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How strategic agility effects strategy implementation in servitizing companies?

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ABSTRACT

As a dynamic meta-capability, strategic agility is recognized as a lever for a holistic strategic change, enabling companies to learn, develop and create new capabilities and find and balance the right fit between the external forces and the company's strategy, structure and processes. Strategic agility heavily focuses on understanding external stimuli (market forces, customers' needs and their value creation), which is a shared element with one of the currently most discussed strategic transformation of manufacturers, servitization.

The aim of this qualitative thesis is to explore the role of strategic agility in servitization and shed some light on how strategic agility effects strategy implementation in servitizing companies. The conceptual framework is built on strategic agility, strategy implementation and servitization literature, which allows deeper understanding of strategic agility itself and its specific form in an early stage servitizing company.

The empirical part of the study was conducted through an in-depth revelatory single-case study, by using semi-structured interviews. The data were collected from eight knowledgeable informants, who were actively involved with the strategy implementation; however, who worked in different teams and countries, thus provided different viewpoints on the same phenomenon.

As a result, the final concept of strategic agility in servitization comprise of four main dimensions: sensitivity, fluidity, leadership and continuity, with fifteen embedded capabilities. The findings indicate that strengthening strategic agility in servitization process could mitigate challenges connected to it, such as the scarcity of resources, strategic misfit, cultural readiness and employee commitment. It supports the company's transformation through the holistic transition process. Moreover, this study presents that thought the dimensions of strategic agility are irreplaceable, the mix of embedded capabilities varies according to a specific transformation process.

KEYWORDS: Strategic agility, Strategic agility dimensions, Dynamic capabilities, Servitization, Strategy implementation

1. INTRODUCTION

1.1. Background

For years, companies strive for finding the sweet spot on a market, developing competitive advantage and improving efficiency of processes to cut costs and harvest well deserved fruits from their hard work of getting to that stage. As constant alertness and high stock of resources and goods are tiring and unprofitable, seeking stability and efficiency are natural steps many companies aim for. With increased efficiency, companies naturally evolve into becoming more stable, but also more rigid (Doz & Kosonen 2010). Regrettably, with rigidity comes inability to change and grow; and from market leaders become followers, and from followers only memories.

Over the last decades more and more companies have acknowledged the increasing speed of market dynamics. Shifting environment and more frequently occurring disruption of markets, are giving organizations two options: commit to a strategy and try to survive the storm, or adapt its organizational capabilities, structures and processes to the changes (Teece, Peteraf, & Leih, 2016). As the former president of Nokia, Olli Pekka Kallasvuo (2006), said:

“Five to ten years ago, you would set your vision and strategy and then start following it. That does not work anymore. Now you have to be alert every day, week, and month to renew your strategy.”

Although, the knowledge and understanding of the need to be alert, did not save Nokia from its downfall, only few years later after the statement above, there are companies such as IBM, SAP, Xerox, Kone and many others, who successfully undertook the renewal of their business models in the face of the inevitable market changes (Doz & Kosonen 2010).

It can be argued that constant alertness and agility are dominants of technology-centered industries. However, unpredictable changes and jolts in the market environment are not limited to only industries constantly operating with new technologies and responding to fast innovation, they occur in every industry (Eisenhardt & Martin, 2000). Just looking at the

disruption in hotel industry (Airbnb), book publishing (Amazon) or mattresses manufacturing (Purple) it is transparent that the change can come at any moment. The occurrence of these shifts in traditional industries can be less frequent than in fast-paced industries, but they do happen; and as a result, companies might be taken by surprise even more, as they are lulled by the conceiving stability of the market.

Therefore, companies cannot solely rely on longitudinal plans and predictions, as these assumptions are built on known information and do not account for unknown unknowns; however, they should be able to change and adapt when needed. As mentioned in previous research, one of the key elements in the search for sustained competitive advantage is fast adaptation and organizational ability to change (Nelson 1991; Prahalad & Hamel 1990; Harreld, O'Reilly III, & Tushman 2007).

Steven Denning in his article for Forbes (Denning, 2018) explains that “*the management revolution now under way is about working smarter, not harder, and achieving more value from less work, with much greater adaptability*”.

The organizational ability to adapt fast and strive when dealing with market uncertainty is typically called agility (Doz & Kosonen 2008b; Teece, Peteraf, & Leih 2016). Lewis et al. (2014) describe it as strategic agility, which is a flexible and mindful response to the market dynamics, resulting in transformation of company's business models.

Doz and Kosonen (2008b) explore strategic agility and its role in an organization transformation through a longitudinal research of Nokia's evolution; company's transformation from a rubber and cable manufacturer into one of the biggest influencers of the mobile phone industry. They visualized three different dimensions of strategic agility (strategic sensitivity, resource fluidity and leadership unity), which are necessary for the transformation of a manufacturing company. This theory was further supported by extensive studies of SAP, HP and Kone's business models' transformation process. (Doz & Kosonen 2010)

When looking at the different markets from strategic perspective, one of the most spread transformation processes that manufacturers are currently undertaking is the shift from product-oriented providers to service and solution providers. This transformation process is described as servitization (Vandermerwe & Rada 1988).

The transformation of manufacturing companies' business models, from product to service, originated as a response to decreasing product margins and customers' growing interest in services (Gebauer et al. 2005). Solely product-driven business models are seen in many markets as insufficient, therefore businesses (including manufactures) have been incorporating service offerings in their business models more extensively (Rabetino, Kohtamaki, & Gebauer 2017), in the attempt to sustain their competitive advantage on the market (Vandermerwe & Rada 1988). As Gebauer et al.'s (2005) research indicates, increased service revenue strongly correlates with company's increasing operating margins, therefore servitization seems to be logical direction for many manufacturers.

However, the transformation process towards servitization is extremely complex one. There is no universal solution that can be applied to all companies, and each business must craft their unique strategy to define and reach the right position and sweet spot on the market. Every position on the strategy map requires specific set of capabilities and processes. Therefore, the transition process of servitization requires adaption and use of specific capabilities and resources, which would enable the organization to obtain the desirable position on the market.

1.2. Research gap

Markets and trends have been, are and will be changing. Already at the beginning of strategic management literature, Mintzberg (1978) introduced that strategy formation and implementation are all about the ability to adapt company's strategy based on external and internal stimuli. This ability allows the company not only to formulate and implement

strategy that is aligned with the market trends and customers' needs but is also appropriate for the resources and core competences of the company. Organizational capability, enabling this dynamic operations and growth is often described as agility (Yusuf et al. 1999) or specifically, strategic agility (Doz & Kosonen 2008a).

Strategic agility in management literature is repeatedly connected to the fast and continuous transformation process of organizational strategies. As Doz and Kosonen (2008b) present in their longitudinal study of Nokia; strategic sensitivity, resource fluidity and leadership unity were the key components to the company's business model renewal. Although, Teece et al. (2016) are reluctant to acknowledge the essential role of strategic agility, Teece et al. (2007) notice that sustainable competitive advantage is " *fleeting unless it is aligned with capabilities to continually sense how the marketplace is changing and size these changes through dynamic organizational realignment.*" Which is closely similar to the concept of strategic agility dimensions, as described by Doz and Kosonen (2008a).

Often, strategic agility is discussed from a holistic perspective, presenting generalized concepts (Long 2000; Sajdak 2015; Doz & Kosonen 2010). Exceptionally, in the longitudinal research of Nokia and the role of strategic agility in the company's evolution process, (done by Doz and Kosonen 2008b), the authors discuss the different roles strategic agility dimensions play, in different transition phases of the company. In other words, in this research, Doz and Kosonen (2008b) indirectly demonstrate that in different phases of organizational strategic transformation, all dimensions of strategic agility are present, but play different role. This research believes, that while the holistic concept of strategic agility remains the same, the specific embedded capabilities change according to the circumstances of the given company and strategic direction the company decides to follow. Understanding not only the generic concept of agility and why it is needed, but what does it represents in a specific transformation process has been an overlooked angle, as it does not correspond with the academic trend of generalization of findings.

Even though the concept of servitization, the strategic transformation of a product-oriented company towards the implementation of a service-oriented business model, has been known

for decades, only in recent years it turned into a trend, which many companies try to follow. Thus, academia tries to better understand this transformation and support the servitizing businesses. Servitization has been heavily studied through the research-based perspective, defining different sets of capabilities and resources necessary for successful execution (e.g., MatthysSENS & Vendenbempt 2010; Ulaga & Reinartz 2011; Baines et al 2013; Huikkola et al., 2016; Huikkola & Kohtamaki 2017). These researches, regardless of how precise, complex, and extensive they are, focus mainly only on specific capabilities and resources a servitizing organization should possess.

As servitization is an organizational change, many companies struggle with the transformation and adaptation process (Huikkola & Kohtamaki 2017). To address these challenges researches have started looking into the dynamic capabilities required for servitization (Kanninen et al. 2017). Baine et al. (2017) indicate that there are still under-researched areas concerning servitization literature, including topics on factors influencing the successful adoption of services and holistic audits of capabilities. Sjodin et al.'s (2016) call for further research of service capabilities and their relationship to servitization, specifically the role of dynamic capabilities in servitizing. Kanninen et al. (2017) argue for development of dynamic capabilities in companies on the early stage of servitization, as they are needed to transform the current business and build new routines and processes.

Although strategic agility is a key dynamic capability enabling strategic transformation process of an organization (based on the strategic agility literature), the evidence of the role that strategic agility plays in the context of servitization is scarce. Therefore, the present study proposes that, by embracing strategic agility dimensions, the implementation process of servitization can be improved and certain challenges mitigated.

To explore the above assumption while extending the existing strategic agility and servitization literature, this research focuses on conjunction of strategic agility, strategy implementation and servitization literature.

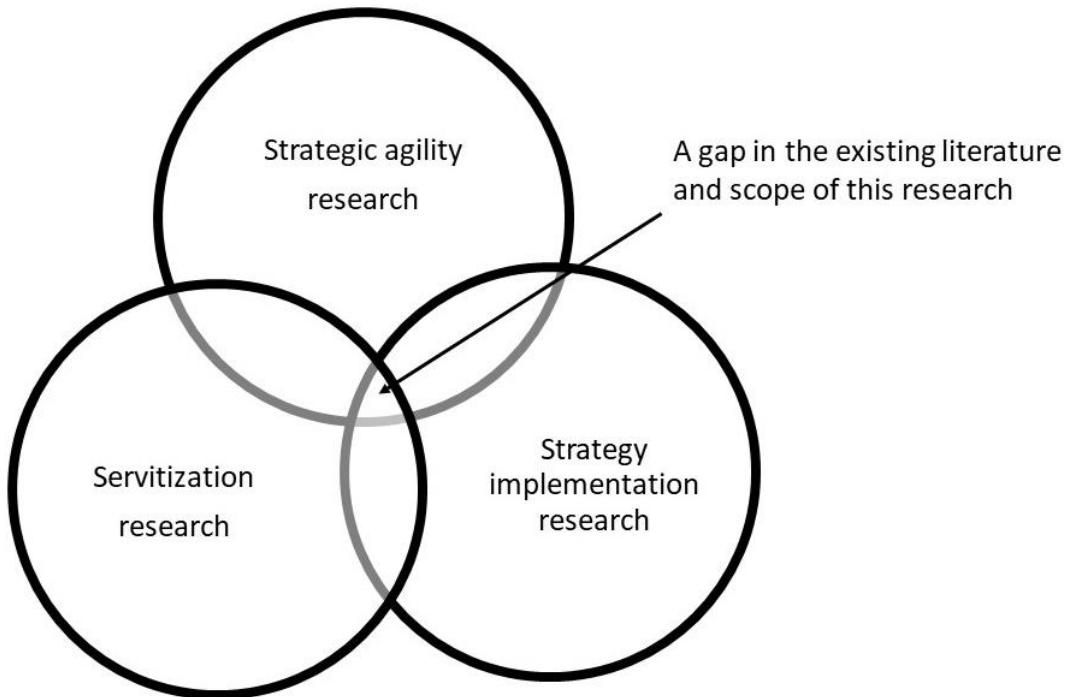


Figure 1: A Gap in the existing strategic management literature and scope of this research

1.3. Research question

The objective of this research is to study the role of strategic agility in servitization. The research aims to deeper the existing literature of strategic agility, through exploration of this phenomenon in a specific transformation process, servitization. By following this road, the research also aims to extend the servitization literature, by exploring the role of a dynamic capability (specifically strategic agility) in the transformation process; as called for by numerous authors (Sjodin et al. 2016; Kanninen et al. 2017).

The present thesis aims to address the following research questions:

What is the role of strategic agility in servitization?

In order to answer this question, this study focuses on three main sub-question to guide the research work.

1) What are the key dimensions of strategic agility for servitizing manufacturers?

The first sub-question focuses on defining the key dimensions and their embedded capabilities relevant for early stage servitizing manufacturing companies. As indicated by Doz and Kosonen (2008b), the holistic theoretical concept of strategic agility might be the same; however, for each strategic change different capabilities under these dimensions might be relevant. Therefore, the first task will be to define what dimensions and specific capabilities within these dimensions are essential in this context.

2) What is the role that each dimension of strategic agility plays in implementation of service strategy?

The second sub-question looks at the relationships between strategic agility and servitization. It guides the research towards understanding the roles each of the dimension of strategic agility play in servitizing manufacturing companies. Further, the existing literature indicates that strategic agility dimensions are inseparable; however, they are not self-reinforcing (Doz & Kosonen 2008a, Sajdak et al. 2015). Therefore, this research will explore these relationships to understand the connection and its influence on strategy implementation.

3) How strategic agility dimensions support strategy implementation in service transition?

The third sub-question focuses on exploration of mitigation of servitizing challenges through strategic agility. Kanninen et al. (2017), Gebauer et al. (2005) and many others indicate, that the most challenging part of successful servitization is the transition process. Thus, the third question explores the role of strategic agility in mitigation of these challenges.

1.4. Thesis structure

The study is structured in six main chapters.

The first chapter focuses on introduction to the background and raises awareness about the researched topic. It introduces the research question and areas that are covered in this study.

The second chapter reviews the existing literature connected to the understanding of strategic agility in servitization. The chapter starts with deeper understanding of the phenomenon, strategic agility, discussed in management literature, its role in strategy implementation, followed by the concept of servitization. There is introduced the theoretical framework of strategic agility dimensions in servitization, including the mentioning of possible challenges companies are facing.

The third chapter introduces the research strategy applied in this study. The case company is introduced, together with the data collection and analysis process, followed by study of validity and reliability of this research.

The fourth chapter includes the empirical findings and presents the analyzed data, collected through the empirical research.

The fifth chapter presents the discussion part of this study. It analysis the empirical findings in connection to the discussed literature in the second chapter and presents holistic framework of strategic agility and its embedded capabilities in early stage servitizing companies. It also includes discussion on how strategic agility dimensions mitigate certain challenges connected to servitization of manufacturing companies.

The sixth chapter summarizes the findings and presents answer to the research question. The theoretical and managerial implications are highlighted in this chapter, as well as the limitations of the study and suggestions for future research.

2. LITERATURE REVIEW

2.1. Strategic agility

“The organizational survival lies with the organization’s ability to adapt and change” (Mayer 1982).

Strategic agility is an organizational dynamic capability enabling organizations to strategically adapt, change and thrive in an ever-changing environment. To understand this concept in depth, the literature review starts from the bases and the core of the concept.

2.1.1. Adaptability, flexibility, agility

Adaptability, flexibility, agility, these are all terms used to describe organizational ability to change and react to unexpected changes. These terms are often used interchangeably and there has not been established clear consensus on the definition of these terms; however, different concepts do exist.

Where Tecce (2016) sees agility as only a synonym for flexibility, Harraf et al. (2015) believe that agility is a combination of its main pillars, adaptability and flexibility. Flexibility is according to them an organizational ability to react to anticipated external stimuli; adaptability accounts for the responses and decisions an organization makes in relation to these external stimuli; and combination of both concepts creates organizational agility.

Based on extended review from Sherehiy et al. (2007:459), it can be even argued that these three terms represent the evolution of a concept describing the organizational ability to adjust to changes. Organizations started with the ability to adapt to occurring stimuli, and slowly realized that being flexible and prepared to adapt to the possible changes, might be more beneficial than just having the ability to adapt. Lately the concept evolved into enterprise agility, recognizing that companies cannot be only flexible and adapt to predicted stimuli, they need to possess agility, the ability to adapt to unexpected changes.

As agility evolved from the two previous concepts, it comprises of both, adaptability and flexibility. Therefore, agility is the ability to adapt to the expected but also unexpected changes in the environment, as demonstrated in Figure 2.

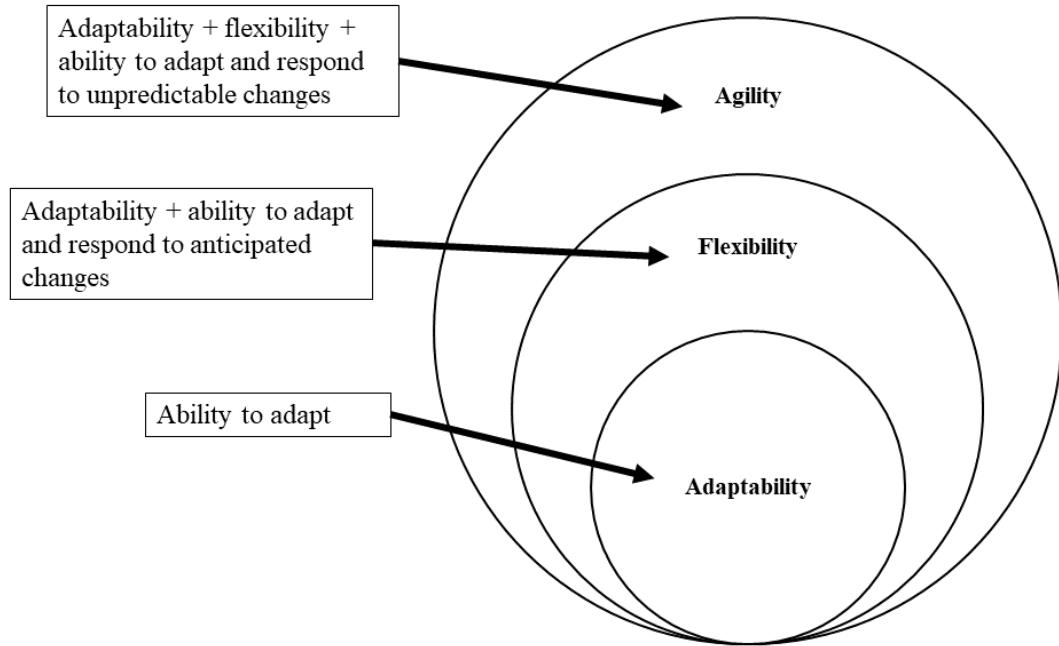


Figure 2: Scope of agility.

Najrani (2016) recognizes three types of agility: reactive, proactive and innovative agility. Reactive agility is seen as the ability to respond to changes, thus it can be compared to Harraf et al.'s (2015) definition of flexibility and adaptability. Proactive agility should enable companies to identify trends and adapt its strategy to thrive on these changes, and innovative agility focuses on developing new products, markets and opportunities, which customers or competitors were not aware of. It is argued that only by combining these three types of agility an organization can be truly agile. This argumentation therefore supports previous theories (Harraf et al. 2015; Sherehiy et al. 2007), arguing that flexibility and adaptability are part of agility.

As demonstrated in Figure 2, this paper recognizes adaptability, flexibility and agility as three distinguished abilities of an organization, which are interconnected. It identifies adaptability as an ability to make decisions and adapt in relation to changes; flexibility as the ability to react and adapt to anticipated changes, and agility as the ability to respond and adapt to unpredictable changes. Further, this paper embraces the above theories that adaptability and flexibility are parts of agility and that it requires both, reactive and proactive approach.

2.1.2. Agility in management literature

In 1991, under the threat of advanced manufacturing and intensification of market competition, a group of executives, supported by academia, introduced the strategy that was to revive the manufacturing industry of America. The strategy was called agile manufacturing (Nagel 1991:1), which was meant to be a system where “*technologies, management structures, and social values are synthesized into a powerful competitive weapon.*” Since then, the concept of agility has been expanding from agile manufacturing (Nagel 1991; Yusuf et al 1999) to other organizational levels and aspects of a company (for example Reed & Blunsdon 1998; Ashrafi et al. 2005; Manifesto for Agile Software Development 2001).

