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**Fake It Until You Make It**  
Implementing agility in three established organizations

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# Fake It Until You Make It

Implementing agility in three established organizations

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## Abstract

Agile working methods have gained attention in the last couple of years to meet the changing demands of the market. Previous research has, however, found that the process of implementing agility in established organizations is one surrounded by challenges. Through a qualitative and comparative study of three organizations, all implementing agile working methods, this study aims to develop a better understanding of the difficulties to implement agile working methods in established organizations. Drawing on Giddens theories on structuration and ontological security this study describes how the shift from a traditional organizational structure to an agile organizational structure affect individual perception of and reaction to the change. Hence, the study provides an alternative explanation of the difficulties of implementing agility in established organizations.

## Key words

Agile, Structuration, Ontological Security, Middle Managers, Uncertainty, Abstract Systems.

## Introduction

To be able to adapt to the changes in the market and the customer demands more and more organizations are now turning towards agile working methods (Forbes, 2019). Agility has been referred to as “the competitive advantage for a digital age” (Harvard Business Review, 2016), “a paradigm shift in management” (Forbes, 2019) and “crucial for an enterprise to thrive” (Business Insider, 2014). Agile working methods have been implemented by industry leaders like Apple, Amazon, Facebook, and Google (Forbes, 2019). The concept of agility within organizations has been defined by Doz and Kosonen (2008) as “the capacity to continuously adjust and adapt strategic direction in core businesses to create value for a company”. In practice, agility is first and foremost a project management model for developing software (AgileAlliance, w.y.). The methods entail small self-organizing and cross-functional teams that develop value with short iterations to be able to adjust the deliverance according to need (ibid.). However, due to the accelerated pace of the software industry and the complexities of markets in general agile working methods were by 2018 spreading upwards to teams on other levels, lateral to other departments and other industries (Forbes, 2018). Organizations are implementing agility due to the perceived positive effects in employee motivation, the use of

team member knowledge, and community-based decision making resulting in a common commitment towards the product (Paasivaara and Lassenius, 2019). Today, 65 % of surveyed companies in a survey performed by Deloitte (2019) believe the change towards agility to be important or very important. However, only 7 % feel ready for the shift agility means (ibid). Thus, organizations recognize the benefits of implementing agility but realize that it comes with challenges.

Previous studies of the concept of agility have focused on describing the management approach (Goldman, Nagel and Preiss, 1995) or made efforts to compare the concept to other management styles to outline whether agility works in practice (Azanha, Argoud, Camargo Junior and Antonioli, 2017; Serrador and Pinto, 2015). In many studies the concept of agility and the effects of implementing it have been explored through one single case in one organization (Azanha et al., 2017; Korhonen, 2012; Rasnacis and Berzisa, 2017; Tseng and Lin, 2008) and by individuals who experienced it (Benefield, 2008; Seffernick, 2007). In line with the results of the survey performed by Deloitte (2019) previous research has established that implementing agility is challenging. Boehm and Turner (2005) bring up some of the practical issues implementing agility comes with, such as changing processes of documentation, milestones, HR-processes and policies and collocation of units. Ebert and Paasivaara (2017) describe the challenge of looking past the tailoring of a model and practices and to acknowledge the change of mindset agility requires. Conboy and Carroll (2019) describe the difficulties of defining a united language of agile concepts and terms, choosing appropriate frameworks for the organizational context, handling the unwillingness of staff to change, combining the chosen framework with existing organizational structures and maintaining autonomy while complying to agile structures and ceremonies. Implementing agility is as it seems difficult which in turn demands of management to maneuver the change and its challenges. However, previous research further describes the challenges that the change in the role of the manager presents. The role of the manager shifts when implementing agility (Joiner and Josephs, 2007) from a direct leader to a facilitator of teams (O'Connor, 2016). Dikert, Paasivaara and Lassenius's (2016) literature review on challenges when implementing agility outline the uncertainty regarding the role of the middle manager in an agile organization and how this is problematic. Dikert et al. (2016) describe that middle managers need to change their mindset from command and control to allowance of self-organization, something that is difficult to achieve. Thus, managers need to maneuver and secure that the implementation is moving forward while facing challenges adapting to the change in the middle manager role.

The explanations to the challenges presented by previous literature can be divided into two sides. On one side the explanation is the individual resistance to the change and the lack of what is referred to as an agile mindset (Balakrishnan, 2016; Conboy and Carroll, 2019; Dikert et al., 2016; Ebert and Paasivaara, 2017). On the other side, the explanation is the way agility has been implemented in terms of coordination, communication and planning (Boehm and Turner, 2005; Bottani, 2009; Dikert et al., 2016; Rasnacis and Berzisa, 2017; Shafiri and Zhang, 2001). However, Kähkönen (2004) argues that while agility sounds good in theory for every organization, agile working methods rely on a way of working in teams that are unsuited for large organizations in changing markets. As agile methods were developed in small team environments where innovation, resources, and support were managed at team level the challenges of implementing agility increase with the size of the implementation (Leffingwell,

2007; Stojanov, Turetken and Trienekens, 2015). Dikert et al. (2016) describe that with implementing agility comes a shift in hierarchy and boundaries often resulting in segmentation between teams and departments working agile in different ways and unclear responsibilities of roles. Dikert et al. (2016) outline how in some cases old bureaucracy and internal silos were kept which hindered agile development as such presenting a critical problem for organizations with established structures and bureaucracy. Thus, as previous research has established that implementing agility in established organizational structures is more difficult than in smaller and less established contexts, agility, as it seems, needs to be seen not as an object that can be implemented in all contexts but as something that will affect the context and vice versa.

The purpose of this study is to develop a better understanding of the difficulties to implement agile working methods in established organizations. Drawing upon Giddens (1991) the purpose of the study will be explored through the lens of structuration theory. As structuration theory aims to explain how individuals in organizations are affected by changes in structures and how the structure is affected by individual behavior and interpretation, we argue it could be used to explain the difficulties of implementing agility in established structures. The study will take the perspective of middle managers as previous research has specifically outlined the uncertain role of the middle manager in an agile context (Dikert et al., 2016; O'Connor, 2016) and as Change Management literature highlights the important strategic role middle managers play during efforts of change (Barton and Ambrosini 2012; Currie and Proctor 2005; Rouleau and Balogun 2011). This study will take the perspective of middle managers to describe the processes of implementing agility in three organizations all with non-agile routines and structures. All organizations are with the help of external consultancy firms, internal support functions, and through different levels of reliance on implementation frameworks moving the agile working ways from small teams of software developers to the Research and Development departments. The purpose of the study will be fulfilled by answering the following question: Why is it difficult to implement agility in established organizations?

The paper will follow a structure of five parts. Firstly, the theoretical framework of structuration theory is presented, followed by a description of the process of collecting and analyzing data. Thirdly, the results of the study are presented, followed by a discussion section. Lastly, the paper ends up in conclusions, contributions, limitations, suggestions for future research, and managerial implications.

## Structuration Theory and Ontological Security

To understand why implementing agility is difficult one must outline why any changes in structure and routines are difficult. Theories on structuration discuss how structures, “recursively organized sets of rules and resources” (Giddens, 1984, p25), influence and is influenced by an individual’s day-to-day activities. Thus, social action either reinforces or challenges structures (ibid.). Orlikowski (1992) employs Giddens view of structuration to explain the interaction between individuals, organizations, and technology. The author argues that the culture of the workplace, existing bases of expertise and power significantly affect how technology is used and interpreted (ibid.). Groves, Meisenbach, and Scott-Cawiezell (2011) describe how structuration theory could be used in an organizational context to explain how

individuals both improve and facilitate for inherent structures. In another study, Bailey and Barley (2011) argue that everyday activities of individuals in an organization shape and maintain the organizational structure. Theories of structuration as expressed by Giddens (1984) has been criticized as it neglects individual experiences of tensions within a society (Archer, 1982). Thus, Giddens is criticized for equating the individual with the society in which the individual exists. Extending his work, Giddens bring in the human psyche to discuss how individuals are limited, enabled and affected not only by structures of society but by themselves and their gravitation towards what is referred to as ontological security (Giddens, 1991).

The concept of ontological security originates from the field of psychology and the analysis of the human psyche (Laing, 1965). Laing defines an ontological secure individual as “an individual that can be said to have a sense of his presence in the world as a real, alive, whole, and, in a temporal sense, a continuous person” (Laing, 1969, p.39). Thus, an ontological secure person does not dwell on or question the details of how the world is organized but rather goes along with the flow ordered by the structures organizing the world (ibid.). The concept of ontological security was later discussed by Giddens who brought the concept into sociology in 1991. By looking at self-identity as reflexively created and as sustained through routines and trust in systems and persons Giddens (1991) describe and problematize the many ways individual behavior is influenced not only by the environment and structures but by the very way individuals’ function. Therefore, theories on structuration as described by Giddens should be possible to use to explain how individual behavior and interpretation is affected by a change in highly reinforced organizational structures.

### The Dynamisms of Modernity

Giddens (1991) describes the world of today as a runaway world. The pace has increased, and the scope has widened with a profoundness not seen before. Giddens describes three elements that affect the dynamism of modernity. The first one is the separation of time and space, the possibility of coordination and collaboration without physical presence. The emptying of time and space can as an example be seen in the universal time and dating systems that have replaced singular systems (ibid.). According to Giddens, the increased pace of time-space distancing can be explained by the second element affecting the dynamism of modernity, the disembedding mechanisms. He defines disembedded mechanisms as “the lifting out of social relations from local contexts and their rearticulation across indefinite tracts of time-space” (Giddens, 1991, p.18). Giddens describes two types of disembedding mechanisms; symbolic tokens and expert systems, together referred to as abstract systems. He describes symbolic tokens as a “media of exchange which have standard value, and thus are interchangeable across a plurality of contexts” (Giddens, 1991, p.18) and exemplifies with the monetary system. He describes how money brackets both time and space as it is a means of credit (time) that does not require two people to physically meet (space). Expert systems, Giddens describe, are structures that enable complex systems to work formed by combinations of expert knowledge, technical procedures, and social relations. Giddens exemplifies expert systems with hospital systems. Expert system brackets time and space as technical knowledge have a validity independent of practitioner or receiver (ibid.).

