

# CHALLENGES TO OVERCOME IN THE SERVICE JOURNEY

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2020*

*Master Project in Innovation and Industrial Management*



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CHALLENGES TO OVERCOME IN THE SERVICE JOURNEY

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## ABSTRACT

**Background:** During the last few years, the manufacturing industry has experienced a multitude of disruptions. One major strategic shift that is occurring across industries today is the implementation of services or “servitization”. Servitization is defined as the movement where firms are changing from the traditional way of thinking, where a firm can only be a service or product provider, to a firm that has integrated packages of products and services as a system. Manufacturing firms need to move into the service area to survive going forward. The products in the traditional manufacturing industry have become more connected, forcing the firms to provide services. It is essential to have the technology in place, but the critical issue for companies seems to be that firms fail to change their strategy, not technology. Companies need to have a clear transition strategy of becoming more service-focused, and firms will need to rethink the business model in this transition.

**Purpose:** The purpose of this research is to create an understanding of the challenges that traditional manufacturing firms go through in the transition to servitization and to understand what requirements this transition is demanding on the manufacturing firms.

**Research Question:** How can incumbent manufacturing firms transform their current business model to a more service-focused business model?

**Literature:** The literature framework depicts the steps that need to be taken for an incumbent manufacturing firm to become more service focused and avoid the service paradox. The service paradox is when firms are investing in developing service offerings, which leads to higher costs but not generating relatively higher returns. It is vital to transform factors such as leadership, change to service culture (norms and values), and change to a service strategy to reach the full potential of servitization. Incumbent manufacturing firms must also make changes to the business model, which include value discovery, value creation, value delivery, and value capture. Business Model Canvas and Business Model Innovation are key tools use to help companies in the servitization transformation.

**Methodology:** A qualitative research strategy was chosen along with an abductive approach. A combination of comparative design and case study design was selected to depict the study best. The comparative design was completed by comparing the business models of five different companies in both the manufacturing and service industries. The framework from the literature and comparative study was then used in the case study to analyze an incumbent manufacturing firm going through a transition phase of becoming more service focused. A case design (case study) is where the developed framework from the comparative design is tested with a case company.

**Comparative Study:** Six main themes were identified after interviewing the companies from the comparative study. The first theme is transformation demand, meaning that firms have different motivations or agendas to transform into a more service-focused business. The second theme is related to the defined enabling factors, which consist of culture, leadership, and strategy. The last four themes are related to business model innovation, how firms discover, create, deliver, and capture value. The analytical framework from the literature review is further developed with the collected results from the comparative study.

**Case Study:** The results from the case study were gathered from multiple managers from different departments in the case company. The results were examined with help from the analytical framework from the comparative study. Recommendations on how the company should move forward in the servitization transformation were then presented.

**Conclusion:** The challenge with becoming more service-focused is the potential to fall into the service paradox, meaning that when firms are investing in developing service offerings it can lead to higher costs but not generating relatively higher returns. The main challenges related to this are the changes in the soft values, such as culture, leadership, and strategy. Our research concludes that a traditional manufacturing firm needs to reconsider the leadership, culture, and strategy and the firm’s business model to become service focused.

**Key Words:** Business Model Innovation, Subscription-Based Revenue, Data-Driven Business Model, and Servitization

## ACKNOWLEDGMENT

We would like to acknowledge the individuals and firms who have been key in their contribution to our master thesis journey.

Firstly, we would like to express our gratitude to the case company in this study. The collaboration and mentorship that we have received along with the welcoming culture of the firm has been highly appreciated. Management and individuals across the firm have made themselves available to participate in interviews despite busy schedules. Great discussions with an open and honest dialogue have been greatly appreciated and contributed immensely to our research. We are thankful for the time and opportunity to learn as well as being able to create added value for the firm.

We are grateful for all firms who have participated in the comparative study: SKF, Assa Abloy, ABB, H&M, and Netflix. The time and insights that these companies have contributed to the study are greatly appreciated as well as the time and the valuable information that they have shared with us.

We would also like to take this opportunity to thank our supervisor Sven Lindmark for his support and guidance during the course of this thesis research. His extensive knowledge and experience in the field of management have been helpful throughout the process. It has been a pleasure to have Sven as a supervisor.

Furthermore, we want to thank each other for a great collaboration with tremendous teamwork and consideration for each other and our ideas.

Gothenburg, 2020-06-XX

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# 1. INTRODUCTION

Chapter one will introduce the topic of the thesis, the relevance of the report, and present the research question. The introduction chapter consists of background, purpose, research question and disposition which is illustrated in figure 1.1.

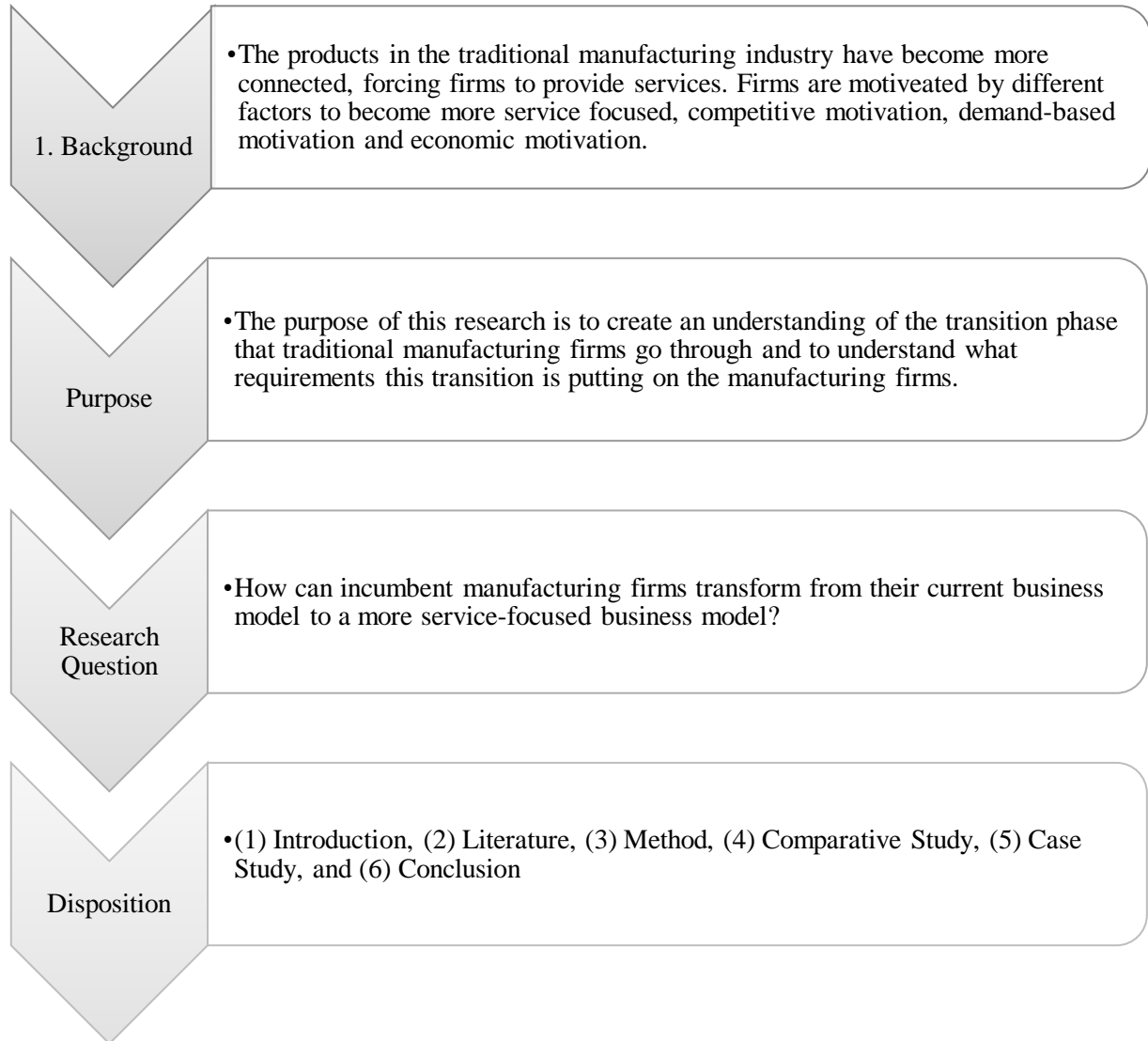


Figure 1. 1 Overview of Introduction

## 1.1 BACKGROUND

The world is changing at a rapid pace, and firms are forced to adapt to be competitive in the market. During the last few years, the manufacturing industry has experienced a multitude of disruptions (Forbes, 2019). Netflix's disruption of the film renting industry and Spotify's disruption on the way individuals consume music are two examples of trends that disrupted their respective industries. One major trend today is the implementation of services in all fields. If a company does not adapt to the trends fast enough, then those companies will quickly become irrelevant to consumers. Two examples of companies losing their leading position in their respective marketplaces due to an inability to adapt to new trends and evolving competition are Kodak and Blockbuster. Kodak missed the rise of new digital technology, which led to them being left behind by more innovative companies. Blockbuster did not recognize that consumers shifted to digitalization and on-demand streaming video consumption which Netflix was driving, allowing other players to encroach on the traditional tv rental space and turn it upside down, leaving Blockbuster irrelevant.

Digitalization is a trend that is affecting many industries. It is creating new platforms, it is changing customer behavior, and it is affecting the ecosystems of players across industries. The products in the traditional manufacturing industry have become more connected, forcing the firms to provide services. The high competition in the global economy is forcing firms to develop sophisticated products and services to move up in the value chain (Neely, 2008). Manufacturing firms need to move into the service area or servitization to survive (Baniet et al., 2007). Servitization is defined as the movement where firms are changing from the traditional way of thinking, where a firm can only be a service or product provider, to a firm that has integrated packages of products and services as a system (Vandermerwe and Rada, 1988). Servitization creates a win-win situation for both the customer and the supplier (Slack, 2005). The customers will be able to reduce risks, predict maintenance and support costs; meanwhile, the supplier will increase the revenue streams (Slack, 2005).

Different authors have discussed the motivation to be part of the transformation journey; the common point that researchers in this field agree upon is that different firms have different incentives to adapt to the servitization process (Raddats, 2016). Wise and Baumgartner (1999) identified that manufacturing firms are becoming more service-focused due to competitive motivations, demand-based motivations, and or economic motivations. A decade later, Baines

et al. (2009) identified similar motivations to become more service-focused; these motivations are strategic, marketing, and financial. Raddats (2016) argue that there is a need to understand the motivation behind servitization for manufacturing firms to develop capabilities and resources accordingly.

Competitive motivation refers to the need for increasing competitive advantage in the market with services. Firms, with this motivation should focus on services that will enable product innovation, for instance, aftermarket services that give firms more insight on how to improve their product (Raddats, 2016). Demand-based motivation indicates that manufacturers should provide advanced services to customers. In this case, customers are often driving the operational activity themselves but find the need to have support such as technical help desks, training and maintenance (Dachs et al., 2014). These advanced services will support the customers and develop customer relationships. In this case, suppliers that have been offering advanced products have the advantage of winning the business by providing advanced services as well (Wise and Baumgartner, 1999).

Economic motivation is one of the most common reasons for manufacturing firms to adopt a more service-based business model (Kindström & Kowalkowski, 2014; Spring & Araujo, 2009). The service approach is a way of facing the challenges of stagnating product markets; it also creates a more stable revenue income for firms (Eggert, Hogreve, Ulaga & Muenkhoff, 2011; Slack, 2005). Eggert et al. (2011) have concluded that the service business for manufacturing firms can increase margins, as a broad service portfolio will increase the profitability and make the manufacturing firms take a more significant part of the total profit. On the other hand, the research conducted by Neely (2008) identified that servitization by manufacturing firms is affected by the firm's size and local economic circumstances, where large firms are more service-focused than smaller firms. The empirical findings also showed that the more service-focused manufacturing firms are suffering from lower profit margins compared to pure manufacturing firms, even though the revenue streams have increased. Service-focused manufacturing firms are suffering from lower profit margins because service-focused firms have higher labor costs, working capital, and net assets, meaning that it is challenging to generate enough revenues to cover the investment made to become a more service-focused firm. In contradiction, smaller firms are not suffering from this dilemma and can increase the margins (Neely 2008). Fang et al. (2008) argue that the sales of services need to reach a certain point

before a manufacturing firm can benefit from it, around 20-30% of the turnover needs to come from the service portfolio.

## 1.2 PROBLEM DISCUSSION

The article "The disruptive impact of digitalization on the automotive ecosystem: a research agenda on business models, platforms and consumer issues" written by Athanasopoulou et al. (2016) concludes that issues with becoming more service focused will be in the business model, platforms and consumer behavior. According to Christensen et al. (1996), it is essential to have the technology in place, but the critical issue for companies seems to be that firms fail to change their strategy, not technology. Therefore, it is not only the technology that needs to be ready to meet the market, but the business model must also be ready to meet customer's needs. Incumbent firms can also create disruptive innovations that change the market, but they must be prepared with a new business model to support the new technology. Christensen et al. (2015) gave an example of Apple's iPhone, which clearly shows that using an innovative business model can lead to disruptive innovation. The disruption and growth of the iPhone's were achieved not only by product-improvements but through the introduction of a new business model (Christensen et al., 2015). The iPhone created a new way to access the internet and was able to challenge laptops as a mainstream way of going online (Christensen et al., 2015).

The need to rethink business models for disruptive and innovative technologies is something that is happening right now. To perform and transform companies, including incumbent firms, must have an agile Business Model. Alexander Osterwalder's Business Model Canvas is used in this thesis to depict a clear understanding of what the Business Model looks like to see what companies need to change to adapt to future requirements. Although many may think that the evolution of technology hinders companies, it is, in actuality, the fact that companies do not change their strategy fast enough to address new technology that hinders companies (Christensen et al., 1996).

With this background, companies need to have a clear transition strategy of becoming more service focused. Firms will need to rethink the business model in this transition. (Bustinza, Bigdeli, Baines & Elliot, 2015)

### 1.3 PURPOSE

As mentioned above, there is research supporting the arguments of the need for traditional manufacturing firms to revisit and rethink the business model of becoming more service focused. The purpose of this research is to create an understanding of the challenges that traditional manufacturing firms go through in the transition to servitization and to understand what requirements this transition is demanding on the business model for manufacturing firms. The research also aims to provide practical guidelines for traditional manufacturing firms that are facing challenges of becoming more service focused.

### 1.4 RESEARCH QUESTION

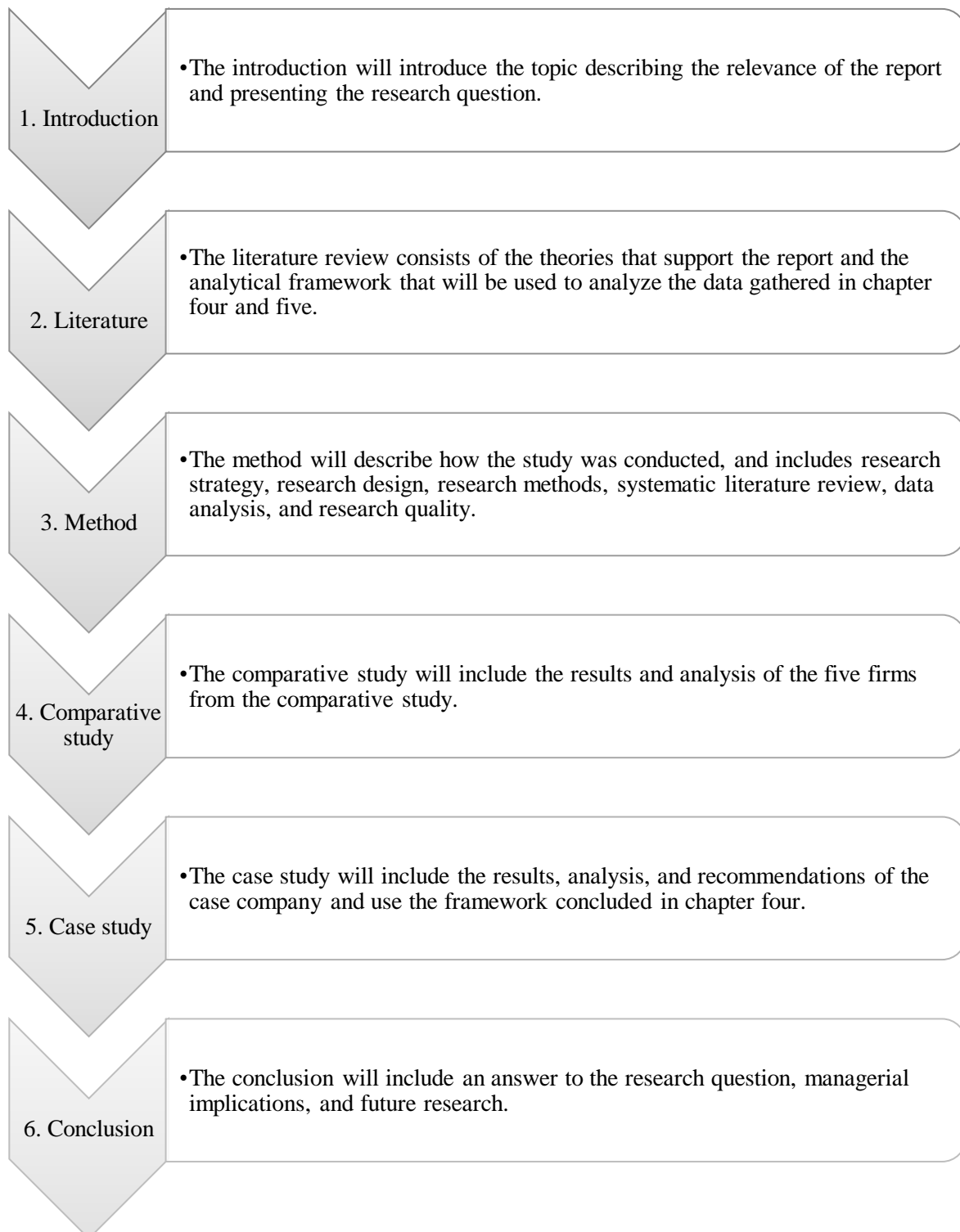
*How can traditional manufacturing firms transform from their current business model to a more service-focused business model?*

The above stated research questions will be answered through the sub questions bellow.

- *What are the challenges of becoming more service-focused?*
- *What can traditional manufacturing firms learn from successful service providers and manufacturing firms that have begun the transformation of becoming more service-focused?*

## 1.5 DISPOSITION

The report will be structured in six chapters to answer the defined research question.



*Figure 1. 2 Disposition*

## 2. LITERATURE REVIEW

Chapter two explains the theory that the thesis is based on, which includes servitization, service paradox, business model, business model innovation, and literature model. This section aims to provide the reader with an understanding of factors that are playing a huge role in companies' futures today.

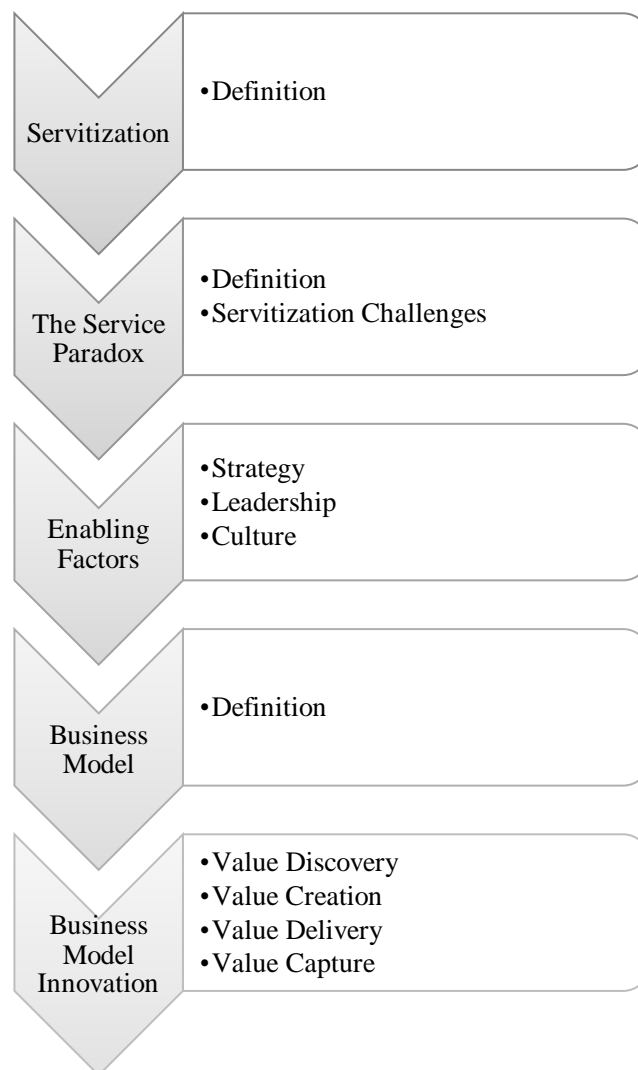


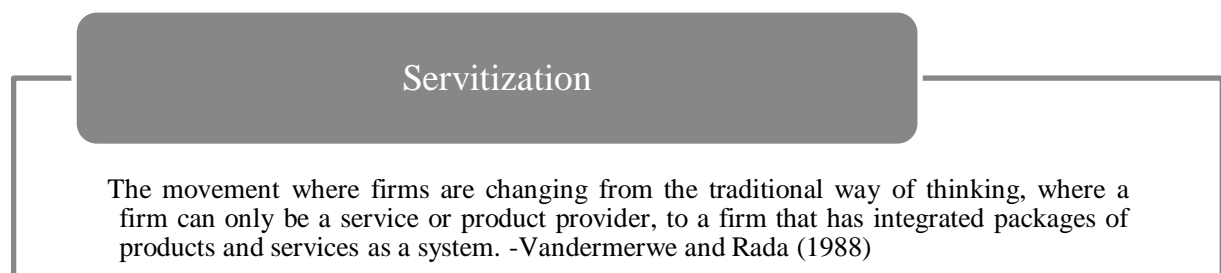
Figure 2. 1 Overview of Literature Review



## 2.1 SERVICITIZATION

This part of the report will explain the definition of servitization and the servitization process. Understanding servitization and the servitization process is necessary because many companies today are going through the process of becoming more service focused. To understand why companies need to make changes to their culture, leadership, strategy, and business model, they must first understand what servitization is and why companies are becoming more service focused.

Servitization has become a buzzword that companies are using to become more profitable (Baines & Lightfoot, 2013; Vandermerwe & Rada, 1988). There are multiple definitions of servitization. The definition of servitization was already mentioned in 1988. Researchers such as Vandermerwe and Rada (1988) stated that servitization is when industries are starting a movement where firms include service in the business to create a competitive advantage. The researchers identified the need for being able to develop services and create value to keep the customers to become successful. The definition of Servitization is the movement from a traditional firm that offers services or products to a firm that has combined packages of products and services as a system (Vandermerwe & Rada, 1988). The aim of servitization, according to Vandermerwe & Rada (1988), is to lock out competitors, lock in customers, and increase differentiation. Tukker (2004) has defined this movement as a product-service system business model that is similar to servitization, which is when firms package services and products together to satisfy customer needs.