When discussing business oriented literature and organizational ability to adapt, the research on agility has been floating around the terms of strategic agility (Doz & Kosonen 2008a), business agility (Ashrafi et al. 2001), enterprise agility (Dove 1999; Sherehyi et al. 2007; Ganguly 2008), agile manufacturing (Gunasekaran 1999, Yusuf et al. 1999, Sharife et al 2001), organizational agility (Reed & Blundson 1998; Harraf et al. 2015; Felipe et al 2016) or solely agility (Teece 2016). Table 1 demonstrates few examples of how agility in an organization is understood by scholars.

Table 1: Agility in management literature.

| Author | Definition |
|-----------------------|--|
| Gunasekaran (1999) | <i>“Agile Manufacturing is the ability of surviving and prospering in a competitive environment of continuous and unpredictable change by reacting quickly and effectively to changing markets, driven by customer-defined products and services.”</i> |
| Yusuf et al. (1999) | <i>“Agility is the successful exploration of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast-changing environment.”</i> |
| Dove (1999) | <i>“It is the ability of an organization to thrive in a continuously changing, unpredictable business environment”</i> |
| Sharife et al. (2001) | <i>Agile Manufacturing is an inevitable condition for survival and prosperity in the increasingly changing business environment of the contemporary world.</i> |
| Ashrafi et al. (2005) | <i>Business agility is firm’s ability to recognize and assimilate change rapidly, swiftly integrate the new knowledge with existing information, and finally exploit these changes before competitors are able to do so.”</i> |
| Doz & Kosonen (2008a) | <i>“Strategically agile companies not only learn to make fast turns and transform themselves without losing momentum, but their CEO and top team also have higher ambitions: to make their companies permanently, regularly, able to take advantage of change and disruption”</i> |
| Ganguly (2008) | <i>“Agility is an effective integration of response ability and knowledge management in order to rapidly efficiently and accurately adapt to any unexpected (or unpredictable) changes in both proactive and reactive business/ customer needs and opportunities without compromising the cost or the quality of product/process.”</i> |
| Harraf et al. (2015) | <i>“Agility is a means of reaching and sustaining high-performance. “...it is a measure of responsiveness...”</i> |
| Felipe et al. (2016) | <i>“Organizational agility, as a key dynamic capability, is a firm’s ability to enable sensing environmental changes and responding efficiently and effectively to them.”</i> |
| Teece et al. (2016) | <i>“Agility is the capacity of an organization to efficiently and effectively redeploy/redirect its resources to value creating and value protecting (and capturing) higher-yield activities as internal and external circumstances warrant.”</i> |

Each of the view points on agility are slightly different, based on the locus of the given research; however, there are numerous similarities in these descriptions that are significant for this specific research, enabling the development of holistic understanding of organizational strategic agility, used in this paper. The concept of strategic agility on its own

has no clear and unified definition, therefore by understanding the concept of agility in general and its strategic position, it is possible to obtain deeper understanding of this phenomenon.

2.1.3. Strategic agility in the strategic management literature

Strategic agility in general is connected to organizational ability to continuously and rapidly sense (Sajdak 2015) and respond to changing environment (Weber & Tarba 2014). According to Doz and Kosonen (2008a: x) strategically agile companies, are companies constantly learning to make fast turns and transform themselves without losing the momentum. The management of strategically agile companies have ambitions “*to make their companies permanently, regularly, able to take advantage of change and disruption.*”

Strategic agility involves adapting existing competences (Weber & Tarba 2014) and developing new capabilities (Sajdak 2015) to ever-changing environment, but also, recombining and reconfiguring them to survive and thrive in the long run. Long (2000b:39) summarizes it in a description of strategic agility as “*the ability to produce the right products and services at the right time, at the right place and for the right customers*”.

Sajdak (2015) distinguishes between two different agilities of an organization: strategic agility (ability to sense) and operational agility (the transformation and reconfiguration ability). He also argues that companies cannot be truly agile if these two aspects are not combined. Therefore, company can be only successful when it possesses the sensing, transforming and reconfiguring elements of strategic and organizational agility. This is aligned with the various definitions of agility mentioned in Table 1.

Other authors such as Weber & Tarba (2014), Long (2000a; 2000b) or Doz & Kosonen (2008a) and Teece (2016) see strategic agility from the holistic perspective of the entire organization, including abilities to sense and adapt, as well as the overall organizational responsiveness, flexibility and efficiency. Moreover, Weber and Tarba as well as Doz and

Kosonen are stressing the longitudinal aspect of strategic agility, including continuous renewal of company's business model.

By understanding and combining above mentioned descriptions generated through the literature review, this paper recognizes **strategic agility as organizational ability to continuously sense, renew and redeploy its resources, based on fast and collective strategic decisions to sustain company's competitive advantage.**

2.1.4. Strategic agility as dynamic meta-capability

Following the dynamic capability perspective, it is believed that “*...sustained competitive advantage comes from the firm's ability to leverage and reconfigure its existing competencies and assets in ways that are valuable to the customer but difficult for competitors to imitate.*” (Harreld et al. 2007:24). Therefore, organizational abilities to adapt and change; specifically, organizational (Teece et al. 2016) and strategic agility (Doz & Kosonen 2010), are recognized as crucial capabilities.

According to Collis (1994), many capabilities are primarily static organizational abilities to bound and manipulate firm's resources, what he recognizes as a threat is the constantly changing and evolving market environment. When companies maintain the same capabilities over long period, the capabilities eventually devalue and deteriorate as the market changes, thus the competitive edge of the company is not sustained (Doz & Kosonen 2008a). Collis argue that for capabilities to have a value for sustainable competitive advantage, they must be able to learn, adapt and evolve in response to the market changes. He refers to such capabilities, “dynamic capabilities”. Dynamic capabilities are organizational abilities to alter the organizational capabilities in form of creating, integrating, recombining and releasing resources (Eisenhardt & Martin 2000).

In earlier work (1997), Teece with colleagues explain the concept of ‘capabilities’ as a description of strategic management’s key role in appropriate adaptation, integration and

reconfiguration of internal and external organizational skills, resources and functional competences to successfully match the requirements of a changing environment. Further, Eisenhardt and Martin (2000) define dynamic capabilities as the firm's processes that use resources to match and even create market change. Specifically, he discussed the processes to integrate, reconfigure, gain and release resources. Dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resources and configurations as markets emerge and evolve.

Teece (2007) categorizes dynamic capabilities into three clusters: 1) sensing and shaping opportunities and threats, 2) seizing opportunities and 3) reconfiguring organizational assets. Capabilities in the sensing and shaping cluster are mainly enabling companies to scan, create, learn and interpret opportunities and threats (p.1322). Seizing capabilities are about continuous strategizing and investment decisions; staying flexible until dominant design is developed and leveraging products and services across the whole company and its projects (p.1326). In addition, reconfiguration capabilities are giving an organization the ability to recombine and reconfigure its structure and resources according to its growth and external market changes (p.1335).

By developing strong competences and dynamic capabilities to foster the organizational ability to change and adapt, the company can more easily react to changes and experience lower switching-costs and pains through the process of change, than it would experience if not having these capabilities (Teece et al. 2016). This argumentation is supported by several studies (Collin 1994; Winter 2003; Eisenhardt & Martin 2000) emphasizing the need for development of specific capabilities to support effectiveness and efficiency in process of adaptability.

Besides dynamic capabilities, there are also “higher-order capabilities” (Huikkola et al. 2016) or “meta-capabilities” (Collis 1994), which can be understood as organizational abilities to adapt its patterns (capabilities), learn, and develop more efficient capabilities that can surpass the abilities of competitors. These meta-capabilities not only consist of various organizational

capabilities, enabling continuous evolution of an organization, but they also enable organization to develop new capabilities, thus sustainable competitive advantage.

Obtaining specific dynamic capabilities should be a priority for any organization, especially for a manufacturing company pursuing new strategic shift. Established and functional routines and processes are not easily acquired assets as machinery or technology, which can be easily purchased and copied by a competitor. Therefore, by developing specific dynamic capabilities a company can develop sustainable competitive advantage that will be difficult to copy (Eisenhardt & Martin 2000; Baines et al 2009).

When discussing strategic agility, based on the agility concept defined in this paper (section 2.1.1) it needs to be emphasized that the pure concept of dynamic capabilities, as introduced by Barney (1991), or pure concept of meta-capabilities (Collis 1994) are not sufficient to explain this specific phenomenon.

Based on existing literature, strategic agility possesses properties of dynamic capabilities (it is an ability to gain, integrate, reconfigure and redeploy resources) as described by Teece (2007). Exceptionally, strategic agility does not fit only in one of clusters introduced by Teece (sensing, seizing, reforming), but rather is built on a combination of specific capabilities from each of the cluster. This indicates that strategic agility simultaneously possesses properties of dynamic capabilities as well as of meta-capabilities (Collis 1994) as already indicated by few academics (Doz & Kosonen 2008a; Fourne et al. 2014).

Therefore, **this paper recognizes strategic agility as dynamic meta-capability. A dynamic capability enabling companies to learn, develop and create new capabilities, which is built on the combination of several generic and dynamic capabilities possessed by the companies.**

2.1.5. Dimensions of strategic agility

When building the theoretical framework of strategic agility as a dynamic meta-capability, various theories and argumentations were taken into consideration to define the dimensions of strategic agility and the capabilities it is built on. For this purpose, existing literature on strategic agility (Doz & Kosonen 2008a; 2008b; Long 2000a; Weber & Tarba 2014 and Fourné et al. 2014) was evaluated in combination with other descriptions of agility in an organization (see Table 1). Further, as defined, strategic agility is in this paper categorized as dynamic meta-capability, therefore Teece's concept of dynamic capabilities was included.

Where Sajdak (2015) sees strategic agility only in the organizational ability to sense, adjust company's strategy and develop innovative ways of value creation, Weber and Tarba (2014) stress the important role of action. Action to adapt, change and continually renew in connection with rapid ability to sense and respond.

Doz and Kosonen (2008a) developed more aesthetic and holistic definition of strategic agility, introducing three dimensions of strategic agility: strategic sensitivity, leadership unity (collective commitment) and resource fluidity. Their work, even though criticized in few aspects (for example refer to Fourné et al. 2014 and Teece et al. 2016), represents one of the most recognized models of strategic agility.

Fourné et al. (2014) extend Doz and Kosonen's (2008a) research by focusing on context in which companies operate, and present slightly different three pillars of strategic agility. The pillars are sensing local opportunities, enacting global complementarities and appropriating local value. The authors argue that even though some of the dynamic capabilities can be generic, others should be modified and added according to the context not only of a specific company, but also according to individual units and branches of the company. Fourné et al.'s (2014) criticism of Doz and Kosonen (2008a) model being too generic and inflexible is not entirely supported in this paper. Though it is important to acknowledge that organizational capabilities are connected to the business and cultural environment of the specific firm or business unit, the weakness in the criticism of Doz and Kosonen's three-dimensional model being too generic lies in omitting Doz and Kosonen's four key levers enabling strategic

agility, including cognitive, emotional, organizational and political aspects (Doz & Kosonen 2008a, p. 123-141). These levers aim to ensure the uniqueness of strategic agility and specific balance of individual dimensions, according to the company's specific needs.

Further, as strategic agility possesses properties of dynamic capabilities, Teece's (2007) three clusters classification (sensing, seizing, and reforming) is taken into consideration, when discussing the dimensions of strategic agility. Teece and colleagues (2016) strongly argue that organizational agility and dynamic capabilities should not be conflated, as dynamic capabilities are superior to agility. However, this paper discusses much complex definition of strategic agility, from what Teece et al. refer to in their paper. The perspective of strategic agility being a dynamic capability is therefore taken into consideration, including the application of Teece's clusters. Moreover, when thoroughly analyzing Teece et al.'s (2014) work, it is transparent that when applied more complex definition of strategic agility, its elements are presented in all three activities: sensing, seizing as well as in the continual renewal of an organization. This further supports the argument of strategic agility being a dynamic meta-capability.

2.2. Strategic agility and Strategy implementation

Company's growth is not built solely on smart strategic decisions and innovative strategies. A company can only succeed with a good strategy, when the strategy is implemented and generates value for the organization (Baroto et al. 2014). It is a cycle of strategy formulation and implementation that drives sustainable growth. Pryor et al. (2007) even propose to highlight the importance of strategy implementation and recognize it as a core competence of an organization, enabling sustainable competitive advantage.

Well planned processes and models for strategic decision making have been found useful on the lower and middle management levels; however, they are lacking in the higher strategy level. Mitzberg et al. (1976) argue that the reason behind the inadequacy of models lies in the unpredictability of the decisions. On a strategic level, managers face decisions and

decision processes that have not been previously defined or implemented. Therefore, there are no explicit and predetermined orders for implementation. This is where this research assumes, embedded strategic agility plays its role.

Being strategically agile means being able to develop, implement and renew strategies and strategic decisions fast and in a smart manner, to maintain competitive advantage on the market. Thus, regardless the novelty of strategic decisions, the organization can implement it fast, through its dynamic capabilities.

Some may argue that strategy is successful already when fully implemented. However, only when strategy is implemented, and addition value is created from the strategy, the strategy can be considered effective (Baroto et al 2014). Miller (1997) in her research defines three features of successful implementation: 1) Completion, 2) Achievement and 3) Acceptability. Completion indicator monitors the degree to which everything that was intended to be done, is completed within the expected time frame. Achievement assesses the degree to which the objectives of what was planned and was done, were fulfilled as intended. Acceptability refers to the degree to which the implementation process and the outcomes satisfy those involved in, or affected by, the implementation. Baroto et al. 's argument, that success of a strategy weighs heavily on the added value it brings to the company and not only its successful implementation, is self-evident, however should not be overlooked in the implementation process.

Baroto et al. 2014 (p. 50) recognizes through literature review some of the main evidence supporting the importance and challenges connected to the cycle of strategy formulation and implementation. It was highlighted that:

- 66% of corporate strategy is never implemented
- 95% of employees do not realize their organization's strategy
- Only 63% of financial objectives envisioned by companies' strategies are achieved
- And 70 – 90% of organizations fail to realize the success of implementing their strategy

These numbers are alarming and Crittenden and Crittenden (2008) see as the main sources of these challenges the gap between strategy formulation and implementation processes in companies. Pryor et al. (2007) assume that strategy implementation efforts often fail due to a lack of clear execution processes and models; however, this assumption can be doubted as every organization is unique and requires specific capabilities and activities to sustain competitive advantage. As Mintzberg et al. (1985) argued, often these new strategies have never been implemented, thus known models may not be applicable. Complex processes take time to implement and the circumstances and market condition for which these changes were intended might change. Therefore, Baroto et al. (2014) argue, that a unique approach addressing the specific internal and external challenges is crucial for effective implementation. Nevertheless, recognizing the drivers and levers of strategy implementation process in general, may enable an organization to recognize its weak elements and act accordingly, to succeed in its efforts of specific strategy implementation.

Therefore, Miller (1997) through her extensive case study research defined ten variables contributing to the successful strategy implementation. She divides them into two categories: realizers and enablers. Realizers directly help to realize the highest degree of success during implementation, and include: backing, assess-ability, specificity, cultural receptivity and propitiousness. Whereas, enablers support the success without directly realizing it. Among enablers are: familiarity, priority, resource availability, structural facilitation and flexibility.

Interestingly, Miller's research indicates that the access to resources, flexibility of the strategy, organizational structure and experience of management are relevant, but not as relevant as the commitment from the management and implementers, clarity of the purpose and targets, organization culture and the favorability of external circumstance - in other words, luck. Comparing this finding with Doz and Kosonen (2008a) description of strategic agility, clear alignment can be seen in the importance of clear purpose and goals, commitment from the management, cultural receptivity and awareness of external stimuli through high quality of strategic sensitivity.

Disputable element is a resource fluidity, which according to Doz and Kosonen is one of the pillars of strategic agility; however, according the Miller is less relevant in successful strategy implementation.

Miller further argues that all variables may play role in successful implementation; however, the alignment of realizers and enablers varies according to the individual circumstances of individual companies. Which is also align with Doz and Kosonen's argument, that each dimension of strategic agility is dominant differently, according to the given circumstances and needs of the organization.

Prior to Miller's (1997) published research, Bonoma and Crittenden (1988) suggested that implementation relies on two main variables: structural levers and managerial skills. They believed that strategies are implemented through organizational structures and frameworks with managerial skills being the activities, within these frameworks, deciding raise or fall of the implementation efforts. Later, Crittenden and Crittenden (2008) introduced eight levers build on the abovementioned believe.

Table 2: Levers of strategy implementation (Crittenden & Crittenden 2008, p. 304).

| | | |
|-------------------|-------------|--|
| Structural levers | Actions | Who what, and when of cross-functional integration and company collaboration |
| | Programs | Instilling organizational learning and continuous improvement practices |
| | Systems | Installing strategic support systems |
| | Policies | Establishing strategy supportive policies |
| Managerial skills | Interacting | The exercising of strategic leadership |
| | Allocating | Understanding when and where to allocate resources |
| | Monitoring | Tying rewards to achievement |
| | Organizing | The strategic shaping of corporate culture |

Contrary to Miller's findings, Crittender and Crittender, argued that structural levers are essential for effective strategy implementation. According to them structural levers include strong strategic support system with policies supporting the implementation process, and clear understanding of the actions to be taken.

Another aspect unaligned with Miller's findings is allocation of resources. However, by combining these theories, it can be concluded, that having excessive resources only for the purpose of strategy implementation is not necessary. On the other hand, it may be more valuable to understand when and where to allocate resources and use the clear organizational structure and goals for the strategy to drive the process.

This assumption is supported by Heide et al.'s (2002) literature review, recognizing seven main organizational aspects that are to be the main influencers of strategy implementation. The aspects are: 1) internal information systems, including mechanisms facilitating vertical and horizontal communication, 2) learning and obtaining of new skills and capabilities for implementation, 3) allocation of adequate resources, 4) formal organizational structure, including the control systems, effecting the decision processes as well as motivation and behavioral aspects, 5) personal management, including the leadership and alignment with needs of individual employees, 6) internal political factors and power games, and 7) organizational culture. Heide et al. conducted, that in their case study the most significant elements influencing the strategy implementation process were communication and organizational structure, which agrees with Crittender and Crittender as well as Miller's researches.

These findings addressing the importance of organization structure, clear goals, communication, strong managerial and cultural involvement as well as understanding of resource allocation, confirm the hidden role of strategic agility in the process of strategy implementation, as described by Doz and Kosonen and other authors recognized in this research.

In addition, Crittenden and Crittenden (2008) observed that all levers are essential when establishing new companies, whereas existing companies are able to overcompensate the

weaker levers with the stronger levers, to reduce the negative impact. As written: “*It is only when an organization understands the capabilities of each lever within the organization that it can determine the right amount of leverage*” (Crittenden and Crittenden 2008: p. 308). This finding further supports Doz and Kosonen’s (2008a) argumentation for balancing individual dimensions of strategic agility according to the specific circumstances and needs of an organization.

2.3. Strategic agility in Servitization

2.3.1. Servitization

“*The best companies of the future will be those who find ways of developing service to create and keep customers and thereby sustain a competitive advantage.*” (Vandermerwe & Rada 1988:314)

For decades more and more manufacturers have been incorporating services in their business models. These companies are inspired by documented stories from General Electric co., IBM Corp., Siemens, Kone and ABB (Sawhney et al. 2004; Gebauer et al. 2011; Baines & Lighfoot 2013; Windahl et al. 2004), where product-oriented companies transformed into customer-oriented providers, successfully embedding services and ultimately increasing their profits and competitive advantages on markets.

This service evolution trend of manufacturing companies is not solely built on abovementioned success stories. Many businesses have recognized the shifts of market dynamics. With constantly emerging new technologies and the easiness with which companies can be established or enter from different markets, the competition is intensifying, and disruption of many industries is inevitable. Across nearly all economies one trend has stand out. Services. It seems that the exchange of services is more frequent than the exchange of goods, which raises an opportunity that should not be overlooked. (Vargo & Lusch 2008).