Individuals can and do interact with the abstract systems either face to face or at distance at so-called access points (Giddens, 1990). To exemplify, the access point in a monetary system may be the bank or the website. Essential in the functioning of abstract systems is according to Giddens the notion of trust. As individuals' place trust in abstract systems they let the system steer action while accepting that they do not fully understand how the system works (ibid.). Giddens describes that the access points establish and maintains trust in the system which is why trust in the system is highly dependent on the individual experience at the access points. If individuals accept and vests trust in abstract systems, these allow for a safer environment and maintain ontological security. However, as the access points provide the pillars on which the system depends on they also make out the points where the system is the most fragile. Giddens (1991) argues furthermore that trust vested in abstract systems often carries little moral meaning. Most often, routines ordered by abstract systems may be experienced as empty overwhelming practices. Trust in a person, described by Giddens (1991) as a caretaker, may provide the moral satisfaction that abstract systems fail to provide. An example of the relationship between an individual and the caretaker is that while a child moving into adulthood may take comfort in trusting pre-established structures of what it means to become an adult, like being able to vote, a parent describing the processes of voting provides her with more comfort and hence moral satisfaction.

The third element affecting the dynamism of modernity besides the separation of time and space and disembedding mechanisms is according to Giddens (1991) institutional reflexivity. In the modernity of today the traditional overarching authorities ensuring that there is one right and one wrong is diminishing. Instead, traditional authorities are replaced by multiple structures and sources of authorities conflicting with each other in the claim for validity (ibid.). Claims of knowledge are therefore considered as hypotheses open to revision and possibly abandoned at a certain stage. Giddens (1991) describes how changes in an individual's life have always demanded reorganization and adjusting of one's beliefs however previously the identity to which the individual was changing was staked out before the change. The author argues that in the modernity of today, the identity of the individual must be explored and constructed as a part of a reflexive process evaluating risks and outcomes (ibid.).

### Ontological Security and Change

Giddens (1991) describes ontological security as an individual's confidence in the self-identity and in the context, a framework of established routines and habits that guides individuals through the changing environment of everyday life. The cluster of habits and beliefs is sequenced in a more or less ordered pattern by the individual's lifestyle (ibid). Giddens describe how the lifestyle is in turn influenced by group pressures and the visibility of role models. Through the following of pre-established habits, individuals avoid cognitive dissonance and reduce the excess of available and potentially disturbing information and knowledge (ibid.). While avoiding acknowledging information as it conflicts with one's pre-established beliefs may be seen as prejudice, Giddens (1991) argues that it rather forms what he refers to as a protective cocoon that helps maintain ontological security. The protective cocoon of routines and experiences helps individuals to accept the real world as real, to not be overwhelmed by

conflictual messages presented to the individual (ibid.). Thus, routinized activities sustain ontological security.

Giddens (1991) describes how the dynamic environment of modernity normalizes crises, moments where individuals or collective goals and beliefs are challenged and made irrelevant. Some crises, Giddens argues, may be unsettling and generate uncertainty for the individual and collective without having any real effect on the self as when reading about regression or political crises in the newspaper. However, Giddens (1991) describes how when the crisis directly affects the individual, if the regression leads to individual economic trouble, it may threaten the self-identity. Thus, crises may both generate general uncertainty and existential questions for the individual (ibid.). Giddens distinguishes anxiety from fear where fear is a result of specific external threats or objects. Anxiety however, is emotional tensions that express internal dangers, threats to the self. While fear may lead to responsive actions, Giddens argues that anxiety tends to paralyze the individual. Giddens (1991) describes that the protective cocoon, trust in abstract systems and commitment to a certain lifestyle most often shield individuals from experiencing radical doubt as threatening of individual objectives. However, sometimes, steering between conflicting abstract systems and authorities give rise to existential questions resulting in doubts and anxieties and threatened ontological security (ibid.). In these cases, Giddens describe how some individuals seek an overarching authority to guide action as they find the freedom of choice to be exhausting. These individuals give up critical judgment to submit to authority. Others, when experiencing doubt and anxiety may fall back on pre-established routines or become paralyzed all together (ibid.).

### Ontological Security in the Context of Organizations

Giddens (1991) theories on structuration and ontological security have originally been used to explain individual insecurity when faced with changes in structures due to disasters like climate change and political crises or personal incidents like the loss of a parent or moving into adulthood. The theories have however also been applied to the context of organizations. Schlichter (2010) describes how the project of implementing an information system in a company had characteristics equivalent to an abstract system. The author describes how the information system lifts out social relationships from local interaction contexts (ibid.). Schlichter (2010) exemplifies with a nurse who can order blood tests from the laboratory using the information system instead of having to go to the laboratory herself. The system works as nurses trust the procedures. The author further describes how project meetings made out access points where laypeople (management) met with representatives from the abstract system (project managers) to gain a common understanding (ibid.). Schlichter (2010) argue that project participants' ontological security and trust in the system were affected by experiences at access points. Consequently, the trust in the process and system affected the individual's usage of the system (ibid.). Dwivedi, Wade, and Schneberger (2011) define telehealth as an expert system part of healthcare as an overarching abstract system. The authors argue that the process of implementing telehealth threatened the security of individuals within the current abstract system (ibid.). Thus, theories about ontological security may also be used to explain how individuals are affected by changes in established routines in organizations. Therefore, theories about ontological security should be possible to use when aiming to explain how individuals experience changes in established routines and structures.

Drawing on Giddens (1991), Schlichter (2010) and Dwivedi et al. (2011) we argue that the structure, technical procedures, social relations and knowledge inherent in organizations make out local expert systems that organize the daily life of employees at all levels. If employees' place trust in the way an organization is functioning, they do not feel the need to understand exactly how everything in the organization works. Individual routines ordered by experience and lifestyle together with trust in the organizational system forms a protective cocoon that guides employees through their work life and shields them from potentially conflicting choices. However, when a company is going through an organizational change the expert system is affected by the implementation of new routines, new knowledge, and new structures. The system needs to adapt, expand or be broken down entirely and replaced by a new one. Applying Giddens (1991) argument about trust in abstract systems versus trust in persons one can argue that individuals feel more morally supported by a person than an abstract system which is why they tend to seek guidance from an authority. Senior managers are the key authority in the expert system. They are, what Giddens refers to as, caretakers. The senior managers also make out the access points of the expert system where trust is established and maintained.

The change described in this paper is that of implementing agility in established organizational structures. The implementation of agile working methods comes with a shift in both roles and responsibilities of managers (Dikert et al., 2016) and changes in organizational structures (Conboy and Carroll, 2019). Hence, implementing agility affects, in Giddens (1991) wording, both the expert system and the role of the caretaker and authority within the expert system. These instances are according to Giddens important for individuals trust in the system and perception of ontological security. Therefore, applying Giddens theories on structuration and ontological security may provide a possible explanation to the difficulties of implementing agility in established organizations.

## Methodology

The purpose of this study is to develop a better understanding of the difficulties to implement agile working methods in established organizations. Hence, the study aims to provide a better understanding of the subject which is why a qualitative research effort was decided as an appropriate approach. The choice of research effort is in line with the ideas of Silverman (2011) who argues that a qualitative research design enables both a deep and broad understanding of complex and specific subjects.

The study is a comparative case study of three organizations to provide a deeper understanding of the subject. As Flyvbjerg (2006) note that case studies give depth to the study by providing examples from real events, comparing three cases may further deepen the understanding of the subject. Even though the author notes that it may be difficult to draw general conclusions based on case studies it will still provide valuable insights. Comparing three cases may further result in conclusions that can be applied more generally than had only one case company been studied. The three companies in this study were chosen based on three requirements:

- 1) Type of change: All organizations had to be undergoing an agile transformation.



2) Level of maturity of change: All organizations had to be in the early phases of implementing to secure that material collected could be compared.

3) Size: All organizations needed to be large and established as previous literature (Leffingwell, 2007; Stojanov et al., 2015) describes that the challenges of implementing agility increases with the size of implementation.

The three studied companies all have operations in Sweden, are large in size (<10 000 employees) and have a long history within their respective industries. Company A and C develops mainly products while Company B develops services. All three companies are going through a substantial process of change to apply agile working methods. In focus is the department for research and development which is where agile methods initially have been implemented in all three organizations. All interviewees are thus employed within the organizations respective Research and Development department. The agile transformations are at different levels orchestrated by the same consultancy firm, specialized in agile transformations. It was through the consultancy that we gained access to the three chosen organizations.

### Collection of Data

The research question, why is it difficult to implement agility in established organizations?, has been examined through the collection of primary data through semi-structured interviews. Data collection was divided into three phases. The first phase was the initial meetings with the consultancy firm guiding the change process in the three companies. These first meetings were held to get initial knowledge about the consultancy’s view of agile methods and their involvement in the change processes. It was important during this phase to secure that the objectives of the research were not influenced by the consultancy objectives which would have resulted in bias. This risk was mitigated by focusing on the case companies rather than the consultancy’s methods or goals with the collaboration. During the second phase, the researchers experienced a workshop that was held by the consultancy for their consultants where agile methods were explained and discussed. Furthermore, pilot interviews were held to create an initial understanding of the subject and its tensions. The third phase entailed interviews with individuals involved in the change processes. In total, as shown in table 1, 19 interviews were held.

**Table 1. Organizations and respondents**

Organization	About the organization	Respondents
Company A	Large global organization with operations in Sweden since the beginning of the 20th century. Develops products as well as services.	Middle manager (MA 1) Middle manager (MA 2) Middle manager (MA 3) Middle manager (MA 4) Middle manager (MA 5) Senior manager (SA 1)

Company B	Large mainly Nordic organization with operations in Sweden since the late 19th century. Develops services.	Middle manager (MB 1) Middle manager (MB 2) Middle manager (MB 3) Middle manager (MB 4) Middle manager (MB 5) Middle manager (MB 6)
Company C	Large global organization with operations in Sweden since the beginning of the 20th century. Develops products as well as services.	Middle manager (MC 1) Middle manager (MC 2) Middle manager (MC 3) Middle manager (MC 4) Senior manager (SC 1) Senior manager (SC 2)

As it is interesting for the purpose of this study to recognize individual attitudes and motives towards the implementation of the agile transformation, interviews were chosen as a method for primary data collection. In line with Silverman (2013), interviews provided the researchers with practical examples and valuable individual opinions. Having a semi-structure of interviews created a relaxed and flexible interview setting and provided the interviewers with the possibility to form the follow-up questions based on the answers received from the respondents. As the questions were open-ended the interviewees had the opportunity to talk freely and provide the interviewers with describing answers and their impression which is why open-ended questions are preferable according to Kvale (1996). Being provided with the interviewees describing answers and impressions was important as the aim is to receive a deep and broad understanding of the subject.