*Figure 2. 2 Definition of Servitization (Vandermerwe & Rada, 1988)*

The servitization process, according to Vandermerwe and Rada (1988), is mainly through three stages. The first stage is when firms are still either a "product" or "service" firm. The second stage is when firms are offering both services and products. For example, if manufacturing firms start to offer maintenance or if a bank starts to offer products. The third stage of moving

to servitization is when firms are offering goods, services, support, knowledge, and self-service. (Vandermerwe and Rada, 1988)

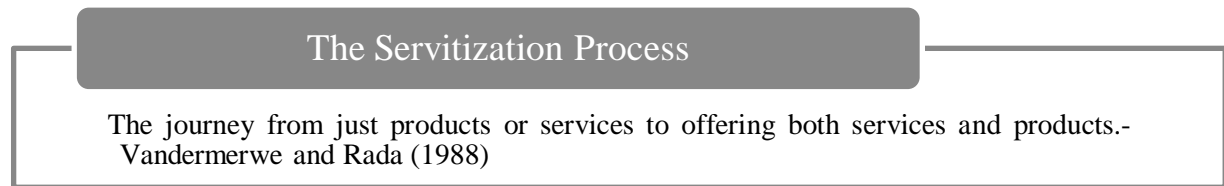


Figure 2. 3 Definition of The Servitization Process (Vandermerwe & Rada, 1988)

To specify further different types of services, Tukker (2004) has identified the archetypical product-service system (See figure 2.1.1). Tukker (2004) has separated between three main types of services, which are product-oriented services, use-oriented services, and result-oriented services. Product-oriented services are services that aid the product; the business model is fit for sales of products. User-oriented service is when firms are creating value based on customer usage and experience, for example, leasing, renting, sharing, or product pooling. Result-oriented services are when firms are selling a result that the client and provider have decided on together, and there is no set product involved. An example of result-oriented service is outsourcing, where the contract is based on performance indicators, which are the quality of the result. The product content decreases; meanwhile, the service content increases going from pure product to pure services. (Tukker, 2004)

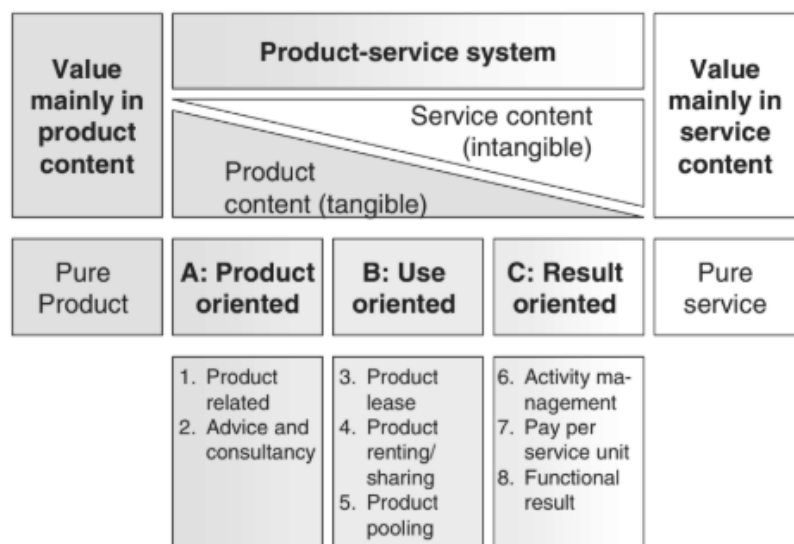


Figure 2. 4 Main and subcategories of PSS (Product-service systems) (Tukker, 2004)

According to Tether (2014), four characteristics distinguish services from physical products shown in figure 2.5. The following are the four characteristics of services: services are intangible or immaterial, services are inseparable between what is provided and who is providing it, services only exist in time, services are carried out, and services are heterogeneous, which means that all services vary or are different. The characteristics that are distinctive for products are: products are tangible, products are separable between what is provided and who is providing it, products have an independent existence, products are homogeneous which means that when manufacturing they aim to first design and then produce in volume so that each product is identical. (Tether, 2014)

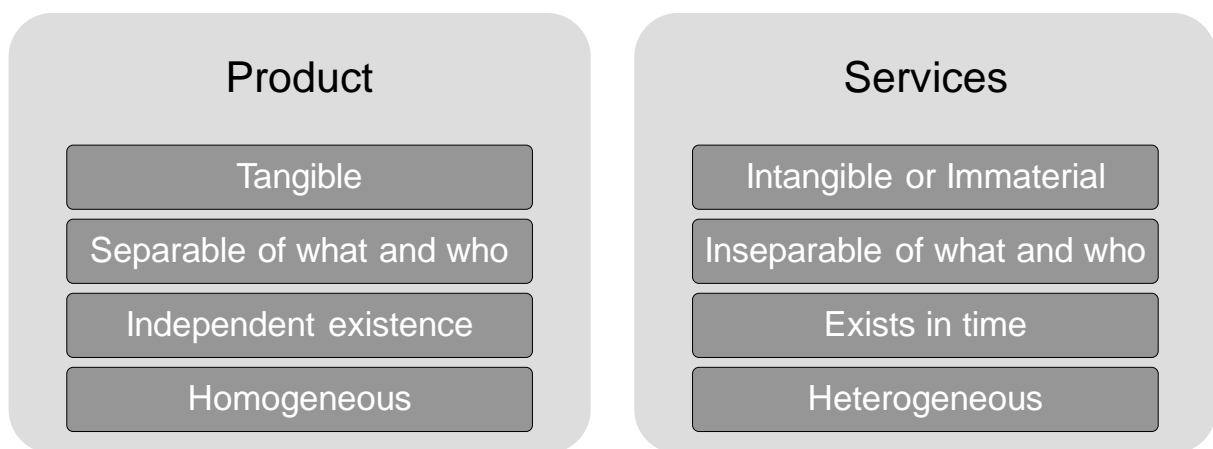


Figure 2. 5 Differences between Products and Services (Tether, 2014)

## 2.2 THE SERVICE PARADOX

The service paradox will be presented in this part of the report. The service paradox is when firms are investing in developing service offerings, which leads to higher costs but not generating higher returns. Research conducted by Gebauer, Fleisch, and Friedliet (2005) discovered that manufacturing firms that are transforming to a service-focused firm could potentially fall into the service paradox. Services should create another revenue source, higher profit margins, and more stable revenues. However, the research has identified that firms have difficulties exploiting financial benefits with services. Figure 2.6 shows that product manufacturing firms can either become a successful service provider by investing in service and also increase the revenues (path 1) or fall into the service paradox where the investment does not creates returns (path 2). (Gebauer et al., 2005)

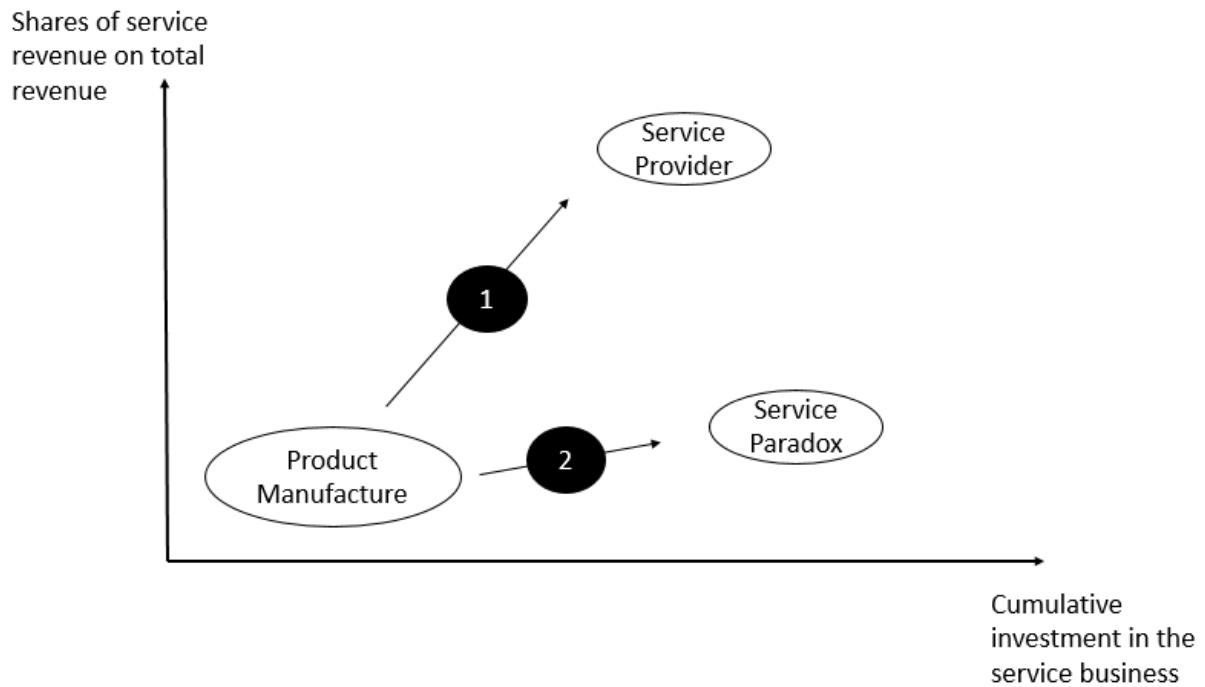


Figure 2. 6 Service Paradox (Gebauer et al., 2005)

Fang et al. (2008) state that it is vital that the services make up 20-30% of the revenue before manufacturing firms can create financial benefits and overcome the service paradox. Through research from Gebauer et al. (2005), around 11% of the investigated firms have services that are covering 40% of their revenues. Meanwhile, 38.7% of firms have services that are covering only 10% of their total revenue (Gebauer et al., 2005). These statistics indicate that there are cases where firms successfully overcome the service paradox, which is 11% in this case (Gebauer et al., 2005).

Service Paradox

The service paradox is when firms are investing in developing service offerings, which leads to higher costs but not generating higher returns. - Gebauer et al., (2005)

Figure 2. 7 Definition of Service Paradox (Gebauer et al., 2005)

Chapter 2.3 will further explain that the enabling factors (leadership, culture, and strategy) need to be developed to avoid the service paradox and maximize the effect of servitization.

## 2.3 ENABLING FACTORS

The research conducted by Gebauer et al. (2005) concludes that to avoid the service paradox firms need to establish a market-oriented development process, focus on the services that create value for the customer, implement relationship marketing, define a service strategy, establish a service organization, and change the culture into a service culture. Research points to several actions that can be taken to avoid falling into the service paradox; in this thesis, they will be called enabling factors. Enabling factors are essential because many manufacturing companies first need to consider enabling factors before reaching the full potential of servitization. The importance of changing enabling factors such as strategy, leadership, and culture will be discussed in this sub-chapter. (Gebauer et al, 2005)

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### 2.3.1 STRATEGY

Gebauer et al. (2005) suggest that firms need to implement some organizational arrangements to create action plans to become more service focused. The firms need to create a service development process that is market-oriented and clearly defined. Meaning that the firms need to create a deeper understanding of the customer to create a value proposition that solves the customer's needs (De Bretani, 2001). The firms that succeed in having 40% of their revenues as services have more information about the customer, which creates a deeper understanding of the customer and allows for market-oriented service development (Gebauer et al., 2005).

There will also be a need to create a deeper relationship with the customer, which requires relationship marketing (Grönros, 1998). A service strategy has proven to be necessary, the research from Gebauer et al. (2005) demonstrates that firms with a clear service strategy do not fail to capture the economic benefits. Studies conducted by Oliva and Kallenberg (2003) demonstrate that firms with a decentralized service organization successfully increase revenues. Heskett et al. (1997) found that manufacturing firms that want to be successful in the service area need to operate as a professional service organization with profit and loss responsibility and employee satisfaction responsibility. The need for creating a service culture that is not focused on efficiency and economies of scale, instead the core values should be around innovation, customization, and flexibility (Gebauer et al., 2005).

### 2.3.2 LEADERSHIP

There are mainly three arguments or aspects that are of importance to avoid the service paradox. (1) Managerial motivation is crucial to overcome the service paradox (Vroom, 1964). It has been shown that managers tend to perform if the results are possible to achieve, and if it is related to rewards (Vroom, 1964). Meaning that top managers need to create the correct incentives for employees to focus and perform. (2) The second is the importance of recognizing economic potential (Gebauer et al., 2005). Due to the nature of services, firms tend to prefer investing in products; therefore, managers must understand and believe in the economic benefits of services (Gebauer et al., 2005). (3) The third is also related to human behavior, Kahneman's (1982) research shows that humans are often risk-averse in the decision-making process. Managers avoid making service investments because an investment in services is more uncertain than an investment in products (Kahneman, 1982). There is an internal risk of creating a business that requires capabilities and resources that the firms do not have and there is an external risk of overstepping the relationship boundaries (Gebauer et al., 2005).

According to Barratt-Pugh and Bahn (2015), to accelerate change, the human resource (HR) department should focus on building relational leadership capabilities and support team activity instead of only focusing on technical competences. Relational leadership can include using informal agencies, involve staff in negotiations, support for local team activity, and involving staff in additional duties, which leads to accelerated cultural development. By supporting relational managing actions, it will most visibly show change indicators for staff. HR should focus on noticeably leading the change. HR is an essential factor in a successful change in a company; HR has the ability to network and has the potential to make a change successful. (Barratt-Pugh & Bahn, 2015)

Furthermore, a service provider needs to have a loose leadership style and trust for their employees (Kanowitz, 2018). It is emphasized that firms should have a "hands-off" management style that improves innovation and creates freedom (Kanowitz, 2018). The leaders should encourage and reward desired behavior, such as independent decision making and an open, innovative mindset (Kanowitz, 2018). Leaders in service companies should encourage a mindset of "think big, start small, fail quickly and scale fast" (Mui, 2011). "Think big, start small, fail quickly, and scale fast" should be encouraged throughout a service organization as well as in the decision-making process (Brightline, 2018).

### 2.3.3 CULTURE

According to Schein (1991) and Barratt-Pugh and Bahn (2015), culture is the values and patterns of shared assumptions that are developed in a firm through social interactions. Cultural changes are when the values and assumptions are disrupted (Schein, 1991; Barratt-Pugh & Bahn, 2015). According to Gebauer et al. (2005), values that manufacturing companies often have are efficiency, economies of scale, and the notion that variety and flexibility are costly. Service companies, on the other hand, often focus on values like innovation, customization, and the view that flexibility and variety create profits (Gebauer et al., 2005).

According to a report conducted by the consultancy firm Solita (2019), firms tend to focus solely on the technology side of being data-driven, where the real challenge is to change the soft values such as organizational culture. The firms also need to change the core business of the company. Firms need to dare to become entirely data-driven, which can mean that they need to change the core business and not only implement an add on feature to the current ecosystem. Changing the core business can potentially lead to changes in key activities. (Solita, 2019)

According to Kotter (1995), one of the eight reasons that transformation fails is that changes in the corporation's culture are not anchored. One of the primary responsibilities when leading a cultural change is change management (Kotter, 1995). Changing mindsets and attitudes to fit the new culture at the workplace are the most critical obstacles when implementing change (Jetter et al., 2009). One important factor that a manufacturing company needs to consider is that having a practical implementation of a service goes hand in hand with creating a service culture (Gebauer et al., 2005). While creating a service culture, it is vital to have a balance between manufacturing values like efficiency and service-oriented values like the flexibility to diffuse resistance (Bowen et al., 1989). Manufacturing companies may need to make organizational climate and cultural changes to support new service-related goals (Gebauer et al., 2005).

Neely (2008) argues that there are three main challenges that manufacturing firms need to overcome in the servitization transition. To avoid the service paradox, firms need to meet these challenges. (1) the challenge with shifting mindset, (2) the challenge of timescale, and (3) the challenge of business models and customer offerings. The first challenge, shifting mindset, is related to the marketing and sales function. When the firms are more service-focused, relational

marketing becomes essential. Each transaction is based on a longer relationship between the customer and the supplier. A longer relationship between the customer and the supplier affects the way products and services will be sold, as the sales arguments will be changed. The second challenge, timescale, emphasizes the importance of managing long term risk and exposure, identifying profitability, and managing long term partnerships. The third challenge, business model and customer offering, is related to understanding the customer needs and developing capabilities internally to both create and capture the value of services. (Neely, 2008)

Service providers need to avoid making all the decisions on top management level (Pearce & Robinsson, 2015). The information needed to make decisions should be available for everyone to avoid top management making all the decisions. The service firms need to have a culture of embracing their employees to make their own decisions. The culture needs to consist of trust, openness, and honesty, but this also creates a particular type of pressure on the employees (Brightline, 2018).

Enabling Factors		
<b>Strategy</b> <ul style="list-style-type: none"> <li>• Firms need to implement organizational arrangements and create an action plan to become more service focused</li> </ul>	<b>Leadership</b> <ul style="list-style-type: none"> <li>• Managerial motivation</li> <li>• To accelerate change, the human resource department should focus on building relational leadership capabilities and support team activities; HR has the network and has the power to make a change successful</li> <li>• A service provider needs to have a loose leadership style and trust for their employees</li> </ul>	<b>Culture</b> <ul style="list-style-type: none"> <li>• Firms tend to focus solely on the technology side of being data-driven, where the real challenge is to change the soft values</li> <li>• Service firms need to have a culture where employees make their own decisions; the culture needs to consist of trust, openness, responsibility, and honesty.</li> </ul>

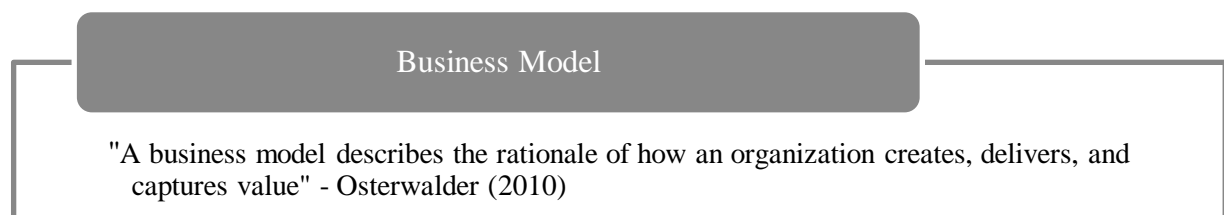
Figure 2. 8 Summary of Enabling Factors



## 2.4 BUSINESS MODEL

Understanding the business model is essential for the transformation to servitization. Chapter 2.4 has a description and definition of business model and Business Model Canvas.

The definition of a business model can differ depending on researchers. The way companies create and capture value is one standard definition. However, it is often how firms create and capture the value that differs in definitions. Margretta (2002) describes a business model as a story that defines the customers and describes how companies can make money from value. Chesbrough (2007) defines the business model similarly with the primary function to create and capture value but also relates the business model to the way the company works. Johnsson et al. (2008) define a business model with four components: customer value proposition, profit formula, key resources, and key processes that are required to create and capture value. Kaplan (2012), on the other hand, defines a business model as the story of how firms create, deliver, and capture value. Schaltegger et al. (2011) define business models as an idea of how business is done to capture value. There are many different definitions of business model, however all definitions include how firms create and capture value. In this report, the definition of the business model is based on Alexander Osterwalder's (2010) study. Osterwalder's (2010) definition will provide a systematic way of innovating in the business model, which will be relevant to conduct this research.



*Figure 2. 9 Definition of Business Model (Osterwalder, 2010)*

According to Osterwalder (2010), "A business model describes the rationale of how an organization creates, delivers, and captures value" (p. 14). Business Model Canvas is used to help create a "shared language" that allows everyone to have a clear understanding of a company's business model. It is also vital that there is a similar understanding of the business model to innovate and create an aligned strategy. A business model shows the strategy of how a company plans to make money, and Business Model Canvas gives a clear picture of this plan.

Many companies' around the world have used Business Model Canvas (See Figure 2.10 for illustration of business model canvas). (Osterwalder, 2010)

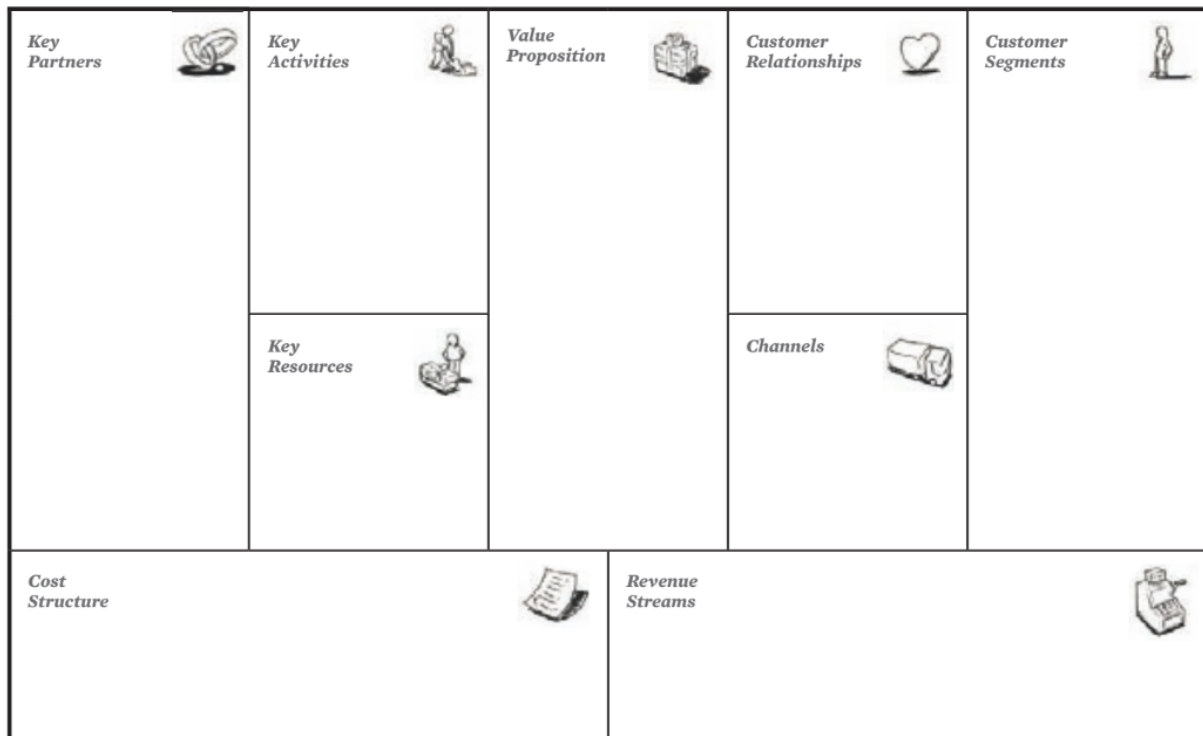
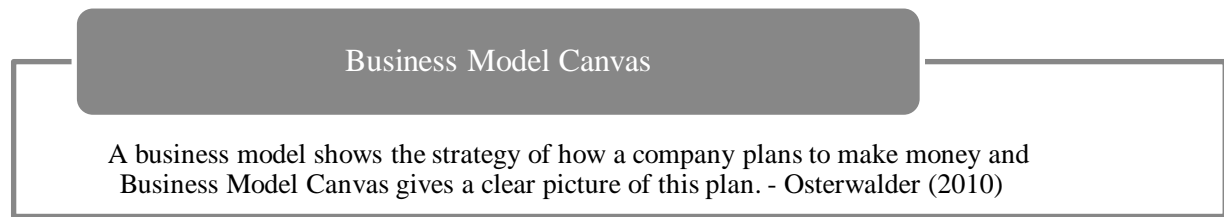


Figure 2. 10 Business Model Canvas (Osterwalder, 2010)

Business Model Canvas is divided into nine blocks that reflects how a company anticipates that they will make money. These nine blocks include customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure. The blocks are interlinked with each other to build a robust and integrated business model with all nine parts working towards the same goal. The value proposition explains what value is created, and the key activities, key resources, and key partners show how value is created. Customer segment, customer relationship, and distribution channels show how value is transferred. Lastly, cost structure and revenue structure show how value is captured. (Osterwalder, 2010)



*Figure 2. 11 Definition of Business Model Canvas (Osterwalder, 2010)*

The business model canvas is a framework used to support firms in the business model innovation process. The framework consists of nine segments that describe a business model. Each of these segments can potentially require a change to adapt to new trends (Osterwalder, 2010). According to Teece (2018), the business model design matters as much as the technology and operations to create success in business. Wise and Baumgartner (1999) state that smart manufacturing firms should go downstream to capture the created value. The authors mean that by providing services, firms can capture the value at the end of the value chain, which is where the money is (Wise & Baumgartner, 1999). The traditional strategy of manufacturing firms is based on vertically integrated supply chains; production activities focused on cost control and economies of scale. As a manufacturing firm needs to capture the value, there is a need to redefine the value chain, build customer allegiances, and rethink vertical integration (Wise & Baumgartner, 1999).

## 2.5 BUSINESS MODEL INNOVATION

Chapter 2.5 will include an explanation of how firms can use business model innovation to meet the challenges of servitization. Business model innovation helps to identify new ways of discovering, creating, delivering, and capturing value. Business model innovation is essential; many manufacturing companies must consider making changes in the business model to reach full servitization potential (Osterwalder, 2010). In the first section, multiple descriptions of business model innovation and big data-driven business model innovation are given, in order to create an understanding of the importance of a data driven business model in the service journey. There will be a description of value discovery, value creation, value delivery, and value capture in chapter 2.5.1 to 2.5.4.

The framework of big data-driven business model innovation developed by Sarah Cheah and Shenghui Wang (2017), illustrates how firms can use big data in the business model. The consulting firm Solita (2019) suggests that firms need to develop a data-driven business model

to tackle the challenges of becoming more service focused in the digitalized era. A data-driven business model means that all activities in the firm need to be guided by data. The first activity should be to change the organization to become a data-driven business (Solita, 2019).

