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The Role of the Manager in an Agile Organization

A Case Study at Scania AB

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Abstract

As the world of business changes at a pace higher than ever before, there is an increased need for organizations to rapidly adapt and respond to these internal and external changes, whether they are technological, political, social or environmental. In management, agility is a term frequently used today in response to this new business environment, which often includes the use of agile methodologies for product development. As organizations adopt agile methodologies, old traditional management and leadership models fade. This void is being filled by new and emerging agile leadership models. Additionally, self-organizing and cross-functional teams become key concepts. All these transformations are bound to culminate in a considerable alteration in the role of the manager. This study examines the new role of the manager in an organization transitioning to agile. To answer the research questions, changes in the key work activities of the manager were evaluated, as well as how changes in interplay and interaction between the manager and the group could affect the role. Furthermore, the aim was also to identify some of the main challenges and barriers that arise. This was studied qualitatively through a literature review. Also, a case study was conducted at the software development department at Scania AB, where ten managers and one employee was interviewed. A survey was also sent out to the group members at this department, with 150 respondents.

Findings indicated that most work activities did not change. Some of them changed in character due to introducing an agile method and due to internal, structural changes. In one case, the work focus shifted from one activity to another. In the interplay with the group, the manager now has new roles to consider, while his role becomes more of an empowerer and meets new leadership models. With this organizational change, there are also new opportunities of delegating work activities to a higher extent. The main challenges that were identified regarded communication and coordination, control, and mastering agile methods.

Key-words: Agile manager, Agile leadership, Manager role, Managerial work activities, Managerial challenges, Agile methods

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Sammanfattning

Affärsvärlden möter förändringar i en allt snabbare takt än tidigare, varför organisationer måste bemöta och förhålla sig till både de interna och externa förändringar som sker, vare sig dessa är teknologiska, politiska, sociala eller miljömässiga. Inom ledarskap används idag termen agilt allt mer, som svar på detta nya affärsklimat, vilket ofta inkluderar användandet av agila metoder inom produktutveckling. Då allt fler organisationer inför användandet av agila metoder, tappar också de traditionella ledarskapsmodellerna sin roll. Detta gap som uppstår har kommit att fyllas av nya agila ledarskapsmodeller. Vidare blir också självstyrande och tvärfunktionella grupper viktiga koncept. Dessa förändringar medför en avsevärd förändring av chefsrollen. Denna studie undersöker hur chefsrollen förändras i en organisationen som blir allt mer agil. För att svara på forskningsfrågorna undersöktes hur huvudarbetsuppgifterna förändrats, men också hur förändringar i samspelet och interaktionen mellan chefen och gruppen kan komma att påverka chefsrollen. Vidare undersöktes också vilka huvudsakliga utmaningar och hinder som uppstod. En kvalitativ litteraturstudie utfördes i studien. Också en fallstudie på avdelningen för mjukvaruutveckling på Scania AB utfördes, där tio gruppchefer och en annan anställd intervjuades. En undersöknings skickades också ut till gruppmedlemmar på denna avdelningar, med totalt 150 svar.

Resultatet påvisade att de flesta arbetsuppgifter inte förändrades. Vissa av dessa förändrades i karaktär och i utförandet, till följd av införandet av en agil metod och strukturella förändringar i företaget. I ett fall skiftade arbetsfokus från en arbetsuppgift till en annan. I samspelet mellan chef och grupp har nu chefen nya roller att ta hänsyn till. Chefens roll blir mer av en facilitator, där nya ledarskapsmodeller också står till mötes. Chefen har också större möjligheter till delegering av arbetsuppgifter än tidigare. De utmaningar som identifierades rörde kommunikation och koordination, kontroll, och hanteringen av agila metoder.

Nyckelord: Agil chef, Agilt ledarskap, Chefsrollen, Chefens arbetsuppgifter, Chefsutmaningar, Agila metoder

Contents

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“ Whoever has walked with truth generates life. ”

Mesopotamian Proverb

Chapter 1

Introduction

This chapter aims to present the background and problematization, with the purpose of formulating the research questions. It continues by presenting the delimitations, the expected contributions and a brief outline of the report.

1.1 Background

Organizations of today exist in a dynamic environment with business processes that are more complex and interconnected than ever before (Nerur et al., 2005; Hass, 2007). In addition, global economy challenges organizations to quickly react to these advances in their surroundings (Joiner & Josephs, 2007). Specifically, software development is becoming an indispensable element in organizations and enterprises and, as a consequence, new methodologies are evolving to meet these ever-changing demands and technologies (Mens, 2008; Nerur et al., 2005). For decades, software development projects began by perfectly defining the parameters and then working on these initial criteria. Methodologies were built around the notion of defining, estimating and planning the software development before writing any code. While these elements were still important, the most successful cases were focusing on other approaches. These companies were working in short iterations, gathering frequent feedback from their clients, and then adapting and meeting the new requirements. By implementing cross-functional teams with people of different skill sets, companies achieved successful outcomes in a number of areas, including innovation, quality and time-to-market. In conjunction with the different team structure, the work process was, as mentioned earlier, iterative and multifaceted meaning that teams were able to handle several traditional project stages at once. (Medinilla, 2012)

During the last few years, agile methodologies have been growing in popularity (Nerur et al., 2005). As agile methodologies emerged, they set the foundation of

a more flexible setting and, according to Balaji & Murugaiyan (2012), welcomed change in client requirements and improved customer satisfaction by increasing quality and reducing time-to-market. These principles became some of the pillars of the Agile Manifesto, a document describing the philosophy of agile software development (Fowler & Highsmith, 2001). The manifesto strongly promotes, among other things, individuals, interactions, and customer collaborations ahead of planning and processes. However, it is important to highlight the difficulty in moving from traditional to agile approaches in contrast to the benefits described (Boehm & Turner, 2005). Conflicts of business and development processes, and people conflicts are some of the challenges that might emerge in this transition (ibid.).

As many companies, primarily in software development, are attempting to implement these new work processes, the role of the traditional manager could be changing (Strålin et al., 2016). Entering an era where continuity is no longer to be expected, leadership in the corporate world is not what it used to be. Managers tend to rely only on explicit and measurable knowledge, which in the long run prevent them from coping with change (Nonaka & Takeuchi, 2011). This approach also assumes a major misconception as it views business as independent of its context, which is not the case (Priem et al., 2017). Experiential knowledge is something that a manager could strive for to ensure a common good. This includes abilities to judge goodness, grasp the essence, create a shared context and communicating this to the employees, with a long-term goal of fostering practical wisdom in the people around them (Nonaka & Takeuchi, 2011).

There are several aspects where the change from traditional to agile management shift the manager's work, among these are management style and role assignment. While traditional management style favors a command-and-control approach where manager tasks include planning, organizing, motivating, and controlling, the agile methods focuses on leadership and collaboration with the team (Cole, 2004). The ideas surrounding the agile philosophy are similar to those found in leadership styles that have emerged during the last decades, some of them being transformational leadership but also post-heroic leadership such as shared and servant leadership. The emphasis is often on providing vision, inspiration, and, in the case of the servant leader, serving the team (Bass, 1990; Alimo-Metcalfe, 2013). In addition, agile methods have a preference for cross-functional, self-organizing teams while the focal point of traditional role assignment is individuals and specialization (Nerur et al., 2005).

1.2 Problematization

For every year that passes by, the world witnesses new markets, technologies and regulations arise. As these changes accelerate, so do uncertainty and complexity (Tolf et al., 2015; Joiner & Josephs, 2007). Consequently, opportunities and threats become harder to predict. Experts have for long been discussing the need of developing agile organizations (ibid.), even though this is more of an aspiration for the vast majority of companies, some have made big organizational changes leaning toward the agile approach. As organizations adapt to agile competition and an acceleration in change of customer preference, the traditional leadership model of command-and-control is beginning to fade (Coleman & Whitehurst, 2014). Furthermore, a move toward agile methodologies should also optimally mean a transition from functional to cross-functional teams, meaning a significant shift in organizational structure (Duka, 2013; Yusuf et al., 1999; Gidlund, 2016). Additionally, self-organizing teams also becomes a key concept (Ashmore & Runyan, 2014). These structural and operational transformations are bound to culminate in a considerable alteration in the role of the manager, both as a manager and as a leader (Yi, 2011). As agile software development places new demands on line managers, their role may drastically change (Strålin et al., 2016). Since there is a connection between leadership and organizational performance, in part because of the impact leadership has on subordinates' work behaviors, it becomes paramount to evaluate the impact of agile transformations on managing and leading (Belschak & Den Hartog, 2010; Northouse, 2017).

1.3 Purpose and Research Questions

The purpose of this study is to evaluate the role of the traditional manager in an agile organization in terms of the manager's interaction with his or her group and the new positions that arise in agile transformations. Furthermore, the study will research changes in the manager's key work activities and identify some main challenges that arise. This has resulted in the following research questions:

RQ1. What is the role of the traditional manager in an increasingly agile organization?

(i) How do the manager's key work activities change?

(ii) How does the interplay between the manager and the group affect the role of the manager?

RQ2. What are the main managerial challenges in such a transformation?

1.4 Delimitations

The study is delimited to conduct research in one major Swedish company, Scania AB. Specifically, the empirical research has been gathered in one of the software development departments focused on embedded software, where two major changes have occurred during the last few years. The research does not include comparative analysis with other departments or organizations which limits the generalizability and application of the findings to other departments and companies. In addition, one cannot be sure that a sufficient amount of respondents are participating in the conducted survey, thus not enabling any general conclusions to be drawn to a great extent.

From an agile point of view, the role of the group manager can often be deemed as redundant. However, this study does not attempt to question the significance or value of this role in agile methods, instead the research is conducted with the assumption that the group manager co-exists with other elements of the agile philosophy.

1.5 Expected Contributions

The intended contribution of this study is to provide empirical research on the manager's role in an organization shifting to a more agile approach and identify the main challenges for the manager in this transition. Few studies have been focusing merely on the new role of the manager and how interactions differ from the traditional state (Wade et al., 2017). In the corporate world, there is a skeptic view on agile and self-managed teams due to the risk of losing control, why Moravec (1999) argues that more research is needed in the field.

1.6 Outline

In Chapter 1, Introduction, the aim is to present the background and problematize it with the purpose of formulating two research questions. The chapter continues by presenting the delimitations, the expected contributions and an outline of the report.

In Chapter 2, Literature Review, existing literature is examined. The chapter begins with a brief description of management and leadership theories. The text continues by providing the reader a summary of the agile approach and the most common agile activities. The chapter ends by merging management and leadership with the agile approach and introducing a new mindset in the form of agile management.

In Chapter 3, Methodology, an explanation for the chosen research methods is given. This includes the research design and process, data collection methods and data analysis methods. The chapter concludes with a discussion of validity, reliability and generalizability, while also providing the reader the ethical considerations shown during the process of this work.