The selection of interviewees was made partly by the consultancy firm who provided the researchers with key actors involved in the change processes and partly by using a snowballing method as discussed by Bryman and Bell (2011) where interviewees themselves provided names of new potential interviewees. Persons of interest for interviews were middle managers (managers at different levels below senior management with responsibility for personnel) and individuals appointed as change drivers or spokespersons for the change. In some cases, senior managers were designated change drivers which is why the study also brings in the perspective of senior managers to some extent (see table 1). As the researchers were aware of the power relationship that exists between the interviewer and the interviewee due to the monopoly of interpretation that the interviewers have together with the power to set the topic and formulate follow up questions, as discussed by Kvale (2006), efforts to create trust was made. The efforts to create trust was partly made through providing the interviewees with the information that neither the name of the company they worked for nor their names would be presented in the article. Other efforts to create trust was by informing interviewees that the information would not be shared with the consultancy firm and that they were not expected to speak for the entire organization. Consequently, employees are referred to as middle manager 1 or senior manager 1, etc. Watson (2011) argues that there is the risk that the answers coming from respondents representing an organization, as they are in this study, are biased. The anonymization of interviewees limited the risk of interviewees providing a polished view. Furthermore, by interviewing various respondents from different positions the risk of being

provided with a one-sided view of the subject was further mitigated. This is in line with Watson (2011) who even though the complexity of the semi-structured interviews nature argues that semi-structured interviews that allow comparison with others may produce valuable insights.

The interviews were held with the help of an interview guide adapted to the interviewee's position and role in the change process that was compiled initially during the first phase of data collection. The guide was adapted after the pilot interview had been held and over time as some questions were considered unnecessary and some were lacking and in need of reconfiguration. The guide secured that all important topics were covered and is highlighted as a contributing element to a successful interview by Bryman and Bell (2011). During all interviews, one researcher was responsible for the asking of questions while both parties asked follow-up questions as they arose. Furthermore, as all interviews were recorded, after acceptance from the respondents, and later transcribed the division of tasks and knowing that the interview could be listened to later created a relaxed setting where the focus was on the interviewees answers and possible follow up questions and not solely on note-taking. Interviews were held mainly over the phone due to issues of time and distance. Performing interviews over the phone may according to Bryman and Bell (2011) lead to a loss in the descriptiveness of a concept. Furthermore, with the knowledge of the interview being recorded, comes according to Bryman and Bell (2011) the risk that respondents choose their words more carefully. However, as both interviewers partook in the phone interviews, the extent of follow up questions and requests for clarification mitigated both these risks.

## Analysis of Data

The analysis of data was divided into two parts. Firstly, the data were analyzed without any considerations for the theoretical framework and secondly, the data was analyzed through the lens of structuration theory. The data was analyzed in this order to secure an inductive point of view that was not biased by the researches assumptions. Following the grounded theory, the interviews were transcribed and later coded using the strategic process that Martin and Turner (1986) refer to as "concept discovery", which is the process when the material gathered is transformed into concepts or broader categories. Using concept discovery, the researchers connected the gathered material with certain concepts. The first round of coding presented the researchers with some concepts common for individuals from all companies such as "challenging", "roles", "communication" and "structure". Hence, it was confirmed that previous studies of the implementation of agility were right, implementing agility seemed to be perceived as challenging and difficult. Moreover, it seemed to have something to do with the structure surrounding the concept of agility and the new roles. In another round of coding, focus was on different happenings individuals perceived as challenging and difficult. What surfaced during this process was the concept of uncertainty. Even if not all interviewees specifically used the word they expressed anxiety, insecurity, and doubt when discussing the processes of adapting to agile working ways, to the new structure and to their new role. The different aspects of discussed anxiety were compared between the different companies. By comparing the material between the different companies, we could see general trends in answers regardless of the organization.

As we could conclude that all respondents regardless of the organization experienced uncertainty we aimed to find out if the uncertainty could explain the difficulties of

implementing agility in established organizations. When analyzing the instances where middle managers and change drivers expressed uncertainty multiple contradicting dictums were discovered. Firstly, respondents seemed to associate agility with something positive and important for the company yet still they experienced difficulties and uncertainties. Secondly, when respondents discussed difficulties it often concerned let down expectations regarding the process of implementing agility. It seemed like respondents had expected something of the process which it did not fulfill. Thirdly, it seemed like respondents experienced uncertainty not necessary because of the organizational change but rather connected to the shift in routines and structure that agility came with. It appeared as if the contrast between old and new was what caused the uncertainty rather than the agile transformation in itself. Recognizing these dictums, we turned to Giddens (1991) who describe individual responses to change in terms of how ontological security and perception of safety is formed and maintained by routines and structure. Giddens theory about structuration and ontological security was brought in to discuss why middle managers and change drivers experience uncertainty when established routines and structures change.

## Empirical Data

### Company A

To outline the setting in which agile methods were implemented, the organizational structures and processes inherent in Company A will be described. Respondents describe how Company A had, before the decision to implement agility, a history of developing products according to a waterfall model characterized by milestones, deadlines and already decided results of the project. According to a middle manager (MA 3), the processes of developing in Company A was prior to the decision to implement agility characterized by documentation and detailed descriptions of processes and routines. The managers describe how roles and responsibilities during projects were staked out and separated. A senior manager (SA 1) further describes how Company A operates in a rather hierarchical industry where decisions about details traditionally have been decided at high levels and distributed downwards. One middle manager (MA 5) describes the traditional line manager role common in the company. Traditionally, the manager has had a direct connection to and authority over their subordinates requiring information and managing. The senior manager (SA 1) further describes how the combination of small margins and predictable development of the industry has led Company A to the development of a project model where planning has been in focus. Another middle manager (MA 1) describes how every individual has had their specific expertise and competence.

We had someone systematic who thought about what to build, so to speak, someone who implemented and builds and then someone at the end who verified it. - Middle Manager, MA 1

Thus, the setting in which agility was implemented in Company A was one characterized by clearly staked out processes, roles, and responsibilities.

Some teams of developers had been working agile in a small scale in Company A for some years prior to the decision to implement agility. These small teams were however still

locked to the projects and milestones of the inherent organizational structure which hindered them from creating real value according to a middle manager (MA 5). Before the decision, there was some frustration internally stemming from newly employed individuals coming from other companies who felt the need to do something different.

The pressure from the changing market together with demands from the customers to be able to deliver faster resulted in the decision to implement agility within Company A product development. A senior manager (SA 1) who had gone through a similar change at another company and was used to work agile was employed in August 2016. In May 2017, top management had a meeting where they decided to use the Scaled Agile Framework, SAFe, to guide the implementation of the agile way of working. SAFe is described as a knowledge base of proven, integrated principles, practices and competencies for the implementation of agile working methods. Within SAFe there are descriptions of new roles that fit the new agile working ways. The choice fell on SAFe as it was considered structured. Company A needed structure as only a few employees had experience of agility and as they realized the major change implementing agility meant. During the first quarter of 2018 pilot teams were formed in line with SAFe with the accompanying change of roles and structures. Six months into the pilot more structured education sessions were held for others who were starting up “agile release trains”, ARTs, cross-functional units of about 100 individuals in line with the SAFe framework. These sessions were held both by external consultants and internal managers with experience in working agile. In March 2019 Company A had started up more than 50 release trains according to (MA 5). The company adapted SAFe to fit its context after the pilots and along the way. Two years into the change they were developing a framework based on SAFe but adapted to Company A. A senior manager, (SA 1) describes how initially the change was moving rather slowly as they did not give the employees deadlines for adjusting to the change. It was not until management communicated that all had to work according to the new structure within six months that things started to happen.

To support the change, a “head agile change leader” was assigned together with other change drivers, often middle managers or other individuals engaged in the change, to drive the change forward and spread information. The change drivers were distributed section-wise with one in every section. The support function was not installed when the change was initiated but started up as a result of a need for structure and keeping of pace. Company A also brought in about one external agile coach per ART who facilitated the change by offering training and support.

Regarding communication surrounding the change, one middle manager describes how the senior managers had meetings with managers at all levels to create a direct link between top management and middle management. One middle manager (MA 2) describes how information has been clear and direct focusing on what is going to happen and when. The middle manager notes however that the level of information depends on the level of management. After meetings with senior management, it was up to middle managers to communicate with their employees. Information was also spread via the intranet.

Practical changes that implementing agility came with were those of roles and responsibilities and the structure to facilitate the new working ways.

We design teams where we have those with a background in systematization, a background in development design and a background in verification. But then we combine all these in teams instead and organize that way. You remove handovers, you even remove some documentation. Because you can talk to Kalle, Lisa, Pelle and Ali and say what you did. So, most of all we have broken down walls. - Middle Manager, MA 1

Thus, Company A moved away from expertise and reliance on single individuals and headed towards broader cross-functional competence. With the change in the structure of teams and processes came also shift in roles and responsibilities. One middle manager (MA 2) describes how individuals with experience in agile were positioned at higher positions in the hierarchy. Meanwhile, traditional roles such as technical experts were leveled with developers within the new organization. The middle manager further describes how managerial authority was distributed between a few agile roles such as Product Owners, Release Train Engineers, and Product Managers.

It's always hard with middle manager levels because people lose their roles. The agile transformation means that some roles disappear. Maybe not directly in the line organization but project leader, sub project leader, you name it. They disappear. Or the responsibilities may still be there but we have cut the cake in another way. - Middle Manager, MA 1

The shift of the manager role is further described by another middle manager (MA 1) who notes that the middle manager became a facilitator for teams working autonomous rather than the driver of the creation of value. Thus, teams were given more mandate to take decisions and team managers were given a more administrative and facilitating responsibility. As the structure surrounding the roles was not made out entirely prior to the implementation, many managers were according to a middle manager (MA 5) positioned with acting roles. This meant that managers had a new responsibility and a new role but with their old roles as their official title. Thus, the structure around the ways of working and the responsibilities were adapted and reconfigured along the way. Agile coaches together with change leaders tracked the progress in the change journey in general based on teams' self-assessment made by Release Train Engineers and Scrum Masters. The self-assessment was then compared against a template where different levels of agility could be reached.