According to the definition of a business model, firms need to meet the challenges of adapting the business model to trends to capture the created value. The trend of servitization is a consequence of the digitalization paradigm and has challenged the original business models in many industries. For example, in the automotive industry, the ordinary business model of owning a product could potentially not be competitive in the future. To create a competitive advantage, the core activities of an automotive company has to focus on mobility service, eco-lifestyle, personalization, and sharification (car sharing). The digital platform will increase competition around services. (Athanasopoulou, Bouwman, Nikayin & Reuver, 2016)

According to Alina Sorescu (2017), the primary function of business model innovation is to identify new ways of creating, capturing, delivering new value propositions. Therefore, business model innovation does not necessarily need to be product innovation (Sorescu, 2017). Tunguz and Bien (2016) argues that big data enables firms to create better services and products and also a tool for business model innovation. Big data has been a resource used to gain a competitive advantage in many markets (Marshall, Mueck, and Shockley, 2015). In an IBM innovation survey, it indicated that around 36 % of the firms with big data have higher revenue growth and operation efficiency, compared to the competitors (Marshall et al., 2015). Alina Sorescu (2017) argues that a business model needs to be able to leverage external data and internal data. The business model needs to be capable of retrieving, packaging, and selling relevant data to fulfill customer needs (Alina Sorescu, 2017). The four characteristics of big data, volume, velocity, variety, and veracity enables firms to create new business opportunities through understanding the market trends, customer behavior, and actions (Erevelles et al., 2016).

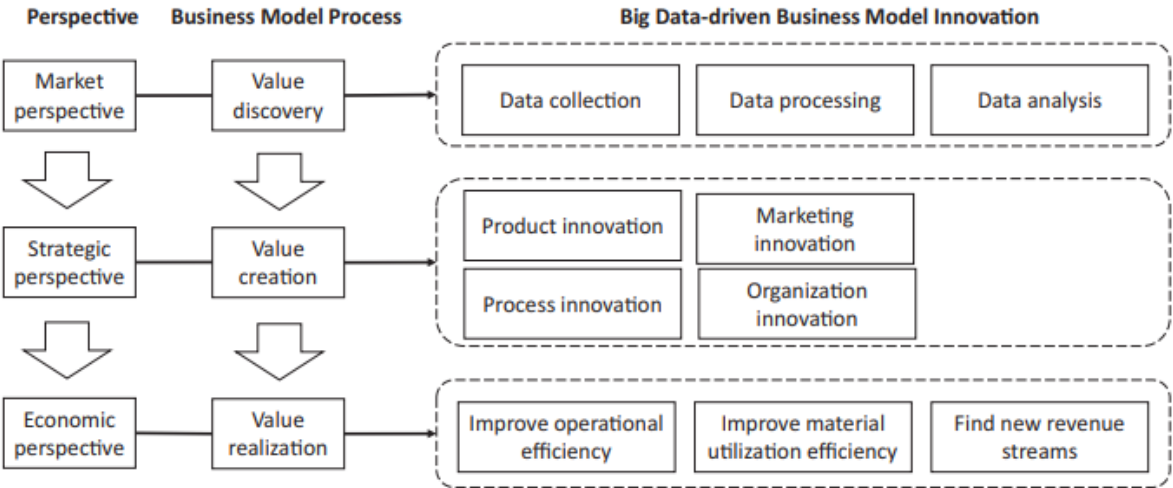


Figure 2. 12 Integrated Framework of Big DDBM Innovation (Cheah & Wang, 2017)

The framework of big data-driven business model innovation, developed by Sarah Cheah and Shenghui Wang (2017), illustrates how firms can use big data in the business model. This definition, together with the definition of a business model, as mentioned above, identifies how big data can discover, create, deliver, and capture value.

Business Model Innovation

- Business model innovation helps to identify new ways of *discovering, creating, delivering and capturing value*
- Big data-driven business model innovation illustrates how firms can use big data in the business model
- Big data enables firms to create better services and products, and could be a resource for business model innovation

Figure 2. 13 Summary of Business Model Innovation

2.5.1 VALUE DISCOVERY

The value discovered by collecting and analyzing data can lead to a unique value proposition that could potentially create a competitive advantage for the firm, increase their market and customer insight, and discover how to satisfy customers. The value proposition includes the products and services that the company offers. These products and services create value and satisfy the customer's needs. Many different things can create value, for example, price or speed of service. Value can also be qualitative; for example, the design of a product or the customer

experience. Other value creating elements are the "newness" of a product or service which satisfies a new set of needs, improving performance, customization, brand or status, and the ability to "get the job done." Value creating elements can also be cost reduction, risk reduction, accessibility, and convenience or usability. (Osterwalder, 2010)

Collecting and analyzing data can help firms become more innovative, although Solita (2019) has identified that firms tend to have challenges of using the data practically. Firms need to be able to use the data and build platforms that will make it ready for the users to interpret, analyze, and use the data. Without the possibility to use the data correctly, it will make it difficult for firms to discover the potential value. (Solita, 2019)

According to Cheah and Wang (2017), the big data value chain is data collection, data storage, data processing, data sharing (data analysis and data visualization), and data application, which is shown in the figure below (Figure 2.14). Meaning that to use data to discover value, the firm needs to collect data but also analyze and visualize the collected data through management systems. The collected data needs to be stored in a platform to be processed. The data processing is preparing data to be analyzed, meaning that data processing requires technologies that can identify the hidden information and value. The end product of the data should be a data application that supports complex decision making and enables experimentation of business model innovation, which will create the possibility to discover new business opportunities. (Cheah & Wang, 2017)

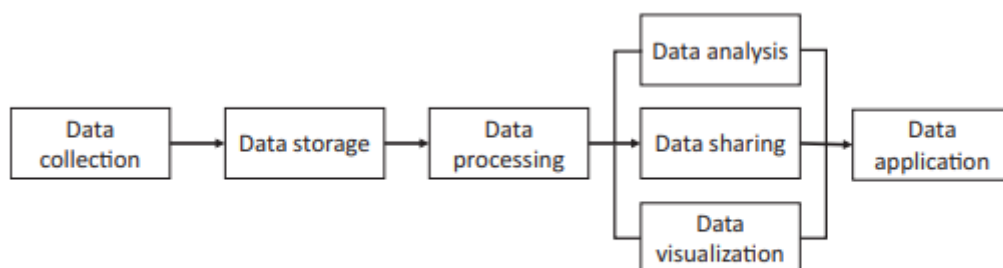
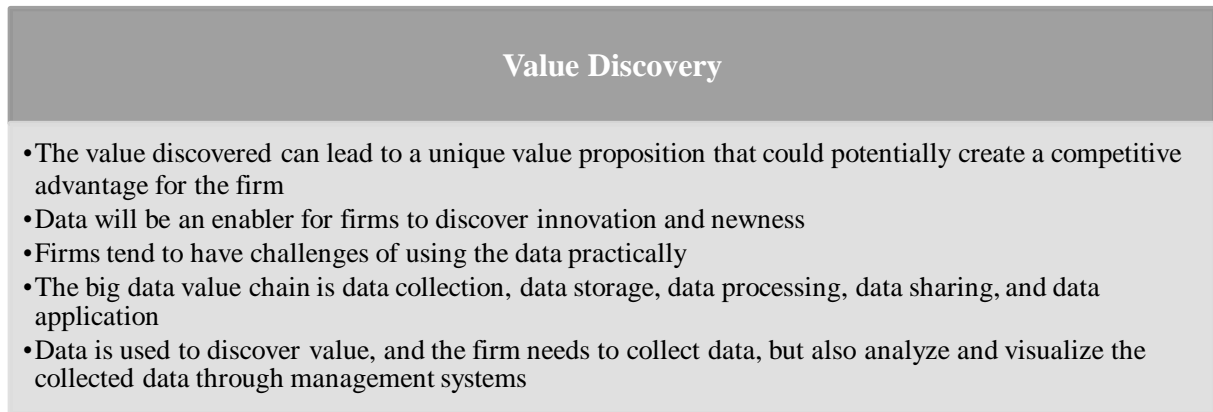


Figure 2. 14 Big Data Value Chain (Cheah & Wang, 2017)

There needs to be an ambidextrous approach, with both exploration and exploitation, to transform from the old business model to the new business model for the digital paradigm. The amount of data collected through connected products needs to be handled and managed to use it effectively for commercial purposes. (Athanasopoulou et al., 2016).



*Figure 2. 15 Summary of Value Discovery*

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## 2.5.2 VALUE CREATION

According to Cheah & Wang (2017), the value that is discovered through big data needs to be created within the firm. Big data enables firms to identify the opportunities, but the firm needs to allocate the key activities, key resources, and key partners to support the discovery from big data (Cheah & Wang, 2017). According to Osterwalder (2010), the value creation within a firm is through the key activities, key resources, and key partners. First, competence and partnership will be discussed and then organizational structure which are both important parts of value creation.

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### 2.5.2.1 COMPETENCE AND PARTNERSHIP

The key partnership block includes the suppliers and partners of the company. Working with partners can reduce risk and gain resources. There are four different types of partnerships that companies can have. These partnerships include a strategic alliance (among non-competitors), cooptation (a strategic partnership between competitors), a joint venture (develop new businesses), or a buyer-supplier relationship (assure reliable supplies). There are also three reasons why companies want to have a partnership. These are optimization and economy of scale, reduction of risk and uncertainty, and acquisition of particulate resources and activities. (Osterwalder, 2010)

In the aspect of key partners, as new entrants are expected to enter the market, there will be a need to have partners that obtain the knowledge that is outside of the firm's core competencies. For instance, in the automotive industry, except for ordinary car manufacturers, car dealers, fuel providers, different players such as app providers and platform providers are also entering the market. The car is becoming a basic product; meanwhile, the service is the premium add-ons that create profit margins and also satisfy customers. (Athanasopoulou et al., 2016)

The key resource block includes the most valuable assets that a company does (Osterwalder, 2010). Key resources can be physical (building or vehicles), intellectual (knowledge or patents), financial (financial guarantees or stock options), or human (human resources) (Osterwalder, 2010). The company can own or lease the key resources, or key resources can be attained through key partners (Osterwalder, 2010). The resource-based view argues that firms need to develop resources and capabilities to be competitive in the market. However, manufacturing firms that are in the servitization process do not have all the resources to create competitive advantages (Kindström and Kowalkowski, 2014). According to Teece (2018), a resource has the characteristics of valuable, rare, imperfectly imitable, and non-substitutable. Teece emphasizes that it is vital that these resources and capabilities are aligned and coherent with the business model and strategy (Teece, 2018), which means that a firm with data-driven business models needs to develop skills and capabilities that support the model.

According to a report conducted by Solita (2019), firms need to develop hard and soft skills. Hard skills such as data scientist and data warehouse experts, but also soft skills such as customer and market insights. There is a need for diversity and perspectives (Solita, 2019). It is argued that big data is an intellectual resource that firms need to develop to be competitive in the market, but this can potentially also lead to a lower need for human resources (Choo & Bontis, 2002). The type of competencies shifts when the business model is challenged (Athanasopoulou et al., 2016). For example, the core business for automotive firms has long been manufacturing and the engineering part of the product, but with all services, software development becomes a capability that is needed (Athanasopoulou et al., 2016).



### 2.5.2.2 ORGANIZATIONAL STRUCTURE

Studies from researchers Parida, Sjödin, Wincent, and Kohtamäki (2014) have identified that manufacturing firms in the servitization process need to go through an organizational transformation to be able to create, deliver, and capture value. Firms need to rethink the process, routines, and capabilities. The researchers have identified four dimensions that were a common factor for success in the transition. These are business model design, network management, integrated development, and service delivery network management. The four dimensions require a set of capabilities that need to be developed, which are explained in Appendix A. (Parida et al., 2014)

Studies from Bustiniza, Bigdeli, Baines, and Elliot (2015) have concluded that organizational structure impacts the relationship of servitization strategy and the financial performance or competitive advantage. The authors suggest four different types of service functions that can be implemented in firms that are becoming more service focused. The first option is to create a new business function with full-service authority and responsibility. The second option is to create a new business function to manage a specific type of service; meanwhile, other services are integrated into the current business. The third option is to integrate and let the service business operate in parallel with the product business, where the functions are handling both services and products. The fourth option is to outsource some of the services and integrate the rest in the current business. The researchers have discovered that firms need to choose the most versatile option by understanding what kind of competitive advantage that the firm wants to create. (Bustiniza et al., 2015)

In case the firm wants to create a competitive advantage by differentiation, research suggests that option one is most suitable; the service should be managed and developed directly from a business function (Bustiniza et al., 2015). If the firm wants to create competitive advantage through customer satisfaction, option two or four is most suitable; the firm should have a specialist unit or external partners (Bustiniza et al., 2015). In any case, Pengzhong, Zhang, and Min (2013) suggest that the service department needs to meet the requirements of being loose coupling, having low iteration, and highly flexible.

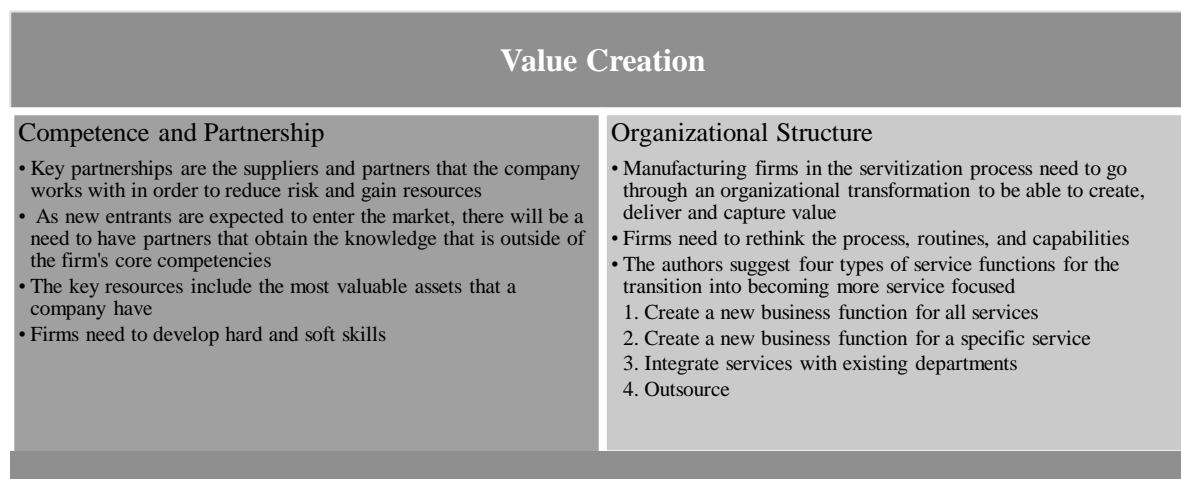


Figure 2. 16 Summary of Value Creation

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### 2.5.3 VALUE DELIVERY

The created value needs to be delivered to the customers. Value delivery is accompanied by identifying customer relationships (customer segments), and distribution channels.

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#### 2.5.3.1 CUSTOMER RELATIONSHIP

Osterwalder (2010) has defined the customer segment as the heart of the business model, as a firm needs to identify profitable customers to survive in the long term. The firm needs to take action and decide which customer group to create value for and which customers to ignore. To reach out to a profitable customer group the companies must first define what group or groups this target group should be and how they can satisfy the customer's needs. Customer segmentation can differ depending on behavior, attributes, and needs. The customer segment needs to be aligned with market characteristics, which can vary from mass markets, niche markets, distinguishing between market segments, a diversified business model that operates towards two unrelated customer segments, and multi-sided markets. (Osterwalder, 2010)

A successful business model requires that the other blocks of the canvas, such as value proposition, distribution channels, and customer relationships, are adapted to the specific customers' needs, which a data-driven business model will enable (Cheah & Wang, 2017). Another strategy is to have a different market segment, where customers have different needs and behavior (Osterwalder, 2010).

According to literature about servitization, firms should identify profitable customers instead of focusing on the volumes (Wise & Baumgartner, 1999). Building customer allegiances is one of the critical building blocks in the research conducted by Wise and Baumgartner (1999). To capture the value created from services, firms should focus on creating a strong relationship with profitable customers instead of focusing on increasing the number of customers. A firm must deliver a product but also provide services that will support the customer's business (Wise & Baumgartner, 1999).

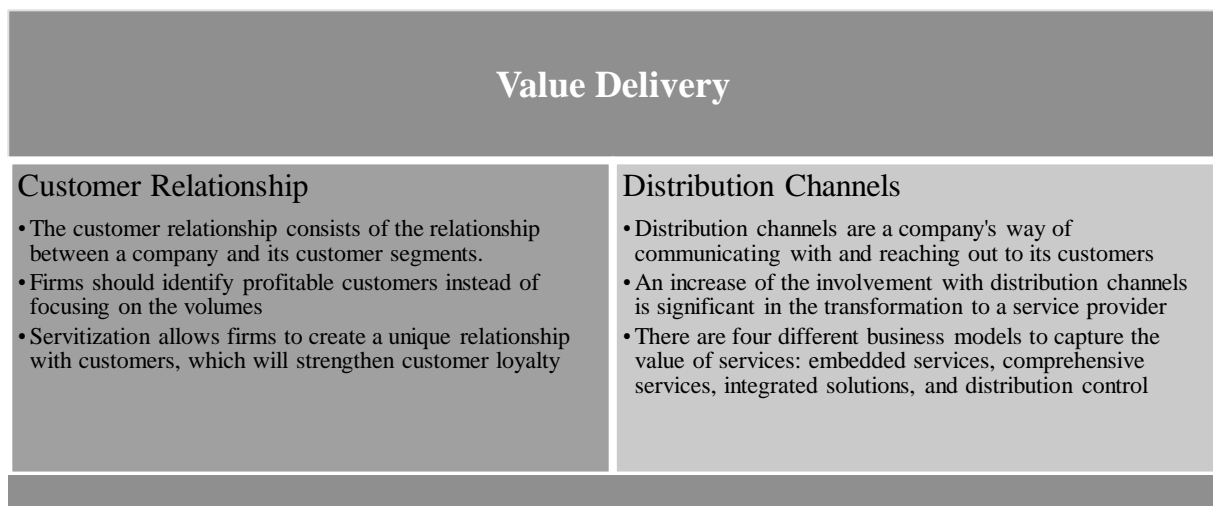
Servitization allows firms to create a unique relationship with customers, which will strengthen customer loyalty (Tukker, 2004). The customer relationship block consists of the relationship between a company and its customer segments. There are different kinds of relationships that companies can have with their different customer segments. These relationships consist of personal assistance, dedicated personal assistance, self-service, and automated services. More recently, companies have been building relationships with customers through communities where other customers can also communicate. Companies are additionally co-creating value with customers, where customers are engaging with companies and helping them evolve. (Osterwalder, 2010)

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### *2.5.3.2 DISTRIBUTION CHANNELS*

According to Wise and Baumgartner (1999), one crucial aspect to consider in the transformation to a service provider is to increase the involvement with distribution channels. The authors mean that to exploit the values of services, firms will need to focus on identifying new channels. There is a need for rethinking how to reach out to the customers. Wise and Baumgartner (1999) suggest four different business models that capture the value of services (embedded services, comprehensive services, integrated solutions, and distribution control). Distribution control is one of the four business models that are different compared to the others. The other three business models focus on creating services and products in different forms to the customer. Meanwhile, distribution control is about gaining control over the distribution activities. Regarding the value chain, firms need to change the mindset of selling services. Instead of seeing services as an enabler to sell the product, sales managers need to see that the product enables more service sales. (Wise and Baumgartner, 1999)

A company's way of communicating with and reaching out to its customers is part of the channels block. The three primary interfaces connecting the value proposition of the company to the customer segment are communication, distribution, and sales channels. To bring value to the customer, a company must find the right channels to reach the customer through. A company can either use their channels to reach customers, partner channels, or both types of channels. They can also choose to use direct or indirect channels. Direct channels are, for example, sales force or web sales, while indirect channels are own stores, partner stores, or wholesalers. Five "channel phases" are essential to cover when choosing what kind of channels to use. The five "channel phases" are to raise awareness about the company, evaluation of value proposition, how customers can purchase products and services, how value is delivered to customers, and the providence of post-purchase customer support. (Osterwalder, 2010)



*Figure 2. 17 Summary of Value Delivery*

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#### 2.5.4 VALUE CAPTURE

The value that a firm has identified, created, and delivered needs to also be captured. Osterwalder (2010) describes the process of capturing value with the help of revenue streams and the cost structure of the business model.

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##### 2.5.4.1 REVENUE STREAMS

Revenue streams consist of the money a company earns. There are two types of revenue streams transaction revenues and recurring revenues. Transaction revenues are one-time payments, and

recurring revenues are ongoing payments. There are many ways that companies can achieve higher revenue streams. Revenue streams could be asset sales or usage fees, which are one-time payments for a product or service. Revenue streams can also be a subscription fee, lending, renting, leasing, or licensing, which is giving customers the right to use the protected intellectual property when they pay a licensing fee. There are both fixed and dynamic pricing, which are pricing mechanisms that can cause varying revenue streams. A fixed price is a predefined price that is based on static variables. Dynamic pricing is a price that changes based on market conditions. (Osterwalder, 2010)

Authors Parida, Sjödin, Wincent, and Kohtamäki (2014) have concluded from their studies that all kinds of services are not financially beneficial. There are four primary services: add on customer services, maintenance service, R&D oriented services, and function & operational services (See Figure 2.18 for further explanation of the service types). Of the four service types, only add-on services had a negative relationship with financial performance. From the same study, it could be concluded that only 21% of the investigated firms achieved results from the services, where the relevant factor was the organizational structure, as mentioned above. (Parida et al., 2014)



Figure 2. 18 Industrial Product Service Business Model (Parida et al., 2014)

Bustiniza, Bigdeli, Baines, and Eliot (2015) concluded from their study that upstream companies could generate financial benefits from both customer satisfaction, and differentiation compared to downstream companies that can only benefit from customer satisfaction.

Companies such as Netflix and Spotify have successfully turned the industry from asset sales or usage fees, to subscription-based models. Adapting the business model to a cloud-based subscription increases the firm's competitive advantages as it will be possible to provide customized solutions, the way of communication and building customer relationships will be positively affected, and it will be possible to have better control over the distribution channels. In the finance world, recurring revenue streams such as subscription makes the planning and forecast easier. (Naukam, 2014)

Software as a service model has had an impact on many industries, and at the forefront is the software industry. However, there are challenges with the financial and controlling processes in firms, especially for firms that have a system that is established around the traditional way of working, such as manufacturing firms that sells products. Turning the revenue stream into a cloud-based subscription model comes with mainly three challenges and adaptations. (Naukam, 2014)

(1) The first challenge that comes with turning the revenue stream into a cloud-based subscription model is a need to create a strategic relationship between the finance and IT department. There needs to be a relationship between the finance and IT department to track the current business and to identify future business opportunities. The work from the IT department will not only affect the way of working internally, but it also has the potential to affect the customer's experience and revenue growth. The finance that knows the number and needs to have a balance between revenue growth and development expense needs to work closely with IT as the actions from both departments affect the revenue growth directly. The CIO needs to report to the CFO regarding the customer experience climate continuously, and the operations need to increase the IT capabilities to create value. The platform should allow the finance team to understand the customers better as the cloud model will provide data on customer behavior. Success in the strategic relationship will increase the competitive advantage in the firm. (Naukam, 2014)

(2) The second challenge that comes with turning the revenue stream into a cloud-based subscription model is the process, pricing, and how transactions are booked, managed, and tracked. VSOE (Vendor-specific objective evidence) in US Gaap has straightforward rules regarding revenue recognition for subscription-based models as it differs from original sales. Usually, revenue is recognized based on a contract which a subscription-based model does not have, which makes it tricky in the accounting perspective to handle these transactions. The items need to be unbundled as it will create challenges with the invoicing. When the offering is un-bundled, the offering will be re-bundled depending on the customer to avoid line item invoicing. Firms need to consider factors such as the price and timing, frequency of billing, billing in advance or arrears, anticipated number of users, rate plans, and disk space as the revenue streams become fluid. (Naukam, 2014)

(3) The third challenge that comes with turning the revenue stream into a cloud-based subscription model is a need to change the way of working, for example, installing analytics to track performance. With the subscription-based model, the finance team needs to monitor and track customer activity (Naukam, 2014). Companies in the B2B segment have developed different kinds of service solutions to gain new revenue streams, allowing their customers (OEM- original equipment manufacturer) to access data about the end customer and will also open up a new revenue stream to the OEM. For example, the automotive manufacturing firm continental offers its customers cloud-based software to access data about the end customers. Continental sells software as a service for OEMs to access basic vehicle data so the OEM can develop and focus on the core business. Selling software as a service has significantly reduced the investment and operating costs for the OEM (Tran, 2017). To successfully share data has put requirements on the firms internally to make the data into a business through analytics and tracking the performance. "Tech monsters" have outperformed in data analytics and tracking performance. The "tech monsters" mentioned have the competitive advantage of capturing the customer's subconscious; through the data provided to them, it is possible to predict what the customer wants before they know it themselves (Solita, 2019).

