

Fostering Innovation through Organizational Agility in the Technology-Driven Firm

An Exploratory Case Study in
the Media Industry

Tomas Fabian

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Fostering Innovation through Organizational Agility in the Technology- Driven Firm

An Exploratory Case Study in the Media Industry

by

Tomas Fabian

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Preface

This thesis was written as part of the Master of Science in Economics and Business Administration at the Norwegian School of Economics (NHH). I am focusing my studies on Innovation and Entrepreneurship in a combination with Strategy and Management profile. The thesis was developed in a collaboration with a research program at NHH, the Future-Oriented Corporate Solutions (FOCUS) program. The ongoing initiatives of the program aim at exploring the technology-driven change in established organizations. The involvement in the FOCUS research program was highly valuable in terms of the knowledge exchange among involved senior scholars and participating students.

My prior working experience as a technology consultant and specialization of my studies for innovation and management drove my motivation for exploring the recent phenomenon of organizational agility and its relation to innovation in the technology-related context. This study fulfilled my curiosity and increased my knowledge in this area. The thesis development process was perceived as demanding yet interesting and enjoyable, especially due to the intriguing topic and case company.

I would like to thank everyone who has contributed to this thesis. First, I would like to thank my supervisor Professor Inger G. Stensaker who actively supported the thesis development and facilitated access to the case company. She provided the research with her valuable insights, critical perspectives and inspiring thoughts relevant for the studied phenomenon. Second, I would like to thank all the interview participants and contact persons at the case company who put their valuable time to participate in this study and enabled this research to be possible.

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1. Introduction

Established firms have been affected by a dynamic, hypercompetitive and constantly changing business environment for decades. Increasing pressure on organizations is challenging the ways they operate, provide goods and services, and create value for different stakeholders. Interconnectedness and complexity of markets together with globalization and industry consolidation have brought new opportunities, and at the same time, significant threats for market participants (Nerur et al., 2005; Wilson & Doz, 2011; Lewis, Andriopoulos & Smith, 2014; Ivory & Brooks, 2018). In addition, customer needs and expectations continuously evolve and call for customization.

Recently, exponentially growing technological advancement and constant introduction of disruptive technology demand substantial changes in the incumbents' existing business models. Emerging companies have a capacity to leverage technological progress more efficiently mostly due to their adaptability and flexibility. On the other hand, these players increase the degree of competitiveness in the markets and challenge incumbents whose structural and cultural inertia is a barrier for embracing innovation (Doz & Kosonen, 2010). However, contemporary business organizations must effectively face the market challenges and promote innovation to remain competitive and ensure long-term survival.

We can see a paradigm shift when observing organizations' responses for changing and unpredictable environment, and how they balance dynamism with stability (Teece, Peteraf & Leih, 2016; Aghina et al., 2017). One of the most predominant proposals is the concept of organizational agility enabling firm's survival and creation of fast-moving, flexible and adaptive entity (Wilson & Doz, 2011; Sherehiy & Karwowski, 2014). Proponents of organizational agility argue that this concept may act as an alternative to command-and-control management style and is being applied across various functions and industries (Rigby, Sutherland & Takeuchi, 2016). Agile organization has a capability to promptly and effectively react upon changes in a highly volatile and uncertain market environment, and thus add a dynamic component into the organization (Ashrafi et al, 2005; Aghina et al., 2017).

Changing customer habits and technology-driven disruption together with emergence of video streaming service providers have also challenged traditional market players in the media industry and especially television-related service providers (Alsin, 2018). However,

innovation in this industry is intertwined with organizational challenges and requires different procedures and methods to be established to successfully deliver innovative solutions. Following the context, this thesis analyses an incumbent, technology-driven media company that leverages the concept of organizational agility for innovation and to remain competitive in a turbulent and changing environment. This qualitative exploratory case study examines the following research question:

How does an incumbent media firm embrace organizational agility to drive innovation?

2. Literature Review

This section presents a review of existing literature related to the researched phenomenon as well as theories relevant for addressing the research question. The literature review provides a solid background for the thorough discussion of the empirical findings. The section reviews organizational agility literature along with the innovation theories associated with the studied phenomenon (see Figure 1 for an overview of presented theories and constructs).

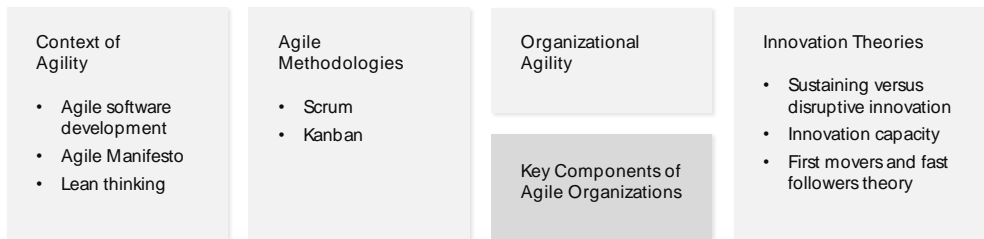


Figure 1. Literature review outline

2.1 Context of Agility

Within the business environment, the concept of agility emerged as a possible solution for emerging problems and needs among practitioners in the mid-1990s. With the rise of software development as an essential component of different enterprises across industries, agile methodologies have found their application due to iterative and continuously changing development cycles. (Williams & Cockburn, 2003; Mens, 2008; Nerur et al., 2005). In contrast to the linear manufacturing or planning, software development involves fast-paced environment and frequent feedback gathering that could not be effectively and efficiently managed using the traditional approaches such as waterfall delivery framework (Cooke, 2012). Iterative and adaptive nature involves decomposing complex projects into smaller parts to seize upon flexibility and continuous improvement (Goulstone, 2016).

The main characteristics, principles and elements of agile software development were formulated in a guideline called ‘*Agile Manifesto*’. The framework is based on four distinctive values: prioritizing (1) individuals and interactions over processes, (2) working product over excessive documentation, (3) customer collaboration over contract negotiation, and (4)

responding to a change instead of following a plan (Beck et al., 2001). Since the introduction of Agile Manifesto, the concept of agility has increased its significance and popularity among different practitioners. The values and principles articulated in the document allow for a higher degree of flexibility, better customer involvement in the development process and faster response times (Novoseltseva, 2016). Despite the described benefits, it has been perceived as a significant challenge to make a successful transition from traditional approaches to agile (Boehm & Turner, 2005). This is mainly from the perspective of different management styles while traditional approaches promote planning, organizing, controlling and theme-specialization, on the other hand, agile methods highlight leadership, active collaboration and cross-functional, self-organized teams (Cole, 2004; Nerur et al., 2005).

Lean thinking, or lean philosophy, is oftentimes discussed together with the concept of agile software development due to its commonalities in the core principles, even though the lean thinking was primarily introduced in the manufacturing industry. In particular, some of the underlying principles of agile development are rooted in the lean thinking. Lean thinking calls for the fast delivery, empowering employees and enhancing customer focus and involvement (Bowen & Youngdahl, 1998; Swank, 2003). In addition to the people-focused culture and speed, the concept also emphasizes continuous improvement cycles, establishment of multifunctional teams and flexible systems (Sánchez & Pérez, 2004).

2.2 Agile Methodologies

Industry practitioners have developed and employed several agile software development practices that are following values of Agile Manifesto, also known as agile methodologies, such as the most prominent Scrum framework or; Kanban, Dynamic Systems Development Method (DSDM), Feature-Driven Development (FDD), Extreme Programming (XP), Test-Driven Development (TDD), Adaptive Software Development (ASD) among others (Williams & Cockburn, 2003; Conboy, 2009; Francois, 2013). Apart from presented elements and values, agile methodologies also promote the establishment of a trustful environment with effective mechanisms for empowering individual employees, and together with stimulating interdisciplinary communication, aim at the quality increase in business outcomes (Cooke, 2012).

Scrum framework has gained popularity and widespread use mainly due to its simplicity, flexibility and easy-to-implement nature (Kostron et al., 2016). Among the main characteristics of Scrum, it is crucial to highlight the iterative processes, customer-focused delivery and self-organized small teams with a recommended size of 8-12 members (Schwaber, 1997). The framework involves three main roles spread within the team; Product Owner, Scrum Master and development team. The Product Owner has a responsibility for the product backlog – a list of all project requirements co-created by involved stakeholders – and for prioritizing the tasks and optimizing the work. On the other hand, the Scrum Master secures the project is proceeding according to the expectations and in line with Scrum principles. The self-organizing development team guarantees cross-functional competence. The process flow under the Scrum framework follows interactions called sprints with duration period between 1-4 weeks; (1) each sprint starts with a Sprint Planning in order to determine the required activities to be executed during following period, (2) once the sprint began, Scrum team performs brief daily Stand-ups to coordinate tasks and update each other regarding the progression, (3) Sprint Review is held at the end of each sprint to identify the performed activities and their status, (4) Sprint Retrospective takes place at the very end with an aim to analyse and assess performance, process, people, relationships, and to find the way for improvements in the next sprints. The overall goal of the sprints in Scrum framework is to prevent repeating problems, find the solutions faster and facilitate mutual learning within the team. (Sutherland & Schwaber, 2013)

Another agile methodology that has gained importance and industry-wide applications is Kanban. This method emerged in the manufacturing industry in Japan in the 1950s, however, it was introduced in the area of software development in the 2000s, similarly to when the Scrum framework was spread worldwide. Kanban aims at visualizing the overall workflow using a Kanban board and minimizing the number of tasks in progress. Despite Kanban does not promote iterations, it enables more effective communication and interaction, enhances the quality of the product and reduces lead time. (Ahmad et al., 2013)

Cooke (2012) argues that following a large amount of existing agile methodologies and frameworks, there is no ‘one-size-fits-all’ model. Each entity should benefit from the agility in a different way using an agile framework that fits their purposes and expertise the best. An

organization might find a suitable solution efficiently when using trial and error principle (ibid.).

2.3 Organizational Agility

As already outlined, the agile methodologies and frameworks were first introduced in software development within the information technology and computer engineering disciplines (Conforto et al., 2014). With the success in this area and proven benefits of agility on a small scale, researchers and other industry practitioners started to investigate possibilities to expand the agile methods to different disciplines and broader context. Non-IT organizations have been also facing significant challenges related to the dynamic, unpredictable and hypercompetitive business environment they are operating in (ibid.). Overby et al. (2006) argue that rigid systems may impede the adaptation to the fast-changing market requirements. Changed market conditions pose a serious threat to the long-term survival of organizations and thus following a concept that enables effective determination of changes, ability to adapt and respond promptly is highly promising. The adoption of an agile concept might provide firms with new opportunities and sources of competitive edge, greater autonomy of employees and enhancement of work performance (Felipe, Roldan & Leal-Rodriguez, 2016). Moreover, these subjects would highly benefit from better customer interaction, productivity and efficiency increase, higher job satisfaction, and achieving overall flexibility (Melnik & Maurer, 2006).

Rigby et al. (2016) argue that common approach for implementing and scaling agile methodologies within the enterprise is to start and succeed in the IT section, encourage and inspire other functions within the firm subsequently, and finally, assess, experiment and scale these practices throughout different units. Under this scenario, original practitioners within the company may become agile coaches for other functions and departments, and thus facilitate the expansion of agile within the firm (ibid.). Each function and division may customize the solution unless it does not undermine the core values and principles of the agile concept. However, an agile organization requires much more than just employing agile tools within different teams and departments. It entails a strong agile mindset being present across the whole firm including the top management and having all systems, processes, people and relationships tailored for agility (Holbeche, 2015).

When talking about agility that goes beyond simple methodology or framework, we can see many different definitions and concepts for how to effectively and efficiently confront the unpredictable and constantly changing environment at an organizational level. Some of the first concepts reflecting how firms adjust their operations to handle the changes in the environment were centred at organizational *adaptability* and *flexibility* (Sherehiy, Karwowski & Layer, 2007). Term *agility* emerged among academia and practitioners in the 1990s as a novel solution, however, the main characteristics and some of its core components are based on previously developed concepts of adaptability and flexibility. The agility as a suitable approach for organizations has arisen around manufacturing and business management, a business area significantly different from mass production that is known for its high degree of standardization and planning (Goldman et al., 1995; Sharifi & Zhang, 2001).

We may find variations in the definitions of agility adopted by different authors. Also, some authors apply varying terms for similar notion. Yusuf et al. (2004) define agility as *“an application of competitive bases such as speed, flexibility, innovation, and quality by the means of the integration of reconfigurable resources and best practices of knowledge-rich environment to provide customer-driven products and services in a fast-changing environment.”* Following a perspective of Gunasekaran (2001), agility is described as growth-oriented, dynamic and change-embracing attribute. Kidd (1994) focuses on a proactive and rapid attribute of the enterprise response when facing unpredicted and unexpected changes in the environment. Goldman et al. (1995) highlight four interconnected dimensions of agility; (1) enriching the customers, (2) enhancing competitiveness through cooperation, (3) organizing to master changes, and (4) seizing the effect of people and information. *Organizational agility* can be defined as an ability of an organization to detect changes in the business environment and react upon them in an effective and efficient manner (Ashrafi et al., 2005). Firm's response involves restructuring own strategies, processes and resources (Overby et al., 2006). Charbonnier-Voirin (2011) extends the definition and argues that organizational agility involves also foreseeing and leveraging market opportunities related to the changes in the environment especially through innovation and learning. As a literature review reveals, there are several different perspectives and definitions of organizational agility without having one common approach or definition for this phenomenon. While some researchers and practitioners do not strictly differentiate among these definitions and consider them as equivalents, some scholars put more strict boundaries between the concepts. For the purpose

of this thesis, organizational agility is defined as *an ability of a firm to respond rapidly to changes in the internal and external business environment and to act proactively with regard to the changes.*

2.4 Key Components of Agile Organizations

The core attributes of agility that could be found throughout the wide range of definitions are *flexibility, speed, and effective response* to change. Yusuf et al. (1999) add *innovation, quality* and *profitability* as other essential elements of agility. To emphasize other characteristics of this business concept, an agile organization involves fast decision-making, nimble execution, people-focused culture, flexible management style and collaborative organizational structure (Holbeche, 2015). Flexible structure within the organization enables fast rearrangement of the physical and human resources which drives overall performance. Further, agility allows for a high degree of customization and high quality of developed products (Gunasekaran, 1999). When dealing with value creation and delivery, understanding customer needs and customer-centric decision-making are intrinsic elements of organizational agility (Gothelf, 2014). Intense customer focus is present throughout the whole process with an aim to meet and even exceed customer needs and expectations. Derived from the Scrum framework, agile organizations utilize continual iterations in a form of rapid cycles of thinking and executing (Aghina et al., 2017). Product development function within an agile organization employs experimentation while executing continual iterations (ibid.). Minimum viable product as a first development goal is then continuously upgraded and improved based on the feedback from involved stakeholders. Such an approach allows for cost-reduction and time-saving as well as it supports end-to-end accountability within the team (ibid.).

An agile organization takes employees representing individual business functions and allocate them into cross-functional, self-organized teams what is considered as one of the main building blocks of this concept (Rigby et al., 2016). These self-managed teams represent small groups of employees preparing and handling their daily duties with a low level of control (Parker et al., 2015). Following this characteristic, an agile firm can be described as a concentrated network of empowered teams with a high degree of accountability and collaboration. The information in an agile organization is quickly and easily accessible to all employees (Yusuf et al., 1999). This transparency of information is further supported by

effective knowledge-sharing mechanisms put in place (Aghina et al., 2017). Several scholars and practitioners have agreed that agility cannot be achieved without the right people and their fitting behavior, attitudes, skills and knowledge. According to Livermore (2007) and Denning (2015), senior management involvement and support is a major component of an agile organization. Similarly, other scholars (Senior & Swailes, 2004; Nixon et al., 2012) argue that the leadership style of management may have a notable impact on team performance. Senior management provides strategic guidance, sets priorities and represents integrating function within the team (Aghina et al., 2017). Among the key roles of leadership in agile organizations is to empower, develop, motivate and coach co-workers along with providing and promoting common vision (ibid.). At a personal level, the agile organization involves management, leaders and employees to act proactively, anticipate the changes in the environment and find appropriate solutions (Griffin & Hesketh, 2003). Besides, the workforce should be able to cope with the new environment, people with different expertise and background, to effectively perform multitasking, allow for professional flexibility and support continuous learning (ibid.). Personal resilience and positive attitude towards change and innovation together with accepting unpredictability, different approaches and stress play a significant role as well (ibid.). Especially positive attitude towards change may be difficult to establish among people with long-lasting work experience. As the research shows (Laanti et al., 2011), employees with longer experience in traditional processes and systems have a more negative attitude towards agile methods. Employees should also have a positive attitude towards self-development and be willing to accept responsibility (Plonka, 1997). Goldman et al. (1995) argue that people's knowledge, skills and experience are one of the key differentiating factors. Therefore, education and training of leaders, managers and employees play a crucial role in an agile organization. However, talent development in an agile organization has different nature compared to traditional firms. It focuses on role mobility that enables and encourages individuals to develop own capabilities and experience by being involved in various roles, teams, projects (Aghina et al., 2017). Consequently, all of these aspects have implications for human resource management since it is crucial to identify people's attitudes and assess their ability to collaborate and learn when hiring new employees (Gothelf, 2014).

An agile organization is engaged in creating value for and with a broad spectrum of stakeholders such as customers, suppliers or partner companies. Thus, agility embraces organization's capability to effectively cooperate with internal and external subjects to

improve resource utilization in a form of time-saving and cost-efficient market responses (Sherehiy & Karwowski, 2014). This involves effective cooperation among different subjects, functions and teams within own organization as well. One specific area closely related to the agile firm is technology. The need for exceptional products and efficient internal operations is pointing at emerging technologies that can address these challenges. Advanced technology-based architecture, systems and tools are inherent digital attributes of an agile organization (Aghina et al., 2017). Similarly, the workforce should have a certain technology awareness and technology-related skills and knowledge (Yusuf et al., 1999). Overall, an agile organization is distinguished by clear purpose, informal work environment and communication, decentralized decision-making, less strict role definitions and boundaries within different departments and functions (Yusuf et al., 1999; Sherehiy et al., 2007).

Decentralized decision-making, shared accountability and self-organized teams are highly dependent on trust but despite the great importance of this attribute, trust is often overlooked in the literature. Trust plays a significant role in achieving effective self-organization within the team since it minimizes bureaucracy and flattens hierarchy in the organization (Moe, Dingsøyr & Dybå, 2010). Trust-based environment and responsibility spread throughout the different levels can be challenging for individuals and leaders that have long-lasting experience within the vertical organizational structure. Further, when balancing cross-functionality and specialization within the teams, it is not the agile practices that ensure success but individual team members, their attitudes and performance. One way how to stimulate the cross-functionality of teams is to establish an appropriate and supportive organizational culture. In general, an agile organization is often characterized by a culture embracing change, innovation, delegation of power and less control (Sherehiy et al., 2007). In addition to the organizational culture as a unifying element, an agile organization focuses on the creation of common physical and virtual environments that enhance effectivity, transparency and communication within the teams and across the firm (Aghina et al., 2017).

2.5 Innovation Theories

As outlined earlier, today's businesses and the economic world are confronted with a dynamic, turbulent and unpredictable environment where traditional approaches do not suffice for organizations to effectively tackle the threats and grasp new opportunities in the market.

Dynamic conditions are multiplied by emerging companies entering markets, changing customer behaviour, rapid technological advancement, and constant emergence and downfall of new markets (Weber & Tarba, 2014; Lewis, Andriopoulos, & Smith, 2014). Firms need to change and successfully innovate their product portfolio, processes, structure and business models at the same pace as the environment changes. However, existing concepts such as market-based or resource-based view together with traditional management styles fail to handle and manage rapid organizational changes (Clauß & Laudien, 2017). The concept of organizational agility with all aforementioned attributes and characteristics may provide organizations with an ability to foster innovation and embrace change, in a timely manner. Agility as a phenomenon is thus becoming popular within the innovation management discipline and according to Wilson and Doz (2011), so-called “agile innovation” will be predominant for flourishing innovations in the years to come. Organizational agility can be beneficial to innovation since it enables faster product development through iterations, reduced time-to-market, more effective teamwork and cross-functional collaboration. When identifying customer needs and adapting to the changing customer expectations, an agile organization and its customer-centric focus is a significant advantage since it improves overall customer engagement and satisfaction. This thesis examines organizational agility and its relation to the innovation initiatives in the context of an established, technology-driven firm hence innovation management literature review is conducted to support the research.