## Company B

Much like Company A, Company B's organizational setting before the decision to implement agility was characterized by waterfall project models with milestones and clearly outlined structures and procedures.

Earlier in Company B we have worked with quite heavy projects where you know exactly what to do, you have made investigations in beforehand and you have a set date for projects finish. - Middle Manager, MB 1

In line with this, a middle manager (MB 3) describes how Company B has been a traditional waterfall organization for the past 20-25 years with clear divisions of responsibilities between departments and groups. According to another middle manager (MB 5), the division between units created silos where the focus is on systems over function meaning that individuals see to their specific part of the process and not their part in the company context.

The management team in Company B had discussed moving towards an agile way of working several years prior to the decision to implement agility. As in Company A, there were some agile teams spread out at different places in the organization. As the company had experienced some large misdirected projects, they felt the need to change from traditional waterfall projects to something else. Ultimately, it was decided to implement agility. When having decided that a transformation was going to happen, several frameworks were evaluated to decide which was most fitting. The choice landed on SAFe for the same reasons as Company A (structure, lacked experience of agility and the major change implementing agility meant).

The implementation started in January 2018 with the formation of a pilot team, an “agile release train” in line with SAFe, that tested the concept. After that, educational sessions were held for employees and more agile teams were formed. The implementation moved forward one release train at the time where departments applied for becoming trains. A middle manager (MB 4) describes how it was considered a benefit to becoming a release train as you by that received more support to drive the change forward, both in terms of financial support, frameworks, and education. Thus, teams becoming trains were educated meanwhile others who had not yet become trains adapted to the change on their own.

As in Company A, the change in working methods practically meant that teams got more mandate and the middle managers role became more facilitating.

We are a company much more decentralized than others in our industry, we have pushed down responsibilities quite far down in the organization mainly on the office side[...]what we do now is that we take it to the central divisions. Laying a lot more responsibility on the team also means that managers must dare to let go of the responsibility and delegate. - Middle Manager, MB 1

Thus, the shift in the role of the manager comes with a shift in behavior according to the middle manager. The shift in the role of the manager is also brought up by another middle manager (MB 3) who describes how the line manager with implementing agility through SAFe gets a rather indirect leadership where a manager leads through other instances such as Release Train Engineers.

To drive the change forward and facilitate for employees adapting to the change Company B formed a support group with designated change drivers, much like the one in Company A. External agile coaches were furthermore brought in to support middle managers during the transformation. As described by a middle manager (MB 4) there was no structured plan for follow up. The responsibility to ask for support and guidance rather laid with the middle managers themselves.

Communication surrounding the framework and the change in general was made mainly through the intranet. Senior management communicated initially about the purpose

while middle managers had the responsibility to concretize the communication and provide their teams with an understanding of the aim and what it meant in practice.

## Company C

Company C is, like Company A and B, an organization with established routines of working within their development processes according to a middle manager (MC 3). A senior manager (SC 1) describe how they have had a traditional way of working including many milestones and a vast amount of documentation. Processes have according to a senior manager (SC 2) traditionally followed a waterfall model where the result is set prior to development and where responsibilities are staked out.

Much like in Company A and B some developers and testers experimented with scrum and other agile working methods in a small scale before the decision to implement agility. The teams that started working agile were according to a senior manager (SC 2) quite clear with their wish to have support to change their way of work and therefore pitched it upwards. However, their aspirations were not shared until much later as the management did not see the point of it and did not see how it differed from the usual ways of working. Things started to happen when new employees with new influences started talking about agile and when early adopters exceeded in their career and took their ideas with them according to a senior manager (SC 2).

Ultimately, in 2017, there was a decision from section management to implement agility in a larger scale. The reason for implementing agility was according to a middle manager (MC 1) the experienced need to be able to change according to the movement of the market and customer demands. Individuals also stressed faster lead times, shorter development cycles, structure, and better team-work as important reasons to bring in agility. A middle manager who had previous experience of a similar change was recruited to support the section in driving the change forward not only in the section but in a broader organizational context. Management decided to test the working methods with a pilot team. As the pilot was considered successful, it was decided to implement it within the entire section. Alongside this, an internal support function named “the agile initiative” was created to support teams within the section to become agile. Within the initiative, there were educations and descriptions of how to adapt to the agile way of working.

Ambassadors of the agile initiative circulated in the organization to spread information about the status of the transformation so managers could focus on working strategically as expressed by a senior manager (SC 1). Company C also brought in external agile coaches from the consultancy to provide general guidance and assist with knowledge spreading. One middle manager (MC 3) in Company C describes how an agile coach acting as a scrum master was brought in as part of the team to guide the middle manager and the team in their specific context. Agile coaches also held 3-4 training sessions where group managers were trained in the new roles and basics of working with scrum. It was then up to group managers to communicate with their teams. During implementation, the ones not a part of the pilot was informed of the changes mainly through weekly letters at the intranet where management expressed their ambitions with the change and informally when talking to managers and individuals closer to the change. There was also a website for the agile initiative.



Some individuals in Company C take distance from the concept of agility. A middle manager (MC 4), underline that they try to avoid using the word agile since they previously have tried implementing the full concept of agility with the help of SAFe without success. According to the middle manager (MC 4) the lack of success was due to the strict routines and the roles that had to be defined when implementing the concept of agility. The middle manager describes how it is all about the organizational culture. Thus, Company C, unlike Company A and B, did not choose SAFe as a framework to guide the implementation. Instead they aspired to improve current practices through adopting agility to a certain extent.

I have never seen the value of throwing everything away. I still live in the faith that we did a lot of things right from the beginning, but we can always improve. It was rather that starting point we had. - Senior Manager, SC 2

Therefore, the senior manager describes how they draw inspiration from the agile manifesto.

In short, we looked a lot on the Agile Manifesto and worked from it and did our interpretation of it. - Senior Manager, SC 2

Established by many respondents is that the shift towards agile working methods resulted in major changes both concerning how projects are managed at an organizational structure level and concerning the shift of roles and responsibilities.

For me, being agile is to connect a part of the product to a team and having that team autonomously manage everything about that part. It really differs from how we have done things traditionally. - Senior Manager, SC 2

In line with the previous statement, one senior manager (SC 1) describes how Company C is shifting from a traditional line organizational structure where responsibilities to deliver value lie with managers to a structure where managers have a more administrative role and deliverance responsibilities instead lie with teams.

If you're going fully agile the middle manager's responsibilities change from what they are today at Company A and project managers don't really exist either if you're going super-agile. It's rather the product owners that have the power. It's a bit complex, after all we are a company that has functioned this way in many years and to turn around takes some time. - Middle Manager, MC 2

Thus, the implementation of agile meant that established social structures, hierarchies, and responsibilities were affected. According to a senior manager (SC 2) Company A is a consensus-driven organization allowing things to take time and people to adjust rather than to force something which is why the process of implementing agility takes time.

To guide the implementation and secure that it is moving in the right direction one middle manager (MC 3), who has an agile coach in the team, describes how the agile coach is brought in to administrate and discuss when the team is faced with challenges. Another middle manager (MC 1) describes how it is business as usual and up to the group how to move forward.

A senior manager (SC 2) notes that if teams struggle with anything, they ask the agile coaches for guidance or turn towards section-wise support groups who guides middle managers who have questions about the framework. The senior manager further notes that they do not have any fixed routine for follow up for teams but that they do some check-ups now and then.

### Uncertainties When Implementing Agility

In general, individuals in all organizations have a positive attitude towards the concept of agility. There are numerous examples where middle managers from all organizations express their belief in the working method. Emphasized by middle managers in all companies is the necessity of the implementation.

We realize that it is necessary to have a good position in the market, but also in order to survive, it's a matter of survival. The current way will not work, it's going extremely fast and we can see it in what our competitors are doing and the demands from the customers. - Middle Manager, MC 4

I think that this transformation is necessary to keep up with the market. We can't keep on living in a time that no longer exists. I think that this is a fundamental condition in order for us to be able to deliver what the customer wants. Beyond that, it's very fun to work according to this new way and job satisfaction is something that gives a lot. - Middle Manager, MB 1

The perception of the concept as important and beneficial can also be seen in Company A where the agile transformation is associated with the benefits implementing agility will have.

Teams feel empowerment and motivation, an intrinsic motivation through this way of working. I'm completely convinced of it. It becomes much clearer regarding team constellations and an understanding of the context. - Middle Manager, MA 1

Thus, individuals from all organizations agree regarding the positive effects implementing agility comes with and how important it is for the future of the companies.

However, regardless of the positive association individuals have towards agility all interviewees no matter the organization or previous experience of agility expresses uncertainty regarding the implementation of agility. Middle managers express uncertainty regarding the new roles, new responsibilities and new hierarchies that come with implementing agility. As decision making moves from management to the teams to create autonomy, there is a shift of responsibilities and mindset at both levels. Teams get more mandate, new roles are created, some roles are dissolved, organizational structures changes and the managers take one step away from the operative. Meanwhile, the agile transformation requires middle managers to not only change themselves and adapt to the new environment but to carry the change and drive it forward. This section will outline the different aspects of uncertainty that middle managers feel regarding the concept of agility.

One aspect is that of "natural uncertainty" which in many cases is mentioned as that, an uncertainty that is a natural part of any change that requires persons to change their behavior and adjust their plans. Ultimately, managers need to either adapt or leave according to a middle

manager (MB 3) at Company B. Adapting to the change in the role of the manager a middle manager (MB 4) at Company B with previous experience in agility who believed in the concept left the position of being responsible for 45 people to become a team manager of about 15 and thus work closer to the operational activities. Described by respondents from all organizations is how the agile working methods is not for everyone and therefore, some leave the companies. One of the middle managers (MA 1), describes that for the ones that have had the same role for a very long time, the transformation could be hard to accept. Another middle manager, (MB 3) argue that those most likely to leave or resist are those not prone to change, those who may have worked in the same system the last 20 years.

