct unit of analysis (Morris et al., 2005; Casadesus-Masanell & Ricart, 2010; Zott & Amit, 2013). This research appears to be confirming the claim by Zott et al. (2011) that the lack of a generally accepted definition is challenging the research on the
topic as there is no mutual agreement between scholars on the components that constitute a business model. This complicated the research process as there were no clear framework to build on and may have had consequences for the results.

Since previous research on business models in the context of startups has been limited, this case study offers empirical knowledge about the phenomenon. Furthermore, this study has established a business model framework with relevant components for technology startup companies. Previously there have been many different business model frameworks proposed, but since companies are always unique, those cannot be used generally. Nevertheless, there is evidence that business models are important for technology startups because, besides embedding technology in products and services, a company must design a novel business model to fully realize its commercial potential (Zott et al., 2011). That was confirmed in this research as well. This thesis lays out a framework for studying the business models of technology startups that can be used in further research about companies operating in similar circumstances.

Even though no general definition has emerged, there seems to be a wide agreement that the business model is some sort of a representation of a certain company’s business architecture (Morris et al., 2005). Zott and Amit (2013) recognize that business models are in essence illustrations crafted by a focal company’s managers, which means that they can be greatly influenced by the illustrators. Furthermore, Mason and Spring (2011) point out that the perception that business models evolve through the interactions of individuals in social groups, both within the companies and within the wider business network, is consistent across the business model literature. These arguments were confirmed by the empirical findings which suggest that the case company’s business model is constantly evolving and multiple stakeholders (social groups) have had influence in its development. Still, the results point out that despite the value network can offer new opportunities, it is up to the focal company’s managers to decide how the business model is altered.

Technological innovation needs to be commercialized via an appropriate business model in order to realize its full potential because technology by itself does not have objective value (Chesbrough, 2010). In Alpha’s case the company has had to modify its business model and expand to more market segments to realize more of the potential their solution has. A big part of the potential Alpha’s technology has would have remained untapped had they just stick to educational markets. Therefore, the business model concept has
significance for the success of Alpha that is aiming to be an agile organization which can
adjust to the changing environment by altering its business model. This, according to
Jansen et al. (2007) is important especially in the rapidly progressing technology sector.

At the early stages, Alpha’s business model was still emerging, thus confirming Teece’s
(2010) argument that the ideal business model rarely appears in the early stages of an
emerging business. When Alpha’s business was in its early stages, they had not developed
any general business practices. Therefore, the activities of the company were not
established and the company was progressing somewhat unorganized which according to
Teece (2010) is common in emerging industries. In the early-stages learning and
adjustments to the business model are necessary. In the case of Alpha, the managers
needed to learn to understand the nature of the markets they are operating in and adjust
the business model accordingly. The results were more established processes for instance
for sales.

The empirical evidences suggest that the case company’s business model and its
components are built around the value component. The structure of value network,
capabilities and resources, and activities are based on the purpose of supporting the value
creation and delivery. The issues of value creation and communicating the value
proposition to various stakeholders have been a priority for Alpha throughout this
research. This is in line with the business model literature which suggests that an emphasis
on value creation for all participants is an important feature of business models
(Casadesus-Masanell & Ricart, 2010; Zott & Amit, 2010; Zott & Amit, 2013). This hardly
can be seen only as a novel feature of the case company, but as a phenomenon concerning
all companies (Morris et al., 2005; Zott et al., 2011; Onetti et al., 2012).