Myriad definitions, constructs and types of innovation can be found within innovation management literature. For the purposes of this research, one of the most predominant innovation typologies, provided by Christensen (1997), is utilized when exploring the innovation actions. The author recognizes two main types of innovation; *sustaining* and *disruptive*. Sustaining innovation refers to the business activities aiming at the product and service improvement around the dimensions that are historically valuable for the market and for mainstream customers. This type of innovation allows established companies to increase product sales and increase profitability. On the other hand, disruptive innovations evolve differently over time. After the initial launch and from the short-term perspective, disruptive innovation attracts only marginal customer groups and is considered inferior to the existing products even though it provides the market with novel features. In the long-term, successful disruptive innovation replaces the existing products by making it less favorable or obsolete. It is important to notice that the attribute of disruptiveness is relative, hence a particular

innovation can be disruptive to one company while sustaining to another company. According to Christensen (1997), incumbent firms are usually less motivated to embrace disruptive innovation since it promises lower profitability, attracts niche markets and provides the customers with inferior products. Following these arguments, disruptive innovations are considered as rare. The author presents multiple arguments of why introducing disruptive innovation is challenging for incumbent firms. For instance, disruptive innovations create markets that do not exist thus the companies gathering market insights for decision-making cannot analyze these areas what impedes the introduction of disruptive innovations. Further, the companies rely on customer insights and feedback when creating and delivering the products or services what is seen as another obstacle for disruptive innovation. (Christensen, 1997; Christensen et al., 2018)

Classification of innovation is oftentimes enriched with two other dimensions reflecting the nature of the progress. First, *incremental innovation* describes small scale improvements to the existing products carried out gradually and constantly. Incremental innovation is usually considered as the most common type of innovation, and at the same time, as an important element for the competitiveness of a firm. Second, *radical innovation* is characterized by much larger leaps and large-scale progress. Following a variety of definitions and typologies of innovation, some scholars consider radical innovation equal to disruptive innovation while others strictly differentiate between these two constructs. (Isomäki, 2017)

In order to meet the research objective and answer the research question, it is crucial to analyze the relationship between organizational agility and innovation. For this purpose, the concept of *innovation capacity* is presented and investigated since it is perceived as an important element for innovation, improving existing products, developing new features and encouraging competition. Innovation capacity refers to the ability of an organization to generate innovative outputs; to create and utilize new products, services, systems or processes over periods of time (Koc & Ceylan, 2007). Innovation capacity hinges on the capabilities and resources held by an organization and determines the effectiveness of the innovation commercialization process (Teece & Pisano, 1994; Jolly, 1997). The innovation performance of an organization is stronger when the innovation process is more effective (Jolly, 1997). The attribute of continuous improvement is essential for innovation capacity since this construct refers to the process rather than a one-off action (Szetto, 2000). Continuous improvement in

this regard means the improvement of the firm's capabilities and resources in order to uphold the innovation process (ibid.). Innovation capacity may enable a firm to innovate faster than competitors in the market and thus gain a competitive edge (Qian & Li, 2003).

Besides different typologies, innovation management literature also presents various innovation strategies reflecting the pace of execution and order of market entry. Here, the companies are typically differentiated as *first movers*, *fast followers* and *late followers* (also called "slow" followers) reflecting when the company delivers innovation to the market (Ankney & Hidding, 2005). Even though this classification gained popularity for the research of emerging companies, it is also applied for incumbent firms entering the market with innovative solutions. First movers refer to the inventors, product pioneers or market pioneers entering a new product category first with no competition hence gaining a first mover advantage (Golder & Tellis, 1993). Fast followers are firms entering the market shortly after the first movers, usually as a second, third or fourth entrants (Hidding & Williams, 2003). Late followers are companies entering the matured market and are characterized by a limited degree of innovation. Anthony (2012) argues that a common mistake for industry practitioners is to overlook the enormous difference between fast followers and late followers. Successful fast followers are described as firms able to replicate innovative solutions at a rapid pace (Fingar, 2000). Some empirical studies have shown that fast followers gain an advantage over first movers in the technology-driven markets with a probability exceeding 50 percent (Ankney & Hidding, 2005). Therefore, being a first mover is not always the only successful innovation strategy and several scholars point out the advantages of being a fast follower (Agarwal & Gort, 2001; Boulding & Christen, 2001; Oliver, 2002). Increased innovativeness was identified as one of the determinants of success for the fast followers to outpace the first movers (Shankar et al., 1998). First movers cannot identify and fully address the customer needs in a market that does not exist. However, once the market is created by first movers, fast followers may learn from the mistakes of first movers and overcome the customer pain points. Fast followers may also benefit from lower R&D expenditures and lower consumer education costs (ibid.). Another business study demonstrates that incumbent firms adopting first mover strategy achieved the best performance but fast followers maintained growth as well and effectively faced the disruptions (Bughin, LaBerge & Mellbye, 2017). The success of fast followers was found in adopting organizational agility (ibid.). Agility enables incumbent firms to adapt to the market sooner what turns this strategy into an advantage. Combining outlined

empirical findings with the aforementioned definitions of fast followers, this theory is considered as highly relevant for studying organizational agility in a technology-driven firm.

3. Methodology

This section presents the methodology used in this study to answer the proposed research question. It provides theoretical and philosophical presumptions that reflect the nature and core characteristics of this research and discusses their implications for the methods used. The aim of the methodology section is to strengthen the quality of research and enhance its trustworthiness (Karlsson, 2009). The chapter starts with outlining the research design and strategy, followed by a description of the methods employed in the data collection and data analysis process. Further, the quality of the research is discussed from the perspective of strengths and shortcomings related to the used methods. The methodology section concludes with the ethical considerations and challenges of the research.

3.1 Research Design

The research design is a plan reflecting the ways how is the research question answered and the study structured (Saunders, Lewin & Thornhill, 2016). Following the findings in the literature review, we observe a fragmented view on the agility as a phenomenon with variations in definitions. In addition, there has been a limited number of research investigating this immature phenomenon and the existing studies do not provide one common approach to how organizational agility is embraced in incumbent firms. Thus, this research study utilizes an *exploratory* approach by analyzing organizational agility in-depth within the context of an incumbent, technology-driven media firm in order to gain insights into this novel concept. This is considered as a suitable approach especially for new and complex topics and it requires less prior knowledge compared to other approaches (ibid.). The approach involves asking open questions in order to develop insights into this topic and to make current understanding more precise and clearer. The exploratory research design enables to grasp and examine the agility from a broader perspective, and at the same time, it gives the flexibility to adapt research focus based on new information generated during the process (ibid.). The research samples are small what gives a researcher an opportunity to generate deeper insights and thus address the research problem (Malhotra & Birks, 2007).

Following the exploratory nature of this study, it adopts *qualitative* research design in which the reality is interpreted mainly through the contextual and transitory aspects (Saunders et al.,

2016; Pedrosa et al., 2012). The qualitative research design utilizes non-numeric, rich data available within the context of the researched phenomenon that are gathered through the interactions with respondents in an informal setting (Ponelis, 2015). Thus, quantitative research would not be an appropriate design when developing insights through rich, contextual data (Rowley, 2002). The qualitative methods are associated with subjective interpretation and perception instead of determining objective truth (Karlsson, 2009).

3.1.1 Research Approach

This research applies a combination of both *deductive* and *inductive* approaches. A deductive approach involves the testing and development of existing theories (Saunders et al., 2016). On the other hand, an inductive approach aims at understanding the researched concept by analyzing collected data and enables to uncover unexpected findings that can enrich the ongoing research (ibid.). In this study, the initial research question, as well as the research setting, were set deductively using existing theories within the organizational agility context. The induction was used to analyze the data, develop new insights and theories that were unknown before. The research question was crystallized during the data collection process. Since the current literature does not suffice to answer the research question, induction is a highly valid approach to address this gap (Eisenhardt & Graebner, 2007). On the other hand, an inductive approach and its unstructured nature increase the time required for the research process and involve researcher to be an inherent part of the process (Saunders et al., 2016). Further, empirical findings and gained insights are then compared with existing theories and information gathered through the literature review.

During the research process, an *iterative* approach is employed to continuously rephrase the research question, adapt the scope of the theoretical background and simultaneously adjust data collection and analysis. This approach allows for updating and specifying the research purpose and question based on the emerging empirical findings what further supports the flexibility of the research process (Malterud, 2011). Overall, the proposed research approach enables collected data to set the focus and direction of the empirical analysis, and at the same time, allowing existing theories to support the research process.

3.1.2 Research Strategy and Objective

To examine how is an incumbent media firm embracing organizational agility and leveraging its benefits for innovation, this thesis uses a qualitative *case study-based approach* as the main research strategy. According to Yin (2009), a case study is an empirical investigation of a current concept examined in a real-life setting what perfectly fits the purpose of this research. From the perspective of the case study nature, a *holistic, single* case study is employed. A case in this study refers to an organization that was selected on purpose due to its unique context related to the organizational agility as a phenomenon. In addition, there is a limited amount of established companies with relatively long experience with agility what further supports the uniqueness of the selected case. Following the time period assigned to this research, a single case study can be seen as a more manageable approach (Saunders et al., 2016). A holistic nature of the study relates to dealing with the case company as a whole entity.

When applying this research strategy, it is crucial to understand the interactions between the case company and its context, and thus prior understanding of the context is needed (Yin, 2009). This understanding is fundamental especially in the single case studies since the researcher has to recognize the conditions enabling this phenomenon in order to provide relevant findings and meaningful interpretations. The case study requires a thorough analysis of relevant data (Hair et al., 2006). This strategy involves generating new insights using rich, non-numerical empirical data gathered through the interviews with respondents from a case company as well as publicly available documents. Besides, case studies examine the fundamental causes of the researched concept and provide answers for *what, why* and *how* questions what is highly relevant for this research question (Saunders et al., 2016). Therefore, the case study approach is suitable for identifying what is happening and exploring the underlying reasons for incidents as well as it may result in providing implications and recommendations for action (ibid.). To allow for an in-depth understanding of organizational agility within the context of an incumbent technology-driven firm, the experiences, beliefs and views of selected case company representatives are being investigated. In addition, a substantial amount of public information related to the company and its historical development is further utilized to facilitate understanding.

The findings of the study aim at providing researchers and practitioners with valuable insights into how an incumbent firm can perform and organize their activities to build an agile organization that is able to drive innovation and face the dynamic business environment. Regarding the time horizon of the study, the research applies a cross-sectional approach in order to meet the main research objective that is to examine the phenomenon at the given time (Saunders et al., 2016). The study focuses on the understanding of the contemporary phenomenon at this time and thus a longitudinal study would not be an appropriate approach.

3.2 Case Selection and Description

In this sub-section, a concise description of the case company is provided to give a reader a better overview and understanding of the case background and its context. Also, the underlying for the case selection are presented. Following the requirement of anonymity for all interview participants and the case company, an anonymized description using aliases is given based on the collected primary and secondary data that are detailed in the data collection sub-section.

The case company is a well-established organization and a notable player within the country's technology, media and telecommunications industry (TMT). The firm's core competence lies in the television distribution with the relatively large and heterogeneous customer base. The technological development, trends in the industry and internal initiatives have led to an emergence of other TMT-related products and services in the firm's portfolio. There are several underlying reasons why is this case considered unique and interesting to explore. First, the company's products and competence are highly technology-based by its nature what perfectly fits within the FOCUS research program agenda of exploring technology-driven innovation. Second, new subjects in the company's senior management together with the support of some existing members started to advocate and strongly promote the concept of organizational agility already several years ago. This early starting point and relatively long experience within the research-related phenomenon give unique setting both within the industry and geographical region. Third, the industry the case company is operating is one of the areas that are most affected by technological advancement and emergence of successful disruptive innovation. Disruptions are shaping the market rapidly what generates the need for any type of innovation in order to face these challenges. Overall, there is a clear priority for

the company to further develop and proceed with the concept of organizational agility that is highly beneficial for addressing the research objective and question.

3.3 Data Selection

As outlined earlier, the research utilizes a single case study approach focused on the selected organization. The population is defined as the entire group of subjects that could be investigated (Karlsson, 2009). The population of this case study is thus characterized by all internal and external employees as well as managers at various levels. Following the constraints impeding the investigation of the whole population, a sample as a subset of the population was selected. Two main sampling techniques are recognized; probability and non-probability sampling. Saunders et al. (2016) propose that the selection of the sampling technique hinge on the research question and research objective. Thus, *non-probability* sampling was used since this research requires information-rich data to address the research objective and answer the research question. Non-probability sampling is characterized by an unknown probability of each case being selected from the population (ibid.). Further, the non-probability sampling technique used was *purposive* and *theoretical*. The purposive sampling is perceived as a common sampling technique for case studies since it allows the researcher to choose the cases that fit the best to answer the research question (ibid.). The theoretical sampling is described as a specific instance of purposive sampling where research aims at informing emerging theory (ibid.). The participants were selected purposively to meet the research needs and support theory development within the researched phenomenon field.

First, access to the case company and initial contact were established by the thesis supervisor, Professor Stensaker. Subsequently, an introductory meeting with the key contact person representing senior management of the case company was held. Further collaboration, as well as data collection process such as schedule for interviews and selection of informants, was discussed via online communication platform. The selection of other informants was conducted with an objective to gather insights from varying perspectives, explore the organizational agility in the context of a case company and inform the theory in the best possible way. Saunders et al. (2016) argue that sufficient sample size when using the theoretical sampling is achieved once the topic overview has been developed and additional interviews do not result in gaining new data. This state is called theoretical saturation. The

research question had been crystallized and phenomenon-related storyline established during the data collection process that was perceived as reaching the theoretical saturation. In addition, the information provided by interview participants at this point was to a limited extent uncovering new perspectives or introducing new themes. A detailed description of the selected sample is outlined in a sub-section below (see Figure 3).

3.4 Data Collection

The following section elaborates on the types of data being utilized in this research and provides a description of how the data were collected and handled throughout the research process. The thesis was developed within the FOCUS research program at NHH what gave a valuable opportunity for knowledge-sharing within the research group. Furthermore, the thesis supervisor, Professor Stensaker facilitated the primary data access and actively supported the data collection process.

To address the research objective and answer the research question, this thesis uses a combination of both primary and secondary qualitative data. The use of qualitative, non-standardized data is especially relevant for a business case study since it gives the ability to come up with questions and actions during the process what makes the research more natural and interactive (Saunders et al., 2016). Further, the research aims at utilizing multiple sources of data to enable the data triangulation and thus strengthen the research quality (ibid.).

3.4.1 Primary Data – Semi-Structured Interviews

The primary data collection method used in this thesis was *semi-structured interviews*. The exploratory nature of the research calls for the understanding of individual reflections, perspectives and in-depth inquiry into the researched phenomenon (Hirsjärvi & Hurme, 2004). The semi-structured interviews are thus considered as a suitable method (ibid.). Besides, it can provide valuable background for the case and foster an overall understanding of the context (Saunders et al., 2016). This method involves the researcher to prepare a set of themes and questions prior to the interviews to facilitate the interview process. However, the questions may differ between interviews as well as the order of the questions following the conversation flow (ibid.). Therefore, an interview guide was developed and critically reviewed by the thesis

supervisor before the interviews (see Appendix). The use of an interview guide throughout the data collection process allowed for easier navigation during the interviews while enabling discussions to evolve freely and explore specific topics more in detail (Pole & Lampard, 2002). It consisted of open-ended questions that allowed informants to articulate and express their perspective in more detail. All informants were interviewed mostly within the scope of six predetermined themes related to the phenomenon that comprised the main structure of the interview guide (see Figure 2). Structuring the interview guide in this way prevented the data collection process to exceed the research scope. At the same time, the researcher ensured the informants have enough space to bring any relevant and research-related topic into the discussion, even if it was not fitting the predefined themes. Overall, the questions were formulated noting the research objective and potential research questions. This approach ensured flexibility of data collection desired for case study research and enabled the final research question to be crystallized afterwards.

THEMES	OBJECTIVES
<i>General introduction</i>	Develop understanding of the context, identify informant perspective and role, explore company's history related to the researched phenomenon
<i>Organization and structure</i>	Find out how is the company organized, what kind of role does each element play in the firm and what are the relationships and interactions within this setting
<i>Processes and product development</i>	Identify the processes that are established, explore how are the projects carried out and how the company interacts with involved stakeholders
<i>People</i>	Explore the team structure at an individual level, recognize professional qualities and skills of the employees and screen the learning and development mechanisms
<i>Technology and environment</i>	Identify the company's physical and virtual environment and assess the importance of technology at daily work
<i>Other</i>	Spot the challenges related to the researched phenomenon, explore the company's culture and intently open the discussion for additional themes

Figure 2. Key themes and objectives of an interview guide

The exploratory nature and iterative approach involve a continuous data analysis also during the data collection process (Saunders et al., 2016). Therefore, collected data were analyzed on an ongoing basis and interview guide had been adjusted based on the emerging information discovered during the data collection process.

As outlined earlier, the theoretical sampling was used, and informants were selected among all subjects actively involved in the case company. The interview participants consisted of case company managers and employees representing various functions and roles within the organization. All respondents had medium or long professional experience within the researched phenomenon. These commonalities allowed the researcher to ask the informants multiple identical questions and assess the validity of the provided answers afterwards. In total, eight interviews with eight different informants were conducted; one introductory interview with a senior manager that was also the key contact in the case company and seven main interviews. The introductory interview facilitated the initial understanding of the case context and relationship between the firm and organizational agility. This meeting was highly valuable for developing an interview guide as well as scheduling the main interview process and selecting the interview candidates. Seven informants were involved in the main interview process; one agile coach, two product owners (project managers), one consultant, one business developer and two software engineers (see Figure 3).

INTERVIEW PARTICIPANT	BUSINESS ROLE	DATE	LENGTH
<i>Informant I</i>	Director	February 6 th , 2020	30 minutes
<i>Informant II</i>	Product owner	March 26 th , 2020	60 minutes
<i>Informant III</i>	Software engineer	March 26 th , 2020	60 minutes
<i>Informant IV</i>	Consultant	March 26 th , 2020	60 minutes
<i>Informant V</i>	Agile coach	March 26 th , 2020	60 minutes
<i>Informant VI</i>	Business developer	March 27 th , 2020	60 minutes
<i>Informant VII</i>	Senior software engineer	March 27 th , 2020	75 minutes
<i>Informant VIII</i>	Product owner	March 27 th , 2020	60 minutes

Figure 3. Selected sample and interview process details

The interviews were initially planned as face-to-face; however, they were held through video calls using two different online communication software (Skype and Google Meet) due to an unexpected situation preventing social interactions. The interviews were conducted in a one-to-one setting and held in English. The introductory interview lasted half an hour while the remaining interviews lasted approximately one hour. All the main interviews were audio-recorded using two different audio-only recording software with the participant's permission. The researcher benefits from recording the interviews since it is easier to focus on asking questions and listening actively the participant's responses (Saunders et al., 2016). Compared to written notes and memos, it increases the accuracy of records and allows for direct quotes to be used (ibid.). On the other hand, the audio recording might influence how the interview participant responds to the questions (ibid.).

Interview Process

After the introductory online meeting, selection of informants for the main interview process was coordinated with the assistance of the key contact person at the case company using web-based software and email communication. The interview schedule was arranged with the

support of the office manager and communicated with the researcher and participants through the instant messaging platform. Subsequently, the researcher contacted each interview participant individually via email to establish a closer professional relationship and asked for signing the informed consent proposed by FOCUS research program. Prior to interviews, the researcher collected publicly available information about the case company and all informants that facilitated a better understanding of the context and business setting. In addition, information provided during the introductory meeting was also analyzed before the main interviews.

At the beginning of each interview, the researcher introduced himself, presented FOCUS research program together with the research topic and its main objective, described how the data will be used and ensured the informant about the data anonymity. By the end of interviews, the informants were asked to bring any relevant topic or perspective that hadn't been discussed and were ensured about the anonymity again.

3.4.2 Secondary Data

This thesis uses also secondary data that were collected previously for other purposes. This data was further analyzed with an aim to provide the research with additional or varying information, perspectives and interpretation (Saunders et al., 2016). The secondary data used in this thesis includes publicly available information gathered from company's website, competitors' websites, social media profiles, podcasts, and news articles. Also, data provided by the case company such as employee satisfaction surveys, agile questionnaires, visuals related to the product development and other business-related documents were utilized. A large number of academic research papers, books and articles concerning the researched phenomenon provided a solid background and facilitated overall understanding prior to the data collection process and informed interview guide development. In addition, the researcher's written notes and comments from each interview can be seen as another data input and played an important role during the data analysis.