The believe that this opportunity should not be unnoticed and that for many manufacturing companies the sustainable revenue stream lies upon combination of products and services, which when combined provide functionality and deliver further value to customers, has been researched and endorsed by numerous researchers, as noted in Lightfoot et al.'s (2013) review. Considering the extensive research done on this topic across various scientific disciplines, it is understandable that certain discrepancies around the terminology exist. When describing the development process of manufacturers embedding services in their business models, researchers are discussing service-led growth (Sawhney et al 2004), service-infusion (Kowalkowski et al 2013; Eloranta & Turunen 2015), service transition (Fang et al. 2008) or service differentiation (Gebauer et al. 2011) strategies. Regardless the diversity in terminology, there is one term commonly recognized and accepted by academics, it is "servitization" and "servitization of business" (Vandermerwe & Rada 1988).

Servitization is the transformation of manufacturing companies, from product oriented to customer and service-oriented providers (Baines & Lighfoot 2014). Servitization in manufacturing companies represents a configuration of value-adding capabilities bounded to deliver the core products and services, which are related to the products, and are supporting the use of the products (Baines et al. 2009). It is an innovative process driven by customer centricity (Gebauer et al. 2011), which arises from reconfiguration of existing knowledge and resources (Kowalkowski et al. 2012).

In other words, it is an innovative process of organizational transformation from product providers to more customer-oriented businesses, in the attempt to differentiate themselves and gain sustainable competitive advantage, by utilizing existing resources and developing adequate capabilities. As Fang et al. (2008) describe, servitization is an attempt to provide total customer solutions and subsequently advance company's competitiveness and performance.

In connection to the aforementioned description of servitization, this research sees servitization as a holistic transformation of an organization, requiring the alignment of strategy, structure, processes, people and organizational culture. It is consistent with

Galbraith's (2002) star model, where he argues that only when the five dimensions, consisting of strategy, structure, processes, people and incentives, are aligned with the strategy and aligned among each other, a company may succeed with servitization. This need for complex approach is similar to the one described for strategic agility by Sajdak (2015), stressing the importance of combining both: agility in operations, as well as ability to sense and understand market changes.

2.3.2. Business drivers of servitization

Manufacturing companies have been extending the service business in their offering, which has shown in many examples highly profitable action, as a response to decreasing product margins (Gebauer et al. 2005). However, to change the business practices and shift the business logic from product oriented to service oriented is significant step that manufacturers should not take lightly. Regardless how intriguing the success stories and the increased frequency of service exchange among industries might be. They should not be the only triggers for manufacturers' transformation towards servitization. Besides organizational need for continuous development (Rabetino et al. 2017) researchers have been monitoring several drivers eliciting servitization (Gebauer et al. 2005).

One of the drivers behind the popularity of services is the buying power of customers. More precisely the **complexity of customers' needs** (Gebauer et al. 2011). Customers are becoming more demanding than ever before. They do not seek specific products, but they are mainly looking for solutions to assist them to make the right decisions. They want to get products when they need them and exactly where they need them. They wish to utilize the products to their full potential and have them repaired, when malfunctioning (Vandermerwe & Rada 1988:318). With this shift in customers' behavior and increasing competition, manufacturers are forced to react.

Another driver behind this movement is a **differentiation strategy** (Gebauer et al. 2011). Servitization gives companies a tool to set barriers to their competitors, third parties but also

to their customers (Vandermerwe & Rada 1988:319). The intangibility of services makes them difficult to copy by competitors and other players on the market, giving a company unique opportunity to differentiate itself on the market and sustain this advantage (Oliva & Kallenberg 2003). Further, strong service differentiation puts companies closer to customers and in better position to respond to dramatic changes of customer needs. It has positive moderation effect on the complexity of customers' needs, innovativeness of the company and overall business performance (Gebauer et al. 2011).

Innovativeness has the most impact if the business has clear focus (Gebauer et al. 2011), which can be achieved by utilization of data and **deeper understanding about customers** (Ulaga & Reinartz 2011). Servitization enables employees in manufacturing industries to understand more to their customers and their value-creation process; giving them the opportunity to address the specific needs their customers have and not only what they presume the challenges are.

Offering services should not be considered as one-sided process, where one company uses its capabilities to solve a problem for another company. It is a **both ways exchange**. By providing internal capabilities to help another company, this focal company uses it as a mean to develop even better understanding of customers, to advance its own capabilities. (Vargo & Lusch 2008).

Reaching towards customers and offering solutions to enhance their value-creation process does not only make from the company a valuable partner, but also **creates dependency** (Vandermerwe & Rada 1988:320) and **increases customer loyalty** (Fang et al. 2008).

2.3.3. Servitization path

Sustainable revenue stream in many manufacturing companies seems to be based on the combination of products and services delivering value to the customers. Fang et al. (2008) even argue that in servitization of manufacturing companies, having the right strategy is

sometimes more important than having the financial means for new investments. However, as Lightfoot et al.'s (2013) research emphasizes, manufacturers face enormous difficulties to identify the right servitization strategy and appropriate business models.

Whereas the servitization of manufacturing companies is referred to as transformation process, it is essential to realize that the road to transformation is done through transition. Servitization might be incremental (Kowalkowski et al. 2012) or more systematic (Oliva & Kallenberg 2003), however it is always longitudinal process of transition towards transformation. This is aligned with Doz and Kosonen's (2008b) observation that strategic agility changes its form and focus in an organization across its various dimensions over the time; however, it should be always present to foster the strategic transformation, as business model renewal is an infinite process and should have clear goals and commitment.

Extensive research has been done to map the transformation process of manufacturing companies (e.g. Vandermerwe & Rada 1988; Oliva & Kallenberg 2003; Gebauer et al. 2010; MatthysSENS & Vandenbempt 2010; and Baines & Lightfoot 2013). The process of servitization is often conceptualized as a transition line, where companies are moving from one side of a scale (goods-dominant side, where service is only “add-on”) to the other side of the scale (service-dominant side, where goods are only “add-ons”) (Oliva & Kellenberg 2003). This process is also referred to as a “servitization path”.

Servitization path conveys the image of *“linear path during which the firm progresses through various stages of increasing commitment as it learns and gathers resources”* (Peillon et al. 2015:1264).

Oliva & Kallenberg (2003) argue that in order for a company to be able to move from one stage to another on this imaginary scale, companies need to obtain specific set of capabilities and resources. The first step companies should take is to consolidate product-related services under single organizational unit. The next stage is to enter the installed base service market, where companies should define the profit opportunities of the service area and create separate organization unit to handle service offering with dedicated sales force, own service technicians, and information system to monitor the business operations for accounting

transparency (p.166). Companies need to deal with the dilemma standardization vs. customization and develop global service infrastructure, while obtaining key capabilities to successfully manage it. When all the decisions are made and required capabilities are obtained, a company may aim to expand the installed base service offerings. It can be achieved by focusing on relationship-based services or process-centered services. Each of the paths requires development of specific capabilities, therefore Oliva & Kallenberg (2003: 170) advice to approach them consecutively. The last stage of servitization is taking over the end-user's operations and becoming so-called "pure service organization".

Matthyssens & Vandenbempt (2010) put the linear visualization of servitization path into a different perspective by adding one more dimension, the "degree of customization". By combining the Oliva & Kellenberg's (2003) process theory with "degree of customization" dimension, they developed four distinguish types of service strategies a manufacturing company can decide to pursue.

According to Gebauer et al. (2010) there should be clear understanding about the servitization strategy to align the organizational design factors accordingly. However, Matthysse & Vandenbempt (2010) observed that most of their case companies combine several strategies, not only one specific, and they do not always follow linear trajectory. This observation contradicts to Oliva & Kallenberg's (2003) process theory as well as Gebauer et al. (2010) argumentation for clear and planned service strategy. This shows that the servitization path is in many organization different and various circumstances may lead to different outcomes. Therefore, company should be able to adjust its strategic direction accordingly.

Additionally, Kowalkowski et al. (2012) claim, that even if transition path of servitization appears to be straightforward, from an accumulated, longitudinal perspective, when reviewing the phenomenon in depth, they discovered that service infusion seems less clear cut and deterministic, and rather more explorative, discoverable, reactive, and ambiguous. Which is supported by Barnett et al.'s (2013) in depth study of a servitizing manufacturer. These conclusions are underlining the importance of organizational strategic agility and

overall organizational ability to continuously sense, renew and redeploy resources, which is supported by collective commitment.

Based on the literature review, this paper considers the need for a shift in the company's logic from product oriented to service oriented (Vargo & Lusch 2008; Barnett et al. 2013), and the necessity of manufacturers having a clear servitization path (Fang et al. 2008), when striving to successfully implement service strategy. Considering the heterogeneity of opportunities (Ulaga & Reinartz 2011), the uniqueness of each company and their overall strategy and market environment they operate in (Matthyssens & Vandenbempt 2010), this paper builds on Oliva & Kallenbergs' (2003) stage model of servitization path taking into consideration the explorative nature of customer driven emerged strategies (Kowalkowski et al. 2012), and incorporating the customization dimension (Matthyssens & Vandenbempt 2010) to accompany it (as seen in Figure 3).

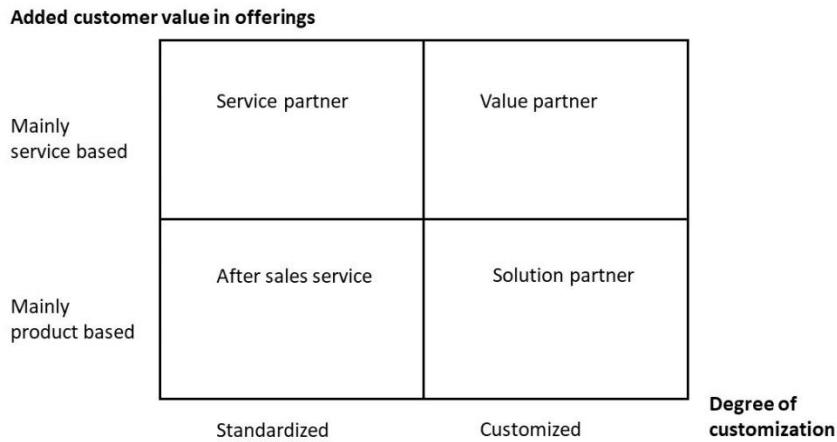


Figure 3: Servitization path (adapted from Matthysens & Vandenbempt 2010).

When servitizing, manufacturing companies follow certain trajectory from goods-oriented to service-oriented, considering the degree of customization. This trajectory does not need to be straightforward but adapts according to new internal and external changes. Whereas, the shift of the company's business logic should be radical, the transformation process follows

incremental (Martinez et al. 2016) and often emergent (Kowalkowski et al. 2012) continuum of service development.

It is crucial to note Peillon et al. (2015) findings, addressing the need for manufacturing companies to find the right balance between product and services, to not lose its core competence, but rather enhance the company's offerings. Therefore, it should always be understood, that servitization of manufacturing companies, does not require to completely shift the company strategy from one pendulum to the other, but rather, companies should define their own servitization path based on the unique internal and external factors influencing it.

To summarize, servitization is a transformation process of an organization. To achieve this transformation in a manufacturing company, this company needs to go through a transition process reforming and redesigning not only its processes, but also the business logic and its organization culture. As servitization is customer-centric and customer-oriented strategic change, its success heavily relies on the acceptance from the customers and may evolve in changes of the incremental elements of the strategy, based on response and acceptance from customers.

Strategic agility is a dynamic meta-capability, enabling companies faster and still complex strategic transition process towards desired strategic goals. Strategic agility as well as servitization is customer centric and focuses on the continuous renewal and alignment of market forces. This similarity of core drivers makes strategic agility fitting tool, for companies to use in the transformation process of servitization.

2.4. Strategic agility dimension in servitization

Servitization is a transformation of companies, from product oriented towards more customer oriented (Baines & Lighfoot 2014). One of the biggest drivers behind businesses deciding to

follow this strategic change are customers. Businesses face more complex and customized needs from its customers (Gebauer et al. 2011), they seek innovation through its close collaboration with customers (Ulaga & Reinartz 2011) to differentiate themselves (Gebauer et al. 2011), create customer dependency (Vandermerwe & Rada 1988:320) and overall increase customer loyalty (Fang et al. 2008).

Servitization is a holistic transformation of a business; and as indicated earlier, this paper defines servitization as an incremental transition process, which is closely aligned with Oliva & Kallenberg (2003) and Kowalkowsky et al. (2012) argumentations.

Kowalkovsky et al. (2012) believe that servitization is rather successive process, where the strategy continuously evolves based on the challenges it is overcoming. They argue that when developing new strategies, managers should leave some room for emerging aspects and elements (Mintzberg 1978), and find the right opportunities as they appear, to gradually build more holistic service-integrated organization.

Oliva and Kallenberg (2003) agree with the incremental ‘step by step’ servitization process, adding that by slowly developing adequate organizational capabilities, the organization will be able to advance its servitization strategy, which is also supported by Matthysens and Vandenbempt (2010) analysis. This is directly connected to Baines et al.’s (2009:513) definition of servitization itself, presenting servitization as a configuration of transactional activities to deliver core product and services related to it, and supporting the use of the product.

However, solely relying on crafting good strategy is not the full recipe for success. The strategy needs to be implemented and must bring value to the company (Baroto et al. 2014). As servitization is a radical strategic shift of an organizational logic, it would be logical to follow the gradual process as suggested by Oliva and Kallenberg (2003) and Matthysens and Vandenbempt (2010), in order to find the right spot on the servitization path, to have the right strategy that is implemented, but also brings value and fulfils its objectives.

It has been proved that companies are able to change merely as a reaction to force majeure from the environment, without being specifically prepared for such a strategic change. This reaction is described as ‘ad hoc problem solving’ (Winter 2003); however, waiting unprepared and react to external forces may turn to be very costly decision, leading to fatal financial struggles and loss of customers, when competitors decide to react faster and more efficiently (Teece et al. 2016; Doz & Kosonen 2008b). Therefore, pushing by force through the different stages of servitization, might not be the most appropriate approach.

To avoid such misfortune, when implementing servitization strategy - a strategy that may shift over the implementation process, companies may decide to obtain certain level of capabilities that would enable them to change and adapt prior to these inevitable changes, to limit their potential loses.

Strategic agility, as recognized in this paper, represents the organizational ability to continuously sense, renew and redeploy its resources, as a response to predicted and unpredicted internal as well as external shifts. It also relies on fast and collective strategic decisions to sustain company’s competitive advantage. As servitization is a response to customer and market needs and involves internal changes of an organization, obtaining capabilities that make this process of change more agile and efficient can benefit the organization when implementing the new strategy or strategic shift.

This paper has combined the capabilities and resources described as essential in servitization, strategy implementation and agility literature to develop a concept of strategic agility capabilities relevant for service strategy implementation. Numerous of these elements overlap or effect each other, as described in the following text.

2.4.1. Key dimensions of strategic agility in servitization

Long (2000a) believes that for a company to be strategically agile, it first needs to understand its core capabilities and the direction the company wishes to follow. In order to do so, the

following framework of strategic agility was developed based on the existing literature on strategic agility, strategy implementation and servitization. This concept of strategic agility as meta-dynamic capability consists of four dimensions: sensitivity, fluidity, leadership and continuity, which when all combined together form organizational strategic agility.

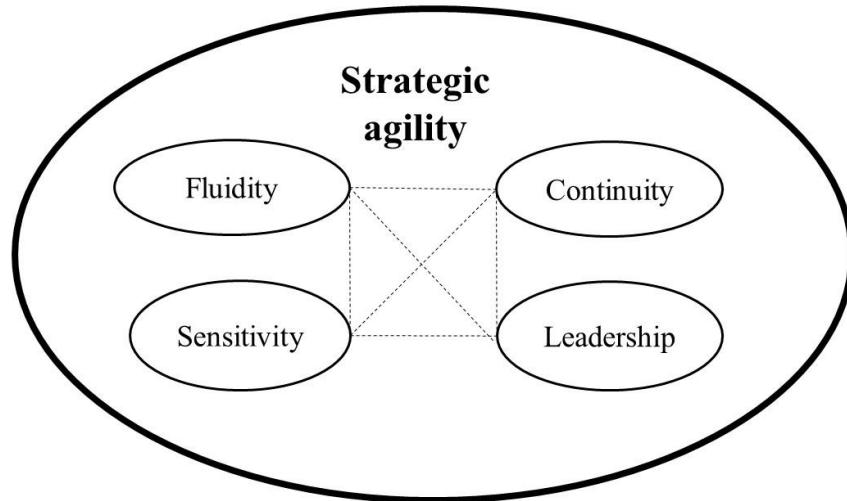


Figure 4: Four dimensions of strategic agility

2.4.1.1. Sensitivity

The bases for sensitivity dimension are derived from Doz and Kosonen's (2008a) description of strategic sensitivity, Teece's (2007) sensing capabilities, and from the core of servitization strategies, the need for closeness to customers and deeper understanding of them. Servitization is often customer and market driven strategic shift, and as such it requires close collaboration and in depth understanding of customers' needs (Gebauer et al. 2011). This level of understanding can and should be built on high alertness to changes and strong sensing capabilities of a company.

Where Doz and Kosonen (2008a) highlight the need for an open strategy process, heightened strategic alertness, Teece (2007, p. 1326) stresses the need for capabilities, such as abilities to sense, filter, learn, shape and calibrate opportunities. The open strategy process refers to company's active ability to co-strategize and experiment with multiple stakeholders, to stay connected with the outside world. Heightened strategic alertness enables companies to be openminded and look at the strategic issues from various perspectives. Through this, they advocate for advanced monitoring capabilities, capabilities to scan and monitor external technological developments, assess customers' needs, the talent developments on the market (Doz & Kosonen 2008a); and learn to anticipate (Teece 2007).

Advanced monitoring skills are essential part of servitization process as well (Matthyssens & Vendenbempt 2010). According to servitization literature it requires organizational networkedness (Storback et al. 2013), supplier network management capabilities (Huikkola & Kohtamaki 2017), and overall network competencies with long term orientation towards customer insights (Matthyssens & Vendenbempt 2010).

Learning capabilities, abductive reasoning and knowledge management are inseparable skills required through the process (Teece 2007). As Heide et al. (2002) highlight, learning and obtaining new skills are essential organizational capabilities necessary for implementation of new strategies. Data processing, interpretation capabilities (Ulaga & Reinartz 2011) but also value quantifying capabilities (Huikkola & Kohtamaki 2017) have been seen as valuable capabilities for companies implementing service strategy.

Customer embeddedness (Storbacka et al. 2013) and forward integration (Huikkola & Kohtamaki 2017) are logical capabilities in increasing organizational sensitivity and should include probing and re-probing of customers' needs, as well as the ability to learn new skills, and suppress known rules to follow innovation and new knowledge (Doz & Kosonen 2008a).

Sensing also includes hypothesis and scenario building, experimenting and testing, which enables abductive reasoning and organization learning (Doz & Kosonen 2008a; Teece 2007).

2.4.1.2. Fluidity

Agility includes assimilation to changes, fast integration of reconfigurable resources, knowledge and realignment of new findings with already existing information (Yusuf et al. 1999; Ashrafi et al. 2005).

These descriptions shape the fluidity dimension. Dimension representing organizational ability to reconfigure business systems fast and efficiently to mobilize and redeploy its resources. It is the ability to redeploy or redirect its resources in order to create or protect value (Davies et al. 2006; Ulaga & Reinartz 2011; Teece et al. 2016).

From Doz and Kosonen perspective (2008a, p.117), at the core of resource fluidity is modularity of business processes and systems, as well as modularity of company's resources and products. Modularity is an ability to redeploy and reuse individual parts or process and components when needed. Deployment capabilities (Ulaga & Reinartz 2011), including deployment of people and their skills (Baines et al. 2013b), and the organizational ability to adapt solutions to the customer's situation and processes (Storback et al. 2013) are important capabilities for servitizing companies as well.

Modularity reinforces other core capabilities, such as mobility of capital and people and general access to resources. It focuses on disassociation of tangible and human resources owned by individual business units (Doz & Kosonen 2008a), with emphasis on project management capabilities (Matthyssens & Vandenbempt 2010; Huikkola & Kohtamaki 2017). However, as described by Crittenden and Crittenden (2008) having access to the resources is not as important as understanding when and where to allocate the resources.

Doz and Kosonen proposes the implementation of unified set of performance data to limit friction and internal conflict, when reallocating resources. Moreover, the alignment of strategy and structure seems to be of an essence for them. Teece further stresses the selection process of appropriate product architecture and alignment of business model. This connected to servitization literature translates into building separate service unit and decentralize the

decision-making process (Matthyssens & Vendenbempt 2010) with integrated information system (Baines et al. 2013).