In Chapter 4, Case Background, a background will be given of the case at hand. This includes a brief description of the client, the organizational structure where the thesis was performed, and a description of the agile transformation. It concludes by defining some existing roles and work activities at the company.

In Chapter 5, Empirical Results, the results from the interviews are presented first. These follow a structure in accordance with the research questions. The chapter ends with the results from the survey, where the order of the results follow the survey questions.

In Chapter 6, Analysis and Discussion, the purpose is to analyze and discuss the findings in the previous chapter and, when possible, attempt to contextualize these findings within the existing literature. The chapter follows a similar structure to the previous chapter where the results are largely discussed in accordance with the research questions. The chapter therefore includes discussions about work activities, roles, meetings, leadership and challenges.

In Chapter 7, Conclusions, the aim is to provide the conclusions that the were arrived at by analyzing the results. These are presented by answering the research questions that were formulated in Chapter 1. The chapter concludes with a description of how one can further research the topics of this thesis.

Chapter 2

Literature Review

In the following chapter, the main topics of this thesis will be discussed by examining the existing literature. The chapter begins with a brief description of management and leadership theories. The text continues by providing the reader a summary of the agile approach and the most common agile activities. The chapter ends by merging management and leadership with the agile approach and introducing a new mindset in the form of agile management.

2.1 Management and Leadership

The following section will present the theories that have governed the views on management and leadership, and provide a description of their recent development during the last few decades.

2.1.1 Traditional Management

According to Cole (2004), there is no single, accepted definition of management. However, management is often described as a variety of activities done by "managers" at organizations, i.e. those formally held responsible for the work of a group of people. These tasks include planning, organizing, motivating, and controlling. (Cole, 2004) These activities are carried out by setting goals, coordinating and controlling activities, acquiring knowledge and allocating resources, managing relationships, and developing talent (Hamel, 2006).

Parker et al. (2015) argues that, based on traditional management theory, operational management needs to have high control during times of uncertainty. Some characteristics of this traditional view are tight control of procedures, hierarchical organizational structure, and interchangeable employees. Also, extensive up-front

planning for risk management is required. The management of knowledge relies on documentation, which is regarded as very time-consuming (Cao & Ramesh, 2008). In traditional management, problems are initially handled by structural and reductionist breakdown of tasks. This is followed by an allocation to a specific accountable person, for each and every task (Parker et al., 2015).

These ideas are closely related to the management style of command-and-control. Nerur et al. (2005) describes the traditional software development as process-centric, heavily based on compliance and measurements. One of the main focuses becomes to accomplish repeatable processes by, among other characteristics, implementing command-and-control. The command-and-control style of management has its roots in the Taylorist view of a predictable organization and, historically, software development has been managed that way (Mason, 2013; Taylor, 2016). Bolton (2005) writes that managers often apply command-and-control when running full out believing they will achieve faster and better results. A similar and related term to command-and-control is micromanagement. Micromanagement is close examination of the employee's work in hope of finding potential for improvements, and it is often an excessive and counterproductive interference (Bielaszka-DuVernay, 2007; Chambers, 2009). (Bielaszka-DuVernay, 2007) argues that it can cause disengagement due to an apparent lack of trust by the manager, while Chambers (2009) discusses several issues which arise related to the organization and customer such as retention problems, unresolved conflicts and diminished service levels. White Jr (2010) is strongly critical to micromanagers, as he states that micromanagers rarely are a part of the development of the people in an organization, but rather exploit them. Furthermore, White Jr (2010) means that micromanagers usually do not hire people with talent and experience, as they fear competition.

Command-and-control has also received significant criticism lately. Mason (2013) argues that the complexity and uncertainty of today require other methods than control. Additionally, the generation of today is more opposed toward authority than ever before. Wheatley (1997) argues that the control mechanisms that exist in organizations, from policies and procedures to laws and regulations, paralyzes people. However, Batty & Hilton (2003) do not suggest a complete abandonment of command-and-control but rather a combination together with the promotion of self-confidence and trust.

2.1.2 Leadership

During the last decades, leadership research has studied leadership traits, what leaders do and how they act, and how they adapt to different situations (Northouse,

2017; Alimo-Metcalfe, 2013; Hersey et al., 1979). One of the most commonly adopted models that emerged from the challenges that were discovered was transformational leadership (Alimo-Metcalfe, 2013). The model of transformational leadership (Bass, 1990) describes four characterizations of the transformational leader: (1) charisma, the leader provides vision, a sense of mission, injects pride, respect and trust; (2) inspiration, the leader have high expectations and expresses purpose in simple ways; (3) intellectual stimulation, the leader advocates intelligence, rationality and problem solving; (4) individualized consideration, the leader acts as coach and gives personal attention and advise to each employee. In contrast to these concepts stands the transactional leadership based on an exchange relationship between the leader and follower (Alimo-Metcalfe, 2013). An example of transactional leadership in an organizational context is offering promotions to excelling employees. According to Bass (1990), in relation to transactional behavior, practicing the four characterizations of transformational leadership increases the likelihood of leaders to be seen as satisfying and effective leaders. However, transformational leadership has also been subject for substantial criticism (Alimo-Metcalfe, 2013). Yukl (1999) raises the issue of transformational leadership explaining effectiveness exclusively from the leader's point of view and suggests that the theories should stress reciprocal influence processes, such as shared and distributed leadership.

Recently, there have been a wake of several new ideas of leadership denouncing the leader as a "savior" or "hero" figure, some of these include "authentic leadership", "servant leadership", and "shared leadership". (Alimo-Metcalfe, 2013) Authentic leadership concerns the authenticity or integrity of leadership and is one of the newest areas of leadership. Servant leadership challenges our traditional beliefs and promotes a leader that leads by serving others. Some of the characteristics of servant leadership are strong relationships, ethics and serving the "greater good". (Northouse, 2017) The interest in shared leadership has emerged in response to the increasingly team-based designs in organizations where the environment is complex and fast-changing (Barnett & Weidenfeller, 2016). Pearce & Conger (2002) describes shared leadership as involving lateral influence in the decision-making processes in addition to the upward and downward hierarchies. In other words, teams can become more influential in shared leadership in relation to traditional and heroic leadership. According to Pearce & Conger (2002), if transformational and other newer leadership approaches are in place it can aid or catalyze the development of shared leadership.

Northouse (2017) states that: "Leadership is a process whereby an individual influences a group of individuals to achieve a common goal". However, as indicated by the discussion above, the post-heroic era is not about one individual influencing the team but rather different forms of distributed leadership. One definition of such

leadership is the Relational Social Constructionist Leadership (RSCL) which encompasses three components: (1) social construction, as a way of understanding social worlds and phenomena (2) building high-quality relationships between people, and (3) emerging flows of influence at the interpersonal interaction level or the collective level (Endres & Weibler, 2017). Endres & Weibler (2017) concludes that there is an increasing recognition of the need for less individualistic views of leadership in organizations.

2.2 The Agile Approach

Agile is often considered an evolution of lean production into software and product development. During the 1990s, new methods to software development started to emerge from successful companies, and some of the main pillars were teams of people with different backgrounds, iterating and adapting to customer demands. (Medinilla, 2012) A big part of the agile approach can be summarized as a set of methodologies that focus on simplifying and continuously improving software development by putting customers and the product at the center of attention (Fowler & Highsmith, 2001). These ideas resulted in the Agile Manifesto, a formal proclamation of mainly four values that agile methodologies lean on today: (1) individuals and interactions over processes and tools, (2) working software over comprehensive documentation, (3) customer collaboration over contract negotiation, and (4) responding to change over following a plan (ibid.). As Fowler & Highsmith (2001) point out, the second segment of the value statements are not deemed unimportant, but of a lesser priority in relation to the first segment.

Several agile methodologies have been developed and are implemented in organizations, particularly software development departments. In a survey conducted by VersionOne, 58% of the respondents worked with Scrum while the rest was distributed over a range of different methodologies including Scrum/XP Hybrid, Scrumban, and Kanban (VersionOne, 2017).

2.2.1 Agile Methods

In broad terms, agile methods are tools attempting to address the fundamental principles of the Agile Manifesto. However, there are dissimilarities in how prescriptive a method is, meaning that different tools will constrain the work process in different ways. For instance, Scrum is generally more prescriptive than Kanban as it constrains the work process to timeboxed iterations. (Kniberg & Skarin, 2010) Some of the other differences are team size, code ownership and mechanisms for feedback and change (Nerur et al., 2005).

Introduction to Scrum

As mentioned earlier, the most implemented agile method in organizations is Scrum. Scrum was developed by Ken Schwaber and Jeff Sutherland to produce complex products and systems by engaging in an approach which is iterative and incremental (Azanha et al., 2017). According to Schwaber (1997), some of the main characteristics of Scrum are flexible delivery adapted to the customer, working in small teams and increased collaboration within and between the teams.

Scrum distributes three different roles within the Scrum team, namely the Scrum Master, the Product Owner and the development team. The Scrum Master is responsible for ensuring that the development team works in accordance with Scrum rules and practices while also making sure that the project is advancing as planned. (Azanha et al., 2017). The Product Owner is mainly responsible for the product backlog, expressing and prioritizing the tasks in the product backlog to optimize the work performed. The development team should ideally consist of a small, self-organizing, and multi-competence team of 3-9 members to ensure enough agility and complexity (Sutherland & Schwaber, 2013).

Scrum Activities

The working process of the Scrum methodology consists of several activities as shown in Figure 2.1. These activities or events are scheduled during timeboxed iterations called sprints, lasting between 1-4 weeks. (Azanha et al., 2017)

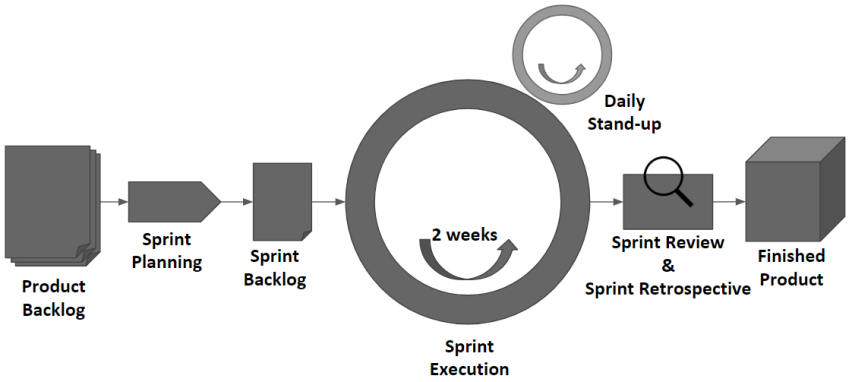

Figure 2.1: An illustration of the Scrum process from the beginning to the finished product.