3.5 Data Analysis

In qualitative research, data collection and data analysis are, to a certain extent, interconnected and not necessarily followed by each other (Collis & Hussey, 2013). Thus, the initial data analysis started already when the first data were collected. As mentioned earlier, the purpose of the initial data analysis was to better inform the later interview process and continuously improve the interview guide. After the collection of primary and secondary data, extensive and structured analysis of all information was performed to get applicable and relevant results. In a case study research, data analysis approach and procedures are highly depended on the researcher since there is no one generally applicable approach (Saunders et al., 2016). In this thesis, data analysis was carried out with an aim to deliver on transparency and traceability of the overall process. Following the outlined research approach, the research setting was set deductively based on the organizational agility literature while data analysis procedures tried to secure that the theoretical concepts and new insights are developed inductively from collected data. The main data analysis process started with preparing collected data and continued with two cycles of coding; initial coding and focused, thematic coding in order to provide verifiable conclusions.

3.5.1 Data Preparation

As discussed, the collected primary data through interviews were audio-recorded using two different software. Subsequently, the audiotaped interviews were transcribed into written text right after the interview process in order to maximize recall and support the follow-up process (Karlsson, 2009). Transcribing gives a researcher an initial opportunity to dive deeper into the dialogues and get the broader sense and meaning of collected data (Lindlof & Taylor, 2011). In addition, the importance was also put on the supplementary contextual information that could be gathered from the audio recordings such as the ways how informants described certain topics and what was their attitude towards it following their verbal expression.

3.5.2 Coding

Coding is a data analysis method used in qualitative research that aims at finding the concepts and relationships among collected data (Strauss & Corbin, 1998). The term “code” describes a label that is used for tagging the concepts (ibid.). This method enhances the reliability of the

research since it gives a structure and agreement about the concepts' definitions and researched themes (Saunders et al., 2016). The collected data were analyzed using an inductive approach, as noted. Therefore, theoretical sensitivity was ensured by the way how the collected and transcribed data were coded, and consequently how the findings emerged.

First, the initial coding involved purposive, manual data processing and sentence-by-sentence labelling of transcripts and interview notes, as proposed by Charmaz (2014). The labelling was conducted to denote and categorize each information based on its meaning related to the theory development. A short, informative and apt description, referred as label, was given to each information (see Figure 4). This process was crucial for sorting and classifying collected data and facilitated analysis of a large amount of data. Moreover, it enabled the researcher to identify the themes that were the most prevalent throughout the collected data. Second, focused coding was employed to further analyze the initial codes, choose the most relevant codes for theory development and generate illustrative insights and constructs (Charmaz, 2014). The initial codes were grouped based on their underlying themes and exploratory insights were unveiled (see Figure 5). This was an iterative process with constant reorganizing of data and codes comparison in order to enhance the researcher's understanding of data and interlinks between different categories. Overall, three main categories were established; *how and why the case company started with organizational agility, how the case company achieves organizational agility, and what organizational agility gives the case company*. The codes were arranged and divided into these categories accordingly. The selected categories provided explanatory insights for the research question and were closely related to the theoretical framework development.



Figure 4. Example of initial coding

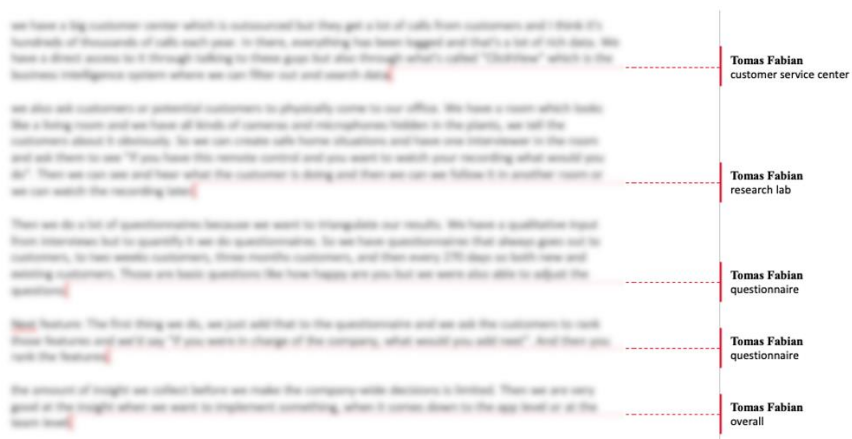


Figure 5. Example of focused coding – Insight gathering mechanisms

After the coding process, a model was developed to give a better structure for the empirical analysis and help the reader to navigate through the main themes and categories in a logical manner. The model is outlined at the beginning of the 'Empirical findings' section (see Figure 6 and 7).

3.6 Research Quality

This section discusses and assesses the quality of the research study with an aim to prove the trustworthiness of research outcomes. Further, the strengths and shortcomings of the research process are evaluated. Overall, this study is developed with an objective to meet the general standards of quality for case study research. According to Saunders et al. (2016), two main determinants of research quality are proposed: *validity* and *reliability*. First, validity is often separated into three main dimensions: *internal validity*, *external validity* and *construct validity* (Saunders et al., 2016; Yin, 2014). Internal validity is described as the existence of causal relationships between variables and research outcomes (Saunders et al., 2016). Using a broader lens, this notion highlights the fact that findings and conclusions are a result of a thorough examination of the data (Farquhar, 2012). External validity, also known as generalizability, claims that research outcomes need to be accountable for a studied phenomenon also outside the research setting (ibid.). In other words, this concept shows whether developed theories can be generalized (Saunders et al., 2016). Construct validity reflects whether the correct measures are applied to the studied concept (ibid.). Second determinant, reliability, refers to the extent to which the research design and strategy will produce consistent results (ibid.). It assesses whether the research findings would be the same if another researcher tries to replicate the study under similar conditions (Bryman & Bell, 2003). Thus, reliability is closely related to the consistency, transparency and stability of the research (Farquhar, 2012).

Several researchers argue that the concepts of validity and reliability as key factors for determining research quality are not appropriate methods for qualitative research since they emerged in the quantitative studies (Bryman & Bell, 2003; Sinkovics, Penz & Ghauri, 2008). Therefore, different concepts have been introduced to define research quality determinants in qualitative studies. The internal validity is substituted by credibility, transferability replaces external validity and the notion of reliability is exchanged with dependability (Lincoln & Guba, 1985). However, there is no one universally accepted approach on how to address the research quality issues and this study applies both validity and reliability concepts.

3.6.1 Validity

Following the distinction of validity into three main dimensions – *internal*, *external* and *construct* – all sub-concepts are examined to prove the overall trustworthiness of the research.

First, to strengthen the *internal validity* of this study, several measures and procedures are applied to avoid false interpretations of the findings and thus prevent wrong research outcomes. According to Saunders et al. (2016), historical events, impact of testing, instrumentation, mortality, maturation and ambiguity about causal direction are acting as the main threats to internal validity. The respondents and their perceptions regarding agility might be influenced by the past or recent events, therefore, supplementary questions were asked during the interviews to establish whether this threat is present. The open nature of the interviews enabled better understanding and interpretation of information through asking follow-up questions and instant clarification of provided data with the informant. Further, the questions were rephrased by the interviewer, if necessary, to facilitate a better understanding of a specific question by the respondent. The internal validity was also enhanced by avoiding leading questions during the interviews. Overall, documenting and providing details about data collection and data analysis was crucial to demonstrate internal validity in this qualitative study (Farquhar, 2012). Following this, all interviews, as the main data collection method, were recorded and saved in an audio format which made it easier to analyze gathered information retrospectively and facilitate proper understanding. Data triangulation as another valid method for strengthening internal validity is described later in this sub-section.

Second, *external validity* perspective calls for generalization of the research findings. Typically, qualitative case studies are difficult to generalize since they study the phenomenon in a unique setting and are closely tied to the specific context (Farquhar, 2012; Guba, 1981). The significance of this claim is even higher if the research is made up of a single case study. This is also a case for this research; however, it intended to explore agility within this unique setting and collect a large amount of information related to the phenomenon. In other words, the study was not intended to be representative. Nevertheless, the analytic generalization – comparing research findings with existing theories – shall be the objective for similar studies (Yin, 2014). The literature section provides the reader with a comprehensive review of existing literature related to the organizational agility and innovation management that gives a unique opportunity to relate the research findings to presented theory and thus strengthens the research quality. Further, the research findings are supported with a description of the research context provided within the Methodology section. This might enable other researchers to evaluate how much does the research setting fit their purposes so that this study can be used as a point of departure for potential comparative studies across different contexts.

Third, *construct validity* deals with the extent to which the research examines what it proposes to examine (Farquhar, 2012). To address the construct validity, this research intends to develop a strong chain of evidence and utilize numerous data sources. As proposed by Yin (2014), a chain of evidence was built in conjunction with using multiple data sources in order to provide clear guidance from the research question to the conclusions.

To enhance the overall validity of this research, *data triangulation* was employed. It refers to the use of several different sources of data in order to answer the research question and meet the research quality standards (Guba, 1981). This study uses the combination of primary data gathered through the semi-structured interviews with secondary data such as company's website, news articles or business reports. When collecting the primary data, potential bias might be observed at both participants' and researcher's side while data triangulation enables to minimize the bias (Yin, 2009). The triangulation also allows for identification of the similarities in findings what further strengthens the validity, and potential differences what develops a better understanding of the topic. In addition, the interview informants were representing different functions and seniority within the company hence providing the research with various point of views on the same studied case. When analyzing collected data and developing conclusions, any theme or idea was presented only when validated using at least two sources of information.

3.6.2 Reliability

The second concept addressing the research quality is *reliability* that is closely linked to the stability and consistency of the research. To enable the replication of the study for other researchers and thus enhance the reliability, a case study protocol can be developed providing a reader with valuable insights into the data collection and data analysis processes (Guba, 1981). This thesis presents and describes in detail the whole research design while using proper referencing what builds overall transparency and reliability of the research. Besides, the thesis development, as well as all procedures related to the research design, were continuously and critically peer-reviewed with the thesis supervisor. However, it might be also challenging to replicate the semi-structured interviews due to the setting specifics. Therefore, 'a step-by-step' research design together with a developed, used and presented interview guide may address this challenge. The interview guide was first assessed by and discussed with the thesis

supervisor, then continuously improved based on the performed interviews and participants' answers. This might significantly reduce the observer error during the interviews; however, the open nature of the interviews could still allow for observer error to occur. To avoid the participant bias that is one of the main threats to research reliability, the interview participants were ensured about the anonymity before the interviews (Saunders et al., 2016).

3.6.3 Ethical Considerations

The overall research quality can be affected by research ethics (Saunders et al., 2016). Hence the researcher is morally responsible for their behavior, research design, data collection and analysis as well as articulating the research findings (ibid.). This thesis has been performed using the researcher's best judgement and prudent approach has been utilized throughout the whole research. The highest priority was to ensure that no harm is caused to the case company, research program or any involved participant. The case company and all interview participants were protected with anonymity meaning that the collected data was anonymized, and particular names were deleted or substituted. The data storage has been also a subject for safety measures. Before the interviews, all the participants signed the informed consent and were verbally briefed about the nature of the research and interview procedures. In addition, the participation in the research was voluntary and all the informants were given with a possibility to withdraw their participation from the research at any time.

4. Empirical Findings

This section elaborates on the comprehensive analysis of collected data and presents the research findings. The chapter starts with a summary and a model of the findings, followed by a detailed analysis. The model was developed to give a better structure for the research outcomes and to easily navigate the reader through the analysis. The detailed findings are arranged and discussed together with data interpretation and demonstrative quotes. Each theme (sub-chapter) is supplemented by a tailor-made visual tool representing the main findings for respective category.

4.1 Summary

The primary and secondary data collection followed by a thorough data analysis uncovered the drivers of embracing organizational agility to be both internal and external. Internally, the dedicated individuals strongly engaged in the transformation process and the company trying to avoid negative outcomes resulting from assumption-led decisions were the key factors. The external drivers were related to disruptive innovation in the market and increased competition, internationally and locally. In addition, agile software development being utilized within the technical teams exemplified some of the core aspects of this concept. The case company managed to embrace agility at an organizational level by perceiving it as an enabler for flexibility, speed and customer focus and at the same time seeing it as a mindset, how the company thinks about approaching the tasks and problems. The components of organizational agility, presented as Hallmarks, were identified in six business-related categories: structure, decision-making, culture, insights, processes and people. *(1) The changes in the structure led to flattening the hierarchy, introducing dual leadership and dynamic teams. (2) The decision-making was decentralized in order to empower employees at various levels and teams were provided with end-to-end accountability for the processes. (3) The company has built and cultivated a culture of trust and open communication culture with numerous information sharing mechanisms in place. (4) Extensive insight gathering mechanisms were established to enhance the customer-centricity. (5) An iterative approach for processes has been adopted within and outside the technical units. (6) Overall, embracing organizational agility requires a versatile, resilient and transparent workforce with fitting attitudes and beliefs.* The outcomes

related to adopting this concept were recognized in the form of challenges and benefits. The case company was found to achieve better flexibility, increased speed and improved customer focus. These benefits improve the effectiveness of innovation initiatives hence the company increases its innovation capacity through embracing organizational agility.

4.2 Model

The model is developed and outlined to articulate the empirical findings in a structured manner and provide the reader with an overview of the key themes and relationships discovered during the data collection and data analysis. Two different visualizations of the same research model were developed in order to facilitate the understanding for different groups of readers (see Figure 6 and 7). The model together with its themes aim at answering the research question: *How does an incumbent media firm embrace organizational agility to drive innovation?*

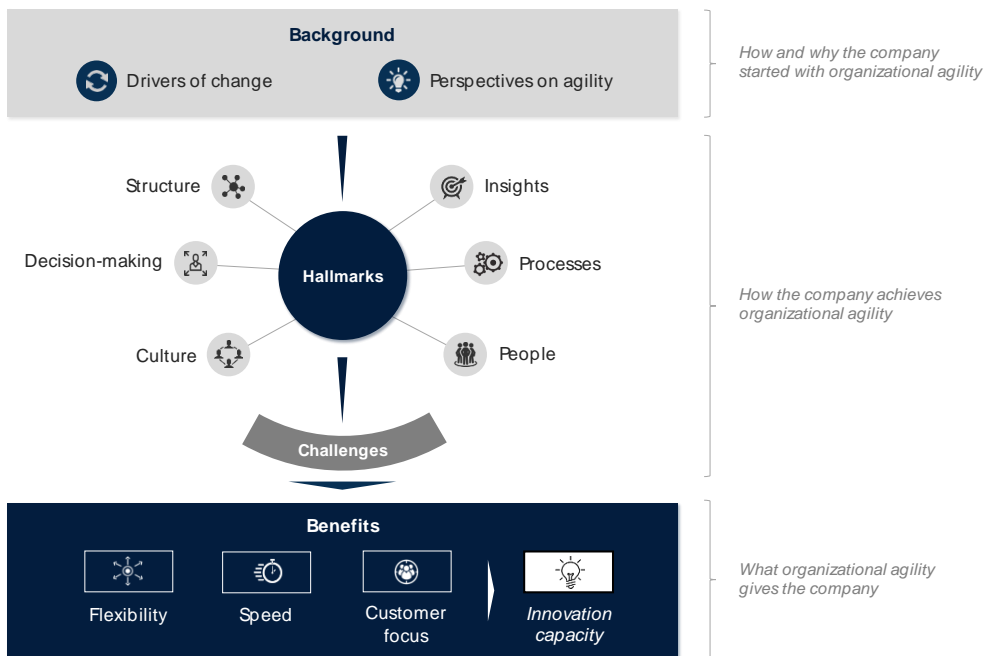


Figure 6. Empirical findings model – Design for business practitioners

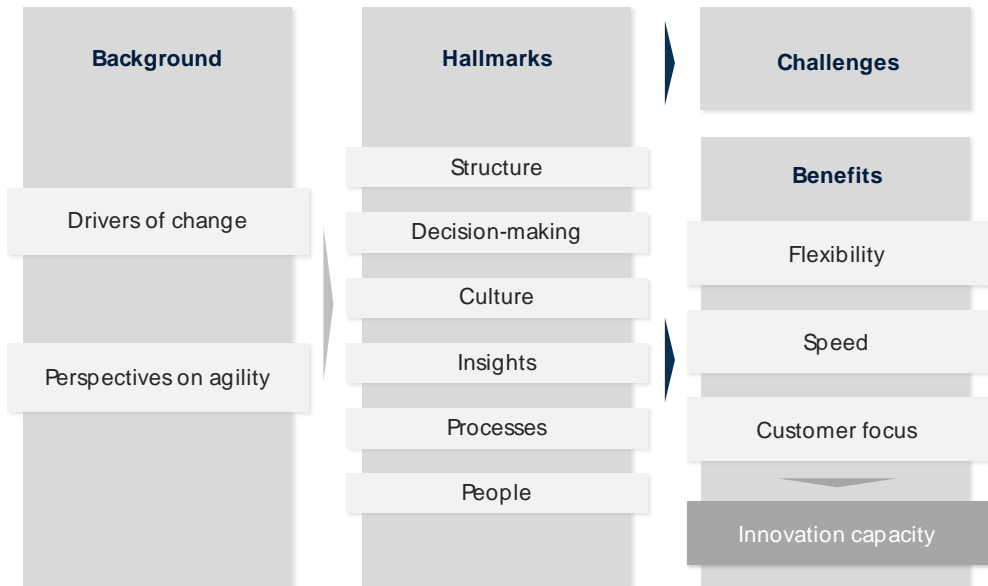


Figure 7. Empirical findings model – Design for researchers

4.3 Background

It became clear during the data collection process that in order to understand how the case company embraces organizational agility to facilitate innovation, it is crucial to find out why and how they started their agile journey. For the context of this research, the informants' perspectives on agility were collected and analyzed in the beginning. This allowed to determine the themes related to the researched phenomenon and develop an overall understanding of this concept within the case setting. Further, during the data analysis, it was important to not overlook the fact that the case company is a technology-driven organization providing technology-based products and services and thus this is also highlighted prior to the main data analysis section.

4.3.1 Drivers of Change and Change Process

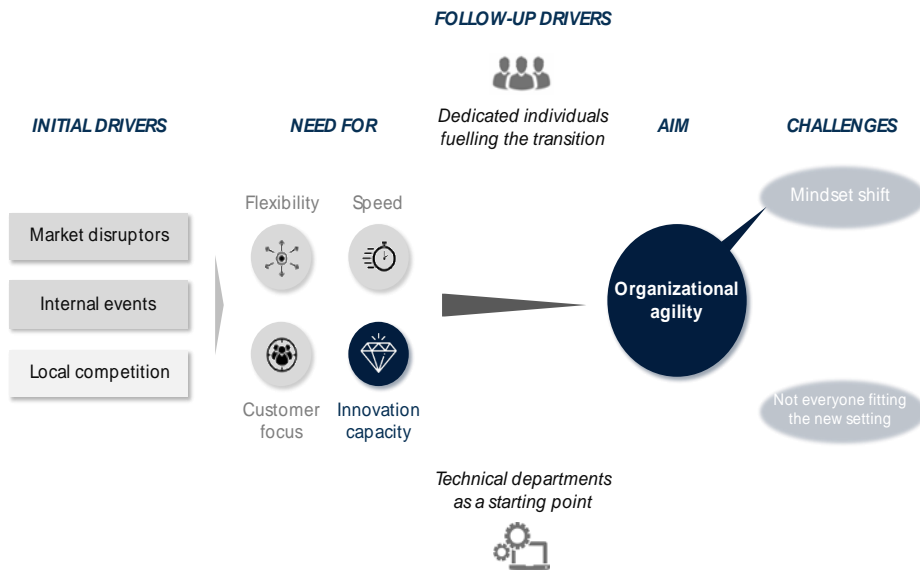


Figure 8. Change process overview

Analyzing the background of agile transformation, drivers of change and some of the main characteristics of the change process were discovered (see Figure 8). Also, these themes were repeatedly brought into discussion during the interview process by informants. First of all, it is important to do not underestimate or overlook the context and industry where the company is operating. The media industry and especially television-related services for end consumers have been significantly affected by the emergence of video streaming service providers. All these new market players led by the key digital disruptor Netflix provided the customers with a new dimension of consuming television content. Thus, new entrants together with changing customer expectations created a significant challenge for traditional market players, such as the case company, so they needed to respond appropriately in order to remain competitive. In addition, the case company had been facing strong competition also from the existing market players within the local media industry. The case company identified and understood how important roles do speed and innovation play in this process.

The thing in the media business is that since Netflix came, it was a total game-changer and we have to be quick. People expect Netflix for streaming purposes meaning that we need to be on the top of our game.

We need speed. If we don't have speed, we die.

Besides, following a specific situation in the case company history, the management realized that business decisions purely based on assumptions without data-driven insights involved in the process may lead to a negative outcome and have an unfavorable effect on the company's performance.

A good example was when somebody came up with an idea, then they made it and I think it had like maximum 100 customers so that was a feature without any type of figuring out and testing if this is something the customer wants. They were just guessing.