### Coordination of Old and New

Besides the natural uncertainty when faced with a change, middle managers from all organizations criticize the process of implementing agility in the current organizational structures. Middle managers from all organizations discuss the difficulties of adapting to an agile way of working in an organization that is not fully agile. Both in terms of organizational structures that hinder the development of change, dependencies on other divisions and general understanding from individuals from the rest of the organization. Regarding the structure, a middle manager (MC 4) at Company C note how it is difficult to replace traditional processes with long lead-time with new ones. The middle manager describes that therefore at some instances middle managers try to adapt to the agile way of working while having traditional milestones and processes which creates uncertainty regarding which structure is most important.

We get from senior management that we are supposed to work agile which means that we don't have a finished result in mind but that we work our way forward. But in our projects, we are still required to launch everything at one point in time. We still have both content and deadline decided and different milestones. So that's asked of me meanwhile I'm supposed to work agile and work my way forward successively. - Middle Manager, MC 4

Thus, individuals steer between the old way of working and the new one without knowing how to prioritize. The difficulties of navigating between old and new can also be seen at Company A. One of the middle managers (MA 5) describe how Company A has not had the result they wished for with the new working methods as they are stuck in projects with traditional lead-times that still has about three years to go. The middle manager describes that they must wait until all "old projects" are done. A middle manager (MB 6) at Company B describes how the approach of marching the new ways into current structures rather than enabling for new working methods by getting rid of old structures before the implementation creates confusion. The middle manager describes an example with control documents that entail the same traditional processes but with different headlines.

And that's where I think we get stuck. You have these new roles, the new framework. You see that this is missing and this needs to be added and then it becomes a strange mix of old and new. And I don't think that it's good. I have an example; we have a

lot of documentation and templates and what's been done is that they have just changed the headline of them to the new name even though it is the same document.  
- Middle Manager, MB 6

Hence, there are examples of middle managers in all organizations airing critique towards the way agility has been implemented in their current organizational structures and procedures. Further mentioned is how different units starting up at different times created a division between agile units and non-agile units. A middle manager (MA 1) at Company A describes how the project organization in their company started later than their unit which resulted in difficulties to coordinate and communicate between the units.

It was hard to coordinate with the old world because it lived on, and it still does today to some extent. - Middle Manager, MA 1

The coordination was hard as some units were not even aware a pilot was happening. Because of this, a temporary role with the responsibility to communicate between the units was added to the framework. At Company C, Middle manager (MC 1), describes how the differences in working methods between units resulted in a lack of motivation for team members to engage in the change.

To facilitate the implementation of agility in the organizational structure Company A and Company B implemented agile working methods with the help of the SAFe, while Company C rather looked at it for inspiration. Critique is directed towards SAFe as a framework from all organizations often coming back to the lack of real-life adaptation and structure. One of the middle managers (MA 3) at Company A notes that SAFe is quite “theoretical” and is not providing “detailed ways of working” which confuses teams and individuals when adopting it in everyday life.

It wasn't clear regarding the old processes and routines. Should you try to adapt the old routines even though they were connected to a completely different way of working that is more divided in waterfall and with gates and projects. Or should you wait for other instructions? And the only thing we got was SAFe and SAFe doesn't have a detailed way of working. - Middle Manager, MA 3

In line with this statement, middle managers at the different companies note how SAFe requires adapting depending on the context which is usually made along the way. A middle manager, (MA 2), describes that new roles were added to SAFe to adapt the working methods to their specific context. This in turn stalled the implementing process, created some confusion as adoptions to the current structure needed to be done. One of the middle managers at Company B (MB 4) describes the wish for the infrastructure surrounding SAFe to have been finished before starting up Release Trains.

Thus, even though SAFe and other frameworks for guiding the implementation of agility provide organizations with role descriptions and implementation guides, middle managers from all organizations mention uncertainty regarding the shift of responsibility and more specifically the implementation of them. A middle manager (MA 4) in Company A

describes how employees were told to go and read the role description in SAFe by themselves rather than explaining it to them face to face which resulted in confusion and shifting views of the responsibilities. One of the middle managers (MB 1) at Company B mentions that they were told that the manager's role would change a lot, but the middle manager was not told how it would change.

It's confusing for the managers, no one in Company B who points or says that this is the way it's supposed to be. You are rather left in no man's land and you have to sort it out yourself. - Middle Manager, MB 1

Moreover, a middle manager (MA 3) at Company A mentions how the role descriptions in SAFe does not describe the responsibilities completely. The middle manager (MA 3) had a difficult time outlining the responsibility regarding who was supposed to communicate to the teams. The uncertainty regarding the responsibility to communicate is further discussed by a middle Manager (MB 3) at Company B.

What didn't work was what information should go directly to the employees, what information should go to line managers and then to their employees, which information should come from me, when will the union be brought in, does the Union have a veto? Extremely unclear. And it still isn't clear, but I don't really care anymore. I inform and then you sort of let it go. We have a decent order now. - Middle Manager, MB 3

Thus, middle managers are seemingly left with the task to interpret changes in roles and responsibilities. In all companies, the fact that the structure surrounding the roles and their responsibilities was under discussion even in the midst of implementation was brought up as an issue. A senior manager (SC 2) at Company C describes how the organization was still, about two years into the implementation, divided in terms of the role and responsibility of the manager and how to use SAFe. A middle manager (MA 3) at Company A describes how discussions were held between Team Managers and Product Owners regarding how Team Managers, Product Owners, and Scrum Masters should divide their responsibilities without consulting the Scrum Masters. A middle manager (MA 1) at Company A described how the uncertainty regarding the role descriptions led managers to map new roles towards old ones. This resulted in managers at different levels performing the same tasks as they did before the implementation of agility with a different title as the only difference.

Seemingly, what most individuals had expected of the process of implementing agility was more structure. Structure in terms of a-priori prepared organizational structures, a framework that thoroughly described the adaptation process and pre-thought out and clearly stated roles and responsibilities.

### Left Without Support

Middle managers further experienced difficulties regarding how to coordinate adapting to the change and at the same time driving the change forward without support. A middle manager (MA 3), describes the uncertainty regarding the roles and responsibilities and how the managers

could not provide guidance as they had not had any training in the agile methods either. Instead, one of the middle managers (MC 2) describes how middle managers relied on their closest managers and the agile coaches. Besides these instances, it was up to middle managers themselves to adapt to the change and to drive the change forward. The middle manager (MC 2) describes the difficulties of implementing something which can be interpreted differently, especially without clear guidelines. A middle manager (MA 5) and designated change driver describes how a clear strategy for implementing and someone to discuss more frequently with would have improved the manager's sense of security in the situation. Rather, the middle manager was left to alone decide how to interpret and work agile within the unit.

It has been fake it until you make it. - Middle Manager, MA 5

The perception of having to fake the way through the implementation of agility due to the lack of support is further described by a designated change driver in Company B (MB 6). The change driver received the responsibility to set up agile teams without having any experience of agile. Instead, the middle manager read about agility online and communicated back to management to see if it matched with their understanding. The middle manager argues that senior management made it easy for themselves by giving the responsibility to contextualize agility to middle managers. Two middle managers (MB 4 and MB 6) at Company B describes how better support in what and how to communicate to their teams would have prevented information being spread in different ways.

I think agility is a cool thing and I'm interested in it, but I have colleagues who don't really buy the change. And if you as a middle manager don't think the change is any good, of course your resistance will affect others. - Middle Manager, MB 6

Thus, giving middle managers the responsibility to interpret the concept, outline the working methods and communicate it to the teams, a middle manager (MC 3) argues, makes the communication and thus general understanding of agility highly individual. Another middle manager (MB 3) emphasized that while teams have agile coaches to support them, the ones supposed to lead the change are left without support. The middle manager would have liked a closer collaboration with the teams of change drivers and other departments like Human Resources and Economy. The middle manager notes, however that it was not possible to discuss agile matters with Human Resources and Economy as: "they are still in the old world and you don't get support from the old world". The middle manager describes an event where the manager suggested some changes to HR regarding how they should coordinate the departments to become more agile. Rather than receiving and reviewing the suggestions, HR sent out the suggestions to the entire organization as facts. The middle manager felt uneasy about the event as the middle manager did not have the competence for that sort of communication. A middle manager (MA 3) at Company A describes how there is a belief in that teams that need help ask for help but that it would have been beneficial to outline the experience of the individuals on a team level, both in technical terms as well as in the agile working method. This would then have provided a better view of what support the different

teams would have needed. Middle manager (MC 1) at Company C, describes that there wasn't any specific follow-up but rather a feeling of "business as usual".

Thus, besides prior established expectations of a structure during the process of implementing agility what middle managers and change drivers had expected was more support in driving the change forward meanwhile adapting to the change themselves.

### Uneven Information and Senior Management Involvement

What is further discussed by middle managers from all organizations is the unevenness in communication and transparency from senior management. A middle manager (MC 3) describes how initial communication about the aim of the change and why the company implemented agility was lacking which resulted in employees not adapting to the change. In line with this, one of the middle managers in Company B (MB 6) describes how the initial change was only communicated by senior management twice through the company intranet. The middle manager described how some individuals spoken to regarding the change in the early stages had not seen the posts and therefore did not know the change was happening and that they were going to be affected by it. In line with this, a middle manager in Company C (MC 3) describes how a planned agile project came to a halt as employees fell back on their old ways of working. The same middle manager underlines how senior management seems to have focused on building team structures and practices without explaining the aim with it. Meanwhile, a senior manager (SC 2) at Company C describes how they moved slowly initially to inform all parties concerned. Thus, there can be seen a pattern of uneven interpretation of the amount of initial communication. This pattern can be seen with Company A as well. While one middle manager (MA 1) describes how six months of information prompted the implementation of agility, another middle manager (MA 4) discusses how there were individuals who had never heard of the guide for scrum and individuals who did not understand the purpose of the change. A middle manager at Company B (MB 6) describes how a team struggling to figure out the purpose of implementing agility for them specifically discussed the matter with a more senior manager. The senior manager explained the purpose in grandiose organization-wide terms but when asked about how they should adapt their specific working methods to the purpose, the manager told them to figure it out themselves. The experience left the team with more uncertainty than before. In Company C a middle manager (MC 2) describes how a senior manager came to reassure a team struggling with the new working methods. The senior manager noted their concerns and told them things would improve but then nothing changed. A middle manager (MA 3) at Company A describes how when implementing SAFe it felt "...like someone pulled away the carpet under your feet without placing another one there".