Fluidity is the ability to mobilize resources to capture value from the newly sensed opportunities to adapt its solutions according to customer's situation and processes (Storbacka et al. 2013). As one of the drivers of service strategy implementation is both ways exchange between the company and its customers (Vargo & Lusch 2008), fluidity and its elements of deep collaborative relationship with key customers through forward integration (Baines et al 2013), and highly efficient business system mechanism (Doz & Kosonen 2008a), are supporting learning and sensing capabilities, which are essential elements for successful servitization as discussed in the section above.

2.4.1.3. Continuity

The concept of continuity plays an important role in strategy implementation and servitization literature. Specifically, the long-term orientation (Matthyssens & Vendenbempt 2010) and continuous improvement (Crittenden and Crittenden 2008) are recognized as essential for service business model implementation. Moreover, Pryor et al. (2007) is describing the continuous infinite cycle of strategy formulation and implementation as a core competence required for organizations, to sustain competitive advantage on the market.

This mainly corresponds with Teece's (2007) transforming cluster of capabilities, addressing the organizational ability to continuously align and realign its assets. Doz and Kosonen (2008a) are also discussing the need for continuous reassessment, realignment and work towards being strategically agile. They argue that staying with the same strategy and using the same knowledge and capabilities can lead to strategic rigidity.

As the environment is changing fast and often unpredictably, continuous reflectiveness, operational adaptiveness and understanding the infinity of the formulation - implementation cycle is crucial.

As servitization requires customer feedback and the ability to capture new inputs in it, it is necessary to thoroughly monitor and report it as well (Matthyssens & Vendenbempt 2010), to ensure sustainable development of the strategy and its implementation. Being able to align performance measurements, demonstrate where the value is created and captured, and overall communicate consistent goals among the staff (Baines et al. 2013a; 2013b), can enable the organization to objectively and continuously monitor changes and its progress.

Further, when implementing new strategy, having these clear goals, objectives and activities is one of the key elements for success (Miller 1995). Structural levers: ‘action’ (including organizational clear understanding of ‘Who what, and when’ of cross-functional integration and company collaboration) and ‘policy’ (having internal policies supporting established strategy) are seen (Matthyssens & Vendenbempt 2010) as essential.

In alignment, Teece (2016) proposes application of “build-measure-learn” methodology, which can enforce the continuous renewal. It requires micro-vertical integration (Baines et al. 2013b) as well as strong organizational networkedness (Storbacka et al. 2013) to communicate, observe and moderate the continuous changes and the levers relevant for the specific strategy implementation.

This long-term orientation is also crucial due to the nature of servitization. Servitization and the services provided by an organization often rely on ‘moments of truth’, the business process, interactions and relationships build between the customer and the company’s employees (Baines et al. 2013b).

2.4.1.4. Leadership

Organizational culture, clear direction, strong leadership and team perspective are elements of leadership dimension of the strategic agility concept discussed in this paper. From agility perspective, this dimension is based on Doz and Kosonen’s (2008a) leadership unity (sometimes also referred to as ‘collective commitment’) and partially on Teece’s (2007)

seizing capabilities, which should lead in servitization toward the transformation of the organizational business logic from product-oriented to service-oriented (Vargo & Lusch 2008) and embeddedness of the service values, (Gebauer et al. 2005) without disrupting the entire business (Rabetino et al. 2017).

Clear direction is built on common goals and shared interest in being successful (Doz & Kosonen 2008a; Baines et al. 2013), and strong and clear leadership/ management, able to make fast and committed decision (Doz & Kosonen 2008a; Teece 2016).

When looking at strategy implementation literature, strategic leadership is there recognized as one of the main levers (Crittenden and Crittenden 2008) and according to Miller (1997), backing and support from the management and the implementation team is one of the keys to success. Bonoma and Crittenden (1988) recognize managerial skills as one of the two main variables influencing strategy implementation. It includes interaction (exercising of strategic leadership), allocation, monitoring and organizing, which drive the implementation process (Crittenden & Crittenden 2008). It also relies on the personal management and leadership alignment with needs of individual employees and their superiors (Heide et al. 2002).

Besides strong leadership giving clear direction, collective perspective and commitment is needed. Collective perspective comes from collective success mindset, relationship building, dialogue and human resource flexibility (Doz & Kosonen 2008a; Baines et al. 2013). Collective commitment represents the top management and individual employees working together as a team. This is achieved by organizing for mutual dependency and shared agenda through common value creation logic, distributed leadership roles, but also shared incentives, transparent goals and fair processes and building overlapping areas of expertise (Doz & Kosonen 2006).

Organizational changes of routines and strategic shifts can lead to an escalation of anxiety within the organization, which can further hinder the implementation process. Unless the organizational culture is prepared for it (Teece 2007). Gebauer et al. (2005) describe it as the ability to balance the product- and service-oriented values within one organization, and ability to diffuse the tension between efficiency and flexibility.

2.4.2. Challenges connected to strategic agility and servitization

One of the main objectives behind implementation of service strategies is for companies to increase the value of their offerings. Value might be created by members of an organization; however, value capture is defined by the perceived power relationships occurring between individual actors. Thus, it is heavily relying on the perception of value from individual customers (Bowman et al. 2000). It is only natural “*...that customer's intentions and knowledge greatly affect the success of the solutions.*” (Valtakoski, 2017: p. 146).

Even though there are existing success stories and numerous incentives for manufacturers to embrace servitization, the reality is that servitization is a complex process, where more companies fail rather than succeed with the implementation (Gebauer et al. 2005). Among the less successful stories can be mentioned Intel Corp., who after 3 years of investing in data centers decided to return to its core business with microprocessors, or Boeing Capital Corp., who decided to slow down on its financial service business (Sawhney et al. 2004:34).

Servitization strategy has proved to be only beneficial for a company if sales of services are above 20%-30% of overall sales, otherwise servitization may have negative effect on the company (Fang et al. 2008). Until service proves to be financial beneficial for the company and overcomes the minimum threshold, managers will have difficulties to overcome their cognitive barriers and the conflict between ‘old’ product-oriented strategy and ‘new’ servitization strategy, which will be negatively affecting company’s operations and its overall performance.

One of the reasons behind company’s inability to successfully implement servitization and find the right position on the servitization path might be at the core of the organizational and its strategic logic. Vargo & Lusch (2008:256) argue that companies attempting servitization, but still following the product-dominant logic might be misled by the concept itself. Product-dominant logic describes servitization as shift towards producing goods and services, which indicates that services can be produced and thus servitization is just about adding one more

department that would be producing services. Whereas service-dominant logic sees servitization of companies more as a shift to developing processes providing service. Therefore, blindly establishing only one service unit, though it is recommended by the literature (Matthyssens & Vendenbempt 2010), without looking at servitization process from the holist perspective of individual companies might be harmful. As an example, Wartsila just recently announced reorganization of its three business areas: marine, energy and service business areas. They have decided to divide and merge the service business unit with marine and energy units, to deliver higher value for its customers (Wärtsilä, 2018). This can be perceived as the next evolutionary step in servitization of a manufacturing company, which was based on the holistic view of what providing services really mean for the company and its customers.

The requirement of changing the fundamental logic of human behavior in manufacturing companies might be one of the biggest obstacles for successful servitization. The cognitive challenges accompanying servitization are also documented by Gebauer et al.'s (2005) research on overcoming the service paradox in manufacturing companies. According to the research, managers tend to overemphasize the obvious and tangible characteristics of goods and fail to recognize the economic potential of services. In combination with risk aversion, which is natural to humans, companies fail to fully embrace servitization and fall for servitization paradox.

Servitization paradox in manufacturing companies is a phenomenon where "*extended service business leads to increased service offerings and higher costs, but not to correspondingly higher returns.*" (Gebauer et al. 2005:24).

As discussed earlier, strategy is only successful when implemented and bringing value to the company. On a servitization path, the role of customer perception plays significant role in this equation, where unsatisfactory perception may lead to a failure of the overall service strategy. The failure may occur from inadequate match between offering and customer expectation, failure to understand customer capabilities and apply the solution accordingly,

or from lack of appreciation and implementation of knowledge and information gathered from the customer (Valtakoski 2017).

There are several other challenges that a manufacturing company should overcome in the attempt for successful servitization. Martinez et al. (2010) address five main challenges a company may face:

- **Embedded culture:** Strongly embedded product centric culture in manufacturing environment, used to heavily rely on innovative R&D, may hinder the transition process to customer-oriented business strategy and may have difficulties to rely on customer perspective and not only the R&D department (p.456)
- **Delivery of integrated offerings:** When delivering integrated solutions, a broader range of personnel is in contact with customer and the understanding of product portfolio and company's practices must be united among all involved parties (p.457)
- **Internal processes and capabilities:** new infrastructure of an organization is required, including development of adequate processes and capabilities to ensure the alignment across the organization to deliver promised solutions (p.458)
- **Strategic alignment:** The servitization strategy should be aligned with customer's needs and the whole organization should not only presume what the customer may think, but they should understand them and align the strategy accordingly (p.459)
- **Supplier relationship:** Servitization does not only requires internal changes of an organization, but also a reassessment of supply network strategy as with a new strategy the company may have different requirements (p.459)

In connection to the above-mentioned challenges, MatthysSENS and VandENbEMPT (2010) warn about **internal readiness** of an organization for such a change. Manufacturers are used to marketing and selling products and the shift towards services may be very challenging, thus companies may struggle to balance the sales of products and services due its taxing nature.

Some of these challenges can be overcome by focusing on development of strategic agility dimensions, to ensure higher level of sensitivity and customer embeddedness, strong network relationships, fluidity and flexibility of processes and resources and organization readiness and commitment.

It is important to note, that the trend of servitization has been heavily discussed by academics and practitioners; however, more and more researchers are finding evidence of companies reducing their service portfolios or completely shifting from service-dominant to product-dominant. This strategic change is referred to as deservitization and service dilution. (Kowalkowski et al. 2017). Deservitization and service dilution should not be considered as a result of unsuccessful implementation of service strategy, though it may be one of the triggers behind it. Nevertheless, it is a strategic decision to enable organizations to find the right strategic position on their own servitization path (see Figure 3).

2.4.3. Need for balance

“Strategic agility results from a mix of stability in processes and people, in values and aspirations, and of sensitivity and flexibility in perceptions, fluidity in resource deployment, and leadership unity in making collective commitment.” (Doz & Kosonen 2008a:8)

When discussing strategic agility, existing literature tends to focus primarily on its positive aspects and how companies can benefit from embracing this capability (Morgan & Page 2008; Fourné et al. 2014). This may lead to assumptions that the more agile the organization is, the better strategic position it holds.

Teece et al. (2016) contradict to this assumption and strongly argue, that organizational agility should be fostered only when required. According to them, agility is too costly and should be applied in alignment with the organizational overall strategy, and only when market conditions demand agile capabilities. Further, they argue that stronger dynamic

capabilities and operational excellence might be in many situations more beneficial than strategic agility.

As mentioned earlier, this paper understands strategic agility differently than what Teece et al. (2016) describe in their article; however, the possible traps and drawbacks of inappropriate use of strategic agility should not be overlooked or underestimated.

As can be seen from the different dimensions described above, many of the elements and variables are interconnected. Overlooking one of the dimensions may negatively affect the other as they depend on each other.

Further, Doz and Koskenen (2008a) warn that the three dimensions of strategic agility are not mutually reinforcing each other, and sole focus on only one of the dimensions may hinder company's overall strategic agility.

The first risk occurs when company decides to emphasize too much resource fluidity, becoming self-centred with overestimating the importance on internal operations and underestimating the need for alertness and external outlook (p.128).

The second risk resulting from extensive focus on resource fluidity is the negative effect it may have on the management itself. Too high resource flexibility requires corporate-wide coordination, which might be too costly, counterproductive and might lead to tension among managers, when deciding reallocation of resources.

The third risk arises when companies focus too much on sensing capabilities and neglect investment in resource fluidity. By relying solely on sensing capabilities, companies might be aware of the shifts of the market, but unable to react as they become rigid (p.129).

The fourth risk comes from collective commitment and the moment people become too confident in the group thinking and start thinking alike. This can result in downgrading critical thinking and strategic decision making of the company (p130).

The fifth risk is the possibility of strategic misfit. Every company has different starting position and is facing different market conditions, therefore the intensity ration of these three dimensions should be adequate to the needs of the company (p.131).

Strategic agility is the ability to not only sense opportunities but also adapt and change fast. The risks of misfit or inadequate understanding and application of the dimensions enabling this change can lead to fatal consequences for the company. However, strategic agility should not be only about speed and flexibility. When describing strategic agility, it is important to highlight the word **strategic**. It does not only mean that the company is agile from the strategic perspective and can change its strategic direction, but it also reflects on the nature of the decisions. Strategic agility represents not only fast, but also mindful and strategically beneficial decisions to adapt, change and evolve company's business modes and operations (Lewis et al. 2014; Fourné et al. 2014). Therefore, having the right fit of capabilities and drivers is essential in obtaining and maintaining strategic agility.

Nevertheless, it is not only about having the right fit and balance of capabilities to be strategically agile, but to be strategically agile to support implementation of service strategy. Based on Peillon et al. (2015) research, finding the right place on a servitization path is a strategic process allowing firms to align their service strategy with the market conditions and adapt several organizational factors to align them with the specific service strategy.

As market and conditions are changing this balancing of servitization, service infusion, deservitization and service dilution (Kowalkowski et al. 2017) will be necessary to refine the strategic position on a servitization path. To sufficiently balance these strategic shifts, it will require adequate fit of capabilities within individual dimensions of strategic agility.

This paper focuses on researching this role of strategic agility in implementation of service strategy, and further the empirical part of the research documents the role of individual strategic agility dimensions in the process.

3. METHODOLOGY

3.1. Research method

One of the most crucial elements when conducting a research is the decision about the specific research design that is to be used. The research design should be complimentary to the research objectives and the research question. Choosing a research design can be compared to choosing a strategy to fulfil the research objectives in the best possible way in the given constraints. Further, this strategy determines what data are needed and how they should be collected (Ghauri & Gronhaug 2002).

This study is an exploratory study looking at the phenomenon of strategic agility within the context of early stage servitization of a manufacturing company and its role in it. Therefore, the research of this phenomenon is strongly depended on the context within which it is studied, thus the importance of context was taken into consideration when choosing the research design.

Qualitative research methodology is typically used when the emphasis of the research is on uncovering and understanding of a phenomenon, when the research is explorative and process oriented, and when the research aims for inductive theory development (Ghauri & Gronhaug 2002). It is due to that fact that qualitative data is used in order to provide deep and rich theoretical description of the phenomenon (Gioia et al. 2012). The qualitative research method will allow for in depth discussion on the implementation process of servitization, to explore what the role of strategic agility is or could be in this specific context. Through the qualitative exploration, we are able to find the relevant variables and develop extension to the existing theory. Qualitative research is also used, when trying to understand the holistic picture of the phenomenon, rather than individual pieces separately (Yin 2009). By looking at the holistic picture from different viewpoints, rather than looking at isolated pieces of the whole, the research should be able to understand not only how individual

dimensions of strategic agility effect strategy implementation, but also how they affect each other.

To gain an in-depth analyzes of this phenomenon and explore the role of strategic agility within this context, this research applies qualitative single-case holistic study. According to Yin (2009: 49-50) there are five rationale behind using single case study. Single case study should be used when it represents critical, unique, representative, revelatory or longitudinal case. In this situation it was decided to use revelatory single-case study on the bases of gaining access to a unique case and insights from knowledgeable informants. In the selection of cases for single case study, "*it is often desirable to choose a particular organization precisely because it is very special in the sense of allowing one to gain certain insights that other organizations would not be able to provide.*" (Siggelkow, 2007:20)

Furthermore, in situations when the research aims to study specific and complex issue, it is recommended to conduct the research in a bigger company, as these companies experience complex problems and have extensive in-house experience, which could provide valuable data about the phenomenon (Ghauri & Gronhaug 2002: 171).

The theories developed through case studies are emergent. They are slowly developed through researcher's recognition of patterns of relationships among individual constructs and variables and their underlying logical arguments (Eisenhardt & Graebner 2007). It is challenging to gain adequate data as the variables are difficult to quantify and are heavily influenced by the context they are researched in (Ghauri & Gronhaug 2002: 171). To collect the data and understand the underlying logic connecting them, the narrative of social actors and their views on the phenomenon and the reality are used as a source of information (Gephart & Rynes, 2004:455).

The holistic approach to single case study is specific by focusing the research on context of a single business unit within a single company. This approached is used when searching to fully and in depth understand one specific phenomenon. It uses materials and data gathered from different informants involved with this phenomenon, to gain various views and perceptions (Yin 2009). These diverse viewpoints allow for holistic understanding of this phenomenon within the given construct.

The most preferred strategy when analyzing the case study evidence is to rely on theoretical propositions (Yin 2009:131), even though the case study is exploratory. Gioia et al. (2012) argue, that prior to the exploratory inductive research it is necessary to review relevant concepts, which in this case are strategic agility, strategy implementation and servitization (as demonstrated in previous chapters), which then serve as the bases for theory building and guidance for creation and validation of the new construct.

3.2. Case selection

The case company is a global leading manufacturer in an energy industry. In 2017, the case company delivered the highest sales growth of 12% growth in local currency and confirmed its status of a growth company.

The case company is constantly investing into innovation and development to sustain its leading market position. After major acquisition in 2014, the company became shifting its focus of one specific business unit towards integration of a service business model. To develop and integrate the global service strategy, the case company decided to establish new business unit within another unit, which would be solely focused on developing, selling and providing service products.

This unique situation and setting of the case company represents revelatory case and enables the research to explore the capabilities and causal relationships among these capabilities effecting the service business unit's situation. By gaining insights from knowledgeable informants operating within this context (Gioia et al. 2012), the research will possess invaluable access to the construct, which would not be possible with a larger sample of cases (Siggelkow 2007).

3.3. Data collection and Analysis process

To collect relevant data and draw holistic picture for this case, it is important to understand the company's situation and the context within which the researched phenomenon is studied. Therefore, primary and secondary data are used. Further, Yin (2009) argues that in order to increase the reliability of a case study, it is recommended to use triangulation based on different sources of data, which can support the holistic view at the matter in question. For this specific purpose, secondary data, such as annual reports, company presentations, company strategy and company website, were used to understand the context within which the research is conducted. It further enables certain level of pre-understanding of the company and its situation, for the researcher to be prepared for the collection of primary data.

Gioia et al. (2012) challenges the traditional way of conducting research, which is strongly focused on measurable constructs, by stating that to advance existing knowledge we need to look beyond of what we already know. It is necessary the discover and review already existing concepts, which are relevant for the study and can be used as a base for the research design and data collection.

Primary data were the main source of information needed, to fulfill the research objectives and build the theory around the role of strategic agility in the context of early stage servitization of a manufacturing company. The primary data were collected through semi-structured interviews.

Semi-structured interviews are organized in a way that the interviewee is asked about a particular issue, then is led to choose a specific incident connected to the issue and is encouraged by the interviewer to provide detailed description of the incident. (Fisher 2007:159). According to Fisher (2007: 165), open questions, which are used in semi-structured interviews, are suitable for a research, where the researcher does not know what answers will be given, or when the research is looking for new ideas. Gioia et al. (2012) also encourages to preserve flexibility and adjust the interview protocol based on the responses given by the interviewee to gain broader and deeper understanding on the topic. As this exploratory research is focused on theory building, this concept of semi-structured interviews

with open questions is suitable for discovering relevant variables connected to the researched phenomena.

After drafting the interview questionnaire, a pilot study was conducted. The purpose of the pilot test was to refine the data collection plan, to ensure that relevant data would be collected and that the questions are in logical order and are understandable (Yin, 2009:92). Following the pilot test, the interview questionnaire undertook small corrections to make it more understandable for the interviewees.

One of the biggest challenges in interview data collection is biased in retrospective sensemaking, which can be averted by “*...using numerous and highly knowledgeable informants who view the focal phenomena from diverse perspective.*” (Eisenhardt & Graebner 2007:28) Therefore, this mitigating mechanism was applied in this work already in the early stage of the research. Further, based on Gioia et al.’s (2012) example, an extraordinary voice was given to the knowledgeable informants when collecting the data.