Combining internal experiences with external market trends, there was a need for approach embracing speed, allowing for flexibility and supporting insights gathering and customer-centricity. At the same time, the approach that could foster innovation. This need was not experienced as a one-off event happening at the particular point in time. It was a continuous process evolving naturally as the information flowed, market trends were analyzed, decisions made and understanding developed. Concurrently, the technical departments within the company such as the ones with the highest proportion of the software engineers were aware of the agile software development and were already utilizing some of the agile frameworks and procedures related to the activities within their discipline. The awareness and use of agile software development could inspire the whole company and gave an exemplification of how to achieve speed, incorporate feedback and testing, or obtain other related benefits.

[In the beginning], it was basically just the technical teams that were working semi-agile at least... the rest of the organization didn't.

The point is that the rest of the organization was thinking a lot more in terms of the basic agile principles such as short feedback loops, to use it and to improve the results.

Organizational agility was viewed as a potential response to the internal and external challenges that could address the company's emerging needs. The idea of agility beyond technical departments – the idea of an agile organization – started to be more present and promoted internally by a dedicated employee. It does not mean that the organizational shift was a one-man show; contrarily, an inherent component of the change process was a senior management involvement and support from the very beginning.

Specifically, it was one person that started this ball rolling, many years ago. [This person] was the catalyst to try and move the company to an agile organization... of course, the management was on board from pretty much day one, so you need the company to be on board.

One employee was fighting for the rest of the organization to become more agile and especially when it came to picking features... someone was able to convince the management that we are going to be an agile company.

Prior to the change process, the case company had a more rigid organizational structure with a distinct hierarchy and top-down decision-making process. This organizational setting did not allow for desired flexibility and speed; moreover, the responsibility for particular decisions was not in the hands of those closest to the customers. Thus, it required a completely different organizational mindset and actions spreading over the entire firm. Here, the organizational agility concept was promising. Also, the case company put substantial emphasis on data-driven decision-making and strong customer insight gathering.

When we started to go into agile a few years ago, we had a clear hierarchy with management group making decisions and product owners and their teams just implementing those decisions... The company did a big mind shift some years ago and tried to go agile. We implemented a different organization throughout the whole company.

If you make sure that the developers actually do what the customers want, then you get a higher effect... we turned to use insight quite a lot, for everything we do, we gather insight first.

Continuously, the case company was establishing new mechanisms, processes, structure and the transformation was intertwined with the mindset shift. Particular actions and related challenges are discussed in detail later in this chapter; however, the change process itself was also linked with an overall challenge, especially observed in the beginning. The new structure, actions and different type of organizational mindset were not reflecting ways of working and beliefs of all the individuals involved in the company. The company needed to make sure that all existing employees and managers are on board of this agile journey and the same applied for hiring new candidates. Therefore, several employees or managers that found themselves not fitting into this transition decided to not be a part of the company. In addition, the company tried to identify the attitude towards the concept of agility for all new applicants in advance.

Of course, some people at the start felt like they were being lost. A bunch of people quit because we need this large organizational change and some people felt they will lose their title and positions, and how they worked up to now.

When I started in the company, one of the onboarding sessions was to have 30 minutes or 60 minutes talk with the CEO... and the primary thing he wanted to talk about was agility.

4.3.2 Perspectives on Agility

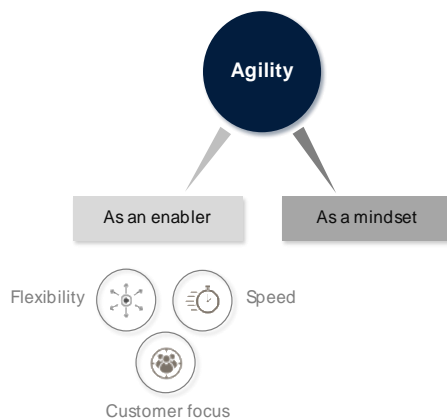


Figure 9. Perspectives on agility

After outlining and analyzing how the change process started and what were the key drivers of building an agile organization, it was perceived as relevant to gain an understanding what does agility actually mean within the case company context. Each informant provided a slightly varying description and perception of this concept based on their experience and professional background. However, several similarities and important elements have been found in the collected data. This particular data helped to develop a general conception of agility in the case setting before the key themes and components were analyzed in detail.

In general, agility was found associated with two main areas; *agility as an enabler* for flexibility, speed and customer focus, and *agility as a mindset* (see Figure 9). First, agility can be characterized by a reduced time to market, short customer feedback loops, minimum viable product environment with incremental development and continuous improvement. These attributes were mostly derived from the initial idea behind the agility as a concept for software development but its underlying aspects are not limited only to this discipline.

When you are working in an agile fashion, you are working on incremental releases, minimum viable products, getting to the market as fast as possible.

The most important with agility is the quick iteration and the quick turnaround on testing the ideas and trying to get to not sit in the room and develop things for a year and then do a big launch, but to do more smaller launches, quicker feedback loops and to be more in contact with end-users... I think that's really helpful in our really quickly changing world.

Second, agility as a mindset describes an environment where the involved subjects perceive agility as a concept exceeding boundaries of technical frameworks. In this perspective, the agile ways of doing are supplemented by agile thinking of challenges the subject is facing. Both perspectives together comprise the complete developed perception of agility. This was also articulated as one of the ways, how the case company shifted this concept beyond technical areas and started to embrace agility at an organizational level.

In the beginning, we were doing pure Scrum usually. We did see some effect, but I don't think we really understood that agility is more. It's a mindset. It's how you approach the problem.

If the rest of the organization isn't agile, then how much does it help if just the software development teams are following this approach... You need to think differently.

4.4 Hallmarks







-  **Structure** | Flat hierarchy, dual leadership and dynamic teams
-  **Decision-making** | Decentralized decision-making and end-to-end accountability
-  **Culture** | Culture of trust, open communication culture and information sharing
-  **Insights** | Insight gathering mechanisms
-  **Processes** | Iterative processes
-  **People** | Versatile, resilient and transparent workforce

Figure 10. Key identified hallmarks of organizational agility

Since the case company started their journey towards organizational agility, multiple procedures were established, actions carried out and features redesigned in order to embrace the full potential of this concept. Six main themes related to the organizational agility presented as ‘Hallmarks’ were identified in the case company context (see Figure 10). This sub-section elaborates on each theme separately and analyze the components in detail in order to discover how the company embraces organizational agility.

4.4.1 Structure – Flat Hierarchy, Dual Leadership and Dynamic Teams

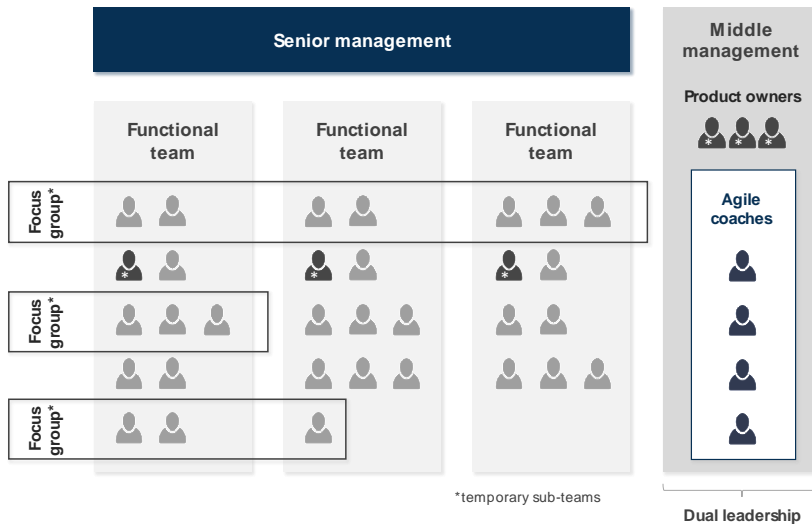


Figure 11. Organizational and team layout

One of the most predominant components of organizational agility observed in the case company context is related to the organizational structure (see Figure 11 for an overview). After a large restructuring a few years ago, the company is now characterized by a clear and flat hierarchy comprised of senior management, middle management and the rest of the organization covering multiple different functions. Besides, a dual leadership approach is utilized to maximize the value generated and thus the middle management consists of product owners and agile coaches.

We're also very flat. Strictly speaking, we have a management team and then we have product owners and agile coaches below there, and then we have all the teams.

The product owners are mainly responsible for prioritizing tasks within the teams and for desired outcomes related to the feature they are developing. They actively collaborate with agile coaches, senior management and assigned teams. On the other hand, agile coaches are not necessarily fixed to a particular team but can migrate across the organization based on the current needs. They do not dictate the process the teams should follow but may facilitate the process establishment. Also, they help the teams and individuals to flourish in the selected

process and continuously identify and improve the weak parts. The retrospectives are organized regularly by agile coaches for improvement purposes.

[Agile coaches] are more floating across teams and domains. [They] are working with those who need help basically... We've changed a little bit the way the agile coaches work at the company. It used to be that every team had one product owner and then they had one agile coach... The agile coach should focus on the people, process and culture, and the product owner should focus on the effect of what we're doing.

Agile coaches are also supposed to facilitate these retrospectives. Every two-three weeks you get together and talk about the last period.

The agile coaches could be seen as “preservers” of key traits the organizational agility is able to deliver. The agile coaches try to enhance individual elements and support the desired progress and thus improve the overall performance of the organization. They are not directly associated with managing. The importance of agile coaches is not underestimated in the case company what can be supported with quantitative data where the case company has one agile coach per 15-20 employees. In addition, the agile coaches facilitate and enhance cross-team collaboration that is discussed later as a separate component.

[Agile coaches] seem to be also focused on cross-team cooperation because a lot of the time we need changes to multiple places in the organization. So, they're focused on how we can work better across teams.

Besides, the case company has remodeled the way how the teams are organized and settled. First, there are bigger teams gathered mainly around the core functions and expertise (for instance sales, design or back-end development). The reason behind having expertise-based teams is to facilitate the knowledge development and sharing within the field and to unify the initiatives across the organization.

For instance, you may have designers in several different focus groups, but the designers also work as a design team. They have representatives in the different groups but if you work as a designer on the assignment to develop a design in our company, we have to make sure that design is coordinated across.

Second, the company has recently introduced smaller, cross-functional focus sub-teams. These focus groups usually consist of three to seven people working on one specific issue such as improving the current products, developing new features or fixing the problems. The focus groups are temporary meaning that the settlement of focus groups is a continuous process based on the company's needs. The groups are dissolved once the goal is achieved. The duration of the focus group existence varies depending on the issue complexity; however, the general intention is to work intensively for a short period of time.

In the beginning, we didn't have the so-called focus groups, so there were larger groups, 10 to 15 people large, and we're trying to work with them... Then we introduced smaller focus teams, feature groups, or squads, different names for the same thing, where they will focus on a specific thing. And when they are done, they can reconfigure those groups and have different constellations.

We have moved a little bit away from the bigger teams to split up into smaller focus teams. So instead of being part of a team with for instance 15 back-end developers, they're also in that small focused team with probably three or four people. Perhaps a designer, or a front-ender, or just back-enders and then they're trying to work more "short and fat" and solve one specific problem or challenge.

The non-standardized approach is also perceived when looking at the team homogeneity. The main goal of any team is to deliver the results in the best possible way. Therefore, if it requires various expertise and domain experts to effectively and efficiently reach the goal, then the teams are heterogenous in the competence. Contrarily, some of the teams are rather homogeneous following the nature of the activities they are performing. When it comes to the age distribution and cultural background, the case company is relatively heterogenous.

[The team] should have all kind of skills required to fulfill their mission. Some of the teams are only consisting of engineers that is a function of the kind of tasks they are solving. It's not really a decision. It's based on the tasks they are solving, not because they only want to have engineers in the team.

Truly, it's a fair mix of people from quite a few countries so it's obviously not just people from our country. So, there are cultural differences, but it works very nicely.

You have everything from people straight from the school to old geezers with a lot of experience.

4.4.2 Decision-Making – Decentralized Decision-Making and End-to-End Accountability

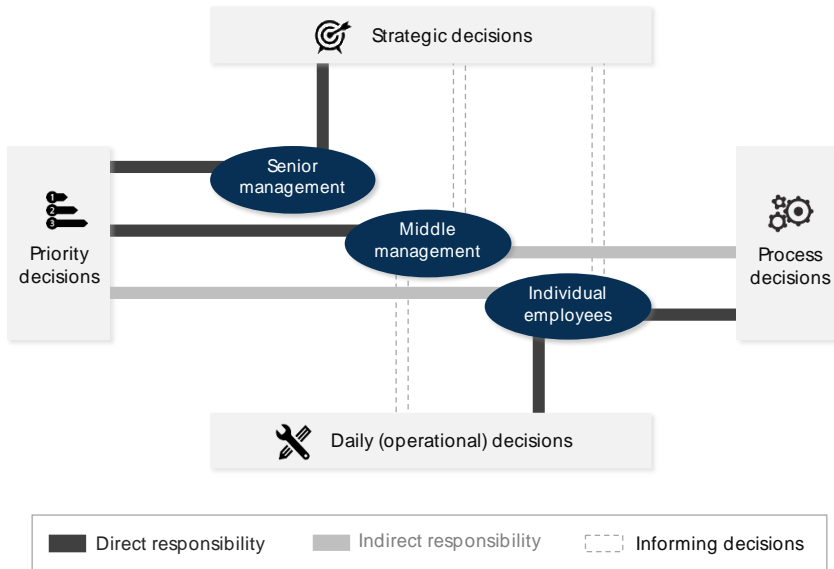


Figure 12. Decision types and decision makers

Another component associated with adopting organizational agility in the case company concerns how the decisions are made and the responsibility spread within the firm. Before the transformation, the company had a top-down decision-making process in place with a limited possibility for employees at the bottom level to make or inform the decisions. However, the company realized that for a technology-driven firm, having any kind of employee with relevant technical expertise involved in the decision-making process may be a highly valuable resource. Besides, following their intention for the customer-centric approach, the employees at the bottom levels are considered to have a much deeper understanding of the product they are developing and providing to the customers. Hence, apart from flattening the hierarchy, the company has also decentralized decision-making across different levels and allowed individual employees and teams to make several types of decisions on their own. This action provided the teams with a higher degree of autonomy.

The intention of expanding the decision group is not to have more justification but you want to place the decision-making as close to the team as possible because they're closest to the product and the customers, much closer than usually senior management.

The management is in the background, so they allow all the developers and the team members to blossom, and flourish, and take ownership. That's also an idea behind the agile approach where you leverage the developers or the team members to make decisions. They get a lot more ownership and motivation to work on the product.

Four main types of decisions were discovered in the case company context; strategic decisions, priority decisions, process decisions and decisions related to the daily work of individual employees (see Figure 12). The senior management is responsible for strategic decisions but an open communication culture, that is discussed in detail later, allows any employee to indirectly inform this process. The priority decisions are a result of a collective initiative between senior management and middle management represented by product owners and agile coaches. Before the priority decisions are made, the product owners and agile coaches directly gather any kind of information or suggestions from individual team members and this mechanism enables the whole company to be involved in this process.

When we start to prioritize, every agile coach and product owner involves the teams in what is the most important thing we can do in the next period. Then we have a meeting with the management team and then we have discussions on what we should prioritize. We take in what we have gotten from the teams and we have to take into account the management perspective.

We've expanded the key decision-making in the company which is what should we do and what should we not do, the priority process... That is now done by [the middle managers] plus the management team. It's a totally democratic process which is quite unique... It's not like management with an agenda just saying this is what we're going to do.

When it comes to the process decisions, each team or focus group in the company can decide upon the way how they want to work on and deliver the assigned tasks. All team members together with the product owner and agile coach are free to select a framework, procedures or

processes that fit their individual purposes and expertise the best. The agile coach plays a specific role here since they may help the teams to choose a suitable process and continuously improve the ways of working. However, the agile coach just supports the team and at the end, it is the team who makes a decision. The smallest decisions concerning the daily routines, software tools, hardware equipment or training are in the hands of individual employees. In certain cases, the manager should be informed but the permission is oftentimes not needed.

The teams are both responsible for delivering the tasks and most of the time, or actually always, for coming up with how to solve it... should it be a Scrum process, or Kanban, or something in between. The team decides but the agile coach is there to facilitate.

The teams are very autonomous so they can decide on the tasks and how they want to solve it. Of course, we have forums and we try to synchronize, so we don't go a totally different direction. But each team and each developer are quite free to come up with the decisions and suggestions... On a day-to-day basis and also what type of tools they use, it's up to the employees themselves.

Overall, flexible organizational structure and especially dynamic teams are intended to enable end-to-end accountability of the teams and focus groups for the tasks and processes they are working on. The case company tries to have the teams working on a specific feature from the very beginning up to the finalized stage. The reason behind this intention is to avoid potential challenges if the process involves different teams with different interests.

We've adopted a more "Google approach" where every team owns the service from inception to production. So, there's no quality assurance team, no operations team.

4.4.3 Culture – Culture of Trust, Open Communication Culture and Information Sharing

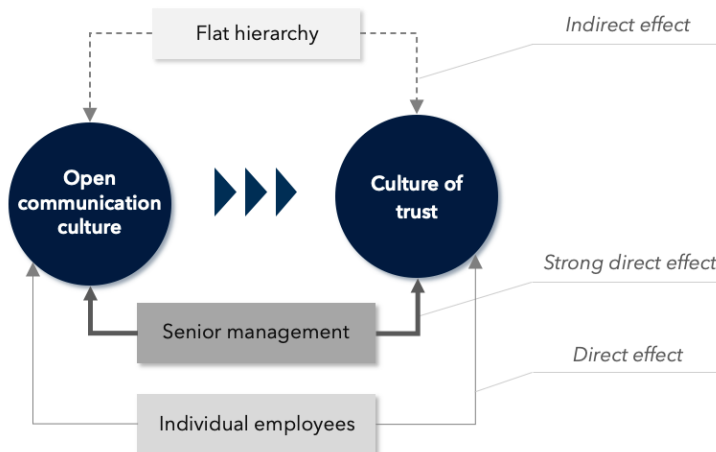


Figure 13. Drivers of open communication culture and culture of trust

Adjacent to the decentralized decision-making and having a large number of smaller focus groups is the open communication culture and culture of trust (see Figure 13 for an overview). The case company strongly promotes openness and transparency, thus, establishing an open communication culture lies among the core actions of their agile journey. Flattening the hierarchy as an overarching element was found to have an indirect effect on promoting the open communication culture. A significant element in building this culture is the senior management acting as role models of openness. They promote and cultivate this environment by acting through examples and by being open at an individual level towards all employees.

We have really open communication. Our CEO is really open and is the most important person in our culture when it comes to openness. [The CEO] is not a dangerous person that's on top of the mountain. [The CEO] is really down-to-earth and easy to talk to.

I think for the senior management, ensuring that everyone understands what we're supposed to do and why, that's very important. Ensuring openness.

A flat hierarchy together with the management approach and their personal qualities facilitated the creation of an open environment; however, the culture involves the mindsets of all

individuals in the organization. It is also important that the company has employees confident in asking questions, making suggestions, challenging the managers, reporting own mistakes and actively sharing all information related to their work. The open communication culture is then fostered at an organizational level.

Sharing is key to every working agile organization. I mean sharing everything. It's almost illegal to not share. Modus operandi should be share everything... It's really the mindset behind everyone sharing things, all the time. Then it works.

Often, of course, the management has ideas which are presented like "should we do this" but more than once, those ideas have been sacked because of good discussions and good arguments from the larger group... so I'm not necessarily inclined to agree with the management. The CEO's intention is to put down the arguments and if there's any input to that, that's what [the CEO] wants.

An open communication culture was often brought into discussion together with a culture of trust. Trust is in most cases perceived as a prerequisite for organizational agility. The case company would find it extremely difficult to establish decentralized decision-making and create more autonomous teams without having trust within the organization. Three dimensions related to building trust in the case company were discovered. First, the aforementioned open communication culture allowing each individual to be provided with all kinds of company-related information is having a significant impact on building and enhancing trust.

If you want a manager to trust you, you just show them, you're open with what's going on. If they can see there's transparency there, then it's easier for them to trust.

Second, the management plays a crucial role not only for building an open communication culture, but also a culture of trust. Similarly, the management constantly shows the trust towards all involved in the company by acting as role models and by ensuring they share most of the information with the rest of the company. Besides, the management allowing individuals to make several decisions on their own is implicitly providing them with a high degree of trust.

When you allow people to make their own decisions, you're also giving them a lot of trust by this, because you trust them to make good decisions.

I think that without having trust from the management, it will never be a culture of trust, So, that you do have to have the leaders showing trust... And we have a very high degree of trust between management and the teams, and I think most people feel that way. Otherwise, we wouldn't be allowed to do all of the stuff with decision-making. So, I think that's very important to have this type of trust.