It's a matter of priorities, to have very clear priorities and that these are communicated throughout the company so that it's diffused on multiple levels. It's not enough that the top-level knows what is important, it must circulate within the whole company. - Middle Manager, MC 4

Thus, respondents from all companies express how senior management does not reassure them during their state of uncertainty. Either as senior management does not communicate enough

or as they communicate one thing and behave in another. Further mentioned is how the unevenness in communication about the change created divisions between units. A middle manager (MB 4) at Company C describes how different departments “live in their own bubble” and that it is up to the middle managers to share information to the teams. Another middle manager (MB 3) describes the differences between units in the level of information. Some units have according to the middle manager received all information while others have received none. When another middle manager and designated change driver (MB 6) discussed the change with the unit the manager was guiding, the middle manager was faced with aggressiveness. It was clear that the individuals the middle manager were supposed to guide through the change had not heard that they were going to be affected.

When I came to talk about my ideas and my thoughts, I was suddenly supposed to defend the change to these people. I had expected that they would have been provided with more information. Did you now know this was going to happen? No, they didn't know anything. They were really aggressive. - Middle Manager, MB 6

Thus, the uneven level of information and communication created uncertainty for middle managers as they were faced with the responsibility to communicate the change. A middle manager (MA 3) at Company A describes how forums initiated for communication about the change was rather unclear. The same information came from multiple directions with not all information being applicable for the receiver. The middle manager describes how more personalized information would have been beneficial. This is further supported by another middle manager (MA 5) at Company A who describes some of the information meetings as tedious as there was too much general information. The middle manager would have liked more context-based information and support during these meetings. Another middle manager (MA 4) describes how many middle managers feel alone in their contextual bubble. The middle manager believes that it would have been motivating to see how other ARTs adapted to the change together with experienced challenges and opportunities. The middle manager argues that while management may inform, they fail to motivate.

The information versus motivation dilemma is also brought up at Company B where a middle manager (MB 5) describes the anchoring of the change at top management levels. The middle manager describes how the change must be anchored at top management level as the implementation of agile comes with large costs. The middle manager does, however, argue that top management may have decided to implement agility based on financial motives without fully understanding the organizational effects of the decision. Thus, the middle manager does not necessarily believe the motivation for the change to be fully anchored at the top. This can be seen also in Company C where a middle manager (MC 2) describes how the non-visibility of senior management and lack of communication leads middle managers to believe that the change is not entirely anchored.

To summarize the result, all three organizations have experienced difficulties when implementing agility in the current organizational structures. Not only at an organizational level with logistical and structural challenges but also at an individual level where uncertainty is aired about the individual's role in the structure. The uncertainties can be summarized in three aspects; (1) the lack of support in the inherent organizational structures for the agile



working methods, (2) the lack of individual support to drive the change while adapting to it and (3) the lack of presence from senior managers. Even though Company A and B chose to implement agility with the help of SAFe due to the need for structure almost all middle managers and change drivers had wished for more structure surrounding the implementation of agility. The wish for structure can also be seen in Company C who does not follow SAFe as strictly. Visible in all organizations is the perceived challenge of navigating old and new structures. What is also evident in all three cases is the wish for support and communication initially and during the process of implementing agility. As middle managers and change drivers are given a lot of responsibility to drive the change forward meanwhile adapting to the change themselves, what they had wished for was someone to discuss with and to support them during the transformation. Instead, they had to, in many cases, adapt to the change on their own with sporadic assistance from agile coaches and senior management leading to unevenness in interpretation and motivation. Hence, there is a common perception among middle managers that the implementation of agility forces them to fake their way through the process.

## Discussion

### The shift

The purpose of this study is to develop a better understanding of the difficulties to implement agile working methods in established organizations. The starting point of this discussion will be the context in which agility is implemented within the organizations. As seen in this study and drawing on Giddens (1991), the organizational structures in the three organizations made out highly institutionalized expert systems. Established by the results in this study is how distinctly outlined organizational, social and managerial structures constituted the organizational frameworks in the three organizations. Standardized processes focus on planning, traditional waterfall models, milestones, deadlines and clearly outlined roles and responsibilities secured that employees knew their role in the system. The manager's role was one with authority, direct leadership and close relationship to the creation of value. Individuals placed their trust in senior managers as overarching authorities and caretakers. Trust was further established and maintained at access points also constituting of managers who spoke on behalf of the organization. As the senior managers were both access points, authorities and caretakers' individuals may have felt not only practically supported by routines and procedures of the expert system but also morally supported by persons advocating the system in line with Giddens (1991). Thus, much like the parent guiding the teenager, the senior managers guided middle managers in the traditional expert systems. Displayed in this study is how employees within the expert system formed routines, habits and beliefs further reinforced over time. Thus, employees within the expert system formed a protective cocoon of routines, habits, and beliefs that maintained the ontological security.

However, the decision to implement agility can be seen as a shift in abstract systems. We argue that the concept of agility is better described as a symbolic token. The agile system is, as Giddens describes the symbolic token, a "media of exchange which have standard value, and thus are interchangeable across a plurality of contexts" (Giddens, 1991, p.18). The assumption is based on three aspects of the symbolisms in the agile structure. Firstly, rather than distinctly outlined organizational structures agility provides a symbolic organizational

structure. Agility, and SAFe provide a general description that departments must interpret and adapt to depending on the context. The results of this study show how all organizations adapt the agile working methods to their specific context and along the way. Furthermore, it can be seen how respondents perceive descriptions of working methods as theoretical without practical appliance. The concept of agility is as such rather than a structure a means to create a common language for an entire organization. This perception is supported by individuals who argue that agility is nothing new or special, rather it is a way to create a common language regarding how to deal with tasks and problems. Secondly, rather than outlined social structures, the traditional divisions based on competence are broken down and replaced by a symbolic social structure. Established by the results of the study is how expertise and specialization are replaced by a broadening of competence, autonomy, and teamwork. It is further mentioned by respondents how individuals with experience in agile got the roles “higher up” in the hierarchy and how previous experts were leveled with developers. As such, the implementation of agility broke down traditional social structures where the hierarchy was based on traditional expertise and experience. Instead, to allow for autonomy and teamwork the traditional social order is replaced by something vaguer that allows for collaboration between multiple contexts. Thirdly, rather than outlined managerial structures, both the senior and middle manager role becomes more facilitative than directive. The results of this study show how authority and decision-making shifts from managerial-level to team-level. As established by the results, the agile coaches are an important authority in the agile system together with change drivers by guiding individuals through the adaption to the change. Thus, both senior and middle managers constitute symbolic leadership. The real leaders and authorities within the agile system are as such the agile coaches, change drivers and teams. The access points to the symbolic system of agility are still middle managers and senior managers as they speak on behalf of the agile system to some extent. However, senior and middle managers are complemented by the agile coaches and change drivers with more knowledge in the system. As autonomy and teamwork are in focus, the caretakers in the agile system shifts from senior and middle managers to middle managers complemented by agile coaches and change drivers.

The implementation of agile working methods and with that the creation of a united language independent of context can be seen as a disembedding activity through the bracketing of time and space in organizations. The shift from expert system to symbolic token and the effects the shift had on the structures is illustrated in table 2.

**Table 2. Traditional Expert System and Agile Symbolic Token**

	Traditional Expert System	Agile Symbolic Token
Organizational Structure	Distinctly outlined with established and documented processes.	A general description of working methods that must be adapted to context
Social Structure	Distinctly outlined based on expertise and experience and clearly divided.	Allowing for cross-functional teamwork and autonomy.
Managerial Structure	Managers have a direct leadership	Managers have a symbolic

	with authority over subordinates and the creation of value.	leadership, facilitating for the teams that creates value.
Access points	Senior and middle managers.	Senior managers, middle managers, change drivers, agile coaches.
Authority	Senior managers and middle managers. Senior managers have the most authority.	Senior managers and middle managers to some extent. Mainly agile coaches, change drivers and teams.
Caretaker	Senior managers and middle managers.	Middle managers, agile coaches, change drivers.

### A Consequence of the Shift: Individual Reactions

Along with the shift from traditional expert systems to agile symbolic tokens within the organizations came reactions from employees experiencing the shift. Drawing on structuration theory (Bailey and Barley, 2011; Giddens, 1984; Groves et al., 2011; Orlikowski, 1992) the structures inherent in the three organizations formed by routines, habits, and beliefs had been reinforced over time creating a highly institutionalized security net, a protective cocoon, for middle managers. The shift from an expert system to a symbolic token and the effects it had on the organizations classify as what Giddens (1991) refer to as a crisis. Hierarchical goals for middle managers became irrelevant and collective organizational goals was redirected. Hence, the shift can be seen as a crisis that affected both individuals and the collective. Through the shift, the previous routines, habits, and beliefs were disrupted or altered without a clear path designed for the individuals to follow and to adjust to. Thus, the protective cocoon opened up exposing the individual to the conflicting environment of modernity threatening the ontological security. With the protective cocoon opening up, the self-identity, due to its reflexive creation, was in constant movement adapting, reconfiguring and seeking for structure. Hence, steering between conflicting abstract systems and multiple new authorities and access point caused in line with Giddens either fear or anxiety leading middle managers to long for structure, to shut the protective cocoon again.

