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Agility, Empowerment, and Innovative Work Behaviors

Navn:	Michael Grassmayr

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Supervisor
Prof. Dr. Miha Škerlavaj

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ABSTRACT

Digital market disruption, changing consumer preferences, and the current COVID-19 crisis require organizations to transform their business models and offerings. Especially large corporations face challenges in creating highly creative and innovative products and services. This case study analyzes the impact of an agile organizational structure on employee empowerment and the innovative work behavior in a large Scandinavian bank. The company transformed a strategic, technical unit to be self-organized two years ago and experienced increased efficiency and innovation as well as more playful and customer-centric solutions since implementation. Agile work methods use prototypes, testing, and customer feedback to ensure that the iterative innovation process creates valuable solutions for customers. The workload and number of open projects need to be limited to avoid adverse effects of high employee empowerment, especially burn out. Data from ten qualitative interviews show that increased autonomy and decentralization lead to higher levels of employee empowerment and innovative work behaviors.

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Michael Grassmayr
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Introduction

Companies face new challenges in a rapidly changing market environment. These circumstances require organizations to become more flexible and adapt rapidly; in times of technological advancement as well as the current COVID-19 health crisis. Large parts of the economy suffer demand declines and supply chain interruptions in 2020, while some companies are able to bring innovative offerings to the market within weeks and reposition their brand. From start-ups to global players, creative solutions were brought forward to help those people affected most (Rigby, Elk, & Berez, 2020). One positive example is Dyson, which delivered a life-saving emergency ventilator after only ten days of development. Two months later, they were able to commercialize air cleaning and hygiene products in the consumer market.

Many large corporations still have month-long, bureaucratic development processes while they are facing increased competition from start-ups, digitally native companies, or market leaders from other industries. In order to take on those competitors and succeed in newly emerging challenges, organizational change is needed (World Economic Forum, 2018). New organizational structures and processes can help companies increase efficiency, profitability, and competitiveness (Kane, Palmer, Phillips, Kiron, & Buckley, 2015; Ross, 2018). Nevertheless, many new competitors can create a better customer experience at lower price points. Traditional organizations need to become more innovative and generate better customer experiences faster (World Economic Forum, 2018).

The financial industry is one of the first major industries to be disrupted by digitally native companies (Gomber, Kauffman, Parker, & Weber, 2018). Initially, only limited services were offered by, for example, PayPal to complement the traditional role of banks. Nowadays, full-service financial institutions like N26 and Revolut gain market share rapidly in traditional banking (Storonsky, 2019; World Economic Forum, 2018). Additionally, numerous competitors emerge for specific core banking services like investing, trading, money exchange, and instant money transfer (Gomber et al., 2018). For big players in the industry, it is crucial to adapt to the digital needs of customers and use information and communication technology to automatize processes and reduce costs (Krstic and Tešić 2016). The World Economic Forum (2018) states that many digital companies within industries other than banking can be seen as future competitors to banks. Customers prefer

brands that create relevant and valuable experiences across industry borders (World Economic Forum 2018). Currently, banks feel partly protected by globally fragmented governmental regulations. Nevertheless, online banks like Revolut increasingly manage to deal with these issues and offer their service in most western countries.

Global digital players like Amazon, Google, and Facebook have knowledge, data, and algorithms to serve customers (World Economic Forum, 2018). Adding one service – like banking - to an existing digital infrastructure might result in lower costs and better customer experiences, instead of building up a digital infrastructure in a traditional enterprise specialized in banking. Additionally, global digital competitors profit from the economies of scale of digital-only solutions.

This outlook of the World Economic Forum draws a rather bleak picture for traditional full-service banks. The question of how they can transform, to leverage their banking experience and provide superior or competitive services to born-digital banks emerges. Only if this is achieved, can they succeed in the current digital competition and be well prepared should global digital players enter the industry.

To create solutions that are perceived as valuable by customers, many organizations rely on teams with an agile structure (Rolfsen & Strand Johansen, 2014; Ross, 2018). Decision power is decentralized and distributed towards teams and individuals (Beck et al., 2001). Agile teams are intended to consist of individuals that participate in team decision making and manage their workload and work schedule (Highsmith, 2004). Thus, they require both a high degree of team autonomy and individual autonomy (Moe, Dingsøyr, & Dybå, 2009). Autonomy is understood to be a motivational work characteristic, since it positively affects the intrinsic motivation of individuals, and is positively related to high-quality job performance and job satisfaction according to self-determination theory (Deci, Olafsen, & Ryan, 2017). It is suggested that autonomous teams are more productive (Parker, Holesgrove, & Pathak, 2015), innovative (Patanakul, Chen, & Lynn, 2012) and customer-centric (Kautz, 2009; Rolfsen & Strand Johansen, 2014).

Companies like ING (Kerr, Gabrieli, & Moloney, 2018), Spotify (Bäcklander, 2019; Kniberg & Ivarsson, 2012), and Zappos (Askin, Petriglieri, & Lockard, 2018) implemented a self-organized structure on a companywide level.

This approach is associated with risk, as transformation processes towards a self-organized structure do not always go as planned (Lee & Edmondson, 2017). Even when the implementation is successful, it is challenging to manage and sustain the self-organized culture (Conboy, Coyle, Wang, & Pikkarainen, 2011; Nold & Michel, 2016). To reduce the risk associated with agility and change processes, many organizations implement self-organized structures only in selected development or programming units.

This case study observes the innovative work behaviors (IWB) within an agile unit of a Scandinavian bank. They implemented a self-organized structure two years ago. The results of this unit are celebrated company-wide because it generated - with comparably few resources - the necessary mobile customer interface which the company had failed to produce two years ago. The software is playful, intuitive, and liked by customers, whereas the desktop version, which is programmed with similar resources in a top-down hierarchical structure, is rated significantly worse by customers. This research project aims at finding out how employees can be encouraged to show innovative work behavior and implement innovative solutions in rapidly changing market situations.

RQ1

"To which extent do agile organizational structures influence innovative work behaviors?"

RQ2

"How can agile work methods support innovative work behaviors?"

As many more industries are being disrupted in the future, it will be crucial to learn from the initiatives by early disrupted industries. This academic research project provides practical implications for organizations to better understand the impact of organizational factors on the innovativeness of their generated products or services.

Theory

In this chapter, academic literature in the fields of self-organized organizational structures and innovative work behaviors is analyzed. The aim is to find out how employees in traditional companies can be encouraged to show innovative work behaviors and adapt to new and rapidly changing market situations.

A systematic literature review based on Booth, Sutton, & Papaioannou (Booth, Sutton, & Papaioannou, 2016) was conducted to gain a broad understanding of research in the relevant field. In this search, inclusion and exclusion criteria were applied to the search results, to reduce biases in the selection process. The literature search was conducted on the platforms business source complete (EBSCO) and Google Scholar with filters to only show academic articles published in peer-reviewed journals between 2010 and 2020. The keyword combinations and their results are stated in Table A1 (Attachments 3). Fundamental literature of the relevant research schools was added through inclusion criteria.

Innovative Work Behaviors

Innovation and creativity are closely related (West & Farr, 1990), as both are crucial in crafting something novel with potential utility (Anderson, Potočnik, & Zhou, 2014). Creativity refers to the generation of novel ideas, whereas innovation is the implementation of those ideas (Anderson et al., 2014; Scott & Bruce, 1994). Kanter (1988) describes the process of creating and implementing novel ideas as a multistage process. First, a problem needs to be recognized to then generate an idea or solution (Kanter, 1988). In the process of identifying a high potential idea to prototyping it, the innovative behaviors of employees - their willingness to act – is crucial (Anderson et al., 2014).

Definition

Innovative work behaviors (IWB) describe the actions of employees to implement ideas which they created based on problem recognition (Scott & Bruce, 1994). The four innovative work behaviors include exploration, generation, championing, and implementation of ideas (Jong & Den Hartog, 2010). The term innovative employee behavior is used to describe only the implementation of ideas (Amabile & Fisher, 2000) and forms one of the four elements of innovative work

behaviors (Jong & Den Hartog, 2010). All four behaviors are linked to each other, which makes it necessary to take a holistic perspective (Jong & Den Hartog, 2010).

The first element of the innovative work behaviors is exploration, in which a problem or unused potential is recognized (Jong & Den Hartog, 2010). Especially in the current COVID-19 crisis, the problem might be an imminent threat where immediate action is necessary. Unused potential might be observed through customer feedback, testing, or comparison with competitors.

Secondly, the idea generation aims at ideating solutions(Jong & Den Hartog, 2010). Ideas must be novel and have a potential utility for customers. Škerlavaj (2018) refers to highly novel ideas with a high potential utility as high potential ideas. In the innovation process, raw ideas gain potential utility as people work on the ideas, intensify them, and identify the most useful elements (Škerlavaj, 2018).

Idea championing is relevant when a high potential idea needs to be implemented (Jong & Den Hartog, 2010). Even if the idea is novel and has a high potential utility, various stakeholders need to be convinced that the gains outweigh the costs (Jong & Den Hartog, 2010). An idea champion or change agent is needed to promote the idea (Škerlavaj, 2018). If stand-out individuals are change agents, the idea is more likely to succeed compared to a team with an equal spread of change agency (Cerne & Skerlavaj, 2015). Nevertheless, informal networks of the change agent might be necessary to promote the high potential idea, gain supporters, and start the implementation process (Jong & Den Hartog, 2010).

Idea implementation is the path of bringing an idea to the market. It relies on the proactive behavior and outcome orientation of employees (Jong & Den Hartog, 2010; Škerlavaj, 2018) as well as the organizational structure (Cosh, Fu, & Hughes, 2012). Formalized processes can help to achieve outcomes with limited resources (Cosh et al., 2012).

Links in Academic Research

Amabile & Fisher (2000) elaborate that innovative work behaviors are fueled by passion and intrinsic motivation. Therefore, providing extrinsic rewards to foster innovative work behaviors is counterproductive (Amabile & Fisher, 2000). Academics have since conducted research to define how organizations can

influence innovative work behaviors. Different factors were found, which include individual, leader, and workgroup factors as well as the organizational climate (Scott & Bruce, 1994). First, the organizational climate can channel the attention and action of employees towards innovation (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Scott & Bruce, 1994). Second, leadership, which empowers employees (Pieterse, van Knippenberg, Schippers, & Stam, 2010; Rhee, Seog, Bozorov, & Dedahanov, 2017) and creates ownership (Sieger, Zellweger, & Aquino, 2013) increases innovative work behaviors. Third, the individual component related to innovative work behaviors is influenced by leadership and organizational climate (Scott & Bruce, 1994). Carmeli, Meitar, and Weisberg (Carmeli, Meitar, & Weisberg, 2006) argue that individuals are increasingly more influenced by their self-leadership skills and interaction with their peers, as organizational structures transform towards more autonomy. Thus, the following proposition is formulated.

Proposition 1

Self-organized teams experience increased innovative work behaviors, as perceptions of empowerment and ownership are high.

The three stated research streams related to innovative work behaviors are strongly interwoven. Leadership style and organizational culture are both elements of the organizational structure and influence the innovative work behaviors directly. The individual factor of empowerment is a moderator between the organizational factors and the innovative work behaviors (Laschinger, Finegan, Shamian, & Wilk, 2004). Thus, structural elements indirectly impact innovative work behaviors. Reward-based, top-down structures need to be transformed if companies want to encourage employees to show innovative work behaviors (Shipton, Sparrow, Budhwar, & Brown, 2017).

Agile Organizational Structures

The agile concept describes an organizational structure as a network of collaborative self-managed teams that aim to organize work and deliver outcomes based on customer needs in an adaptive manner (Beck et al., 2001). To attain agility, organizations decentralize responsibilities. This reduces decision power and control of managers (Abrahamsson, Salo, Ronkainen, & Warsta, 2017). The structural

changes of responsibility and decision power combined require a leadership change towards an empowering leadership style (Bäcklander, 2019).

Agile Teams

Agile teams consist of individuals that participate in team decision making and manage their workload and work schedule (Highsmith, 2004). Thus, they require both a high degree of team autonomy and individual autonomy (Moe et al., 2009). Autonomy could be understood as "the extent to which a job allows freedom, independence, and discretion to schedule work, make decisions, and choose the methods used to perform tasks" (Morgeson & Humphrey, 2006).

This way of working requires a different leadership style compared to autocratic, top-down structures (Bäcklander, 2019). The classical managerial position is split up into different job descriptions, which is further elaborated in the chapter "Agile Work Methods".

Customer orientation is increased in most agile settings, as decisions are made by teams based on the needs of customers (Bernstein, Bunch, Canner, & Lee, 2016). Employees who are in contact with customers physically or virtually through feedback and data might understand the needs of customers better than their superiors in upper positions of the hierarchy. Furthermore, the teams are flexible. Decisions are made immediately and might be revised later (Bernstein et al., 2016). In contrast, if a manager needs to approve decisions, the implementation time is longer, and exciting ideas might be rejected. In an agile setting, the team can decide to make bets on ideas they believe customers could like (Sims, 2011). Those bets are little experiments with a small risk but uncertainty regarding their outcomes (Sims, 2011).

Autonomously structured teams performing better because employees are less limited by the formal organizational structure, as it was proven in the software industry over the last decades (Rigby, Sutherland, & Takeuchi, 2016). (Patanakul et al., 2012) argue based on the results of an empirical study that agile teams are superior if a project has a high degree of innovativeness. Nevertheless, self-planning and scheduling of work require all team members to be fully committed (Moe et al., 2009). Thus, agile structures can bring benefits to organizations, but they need to be implemented and managed well (Conboy et al., 2011). The

assumption that agility means no organizational structure is in place is therefore entirely wrong. Agility is simply a different way of structuring work.