Third, the trust in the case company is also built at a personal level by individuals trusting each other. This is not necessarily associated with certain actions performed by the firm, but it is perceived as an expertise-based trust. The employees trust each other because they trust the skills and abilities of their colleagues.

We trust individuals, pretty much everyone. And trust has to come from you trusting the person to be good enough to do their job properly and to tell other people if they can't succeed... If you don't trust, you can't have this kind of very flexible organization where you don't have a Scrum master, you don't have anyone in particular following up.

With the decisions and responsibilities spread throughout the organization, it is even more important to secure that individual managers, teams and employees are informed in the most effective and efficient way. The company has successfully implemented mechanisms to share all types of information except the strictly confidential one. All teams and individuals have access to information regarding how the priority decisions are made, what are the management plans, or what are the company-wide challenges. Besides, the entire company is able to clearly see how individual teams and groups proceed with their tasks, what are the issues they are facing, and all types of relevant reports are available for everyone.

Most of the decision and reports about the progress and status in the different teams, in all departments, is totally open. Even me, I can browse even the sales reports just to see, where the company is going.

Pretty much all channels are open for everyone. The management channels are open, and they post very often updates in regard to the plans, how we're doing, what foreseeable problems would be coming up... also [as a senior manager] you should be

able to check and see what's going on [in the teams]. You should be able to attend reviews and see how far people are coming.

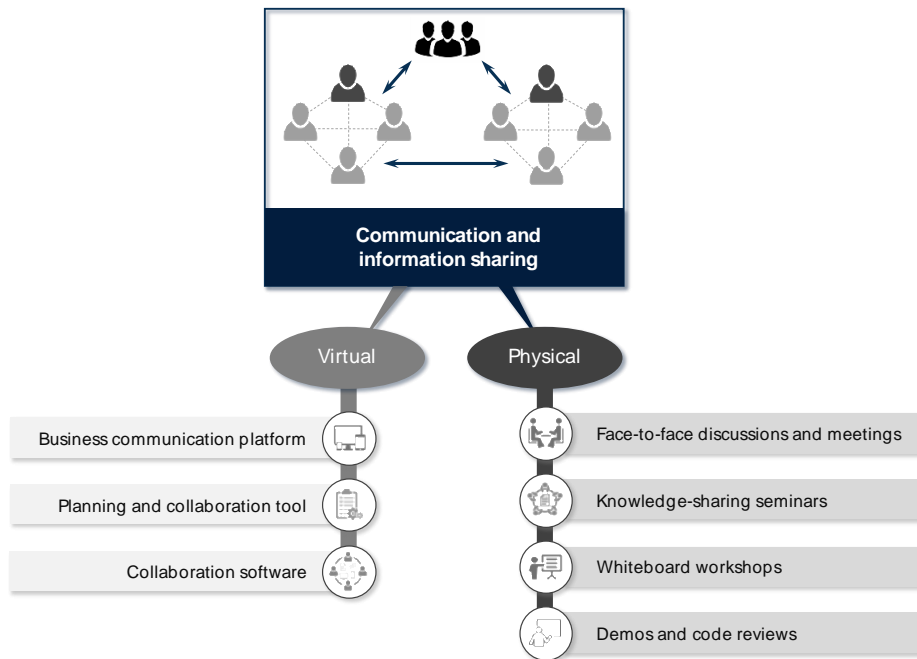


Figure 14. Major communication and information sharing mechanisms

The company utilizes communication in both physical and virtual environment (see Figure 14). However, online communication and information sharing are dominant since it allows for better transparency and the information can easily reach individuals in the entire company. When it comes to particular mechanisms in place, the company has established online communication and information sharing channels using some of the market-leading software. The online Business communication platform is used on a daily basis for instant messaging and open-channel information sharing.

It's quite a lot use of [Business communication platform], both in channels and on direct messaging... You avoid one-on-one [communication] as much as possible. Everything should be open groups and you use tags so that it's easier to follow something, a discussion.

The Planning and collaboration tool is used for assigning the tasks, updating on work progress, or handling the issues. The Collaboration software helps specifically with more technical knowledge sharing.

The whole company is using [Planning and collaboration tool]. All features, epics, user stories, tasks are there and it's totally transparent, you can look at other teams, you can assign stuff to other teams, you can hold stuff from other teams. That's how we share tasks and specifications... Then we use [Collaboration software] to have any documentation, that's more the knowledge sharing.

In addition to the virtual environment, the communication occurs also face-to-face, both within and across the teams. The information sharing is carried out through personal whiteboard workshops, code reviews and knowledge-sharing seminars for specific functions, roles or departments. The demos are organized regularly to showcase the successful projects, new initiatives, research work, failures but also more technical content.

Within the team, we do quite a lot of whiteboard workshops if you're sort of wondering how best to solve this or need to explain something... When it comes to cross-team cooperation, there's a lot of direct communication between people across the teams.

[Some teams] get together and they spend the whole day on knowledge sharing or workshops... The agile coaches have also a regular knowledge sharing session... To show successes, we have demos... We can also do a demo if we've done research thing or started something and it failed.

4.4.4 Insights – Insight Gathering Mechanisms

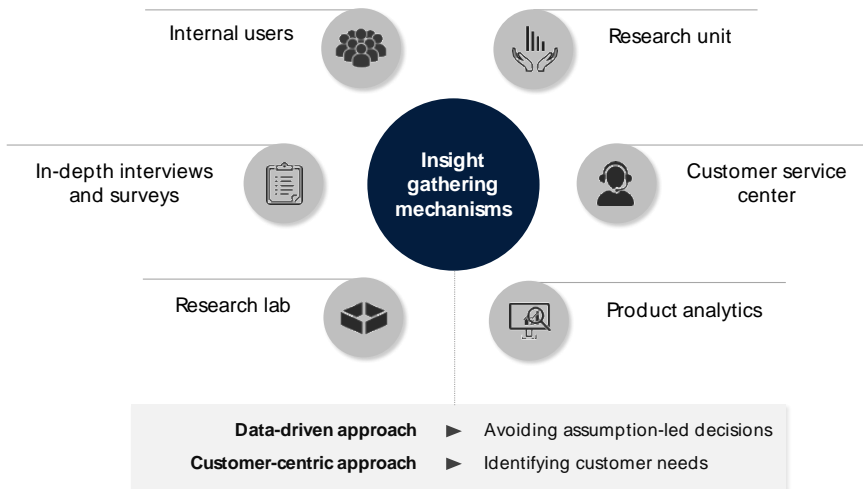


Figure 15. Selected insight gathering mechanisms

Following the company's intention to understand customer needs and deliver the products and services addressing these needs, an establishment of numerous insight gathering mechanisms is another important element of their journey towards organizational agility (see Figure 15). Further, the case company perceives data collection considerably relevant also in order to avoid potential negative outcomes of assumptions-led decisions. Hence, the company tries to gather a reasonable amount of data before and during the decision-making process, product development or product testing.

Oftentimes we discuss something, and we say we don't have that data. Then we go away for a few days and we try to collect that data, to try to inform that decision, and we would discuss again. The process is to make sure that we have all the angles or different perspectives to get this decision on the table, make sure we collect as much missing data as possible.

It's not always that the product owners or the management are able to come up with the correct solution, but they have a hypothesis "this is what we want and this is what would give us more value" but it's the market that decides if this is really what we would be doing.

The company's agile transformation is interconnected with implementing the data-driven and customer-centric approach. There are even particular teams and initiatives being set up to work mainly on research and insight gathering. Overall, the teams in the company aim at utilizing scientific procedures when delivering on the tasks to increase the quality of their work outcomes. All these actions are perceived as a significant shift in the case company context.

If I think we should do something, everyone else will ask "what insight do you have to say that". Then you have to show them... We improved when it comes to how scientific and data-driven we are. I think we are more data-driven as we were two or three years ago.

We do have a lot of insight and we work with it, and we have several people where their main focus is to collect the data and present it in a good way. This is also where we think we need to hire more people to get more. It's very important.

Multiple mechanisms have been established and are exploited to provide the teams and individuals with meaningful insights. The amount and scope of mechanisms in place vary among each department and team. Some of these differences come from the nature of the tasks and processes the particular unit is following what makes it harder or more expensive to implement similar mechanisms. On the other hand, this is also an ongoing process meaning that the company experiments and establishes more mechanisms continuously based on the needs and prior experience from other teams and departments.

The company gathers both quantitative and qualitative data using several different electronic and physical channels. One of the main initiatives is establishing a research unit that aims at gathering insights from the customers and informing the priority decision-making process. The underlying reason for having such a unit in place is to avoid the costs related to the wrong decision being pursued.

We have introduced a [research unit] recently to have some level of customer insight before we make a priority decision... We'll do a lot of research to see how that product should look, but we want to add insight before we even make this first decision.

The customer service center has been outsourced but there is still close cooperation between the center and the company for the purposes of insights gathering. The service center collects

myriad data from the customers what gives the company a highly valuable resource. By having a direct electronic channel between the center and the company, any employee may access the data and use them based on their needs.

We have a big customer center which is outsourced but they get a lot of calls from customers... In there, everything has been logged and that's a lot of rich data. We have direct access to it through talking to these people but also through business intelligence system where we can filter out and search data.

The technological nature of the provided products and services allows the company to collect strictly anonymized customer data, called product analytics. Using special tools and software, the company can access and analyze these data in order to proceed with hypothesis testing, inform the decisions or generate user statistics.

We get anonymized data about consumption, to see the patterns... And you can do the hypothesis testing to see what are the effects of our work.

We look at the consumption and then we push the content that people want more than the content that we think people should watch. So, we let people decide what is been promoted the most. I think we're pretty good at using, at least counting stats and sometimes also more scientific data.

The case company also leverages physical channels to collect insights from the customers. In addition to the in-depth interviews, a research lab has been established to interview and observe the existing or potential customers in the “natural-like environment”. This helps the company to run the testing of prototypes and to get the third-party perspectives on the developed features. The features and products could be then adjusted and improved based on the findings from the customers.

We ask customers to physically come to our office. We have a room which looks like a living room and we have all kinds of cameras and microphones hidden in the plants, we tell the customers about it obviously. So, we can create safe home situations and have one interviewer in the room and ask them: "if you have this [product] and you want to [use it], what would you do". Then we can see and hear what the customer is doing.

Individuals within the company are considered as another source of valuable insights regarding the existing products or developed prototypes. Even though gathering information from internal users does not always provide the company with strictly third-party perspective, at the same time, data collection does not require formal and structured mechanisms and is usually associated with lower costs required. Since the internal users represent different groups of users with varying needs, this channel is perceived useful for getting a variety of perspectives and insights about the products and features.

Actually, one of the most valuable feedback mechanisms is getting feedback from internal users since we have a product. We all have the company's subscription and we use that a lot... So, you have a very different experience when you have lots of people sharing and that qualitative feedback is actually surprisingly important in a very quantitative field.

In addition, the company employs traditional quantitative data collection techniques such as surveys. The survey strategies are designed to regularly determine customer satisfaction but also to gain an understanding of the customer needs and desired features in the existing products.

We do a lot of questionnaires because we want to triangulate our results. We have a qualitative input from interviews but to quantify it we do questionnaires. So, we have questionnaires that always goes out to both new and existing customers. Those are basic questions like how happy are you... Then when we are deciding upon a next feature, the first thing we do, we just add that to the questionnaire, and we ask the customers to rank those potential features.

4.4.5 Processes – Iterative Processes

As previously mentioned, the case company does not employ one standardized approach regarding the processes that individual teams are following to deliver the tasks. Each department and team can decide upon the ways how to approach and work on their assignments. However, the agile software development procedures exemplified and highly influenced the choice of processes, frameworks or systems being applied across the organization. An overall aim of the agile transformation is to achieve flexibility, speed and

customer focus and thus the company-wide initiatives are related to having iterative processes in place that enable realizing these benefits. Due to this intention, a large proportion of teams and departments follow Scrum, Kanban, or Lean frameworks and methodologies. Usually, the teams identify and employ just the individual components of each framework that fit their purposes the best and thereby create a unique approach for their ways of working.

In my team, we have a Kanban-like board but it's very clear on purpose that we don't follow any methodology... If you look at the broader picture, most of the teams work in a Scrumban type of way. So, it's Kanban flow but with time-boxing.

It's always some form of Kanban, Scrum or Lean. All three of those have their benefits so we take the best of all worlds. That's the daily, weekly workflow, we are guided by those principles.

The agile coaches support individual teams with the selection of an appropriate process and help them with continuous improvement. The improvements are done by organizing retrospective meetings where the entire team together with the agile coach analyze the performed activities in the previous period, try to identify inefficiencies and find solutions to avoid the experienced challenges in the future.

The only thing we do dictate is that you have to have retrospectives so that you can look at continuous improvement... We get together and talk about what was good and what was not, what should we improve. We're trying to improve the process you're using to actually build the software.

The iterative approach is applied across multiple different activities from insights gathering and decision-making, through product development and product testing, up to deployment to production and continuous improvement. This approach is closely connected with the minimum viable product environment meaning that the solution is first developed at a very basic level containing only the elements required for being deployed to production. Once this type of product is deployed, the customer feedback is gathered, the product is improved and enhanced based on the collected insights. An iterative approach and minimum viable product environment are intertwined with short feedback loops and incremental development. Overall, an iterative approach allows the company to finalize the products and services in an effective

and efficient manner while thoroughly integrating customer feedback and thus reflecting the customer needs.

For us developers, it's finding the MVP, the minimal viable product and having short feedback loops. We don't want to be doing the whole waterfall thing in six months... [Product development] is a lot of iterations from the previous generation where we have thousands and thousands of customer feedback.

The aforementioned iterative approach originated in agile software development and is greatly used across different units in the case company where the developers represent the majority of the unit. However, the company aims at embracing agility at an organizational level and in this case, they have also tried to implement the iterative approach beyond the technical departments. One of the key initiatives discovered, where the traditional, rigid processes were replaced by a dynamic, continuous approach, was how the company does the resource allocation and budgeting. The case company has implemented Beyond Budgeting concept where the planning and forecasting of the resources are more lean. This concept enables the resources to be allocated dynamically based on the company's emerging needs.

We have introduced Beyond Budgeting for the economy department. So, you basically don't have a real budget... The point is that we are a lot more flexible with the budgeting because that could be a point of failure because you can't really be an agile organization if the allocation of money isn't also agile.

Another initiative where the iterative approach has been introduced was found in the marketing department. Inspired by a lean framework, the marketing department transformed its processes and incorporated an iterative approach to campaigns ideation, development and execution. Further, they carry out testing on a small scale, gather customer feedback in short cycles and scale the developed campaigns accordingly. This approach is utilized mainly for social media marketing activities where the technical nature of the medium enables such procedures to be adopted.

The marketing department really embraced the concept of testing before they actually release it to a larger audience. So, they would do a lot more of a proof of concept commercial, showing it, getting feedback, do some changes, not this traditional

approach where you're going to spend four months on this big commercial campaign without doing some testing in between.

If we're going to create a commercial that is time-consuming and once it's made it's hard to change, it's not a very agile tool itself. But if you're doing social media, that type of marketing is a lot easier to adapt as you see results coming in.

Within and beyond the technical departments, testing and experimenting is a major part of the activities in the case company context. Adopting an iterative approach is directly linked to the frequent testing of developed features or created services such as marketing campaigns. One of the predominant research methodologies being applied for this purpose is A/B testing. Using this concept, proposed scenarios are tested on a selected sample of potential or existing customers in order to get a clear indication regarding the direction of further product or service development. Again, this concept is also leveraged outside the software development discipline.

We use A/B testing when we want to test two different versions of the [developed feature]... We separate the customers into three groups. Group A gets one version, Group B gets another version and a control Group C gets the old way. Then we just compare those three groups and see which one works best. And they're using the same approach to commercials.

4.4.6 People – Versatile, Resilient and Transparent Workforce

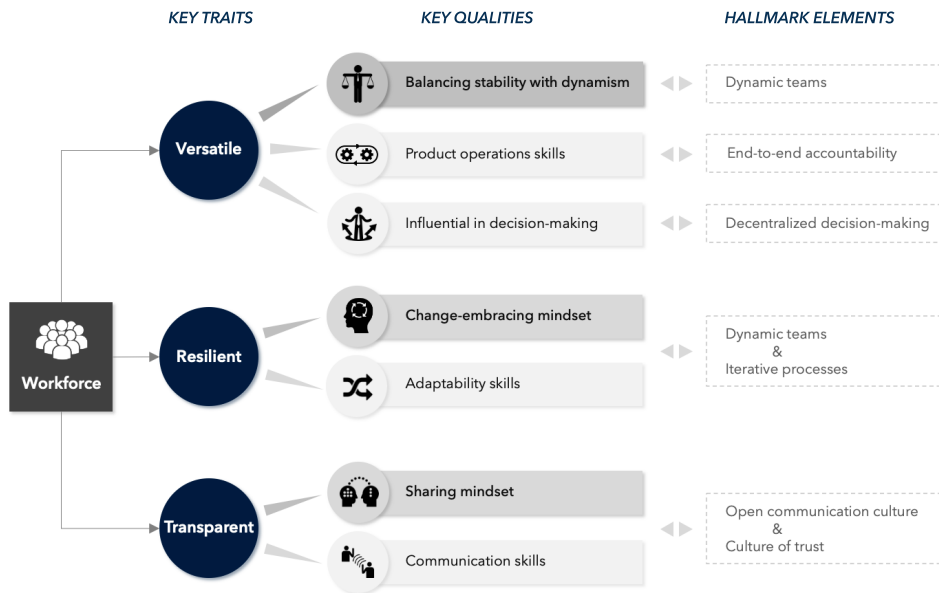


Figure 16. Human capital traits and qualities

Establishing a new organizational structure, decentralizing the decision-making or embracing the open communication culture, all the components of the agile transformation require certain personal and professional qualities as well as fitting attitudes of involved employees and managers. As pointed out when outlining the change process, several people left the company due to their contrasting beliefs and preferred ways of working. Following the informants' professional background and seniority, varying perspectives on the workforce qualities and attitudes were observed, at the same time, a number of similarities were discovered.

One of the major elements in the company's agile transformation journey is a *versatile*, *resilient* and *transparent* workforce (see Figure 16). Starting with the *versatility*, it is mostly related to the decentralized decision-making, end-to-end accountability and focus groups setup. First, empowering employees across different levels and functions goes hand-in-hand with responsibilities being reallocated. Apart from the responsibility for the daily tasks, the

individuals are allowed and encouraged to make or inform high-level decisions as well. In order to effectively handle these actions, it requires employees having a broader understanding of the context of their work and being influential in decision-making. Second, end-to-end accountability for the processes calls for the skills that go beyond the core expertise scope. In a traditional organization, employees focus mainly on the specific part of the process that fits the best their core expertise. In the case company, several teams work on the tasks from initial ideation until the final production phase. Therefore, it requires employees having the ability to handle the product operations along with the ability to develop the product or service. Third, the case company achieves proper functioning of temporary focus teams by having a “two-handed” workforce. Specifically, the versatility of the workforce in this area means that individual employees need to successfully deliver the tasks coming from the focus group agenda and simultaneously secure the smooth operations related to their core functional team. When comparing the nature of these two activities, securing daily operations is perceived as an activity enhancing stability while working in a focus group reflects dynamic action.

Teams own the service from inception to production. There's no quality assurance team, no operations team. So, it also requires different skill sets, or not different but more skills. The developers that make the product, they also need to know how to operate it which is something rather new.

You're a part of a focus team that's supposed to solve one very specific thing and you probably also have some responsibilities that are just about the daily flow of things, to make sure that the service you're responsible for works... You are probably responsible for the daily operations and you're supposed to really dive into your focus team's work. So, a lot of employees handle two kinds of jobs at the same time.

Despite the differences in background and experience among individuals, the employees engaged in the organization are perceived as *resilient* to the dynamic environment within and outside the company. The company's actions focusing on gaining flexibility and speed in order to face the fast-paced environment require overall adaptability skills of individual employees. Besides, the company considers the employees' attitude towards change to play an even more crucial role in facing the dynamic conditions than the adaptability skills. The change-embracing mindset and adaptability skills are especially important when it comes to the

settlement and dissolution of temporary focus groups, but it is also related to the iterative approach being applied since the way, how the tasks are delivered, is constantly changing.

Quite often you will change the team, so you have to be flexible and you have to be okay with changes... We change rapidly, and you have to be adaptable to the surroundings. That's the key thing.

You need to be able, at least, to work in an environment where we're going that direction one week and next week, we might slightly adjust the course... You have to thrive in an environment called controlled chaos. It's not chaos, but it could be experienced as chaos if you are used to a more traditional approach.