To increase the quality and objectivity of this research, the interviewees were selected based on their relevance and involvement with this phenomenon. The researcher had a direct connection to a contact person within the case company’s service unit, and through this connection the relevant respondents were selected. As the data were collected under strict NDA, no identities nor closer description of the participants will be published. Nevertheless, it can be disclosed that there were sent 14 invitations for an interview and 8 of them confirmed and took part in this research. All 8 interviewees are actively working with the newly implemented service strategy; however, their profiles and background vary. Some of them have been in the organization for decades, some less than a year. Some took part in the strategy formulation, others were introduced to it only recently. Some of the interviewees work on technical positions and some on regional or global management positions. Three out of the eight interviewees were women. Moreover, as even this specific business unit has global reach, the interviewees were different place in Finland, Denmark and Germany.

As this research approach is giving significant value to the information provided by the informants, it is important to protect their interests while fulfilling the objectives of the

research. For providing insightful information and observation, discretion and anonymity were promised to the informants by the researcher, as has been usual practice in management research studies (Gioia et al. 2012). Therefore, closer identification of the informants, that the one introduced in table 3 is not to be disclosed.

Table 3: Overview of interviews.

| Interviewee | Title | Country | Date | Length | Channel |
|-------------|---|---------|-------|---------|--------------|
| 1 | Business Excellence Consultant | Finland | 11.4 | 49:25 | Face-to-face |
| 2 | Operational Service Manager | Denmark | 12.4. | 1:00:36 | Skype |
| 3 | Product Manager of Digital Service products | Finland | 13.4. | 43:15 | Skype |
| 5 | Director Services | Germany | 23.4 | 46:57 | Skype |
| 4 | Manager of aftersales Service | Denmark | 16.4. | 50:46 | Skype |
| 6 | Business Excellence Consultant | Finland | 25.4. | 57:55 | Skype |
| 7 | Service manager | Denmark | 8.5. | 59:03 | Skype |
| 8 | Director of Sales Operations and Service Excellence | Denmark | 17.5. | 53:37 | Skype |

Though the interviewees have diverse background they are working with the same global strategy and their performance affect each other. This setting provides perfect condition for holistic single case study as defined by Yin (2009). The interviews were conducted in the period between 12.4. and 17.5. 2018 through Skype. The online channel of communication was regrettable; however, necessary due to the diverse locations of interviewees.

The analysis of the primary data uses the strategy of following the theoretical proposition that led to the case itself (Yin 2009:130) and systematic content analysis. The analysis begun by detail transcript of individual interview recordings. During the process of transcribing the researcher was writing observation notes and combining them with notes taken during the interviews.

After the transcripts were completed, the researcher followed Gioia et al.'s (2012) data analysis method. the raw data/ quotas were coded and categorized. Those categories were then labeled on more abstract terms establishing second order themes and capabilities of strategic agility in servitization. These themes were then grouped into theoretical dimensions, which represent the dimensions of strategic agility (as can be seen in figure 5). Through the analysis process the discussed theoretical concepts, which were the base for this research, were compared with the findings to confirm, reject or answer the challenges the company has been facing.

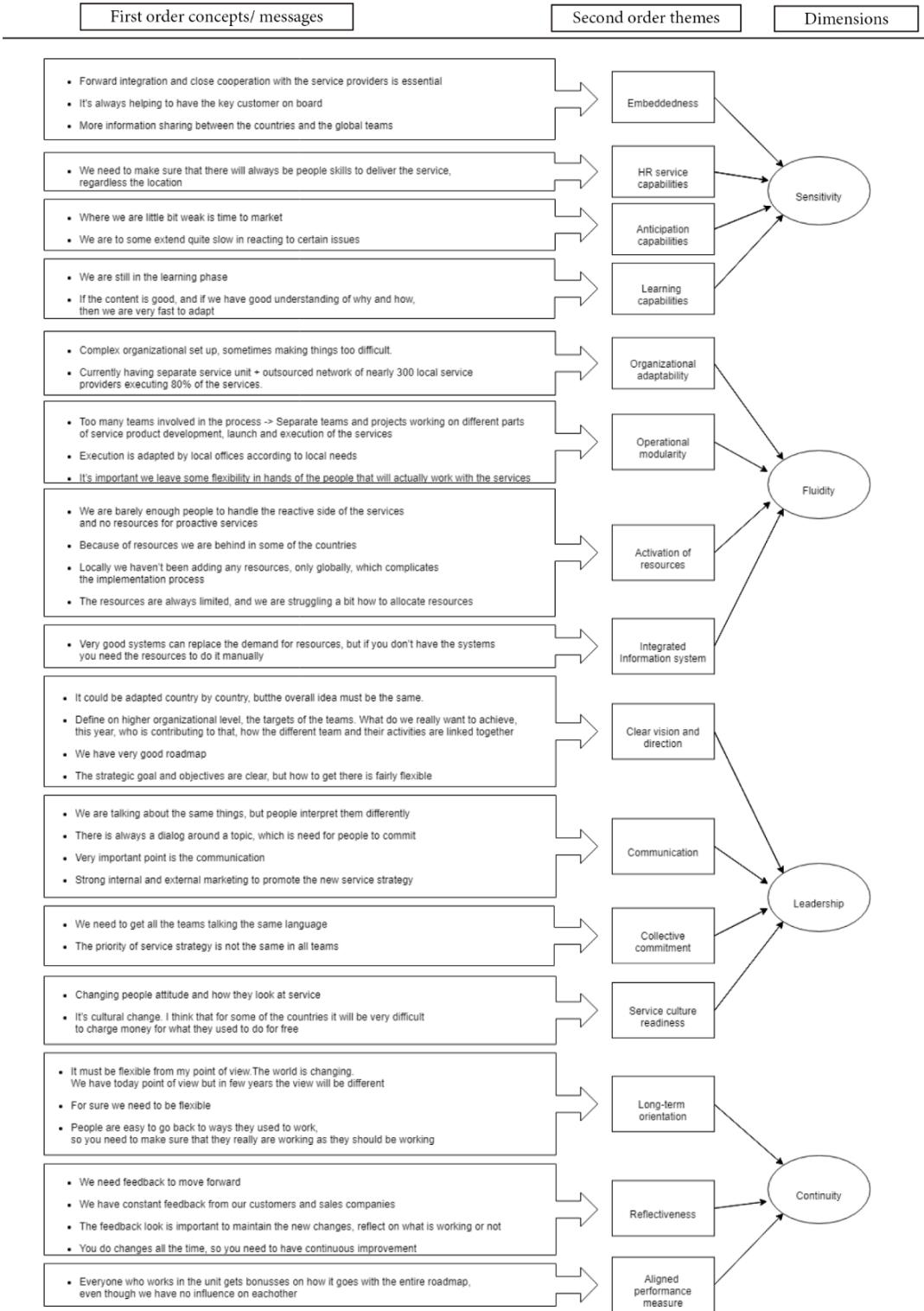


Figure 5: Data structure.

3.4. Validity and reliability

The critical aspects connected to the validity and reliability of the conducted study, are exactly the reasons that make the research valuable. Eisenhardt & Graebner (2007) argue, that the uniqueness of single-case researchers and the value they bring, are also the elements that are often challenged. Therefore, the research design, data collection and data analysis should be carefully conducted to provide maximum possible quality (Yin 2009:40-45).

In qualitative exploratory study there are two quality tests concerning validity of the research. It is construct validity and external validity (Yin 2009: 40-41). Construct validity is concerned with the appropriateness of the operational measures for the concept. To tackle this challenge, this research used numerous and highly knowledgeable informants, gaining diverse perspective on the specific phenomenon. Further, the analysis was conducted based on multiple sources of evidence and the assumptions and progress was consulted with the company representative to confirm the validity of data. These mitigation tactics are encouraged by Eisenhardt and Graebner (2007) as well as Yin (2009) and are adequate approaches to limit bias.

External validity test is concerned with the generalizability of the findings. Foremost, it is important highlight, that as a single case study, this research focuses on theory building, not theory testing and conformity. The process of data collection and data analysis was detailly documented based on the existing research method practice in single case studies (Gioia et al. 2012). As Gioia et al. (2012:18) argue “*...systematic presentation of data allows for rigorous demonstration of the links between the data and the induction of the new concept...*” Siggelkow (2007) further explains that the unique insights gathered from single case study should result in more simplified models and concepts, as the value from the single case study is generated only when the case allows for implicit assumptions about other organizations. Therefore, this research, as a single case study, aims for theoretical implicit generalization.

The third test concerning the quality of this research is reliability test. This test is concerned with the accuracy and consistency provided by the methods and tools applied through the data collection and analysis. It demonstrates that operations of the study-such as the data collection procedures-can be repeated with the same result. (Yin 2009). To ensure the

reliability of this study, all interviews were recorded, and the process of data collection was consistent, not only by following the same interview guide, but also by choosing the same communication channel to conduct these interviews.

4. FINDINGS

4.1. Current position of the company in the servitization map

According to Matthyssens & Vandenbempt (2010), to fully understand the trajectory of a company's service strategy, it is essential to understand the role of service in the company's overall strategy, the industry and the market situation. It is very important in this specific case as well, as this strategic decision predetermines the future direction the company follows, as well as the capabilities it will require.

Therefore, the following statement from one of the company's managers is crucial:

"What is really important for product-oriented company looking towards having service-oriented strategy is that the product-oriented companies take the decision about, if the service is going to complement the product of today and the business model of today, or if the service side is going to take the company in completely different direction. If you use it as a platform to take you into different direction, you can do what IBM has done and other companies and you are changing the whole business model and the service becomes your commodity. If you are taking the other route, which is our route, of putting it as enhancement of the core business, of course, it can open new business models, but it has to be utilized as a differentiator. And value added to the business." (Interview 8)

It is important to understand that with the current service strategy, the case company is not trying to transform into a service provider and completely shift the product-service pendulum, but to find the right balance by providing portfolio with its core hardware products combined with value-adding services to differentiate itself. Such a strategic decision is also supported by previous academic research (Peillon et al. 2015), warning manufacturing companies from drifting too far away from its core competencies and losing its competitive advantage on the market.

The company is aware that to grow its business further, it needs to develop the service offering beyond of what they have been offering so far, with the focus on the product lifecycle.

“The traditional services used to be ‘go and fix things’. It was more like saying, “I am sorry” and fixing the problem. But now, it’s an aftermarket service and it’s also matter of creating revenue, which is completely new product offering.” (Interview 4)

Over the last couple of years, the company has been building the bases for the service strategy implementation, including development and launch of first global service products. Since then, the company has been working with feedback from its customers and local units to further build and shape the service strategy. One of the challenges that the company is facing, when further developing the service strategy, is the diversification of customers and their needs as well as the necessity of scalability of the service offering, which should be provided globally.

“I think we need some customization as each customer is different. But if we look at more traditional services, like extended warranty, start-ups and things like that, that would be more general and really made not only available across the globe, but also unified across the globe.” (Interview 8)

When comparing these strategic decisions with the typology of service strategies developed by Matthyssens and Vandenbempt (2010), it is clear to see that the case company has started its service strategy as an aftersales service and slowly is developing towards service partner and solution partner, according to the specific customer groups and specific products.

4.2. Strategic agility dimensions in implementation of the service strategy

During the empirical research, words such as ‘customer understanding, customer- centricity, flexibility, feedback, communication, commitment, resources’ occurred numerous times. However, these words are not only connected to the servitization itself, but also to individual dimensions of strategic agility, as introduced in the theoretical section. The following sections shows, how the employees working with development and implementation of the service strategy in the case company perceive the different elements and organizational capabilities of strategic agility needed for servitization.

4.2.1. Sensitivity

The first dimension discussed with the interviewees, was sensitivity. Sensitivity dimension and the capabilities embedded in the concept are focused on the company’s ability to sense and understand the shifts on the market. As servitization strategy is derived from a customer-centric logic, the understanding of customers’ needs and serving to the customers was often mentioned by the interviewees. Further, it was mentioned by the interviewees, that this strategy involves the detection and implementation of new trends and technologies, which were developed and recently introduced to the market.

“[the business unit] has taken the first steps within [the case company] in moving towards having service as a growth initiative...moving towards IoT, digitalization, connective products and all of that.” (Interview 8)

However, Interviewee 8 continued discussing the fact, that utilization of this new technology and of date that could be collected already now from their products, could be better.

During all interviews it was clear that customer-centrality is the building block of the case company’s service strategy. In all occasions, the importance to understand customers’ needs, and provide high quality support for customers across all stages of the product lifecycle, was mentioned as first, when discussing the service strategy. As the success of service strategy

relies on the perception and acceptance from customers, it is important to understand what the customers really value and what they require.

“We have been inquired [by the customers] how can we secure that we globally support their businesses. Not only from the traditional perspective of services, but also more value adding services.” (Interview 8)

To gain such an understanding to be able to add value to the customers, the close collaboration with customers and customer embeddedness have been recognized as essential, not only through previous academic research (Gebauer et al. 2011; Storbacka et al. 2013), but the case company itself.

“When you are involving the key customer and having them on board, it’s always helping us to get further with the strategy.” (Interview 7)

Forward embeddedness is not only directed towards the customers, but also towards the local service providers. The case company outsources nearly 80% of the service delivery to its local service partners, therefore having close relationship with them is for the case company important.

“With implementation of new services such as extended warranty, local service providers have no possible to find out about it from only looking at the physical product. Therefore, forward integration and close cooperation with the service providers is essential, when executing services.” (Interview 1)

As the service network consists approximately of 300 service providers worldwide, the company requires network management capabilities and networkedness (Storbacka et al. 2013; Huikkola & Kohtamaki 2017), which are key capabilities for building and managing these relations.

In the case company, they are aware that working with services requires even more customer-oriented skill, than when dealing with pure products. However, where some believe that everyone needs to start thinking as a sales person, trying to find ways how and where the

company could support its customers even more, others believe that customer orientation does not require everyone to be a sales person. Being customer oriented technical expert could mean, that the person is able to create and maintain relationship with technical employees from customer's team, however; you should not expect this person to also be able to talk with the management, do small talk and sell additional service products, as it is not in their nature.

Alertness is also connected to the external development of new technologies and trends. New emerging trends and technologies may open door to new applications and service offerings. However, the company always needs to assess the relevance and applicability of such an innovation (Teece 2007). To embrace something new requires critical assessment and thorough preparation before launch on a global scale. As interviewee 3 said "*We are to some extend quite slow in reacting to certain issues. I can especially see it in my area of servitization. There we have some challenges to react.*"

However, " If the content is good, and if we have good understanding of why and how, then we are very fast to adapt." (Interviewee 5)

In summary, sensing capabilities in this case of servitization are not build only on understanding the customers, embeddedness & networkedness, but also on having capabilities to process these inputs and do something with the information (Ulaga & Reinartz 2011).

4.2.2. Fluidity

For an organization, it is not only about how well it can understand the market, but if it can do something about it. Therefore, the following element brought up during the research was fluidity dimension of strategic agility. Fluidity represents organizational ability to reconfigure business systems fast and efficiently and mobilize and redeploy its resources. It is directly connected to above mentioned ability to assimilate and integrate newly sensed and obtained knowledge (Yusuf et al. 1999; Ashrafi et al. 2005).

The case company's overall strategic approach towards servitization is that services should play the role of a value adding differentiator, that can help them to overcome its competitors, increase revenue and serve its customers in more ways than it has done so far. This type of servitization in a manufacturing company, does not mean that the company relocates its resources, which are working with the core business to work on implementation of the service strategy. Implementation of this type of service strategy means for organizations optimizing its production and operations to build new structures that would facilitate both parts of the revenue stream.

The company's strategy to tackle this challenge was to build a new division within one of its business units, which would focus on the core elements of the servitization, including the development of service products, launch activities, remote monitoring and support and help with more complex problems the customers meet. However, most of the service products are sold and executed through nearly 300 service partners, which are located all over the world.

To build this business unit and implement the service strategy, it requires resources. There were two ways how the case company filled in the gap. Firstly, using existing resources by either relocating them and giving them new roles within the organization, or just adding extra requirements and KPIs on top of the existing ones to specific employees (this was done for example for sales people as they need to be able to serve to the customers with the whole product portfolio). Secondly, the company would find and onboard new people to work specifically on servitization. However, both approaches caused some challenges for the company.

On one side, adding extra requirements and implementing changes within existing setting, was found to be difficult for some of the units and teams.

“You need to be able to support the operational level that we have in a sense that locally we need to have the resources, so we can cope with our daily work. If we don't have these resources, we will never have resources to start implemented new changes.” (Interview 6)

“The resources are always limited, and we are struggling a bit how to allocate resources. That is also to some extend slowing our progress.” (Interview 3)

However, onboarding new resources may require time and other additional resources, which can slow down the implementation process as well, and can pose the risks connected to the inadequate integration process of the new employee. Interviewee 8 pointed out, “*If you have more resources, you can speed up the process. But sometimes it can be hard to onboard new resources.*”

One of the elements discussed within the literature is structural flexibility and adaptability that could loosen some resources, and further support networkedness and flow of information, which are capabilities previously mentioned in the sensing dimension. Baines et al. (2013) see here the need for an integrated information system (Baines et al. 2013), that would allow optimization of existing processes and free resources for implementation of new strategy. Interviewee 6 believes as well, that “*very good systems can replace the demand for resources, but if you don't have the systems you need the resources to do it manually*”.

4.2.3. Leadership

According to the interviewees, one of the strongest factors influencing the strategy implementation are the people.

“If one country decides that it [the strategy] doesn't affect them, then it can hinder the whole strategy. One of the countries have had a service offering long before [the case company] started implementing this service strategy, therefore if they would have decided to stay with already existing process and not adapt new ones, it could significantly hinder the desired effects of global strategy, offering global and unified services with a same quality level provided all over the world.” (Interview 8)

When discussing with individual interviewee the elements connected to this factor, the importance of changing the way of thinking was brought up numerous times. They have

recognized that selling services requires different approach than what they have been using so far. Moreover, they realized that the existing processes and capabilities do not necessarily support this new way of doing business.

“I think it’s more like understanding the role of the services and how it could help us to gain more revenue and reach the growth targets. The lack of understanding of the services is hindering the progress the most.” (Interview 3)

Another element has been the resistance to change. The company has been known for providing high quality service to its customers. However, often these services were done for free, on side or as good will. When the case company decided to unify the global service offering and provide services, the company also put price tag on it, as providing service for free was unprofitable and unsustainable in the long run. To change from providing service for free to start asking money for it, might be for many employees challenging task.

“It’s cultural change. I think that for some of the countries it will be very difficult to charge money for what they used to do for free. “(Interview 4)

Over the last 2 years, the case company has been heavily investing in internal and external communication to make people understand the importance of service products, customer centricity and taking care of the customer needs over the whole product lifecycle. Solely based on the primary and secondary data collected through the research, this has been working very well.

In implementation of service strategy, part of the communication is high quality dialogue (Doz & Kosonen 2008a; Teece 2007) and information sharing. Though the different company representatives communicate with key customers and local sales representatives, and even though the global team is meeting on regular bases to share progress, the information flow seems to lag.

“There could be more information sharing between the countries and the global teams. It’s not very systematic. It’s more based on personal relationships with the sales guys and the

country guys and if they remember to share the information with the global teams.”
 (Interview 3)

Communication is not only about sharing the information and having access to it, but it is also about having unified and clear message, when implementing new strategy. Academics argue that shred goals and interest in being successful (Doz & Kosonen 2008a; Baines et al. 2013) move organization through transformation period more smoothly. Further, backing and support from the management (Miller 1997) as well as strategic leadership are essential levers in strategy implementation (Crittenden & Crittenden 2008). Throughout the research process, it was observed that the level of satisfaction connected with clear and unified message, supportive management, and strong leadership, varies according to the perceptions of individual employees. Interestingly, if the employee was involved in the strategy implementation, his/her satisfaction was significantly higher than the satisfaction from other units or employees onboarded after the strategy was formulated.