Every sprint begins with a Sprint Planning meeting by the Scrum team where the necessary tasks to be performed during the iteration are decided and inserted to the sprint backlog, a subset of the product backlog. During the sprint execution, the

development team has short Daily Stand-up meetings where the team members are expected to plan the next 24 hours and synchronize work activities. Furthermore, there is also an ongoing process called backlog refinement where the team together with the Product Owner can add details and estimates to the product backlog. (Sutherland & Schwaber, 2013)

At the end of the sprint, two additional meetings are held. The Sprint Review is an informal meeting to examine the product backlog by elaborating on what was done during the sprint while also planning for how the next sprint can be improved. The attendees include the Scrum team and other key stakeholders invited by the Product Owner. The second meeting is called Sprint Retrospective and is held by the Scrum team. The purpose of the meeting is to inspect the previous sprint in regards to people, relationships, process and tools while identifying positive aspects and planning potential improvements. (ibid.)

Kanban

Another popular agile methodology is Kanban. Kanban was developed in the manufacturing industry of Japan in the 1950s. Toyota, with their industrial engineer Taiichi Ohno in the front, developed it with the overall goal of improving manufacturing efficiency (Ohno, 1988). It is a way to achieve lean and just-in-time; to produce only what is needed, in the precisely right time, and in the right quantity (Kaltenecker & Leopold, 2015). In the beginning of the 2000s, Kanban was introduced in software development, and drove teams to visualize the workflow, limit "work in progress", and measure cycle time (Ahmad et al., 2013). The Kanban board is a central part of the visualization, as it displays the assigned work for every developer. A key difference from Scrum is the absence of obligatory iterations. The main reported benefits of using Kanban are improved communication and coordination, shortened lead time, improved quality of software and increased consistency of delivery (ibid.).

Extreme programming

Extreme programming (XP) was created by Kent Beck in the 90s, with the goal to turn traditional software process sideways, by doing activities a little at a time. These activities include analysis, design, implementation and testing. A very important practice in XP is pair programming, where two programmers work together at a workstation, one writing code while the other one observes and navigates. With this approach, there is a continuous review of the code. The five values that XP is built upon are feedback, communication, courage, simplicity and respect. Besides pair programming, XP have eleven other practices. One of them are "on-site cus-

tomer", as the customer always should be available when using XP, and giving the customer the right to define system functionality and set priorities. Frequent, and small releases are also a part of XP. (Beck, 1999; Holcombe, 2008)

2.3 Agile Management and Leadership

Corporations are becoming less hierarchical for each decade, as decisions are taken in the context of global markets and rapidly changing financial, technological, environmental, and political forces (Ancona et al., 2007). Even though new agile methods are adopted to survive these powerful and fast-changing forces, many times the managers are responsible for obstructing this adoption (Appelo, 2011). Surveys on adoption of agile methods indicate that some of the main obstacles are managerial responsibilities, thus managers often pose a problem in the solution (VersionOne, 2009; Appelo, 2011).

2.3.1 Agile Leadership

The first part of embracing the agile form of management is a change of mindset, as managers tend to stick with old mindsets, not aligned with the agile methods used (Rigby et al., 2016). Rather than trying to protect a competitive advantage by maintaining status quo, an agile manager must assume that change will be required for survival (Denning, 2016). Instead of focusing on predictability too much, agile managers have to get used to and strive for an environment where late changes are manageable and not seen as a major threat to the process of work (Rigby et al., 2016). Parker et al. (2015) also argue that adaptability to changing conditions should be the focus of the manager and therefore limit the upfront planning based on this assumption of unpredictability. Nerur et al. (2005) means that agile methodologies deal with the unpredictable, again strengthening the understanding that managers must work under this assumption to be fully aligned.

In studies around agile leadership and cross-functional teams, one word that is constantly highlighted in the literature is empowerment (Tessem, 2014; Rigby et al., 2016; Medinilla, 2012), even though few actually go any further than stating that is extremely important in an agile set-up. Appelo (2011) describes that the level of empowerment can be categorized as low, moderate or high. An important part of this three-level description of empowerment is that it is based on maturity, where one fulfills all criteria of a level before passing on to a higher level. The low, or first, level of empowerment contains the low hanging fruits; internal workshops, an establishment of guidelines for coding, and minor activities to foster a good culture. According to Appelo (2011), the moderate level of empowerment is a minimum

requirement in the long run for organizations that are adopting an agile way of work, but where the first level should be assured initially. In this level, team members could interview job candidates, there is self-education of employees, and freedom of working hours and tool selection. The highest level of empowerment is where the people determine their salaries together, anyone can work on what project they want, and where there are no job titles. The last level is practically impossible for most businesses, and in the few cases where this exist, those organizations were probably created that way.

When working agile, there are careful planning sessions before the iterations. Highsmith (2009) holds the view that the line managers', also referred to as functional managers, participation in these planning session could help the team better understand priority issues based on the strategy, and also to show support and commitment for a project. Some even discuss the interesting strategy of having the same person acting as line manager and Scrum Master. Yi (2011) means that one risk with this is that the line managers have a tendency of working via authority. However, he also points out that a part of the agile change is the transformation of management from command-and-control to leading and coaching, perhaps making this assumed risk a non-problem in reality. Yi (2011) suggests that a real problem in this case is the balancing between an organizationally-centric role and a team-centric one. Instead, he means that Scrum Masters demonstrating leadership in all contexts could be good candidates when new line managers are needed, and in that case they could continue to serve as Scrum Masters successfully. This insight, however, gives rise to another dilemma. When Scrum Masters are considered as natural candidates for a new line manager role, the discussion regarding promotion comes in to play. In the agile method of Scrum, the promotion ladder, in the traditional sense, does not exist (Maximini, 2015). The Scrum Master's authority is described as indirect, as it springs from the fact that he or she possess a lot of knowledge around Scrum, its rules and practices, and is in charge of ensuring its processes are followed on a daily basis (Schwaber, 2004). Therefore, filling the role as Scrum Master should not be considered a promotion, nor should the Scrum Master be considered a boss of any kind, and the same is true for the role of a Product Owner in Scrum (Maximini, 2015). Yi (2011) also points out that the role of a Scrum Master should not be related to promotion, but rather a good way to learn and to grow in leadership.

2.3.2 Leadership Agility Model

Joiner & Josephs (2007) developed a five level model for which managers move through as they master leadership agility, which they identify as one of the most critical leadership capacities of today. Furthermore, to understand leadership agility

and how to develop it, they have found four competencies mutually found in agile leaders. The five distinct levels of leadership agility are categorized as expert, achiever, catalyst, co-creator and synergist. An interesting insight here is that Joiner & Josephs (2007) state that 90 percent of managers operate at a pre-expert, expert or achiever level.

The four competencies found mutually among agile leaders were context-setting agility, self-leadership agility, stakeholder agility, and creative agility (ibid.). The context-setting agility competency is used to scan the environment, deciding on what to do next and and anticipating change. Determining the optimal scope and clarifying the outcomes are also included here. Managers that are engaged in self-leadership determine what kind of leader they want to be, and use their daily initiatives to experiment toward this goal. This includes a general interest in understanding feelings, assumptions, and behaviors. Stakeholder agility is at an early point about identifying involved parts and stakeholders. Later on, it becomes a competency were one work for an optimal alignment among the different parts involved, where every view and objective is taken under consideration. The creative agility is about transforming complex issues into desired results. Here, a manager understands the limitation of a single viewpoint, and therefore encourages both questioning of the assumption and multiple perspectives.

Table 2.1: Levels of agility and its implications for leading teams (Joiner & Josephs, 2007).

Level of agility	**Agility in leading teams**	**Distribution**
Pre-expert	-	10 percent
Expert	In the expert level, the manager is described more as a supervisor, and what he creates is rather a group of individuals rather than a team. The expert manager is described as a manager too caught up in his own work to be able to lead in a strategic manner.	45 percent
Achiever	In the achiever level of leadership agility, the manager is actually a manager in the right sense of the word, in contrast to managers in the expert level. Here, a manager often orchestrates meetings or discussions regarding strategic issues to foster his own views.	35 percent
Catalyst	Moving to the first post-heroic level, the catalyst level, we find managers with the intent of creating a highly participative team, were the manager acts as a facilitator and seeks an open exchange of views on issues that are found difficult. It is mentioned that the catalyst level manager uses the team's development as a vehicle for his own leadership development.	5 percent
Co-creator	In the co-creator level, the manager is creating a team of collaborative leadership, where team members feel responsibility for a whole unit, not only their own areas. The managers here have a preference for consensus decision making, but still use authority when needed.	4 percent
Synergist	The final level, the synergist one, is one where the manager is capable of moving between different team leadership styles, suited for every situation. This type of manager is described as one that can amplify the energy dynamics to bring results that are found mutually beneficial.	1 percent

2.3.3 Self-managed teams

A central part of agile management is the concept of self-organized, or self-managed, teams. What this concept implies is that a small group of employees plan and manage their daily activities and duties, often with reduced supervision, but in extreme cases, under none (Parker et al., 2015). Many tasks, previously done by a line manager, such as identifying dependencies and assigning tasks to individual persons in teams, can be done by the self-organizing team itself (Comella-Dorda et al., 2015). However, Hodgson & Briand (2013) concludes, from a case study, that while team members get influence over choice of tasks, work method, and quality standards, more substantial decisions are defined by authorities outside the team. Parker (2012) writes that giving away such responsibilities for decision making is in many organizations today perceived as a high-risk move. Arguably, the perceived security of maintaining efficiency is lower in agile environments, why resistance is present in such cases (Parker et al., 2015). Nixon et al. (2012) suggest that the manager and his style of leadership have an influential effect on the team performance. Senior & Swailes (2004) also discuss team leadership and identify it as one of the major factors for affecting team performance. Furthermore, Parker et al. (2015) state that, to maintain a good relationship among the team members, the manager's relationship with these team members becomes essential. The notion of self-organized teams can indicate that managers themselves might need guiding practices that can work as a framework for management, instead of a set of rigid instructions for it (Spreitzer et al., 1999). The role of the agile manager in self-organized teams starts with an overall problem solving approach that is humanistic in the sense that it sees the people and team as a valuable part in the management of the team (Parker et al., 2015). Some mean that this is important not just because of motivational reasons toward the employees, but rather because that the existence of a complete leader is a myth (Ancona et al., 2007).