Typology of Agile Structures

Many agile concepts are created by consultants and organizations, as there is only limited academic literature in this field. The major challenge for large corporations at implementing agile concepts is that agility is built on autonomously structured teams. The structure and coordination of those teams are complex, as decentralization and work autonomy are vital elements of agility. Two examples of how agility can be implemented in a large organization are described in the following paragraphs. Holacracy and the Spotify model are good representatives of the many structures out there, as the first has successful use cases mainly in small organizations, while the Spotify model is intended for medium and large organizations.

Holacracy

Holacracy is a structure that focuses on work instead of people (Robertson, 2016; van de Kamp, 2014). The organization is divided into many teams called circles. Each circle has a purpose and might be divided into many subcircles in large organizations. There are no job titles, only roles. Every employee can have multiple roles in different circles. Whenever a role is no longer needed, it is removed. This creates a highly flexible work environment which can be easily adapted (van de Kamp, 2014). Many employees decide to take roles in their field of expertise and unrelated fields of interest.

The inspiration for holacracy is the functioning of large cities (Askin et al., 2018). While they grow, they become more productive in contrast to organizations where growth leads to a decrease in productivity. To achieve productive growth, every role has responsibilities and authorities (van de Kamp, 2014). This leads to decision power being spread across the organization. If the CEO of an organization wants to change, for example, the layout of the homepage, they must ask the person responsible for homepage design for permission. This is comparable to a mayor of a city who has no right to change anything on one’s property but can ask this individual to contribute towards a common goal or grant permission to adapt something specific. In both settings, the responsible individual has the right to decline the request in the context of the organizational or governmental regulations.

Zappos is the largest company that implemented holacracy (Askin et al., 2018). They faced issues implementing the structure, which lead to the decision of speeding up the change process and financially incentivizing resistors to leave. This led to 14 % of all employees leaving the company. Medium, a social media company, decided to drop the holocratic structure as it took too much effort to coordinate at scale.

Zappos and Medium are both good examples for understanding the positive and negative aspects of holacracy. Productivity is increased through holacracy in small settings, but additional coordination and leadership roles are necessary for large organizations (Bernstein et al., 2016). This means the productivity gain might be outweighed by the increased need for coordination between circles, training of self-management skills, and potential loss of economies of scale (Bernstein et al., 2016). People in self-managed structures need guidance and might establish micro leadership constellations (Bernstein et al., 2016). Thus, holacracy offers many advantages, such as customer centricity, fast adaptability, ownership feeling, and empowerment of employees, but comes at a cost that might outweigh the benefits.

Spotify Model

The Spotify model was initially designed by agile coaches for the music platform Spotify but inspired many other organizations and became a widely used agile structure (Kerr et al., 2018). It consists of teams called squads, and departments called tribes (Kniberg & Ivarsson, 2012). In each squad, there are defined roles, which in programming teams are related to business and IT. Individuals can join guilds, interest groups for specific topics, and are automatically in one chapter, the group of all people with the same role in a tribe (Kerr et al., 2018). Squads are self-managed teams, with a team lead as coordinator to other squads. Through chapters and guilds, employees can connect with people from the whole tribe. Guilds can form around any topic of interest, like innovation or recruiting.

Support functions are guiding employees and teams in their daily work and development (Bäcklander, 2019). This includes agile coaches who focus on creating an environment where all employees can work efficiently. They support people in their career decisions and encourage them for personal development. Strategic and technological support functions shape the organizational strategy and coordinate company-wide changes.

When squads and tribes plan projects, they create a timeline and goals, but those will be revised during the project in meetings (Kerr et al., 2018). No decision or goal is irreversible. It is essential that the outcome is of good quality and has value for the customer. How this is achieved is up to the squads. If they set ambitious goals and do not reach them, there are no consequences.

Regular meetings are scheduled. Each squad meets in the morning for a meeting to align their work (Kerr et al., 2018). On a bi-weekly basis, the whole tribe meets, while guilds and chapters have varying time intervals for their meetings. In those different meetings, the goals for projects are defined and revised (Kerr et al., 2018). During and after each project, reflections are made to learn from past decisions, successes, and failures. This creates a learning culture, in which the reflection on a past action leads to improvement and better planning of future actions (Bäcklander, 2019).

The Spotify model is an agile structure that works well in large organizations. Team leads and product owners function as leaders for operative alignment, while support functions provide necessary personal development and training in self-leadership. The split into a coaching role and two leadership roles decouple operative work from a personal career.

The Spotify model works well in large organizations (Kerr et al., 2018; Kniberg & Ivarsson, 2012). Nevertheless, the well-known model is already over ten years old. As an agile organization changes the structure regularly, this model might already be outdated for years. The current structure of Spotify might look very different. Organizations that implemented the Spotify model adapted it to their organization. This might go very well, as in the case of ING, where Spotify coaches consulted the bank. In other cases, the company might adopt this model in a way that does not suit the organization or is not well aligned with the goals they aim to reach (Park, 2017). It is crucial for the success of this agile model that the organization is aware that a new structure does not make their company universally more efficient. The organizational spirit, resistance of employees, informal hierarchies, processes, and incentives can result in a failed agile implementation (McAvoy & Butler, 2009).

Benefits, Risks, and Failure of Agile Structures

The examples of Holacracy and the Spotify model show that each type of structure has benefits and costs. In academia and business, people are either strongly enthusiastic or pessimistic about agile structures (Bernstein et al., 2016).

Agile organizational structures are well suited for uncertain or unstable situations (Lee & Edmondson, 2017; Patanakul et al., 2012). Traditional hierarchies are showing flaws in such settings. Thus, agility offers an excellent opportunity for innovation teams, customer-centric teams, and fast response units. Decisions are made rapidly, and all involved team members are equal in rank and decision power (Beck et al., 2001). Every employee can contribute where they are most skilled or interested in. Roles and structures can be adapted whenever necessary. Empowerment and ownership feelings of employees are high.

Top-down structures outperform agile structures in a stable setting, where no rapid adaption of the plan is necessary (Lee & Edmondson, 2017). In a large organization, it might be beneficial if every employee simply executes the commands from above. Agile changes can make the execution inefficient and outcomes less predictable (Lee & Edmondson, 2017). Any organizational change needs to be in line with the values, procedures, and goals of the organization (Kerr et al., 2018). Implementing agility without considering those factors might lead to a failed change process. It is crucial to understand that agility is not a stable structure; the organization needs to invest resources to adapt continuously.

Agility is a structure with great potential for uncertain and rapidly changing environments, but like any change process, it comes at a cost (Lee & Edmondson, 2017). Managers need to consider potential gains, costs, and risks to evaluate whether agility is the right structure for an organization and how it could be implemented.

Agile Work Methods

Agile teams work autonomously but need coordination, strategic direction, and operative alignment to succeed (Bäcklander, 2019; Drath et al., 2008). In order to achieve this, work is aligned and structured by different work methods. One widely used agile project management method is scrum, which acknowledges that development processes are hardly predictable, imperfect, and complicated

processes (Bäcklander, 2019; Schwaber, 1997). Scrum structures teams in product owner, team leader, and scrum master or coach (Schwaber, 1997). All three focus on different aspects of a managerial role to support each other in achieving goals together. Product owners are responsible for subject-specific topics, like one technical function of a product. Team leaders are responsible for the work environment, teamwork, and exchange with other teams. Agile coaches take over the self-development, guidance, and career development function of the classical managerial role.

The significant difference between classical hierarchies is that these three managerial roles are support functions. Managers who work in support functions do not delegate work but facilitate employees in doing their work (Schwaber, 1997). To illustrate this, some companies turn around the hierarchy, so the CEO is at the very bottom, and employees or operative teams are on the top of the organizational chart. This illustrates that support functions are not superior to others but should help them in achieving their individual and team goals.

In scrum, work is done in sprints (Schwaber, 1997). A sprint is a period, for example, 48 hours or one month, in which a specific project has to be finished. The difference to classical deadlines is that before the start of the sprint, no or only a few basic requirements are set. Thus, employees can focus on producing the best possible outcome instead of investing all their time and resources in meeting the minimum requirements. During the project, time, goals, and specifications regarding the outcome might change depending on the progress of the project. After each sprint, the team decides in a defined process what the next sprint should be like, what can be learned from the last sprint, and set priorities for future goals (Schwaber, 1997). During the sprint, such reflection sessions happen on a daily and weekly basis, but in a shorter format.

Innovation Processes

The innovation process consists of multiple steps. Furr and Dyer (2014) structure it into four stages, Insights, Problem, Solution, and Business Model. In each stage, different work methods are needed. The work methods stated by Furr and Dyer (2014) in Image 1 are widely used in business. It is essential to understand that work methods are best suitable in specific stages of the innovation process. In the Insights stage, pain-points, unused potential, or flashes of inspiration start an

open ideation process (Furr & Dyer, 2014). Design thinking is a work method for structuring the innovation process from ideation to the final prototype (Brown, 2008). In the earlier stages, an open and creative process is necessary, while in the solution and business model stage, the processes are increasingly formalized. This work methodology is described in the "Design Thinking" chapter. When a final prototype is produced, a viable business model needs to be created. Lean startup, an approach for the fast and resource-efficient creation of products and business models, and business model canvas are well suitable for this stage. Commercializing the idea or prototype is beyond the scope of this research project and not further considered.

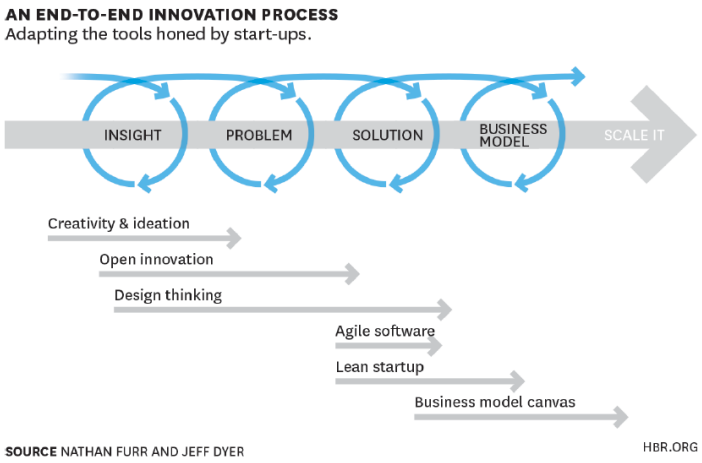


Image 1: End-To-End Innovation Process (Furr & Dyer, 2014)

Design Thinking

Design Thinking is a work method where design techniques are used to develop products or services in an iterative process (Brown, 2008; d.School, 2020). This method is often used in agile settings to bring ideas to the market rapidly. It was initially used by architects and designers and was popularized in the business world by Stanford's d.School and the consulting firm IDEO. The process consists of five steps: emphasize, define, ideate, prototype, and test (Brown, 2008), which reflect the first three stages of Furr and Dyer (2014) in detail. The emphasize phase makes the developing team understand the customers, their needs, and pain-points. In define, they summarize and structure their findings as a basis for creating potential solutions. This leads to ideation, where the team comes up with ideas to meet customer needs and create solutions that are valuable to them. In the next step, the best potential solutions are prototyped to be tested in the last step.

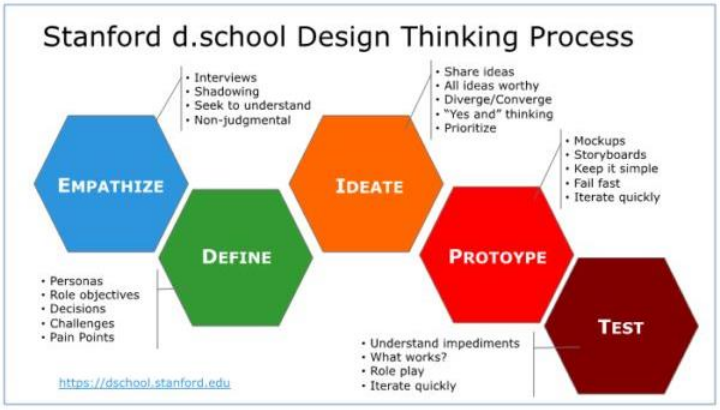


Image 2: Design Thinking Process (d.School, 2020)

Empowerment

In academia, there are two primary research schools, which define empowerment at work differently (Amundsen & Martinsen, 2015; Rhee et al., 2017; Spreitzer, 1995). The first research school views empowerment from a socio-structural perspective (Amundsen & Martinsen, 2015). It is argued that organizations, leaders, and managers need to empower employees through interventions and practices (Amundsen & Martinsen, 2015). Thus, empowerment is perceived as a result of an organizational structure and actions taken by leaders within the organization. The second research school views empowerment from a psychological perspective (Amundsen & Martinsen, 2015). Thus, empowerment is a concept based on each individual's intrinsic motivation to solve tasks. This intrinsic motivation is shaped by different factors, which include besides others, the work environment, and the perceived impact within the organization.

Formalization and Centralization

Psychological employee empowerment is a reaction of employees to the structural empowerment conditions within an organization (Laschinger et al., 2004). Thus, a structural empowerment perspective can be applied to create an organizational structure and work environment in which employees can experience psychological empowerment. A self-administered survey conducted by Rhee et al. (Rhee et al. 2017) in South Korea found a correlation between structural elements and psychological empowerment. Psychological Empowerment is negatively correlated to formalization and centralization.