“We are unified. Very important point is the communication. We are drawing the big picture started form the global meetings, defining the strategy, but also going back to the countries and for sure communicating the strategy. It is the way to communicate how we go forward, what we prioritize... it could be adapted country by country, but the overall idea must be the same. But I think we are good. We are communicating a lot.” (Interview 5)

“The strategic goal and objectives are clear, but how to get there is fairly flexible. So, we can actually adapt it to local needs, legislations and local customers and organizations. I don’t think it’s too flexible, maybe we need to have it more flexible that we really want it, because we have so many different countries. It’s important that we leave some flexibility in hands of the people that will actually work with the services.” (Interview 6)

“Well, we have very good roadmap. Everyone who works in the unit gets bonuses on how it goes with the entire roadmap, even though we have no influence on each other. ... We all know in which direction we are going, but I am just not sure like how I help. ...At least it creates awareness of what others are doing.” (interview 4)

“... in this kind of set up individuals have quiet some power as well. You can interpret things differently and then proceed in your area the way you see it the best. There is a loose link between the teams and there is not that strong guidance on ‘that this is exactly the direction we need to go from the strategic point of view...’” (Interview 3)

One of the goals of stressing the importance of communication is not only to raise awareness and share information but to create collective commitment towards the new strategy and strengthen the loyalty. Regardless of who formulated the strategy, unless it becomes part of the organizational DNA, the implementation will suffer.

“if you go talk to the R&D team who is developing the actual [hardware products], from their perspective the services are not high on the agenda, so I think that is hindering the implementation the most. We need to get all the teams talking the same language, so it’s not only global aftermarket service organization, who is pushing the service strategy and services forward, but it has to be across the whole company.” (Interview 3)

4.2.4. Continuity

The fourth dimension is the element of continuity. The service strategy was built for the outlook toward 2025, including shorter strategic directions and milestones, which should lead the company towards its 2025 goal. As the strategy was developed internally and on the global level, it was expected to have certain degree of flexibility for when implementing locally. The flexibility was to ensure that while implementing global standards and products, it would be presented and communicated in a way that suits the local offices the most.

“As a global organization it’s not only about corporate culture, but also national cultures. And according to them people have different ways of working, communicating, so it needs to be taken into consideration.” (Interview 6)

However, giving this room for adjusting the strategy implementation to not only the global culture, but also to local and local ways of doing business has turned to be challenging for

the process of servitization. When changing the organizational business logic and teaching the entire business unit customer centricity, the need for continuous review and feedback loop is very important.

As one interviewee pointed out, “*people are easy to go back to ways they used to work, so you need to make sure that they really are working as they should be working.*” (Interviewee 1)

People easily pull towards old habits and old ways of thinking, if the new ways are not properly embedded in the organizational DNA. Companies are encouraged to implement consistent goals and reward system (Baines et al. 2013; 2013b), which would be aligned with the goals of the strategy and would continuously motivate the employees to embrace the new ways of thinking and working. Even employees themselves see the need for it:

“It would help if we would define on higher organizational level, the targets of the different teams. What do we really want to achieve, this year, who is contributing to that, how the different team and their activities are linked together. To realize these targets.” (Interview 3)

“Everyone is very busy. They have the sales targets and if they don’t reach it, it will influence their bonus.” (Interview 4)

Not having the reward/ bonus system directly linked to success of the strategy can hinder the implementation process. According to the interviewee 4, as services are marked and accounted for differently than hardware products, some units or individuals are not particularly motivated to promote the strategy.

“Everyone is very busy. They have the sales targets and if they don’t reach it, it will influence their bonus. And if they don’t get this [service strategy implementation] as a fix target that would influence their bonuses then it’s down-prioritized.” (Interviewee 4)

Interviewee 3 confirms the lack of connection between strategy implementation milestones and their KPI and reward system: “*To some extend they are connected to the implementation*

of services, but I think it could be even better. It could be clearer, how this is connected to the overall service strategy. ”

Further on, it was pointed out by Interviewee 8, that the revenue stream from services is different than the streams from hardware products.

“Service is typically long-term reward that you received, compare to a product sales”
 (Interviewee 8)

Selling hardware products is one-time transaction that can be easily monitored and recorded, selling services requires much more and is more long term oriented. Thus, selling services is less attractive when using existing model of reward system and way of assessing revenue growth.

Monitoring system does not concern only internal processes and execution, but also the feedback from customers. When implementing new customer centric strategy, such as the service strategy. It is essential to not only build it for or with the customers and according to their needs, but also communicate and understand their feedback. As they are the one who would either buy it or not.

Teece (2016) suggests using build-measure-learn methodology, to enable the organization to continuously learn and develop its products even further. As interviewee 1 shared:” *You do the changes all the time, so you need to have continuous improvements which are based on the feedback. It’s not that we have monthly review, but we have constant feedback from our customers and sales companies. Whenever you get feedback, you have to take a look at what it is.*”

Not all feedback is implemented on the global level. With small changes or local requirements, the company is able to implement the feedback fast, but the bigger the issue is the more bureaucratic the process is and the longer it takes. Moreover, the company needs to follow the bigger picture, thus not all feedback is always implemented as they are not recognized as relevant. A company cannot please everyone.

5. DISCUSSION

The discussion on emergent and deliberate strategies and their formulation/formation have been around for decades. In the case company, we can see that the servitization strategy was formulated from an emergent strategy and through its incremental implementation the realized strategy possesses the characteristics of an umbrella strategy (Mintzberg & Waters 1985). The customers asked for services related to the hardware products and the company has started offering them. The factor of being a primary hardware manufacturer with strong R&D developed inertia in the organization, which is currently affecting the implementation process of the service strategy. This state of inertia is natural for companies that reach leadership position in its industry and do not actively nurture strategic agility (as discussed by Doz & Kosonen 2008a, and as is transparent from their longitudinal study on Nokia).

On one side, customer centricity has become to some extend part of the organizational DNA; therefore, all interviewees were positively accepting the service strategy and arguing how important it is to focus on the customer through their entire lifecycle. This could have been achieved also due to the intense communication and marketing efforts the company spent on promoting the service mindset and the strategy. However, if it would be only due to the strong communication, logically all departments and local offices would be equally persuaded. The interviews uncovered that there are departments where people do not see service strategy as a priority and consequently, are not convinced about its applicability or importance. Therefore, it can be assumed that there is involved another aspect, inertia. This assumption also suggested by Peillon et al. (2015), and Doz and Kosonen (2008a), who argue that organization inertia plays a significant role in implementation of a new strategy.

Reflecting the influence of inertia on implementation of service strategy, the resistance to change is an important aspect uncovered through the empirical part of this research. Over the years, before formulation of the global service strategy, services slowly became part of different units in different form. Every office was doing what was the best for them and their customers. Now, with implementation of the global service strategy, people need to change

their ways of doing, regardless how much they believe that their way of doing things is the best.

Defining the most appropriate version of all the emergent initiatives, which would then represent the global service strategy, has not been an easy assignment. As Fang et al. (2008) stress, having the right strategy is more important than having the financial means for new investment. Further on, there is no single right strategy for manufacturing companies implementing service infusion. The servitization path depends on the strategic role of service within the overall organizational strategy (Matthyssens & Vandenbemt 2010).

The company decided to use service as a value adding commodity supporting the hardware products and stay focused on its core competences. This decision further drives the trajectory of the company on the servitization path. When using Matthysens and Vandenbemt (2010) typology, the case company, with its new service unit focuses its strategy around after sales service. It is mainly product-based approach with standardized solutions. The implementation of this type of strategy is not only visible from the product portfolio, but also from the way how employees communicate and think. When discussing the service strategy, nearly all interviewees were talking about productizing services, not about offering services. This indicates strong product-dominant logic, rather than service-dominant (Vargo & Lusch 2008).

Considering that the organization is progressing its strategy from after sales service towards becoming service partner (based on the existing product portfolio), which requires providing more value generated from services, the organization logic will play role in the successful implementation of the strategy. The transition through the servitization path has been rather incremental than radical. It is a lengthy process and company needs to be clear about its objectives and goals. To avoid first threat of failure, there should be clear alignment between the service strategy and organizational design (Gebauer et al. 2010). However, as the service strategy is new not only for the company, but for its customers as well as the entire value chain, the incremental process of implementation is necessary, in order to find the right

balance and approach. As described earlier, servitization is rather explorative, reactive and ambiguous process (Kowalkowski et al. 2012).

To stabilize its position as manufacturing and after sales service company, the case company needs to develop certain set of capabilities. Moreover, when the company decides to move forward on its servitization path it should be done incrementally, by developing new capabilities required for the new position (Oliva & Kallenberg 2003). This is where organizational strategic agility and its dimensions can play important role. Strategic agility is for an organization a lever of transformation. It enables transition towards strategic transformation.

According to the interviewees, the most significant elements positively or negatively influencing the implementation process are understanding customers, feedback and review, clear goals and strategy, communication (including information system), leadership and resources. All these elements fall under the dynamic meta-capability known as strategic agility.

5.1. Role of each dimension: Sensitivity

Sensitivity represents organizational ability to rapidly recognize changes and shifts on the market, which also involve thorough understanding of customers' needs and customer embeddedness. (Doz & Kosonen 2008a; Ashrafie et al 2005; Gebauer et al. 2011; Sajdak 2015). In general, this dimension of strategic agility includes capabilities such as high alertness, advance monitoring and networkedness, learning capabilities and many other capabilities, enabling organizations to sense, understand, and learn. The importance of knowing or at least predicting where the market and customers are going, can help a company to formulate strategy on where the company wants to go, and only after that the company can define how to get there.

In this specific context of early stage implementation of service strategy within a manufacturing company, there were specific capabilities that belong to the sensitivity dimension, which stood out during the empirical research. The most relevant and highlighted were: forward embeddedness and networkedness, human resource service capabilities, anticipation and learning capabilities.

Forward embeddedness and networkedness have in this context two levels. The first level focuses on forward embeddedness of the case company's service business unit within its extended network of service providers. With 80% of outsourced services, which started playing an important role in the business unit's overall strategy, it is important to ensure that the communication and understanding of what it means to be the case company's service provider is accurate and align between the headquarter and the local office. This forward integration should be two-sided to ensure maximum efficiency. It should not be only the manufacturing company controlling and training the service providers, but the service providers should be able to give inputs, feedback and predictions to the manufacturer, as they are the ones on the ground and feeling and observing every market shift. Only then the unique value can be co-created. These supplier network management capabilities and value co-creation capabilities are strongly encouraged for servitizing companies (Huikkola & Kohtamaki 2017). The second level of forward embeddedness is customer embeddedness (Storbacka et al. 2013). Servitization is a customer-centric strategic shift and, as such, its success relies on the perceptions and acceptance from the end-customers. It is essential to properly understand not only what the customers require, but also what they may require in the future to be able to fulfill these needs.

A significant aspect often connected in the interviews with the understanding of customer needs and networkedness, were employees. Specifically, the capabilities that organizational human resources, who work with the customers and implement the service strategy, need to possess. They discussed the importance of putting the customers first, relationship building, and being helpful and friendly. There also occurred a disagreement on to which extend all employees should always look to sell new products. It is recommended for personnel to be authentic, flexible and resilient (Baines et al. 2013); and though not all personnel are meant

to do sales, they should be alert and open, in order to discover and communicate current and future customer needs, which could further support the company in deeper understanding of customers' needs and drive more sales. This can be also seen as proactive customer planning (Matthyssens & Vandenbempt, 2010). Other capabilities are anticipating and learning. Though anticipating and learning were not directly discussed by the interviewees, their importance in the process of servitization is tangible.

Anticipating capability, consisting of scenario and hypothesis building capabilities, and experimenting (Doz & Kosonen 2008a; Teece 2016), is one of movers that enables companies to test the market, test its products and assumptions and to develop deep and educated understanding to prepare the organization for potential shifts. This capability can enable organization to build assumptions, based on the data and information gathered from its customers and service providers, which are then bases for new service products and services. This hypothesis building and validation process seems to be essential for companies to define the right direction on the servitization path.

Unless used, data and information gathered from customers and markets are of no value for an organization. Therefore, it is important that companies develop different learning-related capabilities such us sense-making, abductive reasoning, data processing and interpretation capabilities (Ulaga & Reinartz 2011; Doz & Kosonen 2008a) that can be combined with technology development capabilities (Huikkola & Kohtamaki 2017).

5.2. Role of each dimension: Fluidity

The fluidity dimension of strategic agility can be also seen as “a measure of responsiveness” (Harraf et al. 2015), or as the lever of organizational responsiveness. Where sensitivity is at the forefront of an organization, fluidity is meant to move, reconfigure and adapt these new observations and learning to protect and create value (Teece et al. 2016). In the broader context, fluidity is a structural lever for strategy implementation (Bonomo & Crittenden

1988), addressing the organizational structure, operations, and tools. Noteworthy, fluidity cannot stand on its own and requires managerial levers to be of any value to an organization.

Based on the analysis of empirical data, when implementing servitization strategy, there are three main fluidity capabilities, which seem to be key for the process. The capabilities are organizational adaptability, operational modularity, and activation of resources. These capabilities are also recognized as a stepping stones in implementation of service strategy (Gebauer et al. 2005).

Organizational adaptability, within the context of early stage servitization, includes “make-or-buy” decisions, which require deciding what must be done in-house and what outsourced. Indeed, the trade-off between to separate or to integrate the service units has been one major debate in the servitization literature (Gebauer et al. 2012). The case company has decided to establish separate service unit, which focuses solely on development, launch and execution of service products and services. Separating the services from products at the beginning of the servitization phase and giving the service strategy enough resources and space to get up from the ground seems to be one of the first steps recommended to manufacturing companies (Gebauer et al. 2005; Matthyssens & Vendenbempt 2010). Further, the case company is developing and supervising the implementation of the service strategy; however, as recommended by Davies et al. (2006) it outsources complementary service and anything that can be outsourced. This outsourcing strategy requires higher degree of forward integration and embeddedness, but lower demand on actual physical presence of the case company in all countries, where their customers are located. The outsourcing of services should be treated carefully, as the principle behind servitization is to get closer to the customers. Therefore, in this situation the emphases on embeddedness should be highlighted.

Another element of organizational adaptability is self-organizational structure, as opposite to strong hierarchical system and centralized decision making. The case company decided to follow this direction as well. The interviewees agreed, that the development of global strategy with main milestones, but room for local implementation is welcomed. It was argued that only the local offices really know how to communicate with its local customers the best and

how to introduce it on the market, so it would get accepted. However, this room for individual implementation can be behind some of the delays. It seems that each of the local providers have different requirements and needs, when it comes to the preparation for implementation of the service strategy. Therefore, it takes them different amount of time, which is often longer than predicted.

Further, decentralization increases the threat of miscommunication or lack of communication. As we could see through the interviews, every employee handles lack of information and lack of clear operational settings differently. As pointed out by the interviewees, the communication connected to forward embeddedness has been primarily relationship based and unstructured. This is mostly due to the lack of globally integrated information system, that would fulfill all the requirements and needs of the organization. Integrated information system is an essential tool required by servitizing literature (Gebauer et al. 2005, Baines et al. 2013b), strategic agility (Teece et al. 2016) as well as strategy implementation (Crittenden & Crittenden 2008). The case company had to learn this lesson the difficult way, where after launching the service strategy, challenges connected to ununified information system started appearing and complicating the servitization process.

The globally integrated information system also affects operational modularity, which is another capability within the fluidity dimension. Modularity represents the concept of “one size does not fit all” (Doz & Kosonen 2008a). It represents project-based operations and with it connected project management capabilities (Matthyssens & Vandenbempt 2010; Huikkola & Kohtamaki 2017), which enable focused operations around a specific issue, developing on its own speed, but still matching other teams through the synergy with the overall strategy.

Working within the project based and still hierarchical organizational structure, a company needs to focus on activation the resources within its boundaries (Teece et al 2007). Many of the interviewees complained about the lack of resources, inappropriate allocation of the resources, etc. This challenge could be tackled by prioritization and disassociation from resources, so the most relevant tasks would be solved, to achieve the objectives, regardless on how the work used to be done before. Proactive work towards implementation of the

service strategy requires disassociation of resources (Doz & Kosonen 2008a) as well as deployment capabilities (Ulaga & Reinarts, 2011; Baines et al., 2013b).

Crittenden and Crittenden (2008) argue, that when implementing new strategy, it is not always about having extra resources, but about knowing where and how to allocate the resources. Therefore, when resources are disassociated within a modular system, where the strategy and priorities are clear, the servitization process should be smoother.

5.3. Role of each dimension: Leadership

Clear direction, team perspective and service culture readiness. These three capabilities are the core of leadership dimension of strategic agility required for successful implementation of service strategy. Leadership dimension in the broader perspective represents the strong leadership skills of the management, clear direction and commitment and unity within the organization (Doz & Kosonen 2008a; Crittenden & Crittenden 2008; Teece 2016).

Based on the empirical research, having clear direction and understanding of where, how and why of the service strategy, was very important among the employees, when starting with the implementation process. Internally the company used all possible means of communication to promote the new strategy and raise awareness together with unified management sharing the same message of what does it mean for the company and what the goals are. Though the message could have been clear and heavily communicated within the company, the implementation struggled on how detailed implementation process should be communicated. Even though the strategy has clearly set direction, goals and milestones, the implementation process is constantly adapting and evolving. Therefore, many of the elements are floating. Through the empirical research it was possible to observe, that individuals involved with formulation of the strategy and on higher managerial positions, were more comfortable with this level of flexibility, whereas employees onboarded later in the process

of implementation or closer to the local execution were struggling to understand their role in the big picture.

In this situation, having clear direction is not only about unified management and understanding the bigger picture, but also understanding the individual roles and their connection and purpose for reaching the target goal. Only when people fully understand their role and purpose, they are able to fully commit and embrace new direction.

The role of communication in this situation is invaluable. Though communication and information flow are essential parts of servitization, the element of strategic agility is highlighting the need not only for communication, but also high-quality dialogue (Doz & Kosonen 2008a). The teams within a company might be meeting on regular bases, sharing information, monitoring progress, but unless there is a possibility and space for high quality dialogue, of probing and testing assumptions and theories, building scenarios of the implementation process and challenging the strategy itself to find the weak spots, the implementation process will be more challenging than is necessary.

Another important element within the leadership dimension is collective commitment. Collective commitment should evolve from having clear direction and understanding of individual roles and embracing the collective success mindset. It represents organizational shared interest in being successful, common interests and goals for the organization and employee flexibility (Doz & Kosonen 2008a; Baines et al. 2013). The business unit has great advantage in possessing low power distance within its organizational culture, which is built on the national culture of the company's origins (Denmark). This environment can foster the collective commitment; however, work towards common goals and employee flexibility needs to be encouraged by extrinsic motivation coming from the company. As can be seen through the interviews, unless it is not beneficial for employees to change, they will not do it.

The third element of leadership dimension in early stage servitization is service culture readiness. Generally, strategic agility emphasizes the need for strong value system, collaborative culture and organization culture of change (Doz & Kosonen 2008; Teece et al.

2016). All these elements are very important, and directly support the most significant aspect, which is in this situation the shift of organizational business logic. The organization needs to be able to not only understand that service is important for the company's future growth, but it needs to embrace the service logic (Vargo & Lusch 2008), before attempting to progress further on the servitization path. Gebauer et al. (2005) and Vargo and Lusch (2008) warn, that inadequate understanding of the service logic within an organization can draw the organization towards unsuccessful implementation and service paradox.

5.4. Role of each dimension: Continuity

The continuity dimension, though discussed separately, is closely connected to previous dimensions of strategic agility. The core of strategic agility is this continuous realignment between already implemented strategy and newly sensed opportunities and threats, which when combined, create future value for the organization. It is the infinite cycle of strategy formulation and implementation (Pryor et al. 2007), or as described by Teece (2016) 'build-measure-learn' concept, which enables continuous strategic development.

The element of continuous realignment is crucial for servitizing manufacturing companies, which are at the beginning of their path. These companies are realizing their intended strategy, which is regularly influenced by new inputs from the market, customers, but also employees internally, thus the outcome might and should be affected by these elements, as they continuously evolve and change. This aspect of constant change is balanced by the dimension of continuity.

Implementation of service strategy is a radical change for manufacturing companies and will take time. The road towards a company's transformation is through incremental strategic transition. The company needs to possess clear long-term orientation (Matthyssens & Vandenbempt 2010) towards the end goal, when overcoming obstacles and finding and testing new ways how to get there.

As the process of transition towards transformation takes time, the room for flexibility should be embedded thorough the organizational processes, to always find the most appropriate way of reaching the strategic goal set at the beginning. Further, the company should never lose the sign and understanding of its core competences. The case company is understanding this concept of having strong direction, which would guide the organization towards the goal. Most of the interviewees agreed that the 2025 goal is clear and fixed; however, the way of getting there can be influenced by introduction of new technology and trends to the market, or internally. These influences can have positive or negative effect on the implementation process, depending on how the company can sense them, integrate them and get the people on board with them.