Moravec (1999) argues that the role of a manager responsible for the delivery of a product, and operations, is redundant in self-organized teams. Parker et al. (2015) mean that this viewpoint may seem cynical to some extent. Benefield (2008) writes that some managers felt left out when teams became more self-organized and found it difficult to shift from a command-and-control model while implementing agile methodology. Appelo (2011) discusses the importance of line managers in an agile environment, but mentions that they are often forgotten in this context. Appelo (2011), Parker et al. (2015) and Polley & Ribbens (1998) all share the stance that the role of the manager becomes more focused on facilitation and empowerment, where removing obstacles and managing for outcomes also becomes a central part of their work. Strålin et al. (2016) mean that line managers will continue to play a central role in organizations after an agile transformation, as they provide support to career-

development and transferring their knowledge to others. Yi (2011) also concludes that the line managers should still exist, and that the agile transition demands even more management efforts and leadership than before. Maximini (2015) is of the view that traditional line management may not be needed in agile organizations, but should be focused on the individual development paths of the employees in a team, instead of having a responsibility for the performance of a whole team.

2.3.4 Managerial Challenges and Barriers

There are several challenges or barriers associated with implementing a new methodology and specifically the agile way of working. As agile methodologies no longer are bound to small co-located teams, but adopted by companies in a larger scale and in more complex environments, they become characterized by the need for additional coordination (Dikert et al., 2016). When the boundaries of agile expand, new challenges arise (Conboy et al., 2011). A particular problem for managers in the case of agile being implemented in larger projects is the inter-team communication and coordination. If interfacing with other organizational units, such as human resources or marketing, also is a requirement, the challenge becomes an even bigger one (Dikert et al., 2016). Another common challenge for managers in an agile environment is the task of establishing the right level of autonomy in a team. Partly, the challenge becomes to make the team member not having the mindset that taking a responsibility once would result in having the same responsibility forever (Appelo, 2011). But perhaps an even bigger challenge for agile managers is the anxiety of losing the traditional power (Conboy et al., 2011). Appelo (2011) also discuss the issue of managers being afraid of giving power to other people, as some managers believe that this would diminish their status. He further states that this would most likely increase the status of the manager instead . The anticipation of losing power is one of the main reasons people resist change in general (Boisnier et al., 2003), with the agile approach not being an exception. Merely the issue of power and decision making may take an organization enormous effort, time and patience to build a culture of trust and respect (Nerur et al., 2005).

Another challenge is the one of getting top-level management support. Livermore (2007) concludes that there is a significant correlation between management support and involvement and the success of implementing agile methodology in software development. This conclusion is also supported by Schatz & Abdelshafi (2005) who states that since agile often grows in a bottom-up fashion, it requires the sincere support of executives. Management support helps the change get through despite problems or failures that can occur during the first stages of implementation (ibid.). Roberts et al. (1998) writes that although top-level managers are not directly in-

volved in working with the new methodology, they still provide resources, commitment, and discipline for its implementation. Therefore, they can champion the changes and sell the ideas to lower levels of hierarchy. Ahimbisibwe et al. (2015) found that top-level management support is cited as a critical success factor in agile projects more often than in traditional ones. Furthermore, it was also suggested that out of all organizational factors, top-level management support was the primary critical success factor when it came to software development projects. The literature reviewed above shows that there seem to be a clear consensus about the correlation. The barrier lies in the case where the top-level management support is higher for attitudes that are risk averse. In these cases, controlling and extensive planning will be prevailing. In cases where this support is higher for flexible cultures and changes in budget and deadlines, agile can be better accommodated. (ibid.)

As agile teams are becoming more common, so are culturally diverse ones. Some managers try to avoid this by assembling culturally homogeneous teams. In the beginning, the homogeneous team can experience increased efficiencies. But in the long run, the diverse team passes the homogeneous ones as idea diversity and different experiences drive development of solutions that are innovative to complex problems. (Crowder & Friess, 2016) While Crowder & Friess (2016) acknowledge the benefits of diverse teams, they also discuss how this is a challenge for agile managers. Referring to Hofstede et al. (2010) theories about different cultures in organizations, Crowder & Friess (2016) mean that understanding where the team members are from, helps the agile manager to facilitate them and to remove possible roadblocks.

Chapter 3

Methodology

In this chapter, an explanation for the chosen research method is given. This includes the research design and process, data collection methods and data analysis methods. The chapter concludes with a discussion of validity, reliability and generalizability while also providing the reader the ethical considerations shown during the process of this work.

3.1 Research Design

The purpose of this study can be argued to be descriptive as previous research on the area is limited and there is a need for both academia and industry to understand the role of the traditional manager in an agile context. However, one should be aware of the existence of previous research on flexible organizations and agile leadership. To be able to make the best use of both the theory that exists and the empirical material gathered, an abductive approach was used, where the empirical research throughout the study influenced the chosen theoretical framework, and vice versa (Blomkvist & Hallin, 2015). As previous research on managers in an agile context is scarce, an abductive approach is well suited as it allows the forming of a research perspective by combining both existing literature and gathered empirics, possibly resulting in an increase in the substantiality of the conclusions (Alvesson & Sköldberg, 2017; Dubois & Gadde, 2002). For this purpose, the literature study was a continuous process throughout the entire thesis.

A case study was conducted at Scania to make the purpose researchable and for the possibility of gathering rich, in-depth empirical material. Scania is one of Sweden's largest truck manufacturing company, with a research and development division divided into several sectors, departments and sections. This creates complex organizational structures where potential changes demand extensive efforts to be fully

implemented, as previous processes and methods have gained a lot of momentum during the years. Specifically, Scania was a favorable choice for studying this problem since the company has traditionally had technical managers overseeing everyday operations at the supervisory level which has meant that, previously, managers have not focused as much on leadership as on understanding and developing the product and delivering results. As the transition toward an agile approach was still ongoing, it allowed us to see the discussions and debates that were both for and against certain aspects of the agile way. Scania was therefore deemed to be a fitting environment for evaluating how the transition is affecting different aspects of management.

As the research questions of this thesis are complex and can have multifaceted answers, a case study is deemed the best method to collect a range of different perspectives (Blomkvist & Hallin, 2015). According to Gibbert et al. (2008), a case study, if done right, is ideal to create managerially relevant knowledge as it is conducted in close interaction with practitioners and real management situations. The case study consisted of several steps, beginning with an early pre-study to understand the issue and write an appropriate problem formulation. It was also deemed important to study the existing literature early on to be able to contextualize the problem. The data collection process consisted of interviews and one survey, in addition to spontaneous talks with employees of Scania. By combining different methods to study the same phenomenon, commonly referred to as triangulation, the validity of the study was also increased (Collis & Hussey, 2013).

In Figure 3.1, two phases are distinguished; the data collection consisting of the pre-study, literature study, interviews, and a survey and the data analysis consisting of analysis, discussions and conclusions.

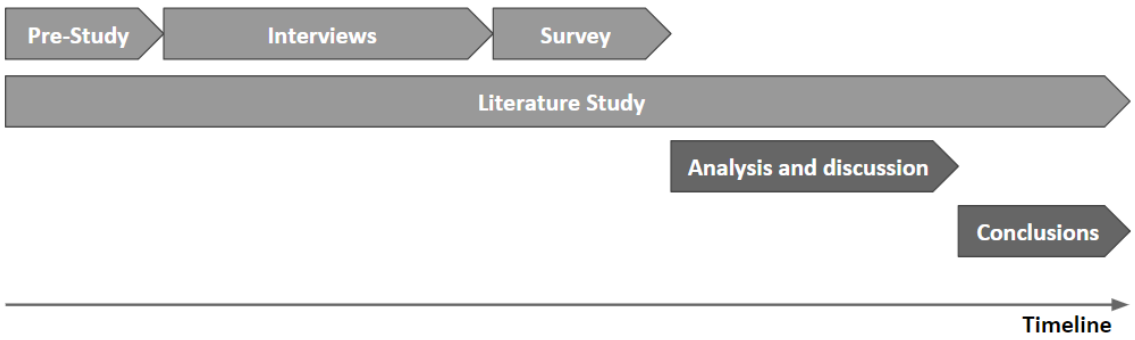

Figure 3.1: An overview of the study's research process.

3.2 Pre-Study and Literature Review

Collis & Hussey (2013) writes that a pre-study is the process of familiarizing oneself with the research area. In this case, the pre-study consisted of meetings and introductory lectures where the case background was laid out and a problem formulation was discussed.

The literature review was conducted to gain an increased understanding of leadership, traditional management and agile management. The reasoning behind choosing these three closely related areas was to understand the transition that is happening in management while also considering the rather soft characteristics explained in leadership theory. According to Collis & Hussey (2013), the literature review can begin as soon as a potential topic is identified. Since the field and problem of this study were identified early on, the literature review could begin immediately. The data collection consisted of searching keywords on Google Scholar, Scopus, Emerald Insight, Link Springer, KTH Online Library, and other databases for published articles while also reading relevant book chapters. This resulted in a long list of potentially relevant literature. This vast information was skim-read to be able to screen for the most applicable literature for the purpose of this study. Blomkvist & Hallin (2015) explain that a broad search for literature is especially important in social science since relevant studies can be found in a spectrum of different fields. Additionally, there was also much consideration put into the selection of sources to ensure a critical and fair view of the topic. Some ways of doing this was by mostly reading articles published in peer-reviewed journals, and in some cases confirming the quality of the journals on Scimago.

The keywords often included words such as “agile” or “manager” and, the authors found that these often worked quite well to point us in the right direction during the literature study. The following keywords, and combinations of them, were used to search for online literature:

“agile”, “agile methods”, “scrum”, “kanban”, “extreme programming”, “agile management”, “agile leadership”, “traditional management”, “command and control”, “leadership”, “leadership versus management”, “agile software development”, “cross-functional teams”, “self-organizing teams”, “management 3.0”, “line management”, “team management”, “scrum master”, “manager in scrum”, “product owner”, “agile manager”, “agile challenges”, “agile adoption”, “agile barriers”, “team behavior”, “agile in large organizations”, “agile project planning”, “agile implementation”, “agile transformation”, “role of the agile project manager”, “agile versus traditional”, “responsibilities line manager”, “agile survey”

3.3 Empirical Study

The following section provides a description of the method used for the empirical study which included several interviews, a survey and observations.

3.3.1 Interviews

Semi-structured interviews, with open-ended questions, were conducted with group managers (see Figure 4.1 for managerial hierarchy). Another employee was also interviewed in the same way. The data collected from the interviews was regarded as primary data, which according to Collis & Hussey (2013) is the data in the study generated by the author. In the set-up with semi-structured interviews, the interviewer prepares questions in advance, but is free to ask additional questions during the interview, as interesting insights might be found during the interview sessions (ibid.). With this approach, the interviewer increases flexibility and can explore areas that were not thought of prior to the interview. Interview questions can be found in Appendix B.

All interviews were conducted with one group manager at a time, during different occasions. During all interviews, one of the authors acted as the interviewer and asked all the questions, while the other one was responsible for the documentation, but was free to ask questions too. With permission from all the respondents, all interviews were audio recorded. These recordings were later used when analyzing the interview. Information about the interviewees, date and length of the interviews is found in Table 3.1 below.