Centralization is defined as the concentration of decision-making authority in the higher management of an organization (Cosh et al., 2012), meaning that

centralization causes a delegation of decisions towards a higher instance within the company, like in top-down organizational structures. This might leave employees with the ability and willingness to make decisions, but without the power to do so. The person who takes the decision might not have the same level of priority and available information.

Formalization gives employees the authority to make decisions within a highly regulated set of rules, norms, procedures, and commands (Cosh et al., 2012; Rhee et al., 2017). Thus, the employee has the autonomy of making decisions but not the freedom to choose an option. The decision making based on written rules and structural factors reduces the possibility for employees to decide for creative or innovative ideas. Innovative and agile working methods can lower the degree of formalization.

Amundsen and Martinsen (Amundsen & Martinsen, 2015) conclude that "Psychological empowerment influences both job satisfaction and work effort but not creativity, while self-leadership influences work effort and creativity but not job satisfaction." Research by Rhee et al. (2017) further indicates that empowerment explains the influence of centralization and formalization on innovative work behaviors. Centralization and formalization both correlate negatively with innovative work behaviors (Rhee et al., 2017). Therefore, the following proposition is derived.

Proposition 2

Self-organized teams show stronger innovative work behaviors if the centralization and formalization of the organizational structure are low.

In structures with high centralization and formalization, employees need to ask for permission before acting and follow strict rules, which can give them the feeling of powerlessness (Organ & Greene, 1981; Rhee et al., 2017). When employees feel powerless within an organization, they have no incentive to improve their work or a product through new processes, technologies, product ideas, or working methods (Baird & Wang, 2010). They might fear punishment if the improvement fails. This situation can be given when complying with the rules and obligations is more important than continuous improvement and efficiency (Baird & Wang, 2010).

At the same time, formalization might have an advantage in commercializing innovation (Cosh et al., 2012). Formalization needs to be low in the early stages of innovation to foster innovative work behaviors (Cosh et al., 2012). In later stages, formalized processes might help teams to develop further and commercialize their innovation (Cerne, Babic, Connelly, & Skerlavaj, 2015; Cosh et al., 2012). The following research proposition is derived.

Proposition 3

The innovative work behaviors are translated into innovative outcomes successfully if the work methods are increasingly formalized over the idea implementation process.

Empowering Leadership

Empowering leadership (EL) or transformational leadership is a form of leadership, which facilitates self-leadership (Amundsen & Martinsen, 2015). EL aims at increasing psychological and structural empowerment directly and indirectly through self-leadership (Amundsen & Martinsen, 2015). The traditional leadership role of supervising and guiding employees is hereby replaced in EL by the role of coaching, encouraging, and motivating.

Empowerment actions taken by leaders within the organizational framework result in empowerment reactions of employees (Amundsen & Martinsen, 2015). These empowerment actions are part of the structural empowerment school of thought, whereas the individual reactions are part of the psychological empowerment school of thought (Amundsen & Martinsen, 2015). Thus, both schools of thought complement each other in achieving the empowerment of employees.

EL is only correlating with innovative work behaviors when psychological empowerment is high (Pieterse et al., 2010). Employees who act out of their intrinsic wish or motivation to bring a project further are the ones who thrive most in an organization with an empowering leadership style. To ensure this is possible, leaders and followers need to have a high-quality relationship, which provides both the necessary trust to do their work autonomously (Scott & Bruce, 1994). In an agile structure, this is achieved through the self-organized team structure, in which decisions are made with pears. Thus, self-leadership and the quality of relationships

between peers are crucial (Yin, 2017). These findings emphasize the interconnectedness of leadership and organizational culture.

Individualism and collectivism are interesting concepts to explain the idea generation within teams. Individualism increases the creativity of employees, which results in a higher number of potential solutions for identified problems (Černe, Jaklič, & Škerlavaj, 2013; Goncalo & Staw, 2006). Collectivism is supporting the innovation process in various stages (Rosenbusch, Brinckmann, & Bausch, 2011), especially in bringing ideas to the market (Černe et al., 2013).

For leaders in an agile structure, it is one of the major tasks to enable and encourage both individual and collectivistic work processes. The focus lays on the collectivistic processes, as they require a higher degree of coordination. Additionally, the organizational culture needs to be created and further developed to ensure that trust – an enabler of cooperation and knowledge sharing - is an integral part thereof (Malone & Crowston, 1994).

Methodology - Qualitative Research

This section of the thesis takes an exploratory perspective, as concepts and theories are dependent on their real-life context (Yin, 2017). To answer the research questions, a case study - as an inductive approach for theory building - is conducted (Eisenhardt & Graebner, 2007). This approach consists of data collection and pattern identification to generate theories and concepts (Bell, Bryman, & Harley, 2015). The book" Business Research Methodology" (Bell, Bryman, & Harley, 2015) is used as a guideline for conducting qualitative research in this project.

The relevant concepts are broad and complex, which makes an in-depth investigation beneficial for this case study (Dubé & Paré, 2003). Through the thesis process, an iterative strategy is used, which allows us to be flexible and alternate between theory and data. During the data analysis, it might be necessary to search for additional literature and add further concepts in the theory part of this paper.

Research Design

This qualitative research is designed as a single, exploratory case study (Bell, Bryman, & Harley, 2017; Yin, 2017). The approach of this paper is abductive,

where the aim is to collect and analyze data for theory building (Bell et al., 2017). To answer the research questions, an in-depth, holistic approach is needed (Dubé & Paré, 2003). Case research suits these requirements as it can observe broad and complex phenomenon within the context they occur (Dubé & Paré, 2003). It is beneficial to observe the participating employees in their real-life work environment as the research topic is dependent on it (Yin, 2017). Observing employees outside of their workplace, unrelated to the team they work with, might not provide us with valuable insights.

The method used to collect data is a series of qualitative semi-structured interviews conducted by Hamza Malik and Michael Grassmayr. We both share an interest in this research topic and bring unique skills from organizational psychology and change management.

As the use of only one method might result in a too high reliance on this method, we also did a shadowing exercise to observe the company culture and innovation process. Additionally, we enriched our understanding of the context through informal talks and observations in a pre-study.

Case

The observed institution is a large Scandinavian bank with global operations. In a strategic product development unit of the bank with 120 employees, the study was conducted. This unit consists mainly of programmers and aims at creating a modernized digital customer interface that competes with solutions of born-digital companies. After two years of failed attempts, the organization transformed the organizational structure of the product development team from top-down to agile. One year later, the first version of the mobile bank was launched, reaching more than 25 % market share in the following year in the target market. The customer feedback gradually improved over the first operative year through bi-weekly upgrades. The qualitative case research aims to analyze why the creation of an innovative product was successful after the change of the organizational structure. As most companies worldwide face or will face a similar situation where new competitors try to disrupt the traditional business model, it is highly relevant to learn from this case example. One operative year after the mobile application of this institution was launched, is an ideal time to qualitatively evaluate the impact of organizational factors on the innovative work behaviors and innovative outcomes.

Sampling

The participants were chosen by the founder of the unit, who was our contact in the company. He conducted a purposive sampling aiming at finding diverse employees from all functions. In this technique, the person selecting relies on his ability to select suitable participants (Tongco, 2007). Data gathered by this selection is only of statistically good quality if the person who is selecting has the ability to choose suitable participants (Tongco, 2007). The manager is in the unit since the beginning and helped to build it up. He followed the aim to find the most diverse sample of employees who are willing to participate. The data could be biased (Davenport, 2009; Tversky & Kahneman, 1974), in case critical voices are overheard. Due to data regulations of the company, selecting a random probability sample was not possible for us.

Nr.	Function	Responsibility	At the company since	Started working in
1	Head of digi. Platforms / Founder of the Unit	Manager of digital platforms	5 years	IT infrastructure
2	Chapter Lead / Senior IOS Software Engineer	IOS app; test application;	1,5 years	mobile bank
3	Product Owner	money management	5 years	IT consulting
4	Squad Lead and Innovation Guild Leader / Product Manager	create a mobile bank with a good customer experience	3 years	mobile bank
5	Agile Coach	culture and structure development	2,5 years	business transformation
6	Squad Lead / Product Manager	coordination; support the team	1,5 years	business transformation
7	Technical Lead	new tools; new technical hiring; support if necessary	5 years	instant payment app
8	Business Lead / Product Manager	create a mobile bank with an excellent customer experience	6 years	corporate consulting
9	Squad Lead / Product Manager	web team	4 years	instant payment app
10	Product Owner	accounts	1,5 years	mobile bank

Table 1: Interview Participants

The number of employees in the unit is about 120, the number of participants was ten, which is a total of 8 % of the unit's employees. Our sample includes employees from all functions with diverse backgrounds and varying times in the company.

Data Collection

Before the data collection, we conducted a pre-study between September 2019 and January 2020, which involved several informal conversations and meetings with staff and management to get a better understanding of the context, administrate the interviews and facilitate for optimal data collection. One first in-depth interview was conducted in October with the founder and leader of the unit. Interviews with all other employees followed in January. In-depth interviews are "a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program or situation" (Boyce & Neale, 2006). All twelve subjects have experience working agile within the specific business unit. The sample size does not overlap with participants of the informal pre-study, except for the leader of the unit. Everyone received an email where we informed them about our research project, our intentions of interviewing them, details of how we conduct the interviews, and a note that everything will be recorded. The information ensures that they can make an informed decision. When they agreed to be interviewed, we scheduled a meeting at the headquarters of the company.

The interviews are semi-structured (Bell et al., 2015) and, thus, based on an interview guide, which is added under attachment 1. Questions are standardized, but answers and follow up questions are open. This methodology gives the interviewer the flexibility to follow up on interesting statements and observations or clear up inconsistencies in answers (Bell et al., 2017; Langley, 1999). The interview guide consists of five main topics and potential follow-up questions.

All interviews took 50 to 70 minutes and were recorded on audio for transcription. The recording allowed us to observe the interviewees rather than being distracted by transcribing. We began the interviews by establishing trust and getting to know the subjects. Due to legal obligations and to avoid that the responders self-censor their answers because of the audio-recording, we assured that data would be analyzed complying with NSD regulations and not shared.

We conducted a shadowing exercise to observe the unit and its culture. In this exercise, we joined participants and observed them, to not only rely on what they tell us but observe their work and the cultural environment ourselves (McDonald, 2005). During the one-year anniversary of the mobile bank launch, we joined the team to observe their celebrations. Additionally, we walked through the office during the workday to better understand their daily work and collaboration. During a company tour, we saw the different approaches of the observed unit and the rest of the bank by observing the behavior of employees and the building architecture.

Data Analysis

The collected, unstructured data is analyzed in order to get a sense of what it could have to say and start finding answers to the investigated research questions (Hayes, 2000). Coding is used to cluster the data from the transcript into major topics (Bell et al., 2017). Coding is a central process in grounded theory, an approach developed by (Glaser and Strauss 1967) to systematically gather and analyze data with the aim of building theory. The process of gathering, analyzing, and theory building is iterative. Thus, data gathering consisted of a pre-study, the qualitative interviews, and an observation/shadowing exercise.

The data from the interviews are first sorted into main categories, which might be similar to the topics of the interview questions. In the process of coding the data, subcategories emerge. Any category might change over the process of coding, and quotes might be shifted to other categories if more suitable. The aim is to create a visual overview of the large amounts of gathered qualitative data. This visualization makes it easier to find similarities, connections, and differences in the participant's answers. The three major categories are defined based on the research question and literature review as structural elements, psychological observations, and innovation.

The data was coded physically on a 1.5 x 3-meter glass wall. Post-its with four different colors were used to express the meaning of the text visually. Yellow post-it is are basic statements and observations often related to the organizational structure. The orange color is for psychological or individual topics, red marks for challenges, and problems, whereas green displays innovation and innovative work behaviors. All post-its are clustered under the three major categories organization,

individual aspects, and innovation. The notes were first placed in specific areas of the wall where they fitted in. In a second step, these notes were structured into various clusters. Sub-categories are created to define or describe the clusters. Lines and errors visualize observed impacts or connections between clusters. The subcategories projects & structure, decision & resources, knowledge sharing, and resistance emerged within the category organization. In the individual category, the sub-categories engagement, creativity, and proactivity emerged. Continuous improvement is a cluster which connects the organizational and individual aspects. Innovation consists of the sub-categories prototyping, idea validation/data, release, and failure. The engagement cluster is at the heart of the visualization and influences a variety of other sub-categories in all three main categories. Proactivity links individual aspects and innovation, while it is a central part of innovative work behaviors.