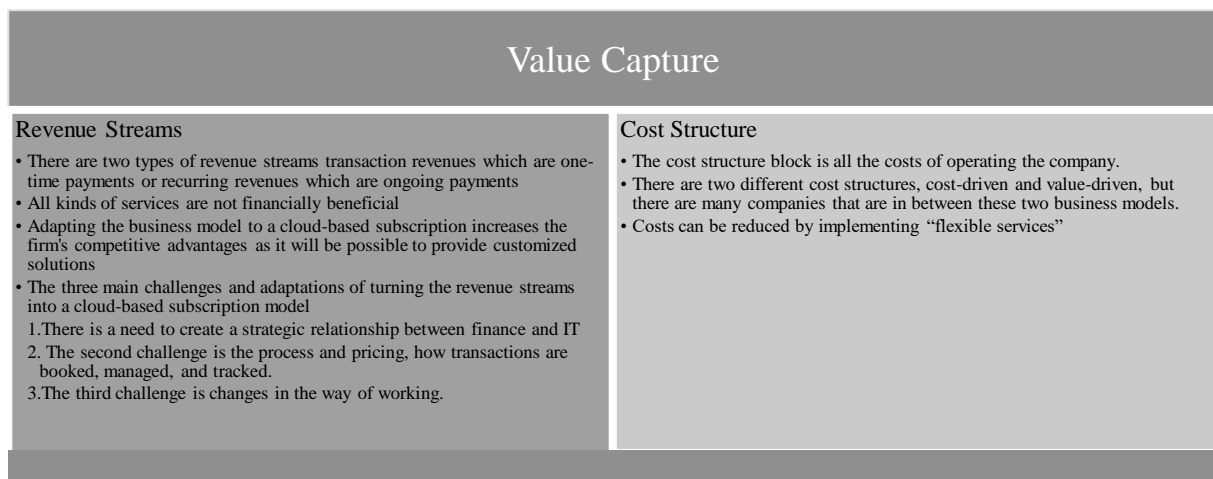
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#### *2.5.4.2 COST STRUCTURE*

The cost structure block is all the costs of operating the company. There are two different cost structures cost-driven and value-driven. Many companies are in between cost-driven and value-driven business models. Cost-driven focuses on minimizing costs, whereas value-driven

focuses on value-creation. Cost structures also have different characteristics, these can include fixed costs, variable costs, economies of scale, and economies of scope. (Osterwalder, 2010)

According to Anderson and Narus (1995), services have a significant impact on costs and profits. The model "flexible service" offers can support manufacturing firms in the process of reducing costs by focusing on creating value (Anderson & Narus, 1995). The model provides flexibility and creates the possibility to customize the offer to each customer. The model suggests that the firms should sell what is mentioned as "naked solutions" or "naked systems" to a low price to surround it with other options that are valuable for every specific customer. The "naked solutions" or "naked systems" are defined as the basic service valued by all customers (Anderson & Narus, 1995). The first step to implement this model is to identify the service portfolio in the firm. The second step is to categorize the services into existing standard services, existing optional services, and new services. The third step is to price the offerings, with flexible offering firms can adapt the price to different companies. The last step is to create value merchants, meaning that there is a need to adapt to the sales department into the correct mindset. According to Anderson and Narus (1995), creating incentives, for example, connecting the salary with long term profit, can change the mindset of the sales department. (Anderson & Narus, 1995)



*Figure 2. 19 Summary of Value Capture*



## 2.6 ANALYTICAL FRAMEWORK

The literature framework depicts the steps that need to be taken for an incumbent manufacturing company to become more service focused. It is vital to transform the enabling factors such as leadership, change to service culture (norms and values), and change to a service strategy to reach the full potential of servitization. Another important aspect is to make changes to the business model, which include value discovery, value creation, value delivery, and value capture. The "Servitization Journey for Manufacturing Firms Framework 1.0" (Figure 2.20) has been created by the researchers based on the literature collected throughout this chapter. This framework will be used as the analytical framework later in the report.

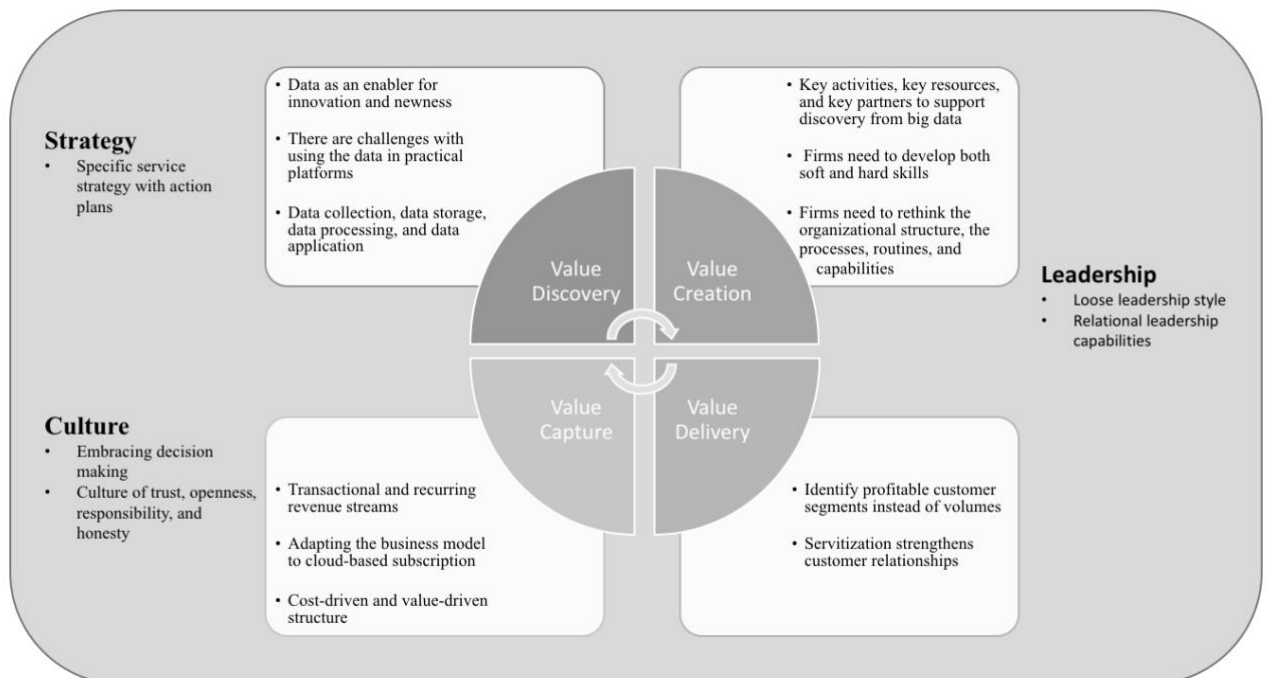


Figure 2. 20 Servitization Journey for Manufacturing Firms Framework 1.0 (Developed by authors)

Leadership, culture, and service strategy have been proven by the literature to be enabling factors in the transformation journey to become service focused. These elements are the base and enablers that must be changed before the firm's business model will create any value. (Gebauer et al., 2005; Jetter et al., 2009)

The importance of leadership to avoid the service paradox has been proven by authors such as Vroom (1964), Gebauer et al. (2005) and Kahneman (1982). The natural human behavior of being risk-averse creates resistance meaning that managers will be more uncertain about

investing and developing in something new such as the service area (Kahneman, 1982). The Leadership to create correct incentives to motivate the employees will be crucial in the transition phase (Gebauer et al., 2005). Top managers and leaders in the firm need to have a service development mindset and understand the potential of services (Gebauer et al., 2005). Further, authors such as Barratt-Pugh and Bahn (2015) state that service-focused firms require relational leadership, which is not a requirement for a product-oriented firm. A service-focused firm requires a relational leadership, and product-oriented firms do not require relational leadership which shows that a traditional manufacturing firm needs to ensure that the required leadership style is available and developed during the transition.

According to Kotter (1995), not being able to anchor the culture is one of the eight main reasons why change initiatives fail. Aligned with Neely's (2008) research, shifting mindset is one of the main challenges for manufacturing firms. Solita (2019) suggests that a data-driven business model is a key to solving the challenges in the service paradox, but the firms will need to go through the obstacle of changing the culture to a more open, flexible, and flat organization.

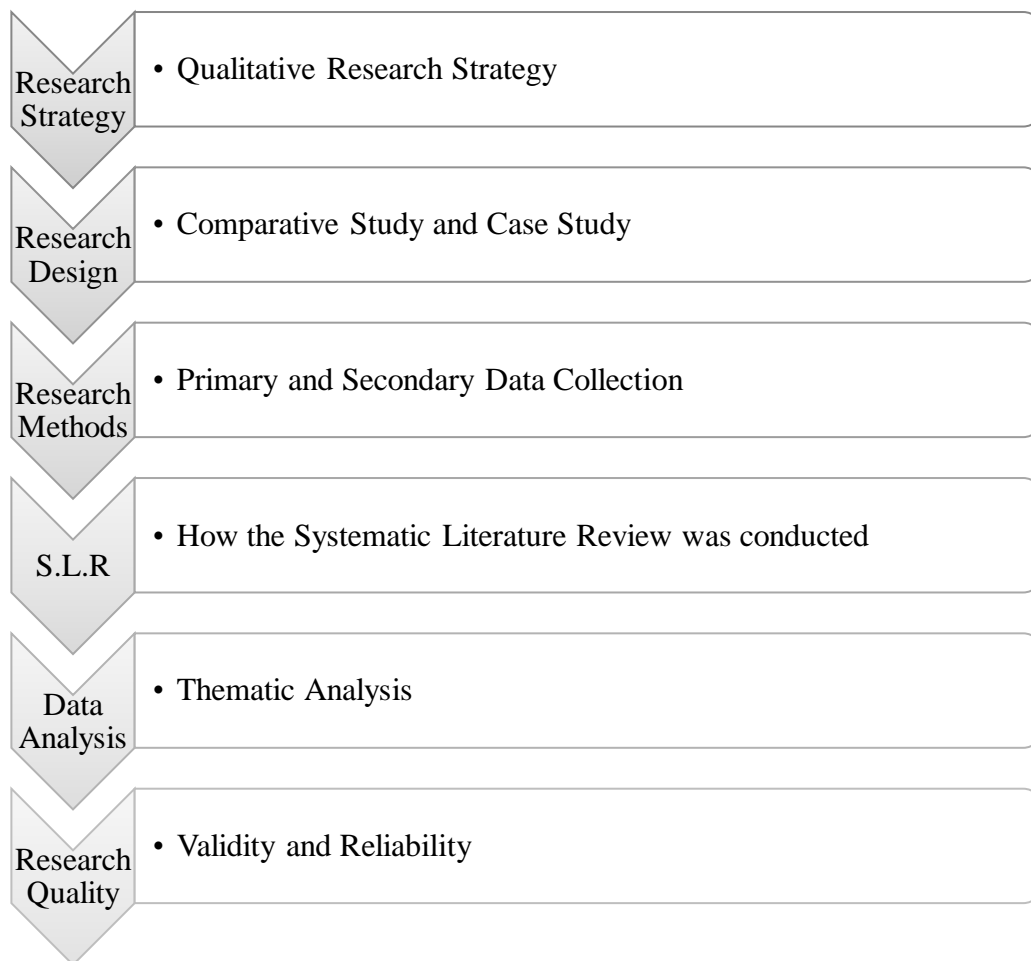
The developed service culture needs to be supported by a service strategy, with a relevant set of KPIs (Gebauer et al., 2005). A service-focused firm values innovation, customization, and flexibility, which is different compared to a product-driven firm (Gebauer et al., 2005). The nature of service makes it easier for leaders to make decisions on investment for products, meaning that the strategy and KPIs will be crucial for the rest of the firm to understand the economic potential of a service (Gebauer et al., 2005). Studies have also shown that a decentralized service strategy creates increased revenues (Olivia & Kallenberg, 2003). Further, Heskett et al. (1997) identified that traditional manufacturing firms would need to operate as professional service companies with profit and loss responsibilities.

When a manufacturing firm has managed the challenges that come from the enabling factors (culture, leadership, and strategy), the firm can develop the process of having a data-driven business model in the service area (Cheah & Wang, 2017). The first step is to be able to discover the value by collecting the data, processing it, and analyzing the data (Cheah & Wang, 2017). In the first part, a challenge will be to create a practical platform to illustrate that data collected throughout the company. The value will only be able to be used if it is interpretable (Solita, 2019). The second step is to create value in the data, where the key activities, key resources, and key partners will play a significant role (Osterwalder, 2010). The firms need to develop

dynamic capabilities to become competitive (Teece, 2018). The value should be delivered in a customized way, where the data will enable the firm to segment the customers and strengthen the relationship (Cheah & Wang, 2017). The last step of the model is to capture the value through revenue streams and cost structures (Osterwalder 2010). Firms need to be able to adapt to new revenue streams that come with a set of challenges (Naukam, 2014). Part of being able to capture the value is to create internal efficiencies with the data collected (Naukam, 2014).

### 3. METHOD

Chapter three explains the choice of research strategy, research design, research method, systematic literature review, data analysis, and research quality of the thesis. This section aims to provide the reader with a clear picture of how this thesis was conducted, along with decisions that were made during the process.



*Figure 3. 1 Overview of Method*

#### 3.1 RESEARCH STRATEGY

To answer the research question in the best possible way, the researchers chose to apply a qualitative research strategy. Bryman & Bell (2011) state that a qualitative research strategy focuses on the emphasis of words. Due to the type of research question and case, a qualitative research strategy fits this study best. A qualitative research strategy was chosen because it allows the researchers to collect more detailed information, which will be done through

interviews and collection of secondary data. One reason that qualitative research strategy is more detailed is that interviews give the research participants a chance to elaborate on their answers. A second reason is that a qualitative research strategy allows for a higher degree of flexibility. The relationship between theory and research is an important concept to consider. In this study, an abductive approach will be set because it allows the researchers to modify the literature after the data collection. The theory will be used as a base to analyze the data collected through the research process. Meaning that the data collection and theory will be continuously compared. Theoretical reflections were done while collecting the data. Through the interviews, new findings appeared; this directed the researchers towards aspects that had not previously been highlighted. New theory was then needed to explain these findings. (Bryman & Bell, 2011)

### 3.2 RESEARCH DESIGN

Research design is a framework for the collection and analysis of data (Bryman and Bell, 2011). According to Bryman & Bell (2011), there are five main types of research designs: experimental, cross-sectional, longitudinal, case study, comparative. This specific study will use two types of research design. Both a comparative design and case study design were chosen to depict the study best.

The first part of the report is a comparative design. According to Bryman & Bell (2011), comparative design involves the study using almost identical methods of two or more different cases. The comparative design builds a foundation for theoretical reflections about different findings from the distinctive characteristics of the cases. The comparative design was completed by comparing the business models of five different companies in both the manufacturing and service industries. The information gathered was used to compare specific parts of the business model that were focused on servitization.

The five companies from the comparative study were selected based on a process and requirements chosen by the researchers. The process started with a brainstorming session together with the case company (which will be described below). Companies that could be used as benchmarks in the servitization process were discussed. The second step was a brainstorming session between the researchers. One requirement was that the firms needed to be well-known service providers or well-known manufacturing firms that were facing service challenges. Based on availability and responses from the contacted firms, the five companies were chosen.

Traditional manufacturing companies such as SKF, ABB, Assa Abloy, and H&M were chosen, and the service company, Netflix was chosen.

The second part of the study is based on a case design, where the framework from the comparative design is tested with a case company (Bryman & Bell, 2011). A case design using the developed framework was conducted to exemplify and implement the results in a company and verify the usage of the conclusions from the first part. The case company was chosen due to the researchers' knowledge that the case company is in a transition phase of becoming more service focused. The needs of the company matched the analytical frameworks, thus contributing to the case companies' process towards becoming more service focused. The case company will be further explained in chapter five of this report.

### 3.3 RESEARCH METHOD

The research method is the technique used for collecting data (Bryman and Bell, 2011). This part of the thesis will discuss how primary data and secondary data was collected.

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#### 3.3.1 PRIMARY DATA

The primary data was gathered through semi-structured interviews. Semi-structured interviews allowed for more flexibility during the interview process because the interviewer can ask follow-up or more in-depth questions. Conducting semi-structured interviews also allows for more detailed answers directing the interviewee to elaborate on their answer. Although it is positive that semi-structured interviews promote flexibility, it is also crucial that the researcher has a reliable interview guide. (Bryman & Bell, 2011)

The semi-structured interviews were conducted with the help of two different types of interview guides, which are based on a series of questions (Appendix B). The first interview guide, which belongs to the comparative research design, was primarily based on questions that surfaced from the theory, research on the companies, and questions related to the interviewees' job position. For the comparative research, the researchers reached out to companies that were relevant to interview through LinkedIn. The researchers started to reach out to companies in November 2019 to see what possibilities there were to interview in the spring of 2020.

The second interview guide was based on an iterative process and is part of the case study. Meetings were booked with respective employees from the case company, some employees with backgrounds related to the topic were introduced to the researchers. After each interview, the interviewees recommended more employees to interview. The interview guide was based on the questions from the comparative study but was updated after each interview to make the questions more relevant for the next interviews.

In total, there were 12 interviews conducted for this study. The company's name, the job title of the interviewee, together with the interview details, is in figure 3.2. Five of the interviews were with incumbent companies, many of which have gone through servitization or are currently becoming more service focused. Seven of the interviews were internal interviews, held with employees from the case company. (See examples of interview guides in appendix B).

<i>Manager</i>	<i>Company</i>	<i>Position</i>	<i>Date</i>	<i>Length</i>	<i>Type</i>
<i>Manager A</i>	SKF	Innovation and Business Development Manager	2020-01-09	60 min	F2F
<i>Manager B</i>	H&M	Regional Leasing Manager	2020-01-09	30 min	Skype
<i>Manager C</i>	Assa Abloy	Business development manager	2020-01-16	60 min	F2F
<i>Manager D</i>	Netflix	Head of business development	2020-01-21	40 min	Google Hangouts
<i>Manager E</i>	ABB	Business Development Manager	2020-01-22	45 min	Skype
<i>Manager F</i>	Case Company	Business Developer Connectivity	2020-02-07	90 min	F2F

<i>Manager G</i>	Case Company	Business Development Manager	2020-02-13	90 min	F2F
<i>Manager H</i>	Case Company	New Business Development Manager	2020-02-17	60 min	F2F
<i>Manager I</i>	Case Company	Director Connected Services	2020-02-18	60 min	F2F
<i>Manager J</i>	Case Company	Senior Vice President HR	2020-02-20	30 min	F2F
<i>Manager K</i>	Case Company	Vice President Strategy and Business Intelligence	2020-02-19	60 min	F2F
<i>Manager L</i>	Case Company	Director Financial Process and Projects	2020-03-23	90 min	F2F

*Figure 3. 2 Description of Interviewees*

### 3.3.2 SECONDARY DATA

The secondary data has been collected through company websites and annual reports connected to companies that we interviewed. This information was collected to help make a relevant interview guide and complement the interviewees' answers. The most recent annual reports were used to be up to date on current activities and make sure that information about the company was not dated. Companies' official websites were used to gather information right from the company itself and not from other perspectives. Information about the case company was gathered through an internal website to better understand the challenges that the company is facing.



### 3.4 SYSTEMATIC LITERATURE REVIEW

The theory for the thesis has been collected through two different processes, from a systematic literature review and through recommendations. The systematic literature review has been done through the digital library at the University of Gothenburg and Google Scholar. To conduct a systematic literature review inclusion and exclusion criterion was identified. Where the inclusion criterion is that literature has to be peer-reviewed, scientific articles, and be in the first ten pages of the search results. The inclusion criteria were chosen based on the judgments that peer-reviewed scientific articles will create the quality of the sources used. Based on these criteria, literature was conducted with keywords such as business model innovation, subscription-based revenue, data-driven business model, and servitization. All articles that filled the requirement of the criterion went through a scanning process. The scanning process was where the authors read through the abstract to determine the relevance of the literature. Through the chosen articles, the authors were able to identify more relevant articles from the reference lists. The literature conducted from the literature lists did not take into account the set criterion. The second process was to conduct relevant literature from a recommendation from supervisors and previous courses.

### 3.5 DATA ANALYSIS

The thesis was built upon a process that was conducted through collecting and analyzing data simultaneously. First, literature was gathered, and a literature model (Servitization Journey for Manufacturing Firms Framework) was designed based on the information discovered. The second step was to conduct and transcribe the interviews. In the third step, the interviews were analyzed with the help of the literature to improve the framework. In the fourth step, a case study was conducted where the literature model was applied to a case company.

The main objective of analyzing the data is to gain understanding in an under-researched field, and to get a deeper understanding of a particular phenomenon or case (Bryman & Bell, 2011). Thematic analysis was used to uncover the major themes in the data. Themes can be meaningful patterns throughout the interviews that are related to the research question and theory (Bryman & Bell, 2011). The text was analyzed by dividing up the interviews into themes. The interviews were divided up into themes such as motivation to transform, strategy, culture, leadership, value discovery, value creation, value delivery, and value capture. The interviews were recorded, and

notes were taken during the interviews. A full transcription of the interviews was completed after the interviews were conducted. The interviews were then divided up into themes to see a clear connection between the interviewee's responses and the theory.

### 3.6 RESEARCH QUALITY

While conducting the interviews, the researchers aimed to have a high level of quality, where reliability and validity are two essential criteria to reach the goal of quality. The researchers have a high level of quality, to ensure objectivity and lower the subjectivity that can arise when conducting a qualitative research study. Although reliability and validity are good options, they are more relevant to quantitative research (Bryman and Bell, 2011). Bryman and Bell (2011) give alternative criteria for evaluating qualitative research, which proposes different strategies such as using credibility, transferability, dependability, and confirmability that are connected to validity and reliability. In this study, the term of assessing the quality of the research is a combination of reliability and validity combined with credibility, transferability, dependability, and confirmability since there is a correlation between them. All these criteria are reached while conducting the interviews and analyzing the data.

Through following the data analysis method with transcribing, recording, and having two participants in all interviews, it will increase the validation. This method allows researchers to discuss the findings to confirm that the interpretation of the results is as accordingly. However, since one of the researchers have previous work experience at the case company, there will be a risk of misinterpreting the data. To avoid influencing the research with personal values, the researcher acted in good faith so that personal values did not influence the research. A semi-structured interview guide was also used to not get off topic during interviews. While conducting the interviews, leading questions were avoided, which kept the research and answers of the interviewees not biased. So that interviews are not mixed up and to ensure a proper assessment of the interviewee's answers, all the interviews were recorded and transcribed. Recording and transcribing all the interviews is also to help ensure that interviewers do not self-elaborate on interviewees' answers.

## 4. COMPARATIVE STUDY

Chapter four consists of two main subchapters; the first subchapter 4.1 will present the results from the comparative study and 4.2 consists of an analysis of the comparative study. Six main themes were identified after interviewing H&M, Assa Abloy, ABB, SKF, and Netflix, the companies from the comparative study (see Appendix C for a description of the companies). The first theme regards the transformation demand, meaning that firms have different motivations or agendas to transform into a more service-focused business. The second theme is related to the defined enabling factors, which consist of culture, leadership, and strategy. The last four themes are related to business model innovation, how firms discover, create, deliver, and capture value. The second subchapter 4.2 consists of an analysis, where the analytical framework from the literature review is further developed with the collected results. Figure 4.1 is an overview of chapter 4.

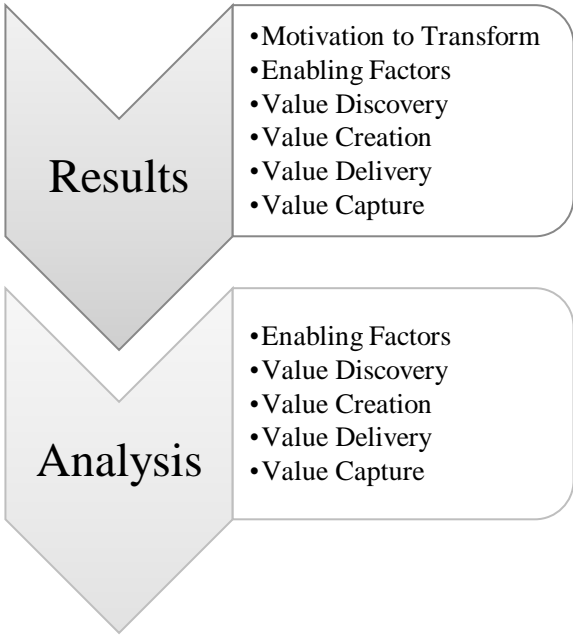


Figure 4. 1 Overview of Comparative Study

## 4.1 RESULTS

The results of the comparative study will be presented with six subchapters. The first part will describe the need for transformation into a service-focused company. The second part will describe the enabling factors: culture, leadership, and strategy. The last four parts will describe how the firms discover, create, deliver, and capture value.