Table 3.1: Information about the conducted interviews.

Interviewee	**Job title**	**Date**	**Length**
A	Group Manager	2018-02-21	01:10:47
B	Group Manager	2018-03-01	00:48:17
C	Group Manager	2018-03-02	01:24:03
D	Group Manager	2018-03-06	00:48:06
E	Group Manager	2018-03-12	00:38:50
F	Group Manager	2018-03-12	00:52:28
G	Group Manager	2018-03-13	01:05:25
H	Employee	2018-03-20	00:57:32
I	Group Manager	2018-03-21	01:08:03
J	Group Manager and Product Owner	2018-03-26	00:33:53
K	Group Manager and Scrum Master	2018-03-26	00:48:06

3.3.2 Surveys

A survey was also conducted, containing both open-ended and multiple choice questions. The survey was sent out to team members in sector E at the R&D-department at Scania. The layout of the survey and its questions were developed together with an agile coach. This was done since Collis & Hussey (2013) argue that one has to be competent in a research area to be able to construct precisely the right questions. The purpose of the survey was to collect both qualitative and quantitative data about team members views on the new role of their managers and the agile methods. The aim of the survey was to collect data from a different perspective, that of the team members, to further increase the understanding of the manager and get valuable insights on which role the group manager should have in relation to new agile roles and meetings. Different topics and discussions from the interviews with the group managers were used to construct questions that were of higher interest.

Distribution of the survey was done through Scania's internal email system and was built in Google Forms, an online application for surveys. Together with a link to the survey, the purpose of the study was included in the invitation email and an assurance of confidentiality. The authors were not able to meet the respondents in person, as the survey was sent out digitally. It was emailed to 638 employees and answered by 150 of them which rendered in an active response frequency of approximately 24%.

The construction of the different types of questions were based on Trost (2012) guidelines for surveys. The guidelines include how to think about the structure of the questions, the vocabulary, and the different alternatives. The authors believed that in that way, the survey may increase in quality. No reward was received by the respondents of the survey for their participations, as this could lead to potential negative effects and thus decrease the quality of the answers. When using rewards, the results of the survey could be affected since an increase of participation of people who only perform it to receive a reward is likely (ibid.). The survey questions can be found in Appendix A.

3.3.3 Observations

During the study, some observations were made to see what people actually did and their daily behaviors. This was particularly done in some meetings such as Daily Stand-ups, and planning sessions. As some aspects are difficult for the interviewees to describe, the daily observations work as a method to fill this minor gap. The observations were conducted in the same period as the interviews were done, to be able to raise interesting questions during the interviews regarding some observations.

Hanington & Martin (2012) argue that if the sample size from the observation is large enough, this data can be quantified for analysis, otherwise to be performed to undercover patterns. In this study, the latter was the case.

3.4 Data Analysis

The analysis of data was based on the interviews, the survey and different observations made during the study. In qualitative studies, the gathering and analysis of data are not followed by each other, but is rather intertwined (Collis & Hussey, 2013). Hence, the analysis of data started at the same time as the collection of data started. The interviews were documented during the interview session by one of the authors. After completing the interviews, there was an extensive round of analysis. This consisted of listening to interviews and documenting them again, in a much more thorough manner this time. This was followed by the main process in the analyzation of data. This involved data reduction, restructuring the data, and detextualizing the data (ibid.). Specifically, the process was as follows:

- After the first few interviews, the authors began to search for and find patterns by listening and reducing the amount of data. The focus was to look for answers related to the research questions. Which work activities were often mentioned? How were their roles described? What challenges were mentioned?
- As the patterns were identified, these were categorized depending on what research question they belonged to. Similar answers were listed together.
- For the remaining interviews, data was added continuously, whether it belonged to an existing category or if a new one had to be created.

Therefore, during this process, reduction of data was continuously done, as data was summarized and interviews were listened to several times. The data gathered from the survey was visualized using charts, to be able to perform an analysis of it. By doing this, one could easily see which answers were occurring the most and the least, and made it possible to find differences and similarities among the respondents and their answers. These charts can be found in Chapter 5.

3.5 Validity and Reliability

One way of evaluating the quality of scientific work is to review the reliability and validity of it (Blomkvist & Hallin, 2015). According to Collis & Hussey (2013), validity is the extent to which a test measures what the researcher has aimed to

measure and the result reflect the phenomena under study. Reliability is defined as the accuracy and precision of the measurement and absence of differences in the results if the research was repeated (ibid.). Blomkvist & Hallin (2015) simplifies the definitions and describes validity as studying the right thing while reliability requires studying it in the right way. Furthermore, high validity pre-requires high reliability but not vice versa (ibid.).

One method to increase the validity of a study is triangulation, meaning the use of various data collecting methods. In this study, multiple interviews were completed with a survey. Additionally, all interviewees that held same job title were asked the same questions more or less, allowing comparisons between answers. As the interviews were conducted in pair by the authors, it was possible to reduce both subjectivity and misinterpretation. Collis & Hussey (2013) writes that one advantage of interviews is the possibility of being able to ask complex and sensitive questions while also collecting comprehensive answers. In this regard, surveys fall short.

Reviewing reliability in case studies is often troublesome as the nature of this type of research makes it difficult to replicate the results. That would require redoing the interviews, the survey, and any other general observations that were collected, in an environment that is constantly transforming and evolving. Collis & Hussey (2013) claim that because of the difficulty in reproducing the results, reliability is not as relevant as validity in qualitative research.

3.6 Generalizability

Blomkvist & Hallin (2015) discusses different types of generalizability in regard to case studies. Firstly, case studies are characterized by systematics when it comes to both data gathering and analysis methods as the researcher is asked for justifications of the choices made. Secondly, while a case study can never result in statistical generalizability, it is possible to produce analytical generalizability by discussing how the particular case can be applied to other, similar cases. This study is believed to have a low generalizability, however, it is important to recognize that some of what is lost in generalizability is gained in a much more in-depth research which can be of interest in other similar cases.

3.7 Ethics

The study was conducted in collaboration with the automotive manufacturer Scania and the consulting firm Knowit. Scania and consultants from Knowit assisted with support and knowledge, when it came to lectures regarding relevant subjects, interviews, a workplace and office equipment, and the right guidance when there were questions to be answered. There was also a monetary reward for the authors. A confidentiality agreement was created by Scania, and later signed by the authors. By signing this contract, the authors undertake rules regarding confidentiality; not revealing information of secret nature, not to pass on information to any unauthorized person and in the end of the term return all material to Scania, including documentation, data files and equipment. Furthermore, per the initial contract, Scania will own all rights to any findings or inventions that may be a part of the result of the study.

The study was performed in a way that followed the four ethical codes by the Swedish Research Council. These four principles serve as an ethical guideline for research of social science. These principles are; information, consent, confidentiality and good use. (Vetenskapsrådet, 2002) The first code, information, was fulfilled since the interviewees and respondents of the survey were all informed of the purpose of the study before actually participating. This was done first when an invitation email was sent out, but then once again before the actual interviews were performed. Consent, the second code of research ethics, was fulfilled as no interviewee or respondent was in any way forced to participate in the research, thus being conducted on a voluntary basis. The code of confidentiality was fulfilled when ensuring every representative of Scania that was participating in the study, that the information shared was considered as confidential information and that it would be treated fully anonymous in the thesis report. To the numerous managers and the one employee interviewed, a promise was made to not publish the data in the report in a way that the reader can understand which specific manager is referred to in the thesis. The last code, good use, was fulfilled as the authors of the thesis will not in any way use the information or data collected in the study for any other purpose than that of the research.

Chapter 4

Case Background

In this chapter, a background will be given of the case at hand. This includes a brief description of the client, of the organizational structure where the thesis was performed and, more importantly, a description of the agile transformation. It concludes by defining some existing roles and work activities at the company.

4.1 Scania AB

Scania is one of the world's leading manufacturers of trucks, buses and engines offering products and services globally. Its headquarters is in Södertälje, Sweden, which is also where this research is conducted. The company has existed for over 120 years and is today one of Sweden's largest organizations with over 45 000 employees.

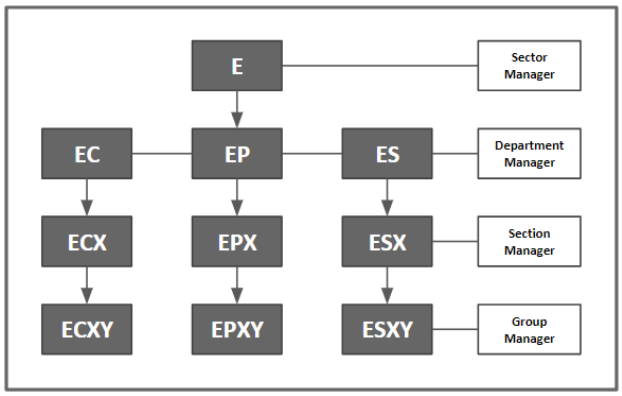

Figure 4.1: The managerial hierarchy at sector E, Scania.

This thesis was conducted at the software development sector, also called sector E, at Scania. Figure 4.1 illustrates the managerial hierarchy in an attempt to clarify the position of the group manager who is the main subject of this thesis.

During the last few years, senior management at sector level has initiated two major transformations, one operational and one structural. The operational change was meant to introduce an agile way of working. Lean and its concepts have historically had a major influence at Scania's production facilities and these ideas have also inspired other parts of the company, such as Research & Development, to introduce agile methods. However, this transition is still not fully implemented today. For example, some groups have fully embraced Scrum, with its activities and roles, while others completely ignore this method. The aim of introducing Scrum has been to eliminate repeated mistakes and maintenance, and to standardize the work by working transparent and close together, both within and between the groups. It has also been a way to add customer value as the demands on shorter release cycles are increasing. (G Söderman 2018, personal communication, 6 April)

The structural change, as the second part of the agile transformation, consisted of a change in group composition. The vehicles produced by Scania are controlled by a number of interconnected systems called Electronic Control Units (ECUs). Before the structural change, each ECU had a team working with development and test of the software for the specific ECU. The teams consisted of 5-12 team members within different areas of competence. (G Söderman 2018, personal communication, 6 April) This is illustrated in Figure 4.2.

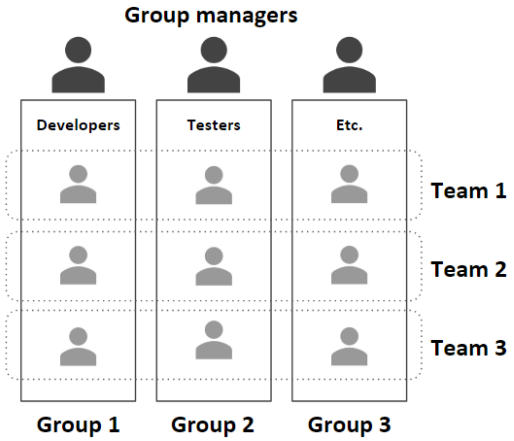

Figure 4.2: Group composition before the structural change.