In addition to the senior managers as role models, the case company managed to build and cultivate the open communication culture and culture of trust by having *transparent* employees – employees with sharing mindset and willing to actively participate in information sharing and informing the decision-making processes. The communication skills of employees are considered important but the attitude towards sharing information and knowledge, proactively and willingly, is perceived to have a stronger effect.

You might make decisions that you don't have to ask the entire company, but you have to share it. If you make mistakes, which we do a lot, you are obliged to share it. It's not a big deal to make a mistake, but it's a big deal to make a mistake and keep it for yourself.

It's very open, transparent communication so it requires to be able to put words on your thoughts and express what you think is necessary.

Besides the main benefits; flexibility, speed and customer focus, some hallmarks were identified to have a positive effect also on the overall satisfaction of the workforce. The company repeatedly scores very high on employee satisfaction, following the results of surveys. First, decentralized decision-making creates an environment where individuals may have a direct impact on their work. To a smaller or greater extent, it allows the employees to influence what are they going to work on and how is their team going to progress. Thus, the employees feel more valued and some individuals even find this environment exciting and

enjoyable. Second, the open communication culture and culture of trust build a pleasant and friendly working atmosphere what significantly influences how do people feel at work.

Employees feel more valued and recognized, you feel like you're making a difference. When I compare it to what I hear about other cultures where hierarchy is a much more structured and it feels much more rigid, not as flexible and not as fun to be a part of.

I really enjoy working at the company... It's the best company I've seen in our country so far regarding culture, organization, agility and flexibility.

Several roles of the senior management were outlined when describing the change process as well as individual hallmarks. The senior management has been actively involved in the agile transformation process since the beginning, they act as role models and culture bearers for openness, transparency and trust within the organization, they lead through examples and strongly promote information sharing. Executing these roles directly or indirectly influences the workforce attitudes, performance as well as satisfaction. The management actions and open approach enhance the overall commitment of employees and their perceptions of involvement. In addition, the management was found to have a specific function in relation to the workforce. They aim at reducing operational barriers and creating an environment where the amount of distractions is limited and individuals can fully focus on their work.

[The management] is making sure that people feel the company is theirs... They are also supposed to be a more facilitating type of management where they're supposed to remove obstacles from the lower-level teams.

4.5 Challenges







	HALLMARK AREA	CHALLENGE	SOLUTION (if any)
	Structure	Cross-team collaboration Distinct agenda and goals of focus groups	Information sharing mechanisms Agile coach facilitates
	Decision-making	Less management control – finding appropriate reporting mechanisms	Information sharing mechanisms Agile coach support
	Insights	Suitability of utilized insights gathering mechanisms for particular departments	Finding alternative forms (e.g. internal users)
	Processes	Suitability of iterative processes for particular departments	
	People	Fitting attitudes and working habits	In-depth recruitment interviews Agile coach support
	Other – IT infrastructure	IT infrastructure and codebase rigidity	Creation of flexible IT platform

Figure 17. Main identified challenges and related solutions

The agile transformation journey has been intertwined with multiple challenges related to the actions being performed and processes being established. This sub-section presents some of the main challenges experienced by the case company and discovered through the data collection phase (see Figure 17). These challenges are perceived as continuous challenges since achieving organizational agility is not a one-off activity but rather an ongoing, constantly evolving process.

The initial challenge related to the mindset shift and ensuring that all employees and managers fit the agile organization context was already described earlier when outlining the change process. However, even several years after the transformation start, the company needs to make sure that the attitudes, beliefs and working habits of new employees and managers reflect the company's needs. This is done before the onboarding process through the in-depth interviews and analysis of candidate's characteristics in relevant areas, and after the onboarding when the individual's development towards company's culture and needs is

actively supported by an agile coach. The areas that are identified to be the most challenging for individual employees are related to the dynamic and constantly changing environment, described earlier as a change-embracing mindset, and open communication culture demanding sharing mindset.

We change rapidly and if you're having problems with changes, then you'll have problems working with us. And if you like everything to be very structured and you always know you can go to the "rule book" and there it is, then you will have problems as well. And also, if you don't like to show what you're working on, or maybe you are embarrassed when you do something wrong and you don't want to show people, then you have issues. We have seen people leaving because they can't handle it. Extreme openness can be difficult.

Decentralizing decision-making and providing the teams with a higher degree of autonomy result in management having less control over the entire organization. This can be especially difficult for individuals that have experience from organizations with a command-and-control style of management but less management control is perceived as an overall challenge. In the case company context, the main challenge lies in finding the ways for reporting that satisfy the management needs, and at the same time, do not hinder the flexibility and speed. An effective information sharing mechanisms and active work of agile coaches play a significant role when addressing this challenge.

It's difficult to be a director in this organization because you don't have total control and you have to avoid asking to get reports... We need to solve the management needs without having to implement lots of reporting.

Dividing the organization into multiple teams and small focus groups requires effective communication and collaboration across different units. The teams or focus groups are given a certain degree of autonomy by being allowed to make several decisions on their own. At the same time, a certain degree of cross-functionality is achieved when having individuals with different expertise within one group. However, some of the tasks still require cross-team collaboration in order to be finalized what may create obstacles and impede the achievement of speed. The information sharing mechanisms and agile coaches play a facilitating role when addressing this challenge and trying to avoid potential inefficiencies.

One challenge has always been the cross-team collaboration. You have your focus team and they all have their own goals, and suddenly, this team finds out: "I need something from this team over here". So how do we get our prioritization into this team. The teams aren't autonomous, not 100 per cent at least. They are dependent on each other's time. It comes to communication and the prioritization of tasks.

Another challenge associated with the focus group setting is ensuring that the group has a distinct agenda and goals. Having stable teams around functions may give a clear indication regarding the direction, common objectives and competence needed to deliver the tasks. On the other hand, establishing temporary cross-functional focus groups based on the company's current needs may lack a clear understanding of what is the main aim and what is the overarching element connecting the whole group. This may have a negative impact on the focus team performance and results.

One of the things that makes this focus team project work or not, is whether they have a clear focus. Sometimes it might be a little bit less clear and that might be a problem for some of the focus teams that they don't really feel that focus.

Despite the fact that the company has established a number of insight gathering mechanisms in order to enhance the customer-centricity, the amount is varying across different departments and functions. Some of the units find it difficult to implement similar mechanisms as other departments due to the different nature of the activities they are carrying out what makes it more complex, time-consuming and cost-intensive. Thus, the challenge lies in finding the alternative ways for gathering insights that can enable customer focus and fit the unit's needs while delivering upon the cost reasonableness. One of the alternative ways being applied is gathering insights from internal users.

The user experience is quite different on different devices, so that's the thing that makes it difficult at the time, and it can take a long time to get it out to all clients so we can actually expose the customers to what we've done. That whole process, that's a challenge for us sitting here.

The same applies to the use of iterative processes across different functions within the organization. Some of the teams cannot leverage the continuous iterations and short feedback loops following the nature of their work.

Our team is not really that suitable for the agile processes because we are dependent upon long-term contracts. It's not that easy to do quick testing and iterations because we have a contract that says this is how it's supposed to be for the next few years.

Being a technology-driven firm, one of the major challenges related to embracing organizational agility involves the IT systems and infrastructure. The company aims at creating innovative products and features that meet the customer needs and delivering them to the market easily and quickly. Especially the easiness and speed of development and delivery is highly dependent on the flexibility of the IT systems since the company's portfolio is mainly technology-based. Here, the company experienced several incidents where the rigidity of the IT systems impeded the prompt delivery or implementation of initiatives that aimed at improving the product features and reacting upon the changes in the external environment. Following the definition of organizational agility that points out the rapid response to the changes in the environment, having flexible IT systems and infrastructure is perceived as a prerequisite for achieving organizational agility in a technology-driven firm. This is seen as a complex challenge having an impact on the entire organization, therefore, addressing this challenge is a demanding process related to the creation of flexible IT platforms and infrastructure.

We've tried to do something that we could present to our customers as a cool thing and I talk to our marketing department about communicating this to our customers. And then it turned out, no, our systems are not flexible enough to be able to do that... It's hardcoded into the system, no flexibility... So, when we try to be more flexible, I find that often technical stuff that slows us down.

Even though the studied phenomenon involves analyzing the concept at an organizational level, data collection uncovered the importance of technical teams in the context of a technology-driven organization. Therefore, the challenges related to the practices within the technical teams are considered important to emphasize while staying within the scope of a business research study. From the technical teams' perspective, the rigidity that hinders

achieving the full potential of an agile organization and all its benefits is related to the ways how the code behind the products and features is written. When the company intends to proceed with product innovation and the core of a product is the code, then the flexibility of the code is one of the key variables influencing the overall flexibility and speed of the innovation process. The particular challenge lies in ensuring the agile codebase that follows technical best practices. This challenge is, to a certain extent, related to building and securing flexible IT systems and infrastructure, as described above.

When you're making software, there are a lot of ways how to do it... So, if you have a very poorly organized codebase, it's not very easy to be agile because it's very hard to predict, how long a new feature will take. It's also quite important to follow a lot of technical best practices to stay agile. If you don't follow technical practices, you won't be agile, or it will be less agile... There's a lot of connection between how you solve things technically and how agile you can be.

4.6 Benefits

By embracing organizational agility, the case company has achieved three main organizational traits helping them to manage daily operations in a better way, at the same time, foster innovation and respond to the changing business environment. The main identified benefits are *flexibility*, *speed* and *customer focus*. These traits were also perceived as intentions why the case company started to embrace organizational agility. This sub-section presents how the company has achieved these benefits and describes the relation to the individual hallmarks (see Figure 18). The section concludes with outlining the relationship between gained benefits and innovation capacity which is an essential factor when answering the research question.

HALLMARK AREA	HALLMARK ELEMENT	Flexibility	Speed	Customer focus
Structure	Dynamic teams - <i>Focus groups</i>	●	●	
	Dual leadership - <i>Agile coaches</i>		●	
Decision-making	Decentralized decision-making	●	●	●
	End-to-end accountability	●	●	
	Open communication culture		●	
Culture	Culture of trust		●	
	Information sharing mechanisms		●	
	Insight gathering mechanisms			●
Processes	Iterative processes		●	●
People	Versatile, resilient and transparent workforce	●	●	
Other	Site reliability engineering team		●	

Figure 18. Overview of relations between individual hallmarks and gained benefits

4.6.1 Flexibility

First, the case company has achieved flexibility that can be described as an ability to change easily according to the situation. Several components were identified to have a direct or indirect effect on flexibility in the case company. The organizational structure and mechanisms for establishing temporary focus groups have significantly contributed to development of this trait. Once the opportunity for improvement is observed, or new feature needs to be developed, or a certain problem to be fixed, the company can easily, without significant changes to its structure, establish a new focus group and proceed with the desired initiative. Flexible structure and team layout are thus reducing the organizational rigidity that is a remarkable barrier for innovation.

We will change teams just to whatever we're supposed to do... If we need to improve [one of our services], we will just create a new group and bring in a few people from the company based on what we want to do.

Most of the teams and focus groups in the company are free to choose the process and procedures they want to follow to deliver the results based on their individual skills and

preferences. The agile coach may help to select, establish and improve the process but the process is never dictated. This has a direct impact on flexibility since the different teams having different needs may follow processes or frameworks that suit the nature of their work the best.

The fact that we could choose a process was an important part when I started. It gives better flexibility, in particular with finding a way to work and work together that actually fits the projects and the tasks we're doing. Because even within software development, it's quite different to do front-end, app development or machine learning. If you're going to do it, you should do it differently. So, it definitely helps with flexibility.

The company's product portfolio is mainly technology-based. When delivering exceptional technology products and innovating them, technology expertise plays an essential role. Having employees with relevant technical expertise regardless of their seniority included in the decision-making makes the overall development and innovation process considerably easier. Thus, decentralized decision-making has a positive effect on flexibility.

The company is the one which is the most developer-driven. Usually, you have x layers of management which decides everything, and they don't understand technical things. But here, it's a lot different, it's so technology-focused and the business logic isn't so complex. It means that the developers have a lot more to say regarding the way the development should go what gives a big advantage.

In addition to the decentralized decision-making, end-to-end accountability further reduces the structural obstacles and thereby has an indirect effect on overall flexibility. Different departments across the firm may have different priorities and interests. In the traditional technology-driven organizations, having one process spreading over multiple departments creates a certain form of rigidity. The case company overcomes this rigidity and allows for flexibility by creating the teams that have a responsibility for the entire process.

If you look at what's in the self-interest of the operations team, they want as few changes as possible because every change introduced is a risk of something going wrong while the developers want to pursue changes all the time. So, there's an inherent

disconnect between the teams or departments. This is why we've adopted the approach where every team owns the service from inception to production. The reason for this is to optimize for flexibility and agility.

Even though the collected data does not explicitly point out the relationship between people and flexibility, the versatility and resiliency of the workforce are seen to play a significant role in establishing dynamic teams, decentralized decision-making and having end-to-end accountability in place. Since these three areas are recognized as factors positively influencing the flexibility attribute, the case company's workforce is thus considered as an important variable for achieving flexibility.

4.6.2 Speed

Second realized benefit related to adopting organizational agility is increased speed. This attribute refers to the rapidity in moving, proceeding or performing actions within the organization. The factors that have an impact on gaining speed were discovered among most of the presented hallmarks. Before outlining the relations between speed and individual hallmarks, it is important to highlight the overall link between speed and agility at an organizational level. Multiple activities related to the daily operations or innovation initiatives require the cooperation between technical and non-technical units. Embracing agility beyond solely technical functions reduces the number of obstacles associated with cross-discipline collaboration, hence provides the company with increased speed.

The positives without a doubt are that the whole organization is agile... Most companies say they're agile but only IT department is agile and then they are blocked because to deliver the functionality, they are dependent on the resources outside of the team. And since those teams aren't part of the agile process then they have their own timeline of things, so it takes a long time to get things from A to B. So, the lead time is much longer.

Diving into the individual hallmarks, a similar analogy can be found in the establishment of focus groups. The transformed organizational structure enables the creation of temporary sub-teams based on the actual needs of the company. A focus group consists of individuals with all kinds of expertise needed to deliver the tasks and meet the objectives. Establishing the

focus groups in this way enhances the cross-functionality attribute. This has a direct effect on increasing the speed since the performed actions are not delayed due to the cross-discipline collaboration inefficiencies.

The other thing that gives us speed is that we have small focus groups and we try to keep them as cross-functional as we can... So, they should have all kind of skills required to fulfill their mission. It shouldn't be that you need to wait for other people doing something to complete your project. You should be independent and in a lot of cases we are.

In general, the agile coaches play an essential role in identifying inefficiencies in the processes and finding the solutions on how to address observed challenges. By delivering upon this role, the agile coaches strengthen the efficiency of the processes what influences the rapidity of actions being carried out.

[The agile coaches] try to reduce handovers. They focus on process and getting better and finding the queues. If there are any queues or anything that's waste, then [the agile coaches] look at how to reduce that.

The company allows the teams and focus groups to decide upon the processes they want to follow and the individuals to make operational decisions on their own. The teams may also make certain types of priority decisions without having a thorough discussion with senior management. Empowering teams and individual employees through decentralized decision-making leads to a significant reduction in decision-making time since fewer levels and fewer subjects are involved in the process what makes the whole process more fluent. Further, having the teams responsible for the processes from the initial phase to the final realization overcomes the obstacles associated with cross-discipline collaboration and inherent differences in the priorities of involved departments. Thus, decentralized decision-making and end-to-end accountability positively influence the speed attribute.

When the team is let to make decisions themselves, they don't have to wait for anybody, they can just go ahead with a lot of type of decisions... So, we pushed the decision-making as far out as we can, so that we don't get these bottlenecks. If everything has

to go up to our director, it takes forever to make a decision... So absolutely a great difference in speed.

In a more traditional world, you have the development team, so they develop something and then it goes to a quality assurance department for testing and verification. Then it will "ping pong" between development and testing until they're satisfied and then it gets adopted by the operations team. And they will spend some time verifying it and then they will get it into production eventually... This is why we've adopted the approach where every team owns the service from inception to production.

The open communication culture and extensive information sharing mechanisms are identified to have an indirect effect on speed. By active use of online communication and collaboration platforms, the information regarding prioritization, assigned tasks, progress or ongoing challenges of each team and senior management is efficiently distributed and accessible to anyone within the organization. The individual employees and managers save time when searching for information required to satisfy their needs. Overall, building a culture of trust and having efficient information sharing mechanisms enable the company to have fewer control mechanisms in place what further increase the speed.

We try to have a lot of feedback, both oral and written, and try to follow up the board so it's easy for people. If they don't want to, they don't have to talk to us to see what the status is. We just focus on doing the right thing and communicating internally... So, that makes it more rapid, be open and trust.

The iterative processes are inherently associated with achieving speed. One of the main intentions behind having an incremental, continuously evolving development is to reduce the time needed for changes and improvements of the final solution. The iterative approach allows the company to avoid time-consuming activities related to the re-building and improving the complex solutions. Instead, the company can make smaller improvements to the smaller parts of the same solution what has a great impact on overall speed. As outlined earlier, the iterative approach is applied also outside the technical teams and several success stories related to gaining speed were observed in the collected data.

One example is when someone in the marketing department came with an idea for a commercial. By embracing this concept (iterations), within one week, they had a campaign made and it was airing. One week from an idea to implementation.

Besides the presented hallmarks that have a direct or indirect impact on speed, additional element significantly enhancing the speed was identified. The company has established a special team focusing exclusively on the IT infrastructure and operations problems, called site reliability engineering (SRE) team. It aims at providing the infrastructure that all the company's services are running on. The team supports the technical departments and all individuals with operating the services. The employees can directly contact the SRE team with regard to the technical and infrastructure support that cannot be handled by employees themselves. This mechanism reduces the number of obstacles and makes the execution of technical tasks more fluent. The relation between speed and existence of the SRE team is evident and the importance of this team in the context of a technology-driven firm is hence remarkable.

There's a team called site reliability engineering which deals with servers, computers and lots of different built systems and external IT systems. They have always someone on call so you can ask, or you just write if you need something... That's usually a very fast, very loose, very nice process where the easy things that are very hard for you and would stop you and your work for a week or two, that get solved... It makes quite a big difference actually moving forward.

Similarly to the flexibility attribute, the explicit relation between people and speed was not found in data. However, all identified traits of the workforce support the implementation or building of those hallmark elements that were recognized to have a positive effect on the speed attribute. Therefore, workforce traits are perceived as another, yet implicit, factor for gaining speed.

4.6.3 Customer Focus

Embracing organizational agility results in improved customer focus, as a third main identified benefit. The customer focus concerns the company's orientation towards identifying and addressing the customer needs. This attribute is one of the key variables influencing customer

satisfaction and overall success of a business. Three main areas were recognized to form the foundations for improving the customer focus. Being a technology-driven company, the employees with relevant technological competence are considered as an essential element for meeting customer needs. As outlined within the ‘Decision-making’ sub-section, these employees are closer to the customers, following the nature of their activities performed at work, and have a greater understanding of the products the company is offering to its customers. Decentralized decision-making established by the case company provides the employees at various levels with decision-making power what results in the significant improvement of the customer focus.

We have the decision-making as close to the team as possible to make sure that the decisions are informed by those who work closely to the product. It's all about trying to make a decision as informed as possible. And information is coming from the customers.

While decentralized decision-making allows the customer-centric approach to be applied when making the choices regarding direction, prioritization and selection of tasks, the actual customer data informing these decisions come from the extensive insight gathering mechanisms. These are seen as a core component for building the customer focus within the company. All identified mechanisms were established in order to identify the opinions and needs of customers, gather feedback for existing services and provide the company with a strong data foundation relevant for creating and improving the solutions. Establishing the research unit has a direct impact on gathering data that are utilized for informing the decisions. This mechanism hence supports the customer focus at the decision-making level.

The purpose of the whole [research unit] is to make the best decisions as possible. We think if we invest more in figuring out what decisions we should make, it costs money because we use time, we use a lot of effort to do this, but we might avoid to make bad decisions, which is often more costly, say developing big feature and then it turns out no one wants it.

Having various insight gathering mechanisms is important when having heterogeneous customers such as the case company. In addition, when the company intends to proceed with an innovation initiative that is supposed to attract different customer segments, the insight

gathering mechanisms allow them to collect missing customer data what further enhances the customer focus.

Before we could launch [a new product], we did a lot of testing of what kind of [features] do customers want. And this product probably has a different age group and target audience than the traditional [products] which is skewed to a bit older audience and they have different needs. So, we needed to get this customer data first.

Once the customer data are gathered through the established mechanisms, the company utilizes this information to address the identified customer needs by developed solutions. Applying an iterative approach for solutions development and having short feedback loops enable the company to effectively and continuously integrate the customer feedback. Therefore, the third area actively supporting the customer focus is related to the iterative processes.