The individual reactions to the shift in abstract systems can be seen in three different aspects, described in the results of this study as the three perceived difficulties; the lack of support in the inherent organizational structures for the agile working methods, the lack of individual support to drive the change while adapting to it and the lack of presence from senior managers. We argue that these three perceived difficulties may be explained by the shift in abstract systems from an expert system to a symbolic token. Firstly, the perceived difficulties when implementing agility can be seen in how the middle managers experience coordinating between the old and new structures as challenging. Expressed by respondents in this study is how SAFe is “theoretical” and does not describe specific ways of working. Seemingly, the agile system with its symbolic organizational structure lacks the distinctly outlined structure inherent in the previous structure. Thus, middle managers find it difficult to prioritize between the systems and as such perceives the coordination as difficult. Secondly, middle managers

describe the challenges of adapting to agile working methods without someone to guide them. Middle managers had wished for individual and context-dependent support from someone with more expertise and experience. However, with the shift from an expert system to a symbolic token the social structures become indefinite. The symbolic social structures force middle managers to adapt to the change on their own and make their own decisions. Something that they did not have to do in the previous structure. Hence, middle managers perceive adapting to the change on their own without support as difficult. The third observed challenge is the lack of reassurance from senior management. This study presents multiple examples from all organizations where middle managers seek confirmation from more senior managers to feel a sense of security in their behavior. As middle managers in all companies note, having top management broadcasting their belief in the concept, benefits recognized, information about the status of change for the entire organization together with some lessons learned and directions would have been beneficial to inspire individuals lacking in motivation. This may be explained by the shift in managerial structures and authority. The senior managers are with the shift in abstract systems no longer an overarching authority but rather one of the multiple and sometimes conflicting authorities. This can be seen in how senior managers have communicated agile information but acted according to traditional processes and beliefs and as such conflicted with the other authorities (agile coaches and change drivers). However, even though the senior managers are not the most knowledgeable within the agile system and even though the agile working methods encourage autonomy the results of this study show how individuals still seek confirmation and reassurance from senior instances. Thus, the routines live on in some cases even though the structures have shifted leading individuals to perceive the lack of senior managerial support as challenging.

As shown, the shift in abstract systems from expert systems to symbolic tokens opened the protective cocoon and exposed the individuals to an environment of conflicting structures, processes and authorities. Forced to navigate and prioritize within the conflicting environment the managers perceived the implementation of agility as difficult and challenging.

### A Consequence of the Shift: Individual Responses

Depending on the individual's goals, beliefs and habits forming the protective cocoon the shift seem to have trigger different responses. In some cases, middle managers changed their situation, in other middle managers seem to not have adapted to the new situation at all while some seek reassurance from other persons. This can be explained by Giddens (1991) distinguishing between fear and anxiety and how it triggers different responses. It seems like some middle managers directly affected by the change experience fear for the self-identity when faced with a crisis and therefore acts to change the situation to find a more supportive structure to rely on. This can be seen in the example of the middle manager in Company B who left his position when the responsibilities changed. Furthermore, as seen in the results of this study, respondents from all organizations describe how employees who did not support the agile transformation left the companies. Thus, as a response to fear employees leave an uncertain symbolic situation for one where they feel more certain. Other individuals experience anxiety which, much like Giddens (199) argue, leads them to fall back on pre-established habits, become paralyzed all-together or seek reassurance from an overarching authority. The

falling back on pre-established habits and becoming paralyzed can be seen in the managers who speak of the benefits of agility but acts the opposite way. It can also be seen in the planned agile project described by a middle manager in Company C that came to a halt as employees fell back on their old ways of working. Thus, these individuals either live by the previous expert system or wait for structures to form in the new system. However, as Giddens argues, some individuals who experience anxiety seek an overarching authority to guide them as they find the freedom to choose between conflicting choices exhausting. The authority before the implementation of agility was the senior managers. However, with the focus on autonomy and with the moving of decision making to the teams the traditional authority is divided between change drivers, senior managers, teams, middle managers themselves and agile coaches. Thus, it becomes difficult for managers to decide what is right and wrong, which structure to follow, how to coordinate and how to prioritize. Furthermore, this study shows that as senior managers no longer are experts within the system they do not necessarily provide the moral satisfaction and support they have provided previously. Therefore, as seen in the results of this study, many middle managers seek reassurance from other individuals advocating the change.

Instances where individuals seek reassurance as they establish trust and maintain ontological security is the access points. What can be seen in this study is the importance of the face-to-face access points that agile coaches constitute. Middle managers from all organizations agree regarding the value of using agile coaches for guidance as them by could focus on the daily work while adapting to the change. The ones who had the benefit of having an agile coach on the team, like the middle manager in Company B who had an agile coach as a Scrum Master, felt supported and secure. Hence, the reassurance at the access point provided the individual with trust in the system which maintained ontological security.

However, as established by this study it is not only agile coaches who have an important role to play in the driving and selling of the shift. Described by respondents from all organizations is how middle managers together with change drivers are given the responsibility to advocate the change meanwhile adapting to the change themselves. Like all individuals, the persons responsible for selling the change also carry with them a baggage of habits, beliefs, and knowledge. The baggage of habits, beliefs, and knowledge forms the protective cocoon and designs the individuals' lifestyles which affects how they make choices and behave. As established by the results of this study, middle managers and change drivers, in some cases, experience how they are forced to act agile without knowing how. In this study, there are multiple examples of individuals designated to drive the change also experiencing uncertainty as they either are not convinced of the benefits of the change or are uncertain about what they are supposed to do. In Company B, the internal support function guiding the change, "team change", took suggestions from one of the middle managers (MB 3) as facts and communicated these without questioning them. It can also be seen in the case of the middle manager and change driver (MB 6) who received the task of creating agile teams without having prior experience of agility. This uncertainty could also be seen by one of the middle managers and change drivers (MA 5) in Company A who felt the need to fake the way through the implementation. Hence, the symbolic nature of the agile system forces middle managers and change drivers to in some cases "fake it until you make it" as a middle manager in Company A puts it. To "fake it" is, like the managers leaving roles or companies, a response to fear for the self-identity. By faking it, middle managers and change drivers may establish trust in the

abstract system and maintain a sense of ontological security helping them to navigate the conflicting environment. Thus, by faking the security and distancing themselves from the previous expert system middle managers and change drivers may close the protective cocoon within the symbolic system of agility.

### An Alternative Explanation to the Difficulties of Implementing Agility

The above presented reactions and responses to the shift in abstract systems from expert systems to symbolic tokens provide an alternative explanation to previously studied explanations of the difficulties to implement agility in established organizations. As shown, difficulties to implement agility could be explained by the shift of abstract systems from an expert system to a symbolic token in line with theories described by Giddens. When applying structuration theory onto the three cases of implementing agility in established organizations, one can argue that implementing agility is difficult due to the individual's constant search for structure and ontological security. As there is no structure to find within the new agile symbolic token, individuals either leaves for another context where a structure can be found or maintain in the expert system neglecting the conflicting structure. The result of this study shows that all respondents associate agility with something positive. Individuals believe agility to be important, beneficial and even crucial to organizational survival. Still, the symbolic nature of the agile system forces even the most change and agile prone individuals to fake their security in the system to establish a sense of ontological security and by that close the protective cocoon. Furthermore, the result of this study shows how all three organizations experience similar uncertainties and challenges. Even though organizations have implemented agility in different ways, with different levels of reliance on SAFe and with different execution plans respondents experience similar difficulties.

Previous studies have explained the difficulties of implementing agility with resistance (Balakrishnan, 2016; Conboy and Carroll, 2019; Dikert et al., 2016; Ebert and Paasivaara, 2017) or the way implementation was executed (Boem and Turner, 2005; Bottani, 2009; Rasnacis and Berzisa, 2017; Shafiri and Zhang, 2001). We rather suggest that the perceived difficulties of implementing agility in established organizations can be explained by the shift in organizational structures and the different reactions and responses the shift triggered with individuals. Thus, this study provides an alternative explanation to the difficulties of implementing agility. By providing an alternative explanation to the difficulties of implementing agility in established organizations this study contributes to more specific studies on agile implementations and its challenges. The results in this study are limited by the fact that only three organizations have been studied and within only one department. Future studies may, therefore, aim to replicate the result in a broader context by involving more perspectives than the middle managers and change drivers and in more and different contexts.

The alternative explanation to the difficulties of implementing agility may also contribute to the general organizational change management theory (Barton and Ambrosini 2012; Currie and Proctor 2005; Rouleau and Balogun 2011). To see an organizational change as a shift in abstract systems provides an alternative way of understanding individual responses to organizational change. Applying Giddens theories on structuration and ontological security may explain why sometimes individual responses to change not necessarily is connected to

what is implemented or how it is implemented. Rather, the reactions and responses depend on the constant and reflexive production of identity. Even though we have studied three cases with similar prerequisites, the study is limited to how agility has been implemented in these specific organizations. It is possible that the results of the study had been different if agility had been implemented in organizations with either a more or a less established expert system. It is further possible that the results had been different if agility had been implemented by other means. Future studies should, therefore, study the implementation of agile working methods in organizations with other prerequisites. The implementation of agility in established organizations is a long-term process. Thus, this study is furthermore limited in time. It is possible that agility as a symbolic token is only a temporary state in the transition towards an institutionalized expert system. Future studies may, therefore, study the process of implementing agility during a longer period to follow the development of the abstract system. Perhaps, “fake it” may finally turn into “make it” for the abstract system. Maybe over time, agile structures will have established, agile roles and responsibilities will be clear, resulting in the protective cocoon closing once again. Thus, organizational structures will have moved from an expert system to a symbolic token to a new agile expert system.

## Conclusion

This study is motivated by the rise of agile working methods. While agile has risen from small teams of software developers to entire departments, organizations and industry leaders like Apple, Amazon, and Google it is evident that the process of implementing agility is not painless. Previous studies have concluded that it is especially difficult for established organizations to adapt structures and processes that have been reinforced over a long period to agile working methods. The purpose of the study was therefore to develop a better understanding of the difficulties to implement agile working methods in established organizations.

This study tells the story about a shift in traditional structures and how it affected middle managers within these structures. The shift described in this paper is one from structures characterized by distinctly outlined organizational, social and managerial structures to symbolic structures characterized by individual interpretation, autonomy, and symbolic leaders. This study shows, by drawing on Giddens (1991), how the shift from an expert system to a symbolic token led middle managers and change drivers to perceive the implementation of agility as difficult in three aspects. Firstly, the difficulty to coordinate between old and new structures, secondly the difficulty to adapt to the new working ways without support and thirdly, the difficulty to adapt to the change without reassurance from senior management. These perceived difficulties caused by the shift in abstract systems triggered different behavior with different middle managers and change drivers. Some individuals left the unstructured context for one with more structure, found in another role or another company. Some did not adapt at all but rather maintained in the previous structure and some searched guidance from overarching authorities and other instances where trust could be placed. We have shown how middle managers and change drivers are given the responsibility to advocate the concept of agility and drive the change forward, often without sufficient knowledge and motivation, meanwhile adapting to the change themselves. Therefore, middle managers and change drivers

are forced to distance themselves from the previous traditional structures and rather throw themselves into the new system. Thus, middle managers and change drivers must fake it to make it to maintain a sense of ontological security within the symbolic system of agility.