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### *4.1.1 MOTIVATION TO TRANSFORM*

There are many reasons why companies are becoming more service focused. In this subchapter, the results of the reason why the company's interviewed want and need to transform will be presented.

SKF offers both products and services that create value for the customer. Traditionally SKF has produced and sold bearings. After many years of experience and development, companies in the industry have reached a level where the basic bearings are not able to improve further. SKF has developed bearing techniques since the start, and they are close to perfecting the product and production. Since SKF has perfected the product and production, this means that competitors are in a similar situation with basic bearings development. Much of the competition is dependent on the price of the product because all the companies are offering similar quality of bearings. According to Manager A (2020) the new way for SKF to compete is through services. The new performance-improving services are the main focus now so that SKF can be competitive in the future. (Manager A, 2020)

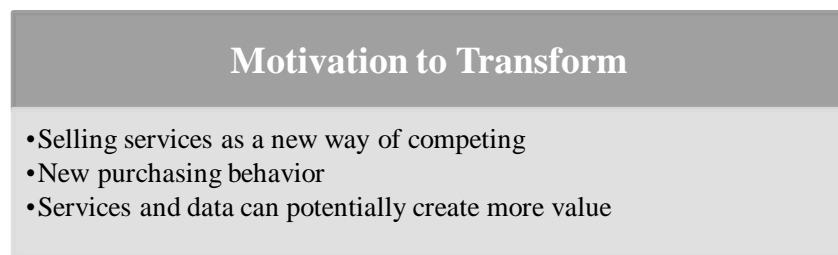
Similarly, Manager E (2020) from ABB states that the customers do not have the same purchasing behavior. The way to create more value is through services, and it will be possible to use the collected data that will be crucial in the phase of discovering future value. ABB is in a transition phase, where the firm has started to restructure the organization as well as re-modify the business model. This change, which is called "The New ABB," has been made to meet the challenges from the external environment. (Manager E, 2020)

H&M initially offered clothes available in a sustainable manner (Manager B, 2020). However, in H&M's current portfolio, they are offering more than just a product. The firm internally expresses that the portfolio should "enable people to express their style" (H&M Annual Report 2018). Meaning that shopping at H&M is not only about the purchase, but instead, it is about a

customer experience, which is reached through different services that are offered (Manager B, 2020).

Assa Abloy is a group that offers a variety of "opening solutions," with the value proposition of creating a safer environment for the customers. The group is offering products such as electromechanical locks, digital door locks, and security doors. Services such as maintenance and software as a service are also offered. With increased demand in the service, the group has a specific segment (Assa Abloy global solution) to meet the rigorous demands of service and transform into a service supplier. (Assa Abloy Annual Report, 2018)

Netflix does not have challenges in transforming to become more service-focused, as they already are a service provider. Netflix has already completed the transformation from offering a product, sending DVDs to customers, to becoming service focused, offering an online solution. The results from Netflix will be used as a comparison and represent the service industry.



*Figure 4. 2 Summary of Motivation to Transform*

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#### *4.1.2 ENABLING FACTORS*

The following sub-chapter will present the results of enabling factors. Enabling factors such as culture, leadership, and strategy are required to change when transforming from a traditional manufacturing firm to a service provider. The results from the interview show what actions the companies are taking in the transformation to become more service focused.

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##### *4.1.2.1 STRATEGY*

In the aspect of strategy, the incumbent manufacturing firms have made some adjustments in the strategy to meet the challenges. For instance, ABB is transforming with three main changes. Where the focus is in digital industries, simplifying the business model and shaping four main

businesses (ABB Annual Report, 2018). From the internal perspective, Manager E (2020) does not feel that there have been any significant changes. For example, simplifying the business model means that the firm will re-organize and follow a decentralized strategy. However, from Manager E's (2020) perspective, the firm is still centralized.

Similarly, Assa Abloy is also pursuing a decentralized corporate strategy where each different brand in the group is acting as an independent entity. However, as the firms want to increase the synergy effect between the brands, they are pursuing a strategy of double branding. The purpose of double branding is to gain popularity globally and to introduce the brand Assa Abloy to each local market. (Manager C, 2020)

SKF has included the importance of service in the corporate strategy, where the top management team is pressuring the importance of both driving businesses from products and services. The firm has two primary value propositions to fulfill different needs. First of all, the firm needs to be able to provide the right product to the right price and time to its customers. From a strategy perspective, the focus is shifting toward rotating equipment performance, which is a service or solution. Meaning that the firm needs to provide the right solution, performance, and cost of ownership. (Manager A, 2020)

In the case of Netflix, the autonomous structure has allowed for clear communication of its strategy and implementation. Information and expected requirements are communicated to each individual. Netflix has a management strategy that is embraced by flexible, incremental actions - believing that employees will only perform the best and make the most effective and rapid decision if they are trusted and full authority of their actions. Thus, the firm wants to avoid the chance of having a rigid process for decisions that will restrain the speed; this is what the core value of people over process means. (Brightline, 2018)

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#### *4.1.2.2 CULTURE AND LEADERSHIP*

From the results, two different cultures and leadership styles could be identified depending on if it was a traditional manufacturing company or a service provider. According to Manager D (2020), Netflix is unique due to its culture of freedom. Manager D (2020) also mentions that the firm does not have budgets restricting employees; instead, they are free to act in the best interest of the company. One of Netflix's core competencies is the culture of trust, and responsibilities in the firm. The firm has a culture of company-wide information sharing.

Meaning that even though the firm is functionally organized, the daily work is in a cross-functional manner. (Manager D, 2020)

In the interview with Manager E (2020) from ABB, it was stated that the process of approving something needs to be escalated to a certain level. Manager E (2020) realizes that this hierarchical process creates consequences of not being fast enough to the market. In the case of ABB, the firm has realized the challenge of needing a different leadership and culture in a more service-oriented business (ABB Annual Report, 2019). The action taken for this is a reorganization to create a more decentralized organization (Manager E, 2020). Similarly, from the interview with SKF, having a traditional mindset and culture is creating inflexibility in the firm. Manager A (2020), believes that it will require changes in the way of working as well as mindsets in the firm.

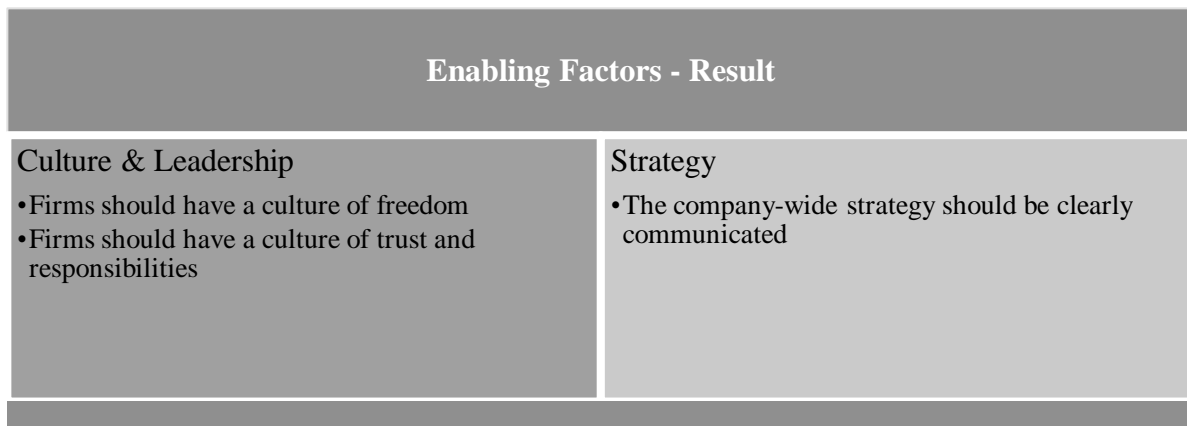


Figure 4. 3 Summary of Enabling Factors – Result

#### 4.1.3 VALUE DISCOVERY

The solutions from SKF are developed and driven by data, from Representative Centers where data is monitored from the collection of the machine, the center distributes the data to the relevant department, to be able to use the data to discover value. There are multiple ways to customize the service to what the customer wants and how the customer wants to pay. SKF offers to monitor the different payment plans, machines, help with making operations more effective, indications of when the machine needs maintenance and more, which all creates new customer value. (Manager A, 2020)

The H&M Group offers products but also delivers services to the customer, such as different app functions, to make the purchasing process more accessible. Through these apps, the data is collected to improve the experience for future purchases. These can, for example, be a visual search, which is a function that can give the customer recommendations or inspiration based on pictures taken by the customer (H&M Annual Report, 2018). New ways of selling their products also appear, for instance, renting clothes through Y-closet (Y-closet is an Alibaba platform where the customer pays a monthly membership fee to rent women's apparel and accessories), which is a software as a service (Manager B, 2020).

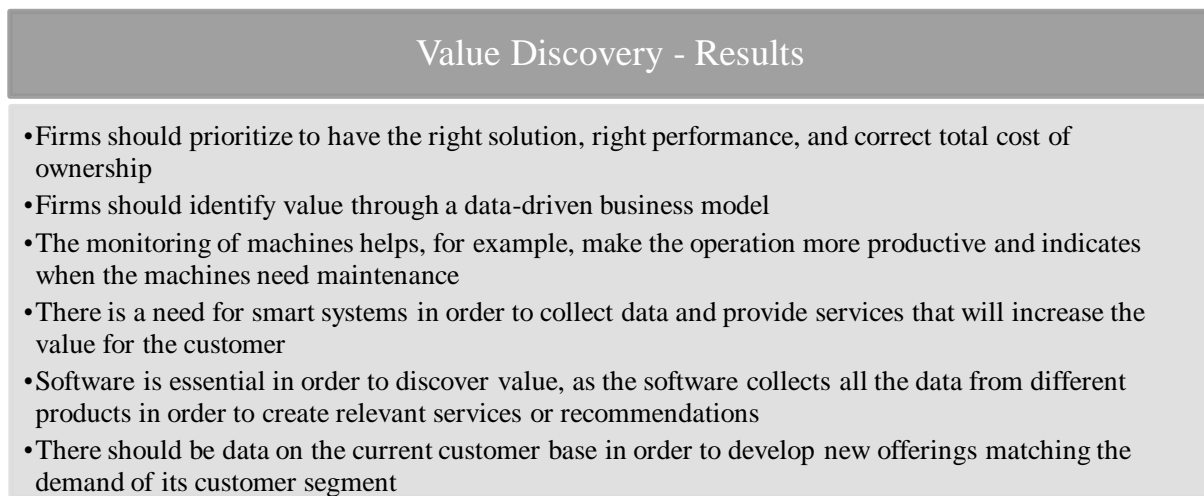
In the case of Assa Abloy, some of the products are connected, but according to Manager C (2020), the firm is not working with big data to discover any value. According to Manager C (2020), the firm is still lacking some development in the staff's competence, in the products to satisfy the demands of selling proactive or uptime services, as well as having a subscription-based solution. Manager C (2020) believes that these kinds of developments will be needed for the future, but in the current state, the portfolio is very profitable, and there has not been any urgency in that aspect.

ABB is a company offering services in the digital industries, such as electrification, industrial automation, motion, robotics, and discrete automation (ABB Annual Report 2018). According to Manager E (2020), the firm is investing in developing the service segment as they believe that this area will increase the possibilities to discover more customer value. The firm's long-term goal is to be able to build smart systems to collect data and provide services that will increase the value for the customer (Manager E, 2020). ABB Ability is an umbrella name for several services, but this software is vital to discover value, as the software collects all the data from the different products to create relevant services or recommendations (Manager E, 2020). This service is offered to the customers, but there is an interest in ABB to be part of the business as it creates possibilities to collect relevant data (Manager E, 2020).

As a service provider, Netflix is using data on the current customer base to develop new offerings matching the demand of its customer segment. Not only is Netflix personalized in the sense of steering to fit the customer's schedule, but it is also personalized based on the customer's movie watching preferences. To best personalize customers' accounts, Netflix has stopped basing preferences off of age, gender, or nationality because this has created more



problems than solutions. Therefore, Netflix is focusing on the subscribers viewing behavior to maintain the customer relationship. (Manager D, 2020)



*Figure 4.4 Summary of Value Discovery – Results*

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#### 4.1.4 VALUE CREATION

From the interviews, there are three common themes of how firms create value and what the challenges in the area are. The themes are resources, partnerships, and organizational structures. In this subchapter, the results of how the companies interviewed create value, in connection to the transformation of becoming more service-focused, will be presented.

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##### 4.1.4.1 RESOURCE AND PARTNERSHIPS

SKF does not currently have any key partners to develop the process of servitization and data further, but according to Manager A (2020), SKF will need partners in the future. Manager A (2020) also states that SKF will be too slow if they do not acquire new key partnerships, and they lack the competence that is needed to become more service focused. These partners would help with, for example, a different type of data collection. They also need new partnerships because they will be facing new competitors. New business models where performance is promised creates possibilities to transform a customer into a strategic partner. As the business is no longer only transactional, it includes a business relationship. (Manager A, 2020)

Assa Abloy, on the other hand, has had a merger and acquisition strategy to capture the key competencies to be able to create value. The firm has an acquisition strategy, meaning that

throughout history, the firm has grown through mergers and acquisitions of market-leading brands globally (Manager C, 2020). For example, during 2018, the firm acquired 19 different companies to remain competitive in the market (Assa Abloy Annual Report, 2018). The market is very fragmented, and different regions are demanding different things, therefore acquiring successful brands has been a successful strategy, according to Manager C (2020). Due to the different brands, the group has a decentralized corporate strategy where each individual is acting as independent entities with double branding. The long-term purpose of double branding is so the group brand of Assa Abloy gains popularity globally (Manager C, 2020). Manager C (2020) explained that during January of 2020, the individual brand started to emerge into the global brand of Assa Abloy to gain synergies. The global brand of Assa Abloy is the start of a journey to work more as a group for all entities (Manager C, 2020).

H&M has had a strategy of entering already existing platforms to take advantage of other customer groups. Being present and available in digital platforms is a long-term strategic solution; by 2018, the firms joined Tmall, and in 2019 the firms joined Y-closet (H&M Annual Report, 2018). Manager B (2020) mentioned that it is difficult to do everything by themselves. To be fast in the market, the firms are partnering up with other actors or joining available platforms (Manager B, 2020). By joining Y-closet, H&M can take part of their customer base and infrastructure for renting clothes. Continually working with new brands makes it possible for H&M to continuously provide value-adding offerings to the customers (Manager B, 2020). During the interview, Manager B (2020) mentioned the trend of "Key opinion leaders" (KOL) in the Chinese market, which could potentially be an essential partner or actor in the retail industry. KOL is a marketing function that is similar to an influencer or blogger; with customer data, KOL can increase sales (Manager B, 2020).

According to Manager D (2020), everything that is a product or content Netflix does in-house, which means that the core competence activities stay in-house and other activities can be outsourced to partners. Partnerships are mostly on the hardware side, like apps and platforms which bring Netflix in front of the eyes of people and bring Netflix closer to consumers (Manager D, 2020). Netflix intends to continue to broaden its relationships with existing partners and increase its capability to stream TV series and movies to other platforms and partners over time (Manager D, 2020). Netflix makes its service accessible through agreements with television providers such as numerous cables, satellite, and telecommunication operators (Netflix Annual Report, 2018). In these agreements, it is stated that partners can bill consumers

directly for the Netflix service or offer services or products in connection with other services (Netflix Annual Report, 2018).

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#### *4.1.4.2 ORGANIZATIONAL STRUCTURE*

The reorganization is one of many actions taken as a part of ABBs transformation journey. The firm has a strategy of simplifying the business internally with actions such as changing the organizational structure, simplifying the business model, and focusing on value-adding acquisitions or divestments, for instance selling power grid segments. ABB has historically had a matrix structure, but now the firm will be functionally based on four different business segments to adapt to the environment. (ABB Annual Report, 2020)

Manager E (2020), believes that the organizational change will lead to a positive change for the business, as today everything has a long process which affects the customers. By changing the organizational structure to a more decentralized form, it will enable each business segment to have more responsibility and be faster to market. Manager E (2020) also states that even though ABB externally is communicating that the firm now is decentralized from an employee perspective, they are still very centralized. With a new CEO who is famous for believing in decentralized strategy, Manager E (2020) means that in the long-term, ABB will have a decentralized organizational structure. (Manager E, 2020)

ABB will simplify the business model by making the internal process and administration easier; this will increase the value created for customers. A challenge that ABB has with services is that it is hard to align all the departments. For the service segment, the long-term plan is to have services centrally managed, as this will potentially be a core competence. The data collected will have a flow centrally, and each segment will receive relevant data. However, as for today, each segment is creating ad-hoc solutions to manage the services. Therefore, this issue will need to be managed on a higher organization level to set more clear directives. The firm has developed internal competences over time that will be needed in the service area. Partnerships with Microsoft and Ericsson is also a topic, as it will solve technical problems such as 5G. (Manager E, 2020)

One of the most important activities is the platforms and networks Netflix uses, which makes it possible to connect to their customers. Another key activity is big data and algorithms which is data that is analyzed and gives Netflix the ability to produce and give users what they want.

According to Manager D (2020), key points to why Netflix is successful is that employees are productive, there is a high degree of freedom, employees get a competitive salary, there are no policies (for example, no policies on travel or expenses, they just need act in Netflix best interest), people are very upfront, and anyone can make a decision. A key resource for Netflix is intellect, which is the knowledge from big data that is gathered from users (Manager D, 2020). The firm is functionally organized with specific responsibilities in each function and it is a flat organization, with high autonomy delivered to the employees (Manager D, 2020). As mentioned above, this organizational structure, in combination with a culture of trust and responsibility, has created many innovative breakthroughs (Brightline, 2018).

Value Creation - Result	
<p><b>Competence and Partnerships</b></p> <ul style="list-style-type: none"> <li>• Firms will need partners because they will need more competence (data collection) and will be facing new competitors</li> <li>• Firms can acquire companies in order to remain competitive</li> <li>• Partners should not be part of the activities that are considered core competencies</li> <li>• Firms should expand relationships with existing partners</li> </ul>	<p><b>Organizational structure</b></p> <ul style="list-style-type: none"> <li>• Restructuring organizations from a matrix structure to a decentralized functional organization has been a common way to simplify the business model</li> <li>• Each function in an organization should work as individual entities</li> <li>• Services are centrally managed and distributed to each function depending on the need</li> <li>• The organizational structure needs to support a high degree of freedom, a flat organization, and have simple administration</li> </ul>

Figure 4. 5 Summary of Value Creation – Results

#### 4.1.5 VALUE DELIVERY

Value delivery for product providers is related to distribution channels. However, servitization allows firms to create a unique relationship with customers, which will strengthen customer relationship (Tukker, 2004). The section below will describe results in the aspect of customer relationship and distribution channels. In this subchapter, the results of how the companies interviewed deliver value, in connection to the transformation of becoming more service-focused, will be presented.

##### 4.1.5.1 CUSTOMER RELATIONSHIP

SKF has different levels of customer stages. The four different levels include: transactional, service model, performance, and functionality. The four steps require different kinds of

relationships and communication with the customer, meaning that each customer segment has different ways of creating and delivering value. The first step is a transactional business, where the customer buys a product or service and pays for it; this does not require more investment in customer relationships compared to normal. The second step is service-based contracts, meaning that the firm offers services related to the products. In this case, SKF has the chance to develop a long-term customer relationship. The third level is performance, meaning that SKF is guaranteeing the performance of the products; this requires a high level of customer relationship as SKF is required to understand the customer business. The fourth level is almost going into partnership with a customer, where SKF requires a fixed fee to run the business. (Manager A, 2020)

The relationships between Netflix and its customers consist of automated/self-service that feels personalized. The relationship between Netflix and its customers is thanks to the personalized accounts that are run by big data. Although when running into problems with the site, the customer can also get personal assistance by calling or sending a message to the customer service center. Although Netflix is for everyone who has an internet-connected screen, some countries do not have the infrastructure to support the internet-connection that is needed when streaming Netflix. According to Manager D (2020), Netflix started where there was good digital infrastructure, payment infrastructure, and broadband penetration; for example, in the Nordics and UK. Everyone with an internet-connected screen in these countries then became part of Netflix's customer segment. However, in the future, this will change due to the potential growth that Netflix has in front of them. There is a hurdle with growth opportunities in Africa and Asia due to digital infrastructures and payment infrastructure. (Manager D, 2020)

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#### *4.1.5.2 DISTRIBUTION CHANNELS*

In the case of H&M, the value to the customers is delivered through different channels such as stores, online shops, and different marketplaces (H&M Annual Report, 2018). The different channels are targeting various customer segments. The new collaboration with Y-closet enables H&M to reach out to a different customer base (Manager B, 2020). The possibility to rent the Cos collection also enables non-customers to turn into customers from a cost perspective. The strategy of having different brands also makes it possible to target various customer segments (Manager B, 2020). Having a fast, effective, and flexible production flow to meet the

expectations of fast lead times is also a strategic goal for the company (H&M Annual Report, 2018).

Manager B (2020) from H&M mentions that the distribution channels are crucial for the company's success. To deliver the value, the customer has expectations in the distribution that the firms need to fulfill. For example, in the big cities in China, the development of infrastructure for deliveries has enabled the firms to benefit and be able to deliver value to the customer. All kinds of services can be purchased and delivered to the demanded place. Some apartments or hotels have robots that will deliver the package from the front door to the apartment to increase the security in the staircase. The technology development has allowed H&M to build a stronger relationship with their customers. For instance, different services that deliver value in the shopping experience are offered to the customer. The upcoming trend with key opinion leaders is also creating a relationship with customers. (Manager B, 2020)

There are new and existing distribution channels that can access the services provided by Netflix. Netflix uses a subscription-based model that captures many segments of the market due to its flexibility. Netflix uses its channels to reach customers, but they also use partner channels. Netflix utilizes a mixture of different marketing techniques and public relations programs; these include social media sites, to promote service to potential new members. (Netflix Annual Report, 2018)

Value delivery - Result	
<p><b>Customer Relationship</b></p> <ul style="list-style-type: none"> <li>• Different payment plans and relationships with customers</li> <li>• Personal assistance for customers</li> </ul>	<p><b>Distribution Channels</b></p> <ul style="list-style-type: none"> <li>• Stores, online shops, platforms, rent, and different marketplaces</li> <li>• Requirement on faster lead times</li> <li>• Subscription-based model</li> <li>• Use partner channels</li> <li>• Different marketing techniques and public relations programs (including social media sites)</li> </ul>

Figure 4. 6 Summary of Value Delivery – Results

#### *4.1.6 VALUE CAPTURE*

In this subchapter, the results of how the companies interviewed capture value, in connection to the transformation of becoming more service-focused, will be presented. Capturing value through revenue streams can be one-time payments from a customer or recurring revenues, which are ongoing payments (Osterwalder, 2010).

In SKF's case, there are four different levels of customer stages, and depending on the different stages, different payment methods are offered. These different payment methods or contract types include Asset Efficiency Optimization, Bearing for Life, Integrated Maintenance Solutions, Proactive Reliability Maintenance, Asset Management Services, and Predictive Maintenance (Manager A, 2020). Asset Efficiency Optimization is a full-service offer for the whole facility and is paid on a monthly fee basis and commonly a penalty/bonus scheme. Bearing for Life is a performance-based contract and is paid by the performance KPI. Integrated Maintenance Solutions is a performance-based contract for the whole facility and is paid on a monthly fee basis and commonly a penalty/bonus. Proactive Reliability Maintenance is a performance-based contract for the whole facility and paid on a monthly fee basis and usually a penalty/bonus scheme. Asset Management Services is a reliability project with a defined scope and a clear timeframe based on the scope. Predictive Maintenance is a service contract for the whole facility and paid on a monthly fee basis. (Manager A, 2020)

ABB captures the value through a payment from the customer. The payment flow and process for products and services are identical. The sales flow is different, meaning that services and products are sold as two different projects, but the payment follows the same process. For example, a product can be sold together with a service contract (ABB ability), which makes it possible for the firm to collect data, which is a way to capture value. ABB ability can also be used to create more revenues. (Manager E, 2020)

H&M has some rental services and app services; most of the revenue is from sales of clothes, accessories, shoes, cosmetics, home textile, and interior decorations (H&M Annual Report, 2018). With KOLs, the firms can use big data to increase the sales, as the firm will be able to create a timing to promote products that are demanded in the specific moment (Manager B, 2020).