However, this meant that every team had several managers from different competence groups that were not placed together and therefore were scattered throughout the organization. After the structural change, competence groups ceased to exist in the same form. Instead, managers were now in charge of a group which in turn consisted of one or several multi-competence teams. Thus, all team members now share the same manager and the group members are now physically closer to each

other in the office. (G Söderman 2018, personal communication, 6 April) This is illustrated in Figure 4.3.

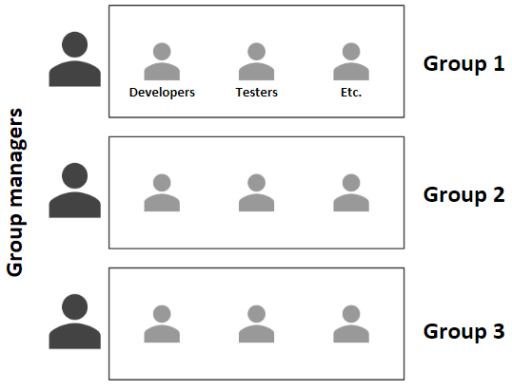

Figure 4.3: Group composition after the structural change.

4.1.1 System Owner, Function Owner and Object Leader

In addition to the roles of the Scrum Master and the Product Owner, the groups in the software development department have three roles that are important to define as they are included later in this thesis: a System Owner, a Function Owner and an Object Leader. The System Owner is responsible for managing the software systems, making sure they have the correct requirements and implementation and test plans. The System Owner also reports the systems' test status and develops safety analyses to ensure their quality. Furthermore, he or she is responsible for communicating with other internal departments. The Function Owner is, as the name tells, the one responsible for the software system's different functions. This includes the responsibility of making sure that the functions' requirements, terms and documentation are all correct. The function manager is also responsible for managing the implementation of functions and to handle the communication with other relevant departments in the company. The Object Leader has no technical responsibility, instead the person is responsible for scheduling and following up on different projects. (Dibo & Fakih, 2017)

4.1.2 Formal Managerial Activities

The group manager is formally responsible for a number of non-delegable activities at sector E. While the responsibility cannot be delegated to other group members, various activities within an area of responsibility can be distributed to certain mem-

bers. The following responsibilities are currently held by the group manager (Scania, 2017).

- **The group's vision.**
- **Product responsibility, including product vision.**
- **Delivering the product.**
- **Prioritizing tasks.**
- **Managing impediments that are not manageable by the group.**
- **Information escalation.**
- **Securing resources.**
- **Staff liability.**
- **Work environment.** The work environment provisions are detailed in a document which is signed by the group manager upon employment. It contains directives for emergencies, employee's safety, authorizations, etc.

Except for the work environment document, there are no further formal descriptions on the remaining responsibilities.

Chapter 5

Empirical Results

The chapter begins by presenting the results from the interviews. These follow a structure in accordance with the research questions. The chapter concludes with the results from the survey where the order of the results follow the actual survey.

5.1 Multiple Interviews

During the empirical study, semi-structured interviews were conducted with ten group managers and one employee. One of the group managers was also the Product Owner, while another held the Scrum Master role in addition to being the group manager. In the following section, the responses will be summarized for each research question of the thesis.

5.1.1 The Role of the Manager

The first research question is divided into two sub-questions which have been the outpost for the semi-structured interviews. The results for the first research question are therefore categorized into two sub-questions.

The Manager's Key Activities

To answer the first of the two sub-questions, the interviewees were first asked to specify their key work activities as group managers at Scania. The most common answers are listed below.

- Prioritizing tasks
- Securing resources

- Managing impediments
- Synchronization between groups
- Work environment
- Information escalation
- Recruitment
- Staff liability
- The group's vision and/or technical roadmap

The interviewees were then asked whether the agile implementation has changed their key work activities and, if so, to explain in what way. As explained in Case Background, the agile journey at Scania has not been implemented across all groups and this was further clarified during the interviews as four group managers stated that they had not experienced any changes to their key work activities. In three out of these four cases, the groups did not work with an agile method and did not have roles corresponding to Product Owners or Scrum Masters (Interviewee B, E, I). However, in the last case, the group manager stated that although the group worked with agile methods, there was a lack in team maturity which resulted in him being less able to distribute work activities to others: "My goal is to make the team able to manage itself and that will come with maturity" (Interviewee F).

A majority of those who had experienced a change in key work activities stated that they are less involved in the daily operational work. Interviewee C states that this allows group managers to be more available while also having more time to explore soft issues: "There is a higher focus on developing the employees and to be available to support them. More time to concentrate on soft issues.". The reasons were that they either had a more self-managed team, capable Scrum Masters and Product Owners or a combination of the two. Interviewee C said that with the introduction of a Product Owner in the group, he has been able to completely abandon activities such as prioritizing tasks. Interviewee J is quoted saying: "The Scrum Master in the group is responsible for leading the Sprint Planning session and to follow up and make sure that tasks are being done.".

Prioritizing tasks

The introduction of agile methods, in this case Scrum, has given the group manager the option of delegating work activities related to the product to the Product Owner.

As mentioned earlier, this option is one of the reasons behind the decrease in daily operational work (Interviewee A, C, D, I, G). In the case of Interviewee D, there are continuous dialogs between him and the Product Owner: "I have a good and clear dialogue with the Product Owner as he is intelligent which produces valuable discussions." Interviewee C, on the other hand, has completely delegated work activities such as "Prioritizing tasks" to the Product Owner. In one instance, the group manager felt that, with the introduction of the Product Owner and Scrum Master, he had no direct insight into the daily work plan of the group and felt distanced to the operational work (Interviewee I).

Managing impediments

Before the structural transition, it was important to agree over certain processes with other groups as competencies were scattered. However, after the structural transition, groups consist of several different competencies which enable a group to have ownership over a certain process or flow. But as Interviewee C explains, this also meant a shift in the character of impediments that group managers have to deal with. He further clarifies that: "Today, we do both part A and part B inside our own group which minimizes the handovers between groups. But testers still need to speak with other testers.". The role of the group manager therefore shifts to ensuring that there are forums in place to enable communication between competencies across groups (Interviewee C). Interviewee D says that the manager today solves minor problems as the team is often able to resolve issues by themselves.

All of the interviewed group managers agree that almost all the impediments they need to manage are external as the groups are often able to resolve internal issues. Internal matters that need the attention of the group manager are more likely to be conflict issues (Interviewee C).

Group vision

Interviewee A facilitates these kind of meetings and discussions via the Scrum Master: "I expect that my group is able discuss these questions independently.". Interviewee C says that he, with the agile way of working, is able to involve the group more in group vision discussions although the amount of time he spends on this issue has not changed. Interviewee D perceives that he has more time to think long term, as opposed to before the agile transformation, due to the lesser involvement in the "daily operational work".

Information escalation

The structural change also made is easier for the group manager to collect and gather information that needed to be forwarded. This was achieved by placing the

group members in the same office space. (Interviewee B)

Recruitment

Generally, the recruitment process involves group members to a higher degree than before the agile transformation. The main reason is that some group managers feel that the group is closer as a team now. However, there are differences between the groups. Some managers involve the group member during the whole process while others involve them at the last stage.

The Manager, the Team and Agile Meetings

The following text will explain the group manager's interaction with the Scrum Master, Product Owner and the group, but also the manager's attendance and role in agile meetings, explained in Chapter 2, under Scrum Activities.

Group Manager and Scrum Master

The group managers at Scania often have a daily interaction with the Scrum Master in their group, mainly because the whole group is placed together which makes it natural to have spontaneous conversations during the day (Interviewee A, C, D, F, G). Additionally, some group managers also have scheduled meetings with the Scrum Master, with varying intervals. Interviewee C explained that although he would like to talk to the Scrum Master after every Scrum meeting, it is sometimes not possible because of existing meetings conflicting with the newly implemented.

The interviewees were also asked to explain what discussions those meetings would yield in. Interviewee A explained that, a lot of the times, the discussions with the Scrum Master involve ideas on how the agile methods at Scania can be improved and how they can be scaled throughout the organization: "We have longer talks every few weeks; how can we scale the agile way of working? How can we make it effective in a bigger picture?" (Interviewee A). Likewise, Interviewee G also mentioned work process improvement as a discussion subject. Furthermore, the dialogues also consist of evaluating the effectiveness of the group and how the group is doing in a general sense (Interviewee A, C, D, F, G).

Interviewee G pointed out that the Scrum Master may have a different view on the group's health: "Scrum Master may get another view on the group health as group members may say different things to the Scrum Master and their boss.". Both Interviewee B and I brought up some negative aspects: "There are advantages to having a Scrum Master, but in the larger picture it is too wasteful to have a full-time Scrum Master" (Interviewee B). Interviewee I had had both a Scrum Master and a

Product Owner in his group but, felt that it did not work well due to their lack of knowledge about the work.

Group Manager and Product Owner

Similarly to the interactions between the group manager and the Scrum Master, group managers at Scania have a daily interaction with the Product Owners in addition to weekly scheduled meetings (Interviewee A, C, D, F, G, K). Interviewee C says that since Scania is a technology-minded organization, it is often required of the group manager to have a high understanding of technical details which, in his case, results in more frequent talks with the Product Owner compared to the Scrum Master.

Interviewee A explains that the conversations are mostly discussions about the product, the prioritizations and in what order to do different errands. Both Interviewee D and Interviewee F also mention that the discussions are related to the product and prioritizing errands in the backlog: “The discussions are often tied to the product and prioritizations. The Product Owner in my team is competent and has a better view of the project compared to me.” (Interviewee F). Interviewee G clarifies that, in his case, talks are often about the prioritization of different projects rather than specific errands in the Product Backlog. However, there are also occasions where the Product Backlog is discussed and where the group manager voices his opinions (ibid.). On delegating authority, Interviewee K says: “I delegate full authority to the Product Owner to be able to prioritize different tasks that are due in the sprints. If I want the Product Owner to work then I have to give him the authority to do it so he can feel committed.”

As touched upon earlier, Interviewee I had previously had a Product Owner in his group but experienced that there was not enough interest in the role from the group members: “It was difficult to even get a hold of a Product Owner, there wasn’t anyone in the group interested in assuming the role. People want to be developers and code." Another issue related to having a Product Owner or not is team size, which both Interviewee B and J point to: “I think having a small sized group with only 6-7 persons makes the role of the Product Owner redundant. However, in larger groups it’s more natural.” (Interviewee B). Furthermore, Interviewee B also argues that, in his case, it was difficult to implement agile methods as his group is highly dependent on external suppliers which results in the group adapting their planning accordingly.