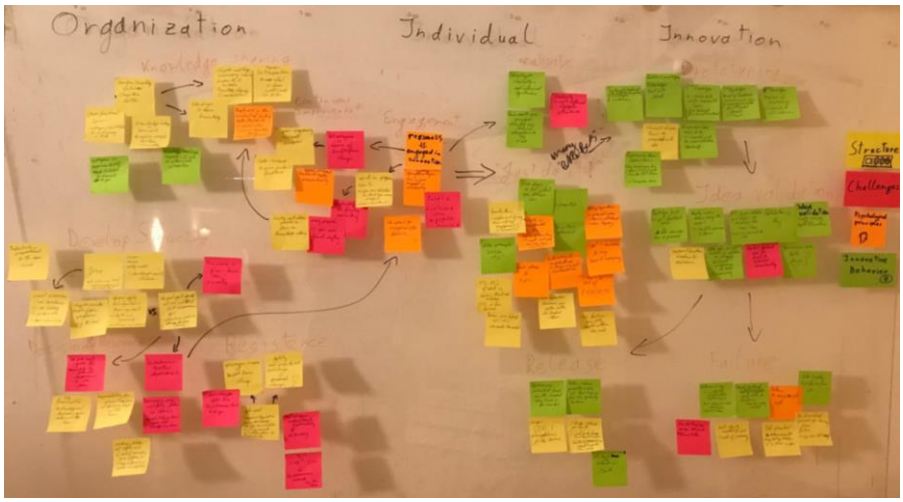


Image 3: Coding of qualitative interviews

Trustworthiness and Authenticity

Reliability and validity are common-known quality criteria in quantitative research (Bell et al., 2015). For qualitative research, those measures have been questioned in their accuracy. Both quality criteria are linked to the measurement of data, which is not applicable in qualitative research as data quality cannot be measured by numbers. Yin (2017) considers the measures as appropriate but suggests a different meaning of the words for quantitative research. Guba and Lincoln (1994) introduced new assessment measures for qualitative research: trustworthiness and authenticity. Trustworthiness consists of credibility (parallels internal validity), transferability (parallels external validity), dependability

(parallels reliability), and confirmability (parallels objectivity) (Bell et al., 2017). Authenticity states whether the observations reflect the 'truth' (Scott 2007).

This research project is based on the theory of a systematic literature review. Conducting the literature review makes the researcher understand the field of research and the social world in which academics conducted prior research. This academic literature forms the foundation for credible data collection and analysis.

The case study is conducted in an agile organizational context. The findings might not be transferable to any other agile organization. This organization has its own type of agile structure and specific organizational elements, which might vary to other organizations. It is not sure whether the findings of this research are universally transferable. Thus, the data is always compared to academic literature, and findings need further academic research to be accepted as academic theory.

In order to ensure dependability and conformability, the qualitative data collection process was conducted as a pair of two students with different academic backgrounds. In discussions, the different social worlds, analysis techniques, and interpretations of the qualitative data from the strategy and psychology perspective were imminent.

The authenticity is dependent on the selection procedure and ethical conduction of this research project. These topics are further elaborated under the chapter "Sampling" and "Legal and Ethical Compliance".

Legal and Ethical Compliance

During data collection and in-depth interviews, it is essential to take ethical considerations (Allmark et al., 2009; Boyce & Neale, 2006). The freedom and integrity of participants need to be respected (Nilssen, 2012), and their data treated appropriately. This is especially important in our research project as it is conducted in the work environment of our participants.

The application to the Norwegian Centre for Research Data (NSD) is based on an agreement with BI – Norwegian Business School to ensure that we hold ethical standards in this research project. NSD assessed that the processing of personal data in this research project is aligned with data protection legislation. In order to gather an informed consent from participants (Bell et al., 2017), I have

given them information about our research project, what it entails for them, and the opportunity to accept or decline the invitation.

Personal data is processed confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act). We are storing the recording and notes of the interviews only on our electronic devices (laptop and phone). After the research project, all recordings will be deleted. If data is further stored, it will only be in anonymized form.

The Case

This chapter analyzes the data gathered during the qualitative research project. The methodology and specifications regarding the data gathering are described under the point "Methodology – Qualitative Research". First, the case setting and organizational structure are described, and secondly, the data is analyzed. Theoretical concepts are used to make sense of observations and relational findings.

Case Description

The strategic unit was founded two years before the research project was conducted. It emerged from a nine-month app development project, which was extended to two years. Projects in the organization are traditionally limited to three, six, or nine months and consist of diverse employees who only work together for one project. This setting caused motivation, empowerment, and ownership feelings of employees to be low. Many participants of this research project describe the work environment as bureaucratic, where they simply followed the rules and fulfilled what they were asked. Proactivity and engagement were not encouraged by leaders, and the organizational hierarchy was visible in the decision-making process. As the mobile bank project did not deliver sufficient outcomes after extending the timeline twice, the management of the organization decided to deviate with this unit from the general organizational structure and introduce agility. One manager acted as a change agent and initiated the transformation process. The unit grew from about 30 to 120 employees within two years. At the time of the research project, the structure of this strategic unit was version 6.0, which means they were undergoing five major organizational changes within two years.

Organizational Structure

The current organizational structure is an adapted version of the so-called "Spotify-Model" (Kniberg & Ivarsson, 2012). An agile structure should never be copied exactly, as organizational factors need to be considered in the implementation of a new structure (Kerr et al., 2018). To give employees the feeling that their structure is unique – which is the case for some specifications – the names are different from the Spotify model (Kniberg & Ivarsson, 2012) and other agile structures (Abrahamsson et al., 2017; Askin et al., 2018). Due to nondisclosure, the specific names of the organizational structure are replaced by the names of the Spotify model.

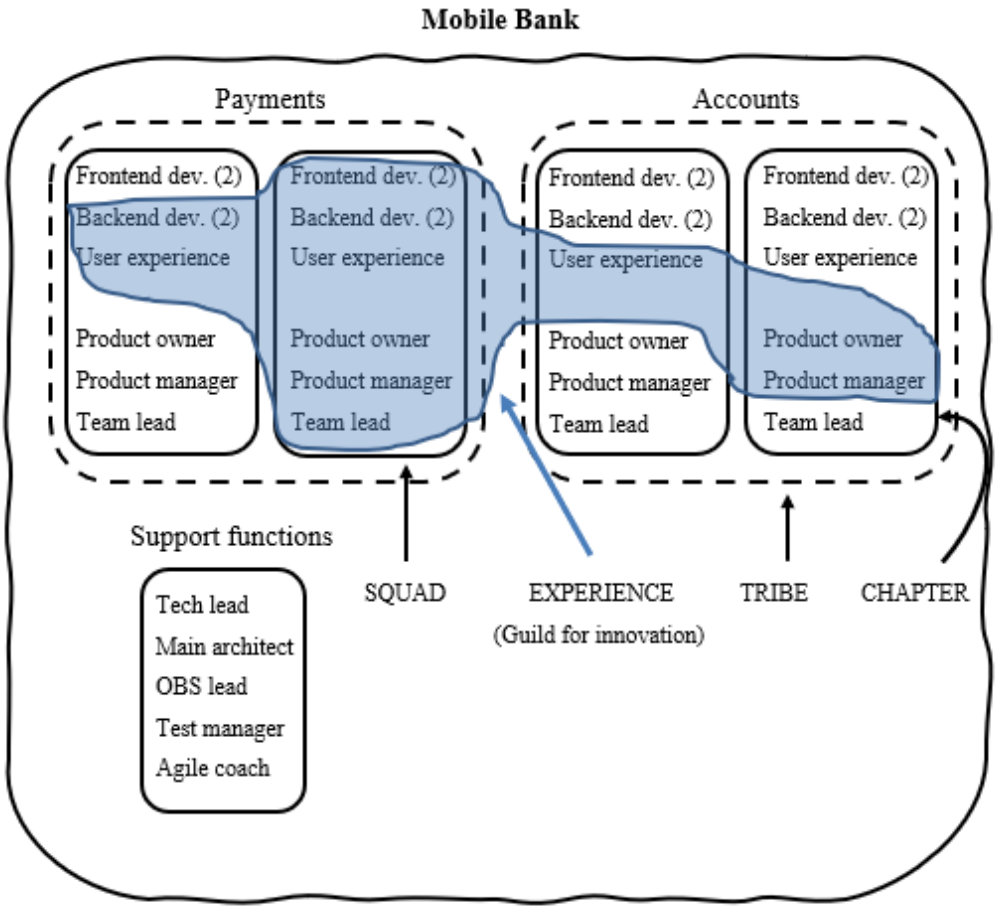


Image 4: Structure of the mobile bank unit

The unit consists of two tribes with each two squads. The tribes divide the mobile app programming into payments and accounts. A trial of forming one tribe where everyone is able to program every part of the app failed as velocity was lost, and the insecurity of employees increased. Within each squad, there are six different roles and 7 to 8 employees. There are each one backend and frontend developer for

iOS and Android who form the IT side of the squad. The business side consists of a Service designer, a product owner, a product manager, and a team leader. The third managerial role of a team leader was introduced in the last structural change. It was perceived as necessary for coordination within the growing unit and to deal with bureaucracy and coordination related to non-agile teams in the organization. The whole unit has five support functions, an agile coach, a test manager, a structural architect, an OBS lead, and a tech lead. Tech lead and OBS lead serve to the rest of the organization as managers of the agile team. The unit is agile but depends on strategic, regulatory, and financial issues strongly on the non-agile organization.

The chapters, all employees from the same profession – e.g., iOS frontend developers – from all four squads meet regularly in chapter meetings to decide over future features, creative ideas, and operative work. There is one guild – a group of people from all chapters and squads – to foster innovation. All members of this guild are interested in innovation and bringing forward new ideas. Any employee can spend 20 % of the work time for this guild to bring forward new ideas, test them out, and program them with the relevant team for a market launch.

As the organizational structure is continuously developed further, this description might already be changed by the time this paper is published. One interesting observation is that the number of substantial structural changes decreased strongly over time. Additionally, the resistance against change increased. This observation is outside of the scope of this research but could be considered in a future research project.

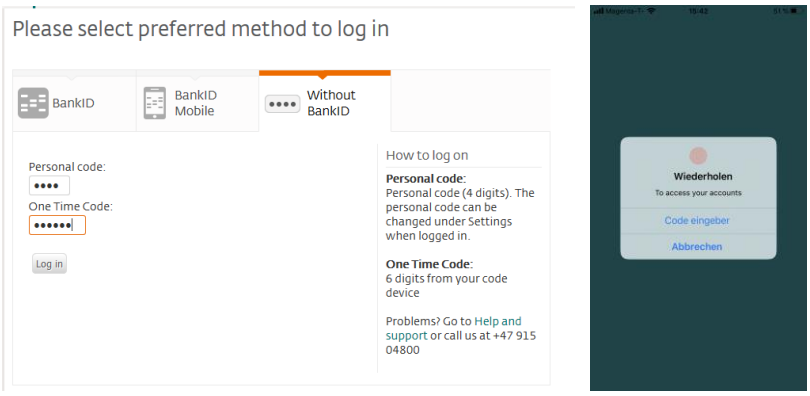
Innovation Process

Innovation can happen anywhere and at any time in the company. Nevertheless, there is a structured innovation process to foster innovative work behaviors and streamline ideas once they are brought forward. Anyone who has an idea can post it into a slack channel and get feedback from employees. This slack post is the first prototype of the raw idea. With the feedback, the idea giver can develop the raw idea further and possibly also find partners who are on board. In the observed unit, there is an innovation guild. It consists of one person who is leading the guild and many others who are interested in contributing when they have time. The second prototype is programmed by people of the relevant team who

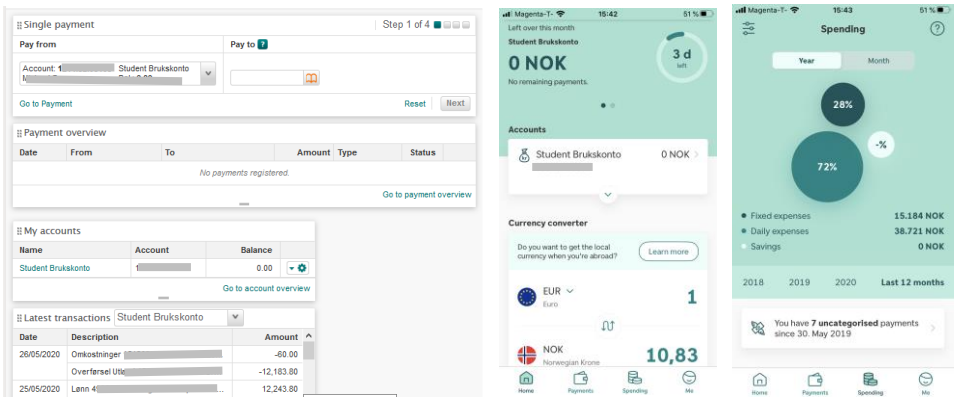
are active in this guild or directly approached by the idea giver. If an idea is perceived as having a very high potential, this process from idea to beta version can be as short as one week. The beta is then tested with internal and external users to get instant feedback. The behavior of users is tracked, measured, and data points are analyzed. This validation process is conducted by the service design or user experience manager. Together with the product owner and product manager, the service designer enriches the idea. The further developed idea is then programmed as a third prototype, which is sent out to all users gradually. Initially, only one percent of the users get the update, which is increased to 10 % and then gradually further if no significant problems are observed. Based on customer feedback and tracked customer behavior, an update is programmed and released within two weeks following the release.

Mobile App vs. Website

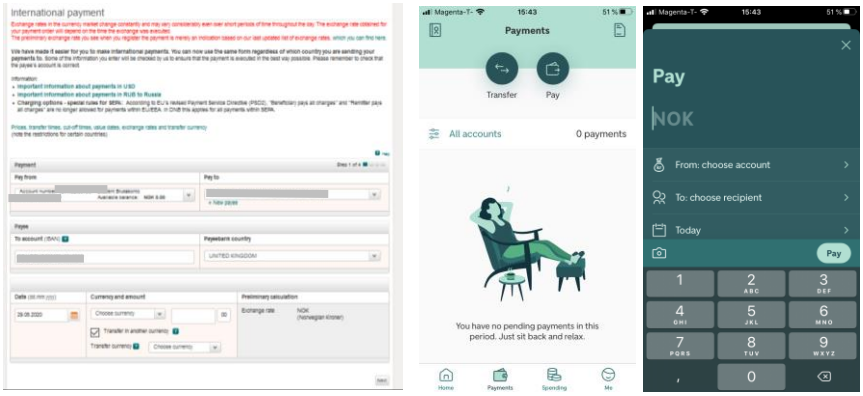
Comparing the mobile banking app to the desktop version of the mobile bank reflects the outcome of top-down and agile structures. The mobile app is programmed in the observed unit, while the desktop version is still developed by a comparable team in the company's top-down structure. Both digital interfaces are programmed completely independently and based on different technological systems. Nevertheless, they are connected to the database of the bank and all core transactional services. The web team has as many resources but is operating for some more years.