In the case of Assa Abloy, there is a clear pattern of dominating revenues from aftermarket sales because of development projects. The current way of capturing value through payment is from services and products. Around 66% of the total sales are from aftermarket sales, and 33% are from new products. According to Assa Abloy Annual Report (2018), services and subscription contracts, such as software services, are creating recurring revenues. On the other hand, Manager C (2020) believes that the firm does not have recurring revenues from subscription-based business models yet, but Manager C thinks that this is something that needs to be developed. Manager C (2020) also mentions that there will be challenges with the administration, for example, to change the mindset of the people working with the administration. To make them understand that they are giving a product for free and charging for the service monthly. Manager C (2020) suggests that this could be something to outsource, as the firm focuses only on having the core competence and core activities insourced. The group has started some projects to see possibilities to receive payments in different ways; an example of this is the investment they made in Microsoft dynamic AX (Manager C, 2020).

According to Manager D (2020), core competencies that most likely will not change are the subscription model, and the fact that Netflix is watched through streaming. Netflix's business model is subscription-based and offers different types of subscriptions based on customer preference. Netflix has many costs, including costs for technology and development, marketing, general administration, costs of revenue (content amortization (highest cost), payment processing fees, customer service, streaming delivery costs and operations costs). Netflix is value-driven; some of the value is captured through the capability of using the data internally in an effective way. (Manager D, 2020)

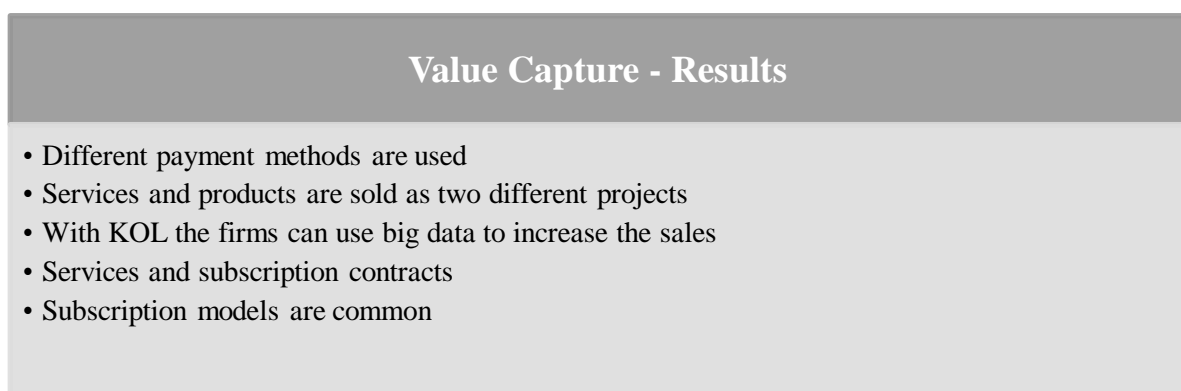


Figure 4. 7 Summary of Value Capture – Results



## 4.2 ANALYSIS

Chapter 4.2 will analyze the findings from the comparative study with the help from the analytical framework “Servitization Journey for Manufacturing Firms Framework 1.0” (Figure 2.20) from chapter two. The conclusion of the analysis is the development of analytical framework “Servitization Journey for Manufacturing Firms Framework 2.0” (Figure 4.8). The conclusion of the framework will be discussed and explained in this chapter.

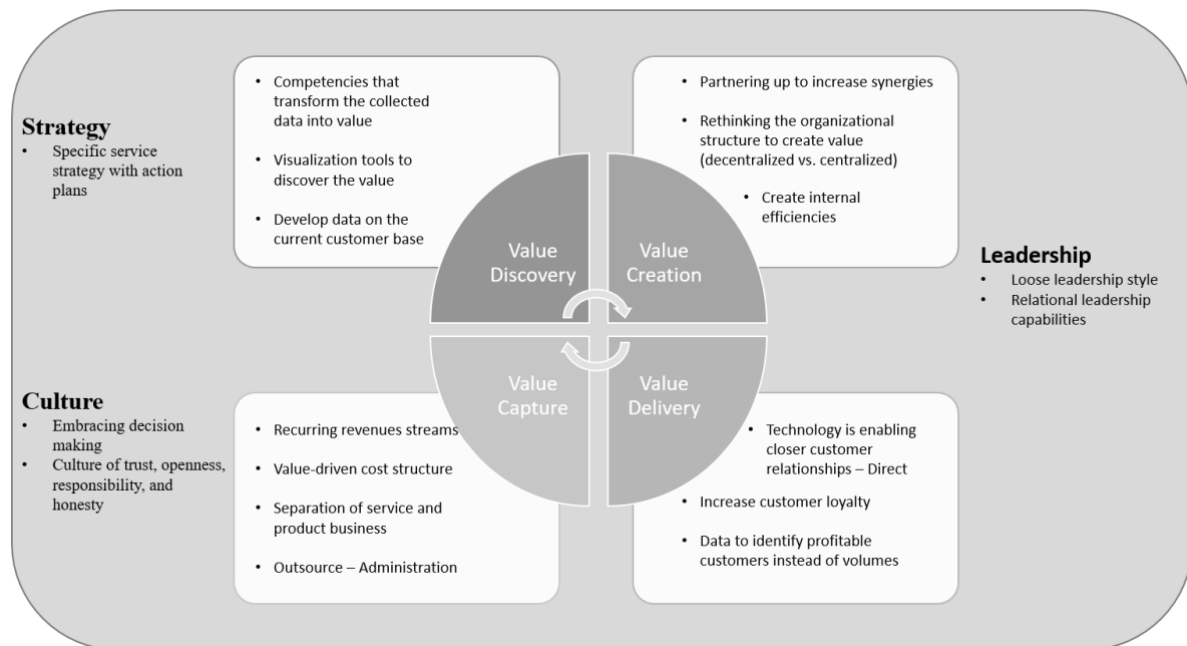


Figure 4. 8 Servitization Journey for Manufacturing Firms Framework 2.0 (Developed by authors)

### 4.2.1 ENABLING FACTORS

As a basis of the model, the soft values such as leadership, strategy, and culture are enablers to complete the service journey. Literature from Gebauer, Fleisch, and Friedliet (2005) states that manufacturing firms that are moving into the service area can potentially fall into the service paradox. The authors emphasize that the main challenge is the changes of the soft values, such as culture, leadership, and strategy (Gebauer et al., 2005).

#### *4.2.1.1 STRATEGY*

The service strategy has shown to be necessary, as the research from Gebauer et al. (2005), illustrate that firms with a clear service strategy will successfully capture the economic benefits. A service-oriented business requires a different set of KPIs compared to product-oriented businesses. Therefore, as a first step, the firms need to align with a service strategy. The firms need to create a deeper understanding of the customer to create a value proposition that solves the customer's needs (De Bretani, 2001). Companies also need to create a deeper relationship with the customer to be able to conduct relationship marketing (Grönros, 1998).

In the case of Netflix, the free and independent structure has allowed for clear communication of its strategy and implementation. Information and expected requirements are communicated to each individual. Netflix believes that employees will perform best and be most effective if they are trusted and can make decisions themselves. Aligned with the literature to have a successful service transformation, firms need to have a decentralized service organization (Olivia and Kallenberg, 2003). The management team needs to have a specific strategy to meet the challenges of becoming more service focused (De Bretani, 2001). The strategy also needs to include a way of working with strategy, which should be to create responsibility for profit and loss on employee level (Heskett et al., 1997), which is aligned with Netflix's current way of working.

At ABB, the action taken for not being fast enough to the market is to create a more decentralized organization. A decentralized organization is implemented to avoid the bureaucratic process that is common in traditional manufacturing firms. Similarly, Assa Abloy has a decentralized organization to be able to be closer and faster to the market. Even though actions are taken, it could be argued that the strategy has not been communicated throughout the whole firm. Manager C (2020) from Assa Abloy indicated that even though the firm is decentralized on paper, the reality is that ABB is still centralized. Therefore, a question could be if the strategy at the top management level at ABB is as well communicated and implemented as it was in the case of Netflix.

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#### *4.2.1.2 CULTURE & LEADERSHIP*

KPIs or values that manufacturing companies often have are: efficiencies, economies of scale, and the impression that variety and flexibility are costly (Gebauer et al., 2005). Service

companies, on the other hand, often focus on values like innovation, customization, and the view that flexibility and variety create profits (Gebauer et al., 2005). Literature indicates that to compile and successfully follow the service strategy with a set of KPIs, the firm needs leadership and culture that is different from a product-oriented firm (Gebauer et al., 2005). That is why one of the primary responsibilities when leading a cultural change is change management (Kotter, 1995). One important factor that a manufacturing company needs to consider when implementing a service is to create a service culture (Gebauer et al., 2005).

There are three main arguments or aspects that are important to avoid the service paradox: managerial motivation, the importance of recognizing the economic benefits of services and human behavior/managers avoid making service investments (Gebauer et al., 2005). According to Barratt-Pugh & Bahn (2015), to accelerate change, the human resource department should focus on building relational leadership capabilities and support team activity instead of only focusing on technical competences. Neely (2008) identified three main challenges that manufacturing will face during the servitization process, these are: (1) the challenge with shifting mindset, (2) the challenge of timescale, and (3) the challenge of business models and customer offerings.

From the results conducted, there was a clear difference between leadership and culture in a service and product company. The interview with Netflix could be interpreted that the leadership style is flat with an open culture. At Netflix, employees have ownership of their actions, meaning that they have the freedom to act on what they believe is the best for the firm. However, employees must also take responsibility and accept the consequences if there is a negative result. Netflix has a culture of trust, openness, and honesty, but this also creates a particular type of pressure on the employees. At Netflix, the department does not have any budgets, and the leadership style is to believe that everyone will do what is best for the firm. At Netflix, if the results are negative, everyone will need to take responsibility for the actions taken. (Brightline, 2018)

The processes are rigid, and there is an authorization hierarchy if the culture and leadership aspect of a traditional manufacturing company is compared with service companies. The incumbent manufacturing firms that have been interviewed, such as SKF and ABB, the leadership style is more top-down, where the leaders want to have control. At ABB, there are a lot of bureaucratic procedures and processes, leading to a situation where they are not able to

move fast enough to the market. In the case of ABB, the firm has realized the challenge of needing a different leadership and culture in a more service-oriented business.

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#### *4.2.2 VALUE DISCOVERY*

The availability of data will make it possible for firms to get market and customer insights and discover the value to satisfy future customer needs. The value discovered can lead to a unique value proposition that could potentially create a competitive advantage for the firm. Data will allow firms to discover innovation and newness. Solita (2019) has identified that firms tend to have challenges of using the data practically. Without the possibility to use the data correctly, it will make it difficult for firms to discover the potential value. To use data to discover value, the firm needs to collect data, which can be through internal data and management systems or external data to understand customer behavior (Cheah & Wang, 2017). See figure 4.9 for a summary of value discovery of each company that will be analyzed with the help of the literature and analytical framework.

From the interviews, firms are continuously working with their current customer base. The older a service is, the higher the quality will be, this is due to the data being processed and analyzed under a longer period of time. For instance, Netflix is collecting data on the specific individuals to offer personalized offerings. The more advanced the algorithms are, the bigger the user base is.

All respondents from the study are stating that services will be an enabler to discover more value and develop future offerings, which means that the services are related in most cases to data collection. An example of this is SKF; the service is about ensuring performance, which is only possible if the company internally understands the product with the data collected. Therefore, to discover the value, firms need competencies to collect, process, and analyze the data, to visualize and communicate it to the relevant stakeholders. ABB, for instance, is planning to have a centralized function for the collection and analysis of the data, to be able to deliver relevant data to respective actors.

Furthermore, the H&M Group offers products but also delivers services to the customer, such as different app functions to make the purchasing process more accessible but also to collect data to improve the experience along with new ways of selling their products. Having services that offer the right solution, right performance, and correct total cost of ownership and are data-

driven helps with making operations more effective. It can also improve, making the purchasing process more accessible and improve the experience. Software is vital to discover value, as the software collects all the data from different products to create relevant services or recommendations.

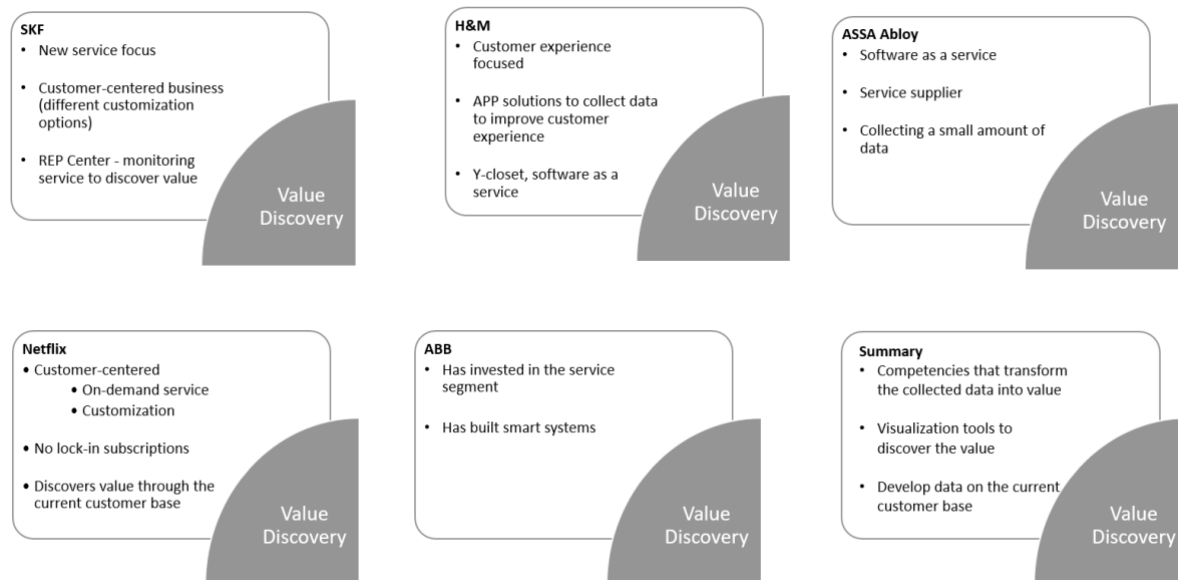


Figure 4. 9 Summary of Value Discovery by Company

### 4.2.3 VALUE CREATION

Value creation will be analyzed in two subchapters, competence and partnerships, as well as organizational structure. See figure 4.10 for a summary of value creation of each company that will be analyzed with the help of the literature and analytical framework.

#### 4.2.3.1 COMPETENCE AND PARTNERSHIP

According to Cheah & Wang (2017), the value that is discovered through big data needs to be created within the firm. Big data enables firms to identify the opportunities, but the firm needs to allocate the key activities, key resources, and key partners to support the discovery from big data (Cheah & Wang, 2017). In the aspect of key partners, as new entrants are expected to enter the market, there will be a need to have partners that obtain the knowledge that is outside of the firm's core competencies (Athanasopoulou et al., 2016).

In the case of Netflix, partners are only used in an activity that is not related to the core competencies, which means that everything that is product or content is done inhouse.

Partnerships are mostly on the hardware side, like apps and platforms which bring Netflix in front of the eyes of people and bring Netflix closer to consumers. Netflix intends to continue to broaden its relationships with existing partners and increase its capability to stream TV series and movies to other platforms and partners over time.

As there will be a need for a different set of competencies in the service area, the firm's human resource department will have a responsibility to ensure that the right set of competencies is available in the firm. Both SKF and ABB, who are both in the service transformation journey, are highlighting the need for rethinking the set of competencies needed. All manufacturing companies in the research stated that there would be a need for partnering up with different companies to be fast enough to the market. Partnering up with other actors to gain core competencies is a strategy that the incumbent firms are considering. Assa Abloy has had a merge and acquisition strategy to develop the core competencies as well as SKF that believes in a future where the firm will need to partner up to develop the needed competencies. H&M, for instance, collaborated with Y-closet not only due to the competencies that they will receive but also due to that H&M can take advantage of the already existing platform for renting clothing. This value can be created through a partnership with synergies. During 2018 Assa Abloy acquired 19 different companies to remain competitive in the market; acquiring successful brands has been a successful strategy.

Discussed with all firms is the importance of having competencies internally to be able to create efficiencies of the data. The people working in the company need to understand the value and possibility the data can create. Firms will need partners due to needing more competences like data collection and facing new competitors. Acquiring companies to remain competitive, using digital platforms and broaden relationships with existing partners could potentially result in becoming more service focused. Although it is an excellent idea to gain new competence and more partnerships, firms should not let partners do the firm's core competencies.

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#### *4.2.3.2 ORGANIZATIONAL STRUCTURE*

The differences between products and services require different kinds of organizational structure. In the transformation process, traditional manufacturing firms need to rethink the process, routines, and capabilities (Parida et al., 2014). Research from Bustiniza et al. (2015) has proven that the organizational structure in a firm affects the financial performance, meaning

that each firm needs to adapt to an organizational structure fitting the environment. Depending on if the motivation to transform is due to gain customer satisfaction or to gain differentiation in the market, the researcher suggests different structures to integrate a service organization (Bustiniza et al., 2015). As mentioned in the literature, if the motivation is due to gaining customer satisfaction, it is recommended to have a specialist unit or external partner to manage the service business (Bustiniza et al., 2015). If the motivation is due to gaining differentiation then the company should have the service department in house and manage the service business internally in the function (Bustiniza et al., 2015).

Netflix employees having ownership and an open culture is an essential factor in driving change. Key points to why Netflix is successful is that employees are productive, there is a high degree of freedom, employees get a competitive salary, there are no policies for example travel or expense (they just need to act in Netflix best interest), people are very upfront, and anyone can make a decision. Netflix is functionally organized with specific responsibilities in each function, and there is a flat organization, with high autonomy delivered to the employees. The organizational structure, in combination with a culture of trust and responsibility, has created many innovative breakthroughs.

In line with Netflix, the pattern of transforming into a functional organizational structure was identified in the investigated manufacturing firms. Part of the ABB transformation journey to meet the market demands is a reorganization, from a centralized to a decentralized strategy. Originally ABB was organized in a matrix structure with a centralized leadership structure. Due to the challenges of reaching the market fast enough and the bureaucratic structure, a part of the new strategy is to decentralize the whole organization by creating four entities that should behave as separate entities. The four entities are further functionally organized. This structure will lead to decisions being taken at a faster speed, and the segment will be closer to the customer, it will as well create responsibility and ownership. ABB is highlighting that even though they are pursuing a decentralized, internal collaboration will still be necessary, and the data will be centrally managed as it will be a new core asset in the future. The same structure is seen at Assa Abloy. By changing the organizational structure, simplifying the business model, having a matrix structure, having a decentralized structure, having a flat organization, and being functionally organized can help firms become more service focused. These things can also lead to making internal processes and administration easier.

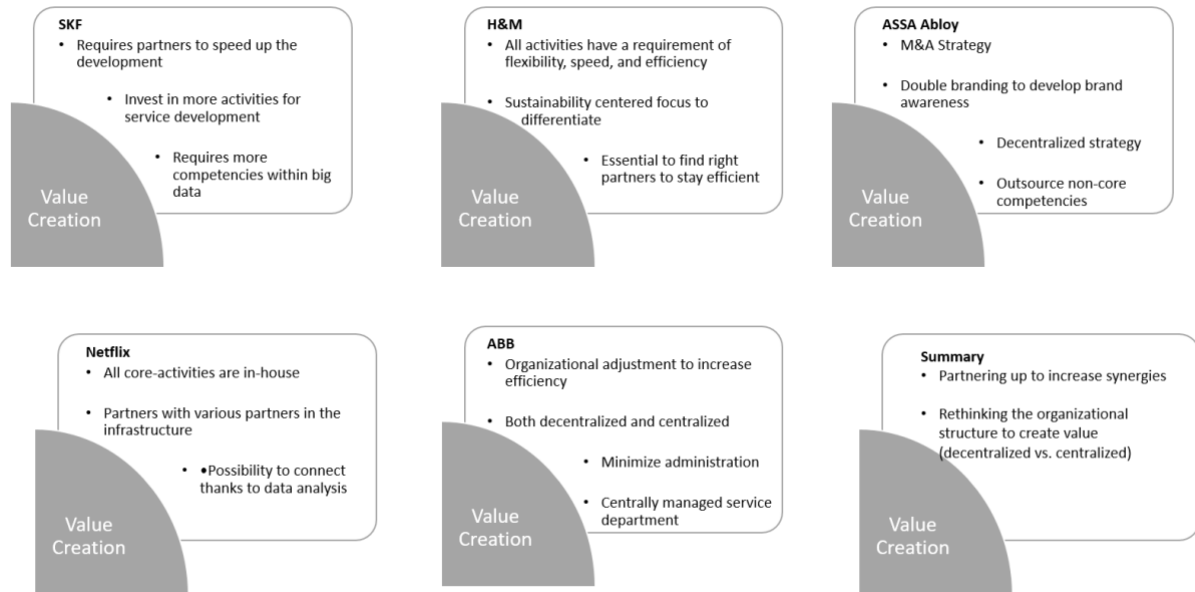


Figure 4. 10 Summary of Value Creation by Company

#### 4.2.4 VALUE DELIVERY

The chapters below will discuss the value delivery from the perspective of customer relationships and distribution channels. See figure 4.11 for a summary of value delivery for each company that will be analyzed with the help of the literature and analytical framework.

##### 4.2.4.1 CUSTOMER RELATIONSHIP

The customer relationship block consists of the relationship between a company and its customer segments. Servitization allows firms to create a unique relationship with customers, which will strengthen customer loyalty (Tukker, 2004).

Netflix has a value-based view, and the relationships between Netflix and its customers consist of automated/self-service that feels personalized. Netflix feels personalized because big data runs the accounts. When running into problems with the site, customers can also get personal assistance by calling or sending a message to the customer service center.

The value that the data has created both internally or externally needs to be delivered to the customer segments, through the different channels, and through customer relationships. Compared to products, services are a long-term offering, creating opportunities to strengthen



the customer relationship. Well managed customer relationships create customer loyalty. SKF has four different levels of customer stages, which makes their offerings more personalized.

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#### *4.2.4.2 DISTRIBUTION CHANNELS*

According to Wise and Baumgartner (1999), one crucial aspect to consider in the transformation to a service provider is to increase the involvement with distribution channels. The authors mean that to exploit the values of services, firms will need to focus on identifying new channels (Wise and Baumgartner, 1999).

Netflix uses a subscription-based model that captures many segments of the service industry due to its flexibility. Netflix uses its channels to reach customers, but they also use partner channels. Netflix uses a mixture of different marketing techniques and public relations programs; these include social media sites, to promote service to potential new members. Netflix's business model is subscription-based and offers different types of subscriptions based on customer preference.

To create new distribution channels, manufacturing firms are reaching out to different marketplaces, through platforms, offering other ways of reaching customers like renting and deliveries, implementing faster lead times, subscription-based models, using partners, and different types of marketing techniques and public relations programs like social media. At H&M, value to the customers is delivered through different channels such as stores, online shops, and different marketplaces. The new collaboration with Y-closet, where H&M is part of a platform in the Alibaba network, enables H&M to reach out to a different customer base. The possibility to rent the Cos collection also allows non-customers to turn into customers from a cost perspective. H&M has KOLs where the firms can use big data to increase sales. Manufacturing companies need to rethink how they reach out to customers as well as different payment plans. Companies need to become more personalized to their customer needs, and this includes the distribution channels as well.