However, first and foremost, the organization has to be able to create desired value for
the customers. Therefore, the topic of value creation is especially complex in the
educational sector where there are multiple stakeholders on the customer side that are all
expecting to receive different value from the same solution. This means that there is no
single value that the company offers. In contrast, as Prahalad and Krishnan (2008, 26–
27) argue, nowadays successful organizations need to offer unique value for each
customer. The case of Alpha indicated that communicating these unique value
propositions to heterogeneous stakeholders who together represent the customer is a
challenge but important for success, as Onetti et al. (2012, 338) point out.
The empirical evidences of this research point out that value is created and captured with activities that the focal firm and its internal and external stakeholders perform. This proves that the business model should link inside workings of the company to outside elements as many scholars have proposed (Zott & Amit, 2010; Baden-Fuller & Mangematin, 2013; Wirtz, 2016; Foss & Saebi, 2018). Therefore, similar components concerning value, activities and stakeholders are included in many business model frameworks and were also relevant in this research. According to Bankvall et al. (2017) modern companies need to pursue network-embedded business models and Alpha’s choices confirm that the business network has had an effect on its business model. The connection between the value network and capabilities and resources is remarkable as the value network clearly provides more capabilities.

Overall, Alpha’s value network and relationships with stakeholders were at an emerging phase in late 2016, thus confirming the claim by Spiegel et al. (2016) that the value network of a startup is usually scant. Furthermore, Amit and Zott (2015) have stated that a newly founded business has a lack of legitimacy in the eyes of the stakeholders. That has not been such an issue for Alpha which has an experienced team that adds credibility to the company. Also, the experience of the team has been significant for Alpha’s activities because the managers could address some possible issues with their expertise before problems emerge. The effect of the experience is realized in the governance of the activities of the company and its partners, but it does not guarantee success (Spiegel et al., 2016). Nevertheless, the experience of Alpha’s founders has brought them networks and by doing so, enabled them to find investors and partners.

The value network has been crucial to Alpha’s success right from the beginning. Besides outsourcing programming at the early-stage, Alpha has been doing the overall product development in cooperation with experts and prepared to launch its product by piloting with certain schools. At later phases Alpha has enhanced its value creation, capabilities, and resources with the help of the value network. This confirms the view of Zott and Amit (2010) who claim that the focal firm’s activities may span organization boundaries but still remain firm centric to enable value creation in cooperation. At the early-stage in late 2016, the most important activities for Alpha were launching the product, finding customers and getting investors on board. Looking back the development since then, it can be noticed that Alpha has succeeded to reach these goals by late 2018 with the help of the value network.
In the early-stages the business model of Alpha was still emerging and the entrepreneurs aimed to keep the company agile in order to adjust their business model to better conform the market. That is important because the business model needs to be evolving to respond to changes in the business environment especially in the technology sector (Jansen et al., 2007; Chesbrough, 2010). To address the issue of change, the business model literature has proceeded towards a more dynamic view (Saebi et al., 2017). This is useful for studying startups that are functioning in a very dynamic environment where the capability to modify the model is crucial (Teece, 2018). Alpha’s case demonstrates that modifying the business model has enabled the company to take advantage of opportunities.

The dynamic nature of Alpha’s business model is realized by three main drivers for change. As Alpha is a startup company pursuing for rapid growth the change that has happened within their business model was driven by the desire to grow. Consequently, the business model change was driven also by the need for resources and capabilities, and need for focus. These are in contrast with the three main drivers, need to adapt to external stakeholders, changes in the competitive environment, and opportunities offered by new technologies, recognized in the business model literature by Saebi et al. (2017). That suggests that the drivers for change are highly contextual and may vary.

As the previous studies on business models have mostly been focusing on large and established companies, they hardly pay attention to future aspirations and the scalability of the business model (Spiegel et al., 2016). Nevertheless, Morris et al. (2005, 729) argue that a usable framework should apply to all types of ventures that have different levels of growth, time horizons, resource strategies and exit vehicles. It was discovered that scalability is one of the key fundamentals of Alpha’s business as the company is pursuing for a rapid growth. This can be considered to be a typical feature for startups.