Images 5 & 6: Login Web and App



Images 7, 8 & 9: Account overview Web and App



Images 10, 11 & 12: Payments

The desktop version offers all standard banking services. In contrast, the mobile bank lacks a few basic features, which are gradually added to the service. The interface of the desktop version is designed like print-out paper documents from the past. Only a few colors are added, and new customers might need some time to understand where they can find which feature. The website requires users to follow several steps to finish any process, including the use of a physical code device to log on.

In contrast, the app usage is quite intuitive, and tutorials explain the functionality at the first use. This option is not offered in the desktop version. Login is possible in the app by fingerprint or face ID, in the desktop version only with a physical code generator device. The app has a clear overview of all services, and additional visualizations for monthly spending and savings change over time and predictions of future fixed cost spending. Options like a discrete mode are offered, which blanks all numbers after waving with the hand over the screen to hide the

amount of money in the account from friends. Widgets and push-notifications can be enabled in the settings.

This observation shows that the app is a more creative product than the website. In the following chapter, this observation is considered to understand the context of the employees' responses better.

Case Analysis

All interviewed employees of the agile unit stated that they perceive their outcomes as more innovative but refused to draw any connection between the organizational structure and their level of creativity. From their perspective, creativity exists at similar levels in agile and hierarchical structures. What makes the difference are the innovative work behaviors of employees. As described in the chapter "Innovation Process," it is easy for employees to kick-off the implementation of a high potential idea in the observed unit. This includes the opportunity to share ideas within the safe organizational environment where they are not judged or punished if anything goes wrong but encouraged by peers and support functions to "just try it". Failure is perceived as learning, while success "increases the confidence in yourself and your ideas", as one employee described.

Self-Organized Teams

The agile structure is relatively decentralized and autonomous. A participant stated: "In our unit, we are fully agile, but we are a part of the whole [organization]. They are still using the old structure. If we work together with another unit, the project loses velocity because they are much slower in making decisions." The agile structure in the unit enables employees to do work in their way and shape the environment they are working in. In the observed case, everyone has the necessary financial resources available and is technologically only limited by market requirements and governmental regulations. This gives employees the freedom to create a product they believe in and are proud of. Every member of the unit actively applied for the position in an agile team, which means they voluntarily chose to have this autonomy. In the interviews, several employees stated, they would not want to work in a strict top-down structure and would have left the company already if this agile unit did not exist. Many stated that former hierarchical structures limited their opportunities to achieve something in their work, as regulations and superiors restricted ideas they brought forward.

In the agile structure, cooperation within small teams allows everyone to raise their voice and be heard. In chapters, they can align with people who face similar problems and find solutions, while in squads and guilds, they can bring forward ideas to get feedback from people of different backgrounds. The organizational culture does not pay attention to formal position titles and gives everyone the chance to approach whomever they want. “Everyone is happy to help you”, one employee said. She added, “If we help others, we all learn, and the outcome is better.” The motivation of individual employees is crucial to see opportunities. Some take advantage of them, while others focus mainly on essential work that needs to be done. “Nobody tells you to have creative ideas, but people use the product [themselves] and want to make it better each day.”, a programmer noted. Everyone is encouraged by support functions to do “additional work during 20% of their work time. Some prefer to stick to their basic work”.

Participants were implicitly asked to compare their level of empowerment and innovative work behaviors in the prior top-down hierarchical structures to agility. Many of them applied from other positions at the company for this specific unit to work in self-organized teams. Their feeling of ownership and “having an impact” increased strongly while working in self-organized teams. One senior-programmer answered, “I would have left the company if I did not find this job in the intranet. Being told by my boss, what I have to do did not fulfill me.” While “in this job, I can do what I believe in”, he stated. Another participant said that he is “as creative and innovative [as] before working in this unit, but I could not convince others of the value of my ideas before.” The general perception of all participants was that the top-down structure limited their impact, ambitions, and innovative work behaviors. The agile structure encourages – or at least does not discourage – them to show innovative work behaviors.

Implementing Ideas

Trying something out, even if nobody knows if it will work out, is an integral part of the unit’s work. The innovation guild leader said: “The customer is our boss. We get feedback and collect data on app usage.” If employees bring forward new ideas, no leader tells them not to try it out. “If you have data, you can convince everyone in this unit. If you have no data, then get it!” one product manager said. Some colleagues help to develop the raw idea further or challenge it. If the team agrees that the idea is worth a try, it is programmed by the relevant

members and then tested internally and with 5.000 customers. These customers are part of a voluntary test group. Various data points are taken from the customer's usage of the app. Data is the basis for any decision whether the idea is further continued and implemented or rejected. It is not a boss up the hierarchy who rejects an idea, but it is the customer.

In case customers seem to like an idea, the idea giver is involved in bringing it to the market, supported by user experience and support function managers. People are usually not pointed out to be the idea givers: "We are one unit, I am not the one who made this new feature, it is us. Only if everyone contributes, we have a great outcome. Who had an idea is not relevant." In the interviews, only close colleagues of an employee knew it was the idea of this person. All participants of the research project refused to be proud of having provided an initial idea, they identified with the final product and claimed that one idea does not have an impact, it is the team's cooperation that makes them achieve an excellent product, which customers like. One playful feature, which was released at the time of the research project, was highlighted by several employees. When starting to talk about this feature, each of them got out their phone, had glowing eyes, and enthusiastically said, "I have to show you… !" or "Did you try out … already?". We observed that they have an empowered and motivated work attitude and a strong ownership feeling. Sharing knowledge with everyone, asking for their feedback, and being open to improving initial ideas are integral parts of this unit. "If you are afraid of sharing your ideas, you miss the chance of getting feedback", one team lead stated. The ownership feeling is strong, not on an individual but mainly on a team and unit level. The innovative work behaviors of employees are not limited to implementing ones' own idea. Innovative work behaviors are shown towards any idea they believe customers could like. "The customer wants the best features, fast. So, I share my idea with everyone who wants to listen to me [in this unit]. Most people are listening to you.", the technical lead described.

Making Little Bets

Primary goals are set by support functions or top-level managers in the organization. Such goals are, for example, creating a savings account or enabling international transfers, all services that competitors offer, and customers expect to find in the app. A programmer stated: "[Those] features will hardly impress any customers but are [their] basic needs." As the unit is quite young and still building

up the app, about 80 percent of their time is dedicated to basic features. In the remaining time, they can work on innovative ideas as described in the chapters before.

While working on innovative ideas, they do not have any set goals which need to be reached. One participant said: “We launch the feature when it is ready. If we are not happy [before a planned launch], we simplify [the functionality] or launch it another time.” There are two ways of how raw ideas are created. On the one hand, customer feedback might indicate that specific functions would be appreciated. Those are then overtaken as a vision of what future features could look like. On the other hand, employees of the unit might bring forward innovative ideas.

In both cases, there is only a vision or maybe an idea. There is no clear goal and no defined path of how to achieve the vision or implement the idea. All the team does is making little bets about what customers might like and how to achieve it. A participant stated: “When we are not sure if something could work, we program a prototype in two days and test it. The worst [case] is, we lose two days.”

For the approach of making little bets, it is important to prototype and test fast. With the received feedback - mostly digital data points of the app usage – the team defines whether the bet was successful or failed. Depending on the outcome, the idea is rejected, further developed, or put on hold if it is not of the highest priority. The feature “can work great, but if they [the customers] do not use it, what is the point?”, a programmer noted. This approach avoids resources being wasted on ideas that are not worth it in the eyes of the customer and help to define the value of features. Deviation from the norm is easily possible with this approach, as even the craziest and most unrealistic idea can be tested without much risk for the organization and the idea giver. Confronted with the question of what one would do if nobody believed in a crazy idea, he/she brought forward; the participants answered all very similar. A programmer said: “I would question my idea. But if I am sure it can work, then I will test it and collect data.” The business lead of the unit believes: “With data, you can convince everyone in this unit”. So even if nobody believes in ones’ idea, this person has the ability and power to prove everyone wrong.

When an idea is proved to have potential, it is “added as new project into the pipeline”. The project then has a priority rank and is worked on by the relevant

team as soon as they have free capacity. In this stage of the innovation process, a viable solution is programmed as a beta version of the app.

Learning from Failure and Feedback

The process of fast and iterative testing ensures that instant feedback is provided by peers and customers. If ideas fail, not much time and resources are "lost" – or as interviewees framed it – "invested in new learnings". The framing of not losing anything by failure but gaining some unexpected learning can make all the difference in organizational learning (Edmondson, 2011).

Nevertheless, the feedback from testing is not provided directly to programmers. "Feedback is filtered by us [business functions]", one team lead described. This is done not to overwhelm employees if things go wrong and ensure that "failure" is framed and perceived positively. As most employees in the unit are very engaged and feel ownership towards the produced outcome, the demoralization of the unit in times of intense negative feedback is "a risk for each person and our unit" as one team lead worried.

The filtering of feedback was especially necessary for the months after the first launch of the mobile bank. An early employee of the unit said: "Many assumptions were [proved] wrong. Customers are used to intuitive apps with all functions." The first market-ready app did not live up to those customer expectations. "It [the feedback] was helpful, but our mood was really bad", he added. The feedback was used to develop the app further, understand customer expectations, and program new features. Programmers came up with minimum viable solutions on how to solve pain points. One example is when the login with fingerprint did fail sometimes, and people complained about the hassle to enter their password each time they wanted to check the balance of their account. The programmers introduced a widget that shows the balance at any time without log-in if enabled by the customer. This was a fast fix of the customer pain point, although the underlying technical issue took longer to be solved. The widget was well accepted and is still in use after the login issue was fixed. Ideas like this one led to a steady improvement in the customer experience, which is shown by regular surveys. A user experience expert said: "This was an emergency, and we had a simple solution. […] The customers liked it more than many complex technical

features." The app rating increased due to constant improvements to 4,4 of 5 stars in the android app store at the time of conducting this research project.

The primary learning for the team from the described situation was that improving customer pain points does not always require complex technical solutions. Solving customer pain points with a standard feature might only take a few days.

Restrictions

During interviews with support functions, the perception of employees to be completely agile was widely rejected. Even they are proud of their unit-wide agile structure. They are strongly dependent on the organization itself. Support functions act in the overall organization as managers of the agile unit and see both sides of the organization. One support leader stated: "We are managers to the organization and part of an agile team. If our team fails, we are responsible." Being agile is supported by the organization, but still, top-level management wants specific targets to be met. Thus, the support functions have a challenging task of balancing "our position in the unit and the organization". Being dependent on the non-agile units of the company limits the autonomy of the observed unit.

Additionally, regulatory institutions require the teams to comply with a variety of legal and security guidelines, including regular reporting and audits. To ensure cyber-security and stability, the agile unit is limited in the use of technological opportunities, like useable software, which the company tested extensively. One programmer said: "We have ten times the funding for each project compared to the company where I worked before and the same working structures, but we do not have the freedom to choose a program that makes work faster or easier if it is not approved by the responsible manager. […] Getting approvals [for external software] takes a year or more."

These restrictions are a kind of centralization towards top-level management and central company functions and a formalization of processes. The dependence on other units in the organization slows down the unit's processes. Thanks to the three managerial functions in each squat, the restrictions are not directly affecting the work of programmers. A product leader said: "We three business functions [of each squad] do all kind of the same; Manage the bureaucracy and coordinate with other [non-agile] units." "That is half of my work or more", she added. In the every-

day work, these boundaries of the agile structure are seen as given. Autonomy is not perceived to be influenced negatively. A product owner concluded: “We are fully agile. […] this work [with other units] does not influence our agile structure, but how work is done.”

Case Findings

This qualitative study provides evidence in support of proposition 1. In the observed unit, the self-organized team showed increased innovative work behaviors compared to before the organizational transformation. The higher innovative work behaviors are directly linked to the structural changes in the unit. Support functions, as well as programmers, experience a higher responsibility and perceived impact in the organization within the agile structure. The ownership feeling is high, and people are proud of their produced outcome.

Decentralization and lower formalization are directly linked to the empowerment of employees. For employees, being able to make decisions, try out ideas, and receive feedback from customers, increases their empowerment. Empowerment is directly linked to innovative work behaviors. The collected data suggest that innovative work behaviors increase empowerment, which again strengthens the innovative work behaviors. The starting point was a structural change, which increased empowerment through decentralizing decision power and decreasing formalization. Thus, agile organizational structures increase innovative work behaviors due to decentralization and lower formalization; proposition 2 is correct.

Each employee is free and not bound to any formal processes in coming up with ideas. When an idea is brought forward in a squad, chapter, or guild, it is informally followed up, prototyped, and tested by interested peers. With each prototype, the formalization of the process increases, as well as the resources. It is vital in the self-organized structure to give everyone the possibility to test their ideas. To ensure that only viable ideas receive the funding, employees must provide data that proves the value of their idea for customers. This helps to understand if ideas could work out and define their impact on customer experience and revenue generation. Based on the data they collect, the focus is shifted to the most promising solutions, which are implemented with the limited resources available. Consistently low formalization during the implementation process would limit the support, time,

and money available for the most promising ideas and frustrate the idea giver. An increase of formalization over the innovation process is achieved by guidelines about who should be involved at which stage, the support of the innovation guild leader, and agile work methods. Thus, P3 is supported by this research project.