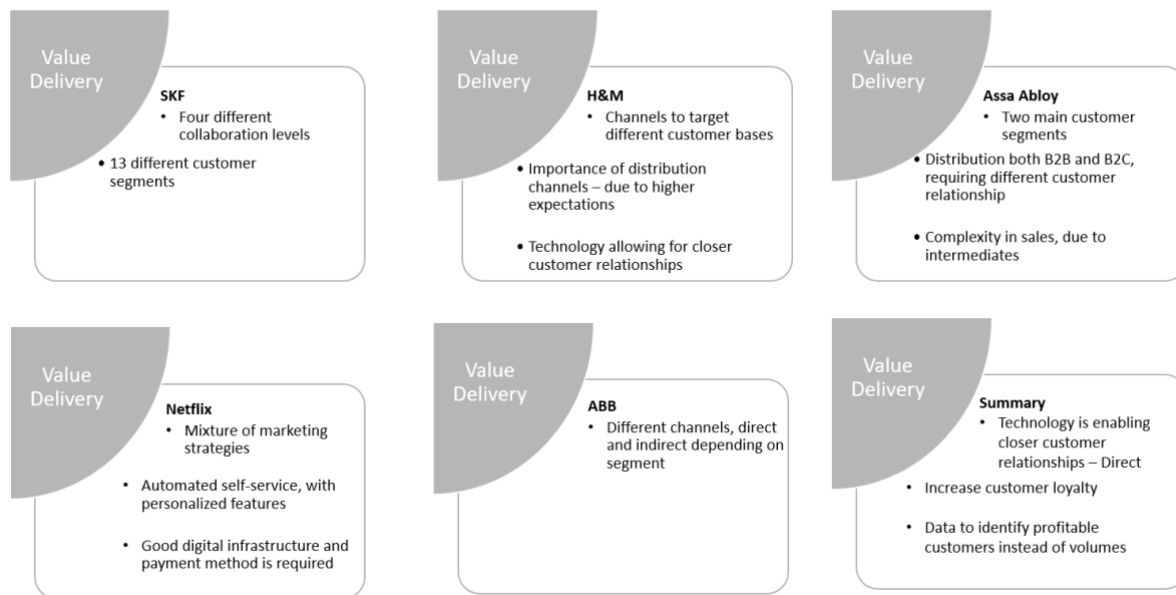


Figure 4. 11 Summary of Value Delivery by Company

#### 4.2.5 VALUE CAPTURE

Revenue streams can be in different forms according to Osterwalder (2010), in this study, the results indicate that the change in revenues stream when moving into a service-focused area is the increase of subscription-based fee. Instead of receiving a one-time transaction, firms will increase recurring revenues. Research from Parida, Sjödin, Wincent, and Kohtamäki (2014) indicate that add-on service does not create any financial services. Wise and Baumgartner (1999) conclude that firms need to focus on profit margins instead of volumes when moving into the service business. Selling services differs from selling products, Naukam (2015) mentions the challenges of converting the revenues to recurring (in the form of a subscription base) from one-time payments. This transformation requires a strategic partnership between the IT and Finance department, the process of payments and pricing process, and lastly, challenges of the way of working. The cost structure in a service company is suggested by researchers to be flexible. Anderson and Narus (1995) mean that firms need to have "naked solutions" as a basic service where customers can customize the package. The customized package creates a flexible way of identifying prices for each customer. It also creates requirements for the sales department, in the mindset of how to sell services (Anderson & Narus, 1995). See figure 4.12 for a summary of value capture for each company that will be analyzed with the help of the literature and analytical framework.

Netflix uses a subscription-based model that captures many segments of the service industry due to its flexibility. Netflix's business model is subscription-based and offers different types of subscriptions based on customer preference. The firm is highly prioritizing value-based creation, meaning that the cost structure is value-based. The profit is not only generated from the recurring revenues but through increased efficiencies related to the way of working, the access to information, and the possibilities to take actions to create internal efficiencies that are related to cost savings. As an example, Manager D mentions that for each project, the managers do not have any financial budgets; instead, they are reporting what values the project will create, and based on that, each employee has the responsibility to fulfill the expectations. At Netflix, the interviewed manager mentioned that the salary set for employees is always based on the value they are capable of creating.

The companies interviewed capture value through different payment methods to increase sales, such as subscription models, services, and subscription contracts, and KOLs. H&M has some rental services and app services. They also have KOLs where the firms can use big data to increase sales, as the firm will be able to create timing to promote products that are demanded in the specific moment. At SKF, the majority of the services are charged with a monthly fee. In SKF's case, there are four different levels of customer stages, and depending on the different stages, different payment methods are offered. At ABB, the sales flow is separate for products and services, which has made it possible to have separate profits. Also, at ABB, a product can be sold together with a Service contract (ABB ability), which makes it possible for the firm to collect data, which is a way to capture value. Assa Abloy offers services and subscription contracts, such as software services, which are creating recurring revenues. Being able to personalize ways to capture value for customers, firms will be more appealing to customers. Companies are also more appealing if they are flexible in their payment methods rather than one payment method for all customers. The services created through data are mostly captured through recurring revenues.

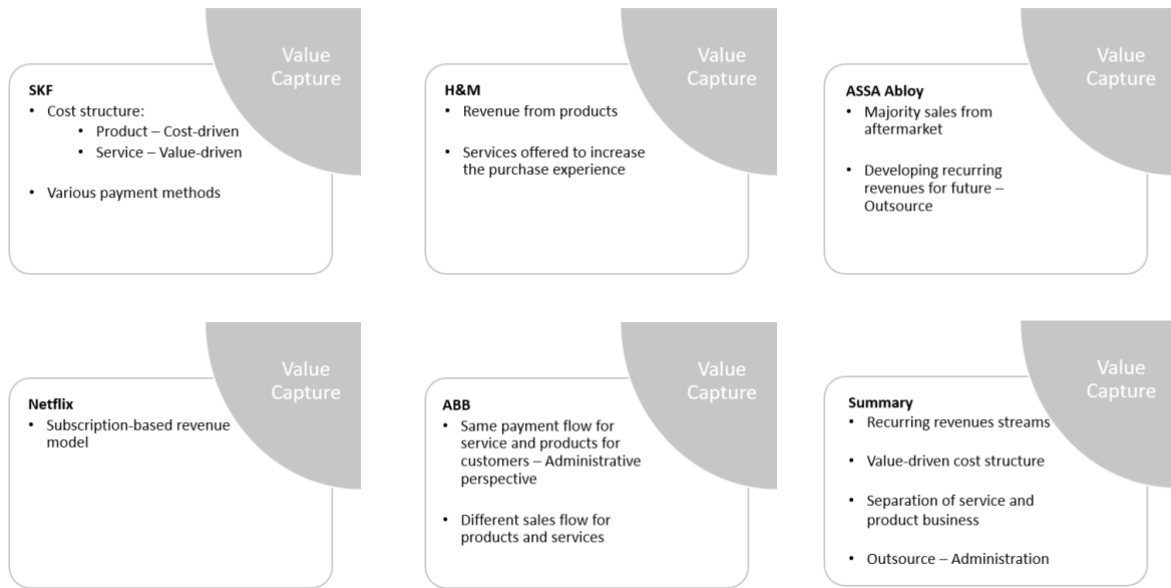


Figure 4. 12 Summary of Value Capture by Company

## 5. CASE STUDY

The case company is an international company operating in the industrial industry and is part of a bigger group working in the industrial manufacturing industry. The case company has revenues of around 10 billion SEK yearly and approximately 1500 employees. Currently, the case company is product-oriented and has started the transformation to becoming service focused with small initiatives, as will be presented in this chapter.

There were seven interviews conducted with managers from the case company. These interviews were categorized by themes, where the five main themes identified were enabling factors (strategy, culture, and leadership) and how the case company discovers, creates, delivers, and captures value. The results from the case study are from interviews with multiple managers from different departments the case company. In the analysis, the results from the managers will be examined with help from the literature in chapter two, the comparative study in chapter four and the analytical framework “Servitization Journey for Manufacturing Firms Framework 2.0” (Figure 4.8).

In each subchapter, the results and analysis will be presented. Chapter five consists of five sub-chapters. The first subchapter 5.1 will present the results, analysis and recommendations from the enabling factors, which consist of culture, leadership, and strategy. Subchapters 5.2-5.5 present the results and analysis related to how the case company discovers, creates, delivers, and captures value. The last sub chapter 5.6 will summarize the recommendations to the case company.

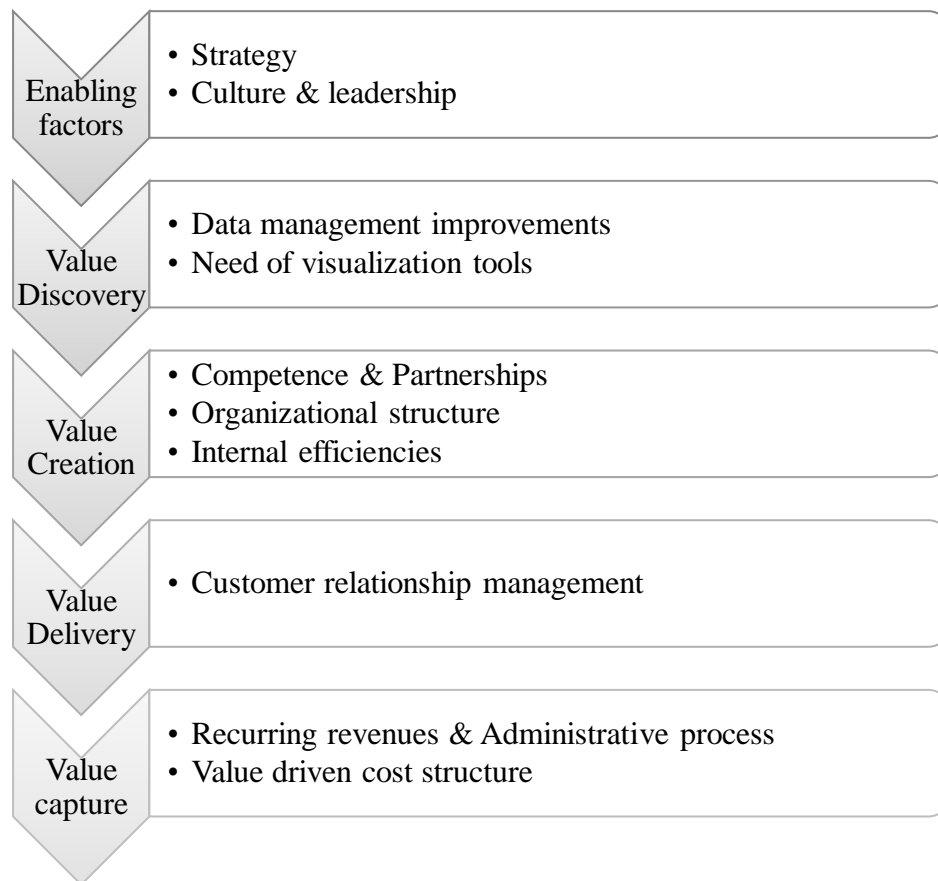


Figure 5. 1 Overview of chapter 5

## 5.1 ENABLING FACTORS

An adjustment to enabling factors such as strategy, culture, and leadership are necessary to transform from a traditional manufacturing firm to a service provider. The results from the case company interviews show what actions the case company is taking in the transformation to become more service focused and what they lack in strategy, culture, and leadership.

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### 5.1.1 STRATEGY

#### *Result*

The management team in the company has a clear mindset where in the service area they want to develop in, they also have a clear picture of how to reach the wanted state. However, the case company is experiencing challenges in executing the plan, which is a challenge that they have worked to overcome during an extended period of time. (Manager K, 2020)

From an interview with Manager F (2020), it was clearly stated that the first step in the journey is to set a service strategy where: why, whom, and what needs to be clearly stated. Even though the management team of the case company has a clear strategy in mind, there is no clear service strategy included in the written document for the corporate strategy and tactical plan. The corporate strategy and tactical plan, with a detailed description, are not available for all employees (Manager K, 2020).

Manager K (2020), stated that the projects that are service focused are unnecessarily drawn out and cost more money than required. The service focused projects could be achieved faster and more cost-effective. There are also challenges of not aligning actions. These kinds of challenges are what Manager F is stating will occur without a clear service strategy (Manager F, 2020).

### *Analysis*

From the literature, it is clearly stated that a service-focused business, compared to a product-focused business, requires different kinds of KPIs, as success is measured differently (Gebauer et al., 2005). Therefore, firms must have a transparent service strategy, which is aligned with what Manager F (2020) believes. As this firm is new to the service area, having a clear and public service strategy is even more critical. It will be a part of the employee's actions. From a service company such as Netflix, the CTO (chief talent officer) stated that "If you create a lot expectation of responsible behavior, most employees will comply."

Therefore it can be summarized that the management team in the case company has a clear mindset of where in the service area they want to develop; they also have a clear picture of how to reach the desired state, but there is challenges due to not having an strategy plan or a formally written service strategy in their execution plan. As the case company has no strategy plan, it creates lack of alignment, and everyone is heading in a different direction. From interviews, it has been shown that many projects in this area have required a lot more time and money than expected. One reason that projects are taking too much time and costing too much is that the case company lacks alignment in the different departments, leading to a lack of efficiency. Lastly, the case company needs to take home "short-term wins," which is not happening because projects are taking an unnecessary amount of time and costing too much.

### *Recommendation*

In this area, it is recommended that the case company identify the service strategy and document it, as well as publish it to the related employees. The case company should identify the service strategy and distribute it to the employees to help create the wanted culture that is required in a service organization, as well as the way of working and alignment. Manufacturing companies traditionally revolve around its core product offerings. Managers of service-focused industrial firms can establish clear strategic priorities and explain this to their operational teams how the service business orientation relates to the overall organizational goals and processes to reduce potential resistance.

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### *5.1.2 CULTURE AND LEADERSHIP*

#### *Result*

The view of culture in the case company is that it is product centered and actions are based on a traditional manufacturing mindset. Manager I (2020) means that the culture cannot just be changed; it is the employees in the case company that builds the culture based on different actions and guidelines provided by the management team.

Similarly, Manager K (2020) means that changing the culture will require different kinds of people in the case company. The majority of the case company's employees are risk-averse, which develops a type of leadership. Manager K (2020) further explains that in the case company, there is a culture of always being safe. The company is not taking enough risks, which might be required in today's environment. The case company is an expert at making decisions on projects with difficult financial situations, where there is a significant risk of losing or winning money. Although, when it comes to decisions regarding doing something different, for instance, services, the case company does not dare to take risks or make big decisions, even though the financial investment might not be significant. There will be requirements for the company to attract risk-taking leaders in a transformation period (Manager K, 2020).

Manager J (2020), mentioned that a benefit of the case company is that the culture and the values are not just on some PowerPoints; each individual is respecting and applying the corporate values. Because individuals respect and apply corporate values, it will be an enabler for the transformation journey, where the employees respect the decided values (Manager J, 2020).



### *Analysis*

From the interviews it can be concluded that the case company's current culture or way of working could be discussed as the opposite of a service provider. Product companies focus more on economies of scale and standardization, while service companies focus on creating profits through customization, flexibility, and variety (Gebauer et al., 2005). The values will need to be reflected in the company's culture. Netflix, for example, has a culture of independent decision making, information sharing, prioritizing people over process. In the case company, the decisions need to be escalated on various levels, employees do not have the freedom to make their own decisions, and currently, processes are more trusted than people.

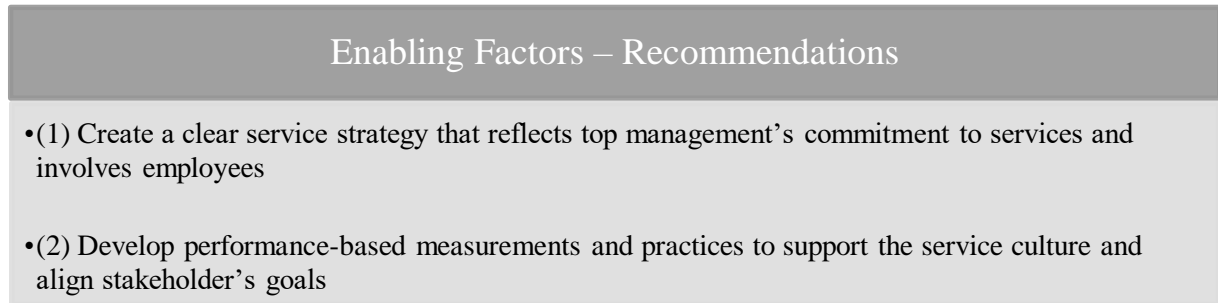
From the interviews, the new business development team, working with service are in the culture of a service provider. Meanwhile, the rest of the case company is still in a traditional manufacturing mindset, and this creates some clashes. For example, two evident mindsets are clashing. There is one part of the case company that wants to be prepared before launching any projects, the administrative processes, and other processes regarding the project. The other mindset is that the service does not need to be fully ready; it will be developed parallel with the release.

The challenges that the case company is facing is changing the mindset. They have a decentralized strategy, and HR needs to find the right leadership, whom to recruit and find tools to help them with the recruitment process. The mindset that leaders will be communicating with the rest of the case company is something that the leaders will need to determine. The case company needs to set what kind of leadership is desired.

### *Recommendation*

The case company is recommended to have performance-based measurements and practices to support the service culture and align stakeholder's goals. Making this change will encourage change in the mindset of people and develop strong customer relationships. According to the literature, the focus on product and service companies is different. Product companies focus more on economies of scale and standardization, while service companies focus on creating profits through customization, flexibility, and variety. The values will need to be reflected in the company culture, for example, changing the mindset to a professional service provider. The case company needs to make leaders understand that services create value, not only through revenues but also through various cost savings. As the case company has a culture that is

accepted throughout the organization, it creates a platform to be able to operate as a professional service provider with independent decision making, information sharing, and prioritizing people over process



*Figure 5. 2 Enabling Factors – Recommendations*

## 5.2 VALUE DISCOVERY

According to the designed analytical framework “Servitization Journey for Manufacturing Firms Framework 2.0” (Figure 4.8), there are two main challenges that incumbent manufacturing firms are facing in the service journey. These are to be able to have the competence to transform the collected data into value and to design a visualization framework to use the data systematically.

### *Result*

The case company has developed a possible way of collecting data from the product. The data will be centrally managed, where each department will request the needed data (Manager H, 2020). The technical way of distributing the data already has a solution, but how to use the data to boost the business remains a challenge (Manager H, 2020). The case company has still not yet developed a team to analyze the data. It is in early phase discussions of creating a team or even artificial intelligence models to minimize manual work (Manager F, 2020). Manager K (2020), emphasizes that the competence of using the data to creating added value of the products is not something that will be an issue, as the core competence in the case company is understanding the product. The data will work as a supporting force in product development work. However, using the collected data to identify new business opportunities or even new customers' needs will be a challenge (Manager K, 2020).

The collected data can be used for several purposes, and the case company has already started to work to identify which department would benefit from the collected data. Currently, there is no clear plan of designing an interface or visualization tool for non-data scientists to understand the data (Manager F, 2020; Manager G, 2020; Manager H, 2020).

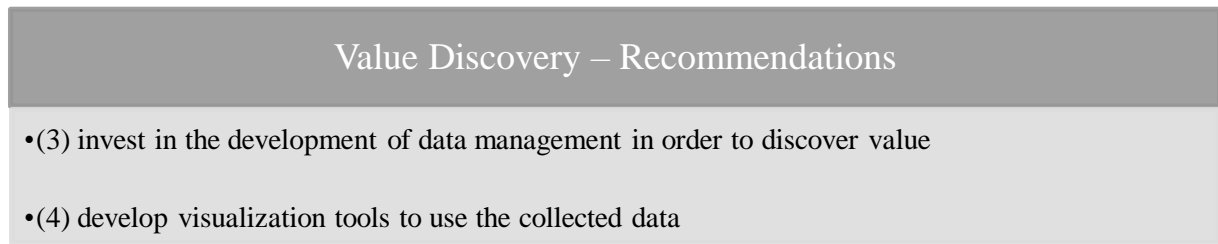
Manager G (2020) also highlighted the challenges of investing in the correct projects, stating that the current way of deciding on projects is not entirely suitable for service development. The current way of deciding on projects is not working, this has led to a situation where the case company is not able to collect discovered value in the sense of investing correctly. The same process and KPIs are used for both products and services, making it challenging to progress service projects. (Manager G, 2020)

### *Analysis*

The current way of deciding on projects is based on a process of financial KPIs. In the service area, it is difficult to estimate the financial KPIs due to the uncertainty, because the case company has not had service business previously. Difficulties with estimating financial KPIs is creating a situation where progression and development are stagnating due to the process. Netflix, which is a service provider with core values such as "people over process," is discovering the value based on the competence in the team. Trust and responsibility are in the people and not the processes for a service provider. Therefore, it can be questioned if the case company's process used to discover value is still valid in the sense of being a service provider.

### *Recommendation*

To summarize, the case company are recommended to develop a process for data management as well as a visualization tool to translate the data in for non-data scientists and develop different methods and KPIs for service development. Creating a team and artificial intelligence models to minimize manual work should be put in focus as it is only in an early phase right now, where it has only been discussed. This will support the value discovery process, through tools and competences in managing the collected data. To be able to develop visualization tools to translate the data for non-data scientists, there are some services that the case company needs to have in place. Chapter 4.1.3 on SKF is an excellent example of how a manufacturing company discovers and creates value from data.



*Figure 5. 3 Value Discovery - Recommendations*

## 5.3 VALUE CREATION

From the literature review and the interviews, there are three main challenges that firms need to manage to create value. These three challenges are the need for partnering up to create synergies, rethinking the organizational structure, and enabling the case company to create internal efficiencies.

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### 5.3.1 COMPETENCE AND PARTNERSHIPS

#### *Result*

Multiple managers in the case company think that new competences are needed in the transformation to become more service focused. Manager G (2020) emphasizes in the interview that to succeed, the case company needs to rethink the way of selling. Instead of transactional business, there will be an increase in partnership (Manager G, 2020). The case company will need to work in a network, where its current customer base will need to be managed as a partner (Manager G, 2020). The case company is a component manufacturer, meaning that the focus needs to shift to the end-customer (Manager G, 2020). Similarly, Manager H (2020) states that the case company, together with its current customers, will need to work together to serve the end-customers. Manager H (2020) states that a potential business in the future is to guarantee performance and charge per month, but in any way, the need to work together and creating value in a network will be required. The case company is already working with different pilots, together with its customers, to create such a relationship (Manager H, 2020). Challenges that the case company is facing is to ensure that all competencies are in place, map what skills the case company has in-house today, and decide what skills are needed.

### *Analysis*

Manufacturing firms that are in the servitization process do not have all the resources to create competitive advantages (Kindström and Kowalkowski, 2014). As new entrants are expected to enter the market, there will be a need to have partners that obtain the knowledge that is outside of the case company's core competencies (Athanasopoulou et al., 2016). Partners can optimize (economy of scale), reduce risk and uncertainty, and acquire particulate resources and activities (Osterwalder, 2010). To reach the market fast enough and not fall behind as an incumbent firm, the case company must acquire new competences. One way to attain new competences is through partnerships.

The case company needs a system to identify the competencies in the case company to determine what is lacking, and HR needs a strategy to identify new skills. The case company needs to either create new partnerships or hire personnel with the new competence that is required in the company. It is recommended the case company invest in competency mapping to make the best out of staff that the case company has. Competency mapping is a way to help the case company realize what competencies that the case company already has in-house and are unaware of and what skills are missing. HR will then be able to have a clear picture of what type of people they should hire and what part of the case company they are needed in or if some people may be more effective in another part of the company.

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### *5.3.2 ORGANIZATIONAL STRUCTURE*

#### *Result*

From the data collection, it could be concluded that one way of transforming into the service area is to start with the organizational structure. Which is, for example, what Assa Abloy and ABB did. In the sense of the organizational structure, the case company has not made any significant changes since 1997 (Manager L, 2020).

From the interview with Manager J (2020), it can be concluded that the case company has a gap in the current state and the wanted state in the scene of the effect of organizational structure. The case company currently has a matrix organization and has completed small changes in the organization to meet the challenges of becoming more service-focused (Manager F, 2020). In the sense of being service-oriented, the case company has taken small steps in the organizational structure. The first initiative was to create a new department focusing on new business

development, where services became one of the team's responsibilities. The purpose of this team was to create an environment where they are freer and can develop future offerings. The second step that was taken is the co-location of the service team. Where people from different departments are placed in one commonplace to increase the cross-functional way of working (Manager F, 2020), after these changes, there is still a process that is blocking the innovation and development speed (Manager F, 2020; Manager G, 2020; Manager H, 2020; Manager I, 2020). The case company is currently working to reconsider a bigger organizational structure change, but it is still in the early phase of discussions (Manager F, 2020; Manager G, 2020; Manager H, 2020).

Motivation behind the need of reconsider the organizational structure is according to Manager F (2020), Manager G (2020), Manager H (2020), and Manager I (2020) that the matrix structure can potentially be an obstacle in the development to become more service focused. In the sense of the organizational structure, the case company has not made any significant changes since 1997. The current organization was designed in a stable environment. The matrix organizational structure enables the case company to have control mechanisms in two lines. Manager I (2020) stated that in a world where firms can have control, the matrix structure is suitable. The current external environment is more volatile and changes fast, meaning that it is no longer possible to have control (Manager I, 2020). Manager K (2020) mentions that the project development process is different between products and services. The product process has different phases that come after each other, whereas services have a process where all the phases are continuously happening. Services are operating at the same time as it is developing, while products are fully developed before a launch.

### *Analysis*

Relating to this is the organizational changes ABB has introduced, transforming from matrix organization to segment based. This is to create a decentralized organization with ownership and responsibility in each segment. From an interview with Manager D (2020) from Netflix, the organizational structure is flat, and each team is decentralized with ownership and responsibility. Manager D (2020) mentioned that the case company does not control the mechanism as budget; instead, the case company is value-driven, and each team has the ownership to invest in what they believe adds value, but it also takes responsibility for the action taken. A service department has shown to need decision making at the operation level, where each employee is encouraged to take ownership and responsibilities. There needs to be a clear

strategy, a culture where these actions are supported, and a culture where employees can have a consequence thinking process. Therefore, in this case, the small step made by the case company is not enough to create the wanted results. Adding a department without changing the whole organization will still put the new department into the restriction of the more prominent organization.