Overall, the view of Trimi and Berbegal-Mirabent (2012, 453) that the process of starting a new venture is a complex task and the possible success is depending on the relationships with external stakeholders is proved by the case of Alpha. The company needed to involve and convince numerous different stakeholders in order to develop and sell their offering. Alpha has constructed a business model that enables value creation. To comply with the dynamic nature of the business environment, that model has changed in the two years researched due to the three main drivers for change. With all the interconnections between
different components and their sub-components, it seems that the dynamic nature makes the business model a contemporary and complex concept.

5.2 Managerial Implications

This research presented the business model of a technology startup company and how its evolution process has unfolded. The results have significance for practitioners as managers need to have a good understanding of business models to enable their organizations to thrive (Casadesus-Masanell & Ricart, 2010; Foss & Saebi, 2015). By doing so, it also revealed some issues that can be considered as characteristics of Alpha’s field of business, and thus have substance for those engaging in entrepreneurial actions in the markets of selling technology-based tools and services for mobile device management. Also, many of the features of Alpha’s business model can be common for startup companies. However, the appropriateness of a business model can only be determined in its own unique context, which is why no general models exist (Teece, 2010).

This research discovered that the importance of business models for technology startup companies is evident. Studies on business models and technology management have asserted that technological innovation is important for companies but it does not guarantee success (Doganova & Eyquem-Renault, 2009). Therefore, companies must design their business models in a way that they can realize the whole commercial potential of their technology in the markets. The business model theory and Alpha’s case pointed out the importance of issues concerning value and the value network which are crucial for every company. Also, it is important to ensure that the business model is modified and on a par with the ever-changing environment (Jansen et al., 2007; Chesbrough, 2010). Moreover, the three drivers for business model change recognized in this research can be relevant to most startups which have a desire to grow and lack of capabilities and resources.

5.3 Dependability and Limitations

The dependability of a qualitative research can be evaluated simply with two common and classic criteria originating from quantitative research: reliability and validity
(Eriksson & Kovalainen, 2008, 291–292). Even though there is some criticism of whether these criteria are suitable for a qualitative research, they may still be partly applied. Additionally, this research was focused on a startup company, which proved to be challenging because the conditions surrounding the studied environment are in a state of constant flux. Therefore, when studying startups, it is important to explicitly define the context and its uniqueness (Paternoster, Giardino, Unterkalmsteiner, Gorschek & Abrahamsson, 2014, 1216). Next the reliability and validity of this research, along its uniqueness, are assessed.

This research was conducted as a case study, which is why the results cannot be directly applied to other companies. As Teece (2010, 191) points out, a business model cannot be assessed in the abstract, because its suitability can only be determined in a particular business context. Therefore, the findings of this research represent solely the business model of one particular company and its business environment. According to George & Bock (2011, 105) early-stage entrepreneurial activity often comprises a limited number of stakeholders limiting the ways data can be collected and may compromise objectivity. That is especially true in this research as the empirical data was gathered from the company, which means that it represents merely the way the company’s employees describe its business model. The empirical part of this research represents only the perspective of the case company and the external relationships or views of the company were not investigated.

The theory in this research does not represent any general descriptions of business models since the objective was to investigate business models in the context of a technology startup company. Therefore, the literature examined was focused on business models in an entrepreneurial and a startup context. Because the theoretical framework of this research is based on business model literature, which is ambiguous, there is a possibility that the framework applied was not purposeful for this kind of research. Consequently, the results of the business model literature analysis can be biased and not pervasive since the research aimed to discover the main characteristics of a technology startup’s business model. This meant the exclusion of some traditional business model features of large companies. In addition, the theoretical analysis aimed to focus on the descriptive attributes of business models, thus not catering to, for instance, viewing business models from the activities’ perspective. For these reasons, the theoretical part of this study was limited to cover only aforementioned aspects of the theory of business models.
The resulting business model of this research has its limitations, too. First, because the data used for constructing the business model of the case company came solely from Alpha, it is based on the subjective views of the company’s key employees and the subjective view of the researcher. Second, the inexperience in gathering the empirical material may have resulted in inaccurate assumptions. Third, this research was focused on the firm’s perspective of the business model, thus it did not cover the network aspect which according to empirical evidence, appeared to have effected Alpha’s model. These issues implicate that the reality can be different than the findings of this research suggest. Therefore, they may only be used with careful consideration in the context of similar applications. Overall, regarding the startup world in particular, all companies are unique and no general models or tools for explaining their business models comprehensively exist.