General Discussion

In this chapter, the research questions are answered, and findings are discussed in a broader context, which reflects on academic developments. The impact of this research project is elaborated, as well as the limitations of the findings. Research gaps within the observed field of innovative work behaviors in agile organizational structures are stated and recommendations given for future research.

Theoretical Contribution and Future Research

Academic research on agile structures is mainly rooted in the fields of information systems (Conforto & Amaral, 2016; Gomber et al., 2018; Parker et al., 2015), project management (Lappi, Karvonen, Lwakatare, Aaltonen, & Kuvaja, 2018; Müller, Pemsel, & Jingting, 2015; Serrador & Pinto, 2015), and organizational science (Amundsen & Martinsen, 2015; Hodgson & Briand, 2013; Rolfsen & Strand Johansen, 2014). Most academic research focuses on potential efficiency gains of the agile structure. Agile work methods and their impact on the innovation process are academically extensively analyzed (Bäcklander, 2019; Furr & Dyer, 2014). Innovative work behaviors are researched in various contexts. Nevertheless, the literature of the systematic review included only one paper (Rhee et al., 2017), which analyzes the impact of structural, organizational elements on the innovative work behaviors of employees. Empowerment is found to be linked to innovative work behaviors. The empowerment of employees is one core element of the research on humanistic management, where an assumption is taken that individuals are intrinsically motivated and need to be empowered to manage themselves (Lee & Edmondson, 2017).

This qualitative research project validates the findings of Rhee et al. (2017). Lower centralization and formalization in a self-organized structure increases innovative work behaviors. In the case example, this leads to a more innovative outcome compared to a similar unit with a top-down structure. The collected data suggest that innovative work behaviors lead to an increase in ownership feelings and a higher level of empowerment. These two factors appear to strengthen

innovative work behaviors. Further research is necessary to validate the impact of empowerment on innovative work behaviors and vice versa.

Research question 1 is answered by P1 and P2. An autonomous organizational structure increases the innovative work behaviors if the decision making is decentralized and formalization is low. The feeling of employees to have an impact on the organization and be able to implement their ideas fosters innovative work behaviors, increases employee motivation as well as empowerment. Knowledge sharing and the organizational culture are essential factors for the success of the agile structure, as employees might overwork or feel unsupported in uncoordinated self-organized settings. Empowerment is linked to the organizational structure and innovative work behaviors, which is in line with the findings of Rhee et al. (2017).

The agile coach of the organization, support functions, and team leaders are helping anyone who feels overwhelmed by self-management, which are mainly new hires. Ensuring that everyone feels safe, supports each other, and can grow into one's role is crucial to ensure that an empowered, innovative and creative culture is possible. The workload and open projects are currently being limited in the observed unit to avoid that employee empowerment leads to overworking and potentially even burn out.

The innovative work behaviors are capitalized within the agile structure through agile work methods. Based on customer feedback and data gathered from app usage, creative ideas are formed and further developed through peer feedback. The innovative work behavior, in combination with a structured validation and implementation process, transforms ideas into solutions for the customer. Raw ideas are further developed with peers and support functions through agile work processes. At the beginning of the innovation process, internal support within the squad, chapter, or guild is provided relatively informal. Later, design thinking is applied as an iterative idea implementation process. Discussion within the unit and testing of prototypes with external users are the foundation for further development. The main success of the design thinking process is rapid testing and feedback (Brown, 2008; d.School, 2020). Based on feedback and data, the idea givers can prove the potential of any idea with hard facts. This data enables them to receive the necessary resources to implement the idea, depending on the priority it has

compared to other ongoing tasks. The prototype is then commercialized in a more formal business plan development process, as described by Furr and Dyer (2014). In this stage, the size, experience, and financial resources of a large company are beneficial.

Thus, the key to transforming innovative work behaviors into valuable customer solutions is an open culture in which feedback is gathered fast to back up raw ideas or reject them. Gradually improving the formalization of the work methods throughout the innovation process (Furr & Dyer, 2014) helps creative minds to bring ideas to market rapidly with sufficient quality while complying with resource limitations. This observation is in line with the research findings of Cosh et al. (2012).

The observed unit is continuously developing its structure further to stay flexible and adapt to changing requirements. After the foundation of the unit, every three months, a new structure was introduced. Two years later, when the research project was conducted, the changes were done only every six months as resistance for change increased, and the perceived necessity of change decreased. The structure offers excellent working conditions as perceived by the employees, but many recommendations for improvements exist within the unit. Nevertheless, the continuous development initiative is outside of the scope of this research project. Future research could analyze whether agile teams stay agile over time and which psychological principles restrict autonomy and change within self-structured units. The example of Zappos (Askin et al., 2018) shows as one of many that companies might struggle to be fully agile over a longer time.

Limitations

The research project has a small sample size of only ten participants, which were purposively selected within only one company. The findings of the qualitative analysis need to be replicated with a more significant amount of people in diverse industries and settings to ensure that the findings are credible and transferable according to the quality criteria for qualitative research.

The agile unit was observed, and knowledge of the employees regarding “how it was before” was gathered to compare the agile structure with the top-down hierarchy of the organization. A company tour and comparison of the produced output (website and app) confirmed these statements. Nevertheless, it would be

insightful to compare an agile to a top-town structured unit within the same organization to gain a deeper understanding of the perceived advantages of hierarchical structures.

The observed group consists of employees who voluntarily decided to work agile. A large-scale transformation process with employee resistance to change might lead to a different structure than the one observed at the case company.

The analyzed unit is agile but dependent on the strongly hierarchical organization itself. Thus, agility in a start-up has a different meaning than in this observed unit. Findings for this kind of agile structure might not be universally true for organizations that have limited resources, knowledge, and coaching or experience higher levels of autonomy and decentralization.

Practical Implications

Agility is a term which people often have strong positive or negative opinions about. In this research project, it was the aim to understand the innovation component of an agile or self-organized structure better. The results show why, and to which extend agile structures and agile work methods can increase the innovative work behaviors.

The findings of this research project are provided to the case company to understand the critical factors in fostering innovative work behaviors. In this organization, a complete transformation towards an agile structure does not have the support of managers and employees yet. This research project gives managers a decision base and provides an understanding of which measures could be taken to reach increased innovative work behaviors without introducing an agile structure through agile work methods.

Businesses that aim at being prepared for a disruption in their market can learn from this paper how innovative ideas could be created and implemented. The starting point might not be a radical organizational change but the use of agile work methods. For example, a company could host an event where employees are asked for ideas and inputs in an open and informal setting. Bringing innovative solutions to the market through innovative work behaviors and agile work methods are the core of the observed unit's success. If managers in non-agile settings are aware of the influence of organizational factors and leadership on the empowerment and

innovative work behaviors, they can focus more on those. Thus, any manager in an agile or non-agile organization can learn from this the findings of this paper how innovative outcomes could be achieved through psychological and structural factors.

Conclusion

The data from ten qualitative interviews show that increased autonomy and decentralization leads to higher levels of employee empowerment and innovative work behaviors. Empowerment is high if innovative work behaviors are high and vice versa. Amundsen & Martinsen (2015) found that empowerment is a moderating factor for innovative work behaviors, which is confirmed by this research project. How they are related or influencing each other needs further research. The findings suggest that innovative work behaviors increase ownership and empowerment, which in turn strengthen the innovative work behaviors.

Through agile work methods, innovative work behaviors are increased. As described by Furr and Dyer (2014), different work methods are needed during the innovation process. First, feedback is gathered to back up raw ideas or reject them. Later, the formalization of the process helps creative minds to bring ideas to market rapidly with sufficient quality while complying with resource limitations. Design Thinking is used in the observed unit to ensure this development process includes feedback of all stakeholders, and iteratively improves the product or service.

References

Abrahamsson, P., Salo, O., Ronkainen, J., & Warsta, J. (2017). *Agile Software Development Methods: Review and Analysis*. Retrieved from http://arxiv.org/pdf/1709.08439v1

Abrams, L. C., Cross, R., Lesser, E., & Levin, D. Z. (2003). Nurturing interpersonal trust in knowledge-sharing networks. *Academy of Management Perspectives*, *17*(4), 64–77. https://doi.org/10.5465/ame.2003.11851845

Allmark, P., Boote, J., Chambers, E., Clarke, A., McDonnell, A., Thompson, A., & Tod, A. M. (2009). Ethical Issues in the Use of In-Depth Interviews: Literature Review and Discussion. *Research Ethics*, *5*(2), 48–54. https://doi.org/10.1177/174701610900500203

Amabile, T., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the Work Environment for Creativity. *Academy of Management Journal*, *39*(5), 1154–1184. https://doi.org/10.5465/256995

Amabile, T., & Fisher, C. (2000). Stimulate creativity by fueling passion. *Handbook of Principles of Organizational Behavior*, *331*, 341.

Amabile, T., Fisher, C. M., & Pillemer, J. (2014). IDEO's Culture of Helping. *Harvard Business Review*. (January - February). Retrieved from https://hbr.org/2014/01/ideos-culture-of-helping

Amundsen, S., & Martinsen, Ø. L. (2015). Linking Empowering Leadership to Job Satisfaction, Work Effort, and Creativity. *Journal of Leadership & Organizational Studies*, *22*(3), 304–323. https://doi.org/10.1177/1548051814565819

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and Creativity in Organizations. *Journal of Management*, *40*(5), 1297–1333. https://doi.org/10.1177/0149206314527128

Askin, N., Petriglieri, G., & Lockard, J. (2018). Tony Hsieh at Zappos: Structure, Culture and Change. Retrieved from https://www.thecasecentre.org/educators/products/view?id=137577

Bäcklander, G. (2019). Doing complexity leadership theory: How agile coaches at Spotify practise enabling leadership. *Creativity and Innovation Management*, *28*(1), 42–60. https://doi.org/10.1111/caim.12303

Baird, K., & Wang, H. (2010). Employee empowerment: extent of adoption and influential factors. *Personnel Review*, *39*(5), 574–599. https://doi.org/10.1108/00483481011064154

Beck, K. M., Beedle, M., van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., . . . Thomas, D. (2001). Manifesto for Agile Software Development. Retrieved from https://pdfs.semanticscholar.org/2dc5/d5a781ab55d3bba09d2fdb05ebf87bde7a2f.pdf

Bell, E., Bryman, A., & Harley, B. (2017). *Business research methods* (Fifth edition). Oxford: Oxford university press.

Bernstein, E., Bunch, J., Canner, N., & Lee, M. [Michael] (2016). Beyond the holacracy hype. *Harvard Business Review*, *94*(7/8), 38–49.

Booth, A., Sutton, A., & Papaioannou, D. (2016). *Systematic approaches to a successful literature review*: Sage.

Boyce, C., & Neale, P. (2006). Conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input.

Brown, T. (2008). Design Thinking. *Harvard Business Review*, *86*, 84-92, 141.

Carmeli, A., Meitar, R., & Weisberg, J. (2006). Self-leadership skills and innovative behavior at work. *International Journal of Manpower*, *27*(1), 75–90. https://doi.org/10.1108/01437720610652853

Cerne, M., Babic, K., Connelly, C. E., & Skerlavaj, M. (2015). "Team-level knowledge hiding, social leader-member exchange, and prosocial motivation". *Academy of Management Proceedings*, *2015*(1), 16302. https://doi.org/10.5465/ambpp.2015.16302abstract

Cerne, M., & Skerlavaj, M. (2015). Idea championing as the missing link between idea generation and team innovation implementation. *Academy of Management Proceedings*, *2015*(1), 16929. https://doi.org/10.5465/ambpp.2015.16929abstract

Černe, M., Jaklič, M., & Škerlavaj, M. (2013). Decoupling management and technological innovations: Resolving the individualism-collectivism controversy. *Journal of International Management*, *19*(2), 103–117.

Conboy, K., Coyle, S., Wang, X., & Pikkarainen, M. (2011). People over process: key people challenges in agile development.

Conforto, E. C., & Amaral, D. C. (2016). Agile project management and stage-gate model—A hybrid framework for technology-based companies. *Journal of Engineering and Technology Management*, *40*, 1–14. https://doi.org/10.1016/j.jengtecman.2016.02.003

Cosh, A., Fu, X., & Hughes, A. (2012). Organisation structure and innovation performance in different environments. *Small Business Economics*, *39*(2), 301–317.

D.School (2020). Getting started with design. Retrieved from https://dschool.stanford.edu/resources/get-started-with-design

Davenport, T. H. (2009). How to Design Smart Business Experiments. *Harvard Business Review*. Retrieved from https://hbr.org/2009/02/how-to-design-smart-business-experiments

Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-Determination Theory in Work Organizations: The State of a Science. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*(1), 19–43. https://doi.org/10.1146/annurev-orgpsych-032516-113108

Drath, W. H., McCauley, C. D., Palus, C. J., van Velsor, E., O'Connor, P. M.G., & McGuire, J. B. (2008). Direction, alignment, commitment: Toward a more integrative ontology of leadership. *The Leadership Quarterly*, *19*(6), 635–653. https://doi.org/10.1016/j.leaqua.2008.09.003

Dubé, & Paré (2003). Rigor in Information Systems Positivist Case Research: Current Practices, Trends, and Recommendations. *MIS Quarterly*, *27*(4), 597. https://doi.org/10.2307/30036550

Edmondson, A. C. (2011). Strategies for learning from failure. *Harvard Business Review*, *89*(4), 48–55.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory Building From Cases: Opportunities And Challenges. *Academy of Management Journal*, *50*(1), 25–32. https://doi.org/10.5465/amj.2007.24160888

Furr, N. R., & Dyer, J. H. (2014). Choose the Right Innovation Method at the Right Time. *Harvard Business Review*.

Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services. *Journal of Management Information Systems*, *35*(1), 220–265. https://doi.org/10.1080/07421222.2018.1440766

Goncalo, J. A., & Staw, B. M. (2006). Individualism–collectivism and group creativity. *Organizational Behavior and Human Decision Processes*, *100*(1), 96–109. https://doi.org/10.1016/j.obhdp.2005.11.003

Highsmith, J. [J.] (2004). *Agile Project Management: Creating Innovative Products*. Redwood City: Wesley Longman Publishing Co.

Hodgson, D., & Briand, L. (2013). Controlling the uncontrollable: 'Agile' teams and illusions of autonomy in creative work. *Work, Employment and Society*, *27*(2), 308–325. https://doi.org/10.1177/0950017012460315

Jong, J. P.J. de, & Den Hartog, D. N. (2010). Measuring Innovative Work Behavior. *Creativity and Innovation Management*, *19*(1). https://doi.org/10.1111/j.1467-8691.2010.00547.x

Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2015). 2015 Digital Business Global Executive Study and Research Project.

Kankanhalli, A., Tan, B. C. Y., & Wei, K.-K. (2005). Contributing knowledge to electronic knowledge repositories: an empirical investigation. *MIS Quarterly*, 113–143.

Kanter, R. M. (1988). When a thousand flowers bloom: Structural, collective, and social conditions for innovation in organizations. *Knowledge Management and Organisational Design*, *10*, 93–131.

Kautz, K. (2009). Customer and user involvement in agile software development. In *International Conference on Agile Processes and Extreme Programming in Software Engineering.* Symposium conducted at the meeting of Springer.

Kerr, W. R., Gabrieli, F., & Moloney, E. (2018). Transformation at ING: Agile. *Harvard Business Review*. Retrieved from https://hbr.org/product/transformation-at-ing-a-agile/818077-PDF-ENG

Kniberg, H., & Ivarsson, A. (2012). Scaling agile@ spotify. *Online], UCVOF, Ucvox. Files. Wordpress. Com/2012/11/113617905-Scaling-Agile-Spotify-11. Pdf*.

Langley, A. (1999). Strategies for Theorizing from Process Data. *Academy of Management Review*, *24*(4), 691–710. https://doi.org/10.5465/amr.1999.2553248

Lappi, T., Karvonen, T., Lwakatare, L. E., Aaltonen, K., & Kuvaja, P. (2018). Toward an Improved Understanding of Agile Project Governance. *Project Management Journal*, *49*(6), 39–63. https://doi.org/10.1177/8756972818803482

Laschinger, H. K. S., Finegan, J. E., Shamian, J., & Wilk, P. (2004). A longitudinal analysis of the impact of workplace empowerment on work satisfaction. *Journal of Organizational Behavior*, *25*(4), 527–545. https://doi.org/10.1002/job.256

Lee, M. Y., & Edmondson, A. C. (2017). Self-managing organizations: Exploring the limits of less-hierarchical organizing. *Research in Organizational Behavior*, *37*, 35–58. https://doi.org/10.1016/j.riob.2017.10.002

Lin, H.-F. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of Information Science*, *33*(2), 135–149. https://doi.org/10.1177/0165551506068174

Long, D. W. de, & Fahey, L. (2000). Diagnosing cultural barriers to knowledge management. *Academy of Management Perspectives*, *14*(4), 113–127. https://doi.org/10.5465/ame.2000.3979820

Malone, T. W., & Crowston, K. (1994). The interdisciplinary study of coordination. *ACM Computing Surveys*, *26*(1), 87–119. https://doi.org/10.1145/174666.174668

McAvoy, J., & Butler, T. (2009). A failure to learn in a software development team: the unsuccessful introduction of an agile method. In *Information Systems Development* (pp. 1–13). Springer.

McDonald, S. (2005). Studying actions in context: a qualitative shadowing method for organizational research. *Qualitative Research*, *5*(4), 455–473. https://doi.org/10.1177/1468794105056923

Moe, N. B., Dingsøyr, T., & Dybå, T. (2009). Overcoming Barriers to Self-Management in Software Teams. *IEEE Software*, *26*(6), 20–26. https://doi.org/10.1109/MS.2009.182

Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *The Journal of Applied Psychology*, *91*(6), 1321–1339. https://doi.org/10.1037/0021-9010.91.6.1321

Müller, R., Pemsel, S., & Jingting, S. (2015). Organizational enablers for project governance and governmentality in project-based organizations. *International Journal of Project Management*, *33*(4), 839–851. https://doi.org/10.1016/j.ijproman.2014.07.008

Nilssen, V. L. (2012). *Analyse i kvalitative studier: den skrivende forskeren*: Universitetsforlaget.

Nold, H., & Michel, L. (2016). The performance triangle: a model for corporate agility. *Leadership & Organization Development Journal*, *3*, 341–356.

Organ, D. W., & Greene, C. N. (1981). The Effects of Formalization on Professional Involvement: A Compensatory Process Approach. *Administrative Science Quarterly*, *26*(2), 237. https://doi.org/10.2307/2392471

Park, A. (2017). Case Study: When emulating Scaling Agile at Spotify went awry at Refinery29. Retrieved from https://medium.com/@andy.park/when-emulating-scaling-agile-at-spotify-goes-awry-d297dc006763

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), 112–128. https://doi.org/10.1108/IJPPM-10-2013-0178

Patanakul, P., Chen, J., & Lynn, G. S. (2012). Autonomous Teams and New Product Development. *Journal of Product Innovation Management*, *29*(5), 734–750. https://doi.org/10.1111/j.1540-5885.2012.00934.x

Pieterse, A. N., van Knippenberg, D., Schippers, M., & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment. *Journal of Organizational Behavior*, *31*(4), 609–623. https://doi.org/10.1002/job.650

Rhee, J., Seog, S. D., Bozorov, F., & Dedahanov, A. T. (2017). Organizational structure and employees' innovative behavior: The mediating role of empowerment. *Social Behavior and Personality: An International Journal*, *45*(9), 1523–1536. https://doi.org/10.2224/sbp.6433

Rigby, D. K., Elk, S., & Berez, S. (2020). Develop Agility That Outlasts the Pandemic. *Harvard Business Review*. Retrieved from https://hbr.org/2020/05/develop-agility-that-outlasts-the-pandemic

Rigby, D. K., Sutherland, J., & Takeuchi, H. (2016). Embracing agile. *Harvard Business Review*, *94*(5), 40–50.

Robertson, B. J. (2016). *Holacracy: ein revolutionäres Management-System für eine volatile Welt*: Vahlen.

Rolfsen, M., & Strand Johansen, T. (2014). The silent practice: sustainable self-managing teams in a Norwegian context. *Journal of Organizational Change Management*, *27*(2), 175–187. https://doi.org/10.1108/JOCM-08-2012-0124

Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, *26*(4), 441–457. https://doi.org/10.1016/j.jbusvent.2009.12.002

Ross, J. (2018). Let Your Digital Strategy Emerge. Retrieved from https://sloanreview.mit.edu/article/let-your-digital-strategy-emerge/

Schwaber, K. (1997). Scrum Development Process. In J. Sutherland, C. Casanave, J. Miller, P. Patel, & G. Hollowell (Eds.), *Business Object Design and Implementation: Oopsla '95 Workshop Proceedings 16 October 1995, Austin,*

Texas (27–29, pp. 117–134). London: Springer London. https://doi.org/10.1007/978-1-4471-0947-1_11

Scott, S. G., & Bruce, R. A. (1994). Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace. *Academy of Management Journal*, *37*(3), 580–607. https://doi.org/10.5465/256701

Serrador, P., & Pinto, J. K. (2015). Does Agile work?—A quantitative analysis of agile project success. *International Journal of Project Management*, *33*(5), 1040–1051.

Shipton, H., Sparrow, P., Budhwar, P., & Brown, A. (2017). HRM and innovation: looking across levels. *Human Resource Management Journal*, *27*(2), 246–263. https://doi.org/10.1111/1748-8583.12102

Sieger, P., Zellweger, T., & Aquino, K. (2013). Turning Agents into Psychological Principals: Aligning Interests of Non-Owners through Psychological Ownership. *Journal of Management Studies*, *50*(3), 361–388. https://doi.org/10.1111/joms.12017

Sims, P. (2011). *Little bets: Unleashing creativity by doing things to discover what to do*. New York: Free Press.

Škerlavaj, M. (2018). Chapter 11: From Creativity to Innovation: Four Leadership Lessons about Capitalizing on High-Potential Ideas. Retrieved from https://www.idunn.no/at-the-forefront/chapter-11-from-creativity-to-Innovation

Spreitzer, G. M. (1995). Psychological Empowerment in the Workplace: Dimensions, Measurement, and Validation. *Academy of Management Journal*, *38*(5), 1442–1465. https://doi.org/10.5465/256865

Storonsky, N. (2019, November). *Revolutionising stock: Fintech's role in the market.* Elizabeth Schulze. Websummit 2019, Lissabon.

Tongco, M. D. C. (2007). Purposive sampling as a tool for informant selection. *Ethnobotany Research and Applications*, *5*, 147–158.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, *185*(4157), 1124–1131.

Van de Kamp, P. (2014). Holacracy-A radical approach to organizational design. *Elements of the Software Development Process-Influences on Project Success and Failure. University of Amsterdam*, 13–26.

Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, *20*(2), 115–131. https://doi.org/10.1016/j.hrmr.2009.10.001

West, M. A., & Farr, J. L. (1990). *Innovation and Creativity at Work: Psycological and Organizational Strategies*: John Wiley.

World Economic Forum (2018). *The New Physics of Financial Services: Understanding how artificial i ntelligence is transforming the financial ecosystem*. Part of the Future of Financial Services series.

Yin, R. K. (2017). *Case study research and applications: Design and methods.*: Sage.

Attachments

Attachment 1: NSD – Participant Information and Consent Form

Are you interested in taking part in the research project "Agile Structures, Empowerment and Innovation at [company]"

This is an inquiry about participation in a research project where the main purpose is to analyse the impact that an agile structure in the mobile bank app development team has had on the innovativeness of the final service. In this letter we will give you information about the purpose of the project and what your participation will involve.

Purpose of the project

This research project (master thesis) is conducted to analyse the impact an agile structure has had on innovativeness. The aim is to validate academic research synthesized through a systematic literature review, which suggests that empowered employees in self-organised teams have more innovative behaviors.

Who is responsible for the research project?

BI. Norwegian Business School is the institution responsible for the project.
The research is conducted by Hamza Malik and Michael Grassmayr in cooperation with [company].

Why are you being asked to participate?

As you work in the [company – department name] department you were selected for this research project.
Your contact information was gained through Ingrid Wroldsen Carlsen.

What does participation involve for you?

If you chose to take part in the project, this will involve a 45 – 60 minutes personal interview. The interview includes questions about the structure in your unit, how

you work agile and your experiences with working agile. Your answers will be recorded electronically.

Participation is voluntary

Participation in the project is voluntary. If you chose to participate, you can withdraw your consent at any time without giving a reason. All data about you will be anonymized. There will be no negative consequences for you if you chose not to participate or later decide to withdraw.

Your personal privacy – how we will store and use your personal data

We will only use your personal data for the purpose(s) specified in this information letter. We will process your personal data confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act). We are storing the information of this interview only on our personal electronic devices (laptop and Phone). After the research project is done, all data will be deleted.

Your rights

So long as you can be identified in the collected data, you have the right to:

- access the personal data that is being processed about you
- request that your personal data is deleted
- request that incorrect personal data about you is corrected/rectified
- receive a copy of your personal data (data portability), and
- send a complaint to the Data Protection Officer or The Norwegian Data Protection Authority regarding the processing of your personal data

What gives us the right to process your personal data?

We will process your personal data based on your consent. This consent can be withdrawn at any time by contacting Michael Grassmayr or Hamza Malik.

Based on an agreement with BI. – Norwegian Business School, NSD – The Norwegian Centre for Research Data AS has assessed that the processing of personal data in this project is in accordance with data protection legislation.

Where can I find out more?

If you have questions about the project, or want to exercise your rights, contact:

- BI. Norwegian Business School via Michael Grassmayr (m.grassmayr@gmx.at) or by telephone: +436767431760, and Hamza Malik (hamzamalikn@gmail.com)
- The project supervisor is Miha Skerlavaj (miha.skerlavaj@bi.no)
- Our Data Protection Officer: Vibeke Nesbakken (vibeke.nesbakken@bi.no) or by telephone: +4748012648
- NSD – The Norwegian Centre for Research Data AS, by email: (personverntjenester@nsd.no) or by telephone: +47 55 58 21 17.

Yours sincerely,

Prof.Dr. Miha Škerlavaj	**Hamza Malik**	**Michael Grassmayr**
Project Leader (Researcher, Supervisor)	Student	Student

Consent form

I have received and understood information about the project" Agile Structures, Empowerment and Innovation at [company]" and have been given the opportunity to ask questions.