To understand where to shift and how, in order to reach its ultimate strategy goal, company needs to rely on customer feedback and input capturing (Matthyssens & Vandenbempt 2010). Through forward integration and heightened sensing capabilities a company can detect the market and customer changes. There it is essential to add the feedback element, to understand whether the direction the company is going is the correct one, if what the company is offering is really what the customers need and how or in what way they can change or improve, to provide even better value to its customers and find the most appropriate strategic position. It is the ‘build-measure-learn’ concept (Teece 2016), that could help the organization to move forward. It also means that it cannot end by only gathering the feedback. Company needs to be able to reflect on the feedback.

The interviewees discussed that the case company is serving its customer to their best knowledge and capabilities. Therefore, when the feedback and suggested changes are incremental and in a local context, it is possible to implement them very fast. When the feedback could affect the global scale of the company, the changes take time to ensure proper execution. Moreover, any feedback and changes must be compared with the organizational overall strategy, to confirm that the company is not drifting away from its main goal but moving closer to it.

The people element is very strong in this ambiguous situation of early stage implementation of a new service strategy, where the new strategy should be combined with existing strategy and where the shift of organizational logic should transform the way of doing business, while being in the same ‘old’ environment. Tackling this challenge has been discussed in the leadership dimension; however, continuity plays here an important role as well. This can be done through reflectiveness capability, which includes the need for reporting tools (Matthyssens & Vandenbempt 2010) and aligned performance measurements and mutually consistent goals among the units and people (Baines et al. 2013; 2013b). These elements support and encourage the people in implementation of the new strategy and in changing the way how they do business.

Underdeveloped internal reflectiveness capability and unaligned performance measure can result in employee frustration, when their bonuses are tight to a performance of another team, which they cannot influence. This can lead the employees towards decisions of not putting the servitization as a priority and drifting back to the old ways of doing business.

Tabel 4: Overview of strategic agility capabilities important for early stage servitization.

| SA Dimension | Capability/ Factor | sub-capabilities and description | Its role |
|--------------|-------------------------------|---|---|
| Sensitivity | Embeddedness | Forward integration with service providers and customer embeddedness | Enables control over service delivery and information flow |
| | HR service capabilities | Customer-centric mindset and behavior of personnel | People are the ones executing the strategy-> require capabilities to sense and execute the service strategy |
| | Anticipation capabilities | Proactively testing, probing and hypothesis building | Predicting and testing of solutions increases the accuracy of these hypothesis and enables faster/proactive approach to changes |
| | Learning capabilities | Sense-making, abductive reasoning, interpretative capabilities | Ability to do something with the gathered information |
| Fluidity | Organizational adaptability | In-house or outsource strategic decision, creating separate service unit | Ability to build the organizational structure favoring successful implementation of the strategy |
| | Operational modularity | Project-management capabilities, self-organization, decentralized decision making | Enabling fast and symphonized implementation of a global strategy in local context |
| | Activation of resources | disassociation of resources, deployment capabilities | Allocating resources based on the priority plan for strategy implementation |
| | Integrated information system | System enabling structural information storing and sharing | Capability/ tool enabling other capabilities of strategic agility |
| Leadership | Clear vision and direction | Knowing ‘who, where, how and why’, | Understanding the direction and how to get there allows for faster and agile fulfilment of goals under diverse forces |
| | Communication | High-quality dialogue, internal & external communication, | Communication fosters commitment |
| | Collective commitment | Shared interest in being successful, clear and common goals, employee flexibility | Unified understanding of goals and what does it mean to be successful with the strategy |
| | Service culture readiness | Strong value system, service-dominant business logic | Culture and business logic must be aligned with the strategy |
| Continuity | Long-term orientation | Flexible construct with fixed direction and goals | It allows to be agile, but never shift too far from its core competences |
| | Reflectiveness | Collecting and processing internal and external feedback, ‘build-measure-learn’ loop capabilities | It is essential for continuous development, and understanding the progress that has happened and that should happen |
| | Performance measure | Aligned KPIs and performance measures supporting the implementation of the strategy | Culture and business logic must be aligned with the strategy |

5.5. Strategic agility dimensions mitigating servitization challenges

In the section 2.4.2 the challenges that a manufacturing company may face when implementing service strategy were discussed. Through the data collected, it could be observed that the case company itself faced or has been facing many of the above-mentioned challenges. Therefore, this part of the discussion is focused on how the dimensions of strategic agility and its embedded capabilities could mitigate these challenges.

When discussing servitization and strategic agility, it is important to start from customers. Customers' intentions and perceptions greatly affect the success of the company's new strategy, whether it is accepted and brings value, or not (Bowman et al. 2000; Valtakoski 2017). The complete failure of implementation of service strategy can occur when there is an inadequate match between the service offering and customer expectation (Valtakoski 2017), in other words, when there is strategic mismatch (Doz & Kosonen 2008a). Markets are changing as well as customers' needs are, therefore constant diligence is in place. This is where the strategic agility capabilities are crucial. Understanding to these changes and requirements is done through sensitivity dimension. Forward embeddedness ensures access to the sources of information, and with anticipating and learning capabilities the company is able to make sound assumptions from which further changes and strategies are derived. This probing, testing, learning and re-learning should be guided through reflectiveness (continuity dimension), using internal and external feedback and 'build-measure-learn' loop. This allows for continuous strategic development, which is aligned with the market and real customers' needs. Further, it can position the company as a market leader, not only follower.

Underestimating the importance of feedback and reflectiveness may lead to a failure of strategy implementation. Additionally, sensitivity does not only enable the organization to sense and anticipate shifts, but it also enables deeper understanding of value creation process of its customers, which further enables the company to design better fit between its offerings and customers' wants and needs (Valtakoski 2017).

As heavily stressed through the interviews, it all relies on people. On their capabilities, commitment and actions. Martinez et al. (2010) warn, that in order to deliver integrated

offerings the company's practices must be unified. They also stress the fact that with service offerings, more people are involved with the customer and can influence the outcome, as opposite to pure product sales. Therefore, the unity in processes and having customer-centric mindset and behavior is crucial. This can be achieved through leadership and continuity dimensions. When the company sets clear vision and direction and makes the people understand not only the 'why' behind the strategy, but also 'who, where and how', people will be more incline to follow it, because they will know how. Further, communicating the priority order of goals or operations, and explanation of the roles that each of the people play in the company's big picture, and how they can contribute to reach these goals seemed to be an important element also in the case company.

Another important aspect effecting the people is collective commitment. Once people understand "why, who, where and how" they also need to understand what it means to succeed and the interest in being successful must be shared among them. Having clear and common goals for everyone to follow and to contribute to is an important factor in building the right attitude and motivation. People are not only motivated by believes and shared goals, but they can be motivated extrinsically. By aligning KPIs and performance measures that encourage customer-centricity and sales of services, the company can further foster the implementation process.

Having shared interest in being successful and having shared goals and aligned KPIs, the company's resources could be activated and deployed according to the given priorities with better ease. Which would lower the struggle for resources and internal conflict.

The implementation does not rely only on the people, but also on the construct they operate it (Martinez et al. 2010). That is where the fluidity dimension of strategic agility plays important role. It encourages the adaptability of organization structure through decisions on what to keep inhouse, what to outsource and what networks to build. Further, it encourages operational modularity, ensuring that the global strategy fits to the local context. The more decentralized the organization structure is the stronger the sensitivity and continuity dimensions should be to counter the loss of control and insights.

This study as well as existing research (Heide et al., 2002) strongly emphasize the role of communication (leadership dimension). Without high-quality dialogue and internal and external communication, a company would not be able to fully sense and learn. The employees would not be united and would not understand their role and what they should do and there would not be continuous growth. To have a flow of information, clear communication and channel for reflectiveness, an integrated information system is of an essence.

Through the study, it was transparent that embracing strategic agility could foster the implementation process of service strategy. Though, strategic agility dimensions are depended on each other; however, they are not self-enforcing. Sensitivity enables an organization to gain valuable insights and learn to develop and implement new products and processes, fluidity ensures the flow of resources and organizational adaptability, leadership encourages and manages people within the organization; and continuity ensures that there is strategic logic behind all the actions and that the changes remain and move the organization in the right direction.

Without continuity, sensitivity could drive the organization in a direction far away from the company's core competences, or the changes would never stay for too long as they would not have time to become part of the organization's DNA. Weak leadership dimensions ensure stronger continuity but will not motivate to embrace newly sensed and learned knowledge. And without organizational fluidity the organization would struggle to deploy capabilities and deliver the services that it promises.

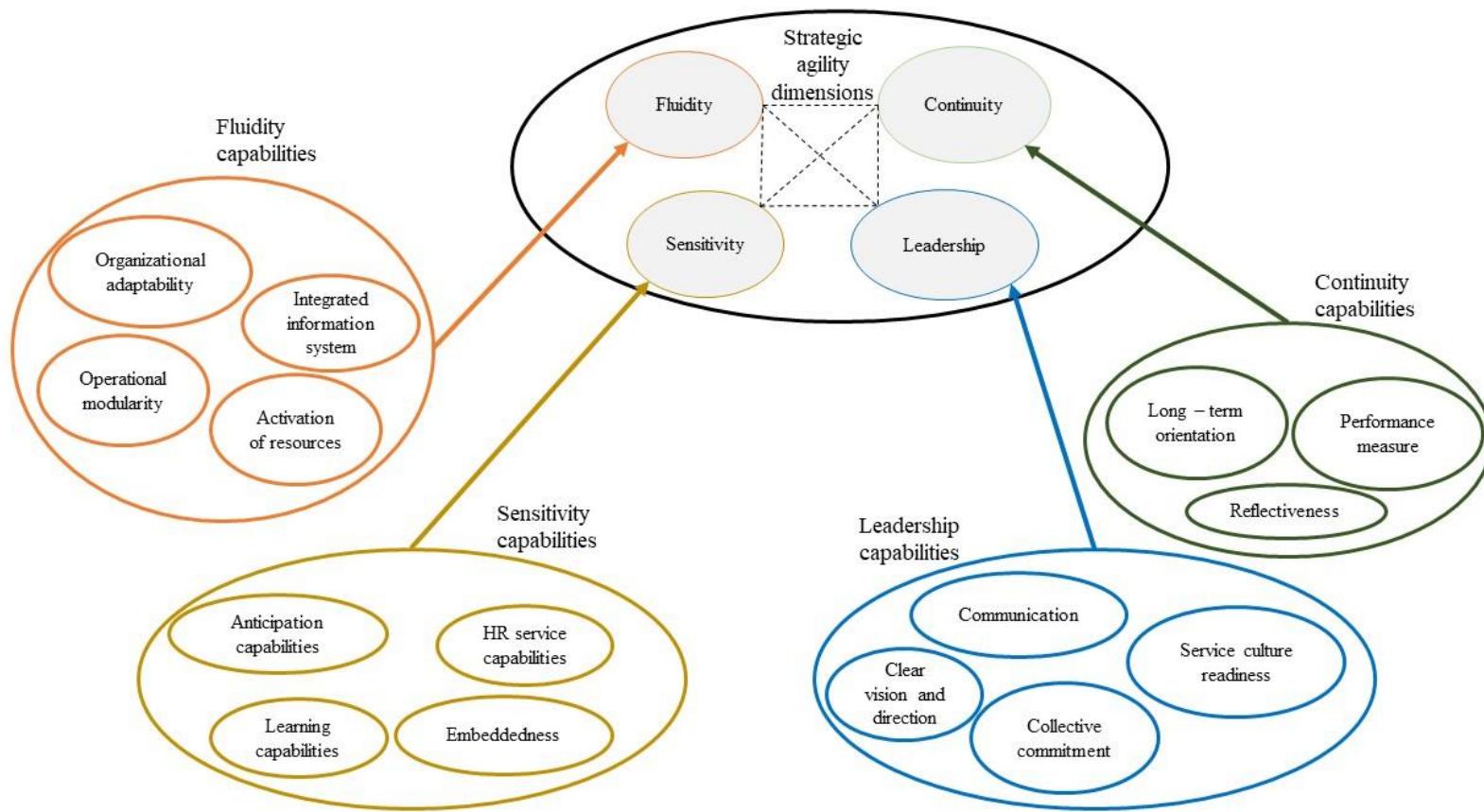


Figure 6: Overview of strategic agility capabilities important for early stage servitization.

6. CONCLUSION

The objective of this research was to challenge existing literature of strategic agility, strategy implementation and servitization and explore the role of strategic agility in servitization. Specifically, this paper set as its objective to answer the question:

What is the role of strategic agility in servitization?

To guide this research in answering the question, there were set three sub-questions, which were answered through an extensive literature review and analysis of data gathered from the in-depth single case study. The questions were as followed:

- 1) *What are the key dimensions of strategic agility for servitizing manufacturers?*
- 2) *What is the role that each dimension of strategic agility plays in implementation of service strategy?*
- 3) *How strategic agility dimensions support strategy implementation in service transition?*

The first step was to define the key dimensions and its embedded capabilities and explore the relationship between strategic agility dimensions and servitization. The key dimensions of strategic agility were defined as sensitivity, fluidity, leadership, and continuity. Where the sensitivity represents the organizational ability to connect with customers and its network, and to test, anticipate and to learn. The fluidity focuses on organizational structure and processes, which should be aligned with the strategy and should foster flow of information and resources, to ensure faster and clear deployment of these resources, limiting internal conflict and not slowing the implementation process. The leadership dimension is about the leadership direction through the transition process. It reflects the cultural readiness, and the understanding of individual roles in the big picture of the strategy implementation, this together with strong communication decides the employee commitment towards the new service strategy implementation. The fourth dimension is continuity, which affects all other three dimensions by building reflectiveness and ensuring that the organization does not shift far away from its core competences.

Moreover, the findings seem to be indicating the irreplaceability of individual dimensions. Increasing one dimension would not compensate the existence of another. Strong sensitivity dimension, without being supported by fluidity dimension, guided by leadership dimension and monitored through continuity dimension, would not bring significant support in the implementation process of service strategy. In addition, it could lead the organization to uncontrollable strategic drifts to different directions, away from its core competences. Likewise, too strong fluidity dimension favoring decentralization will require stronger sensitivity dimension, to balance each other, as the loss of direct connection and flow of information could negatively affect the organizational in-depth understanding of customers' needs, which is the core of servitization strategies.

Interestingly, these findings also lead to believe that by strengthening specific embedded capabilities, the weaker presence of other capabilities within the same dimension can be compensated. The leadership dimension can be taken as an example: when clear direction and understanding of individual roles is weaker, it can be to some extend substituted by stronger collective commitment and service culture readiness; or in the fluidity dimension: the lack of resources can be to some extend balanced by integrated information system and more efficient processes.

In servitization, understanding the market and specifically the customers, how they generate value and what their needs are, is one of the most essential elements, and it is one of the biggest challenge companies struggle with. By strengthening sensitivity dimension, specifically embeddedness with customers and local offices or service providers (as they are the ones having the most knowledge and understanding) companies can overcome this challenge. The continuity dimension plays role here as well. By gathering feedback, tracking progress and ensuring that while the company is absorbing new ideas and building new solutions, it is always aligned with the main organizational strategy.

Another challenge of servitization is commitment of the people, which can be improved through the leadership dimension of strategic agility. This dimension fosters having clear understanding of the big picture, and of "who, where and how" of the strategy, within an

organization; including employee understanding of what the individual roles are and how they can support each other. When people understand the ‘why’, and what it means specifically for them, and how their role is connected to others, then they are more likely to commit their daily operations to it and not only believe in the ‘why’ and the big picture. Further, the role of continuity dimension plays role in here by encouraging the alignment of performance measure and strategy implementation process, which is based on the priority order. Thus, people are not only motivated internally, but also externally.

In servitizing manufacturing companies, the business does not shift overnight, and the resources are not automatically relocated from production to services. Therefore, companies can struggle with allocation of resources and the lack of resources. As showed through literature and the empirical data, this can be solved through fluidity dimension. By adapting organization structure and its processes, and by using integrated information system, the lack of resources can be compensated through increase of efficiency.

6.1. Theoretical implications

This study was conducted with the purpose of exploring the role of strategic agility in servitization, specifically in early stage of servitizing manufacturing companies. The contribution of this study enriches both, strategic agility as well as servitization literature in management studies.

The exploration of strategic agility’s role in a specific transformation process, servitization, provides invaluable insights on the form and core role of strategic agility in manufacturing companies. Teece (2016) regards agility as too difficult to maintain and not suitable for companies, which are not in high-tech industries. This belief of strategic agility being relevant only for high-tech companies is supported by academic case studies (Doz & Kosonen 2008b) and popular literature, discussing agility mainly in industry of information technologies. This study extends the common understanding of the role of strategic agility

and provides evidence, suggesting that strategic agility plays significant role also in manufacturing companies integrating service business models. Further, the study advances the discussion of the individual strategic agility dimensions (Doz & Kososnen 2008a; Fourné et al. 2014) and the relationship between these dimensions. The study indicates that the need for specific embedded capabilities of strategic agility varies according to the specific strategic path of an organization and its circumstances.

Additionally, the role of strategic agility in servitization complements and extends the existing research focused on implementation process of servitization strategies and challenges connected to it (Gebauer et al. 2005; Martinez et al. 2010; Huikkola & Kohtamaki 2017). It contributes to the research from a dynamic capability perspective and presents how dynamic capability such as strategic agility could mitigate challenges connected to servitization of manufacturing companies.

6.2. Managerial implications

Unfortunately, there is no single recipe that would ensure successful servitization for manufacturing companies. Noteworthy, this research uncovered an angle on how strategic agility as a dynamic capability could support organizations at the beginning of their servitization path.

Primary, companies are encouraged to clearly define and communicate their servitization path and how they plan to get there. In this transformation process, employees' commitment does not stand only on their understanding of 'why' of the strategy, but also on the understanding of their individual roles, contributions and processes. It is crucial that not only people who were involved in the strategy development, but also the rest of the organization can see the road map and their role in it. Underestimating this leadership element can cause frustration or even resistance within the organization. Employee resistance towards the new strategy could come also from the inadequate performance measures, which are either not aligned with the priorities of the implementation process or are built on a product-centric

business logic, rather than customer-centric. Weaker understanding of the direction (defended by the argument of ‘being flexible in the long-run’) could be balanced by other leadership capabilities; by service culture readiness and collective commitment. When the organization is able to shift the business logic from product- centric to customer-centric, build strong value system, introduce clear common goals and shared interest in being successful, the company can balance the weaker capabilities in the dimension.

In a radical transformation process such as servitization, resources are always sensitive topic. A company continues providing its core products and at the same time needs to build new processes, new products, launch them and keep selling them. The company has three options, buy in new resources, outsource or put more on shoulders of its employees. Strategic agility as a dynamic capability is primarily aiming to optimize the organization structure and operations, to use existing resources in more effective way. Therefore, the fluidity dimension of strategic agility stresses the importance of an integrated information system, disassociation of resources and strong project management capabilities. By optimizing the processes, disassociating from resources and allocating them when and where exactly needed, based on the implementation plan, the company could make the implementation process easier and smoother. Further, the fluidity dimension encourages strategic decision concerning the adaptation of organizational structure. The more decentralized decision making and the more outsourced operations, the stronger the leadership and sensitivity dimensions should be.

Servitization relies on company’s in depth understanding of customers’ needs and their value creation. If the services the company plans to provide do not match the real needs of the customers, the strategy would fail. Therefore, the bigger physical distance between the company and its customers, the stronger the forward embeddedness and sensitivity should be. Together with the reflectiveness capabilities the company can test, anticipate and learn whether it is in the right direction, if it is improving or where to shift its focus and efforts.

This research also indicates, that when servitizing, companies cannot omit one of the four dimensions as they are depended on each other. However, after defining what capabilities the company already has and which are missing, the company can decide, which capabilities

should be strengthened, and which needs to be built, in order to improve the implementation process of service strategy.

6.3. Limitations

Every study faces certain level of limitations, which occurs through the research process or are uncovered in retrospective. This study is not an exception. Through the data collection, this study was limited by four main limitations, all connected to the informants and the case itself.

The first limitation came from the small number of interviewees. Though the planned number of interviewees was fourteen, due to the inaccessibility of some of informants, the number was lower. The researcher was able to obtain extremely valuable information and insights, on which the findings of this research are built; however, with higher number of informants the theory could have been strongly confirmed or developed further. Moreover, due to the international nature of the organization and the specific business unit, interviews were conducted online through skype, without visual connection. This limitation could have affected the process of data collection, as the interviewer was not able to observe the interviewee and they were not able to use non-verbal communication.