This study contributes not only to studies on agile implementations (Azanha et al., 2017; Balakrishnan, 2016; Benefield, 2008; Boehm and Turner, 2005; Bottani, 2009; Conboy and Carroll, 2019; Ebert and Paasivaara, 2017; Joiner and Josephs, 2007; Korhonen, 2012; Kähkönen, 2004; Leffingwell, 2007; O'Connor, 2016; Rasnaxis and Berzisa, 2017; Seffernick, 2007; Serrador and Pinto, 2015; Shafiri and Zhang, 2001; Stojanov et al., 2015; Tseng and Lin, 2008) but also to general organizational change management literature (Barton and Ambrosini 2012; Currie and Proctor 2005; Rouleau and Balogun 2011) and structuration literature (Bailey and Barley, 2011; Groves et al., 2011; Orlikowski, 1992). The study provides an alternative lens when seeing to individual's reactions and responses to organizational changes. The study comes with some limitations connected to the period of time and the width of the context studied. Future studies are therefore needed seeing to both time and context studied.

The study provides important managerial implications for established organizations considering implementing a change in general and for established organizations considering implementing agility in particular. While planning, communication and the right mindset is important according to the results of this study it does not necessarily solve all challenges. The results of the study implicate that as long as two structures are conflicting within an organization, issues of anxiety and uncertainty will always be present. Furthermore, the changes to established structures and systems will trigger different reactions and responses with different individuals. Therefore, organizations must learn to balance the different structures and manage the different triggered reactions and responses with individuals. Organizations firstly need to reflect on their current structures and how they will be adapted to or affected by the agile processes. Secondly, how organizations interpret the concept of agility and how it will affect current structures should be communicated to the employees to level expectations. Thirdly, there is sometimes a need for managers and agile coaches to take a more present caretaker role and step in during processes of implementation, especially to support individuals with responsibility to drive the change forward. Thus, to make sure that agile implementations in established organizations “make it” rather than “fake it” it is important to recognize the organizational context and the individuals given the responsibility to change the context.



## References

- AgileAlliance. (w.y.). *Agile 101*. Retrieved 2019-03-24.  
<https://www.agilealliance.org/agile101/>
- Archer, M. (1982). Morphogenesis versus structuration: On combining structure and action. *British Journal of Sociology*, 33(4), 455-483.
- Azanha, A., Tiradentes, A.R., Argoud,T.,Batista de Camargo Junior, J., & Domingos Antonioli, P. (2017) Agile project management with Scrum: A case study of a Brazilian pharmaceutical company IT project, *International Journal of Managing Projects in Business*, 10(1), 121-142.
- Bailey, D., & Barley, Stephen R. (2011). Teaching-learning ecologies mapping the environment to structure through action. *Organization Science : A Journal of the Institute for Operations Research and the Management Sciences ; Bridging Disciplines to Advance Knowledge of Organizations*, 22(1), 262-285.
- Balakrishnan, J. (2016). Design of a Framework to Implement Agility at Organizational Level. In I. Ghani, D. Jawawi, S. Dorairaj, & A. Sidky (Eds.), *Emerging Innovations in Agile Software Development* (pp. 127-140). Hershey, PA: IGI Global. doi:10.4018/978-1-4666-9858-1.ch007
- Barton, L., & Ambrosini, V. (2012). The moderating effect of organizational change cynicism on middle manager strategy commitment. *The International Journal of Human Resource Management*, 24(4), 1-26.
- Benfield, G. (2008). Proceedings of the Annual Hawaii International Conference on System Sciences, .
- Boehm, B., & Turner, R. (2005). Management Challenges to Implement Agile Processes in Traditional Development Organizations. *IEEE Software*, 22(5), 30-39.
- Bottani, E. (2009). A fuzzy QFD approach to achieve agility. *International Journal of Production Economics*, 119(2), 380-391.
- Bryman, A. & Bell, E. (2011). *Business Research Methods*. Second Edition, Stockholm, Liber.
- Business Insider. (2014). *Why Only The Agile Survive*. Retrieved 2019-03-24.  
<https://www.businessinsider.com/why-only-the-agile-survive-2014-6?r=US&IR=T&IR=T>
- Conboy, K., & Carroll, N. (2019). Implementing Large-Scale Agile Frameworks: Challenges and Recommendations. *IEEE Software*,36(2), 44-50.

- Currie, G., & Procter, S. (2005). The Antecedents of Middle Managers' Strategic Contribution: The Case of a Professional Bureaucracy. *Journal Of Management Studies*, 42(7), 1325-1356.
- Deloitte. (2019). *Leading the social enterprise: Reinvent with a human focus*. (Global Human Capital Trends, 2019), Deloitte Development LLC.
- Dikert, K., Paasivaara, M., & Lassenius, C. (2016). Challenges and success factors for large-scale agile transformations: A systematic literature review. *Journal Of Systems And Software*, 119, 87-108. doi: 10.1016/j.jss.2016.06.013
- Doz, Y., & Kosonen, M. (2008). The Dynamics of Strategic Agility: Nokia's Rollercoaster Experience. *California Management Review*, 50(3), 95-118.
- Dwivedi, Y., Wade, M., & Schneberger, S. (2011). *Information Systems Theory : Explaining and Predicting Our Digital Society*, Vol. 2. New York: Springer.
- Ebert, C., & Paasivaara, M. (2017). Scaling Agile. *IEEE Software*, 34(6), 98-103.
- Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, 12(2), 219-245.
- Forbes. (2018). *For Agile It's The Best And Worst Of Times*. Retrieved 2019-05-17. <https://www.forbes.com/sites/stevedenning/2018/08/13/for-agile-its-the-best-and-the-worst-of-times/#e2cbf6d65f19>
- Forbes. (2019). *The Irresistible Rise Of Agile: A Paradigm Shift In Management*. Retrieved 2019-03-24. <https://www.forbes.com/sites/stevedenning/2019/02/20/the-irresistible-rise-of-agile-a-paradigm-shift-in-management/#2285ef121e9d>
- Giddens, A. (1984). *The constitution of society: outline of the theory of structuration*. Cambridge: Polity Press.
- Giddens, A. (1990). *The consequences of modernity*. Stanford: Stanford University Press.
- Giddens, A. (1991). *Modernity and self-identity : Self and society in the late modern age*. Cambridge: Polity press.
- Goldman, S, L., Nagel, R, N. & Preiss, K. (1995). *Agile Competitors and Virtual Organizations*. Michigan: Van Norstrand Reinhold.

Groves, P., Meisenbach, R., & Scott-Cawiezell, J. (2011). Keeping patients safe in healthcare organizations: a structuration theory of safety culture. *Journal Of Advanced Nursing*, 67(8), 1846-1855. doi: 10.1111/j.1365-2648.2011.05619.x

Harvard Business Review. (2016). *Agile Practice: The Competitive Advantage for a Digital Age*. Retrieved 2019-03-24. <https://hbr.org/sponsored/2016/04/agile-practice-the-competitive-advantage-for-a-digital-age>

Joiner, B., & Josephs, S. (2007). Developing agile leaders. *Industrial and Commercial Training*, 39(1), 35-42.

Korhonen, K. (2012). Evaluating the impact of an agile transformation: a longitudinal case study in a distributed context. *Software Quality Journal*, 21(4), 599-624.

Kvale, S. (1996). *Interviews: An Introduction to Qualitative Research Interviewing*. SAGE.

Kvale, S. (2006). Dominance Through Interviews and Dialogues. *Qualitative Inquiry*, 12(3), 480-500.

Kähkönen, T. (2004). Proceedings of the Agile Development Conference, ADC 2004, 2-10.

Laing, R. (1965). *The divided self: An existential study in sanity and madness*. Oxford, England: Penguin Books.

Laing, R. (1969). *The divided self*. London: Penguin Books.

Leffingwell, D. (2007). *Scaling Software Agility: Best Practices for Large Enterprises*. Pearson Education.

Martin, P. Y. and Turner, B.A. (1986). Grounded theory and organizational research. *The Journal of Applied Behavioral Science*, 2, 141-157

O'Connor, G. (2016). Agile Must-Haves. *PM Network*, 30(1), 26-27.

Orlikowski, W. (1992). The Duality of Technology: Rethinking the Concept of Technology in Organizations. *Organization Science*, 3(3), 398-427. doi: 10.1287/orsc.3.3.398

Paasivaara, M., & Lassenius, C. (2019). Empower Your Agile Organization: Community-Based Decision Making in Large-Scale Agile Development at Ericsson. *IEEE Software*, 36(2), 64-69.

Rasnacis, A & Berzisa, S. (2017). Method for Adaptation and Implementation of Agile Project Management Methodology. *Procedia Computer Science*. 104(2017), 43-50.

Rouleau, Linda, & Balogun, Julia. (2011). Middle Managers, Strategic Sensemaking, and Discursive Competence.(Report). *Journal of Management Studies*, 48, 953.

Schlichter, B.R. (2010). *An International Journal on Communication, Information Technology and Work*. 4(1), 1-22.

Seffernick, T. (2007). Enabling Agile in a Large Organization Our Journey Down the Yellow Brick Road. *Agile 2007 (AGILE 2007)*, 200-206.

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

Sharifi, H., & Zhang, Z. (2001). Agile manufacturing in practice - Application of a methodology. *International Journal Of Operations & Production Management*, 21(5/6), 772-794.

Silverman, D. (2011). *Interpreting Qualitative Data: A guide to the principles of qualitative research*. Fourth Edition, London, SAGE.

Silverman, D. (2013). *Doing Qualitative Research: A Practical Handbook*. Fourth Edition, London, SAGE.

Stojanov, I., Turetken, O., & Trienekens, J. (2015). A Maturity Model for Scaling Agile Development. *2015 41st Euromicro Conference on Software Engineering and Advanced Applications*, 446-453.

Tseng, Y-H., & Lin, C-T. (2011). Enhancing Enterprise Agility by Deploying Agile Drivers, Capabilities and Providers. *Information Science*. 181(17), 3693-3708.

Watson, T. (2011). Ethnography, Reality, and Truth: The Vital Need for Studies of ‘How Things Work’ in Organizations and Management. *Journal of Management Studies*, 48(1), 202-217.