[Product development] is a lot of user testing in our test lab at work. It's a lot of iterations from the previous generation where we have thousands and thousands of customer feedback and that's the big part of what we do. Making sure when we decide "we're going for this [feature] or we're going for this [experience]" that it's properly researched and based upon not our assumptions but customer data.

4.6.4 Innovation Capacity

Following the definition of innovation capacity, it refers to the organizational ability to create and utilize new products, services, systems or processes (Koc & Ceylan, 2007). The innovation capacity depends on the resources and capabilities held by a firm and determines how effectively an organization can carry out the innovation process (Teece & Pisano, 1994; Jolly, 1997). The case company business environment is intertwined with changing customer expectations which draw great attention to addressing the customers' needs by innovating current portfolio and developing new solutions tailored to their demands. In the context of this research, identified hallmarks related to embracing organizational agility has provided the company with better flexibility, increased speed and improved customer focus. First, enhanced flexibility and speed enable the case company to proceed with innovation initiatives easily and rapidly. Second, improved customer focus allows for fostering customer-centric innovation that plays a vital role in the case company context. Altogether, this is perceived as an

improvement in the effectiveness of the innovation process hence embracing organizational agility is found to increase the innovation capacity through gained benefits. Further remarks on the relationship between organizational agility and innovation are presented in detail in the ‘Discussion’ section.

5. Discussion

This section elaborates on the further discussion of the empirical findings presented in the previous chapter and outlines their relation to contemporary literature. The findings resulting from thorough empirical analysis are reviewed to address the research objective and discuss *how does an incumbent media firm embrace organizational agility to drive innovation*. The section demonstrates which areas of findings support existing organizational agility literature and where the findings produce new insights and enhance theory development. Besides, detailed discussion of a relation between organizational agility and innovation is presented together with outlining some of the main managerial implications. The section concludes with discussing the limitations of this research study.

This thesis identifies the key components of organizational agility and investigates how these components influence innovation initiatives. The researched phenomenon is explored within the context of a technology-driven media firm and analyzed as a single case study. The conducted research unveiled multiple intriguing findings related to the analyzed research question which are highlighted with regard to the existing literature.

5.1 Relation of Empirical Findings to Existing Literature

First, drivers of change and perspectives on agility are outlined in relation to the organizational agility literature. One of the key identified drivers of shifting the company from traditional approaches was increased competition and emerging companies successfully delivering innovative solutions to the market. The hypercompetitive environment and industry disruptors are seen as initial drivers of why the company started to explore innovative approaches for daily operations as well as innovation actions. This finding supports the arguments in the literature that established companies confronted with a dynamic environment and new market players are trying to adopt new approaches to effectively face the changed business environment (e.g. Weber & Tarba, 2014; Lewis et al. 2014). Further, the senior management was involved in the transformation process towards organizational agility since the beginning. The senior management involvement and support are perceived as a major component of adopting organizational agility what also reflects the literature on agile organizations (e.g. Livermore, 2007; Denning, 2015; Aghina et al., 2017). The empirical findings show that the

technical departments were utilizing some of the agile frameworks and development practices even before the agility started to be embraced at an organizational level. The technical departments played an important role in exemplifying the concept of agility among other non-technical departments what, to a great extent, supports the arguments of Rigby et al. (2014). They argue that the common approach for adopting organizational agility is to start and succeed in the IT departments, inspire other functions and implement similar practices within non-technical units. The agile transformation start was interconnected with new procedures and practices being applied which were not reflecting the preferences and attitudes of all managers and employees. This was perceived as an initial challenge related to the change process what also reflects the research findings of Laanti et al. (2011) who discovered that employees with long-lasting experience with the traditional ways of working have a negative attitude towards the agile approach. When exploring the perspectives on agility, it was discovered that the company embraced the concept of agility at an organizational level by approaching it as an enabler for benefits resulting from adopting agile practices, and at the same time, seeing it as a mindset that was spread across the organization. This reflects the arguments of Holbeche (2015) that an agile organization requires a strong agile mindset in addition to the agile tools being implemented across different units.

Second, identified hallmarks are presented with regard to the literature discussing the components of organizational agility, also called agile practices, actions or characteristics of an agile organization. The transformed organizational structure is characterized by a flat hierarchy and enables rapid rearrangement of human resources based on the company's current needs what reflects the Holbeche's (2015) arguments on flexible structure within the agile organization context. The establishment of temporary, cross-functional focus groups as dynamic sub-teams working intensively on a specific task supports the literature related to organizational agility (e.g. Rigby et al., 2016). However, when reviewing the literature, it is not always clear whether the cross-functional teams are established in addition to the existing functional teams or they substitute the functional teams. Besides, the degree of cross-functionality is oftentimes not discussed. In this research context, the focus groups are established along with the functional teams and the cross-functionality attribute varies depending on the nature of the performed tasks. Decentralized decision-making and empowering the employees at individual levels are perceived as one of the strongest identified hallmarks both when looking at the frequency of this element in the collected data as well as

its relation to the gained benefits. The same can be found in the existing organizational agility literature since the decentralized decision-making component was explicitly or implicitly discussed in all reviewed publications (e.g. Yusuf et al., 1999; Sherehiy et al., 2007; Cooke, 2012). Contrary to the decision-making hallmark, the culture of trust is pointed out in the literature marginally and only some authors emphasize the importance of this component in an agile organization (e.g. Moe, Dingsøyr & Dybå, 2010). However, this study unveiled the great importance of trust and considers this hallmark as another strong component of organizational agility having an impact on other identified components. In addition, information sharing mechanisms established in a physical or virtual environment play an important role when having flexible organizational structure and decentralized decision-making. This supports the arguments found in literature since multiple authors highlight the effective and transparent communication and information sharing achieved by implementing appropriate mechanisms (e.g. Yusuf et al., 1999; Cooke, 2012; Aghina et al., 2017). The adopted processes and ways of delivering the tasks vary across different teams and functions since the company sees the difference in nature of the work and thus allows individual teams to select the procedures that suit them the best. Overall, the units utilize the features contained in the Scrum, Kanban or Lean methodologies and create a tailor-made approach fitting their purposes. These findings fully reflect the literature on agility where several authors emphasize there is no 'one-size-fits-all' approach, point out the flexibility in processes applied across the organization and consider Scrum and Kanban as the most prominent agile frameworks (e.g. Cooke, 2012; Rigby et al., 2016). Besides, the company employs iterative approach for multiple activities across different functions, aims to have short customer feedback loops and is characterized by minimum viable product environment. This supports the findings in the literature oriented towards industry practitioners (e.g. Aghina et al., 2017). The fact that embracing organizational agility requires a workforce with appropriate skills and fitting attitudes is supported by empirical findings as well as the literature review. The versatility and resiliency as general traits of the case company workforce reflect the arguments found in literature concerning the adaptive and flexible human capital in the agile organizations (e.g. Griffin & Hesketh, 2003). Also, adopting organizational agility was found intertwined with increased employee satisfaction what further supports the findings of Melnik & Maurer (2006) regarding the higher job satisfaction at the agile organizations.

Third, the outcomes resulting from adopting organizational agility are discussed in relation to existing literature. Some of the identified challenges in the research context were found in literature as characteristics or prerequisites for organizational agility. Decentralized decision-making implies a certain degree of autonomy and less management control in place. While the organizational agility literature typically sees less management control as a characteristic of an agile company (e.g. Sherehiy et al., 2007; Parker et al., 2015), empirical findings show that, in some circumstances, this characteristic is also considered as a challenge that should be handled carefully. In addition, having a flexible IT infrastructure as a prerequisite for technology-driven firm reflects the arguments in the literature oriented towards industry practitioners (Aghina et al., 2017), but achieving it was found as a significant challenge. Looking at the gained benefits, the company has achieved better flexibility, increased speed and enhanced customer focus by embracing organizational agility. Different scholars present a different combination of benefits associated with this phenomenon (see for instance Melnik & Maurer, 2006; Gothelf, 2014 or Holbeche, 2015). However, when looking at the organizational agility literature as a whole, flexibility, speed and customer focus are among the most predominant benefits.

5.2 New Insights and Theory Development

The study also provides new insights and interesting findings of how technology-driven firms can embrace organizational agility. The examined case is especially valuable and informative for organizational agility studies and provides the researchers as well as industry practitioners with an in-depth inquiry into this phenomenon. One of the interesting findings is related to the drivers of change and how the case company started to adopt organizational agility. Having dedicated and keen individuals actively involved in promoting the concept of agility at an organizational level as a driver of change is considered relatively unique. Based on the developed understanding of the case, this is also seen as one of the main success factors. Another valuable finding is the establishment of dual leadership in the agile organization and especially a vital role of agile coaches. The middle management consisting of product owners and agile coaches gives a clear distinction regarding the roles and enables better focus for each party. Even though the presence of agile coaches in an agile organization is mentioned within the existing literature, this study provides a comprehensive inquiry into the role of agile

coaches what supports the theory development. The agile coaches ensure continuous improvement, enhance the rapidity of the processes, facilitate cross-team collaboration, assist the teams with process selection, support managers and employees with professional development, secure that established procedures are in line with agile principles and do not hinder flexibility, speed or customer focus. Not only the existence of agile coaches but also their competence and role that goes far beyond Scrum Master work are considered essential for embracing organizational agility. Further, informal communication and information sharing can be found as a characteristic of an agile organization in the existing literature. However, this study found that building an open communication culture around the simple distribution of information throughout the organization is vital for organizational agility. It takes the mindset of all involved to participate in the communication and information sharing and this mindset can be cultivated by an appropriate corporate culture. Thus, establishing an open communication culture is another essential element that is oftentimes overlooked in the literature. A customer-centricity is an attribute frequently discussed in the organizational agility literature. This research further provides a thorough examination of insight gathering mechanisms that are beneficial for utilizing a data-driven approach and enhancing the customer focus. The study also provides an in-depth inquiry into the key qualities of the workforce and presents its relation to the individual hallmarks. The open communication culture as a novel finding is closely associated with transparent workforce and a strong sharing mindset. In addition to the relevant skills, the mindset of people involved in the organization plays a tremendous role throughout the wide range of activities and significantly supports the achievement of flexibility and speed. Among the most intriguing empirical findings is the ability of the workforce to balance dynamism with stability. Establishing the temporary, cross-functional focus groups in addition to the functional teams requires to have a “two-handed” workforce. The workforce that is able to enhance stability by secure daily operations related to the functional team, and at the same time, cope with dynamic conditions when delivering the tasks coming from the focus group agenda.

The single case study allowed for in-depth analysis of the case company context. Hence, the challenges related to adopting organizational agility as well as solutions could be investigated in detail. Some of the findings in this area are more specific for the individual hallmarks and may be highly valuable for industry practitioners. For instance, describing the agile organization as a network of autonomous, cross-functional units often leads to overlooking

the importance of cross-team collaboration. In practice, it was found that achieving fully autonomous and cross-functional teams is not always possible and effective cross-team collaboration becomes a challenge that should be addressed to not impede the achievement of desired benefits. The effective information sharing mechanisms and agile coaches act as facilitators when addressing this challenge. Another novel finding discovered among the identified challenges is the suitability of iterative processes and insight gathering mechanisms for different departments. The positive relation between iterative approach and gaining flexibility and speed within the IT functions was already articulated in the Agile Manifesto (Beck et al., 2001). However, embracing agility at an organizational level requires adopting similar procedures also among the non-technical functions to achieve the full potential of this concept. The same applies to the use of insight gathering mechanisms across different departments. This study points out the challenge related to establishing agile procedures among different units and emphasize its importance when adopting the concept of organizational agility. When looking at agility as procedures derived from agile software development, it may not suit well other functions within the organization. When looking at agility as an enabler for flexibility, speed and customer focus, and at the same time, considering agility as a mindset – then this concept may be applicable to different functions across the organization. However, an organization has to come up with own unique procedures and processes that fit the individual units and their activities.

5.3 Relation of Organizational Agility to Innovation

The case company as an incumbent, technology-driven firm operating within the TMT industry achieved better flexibility, increased speed and enhanced customer focus by embracing organizational agility. This enables the firm to proceed with daily operations as well as innovation initiatives in an easier, faster and more customer-centric manner. This study focused especially on the relationship between gained benefits and innovation actions in order to meet the research objective. Here, the construct of innovation capacity as one of the key determinants for innovation performance was discussed. Innovation capacity refers to the firm's ability to generate innovative outputs over periods of time and influences the effectiveness of the innovation process (Jolly, 1997; Koc & Ceylan, 2007). The case company increases its innovation capacity through gained flexibility, speed and customer focus since

these benefits improve the effectiveness of the innovation process. Identification of these attributes and their relationships allows for answering the proposed research question. The technology-driven case company embraces organization agility characterized by six presented hallmarks and gains benefits that enhance the innovation capacity. Hence embracing organizational agility in the studied setting facilitates innovation in the organization.

When exploring the phenomenon in the case company context, an evidence for sustaining innovation was found. Organizational agility facilitates the improvement of existing products and services, creation of new features, development of new products and their delivery to the existing markets. The company can thus drive sustaining innovation more easily and rapidly while strongly focusing on customer needs. These innovation initiatives are carried out with an aim to remain competitive within the industry, address the changing customer needs and improve the customer experience. Following the characteristics of disruptive innovation, the success of disruptive innovation and whether a new innovative solution replaced an existing solution in the market can be identified after a certain period of time (Christensen, 1997). Therefore, it was hard to investigate the relationship between organizational agility and disruptive innovation when performing a cross-sectional case study and analyzing the innovation initiatives carried out in recent years. In addition, the attribute of disruptiveness is considered as relative (*ibid.*). This research being a single case study made it difficult to relate the identified innovation initiatives to the actions of other companies. On the other hand, an evidence for organizational agility having a positive impact on incremental innovation, as another dimension, was found. Dynamic teams and especially adopting an iterative approach for processes within and outside the technical functions directly affect the effectiveness of incremental innovation. This approach is closely connected with the minimum viable product environment, short customer feedback loops, gradual development and continuous improvement what enhances the flexibility and speed.

Empirical findings were also reviewed in relation to the innovation strategies found in the literature. Developed understanding of data indicates that the company may become a fast follower by embracing organizational agility. Extensive insight gathering mechanisms and effective processes integrating insights into the innovation actions may facilitate the exploration of new markets at an early stage and identification of emerging customer needs. Dynamic teams and all other elements enhancing the flexibility and speed may enable the

company to ideate, develop and deliver the innovative solutions to this market easily and rapidly. Even though the company is not gaining a first mover advantage, they may also benefit from entering the market shortly after the first mover. The advantages of fast follower strategy were found in literature and other empirical studies (e.g. Agarwal & Gort, 2001; Oliver, 2002; Bughin et al., 2017). Some studies in the technology-driven markets even show the advantages of fast followers over the first movers (Ankney & Hidding, 2005). Bughin et al. (2017) further discuss a relation between organizational agility and a successful fast follower strategy what supports the developed understanding of empirical findings in this study. *Identified hallmarks of organizational agility and gained benefits may support a technology-driven firm in executing a fast follower strategy.* This is seen as one of the main managerial recommendations of this study.

Multiple challenges related to organizational agility were presented in the empirical findings section. These are the challenges that were found in the collected data. Besides, another perspective on the overall challenge associated with the studied phenomenon is outlined that provides further implications for the managers. The company tries to gather a significant amount of data and customer insights to inform all kinds of decisions being made in the organization. While this strongly supports the customer-centricity, at the same time, the company may become too customer-focused. In other words, the company may solely develop and deliver solutions that reflect the customers' thoughts about the products. The customers might have a clear understanding of existing products and features, but it is more difficult to think about non-existing products. Therefore, always relying on market data and customer insights may sometimes lead to wrong decisions being made. Even though this study did not examine the relationship between organizational agility and disruptive innovation, being too customer-focused may impede potential disruptive innovation. This is also found in the literature that incumbent firms actively gathering insights have difficulties in analyzing the markets or getting customer feedback for products that do not exist (Christensen et al., 2018). *If there is a desire for more disruptive outcomes, the company should balance exceptional sustaining innovation facilitated by adopting organizational agility with initiatives allowing for groundbreaking solutions.*

5.4 Limitations of the Research

This thesis possesses multiple limitations. The major limitation to the generalization of empirical findings is the nature of this research. Generally, qualitative case studies are considered difficult to generalize and the same applies to this thesis that investigates the phenomenon in a unique setting and specific context. Besides, the research being a single case study made it difficult to analyze the phenomenon in a different setting and compare the discovered findings. The context of this research is limited to a technology-driven firm. On one hand, it is highly beneficial for studying technology-driven innovation which is also an objective of this study. However, the findings from this context may not be fully applicable for non-tech companies.

The research was limited by the time constraints under which it was conducted. In addition, transcribing and coding the data was a time-consuming process which even reduced the time available for overall data analysis. The thesis is a cross-sectional study that investigated the phenomenon at a specific point in time. This made it difficult to assess the relation to disruptive innovation and review certain strategic decisions being made in the company since it requires longer periods of time for the outcomes to be seen.

The interviews as the main primary data collection method were planned to be conducted face-to-face and supplemented by observations in the field. An unexpected situation impeding social interactions caused that interviews were held through video calls and observations could not be carried out. As outlined within the methodology section, the participant bias and researcher bias could be still present even though the researcher implemented several measures to minimize it. These factors can be seen as another limitation of this research.

6. Conclusion

This study aimed at exploring organizational agility phenomenon and answering the research question *how does an incumbent media firm embrace organizational agility to drive innovation?* An exploratory, single case study was conducted to meet the research objective. The case company selected for the research was a well-established, technology-driven media firm with a relatively long experience within the studied phenomenon. Eight informants were interviewed representing different functions and seniority within the company. The interviews together with a great amount of secondary data provided a solid background for data analysis and facilitated a deep understanding of organizational agility and its relation to innovation.

The findings show that some of the main drivers of shifting the company towards organizational agility were increased competition, emerging companies successfully delivering new solutions to the market and especially dedicated individuals actively promoting the concept of organizational agility within the firm. The senior management involvement and support played a tremendous role in the transformation process. The components of organizational agility, presented as Hallmarks, were identified in six business-related categories: structure, decision-making, culture, insights, processes and people. By adopting organizational agility, the case company was found to achieve better flexibility, increased speed and enhanced customer focus. These three attributes are seen as the main benefits and gaining these benefits was also an intention behind the agile transformation. The company managed to embrace agility at an organizational level by perceiving it as an enabler for these benefits, and at the same time, seeing it as a mindset that is promoted throughout the firm. Further, the firm increases its innovation capacity through gained benefits which improve the effectiveness of the innovation process.

The existing literature on organizational agility was reviewed together with selected theories within innovation management discipline to develop an initial understanding before the data collection process as well as to relate the empirical findings to existing theories. This research contributes to contemporary literature on organizational agility with several novel insights that have been developed. For instance, it enhances the literature with a comprehensive inquiry into the role of agile coaches. In addition to the presence of agile coaches, their competence and role being different than commonly discussed Scrum Master work were found essential

for embracing organizational agility. Further, building an open communication culture that cultivates a sharing mindset among all individuals was found as another vital element for organizational agility. This research provided an in-depth examination of insight gathering mechanisms that are crucial for enhancing customer-centricity. One of the most intriguing findings was the ability of the workforce to balance dynamism with stability. The company establishes temporary, cross-functional sub-teams along with the function-based teams what requires to have a “two-handed” workforce able to handle dynamic environment while securing daily operations and enhancing stability.

Exploring the phenomenon in this research setting showed that organizational agility can facilitate innovation in the technology-driven organization. It can facilitate the improvement of existing products and services as well as the development of new products and their delivery to the existing markets. By embracing organizational agility, a technology-driven firm can drive sustaining innovation more easily and rapidly while strongly focusing on customer needs. Also, organizational agility was found associated with incremental innovation since some of the identified hallmarks directly affect incremental development and continuous improvement of created solutions. Identified hallmarks of organizational agility and gained benefits may support a technology-driven firm in becoming a fast follower. The literature review showed that executing a fast follower strategy may provide a firm with multiple advantages and can be seen as one of the desirable strategies for driving innovation (e.g. Ankney & Hidding, 2005; Bughin et al., 2017). A concern regarding excessive customer-centricity was articulated in addition to the challenges presented within the main empirical findings. An organization may become too customer-focused when always relying on customer insights what can impede potential disruptive innovation initiatives (Christensen, 1997). This challenge can be alleviated by achieving a reasonable balance between sustaining innovation facilitated by embracing organizational agility and initiatives fostering disruptive innovation. Overall, adopting the concept of agility at an organizational level can enable a technology-driven firm to proceed with daily operations as well as innovation initiatives in an easier, faster and more customer-centric manner. This can facilitate the innovation process, reduce the organizational rigidity and allow the firm to effectively face the turbulent business environment, increased competition, changed customer expectations and rapid technological advancement.