Interviewee J, both group manager and Product Owner, means that in some cases it could be difficult to have both roles: “When you are aware of everything around the

group it usually turns out fine, but for someone who lacks the technical competence, I believe it could be a difficult task to manage.". Interviewee K, who act as both group manager and Scrum Master, also touches upon the dual role that a group manager could have: "I think that the way of how the group manager is working, lies closer to the role of the Scrum Master than the one of a Product Owner, but I still don't think it's wrong for the group manager to have the Product Owner title either.".

Several group managers pointed out that the Product Owner role, to some extent, already exists in Scania in the shape of System Owner (Interviewee D, F, G, I, J). For example, in the case of Interviewee F, the System Owner became the Product Owner when Scrum was introduced in the group. Interviewee D also sees some similarities: "The roles of the product and System Owner do overlap to some extent and I do believe that Product Owners sometimes are superfluous.". Two group managers even held the opinion that there is no difference at all between the role of a System Owner and a Product Owner (Interviewee I, G) Interviewee J suggests further discussions on the matter: "We have to define what a Product Owner is and what a System Owner is. There is a need to define the dissimilarities.".

Group Manager and the group

The group manager's interaction with his group members usually happens during Daily Stand-up meetings, when he saunter around the office, or simply because of the fact that they sit close to some group members (Interviewee A, D). Some explicitly mention that they casually walk up to group members and ask how and what they are doing (Interviewee A, B, C, D). Interviewee A adds that this removes any risk of making it uncomfortable to speak to him as a manager, and instead making it a part of the daily work: "I try to pass by my team members and ask them what they are doing, which gives me insights in their work and at the same time get to know if they are all doing well. I try to make it a habit to remove any uncomfortableness that a manager's presence otherwise could result in." (Interviewee A). Interviewee K states that he works closely with the team, but do not fully see himself as a part of the team, as he thinks it is better to stand right next to the team and have a helicopter view. Interviewee B means that he tries to not involve himself in their work to be able to encourage them to be self-managed: "I try to let the group take many own decision and not involve myself at all in some cases, in that way I believe self-organization can foster." (Interviewee B). Interviewee A says that he has noticed that the teams are self-managed to a higher grade since the agile implementation. Interviewee B, C and F strongly favors that all the team members are now situated in the same workspace, in contrast to before the structural change: "I think that it is a great advantage to be located in the same place, and that we now are fewer

in each team." (Interviewee B). Interviewee B also means that the interaction with the team has increased since the agile transition, much due to the fact that team members now have the same group manager and are sitting right next to each other. He now had a better picture of the prioritization, occupancy, and work activities. Interviewee K states that the situation is much better now with smaller groups, as it was harder to make changes with bigger groups, and to establish consensus on what is done or not: "With smaller teams, it is easier to reach an agreement on what things are to be considered done" (Interviewee K).

Interviewee B means that he has two roles. He is partly a group member, but he is also a part of the management. He concludes by stating that as a group manager you are never fully a part of the group: "You can never be hundred percent a part of the team, as you have to act as an employer too." (Interviewee K). Interviewee F, who has a new group, states that he is trying to identify what types of persons he have in his new group early on, and adds that he believes that the best results are achieved when he and the group work together. He also adds that he encourages open dialogs and that he is not afraid of light conflicts, or discussions: "I think it is important to not be afraid of "conflicts" or discussions within the group, as this often leads to people getting their will through." (Interviewee F).

Interviewee I means that he must help them prioritize sometimes, as they do not have sufficient information to do that by their own: "The team members do not have all the inputs, which is why I actually have to help with the priority" (Interviewee I). Interviewee E criticizes the structural change to some extent and means that it was too big of a change in some parts of the company. He states that with too many different competencies, a wholeness becomes missing.

Agile Meetings

The attendance for the Sprint Planning was varied, as can be seen in Table 5.1. The majority of the group managers at Scania attend the Sprint Planning as observers, meaning that they are at the meeting, listening to what is being said but do not participate to a higher degree: "I attend the meeting to see how things are going, if there are any questions that come up. I don't participate that much but rather tend to let the team plan themselves" (Interviewee A). However, one exception was Interviewee K who said that he leads the meeting as he is both group manager and Scrum Master.

Table 5.1: Sprint Planning

Attendance	**Interviewee**
Every time	C, D, F, J
Every third time	A, G, K
Does not have the session	B, E, I

Most of the group managers attend the Daily Stand-up every day and their role is not always the same. Interviewee A said that he listens to what the team says but also checks if the prioritizations are correct, if anyone has too many tasks or if the team has impediments he needs to take care of. Both Interviewee I and J work in a similar fashion while Interviewee G adds that he also uses the Daily Stand-up as an opportunity to provide feedback to the team. Interviewee B sees it as a way to coach his team: "I try to be part of the team, to ask questions and coach my employees.". Interviewee C adds that he provides new information to the team during the meeting.

Table 5.2: Daily Stand-up

Attendance	**Interviewee**
Every time	B, D, F, G, I, J, K
3-4 times a week	A, C
Does not have the session	E

The Sprint Review and Sprint Retrospective meetings are always held in conjunction which means that the group managers often attend either both or neither of them. As can be seen in Table 5.3, the attendance varies greatly. Three of the interviewees did not have the session, mainly due to not having implemented Scrum to a higher degree. Interviewee G said that the Sprint Retrospective is the most interesting meeting: "The discussions on the Sprint Retrospective meeting are important, to see what people think. I try not to influence the team, for example I pass some exercises or have my say last.". Interviewee A has a similar thought process which is why he does not attend every time. Furthermore, both Interviewee C and K never attend the meetings.

Table 5.3: Sprint Review & Retrospective

Attendance	**Interviewee**
Every time	F
Four out of five times	G
Every second	A, D
Every third time	J
Never	C, K
Does not have the session	B, E, I

Nearly half the interviewees say that they never attend the Backlog Refinement meeting. This is mainly due to the Product Owner holding the meeting instead. However, Interviewee D participates in the meeting and discusses together with the other attendees matters such as time estimations and product backlog items.

Table 5.4: Backlog Refinement

Attendance	**Interviewee**
Every time	D, I
Two out of three times	B
Every second time	G
Never	A, C, F, K
Does not have the session	E, J

5.1.2 Managerial Challenges and Barriers

The interviewees were asked about their biggest challenges and barriers in the transition to agile methods and in the structural change. One of the major issues mentioned by group managers is the one regarding coordination with other groups and teams. Synchronizing groups and teams in the way they work, and what they work with has been a challenge, as the goal should be to work agile together, not just in the separate teams (Interviewee F). Interviewee D also mentions that things must be done at the same time: "Many things must be simultaneously, to be able to synchronize the work at a section level." (Interviewee D). The way different groups

work with agile methods could differ a lot (Interviewee C). Interviewee K mentions the issue of bad synchronization too, and adds that the agile implementation should have been done differently: "I think that the way agile has been implemented is not the correct one, it should have a greater focus on people, rather than processes." (Interviewee K).

When the issue of coordination was discussed, a closely related topic, the one of scaling agile, was usually mentioned. Interviewee C mentions that to be able to coordinate at a section level, the section management must do their part. Interviewee C also added that this is not the responsibility of group managers to begin with: "The solution must come from the section managers, and not rely on the group managers to solve this, bigger, problem." (Interviewee C). Other also perceived the agile scaling as the biggest challenge, but also saw the difficulty in how managers on group level should be the ones working with this question alone (Interviewee A), thus also pointing out a possible lack of support from the top management regarding the agile scaling. Other also point out that very little is done to support the group managers in their agile work (Interviewee H).

Another related topic is the one of agile education and training given to the group managers, both before the agile introduction and during their time working. Interviewee C stated that much of what he learned about agile was due to his own interest and research on the field. Furthermore, he stated that the education offered was not enough: "I don't think that the training that was given was enough, and that the focus should have been more on agile, and less on lean. Also, I think external courses could be beneficial too, not just internal ones." (Interviewee C). Another interesting point by Interviewee C is that an agile forum for group managers does not exist, only for Scrum Masters and Product Owners. Interviewee F means that the company should have performed the transition in a different way, by offering more agile training to begin with, but also general information about why the change is done. He continues by stating that he has seen a lot of managers having trouble because of this, and furthermore states that it is important to train the team members too, not just their group managers. Interviewee A means that the company is unaware of the fact that he faces a challenge in understanding the different roles: "I don't think that they have realized that it is not easy to understand all the different roles in agile, and that this consequently leads to a challenge for me in how to improve competencies in my team." (Interviewee A). He states that this should have been a part of the initial training. Interviewee G and K state that one of the biggest challenges is that all group managers must have the same picture about what agile is for things to work out well, but that this has improved along the way. Interviewee K also added that the training given to him prior to

the big changes was not enough. Interviewee H on the other hand, stated that in many cases, training is actually offered to group managers, but very few seem to be enthusiastic or interested in participating, and usually prioritize other things.

A majority of the interviewees discussed the topic of group managers historically being technical knowledgeable in the areas they work in, how an agile transition perhaps aims to change that, and the fear of this. Interviewee H, an employee involved in the transition, states that in the best of worlds, a group manager should not focus on giving technical expertise. Interviewee A mentioned that he earlier had witnessed, in another company, a group manager being distanced from the development, working at a distance from a Product Owner, and answered with a rhetoric question: "What's the role of the group manager then?". He further added that the role then becomes that of a HR-specialist rather than a group manager, a role he does not want to have at the company. Another group manager reflects on the situation where agile is taken to far: "If agile is taken to far, there is a great risk of managers being too far from the daily activities, a situation I would not like to be in." (Interviewee D). He adds that most group managers have a degree in engineering, and that the technical knowledge therefore should be a part of their job, also mentioning that the role in that case becomes like a HR-specialist (Interviewee D). Other believes that the leadership should have a greater role today (in the administration-leadership-engineering balance of a group manager), but that the technical or engineering part should exist to some extent (Interviewee G). Interviewee I states that he do not think that group managers should be doing administrative work solely. He further comments on the history of group managers with a technical expertise in the company: "Group managers have for a long time possessed technical knowledge, and I think that should persist." (Interviewee I). He believes in self-organizing teams, but does not think that the optimal way of leading a team, as a group manager, is by being a bystander. One group manager lifts a very interesting point in this discussion. He means that even if it would be desirable to lean more on leadership, and leaving the technical part of managing the groups and team, this would not be achievable at the moment (Interviewee C). This is because they are often asked, from higher ranked managers, questions that are strongly related to the technical part of a product, project or other things concerning the technical work a team does. Thus, this leaves no choice for group managers than to be thoroughly informed and knowledgeable about most technical aspects, he concludes.