### *Recommendation*

From the literature, it is recommended that firms need to identify the reason to create a competitive advantage (Bustiniza et al., 2015). Either if it is through differentiation, where the case company should develop a service department internally, or if it is through customer satisfaction where the case company should be using an external partner. If the case company develops a department internally to manage the service business, the department must not be affected by the traditional mindset. Instead, it needs to be embraced with a service culture such as loose coupling, having low iteration, high flexibility, freedom as well as responsibility

The contrast between how incumbent manufacturing firms are organized and managed, compared to service-oriented business is substantial. The case company is recommended to have a new organizational structure that supports service delivery interaction with the customer and internal cross-functional integration. The case company should go from a segment-based organization to a decentralized function-based organization. Challenges that the case company is facing is that they do not have a decentralized with ownership and responsibility. The case company also needs to create a value-driven mindset, not to have a control mechanism, and customer satisfaction where the case company should be using an external partner.

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### *5.3.3 INTERNAL EFFICIENCIES*

#### *Result*

From interviews with Manager F (2020), it was clearly stated that the increase of internal efficiencies would be the big winners of the connected services. As the data will continuously turn the case company into becoming more business-driven (Manager F, 2020). The mindset of creating value through minimizing costs instead of increasing revenues is still not common in the case company, according to Manager F (2020). For example, Manager G (2020) and Manager I (2020) mentioned that the way of evaluating a project has a big focus on financial figures of sales, the volume and value that the project still generates. Evaluation of the cost-

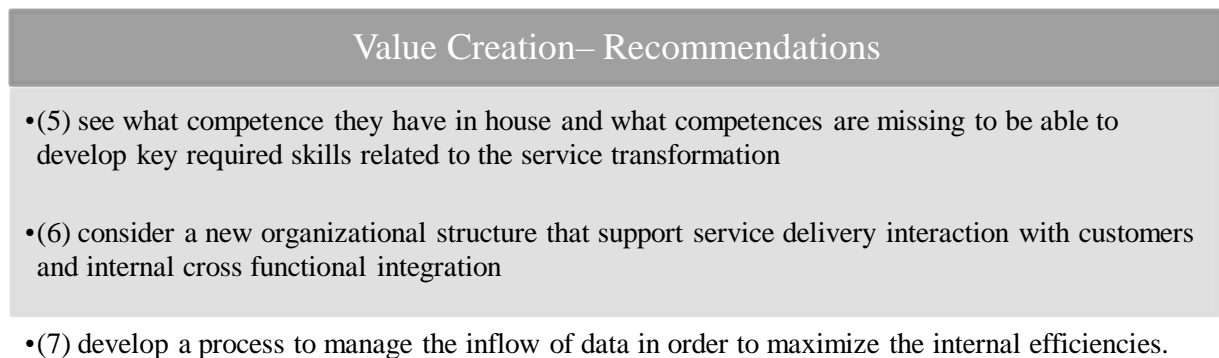
saving and the improvements that the data can create have not been a KPI in the project evaluation (Manager G, 2020; Manager I, 2020).

### *Analysis*

There are plans and opinions on how the case company should work to utilize the data effectively. As mentioned above, there is a technical solution on how to distribute the data. However, the case company is currently lacking a plan to motivate and educate the employees to use the data daily. Manager G emphasizes that the reason why the plan has not been structured or developed is that it is more important to first get the data, planning is the second step. (Manager G, 2020)

### *Recommendation*

As the managers emphasize that the significant return of an investment will be in the form of cost savings. It is recommended to develop the process of collecting data parallel with a plan for how the data will be managed and analyzed. Otherwise, there is a risk of collecting endless amounts of data without the capability of managing the data to create any value. It is also important to create a mindset and understanding that the financial return will in the form of cost savings.



*Figure 5. 4 Value Creation – Recommendations*



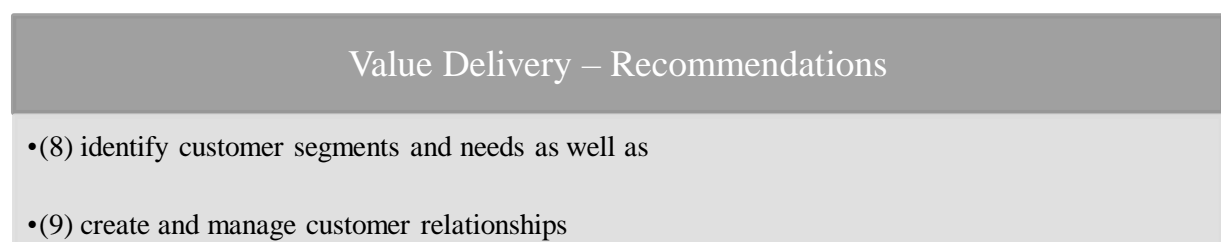
## 5.4 VALUE DELIVERY

The following chapter will describe results in the aspect of the customer relationship. The results include what the managers interviewed believe that value delivery is in the case company and what needs to change in the connection to the transformation of becoming more service focused.

### *Result*

All manager interviews commonly state that the data will create a long-term customer relationship. The case company has started pilots to test how these kinds of services would be in practice (Manager G, 2020). The case company will need to collaborate with their customers by working in a network or a partnership. The challenges discussed with the Managers were: Who the customer will be in the future? Will the end-user of the service be the end customers? Challenges with how much does the case company need to know about the end customer, and will this require other resources in the organization? As well as, what will it require to be able to maintain long-term customer relationships?

The case company needs to take action and decide which customer group to create value for and which customers to ignore (Osterwalder, 2010). To reach out to a profitable customer group, the companies must first define what group or groups this target group should be and how they can satisfy the customer's needs (Osterwalder, 2010). According to literature about servitization, firms should identify profitable customers instead of focusing on the volumes (Wise and Baumgartner, 1999).



*Figure 5. 5 Value Delivery – Recommendations*

## 5.5 VALUE CAPTURE

This subchapter will present the results of how the case company captures value, in connection to the transformation of becoming more service-focused. Recurring revenue and a value-driven cost structure are requirements to be able to capture value. The results and analysis will be presented under recurring revenues and value-driven cost structure.

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### 5.5.1 RECURRING REVENUES

#### *Result*

Currently all transactions are between the case company and the intermediates, meaning that the case company never has direct contact with the end customers. The case company only has contact with the intermediates, which creates challenges regarding creating recurring revenues because the end customers will be the ones using the services. According to Manager H (2020), recurring revenues are the most logical and maybe the only option. Meaning that this problem currently does not have a solution but will need to be solved in one way or another (Manager H, 2020). Manager G (2020) is working with some pilots to investigate the demand and possible options for creating recurring revenues. Another challenge related to recurring revenues is that the case company currently does not have an administration process that supports this type of invoicing or business. Current IT-systems only support transactional business, with a one-time payment (Manager L, 2020).

#### *Analysis*

From interviews with Netflix, it was mentioned that the case company had to re-invest in all IT-systems to match the business (Manager D, 2020). Manager D (2020) emphasizes the importance of having systems that support the business and not the other way around. In the interview with Assa Abloy, it was mentioned that administrative business is not their core competence, and if the current system is not supporting the business outsourcing, the whole administration process would be an option (Manager C, 2020).

#### *Recommendation*

The case company should either change IT-systems that will support the business or outsource the administration process to a third party. Systems are supporting business, not the other way around. The case company should re-invest in something that works for both.

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### 5.5.2 COST STRUCTURE

Services will create challenges of capturing a different kind of value. It is not anymore just the value of earning money. It will also be the value of creating internal efficiencies, using the data to develop the business and more. Currently, the case company is cost-driven, as mentioned previously, evaluations of products are based on cost and potential revenues. Instead, the case company needs to change the mindset to become value-driven by understanding the values in the long term that the projects will be able to generate to use the manager's experience to evaluate a product. However, this requires each manager to take responsibility for their actions, as discussed in the culture chapter.

One common ground of all managers interviewed who are working with connected services is that the most significant value from the data will be the internal use. To create efficiencies in respective departments, to be able to act based on data and also to create cost savings (Manager F, 2020; Manager G, 2020; Manager H, 2020; Manager I, 2020). In this case, it will be crucial for the case company to develop an interface or platform to analyze and visualize the collected data. Without these tools, the case company runs the risk of not being able to manage or capture the value of the collected data. The case company should use new technology to gather real-time data to make forecasting models. The case company also needs to change the mindset to become value-driven by understanding the values in the long term. The new mindset will help generate experienced managers to evaluate projects.

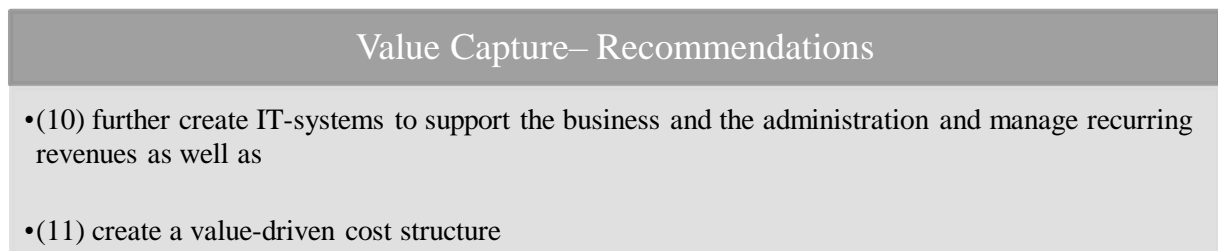


Figure 5. 6 Value Capture – Recommendations

## 5.6 RECOMMENDATIONS SUMMARIZED

In order to successfully go through the servitization transformation, the case company needs to make sure that the enabling factors are fully developed in the desired way. The case company should (1) create a clear service strategy that reflects top management's commitment to services and involves employees. The case company will need to operate as a professional service provider, which requires adjustments in culture and leadership. The case company should (2) develop performance-based measurements and practices to support the service culture and align stakeholder's goals.

As part of the iterative cycle of the value process, to be able to discover value the case company will need to (3) invest in the development of data management in order to discover value and (4) develop visualization tools to use the collected data. To be able to create value in the service the case company should (5) see what competence they have in house and what competences are missing to be able to develop key required skills related to the service transformation. The case company should (6) consider a new organizational structure that support service delivery interaction with customers and internal cross functional integration. Through benchmarking it has been concluded that companies in this transformation journey have created a decentralized organizational structure with a centralized service organization. As a professional service provider, the case company's organization should support individual decision making, with ownership and responsibility. The case company should (7) develop a process to manage the inflow of data in order to maximize the internal efficiencies. To deliver the value the case company needs to (8) identify customer segments and needs as well as (9) create and manage customer relationships. The case company should (10) further create IT-systems to support the business and the administration and manage recurring revenues as well as (11) create a value-driven cost structure.

## 6. CONCLUSION

In this chapter the conclusions of the research questions will be presented. The following research questions will be answered:

- How can traditional manufacturing firms transform from their current business model to a more service-focused business model?
  - o What are the challenges of becoming more service-focused?
  - o What can traditional manufacturing firms learn from successful service providers and manufacturing firms that have begun the transformation of becoming more service-focused?

### 6.1 THEORETICAL IMPLICATIONS

One of the challenges with becoming more service-focused is the potential to fall into the service paradox, meaning that firms invest in becoming more service-focused without creating financial returns. The main challenges related to this are the changes in the soft values, such as culture, leadership, and strategy. Our research concludes that a traditional manufacturing firm needs to reconsider the leadership, culture, and strategy of the firm to become service focused, as well as create a business model that supports servitization.

The analytical framework “Servitization Journey for Manufacturing Firms Framework 2.0” (Figure 4.8) has been developed through collected literature combined with the results from the comparative study. The framework has created an understanding of the need to develop the enabling factors as a basis in order to overcome the potential challenges in the process of becoming more service focused. The framework concluded that a traditional manufacturing firm should develop a specific service strategy with an action plan. A culture of trust, openness, responsibility, and honesty, combined with an attitude of embracing decision making, is concluded as a crucial step. The framework also concludes that loose leadership with a focus on relational capabilities needs to be developed. By completing the needs of the enabling factors, the firm will be able to continue the iterative process of the values (value discovery, value creation, value delivery, and value capture).

In each value process, there is changes and adjustments that the firm will need to go through. To be able to discover value, firms need to manage the data collected on the customer base as well as develop a visualization tool to analyze the collected data. Partnerships, and restructuring the organization needs to be overlooked in order to create value. To deliver value, firms need to invest in customer relationships. Administrative IT support for recurring revenues, as well as creating a value-driven cost structure, will be crucial to capture the value.

## 6.2 MANAGERIAL IMPLICATIONS

In the case study, the main challenges in becoming service-focused are mainly due to the soft values (enabling factors) and making changes in the business model. The case company has started with technical solutions to services, but the launch of different projects and solutions is rigid due to the traditional mindset related to the enabling factors. In this case, the case company is trapped in the service paradox, where the case company invests money in the project but does not capture the financial benefits, as the case company is not launching the solution fast enough.

Traditional manufacturing firms will need to look at the way successful service providers discover, create, deliver, and capture value but also the management of the enabling factors. (1) The first step to avoid the service paradox is concluded to be through preparing the enabling factors of the case company. Leadership, strategy, and culture need to be in place before the case company can discover, create, deliver, and capture the value. (2) The case company will need to be able to have competencies, resources, or partners to collect, process, and analyze the data to discover value. This information will further need to be communicated and visualized in an informative manner to the relevant stakeholders. (3) To be able to create value to reach the market fast enough, it can be concluded that the case company will need to partner up with other firms. (4) The organizational structure will need to be redesigned to manage the service business, as the nature of the product and service differs. Firms will need to transform into functional organizations with flat leadership and high autonomy with loss and profit responsibility, which will require a culture of trust and freedom. (5) The value captured from the services is concluded to be in the form of recurring revenue as well as cost savings from internal efficiencies.

### 6.3 FUTURE RESEARCH

For future research, more case studies should be done to verify the analytical framework “Servitization Journey for Manufacturing Firms Framework 2.0” (Figure 4.8) designed in this study. The analytical framework “Servitization Journey for Manufacturing Firms Framework 2.0” has been used in the case study of this research. However, to increase the reliability, more case studies should be conducted before the implementation of the framework.

Increasing the scope and gathering data from more manufacturing companies is also suggested as future research. The current data is based on the results from four different traditional manufacturing companies (SKF, ABB, ASSA Abloy, and H&M). To get more in-depth insight more interviews with manufacturing firms that are undergoing the same challenges should be conducted.

Future research could also include studying manufacturing firms that have had successful servitization journeys. Then determine what factors led to a successful transformation from a manufacturing firm to a service-focused firm. For future studies, it would, therefore, be useful to see if any manufacturing firm has succeeded with this journey and, based on that, identify practical guidelines for other firms to follow.

In this study, one of the main themes has been to look at the companies enabling factors - strategy, culture, and leadership. For future studies, it would be interesting to see the requirements and challenges at the department level. For example, challenges each department will face and what they need to do to mitigate the challenges in the best way. This kind of study will develop practical guidelines for the firms on a more detailed level.

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## APPENDIX A – DEVELOPING CAPABILITIES

Capability	Capability Dimensions	Activities to Develop Capabilities
Business model design	<ul style="list-style-type: none"> <li>• Focus on a value-driven marketing approach</li> <li>• Adopt a value-based pricing strategy</li> <li>• Develop risk- and revenue-sharing agreements</li> <li>• Increase focus on flexibility and customization</li> </ul>	<ul style="list-style-type: none"> <li>• Revise internal outlook toward selling a solution rather than products or services</li> <li>• Establish brand image as a provider of product-services through marketing activities</li> <li>• Build internal tools and demonstrators to help customers visualize financial and other benefits</li> <li>• Increase focus on developing risk- and revenue-sharing agreements that consider delivery partners' and customers' interests</li> <li>• Focus on increasing possibilities for customization by adding room for flexibility in the agreements</li> <li>• Explore new payment approaches considering creative and unorthodox solutions</li> </ul>
Network management	<ul style="list-style-type: none"> <li>• Involve new and existing partners</li> <li>• Develop partner understanding</li> <li>• Align partner incentives</li> <li>• Establish relationship management unit</li> </ul>	<ul style="list-style-type: none"> <li>• Map competence and resource needs to offer diverse product-services</li> <li>• Identify potential partners inside and outside the value chain</li> <li>• Develop partner knowledge to understand their goals and motives</li> <li>• Engage in joint exploration projects to identify mutually beneficial offers</li> <li>• Designate formal roles to manage relationships with partners</li> <li>• Engage in formal and informal meetings with partners to deepen relationships and build commitment</li> </ul>
Integrated development	<ul style="list-style-type: none"> <li>• Link disconnected development processes</li> <li>• Enhance potential to capture customer needs</li> <li>• Use product-in-use information (e.g., remote diagnostics)</li> </ul>	<ul style="list-style-type: none"> <li>• Connect service development process with established product and technology development processes</li> <li>• Revise ideation focus toward identifying customer needs and potential solutions rather than ideas for products or services</li> <li>• Implement systems to capture and integrate product-in-use information during development</li> </ul>
Service delivery network management	<ul style="list-style-type: none"> <li>• Extend involvement of delivery partners</li> <li>• Facilitate transition of delivery partners</li> <li>• Train and recruit front-line sales and engineering staff</li> <li>• Develop support strategy for delivery partners</li> </ul>	<ul style="list-style-type: none"> <li>• Introduce process to identify attractive delivery partners with appropriate competencies, resources, and customer segments</li> <li>• Support delivery partners with incentives and opportunities for growth</li> <li>• Implement training programs for delivery partner staff to sell and deliver services</li> <li>• Develop support material for service delivery network partners</li> </ul>

## APPENDIX B - INTERVIEW GUIDE

### Example of comparative study questions:

*Case questions varied depending on company*

#### Introduction:

1. What is your job position?

#### Servitization

Explain what we mean by services

1. Where in the servitization process is the firm? → Vandermerwe and Rada
  - a. Either product or services
  - b. Offer both services and products
  - c. Offering goods, services, knowledge, and self-service
2. What kind of services are you offering right now? → Tukker (2004)
  - a. Product-oriented
  - b. Use oriented
  - c. Results-oriented
3. What are the motivations for you and your company to become more service-focused?  
→ Raddatz et al. (2016)
  - a. Competitive motivation
  - b. Demand-based motivation
  - c. Economic motivation
4. Do you feel that the firm is challenged to exploit the financial benefit of service? If yes, why do you think that is the case? How much of the total income is from services?
5. Do you see any challenges in moving to the service area for your firm? → Neely (2008)
  - a. Shifting Mindset
  - b. Challenge with timescale
  - c. Challenge with the business model and customer offering



6. If yes, how are you working in order to overcome these challenges? à Service Paradox (Is it aligned with the solutions provided there)

### **Business Model Innovation**

7. Does the company you work for have a more product-based business model or service-based business model?

8. What is the main focus of your business today?

9. Do you think the business models need to change?

10. Are you using any data in the business model today?

a. What is the value of data for the company you work at?

11. How are you using data to discover value?

a. What are the key trends today that may affect consumer behavior?

b. Understand the market?

c. Do you have any practical way of using the data? Is the finance team and IT team together?

12. What are the key trends that are affecting your consumer today?

13. How are you using data to create value?

a. Key resources → Physical, Intellectual, Financial, or Human?

i. Do you think you will need to develop certain skills in order to have a data-driven business model for your firm?

b. Key activities → Guided by data? Culture?

c. Key partners → Strategic Alliance, Competition, joint venture, buyer-supplier relationship

14. How do you deliver the value?

a. Customer relationship

i. How do you connect with your customer?

- b. Customer Segment
    - i. Which customer segment are you focusing on?
  - c. Distribution channels
    - i. Who delivers the product to your customer?
    - ii. How do you deliver the service to the customer? → Help button
15. How are you using data to capture or realize the data?
- a. How do you charge for your services today?
  - b. How is it bundled to the product?
16. How does the business model fit the changes happening?
17. How could you use data in the future?

**Example of case study questions:**

*Case questions varied depending on job position*

Manager H

1. What is your role, and what are you working with?
2. What challenges do you see is most urgent for the firm to solve in order to be successful in this journey?
3. While interviewing Manager G, it was mentioned that we would need to work more in partnership with our OEM/dealers to serve the end customers, do you see any challenges with this? Or how will we be able to create this kind of relationship?
4. Do you think the firm is internally ready?
5. Is it okay to start when we are not is ready, or should we have the structure in place, at least? Thinking of how we internally will be able to handle data?

6. If we are not ready to handle it internally, then will we get the benefit of becoming internally efficient?
7. Oskar mentioned that there is one person that is analyzing the information currently, and this person does it when he has time. Is it not efficient, as the analyzing part is crucial?
8. What do you think is valid parameters to judge if a project is successful or not? (Business case?)

## APPENDIX C – DESCRIPTION OF COMPANIES

### **SKF**

SKF offers both products and services that create value for the customer. Traditionally SKF has been producing and selling bearings, but with many years of experience and development, the product will reach a level where it does not need to improve anymore. Because SKF has had the same product for a long time, they have perfected the product and production of the product. This means that the competitors are in a similar situation. According to Manager A (2020), the new way to compete is through services. The new performance-improving services are the main focus now to be competitive in the future (Manager A, 2020). SKF can be split into two different value propositions to meet the customer's needs. The products, which will create value by delivering the right product, the right time, and the right price. The second value proposition is the services, which is the rotating equipment performance. SKF satisfies customer needs through having the right solution, right performance, and the right total cost of ownership (Manager A, 2020). There are multiple ways to customize the service to what the customer wants and how the customer wants to pay (Manager A, 2020). SKF offers monitoring of the different payment plans, machines, help with making operations more effective, indications of when the machine needs maintenance which all create new customer value (Manager A, 2020).

### **H&M**

H&M was originally just a product delivered to create clothes available in a sustainable manner. However, in H&M's current portfolio they are offering more than just a product. The firm internally expresses that, the portfolio should “enable people to express their own styles” (H&M Annual Report 2018). Meaning that shopping at H&M is not only about the purchase but instead, it is about customer experience. H&M Group consists of different brands such as H&M, COS,

Weekday, Monki, H&M Home, Afounf, Arket, Otherstories, and Cheap Monday. The H&M Group offers products but also delivers services to the customer such as different app functions to make the purchasing process easier. These can, for example, be a visual search, which is a function that can give the customer recommendations or inspiration based on pictures taken by the customer (H&M Annual Report, 2018). New ways of selling their products are also appearing, for instance renting clothes through Y-closet (Alibaba platform), which is a software as a service.

### **Assa Abloy**

Assa Abloy is a group that offers a variety of “opening solutions”, with the value proposition of creating a safer environment for the customers. The group is offering products such as electromechanical locks, digital door locks, and security doors. Services such as maintenance and software as a service are also offered. With increased demand in the service, the group has a specific segment (Assa Abloy global solution) to meet the strong demands of services and transform into a service supplier. (Assa Abloy Annual Report, 2018).

### **ABB**

ABB is a company offering services in the digital industries, such as electrification, industrial automation, motion, robotics, and discrete (ABB Annual Report 2018). According to Manager E (2020), the firm is investing to develop the service segment as they believe that this area will increase the possibilities to discover more customer value. The firm’s long-term goal is to be able to build smart systems to collect data and provide services that will increase the value for the customer. In the case of ABB, the majority of the customers are purchasing systems and solutions that require huge investments, meaning that these purchases are long term and updates are not always relevant even though new products are released. Manager E (2020) states that the customers do not have the same purchasing behavior as in for example the phone industry. The way to create more value is through services and it will be the possibility to use the collected data that will be crucial for value discovery (Manager E, 2020). ABB Ability is an umbrella name for several services, but this software is important to discover value, as the software collects all the data from the different products to create relevant services or recommendations. This product is offered to the customers, but there is an interest in ABB to be part of the business as it creates possibilities to collect relevant data.

## **Netflix**

Netflix is the world's leading internet entertainment service; they have over 139 million paid memberships and they are in over 190 countries. Netflix offers TV series, documentaries, and films in many different languages and genres. There is no limit on how much Netflix customers can watch, they can watch at any time, anywhere, as long as they have an internet-connected screen. Members are not committed and can subscribe and unsubscribe when they want. There are no commercials and the customer can play, pause, and resume watching when it fits them. Not only is Netflix personalized in the sense of steering to fit the customer's schedule but it is also personalized based on the customer's movie watching preferences. Netflix also offers the legacy DVD-by-mail service, which has around two million subscribed members in the U.S. (Netflix Annual Report, 2018)