This research leaves multiple questions related to embracing organizational agility unanswered. A significant gap within this area of research is the absent evidence for a relationship between agility and economic performance of the organization. Further, a study exploring available techniques for measuring the effectiveness and efficiency of different agile actions would be highly beneficial for industry practitioners as well as researchers measuring the performance. Comparing the organizational agility in a technology-driven firm with a non-tech company could be a valuable and interesting area for research. Additionally, each of the six identified hallmarks in this study can be a subject for detailed examination in separate research.

References

Introduction & Literature Review

- Agarwal, R., & Gort, M. (2001). First-Mover Advantage and the Speed of Competitive Entry. *The Journal of Law & Economics*, (44:161).
- Aghina, W., Ahlbäck, K., De Smet, A., Fahrbach, C., Handscomb, C., Lackey, G., & Woxholth, J. (2018). The 5 Trademarks of Agile Organizations. *McKinsey & Company*. Retrieved from: <https://www.mckinsey.com/business-functions/organization/our-insights/the-five-trademarks-of-agile-organizations>
- Ahmad, M. O., Markkula, J., & Oivo, M. (2013). Kanban in software development: A systematic literature review. In *Software Engineering and Advanced Applications (SEAA)*, 2013 39th EUROMICRO Conference on IEEE.
- Alsin, A. (2018). The Future Of Media: Disruptions, Revolutions And The Quest For Distribution. *Forbes*. Retrieved from: <https://www.forbes.com/sites/aalsin/2018/07/19/the-future-of-media-disruptions-revolutions-and-the-quest-for-distribution/>
- Ankney, K., & Hidding, G. J. (2005). Fast-Follower Advantages and Network Externalities in I.T.-Driven Markets. *Journal of Information Science and Technology (JIST)*, 2.
- Anthony, S. D. (2012). First Mover or Fast Follower? *Harvard Business Review*. Retrieved from: <https://hbr.org/2012/06/first-mover-or-fast-follower>
- Ashrafi, N., Xu, P., Sathasivam, M., Kuilboer, J. P., Koelher, W., Heimann, D., & Waage, F. (2005). A framework for implementing business agility through knowledge management systems. Proceedings - *Seventh IEEE International Conference on E-Commerce Technology Workshops*, CEC 2005 Workshops.

- Beck, K., et al. (2001). The Agile Manifesto. *Agile Alliance*. Retrieved from: <http://agilemanifesto.org/>
- Boehm, B., & Turner, R. (2006). Management Challenges of Implementing Agile Processes in Traditional Development Organizations. *IEEE Software*.
- Boulding, W., & Christen, M. (2001). First-Mover Disadvantage. *Harvard Business Review*, (79:9).
- Bowen, D. E., & Youngdahl, W. E. (1998). Lean service: in defense of a production-line approach. *International Journal of Service Industry Management*, 9(3).
- Bughin, J., LaBerge, L., & Mellbye, A. (2017). The case for digital reinvention. *McKinsey & Company*. Retrieved from: <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/the-case-for-digital-reinvention>
- Charbonnier-Voirin, A. (2011). The development and partial testing of the psychometric properties of a measurement scale of organizational agility. *Management*, 14(2).
- Clauß, T., & Laudien, S. (2017). The Influence of Strategic Agility on Firm Innovation Behavior: A Quantitative-empirical Analysis.
- Cole, G. A. (2004). Management theory and practice. *Cengage Learning EMEA*.
- Conboy, K. (2009). Agility from First Principles: Reconstructing the Concept of Agility in Information Systems Development. *Information Systems Research* Vol. 20, No. 3, September 2009.
- Conforto, E. C., Salum, F., Amaral, D. C., Da Silva, S. L., & De Almeida, L. F. M. (2014). Can Agile Project Management Be Adopted by Industries Other than Software Development? *Project Management Journal*, 45(3).

- Cooke, J. L. (2012). Everything you want to know about Agile: How to get Agile results in a less-than agile organization, *IT Governance Ltd*.
- Christensen, C. (1997). Innovators Dilemma, Boston, MA, *Harvard Business School Press*.
- Christensen, C., McDonald, R., Altman, E., & Palmer, J. (2018). Disruptive Innovation: An Intellectual History and Directions for Future Research. *Journal of Management Studies*.
- Denning, S. (2015). Microsoft's 16 Keys To Being Agile At Scale. *Forbes*. Retrieved from: <https://www.forbes.com/sites/stevedenning/2015/10/29/microsofts-sixteen-keys-to-becomingagile-at-scale/>
- Doz, Y., & Kosonen, M. (2010). Embedding Strategic Agility: A Leadership Agenda for Accelerating Business Model Renewal. *Long Range Planning*, 43.
- Felipe L. C., Roldán, J., & Leal-Rodríguez, A. (2016). An explanatory and predictive model for organizational agility. *Journal of Business Research*. 69.
- Fingar, P. (2000). Component-based frameworks for e-commerce. *Communications of the ACM*, (43:10).
- Francois, C. (2013). Agile Methodologies. Enlarge The Available Skill-Set. *Capgemini Consulting*. Retrieved from: https://www.capgemini.com/consulting-fr/wp-content/uploads/sites/31/2017/08/agile_methodologies_-_capgemini_consulting.pdf
- Golder, P. N., & Tellis, G. J. (1993). Pioneer Advantage: Marketing Logic or Marketing Legend. *Journal of Marketing Research*, (XXX:2).
- Goldman, L. S., Nagel, R., & Preiss, K. (1995). Agile Competitors and Virtual Organizations: Strategies for Enriching the Customer. *New York: Von Nostrand Reinhold*.

- Gothelf, J. (2014). *Bring Agile to the Whole Organization*, London: *Harvard Business Review*.
- Goulstone, P. (2016). Project Management. It could be agile?. *Deloitte*. Retrieved from: <https://www2.deloitte.com/au/en/pages/financial-services/articles/project-management-technology.html>
- Griffin, B., & Hesketh, B. (2003). Adaptable behaviours for successful work and career adjustment. *Australian Journal of Psychology* 55 (2).
- Gunasekaran, A. (1999). Agile manufacturing: a framework for research and development. *Int. J. Product. Econ.* 62.
- Gunasekaran, A. (2001). *Agile Manufacturing: The 21st Century Competitive Advantage*. Oxford: Elsevier.
- Hidding, G. J., & Williams, J. R. (2003). Are there First-Mover Advantages in B2B eCommerce Technologies? in Sprague, R. and Nunamaker, J. F. Jr. (Eds.) *Proceedings of the 36th Hawaii International Conference on System Sciences*, Waikaloa Village, Hawaii, IEEE.
- Holbeche, L. (2015). *The Agile Organization: How to build an engaged, innovative and resilient business*. London: Kogan Page Limited.
- Isomäki, A. (2017). How to Manage Disruptive Innovation: Introducing the Innovation Matrix. *Viima*. Espoo, Finland. Retrieved from: <https://www.viima.com/blog/how-to-manage-disruptive-innovation-introducing-the-innovation-matrix>
- Ivory, S., & Brooks, S. (2018). Managing Corporate Sustainability with a Paradoxical Lens: Lessons from Strategic Agility. *Journal of Business Ethics*. 148.

- Jolly, V. K. (1997). *Commercializing New Technologies: Getting from Mind to Market*. Boston, MA, *Harvard Business School Press*.
- Kidd, P.T. (1994). *Agile Manufacturing: Forging New Frontiers*. *Addison-Wesley*.
- Koc, T., & Ceylan, C. (2007). Factors impacting the innovative capacity in large-scale companies. *Technovation* 27(3).
- Kostron, A., Brauchle, A., & Hanisch, B. (2016). Rise of Agile in Automotive R&D, *Horváth & Partners*. Retrieved from: https://www.horvath-partners.com/fileadmin/horvathpartners.com/assets/05_Media_Center/PDFs/englisch/WP_Agile_Automotive_web_g.pdf
- Laanti, M., Salo, O., & Abrahamsson, P. (2011). Agile methods rapidly replacing traditional methods at Nokia: A survey of opinions on agile transformation. *Information and Software Technology*, 53(3).
- Lewis, M. W., Andriopoulos, C., & Smith, W. K. (2014). Paradoxical Leadership to Enable Strategic Agility. *California Management Review*, 56(3).
- Livermore, J. A. (2007). Factors that impact implementing an agile software development methodology. In *Southeast Con*, 2007. Proceedings. IEEE.
- Melnik, G., & Maurer, F. (2006). Comparative analysis of job satisfaction in agile and non-agile software development teams. In *Extreme Programming and Agile Processes in Software Engineering: 7th International Conference, XP 2006*, Oulu, Finland, June 17-22, 2006. Proceedings. Lecture Notes in Computer Science. *Berlin, Heidelberg: Springer Berlin Heidelberg*.

- Mens, T. (2008). Introduction and roadmap: History and challenges of software evolution, chapter 1. software evolution.
- Moe, N. B., Dingsøy, T., & Dybå, T. (2010). A teamwork model for understanding an agile team: A case study of a scrum project. *Information and Software Technology*, 52(5).
- Nerur, S., Mahapatra, R., & Mangalaraj, G. (2005). Challenges of migrating to agile methodologies. *Communications of the ACM*, 48 (5).
- Nixon, P., Harrington, M., & Parker, D. (2012). Leadership performance is significant to project success or failure: a critical analysis. *International Journal of productivity and performance management*, 61 (2).
- Novoseltseva, E. (2016). Benefits of agile project management. *Apiumtech*. Retrieved from: <https://apiumtech.com/blog/agile-project-management-benefits/>
- Oliver, R. W. (2002). The Strategic Sweet Spot. *Journal of Business Strategy*, (23:2).
- Overby, E., Bharadwaj, A., & Sambamurthy, V. (2006). Enterprise agility and the enabling role of information technology. *European Journal of Information Systems*, 15(2).
- Parker, D. W., Holesgrove, M., & Pathak, R. (2015). Improving productivity with self-organised teams and agile leadership. *International Journal of Productivity and Performance Management*, 64 (1).
- Plonka, F. S. (1997). Developing a lean and agile work force. *Human Factors and Ergonomics in Manufacturing* 7 (1).

- Qian, G., & Li, L. (2003). Profitability of small- and medium-sized enterprises in high-tech industries: the case of the biotechnology industry. *Strategic Management Journal* 24 (9).
- Rigby, D. K., Sutherland, J., & Takeuchi, H. (2016). Embracing Agile - How to master the process that's transforming management. *Harvard Business Review*. Retrieved from: <https://hbr.org/2016/05/embracing-agile>
- Sánchez, A. M., & Pérez, M. P. (2004). The Use of lean Indicators for Operations Management In services. *International Journal of services Technology and Management*, 5(5-6).
- Schwaber, K. (1997). Scrum development process. In Business object design and implementation. *Springer*.
- Senior, B., & Swailes, S. (2004). The dimensions of management team performance: a repertory grid study. *International Journal of Productivity and Performance Management*, 53 (4).
- Shankar, V., Carpenter, G., & Krishnamurthi, L. (1998). Late Mover Advantage: How Innovative Late Entrants Outsell Pioneers. *Journal of Marketing Research*, (35:1).
- Sharifi, H., & Zhang, Z. (2001). Agile manufacturing in practice—application of a methodology. *International Journal of Operations and Production Management* 21 (5–6).
- Sherehiy, B., & Karwowski, W. (2014). The relationship between work organization and workforce agility in small manufacturing enterprises. *International Journal of Industrial Ergonomics*. 44.

- Sherehiy, B., Karwowski, W., & Layer, J. K. (2007). A review of enterprise agility: Concepts, frameworks, and attributes. *International Journal of Industrial Ergonomics*, 37.
- Sutherland, J., & Schwaber, K. (2013). The scrum guide. The definitive guide to scrum: The rules of the game. *Scrum. org*, 268.
- Swank, C. K. (2003). The lean service Machine. *Harvard Business Review*.
- Szetto, E. (2000). Innovation Capacity: Working Toward a Mechanism for Improving Innovation within an Inter-Organizational Network, *The TQM Magazine*, 12(2).
- Teece, D., & Pisano, G. (1994). The Dynamic Capabilities of Firms: An Introduction. *Industrial and Corporate Change*, 3.
- Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic Capabilities and Organizational Agility: Risk, Uncertainty, and Strategy in the Innovation Economy. *California Management Review*.
- Vokurka, R. J., & Fliedner, G. (1998). The journey toward agility. *Industrial Management & Data Systems*, 98(4).
- Weber, Y., & Tarba, S. Y. (2014). Strategic agility: a state of the art. *California Management Review*, 56(3).
- Williams, L., & Cockburn, A. (2003). Agile software development: it's about feedback and change, *IEEE Computer* 36 (6).
- Wilson, K., & Doz, Y. (2011). Agile Innovation: A Footprint Balancing Distance and Immersion. *California Management Review*, 53.

Yusuf, Y. Y., Sarhadi, M., & Gunasekaran, A. (1999). Agile manufacturing: The drivers, concepts and attributes. *International Journal of production economics*, 62 (1-2).

Yusuf, Y., Gunasekaran, A., Adeleye, E. O., & Sivayoganathan, K. (2004). Agile supply chain capabilities: determinants of competitive objectives. *Eur. J. Oper. Res.* 159 (2).

Methodology

Bryman, A. & Bell, E. (2003). Business research methods. New York: *Oxford University Press*.

Charmaz, K. (2014). Constructing Grounded Theory. *Sage*.

Collis, J., & Hussey, R. (2013). Business research: A practical guide for undergraduate and post graduate students. *Palgrave Macmillan*.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and Challenges. *Academy of Management Journal*, 1.

Farquhar, J. D. (2012) Case study research for business. *Sage*.

Guba, E. G. (1981). Criteria for Assessing the Trustworthiness of Naturalistic Inquiries. *ECTJ*, 29(2).

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Multivariate data analysis. 6th Edition. *Pearson Prentice Hall*. New Jersey.

Hirsjärvi, S. & Hurme, H. (2004). Research Interview: Thematic Interview Theory and Practice. Helsinki: *Gaudeamus Helsinki University Press*.

- Karlsson, C. (2009). Researching Operations Management. *Researching Operations Management*. New York: Routledge.
- Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry (Vol. 75). *Sage*.
- Lindlof, T., & Taylor, B. (2011). Qualitative Communication Research Methods. 3rd Hrsg. London: *SAGE Publications, Inc.*.
- Malhotra, N. K. & Birks, D. F. (2007). Marketing Research An Applied Approach, *FT Prentice Hall*, London.
- Malterud, K. (2011). Qualitative research: standards, challenges, and guidelines. *The lancet*, 358(9280).
- Pedrosa, A., Naslund, D. & Jasmand, C. (2012). Logistics Case Study based Research: Towards Higher Quality. *International Journal of Physical Distribution & Logistics Management*.
- Pole, Ch. & Lampard, R. (2002). Practical Social Investigation – Qualitative and Quantitative Methods in Social Research. *Harlow: Pearson Education*.
- Ponelis, S. R. (2015). Using Interpretive Qualitative Case Studies for Exploratory Research in Doctoral Studies: A Case of Information Systems Research in Small and Medium Enterprises. *International Journal of Doctoral Studies*.
- Rowley, J. (2002). Using Case Studies in Research. *Management Research News*.
- Saunders, M., Lewin, P., & Thornhill, A. (2016). Research Methods for Business Students (Seventh ed.). *Harlow, England: Pearson*.

- Sinkovics, R. R., Penz, E., & Ghauri, P. N. (2008). Enhancing the trustworthiness of qualitative research in international business. *Management International Review*, 48(6).
- Strauss, A., & Corbin, J. (1998). Basics of qualitative research: Techniques and procedures for developing grounded theory. Thousand Oaks, CA: *Sage*.
- Yin, R. K. (2009). Case study research: Design and methods (4th Ed.). Thousand Oaks, CA: *Sage*.
- Yin, R. K. (2014). Case Study Research, Design and Methods. (5th ed.). Thousand Oaks, CA: *Sage*.

Appendix – Interview Guide

Before the interview

- Introducing the researcher and outlining the personal motivation for examining organizational agility
- Introducing the thesis, topic and research program
- Presenting interview setting; open discussion, recording permission, ensuring about anonymity

Background information

- 1) How long have you been involved in the company and what is your current position and role?
- 2) Could you tell me what kind of products and services your company is providing?
 - How do you deliver the products and services to your customers?

General introduction to the topic

- 3) How would you describe the agility?
- 4) How long have you personally been working with agility? How long has your company been working with agility?
 - If long and matured; has the way you work with agility evolved and changed over the years?
 - If possible, take me through a concrete example of how you work in agile way today compared to a few years ago (or in the very beginning)?
- 5) Could you give some examples of products or services that were developed through agile methods?
 - If possible, take me through an example of a very successful product or service and a less successful one, and compare these two
- 6) What were the main reasons to start exploring and leveraging agile practices?

Organization and structure

- 7) How would you describe the structure of your teams? Is it divided according to roles and functions?
 - Do you have project-based teams?
 - What is the average size of a team?
 - What do you think works well and not well in such a structure?
- 8) How is the information distributed and shared within the team and across the organization?
- 9) How are the decisions made within the team? How is the responsibility allocated?
- 10) How would you describe the senior management approach? What kind of role do leaders play in your company?

Processes and product development

- 11) How do project development and strategic planning look at your company?
 - Do you utilize iterative approach? Where? In product development only or also elsewhere?
 - Could you give an example of any project you have been engaged in?
- 12) To what extent do you cooperate with your customers and suppliers?
 - Do you involve them in any of the processes?
 - What are the mechanisms for securing collaboration?
- 13) How do you secure high quality and innovativeness of your products and services?
 - Do you use experimentation approach in product development or elsewhere?
- 14) How do you track changes in the market?
 - Do you consider your working methods to have a positive impact on market responsiveness?
- 15) Do you think your company do increase cost-effectiveness practicing agile?
 - How? Do you have any key metrics being applied and continuously assessed?

People

- 16) What kind of skills and knowledge does it require to be a valuable member of your team?

- How are these skills relevant for successful project execution, effectivity and efficiency?
- 17) Does your company provide specific training and education for its employees?
- Do you have any continuous learning mechanisms in place? How does it work?
- 18) Does your everyday work require cooperation with people from different background and functions?
- What does this heterogeneity provide you with? (If any)
 - How do you ensure effective collaboration?
 - How do you solve potential tension?
- 19) How would you describe overall employee satisfaction in your company?
- Do you have any concrete measures in place?
 - If yes, could you share your employee satisfaction survey results?

Technology and environment

- 20) What kind of role does technology play in your everyday work? Do you think that advanced IT infrastructure is crucial for your company?
- 21) How would you describe your physical and virtual environment?
- How does it help to increase productivity and overall effectiveness in your company?

Other

- 22) How would you describe your organizational culture? Does your company promote a strong vision among its employees?
- How does it affect your performance and team productivity?
- 23) How do you ensure trust within the teams?
- How do you ensure trust within the company?
 - What kind of rule does the trust play in your company?
- 24) What are the biggest challenges when working in an agile way?
- Could you describe key lessons-learned when solving these challenges?

Closing the interview

- Asking for any other comments or suggestions
- Asking for a possibility of follow-up questions via email
- Ensuring informant about anonymity again
- Appreciating informants' time and interest

This thesis examines how a technology-driven firm can drive innovation through the concept of organizational agility. This research is conducted as an exploratory, single case study investigating the phenomenon in the context of an incumbent media firm. The empirical findings are further related to the existing literature on organizational agility and selected theories within the innovation management discipline.

The findings outline the change process and discuss the main drivers of shifting the company towards the organizational agility. The components of organizational agility are identified and presented as 'Hallmarks' concerning established procedures, performed actions and other characteristics related to the studied phenomenon within the research context. Each of the hallmarks is elaborated in detail to develop an overall understanding of how agility can be embraced at an organizational level. Besides, the outcomes in the form of experienced challenges and gained benefits related to adopting organizational agility are identified. The flexibility, speed and customer focus as the main achieved benefits are further discussed in relation to the concept of innovation capacity.

The study finds that embracing organizational agility may facilitate sustaining innovation in the technology-driven firm. Additionally, identified hallmarks of organizational agility and gained benefits may support a technology-driven firm in executing a fast follower strategy. A general concern associated with excessive customer-centricity potentially hindering disruptive innovation is emphasized and respective managerial recommendations are proposed.

The thesis suggests that both academia and industry would benefit from future research examining the relationship between agility and organizational economic performance and studying the phenomenon in the context of a non-tech organization.

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