The third limitation came from the sample of interviewees. Most of the interviewees were at the higher managerial positions, therefore this research omitted to interview engineers working on side or local service providers delivering the service products. Including their perspective could have add extra depth into the understanding of capabilities and tools required for successful servitization. However, this study is done from the organizational perspective of strategic agility, therefore the data collection was decided to focus on strategic managerial level of the organization. Even with this approach, the research gathered diverse inputs and observation. Adding an extra layer would be above the scope of this paper.

The fourth limitation originated from the case selection itself. As a single case study, this research can be generalized with difficulties. It represents a snapshot of an organization under specific circumstances. By using multiple case studies, the research would have been able to explore the role of agility across the different positions on the servitization path and would have been able to propose, what specific capabilities are needed for specific strategy. Nonetheless, the objective of this research was to explore the role of strategic agility in servitizing manufacturing company, and for that purpose in depth data and case analysis was an adequate approach.

6.4. Suggestions for future research

This research is only small, but intriguing work, challenging existing concepts and opening doors for further research.

In the research of strategic agility in servitization, this paper calls for multiple case study research, which could uncover strategic agility capabilities required in different stages of servitization. This research explored the strategic agility capabilities required for early stage servitization; however, to draw more comprehensive understanding of the role of strategic agility in servitization in general, further research is required. This study encourages to explore what embedded capabilities of strategic agility are required on later stages of servitization and how strategic agility supports companies to move on their servitization path, towards servitizing or deservitizing.

This study only slightly explores the relationships between individual dimensions of strategic agility and between the embedded capabilities. To fully understand the connections and effects that individual dimensions and capabilities have on each other, more in-depth research focused on each dimension individually, and the causality between them is required.

The most burning suggestion for further research comes directly through the interaction with the informants. Many researches and popular books are discussing what companies should do and what capabilities they need to possess in order to be successful. However, the knowledge and understanding of what it really means for the company and the people there, from a practical perspective, is scarce. Thus, this paper calls for more extensive research on strategy as a practice in the studies of strategic agility and servitization.

As human aspect is very strong in the transformation process of an organization, this research proposes to address the issue of what does it practically require from a company, to be able to synthesize product- and service- value systems in the company's business logic.

REFERENCES

- Ashrafi, N., Xu, P., Sathasivam, M., Kuilpoer, J.-P., Koelher, W., Heimann, D., & Waage, F. (n.d.). A framework for implementing business agility through knowledge management systems. *Seventh IEEE International Conference on E-Commerce Technology Workshops*. Computer Society.
- Baines, T., & Lightfoot, H. W. (2013). Servitization of the manufacturing firm: Exploring the operations practices and technologies that deliver advanced services. *International Journal of Operations & Production Management*, 3(1), pp. 2-35.
- Baines, T., Bigdeli, A. Z., Bustinza, O. F., Shi, V. G., Baldwin, J., & Ridgway, K. (2017). Servitization: revisiting the state-of-the-art and research priorities. *International Journal of Operations & Production Management*, 37(2), pp. 256-278.
- Baines, T., Lightfoot, H., Peppard, J., Johnson, M., Tiwari, A., & Shehab, E. S. (2009). Towards an operations strategy for product-centric servitization. *International Journal of Operations & Production Management*, 29(5), pp. 494-519.
- Baines, T., Lightfoot, H., Smart, P., & Fletcher, S. (2013). Servitization of manufacture: Exploring the deployment and skills of people critical to the delivery of advanced services. *Journal of Manufacturing Technology Management*, pp. 637-646.
- Barnett, N. J., Parry, G., Saad, M., Newnes, L. B., & Goh, Y. M. (2013, May). Servitization: Is a paradigm shift in the business model and service enterprise required? *Strategic Change*, 22(3-4), pp. 145-156.
- Barney, J. (1991, March). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120.
- Baroto, M., Arvand, N., & Ahmad, F. (2014). Effective strategy implementation. *Journal of Advanced Management Science*, 2(1), pp. 50-54.
- Bonomo, T. V., & Crittenden, V. L. (1988). Managing marketing implementation. *Sloan Management Review*, 29(2), pp. 7-14.
- Bowman, C., & Ambrosini, V. (2000). Value creation versus value capture: Towards a coherent definition of a value in strategy. *British Journal of Management*, 11, pp. 1-15.
- Collis, D. (1994). Research note: How valuable are organizational capabilities? *Strategic Management Journal*, 15, 143-152.

- Crittenden, V. L., & Crittenden, W. F. (2008). Building a capable organization: The eight levers of strategy implementation. *Business Horizons*, 51(4), pp. 301-309.
- Davies, A., Brady, T., & Hobday, M. (2007). Organizing for solutions: Systems seller vs. systems integrator. *Industrial Marketing Management*, 36(2), pp. 183-193.
- Denning, S. (2018, January 18). *What is Strategic Agility?* Retrieved September 10, 2018, from Forbes: <https://www.forbes.com/sites/stevedenning/2018/01/28/what-is-strategic-agility/#4b5dc218a0b1>
- Dove, R. (1999). Knowledge management, response ability, and teh agile enterprise. *Journal of KNowledge Managemnet*, 18-35.
- Doz, Y. L., & Kosones, M. (2010). Embedding Strategy Agility: A leadership agenda for accelerating business model renewal. *Long Range Planning*(43), 370-382.
- Doz, Y., & Kosonen, M. (2008a). *Fast strategy: How strategic agility will help you stay ahead of the game*. Pearson/Longman.
- Doz, Y., & Kosonen, M. (2008b). The Dynamics of Strategic Agility: Nokia's Rollercoaster Experience. *California Management Review*, 50(3), 95-118.
- Eisenhardt, K. M., & Graebner, M. E. (2007, February 1). Theory Building from Cases: Opportunities and Challenges. *The Academy of Management Journal*, 50(1), pp. 25-32.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? . *Strategic Management Journal*, 11051121.
- Eloranta, V., & Turunen, T. (2016). Platforms in service-driven manufacturing: Leveraging complexity by connecting, sharing and integrating. *Industrial Marketing Management*, 55, pp. 178-186.
- Fang, E., Palmatier, R. W., & Steenkamp, J.-B. E. (2008). Effect of service transition strategies on firm value. *Journal of Marketing*, 72, 1-14.
- Felipe, C., Roldán, J., & Leal-Rodríguez, A. (2016). An explanatory and predictive model of organizational agility. *Journal of Business Research*, 4624-4631.
- Fisher, C. (2007). *Researching and writing a dissertation? A guidebook for business students*. Harlow: Pearson Education Limited.
- Fourné, S. P., Janse, J. J., & Mom, T. J. (2014, Spring). Strategic agility in MNEs: Managing tensions to capture opportunities across emerging and established markets. *CAifornia Management Review*, 56(3), pp. 13-38.
- Galbraith, J. R. (2002). Organizing to deliver solution. *Organizational Dynamics*, 31(2), pp. 194-207.

- Ganguly, A., Nilchiani, R., & Farr, J. (2009). Evaluating agility in corporate enterprises. *International Journal Production Economics*, 410-423.
- Gebauer, H., Fleisch, E., & Friedli, T. (2005). Overcoming the service paradox in manufacturing companies. *European Management Journal*, 23(1), 14-26.
- Gebauer, H., Gustafsson, A., & Witell, L. (2011). Competitive advantage through service differentiation by manufacturing companies. *Journal of Business Research*, pp. 1270-1280.
- Gebauer, H., Ren, G.-J., Valtakoski, A., & Reynoso, J. (2012). Service-driven manufacturing: provision, evolution and financial impact of service in industrial firms. *Journal of Service Management*, 23(1), pp. 120-136.
- Gephart, R., & Rynes, S. (2004). Qualitative Research and the Academy of Management Journal. *Academy of Management Journal*, 47(4), pp. 454-462.
- Ghauri, P., & Gronhaug, K. (2002). *Research methods in business studies: A practical guide*. Harlow: Pearson Education Limited.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 1, pp. 15-31.
- Grant, R. M. (1991, Spring). The resource-based theory on competitive advantage: Implications for strategy formulation. *California Management Review*, pp. 114-135.
- Gunasekaran, A. (1999). Agile manufacturing: A framework for research and development. *International Journal Production Economics*, 87-105.
- Harraf, A., Wanasiaka, I., Tate, K., & Talbott, K. (2015). Organizational Agility. *The Journal of Applied Business Research*, 31(2), pp. 675 - 686.
- Harrel, J. B., O'Reilly III, C. A., & Tushman, M. L. (2007). Dynamic Capabilities at IBM: Driving Strategy into Action. 49(4). Retrieved November 29, 2016
- Heide, M., Grønhaug, K., & Johannessen, S. (2002). Exploring barriers to the successful implementation of a formulated strategy. *Scandinavian Journal of Management*, 18(2), pp. 217-231.
- Huikkola, T., & Kohtamäki, M. (2017). Solution providers' strategic capabilities. *Journal of Business & Industrial Marketing*, 32(5), pp. 752-770.
- Huikkola, T., Kohtamäki, M., & Rabetino, R. (2016). Resource realignment in servitization. *Research-Technology Management*, 59, pp. 30-39.

- Kaj Storbacka, K., Windahl, C., Nenonen, S., & Salonen, A. (2013). Solution business models: Transformation along four continua. *Industrial Marketing Management*, 42, pp. 705-716.
- Kallasvuo, O. P. (2006, December 3). Nokia's discreet but potent influence. *Financial Times*. (D. Ibison, Interviewer) Retrieved from <https://www.ft.com/content/957e717a-815b-11db-864e-0000779e2340>
- Kanninen, T., Penttinen, E., & Tinnilä, M. (2016). Exploring the dynamic capabilities required for servitization. *Business Process Management Journal*, 23(2), pp. 226-247.
- Kowalkowski, C., Kindstrom, D., Alejandro, T. B., Brega, S., & Biggemann, S. (2012). Service infusion as agile incrementalism in action. *Journal of Business Research*, pp. 765-772.
- Lewis, M., Andriopoulos, C., & Smith, W. (2014). Paradoxical leadership to enable strategic agility. *California Management Review*, 56(3).
- Long, C. (2000b, May). You don't have a strategic plan? -Good! *Consulting to Management*, pp. 35-42.
- Martinez, V., Bastl, M., Kingston, J., & Evans, S. (2010). Challenges in transforming manufacturing organizations into product-service providers. *Journal of Manufacturing Technology Management*, 21(4), pp. 449-469.
- Martinez, V., Neely, A., Velu, C., Leinster-Evans, S., & Bisessar, D. (2017). Exploring the journey to services. *International Journal of Production Economics*, 192, pp. 66-80.
- Matthyssens, P., & Vandenbempt, K. (2010). Service addition as business market strategy: Identification of transition trajectories. *Journal of Service Management*, 21(5), pp. 693-714.
- Matthyssens, P., Pauwels, P., & Vandenbempt, K. (2005). Strategic flexibility, rigidity and barriers to the development of absorptive capacity in business markets: Themes and research perspectives. *Industrial Marketing Management*, pp. 547-554.
- Miller, S. (1997). Implementing strategic decisions: Four key success factors. *Organization Studies*, 18(4), pp. 577-602.
- Mintzberg, H. (1978, May). Patterns in strategy formation. *Management Science*, 24(9), pp. 934-948.
- Mintzberg, H., & Waters, J. (1985). Of strategies, deliberate and emergent. *Strategic Management Journal*, 6, pp. 256-272.

- Morgan, R. E., & Page, K. (2008). Managing business transformation to deliver strategic agility. *Strategic Change*, pp. 155-168.
- Najrani, M. (2016). The endless opportunity of organizational agility. *Strategic direction*, 32(3), pp. 37-38.
- Nelson, R. R. (1991). Why do firms differ, and how does it matter? *Strategic Management Journal*, 12, 61-74.
- Oliva, R., & Kallenberg, R. (2003). Managing the transition from products to services. *International Journal of Service Industry Management*, 2, pp. 160-172.
- Peillon, S., Pellegrin, C., & Burlat, P. (2015). Exploring the servitization path: a conceptual framework and a case study from the capital goods industry. *Production Planning & Control*, 1264-1277.
- Prahalad, C., & Hamel, G. (1990). The Core Competences of the Corporaton. *Havard Business Review*, 80-91.
- Pryor, M. G., Anderson, D., Toombs, L. A., & Humphreys, J. H. (2007). Strategic Implementation as a Core Competency: The 5P's Model. *Journal of Management Research*, 7(1), pp. 3-17.
- Rabetino, R., Kohtamaki, M., & Gebauer, H. (2017). Strategy map of servitization. *International Journal of Production Economics*, 192, 114 -156.
- Reed, K., & Blunsdon, B. (1998). Organizational flexibility in Australia. *International Journal of Human Resources Management*, 457-477.
- Roger, N. (1991). *21st Century Manufacturing Enterprise Strategy Report*. Iacocca Institute.
- Sajdak, M. (2015). Compilation of operational and strategic agility for ensuring the highest efficiency of company operations. *Economics & Management*, 7(2), pp. 20-25.
- Sawhney, M., BAlasubramanian, S., & Krishman, V. V. (2004, Winter). Creating growth with services. *Sloan Management Review*, pp. 34-43.
- Sherehiy, B., Karwowski, W., & Layer, J. (2007). A review of enterprise agility: Concepts, frameworks and attributes. *International Journal of Industrial Ergonomics*, 445-460.
- Siggelkow, N. (2007). Persuasion with case studies. *Academy of Management Journal*, 50(1), pp. 20-24.
- Sjodin, D. R., PArida, V., & Kohtamaki, M. (2016). CApability configuration for advanced service offerings in manufacturing firm: Using fuzzy set qualitative comerative analysis. *Journal of Business Research* 69, pp. 5330-5335.

- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*(28), pp. 1319-1350.
- Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic Capabilities and Organization Agility: Risk, uncertainty and strategy in the innovation economy. *California Management Review*, 58(4), 13-35.
- Ulaga, W., & Reinartz, W. J. (2011). Hybrid offerings: How manufacturing firms combine goods and services successfully. *Journal of Marketing*, 75(6), 5-23.
- Valtakoski, A. (2017). Explaining servitization failure and deservitization: A knowledge-based perspective. *Industrial Marketing Management*(60), pp. 138-150.
- Vandermerwe, S., & Rada, J. (1988). Servitization of business: Adding Value by Adding Services. *European Management Journal*, 6(4), 314-324.
- Vargo, S. L., & Lusch, R. F. (2008). From goods to service(s): Divergences and convergences of logic. *Industrial Marketing Management*, 37, pp. 254-259.
- Wärtsilä. (2018, October 1). *Wärtsilä redesigns organisation to enhance customer value*. Retrieved October 2, 2018, from Wärtsilä: <https://www.wartsila.com/media/news/01-10-2018-wartsila-redesigns-organisation-to-enhance-customer-value-2284300>
- Weber, Y., & Tarba, S. (2014, Spring). Strategic agility: A state of the art. *California management Review*, 56(3), pp. 5-12.
- Windahl, C., Berggren, C., & Nehler, C. (2004). Manufacturing firms and integratedsolutions. *European Journal od Innovation Management*, 7(3), pp. 218-228.
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24, 991-995.
- Yin, R. K. (2009). *Case study research: Design and methods*. London: SAGE Ltd.
- Yusuf, Y., Sarhadi, M., & Gunasekaran, A. (1999). Agile manufacturing:The drivers, concepts and attributes. *International Journal Production Economics*, 33-43.

APPENDICES

APPENDIX 1. The semi-structured interview guide with informants

Section 1: Background information

- Could you share few words about your experience with the company and your professional background in general?
 - *What is your current position?*
 - *How many years have you been working in the company?*
 - *How many years have you been working in the current position?*

Section 2: Company Service strategy

- How, and in which ways, do you get to know about the service strategy?
- How do you understand services in the context of your company?
- Which of the ways help you the best to understand the strategy and reasons behind it? Why?
- Maybe you remember, what are the key messages of current company strategy?
 - *What are the short/medium/long term objectives of the service strategy?*
- Could you tell me more about the services in your company's strategy?
 - *How important role the services play in overall company strategy?*
 - *What do you see as the advantage and disadvantage of having this service-orientation strategy?*
 - *How do you personally feel about the service-oriented strategy? Do you believe in it?*
 - *Has the company managed to implement the service-oriented strategy as expected?*
 - *How has the implementation process been so far?*
 - *Is the service-strategy fulfilling its objectives?*
 - *How well is the service-oriented strategy accepted and welcomed by the employees? /By the customers?*

Section 3: SA dimensions

3.1. Sensing:

- Do you know where the strategy originates?
 - o *Has it come from customers' requests/ competitors' analysis or internally?*

- How fast are you able to detect opportunities on the market? And what channels do you use for it?
 - o *To what extend do you or the company take into consideration and evaluate what is happening on the market? Can you give me an example?*
 - o *How much do you or the company take into consideration and evaluate what customers request or need? Can you give me an example?*

- Do you communicate your observation or experience connected to the service strategy within the organization?
 - o *In which ways, channels do you communicate? (Can you give me an example?)*
 - o *Do you store or manage the information somewhere within the organization? (Can you give me an example?)*

- Do you see any of these elements important for strategy implementation? (Do you think that aspects such as involvement with customers, alertness to market changes and sharing of the information play important role in implementation of the service-oriented strategy?)
 - o *(If some do) What role they play?*
- Do you see any of these elements to hinder strategy implementation?

3.2. Renewal:

- Do you see the long-term strategy set in stone or adaptable? Why?
 - o *What are the triggers that could change the strategy implementation process?*

- In which way and how often do you review the progress of the service-strategy implementation?

- How well is the service-strategy embedded with the overall organization strategy?

- Who is involved in the service-strategy implementation?

- Do you see any of these elements important for strategy implementation?
- What do you think that could hinder strategy implementation in this context?

3.3. Culture commitment:

- Do you see that there is clear direction of service-oriented strategy implementation?
 - o *From your perspective, is the management unified on the short and long-term goals and how to achieve them? Why do you think so?*
 - o *Is the management stable or is there high fluctuation?*
- How often do you communicate with colleagues?
 - o *do you have online meetings or physical?*
 - o *How often do you communicate?*
 - o *Do you discuss only progress of the work progress or you have the time/opportunity to discuss reflection and new ideas?*
- How would you describe the organization culture?
- Are there any system or tools to support the service strategy implementation? (reward system, relevant KPI...)
- Do you see any of these elements important for strategy implementation?
- What do you think that could hinder strategy implementation in this context?

3.4. Adaptability of resources:

- Connected to the service-oriented strategy, how is the structure organized, do you do everything in-house, or do you outsource? Can you describe it for me? (What about open innovation?)
- Do you have access to resources to implement and execute the service-oriented strategy?
 - o *Can you give me an example?*
- Who is making the decisions about access to resources?
 - o *How autonomous are individual local units and to which extend are decisions centralized?*

- How skilled and trained are the employees working with customers?
 - o *How well are they connected with the customers and among each other?*

- What skills and capabilities have/need employees working with service-oriented strategy?

- Do you see any of these (adaptability) elements important for strategy implementation?

- What do you think that could hinder strategy implementation in this context?

Section 4: Tension/ balance

In company there is the element of sensing and finding the needs and requirements from customers, market or inside, there is also the continuous renewal and reflection (that you have mentioned), certain level of commitment or resistance from the employees and management and access or limited access to resources.

- Which of these 4 elements do you think is the most crucial for your service strategy implementation? Or are they equally important and why?
- And which can hinder the implementation of your strategy the most? Why?
 - o *Or is there something else that from your point hinders the implementation process?*

- What do you think are the practices that could moderate the tension?

- What do you think is hindering the strategy implementation?
- What do you think would improve the strategy implementation?

- Is there anything you would like to add?
 - o *Any insights, comments, or feedback?*

APPENDIX 2: Interview guide for final interviewee**Interview Guide**

This interview will be conducted for sole academic research purpose. All the participants and their answers will be anonymous and will be recorded for documentation. The interview consists of four sections as follow:

Section 1: briefly covers the background of the interviewee

Section 2: uncovers the implementation process of the services structured and its success to that moment, including the understanding of services in the company

Section 3: indirectly brings up a discussion on individual dimensions of strategic agility, their role and situations connected to it

Section 4: focuses on uncovering existing challenges and further exploration of individual strategic agility dimensions in the case company