❑ I give consent to participate in an interview for this project

I give consent for my personal data to be processed until the end date of the project, approx. June 2020

(Signed by participant, date)

Attachment 2: Interview Guideline

The interviews will be conducted on the premise of [company] in Oslo. Each interview takes 45 - 50 minutes. At every interview, the interviewer Hamza Malik and Michael Grassmayr and one of the interviewees will be present. The interview is conducted as deep, semi-structured interview as described by Turner (2010).

Introduction

- We give information about the research project
  - The interview will be recorded and the data will be anonymous in our paper.
  - Show NSD agreement.
- Name and position of the employee
- What are your responsibilities and regular tasks?
- When did you start at [company] and when did you get involved in this project? Did you work in a similar role before?

Agile Structure - Autonomy, structure, decision making

- **How would you describe the agile structure you have within the unit?**
  - Who tells you what to work on?
  - How much independence and freedom do you have as a team? E.g. choosing what to work with, how to work and when to work.
    - And how much independence and freedom do YOU have?
    - How comfortable are you with this?
  - How much does your team contribute to the decision-making in your unit?
  - Who makes the decisions in your team?
  - How do you communicate with each other in the unit?
  - Could it be challenging some times?

Agile Structure - Opinions about agile structure

- **Do you think that you work completely agile, or are there some elements of the top-down structure still in place?**
  - How do you like agile structures now when working in it? What works well?
  - How motivating do you find it to work agile?
  - Is there anything you need more of to work agile? E.g. financial resources, time, knowledge and training, power

- What do you find challenging with the agile structure?
- Is it demanding to work agile in terms of time pressure or cooperation with others?
- What would you change?

Structural Empowerment

- **How will you get started with a new idea? Who needs to approve it/ with whom do you align?**
  - Who takes the final decision when there are different opinions?
    - Which team/person? (e.g. of which function you will program next)
  - Under which conditions can you take decisions by yourself?
  - Is it easy to connect with other teams?
    - Do you request knowledge, support and other resources from employees in your team / other teams

Psychological Empowerment

- **If you have an idea in which you strongly believe but nobody thinks it will work out, would you dare to continue working on it?**
  - If this crazy idea does not work out and you fail really hard, what would the people around you say?
    - E.g. your colleagues, your coach, your chapter lead, …
  - Do you have the opportunity to pursue new ideas?
  - If you get an idea, will you share it with you co-workers?
    - Will you move forward with it?
  - How much personal ownership do you feel to your unit?
  - How much impact do you have in the organization? Do you have any examples?
  - Whom do you ask for feedback and support?

Innovation

- **Do you feel the agile structure has impacted your creativity and innovation capacity as a unit? Why?**
  - Do you feel that YOU have become more creative since the agile change?
  - Is your unit able to adapt quickly to changes in the external environment?
    - E.g. changes in the market
    - Can you name an example?
  - Is you unit able to use feedback from customers to create innovative solutions?

- Can you name an example?

Finishing the interview

- Clear up any loose ends.
- Do you have any questions?
- Thanks for participating!

Attachment 3: Literature Review

A systematic literature review based on (Booth et al., 2016) was conducted to gain a broad understanding of the research field. This systematic literature review does not represent the complete available literature. Due to changing terminology and a strong limitation in the year of publication, relevant literature might not be found. The main purpose of this systematic literature review is to give an overview of the topic and point out existing research schools and scholars in the relevant field. The systematic literature review is complemented by relevant literature from master courses at BI. and psychological core literature from the last decades.

The systematic approach of (Booth et al., 2016) suggests that the literature found on academic search platforms should be selected based on inclusion and exclusion criteria. This approach aims at reducing biases in the selection process. Through the selection of keywords and exclusion/inclusion criteria the results might still be subconsciously biased, but the selection process itself is relatively objective. The literature search was conducted on the platforms business source complete (EBSCO) and Google Scholar with filters to only show academic articles published in peer-reviewed journals between 2010 and 2020. The keyword combinations and their results are stated in Table A1.

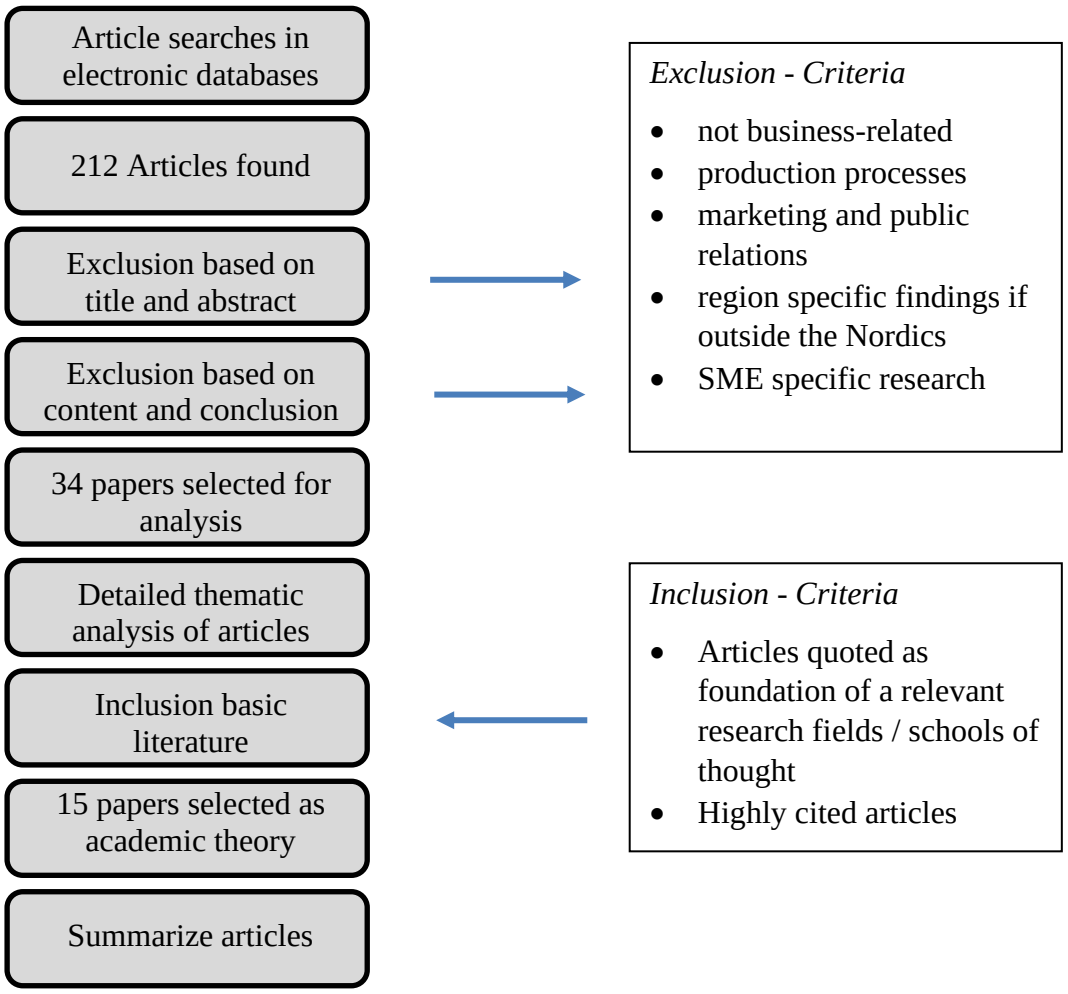


Image A1: Selection process of the systematic literature review based on (Booth et al., 2016)

Search Terms and Results of the Literature Review			
Search Term 1	AND Search Term 2	Search Results	Selection
change management	Banking AND digital	11	1
	Agile AND corporate	15	2
Agile or self-organized	Structure AND empowerment	9	1
	Employee AND empowerment	52	3
	Customer	12	0
	Structure AND creativity	17	1
	Service innovation	15	1

	Mental health or employee health	3	1
	Life satisfaction or well being	9	1
Empowerment	Innovative behavior	21	2
	Employee performance	48	2

Table A1: Keywords and Results of the literature review.

As a first selection, title and abstract were analyzed and excluded based on title and abstract. All articles focusing on not business-related topics, production processes, marketing and public relations, regional findings outside the Nordics or SME specific research were excluded. This resulted in 53 articles remaining as academic foundation for this paper. In a second exclusion step, the academic articles were excluded based on the overall content and findings of the paper, by applying the same exclusion criteria. The second exclusion lead to only 22 papers being selected.

Highly cited articles, foundations of research fields and relevant course literature from our master studies at BI were included. This inclusion is relevant to find academic articles published before 2010 and from related fields where different terminology than the search terms might be used. As many pschological articles were published already before 2010, the inclusion of 3 additional fundamental papers summs up to a larger amount than the original literature review.

ATTACHMENT 4: Selected Articles - Systematic Literature Review

Author	Journal	Title	
Galetti, B.; Golden, J.; Brozovich, S.	People and Strategy	Inside Day 1: How Amazon Uses Agile Team Structures and Adaptive Practices to Innovate on Behalf of Customers	2019
Kautz, K.	Information Technology and People	Investigating the design process: participatory design in agile software development	2011
Gomber, P.; Kauffman, R. J.; Parker, C.; Weber, B. W.	Journal of Management information systems	On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services	2018
Hodgson, D.; Brian, L.	Work, employment, and society	Controlling the uncontrollable: 'Agile' teams and illusions of autonomy in creative work	2013
Bäcklander, G.	Creativity and Innovation Management	Doing complexity leadership theory: How agile coaches at Spotify practise enabling leadership	2019
Nold, H.; Michel, L.	Leadership and Organization Development Journal	The performance triangle: a model for corporate agility	2015
Rolfsen, M.; Johansen, T. S.	Journal of Organizational Change Management	The silent practice: sustainable self-managing teams in a Norwegian context	2013
Conboy, K.; Coyle, S.; Wang, X.; Pikkarainen, M.	IEEE Software	People over Process: Key Challenges in Agile Development	2011
Hill, M. E.; Cromartie, J.; McGinnis, J.	Innovation Management	Managing for variability: A neuroscientific approach for developing strategic agility in organizations	2017
Beck, K. et al	Non-academic publication	Manifesto for Agile Software Development	2001
Parker, D. W.; Holesgrove, M.	International Journal of Productivity and Performance Management	Improving productivity with self-organised teams and agile leadership	2015
Rhee, J.; Seog, S. D.; Bozorov, F.; Dedahanov, A. T.	Social Behavior and Personality	ORGANIZATIONAL STRUCTURE AND EMPLOYEES' INNOVATIVE BEHAVIOR: THE MEDIATING ROLE OF EMPOWERMENT	2017
Baird, K.; Wang, H.	Personell Review	Employee empowerment: extent of adoption and influential factors	2010

Laschinger, H. K.; Finegan, J. E.; Shamian, J.; Wilk, P.	Journal of Organizational Behavior	A longitudinal analysis of the impact of workplace empowerment on work satisfaction	2004
Amundsen, S.; Martinsen, O. L.	Journal of Leadership and Organizationl Studies	Linking Empowering Leadership to Job Satisfaction, Work Effort, and Creativity: The Role of Self-Leadership and Psychological Empowerment	2015
Schwaber, K.	Business Object Design and Implementation	SCRUM Development Process	1997
Amabile, T. M. et al.	Academy of Management Journal	Assessing the Work Environment for Creativity	1996
Lee, M. Y.; Edmondson, A. C.	Research in Organizational Behavior	Self-managing organizations	2017

Table A2: Core literature based on the literature review

Attachment 6: Knowledge Sharing

The organizational culture can influence the willingness of employees to share knowledge. Long established organizational values, norms and practices, which are not in line with sharing knowledge can hinder knowledge management initiatives (Long & Fahey, 2000; Wang & Noe, 2010). This is for example the case, when discrepancy and highly restricted access to various information were important within the company in the past. A positive impact of the organizational culture on knowledge sharing is associated with trust between employees and encouragement by leaders and executives (Wang & Noe, 2010).

Trust can be defined as the ability to show vulnerability to others (Abrams, Cross, Lesser, & Levin, 2003). It is an element of the organizational culture, which is negatively correlated with the cost of sharing (Kankanhalli, Tan, & Wei, 2005). This leads to higher contributions to internal knowledge management systems and individual knowledge sharing (Wang & Noe, 2010). Trust between people exists in two different forms, trust in a person's competence and trust in a person's benevolence (Abrams et al., 2003). A person with benevolence is trusted by other's for acting in good will, caring about them and not destroying their self-esteem when showing vulnerability (Abrams et al., 2003; Amabile, Fisher, & Pillemer, 2014). Leaders can foster a culture of trust by showing their own vulnerabilities, asking for help whenever they need it and providing help to others continuously (Amabile et al., 2014). Trust is an interpersonal attribute, which is created only between two

people or a group of people (Abrams et al., 2003). Competence, on the other hand, is a person's expertise regarding a topic. It is crucial for knowledge sharing that one is perceived to have competence, because only in this case the person will be approached with questions and requests regarding this topic (Abrams et al., 2003). When somebody has competence in some field, others can expect that knowledge shared by this person in that field is valid and can be relied on (Abrams et al., 2003).

Motivation

Motivation can be intrinsic or extrinsic in nature. Intrinsic motivation means that one is interacting in an activity because of interest or believe in this activity (Lin, 2007). The rewards of intrinsic motivation are self-efficacy and the enjoyment of helping others (Lin, 2007). This intangible form of reward can have a positive impact on the employee who is helping others through sharing knowledge. On the one hand, one will feel good about helping others, which is explained by psychologists through the concept of Altruism (Lin, 2007). On the other hand, one might feel more confident and qualified after helping others (Lin, 2007).

ATTACHMENT 7: DRAWING MOBILE BANK STRUCTURE