5.4 Future Research Path

This study has revealed issues regarding business model research. As discussed, the concept of business models does not have a generally accepted definition to date. This is a key issue that is holding back the research on the topic. Therefore, it is important to reach a general consensus about the business model concept for scholars to base on further research. Moreover, little attention has been paid to business models in the context of newly founded companies (Spiegel et al., 2016). The form and impact of business models in new, early-stage startup companies are very different compared to that of large and established companies. Therefore, further research is needed about the applications of business models in early-stage startup companies.

This case-study also provides a ground for further research on the topic of business models in startup context with its business model framework for technology startup companies. For instance, now that the business model of the case company has been illustrated and its change in the early stages has been studied, further research can be based on these findings. However, the literature review revealed the absence of literature on modelling a focal firm’s business model, which would also need further research to enable scholars to better describe the business models of different companies. Based on this research, there are drivers which constitute to the dynamics of the business model. But only few researches about business model change drivers have emerged. Therefore,
the drivers should be investigated further as they have clear consequences for the development of the model.
REFERENCES

Literature


APPENDIX

Prepared outline of the interview topics

**Manager A** (16.11.2016)

Value Creation

*Who are you aiming to create value for?*
*What kind of value are you looking to create?*
*How are you communicating your value proposition to the customers?*

Offerings

*Are you planning to offer only the application or also services?*
*What kind of level of customization will you offer?*
*How is the product going to be distributed?*

Customers

*Who are your customers?*
*What are their special characteristics?*

Market factors

*What kind of markets is your product going to be competing in?*
*Are there any similar solutions available in the markets?*

**Manager B** (16.11.2016)

Capabilities & Competence

*What are your main capabilities and competences?*
*What kind of level of outsourcing are you using?*

Economic Model

*How do you capture value?*
*What will your revenue model be like?*

**Manager C** (18.11.2016)

Market Factors

*What is your competitive landscape like?*
*What kind of competitive threats are you facing?*
Value Creation

*Who are you aiming to create value for?*
*What kind of value are you looking to create?*

Competitive Strategy

*How are you aiming to gain competitive advantage?*

**Manager D (18.11.2016)**

Stakeholders

*Who are your most important stakeholders?*

Time & Scope

*What are your future aspirations? How can they be achieved?*
*What things in your strategy will most likely be changed?*
*How do you find the scalability of the business?*

Competence

*What is your main competence?*
*What would be the attributes you would like the company to be known for?*

**Manager B (2.7.2018)**

Value network

*What market segments are you now operating on?*
*What have you learned about the characteristics of these markets?*

Value

*How have you succeeded in communicating the value proposition to customers?*
*What is your current value proposition?*
*What is your current revenue model?*

Activities

*How do you sell your solution?*
*How would you perceive the company in terms of focus and processes?*

Development

*What kind of successes have you had in the last two years?*
*What kind of failures have you had? What would you do differently?*
How did you succeed with internationalization?
What kind of factors have been most consequential for the development of the company?

**Manager D (3.7.2018)**

Value network

What market segments are you now operating on?
Who are your most important stakeholders?
How did you manage to attract them?

Value

What is your current value proposition?
How do you create value?

Activities

What are your current main activities?
Is being agile and scalable still important?

Capabilities & Resources

How do you perceive the team?
Has there been resource constraints?

Development

How would you perceive the development within the last two years?
How much have you been able to influence and dictate the direction of the company?
Has there been any significant external or internal triggers for change?