Some group managers mention the problem of different cultures in the new group formations. Interviewee E says that people from the old functional groups think different, as separate cultures persist in different professions. He continues by stating that this gave rise to difficulties in the process of work. Interviewee I also pointed

out that groups are no longer homogenous, and that different backgrounds have made the new agile way of working a bit harder. He states that there are different types of culture: “Throughout the research and development department of the company, there are several different types of culture, which of course is a challenge.” (Interviewee I).

5.2 Survey

During the empirical study, a survey was also conducted which had three distinct areas; background, agile methods and the manager, and agile meetings.

5.2.1 Background Questions

Which department do you work at?

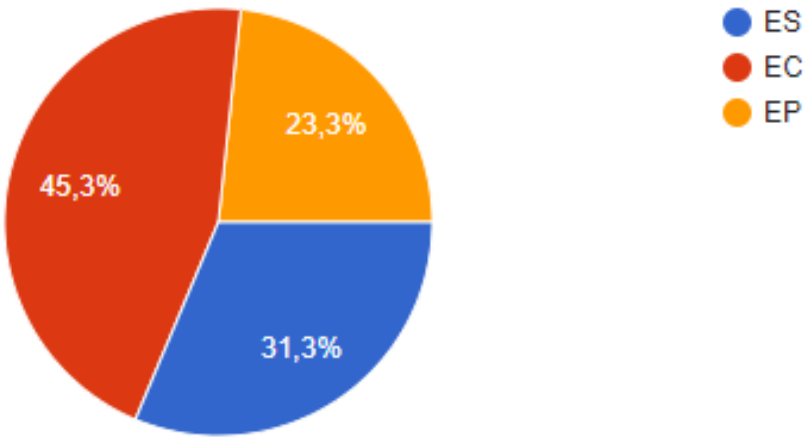

Figure 5.1: The figure shows the response distribution among the different sections.

Please select your role. You can choose multiple options.

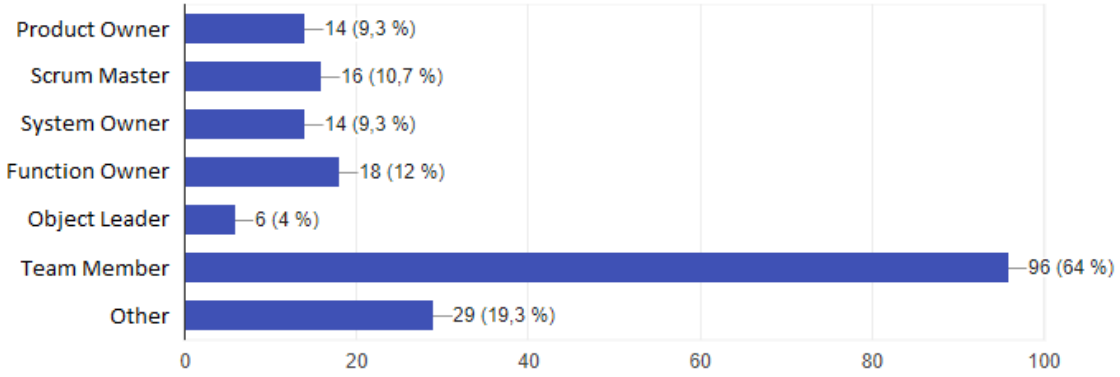

Figure 5.2: The figure shows the response distribution among the different roles.

Have agile methods (e.g. Scrum, Kanban etc.) been introduced in your group?

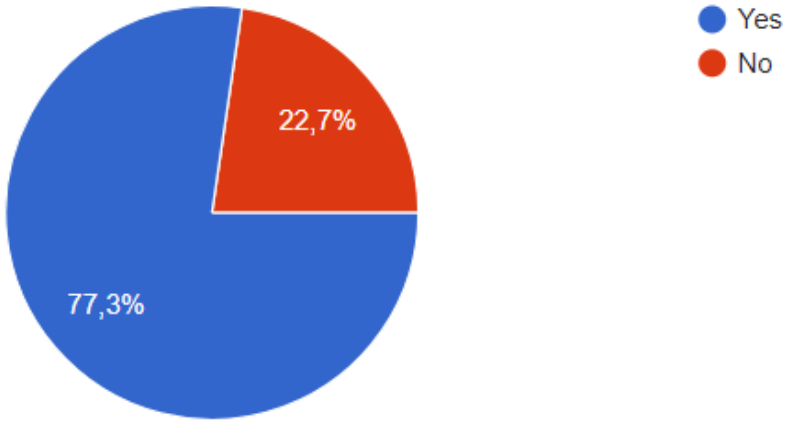

Figure 5.3: Introduction of agile methods at sector E.

How many years of work experience do you have with agile methods (at Scania and past)?

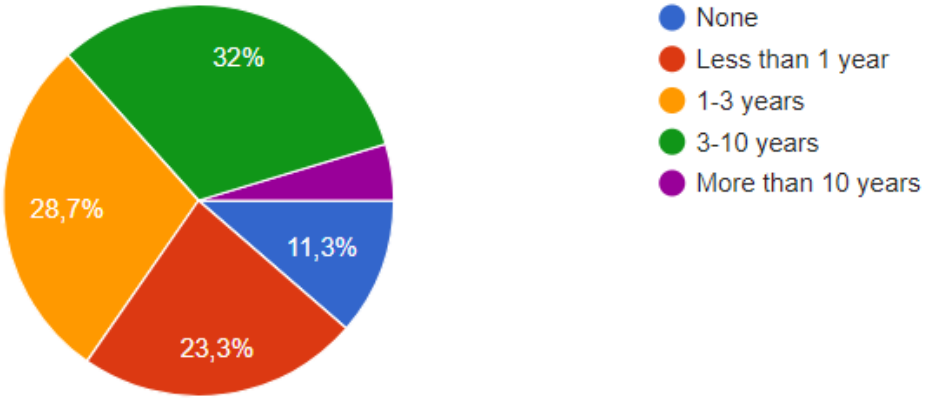

Figure 5.4: Agile work experience among the respondents.

Have you had any training or courses in how to work in an agile way at Scania?

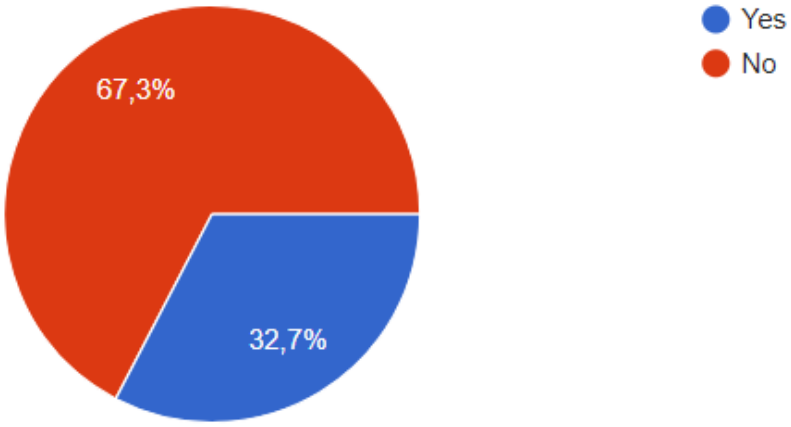

Figure 5.5: Proportion of respondents that had had training or courses in agile methods.

If yes, how would you rate the training/courses?

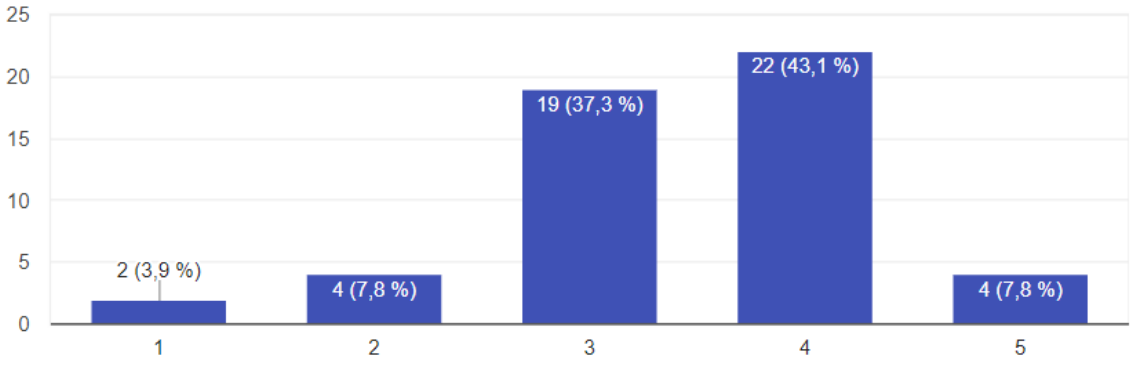

Figure 5.6: The score distribution for the training or courses.

5.2.2 Agile Methods and the Group Manager

Do you think that agile methods fit the work that you do?

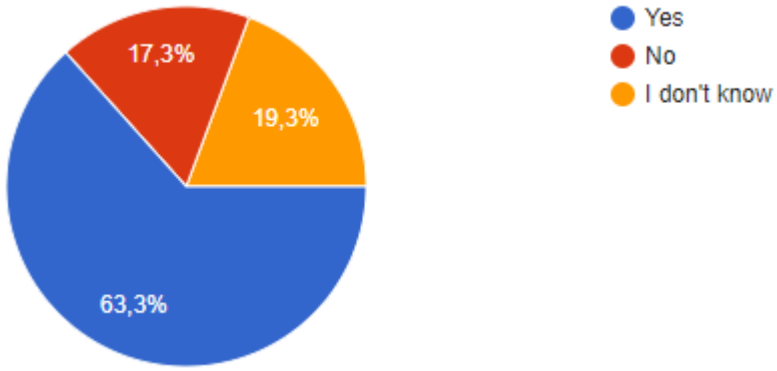

Figure 5.7: The figure shows the proportion of respondents that answered Yes, No or I don't know.

What do you think are the major challenges for the group manager when working in an agile way?

The respondents were asked what they think are the major challenges for the group manager when working agile. The question was not mandatory to answer. Out of the 150 respondents, 91 gave an answer to this question. The answers are listed below and sorted after the most recurrent.

Mastering agile methods

The most common answer was regarding group manager's ability to master agile methods. Some answers highlighted the fact that they thought the organization was still of waterfall structure, in some cases as the overall critical point, in other as a challenge for the group managers to work agile in a bigger organization using agile. Other answers commented that their group had not matured towards agile enough, and that it is a challenge to "make everyone go agile all the way". In one case this was mentioned about the manager too: "That Agile is for everyone including the managers! They should learn to be really agile, instead of doing some agile." Another comment was: "To embrace the change to agile: drop old structures with Project leads and instead work with Product owners. Continuous improvements. Retrospects. And finally, the most important, to make a change from "Component focus" to "functional focus."".

Loosening control

The second most common answer was about managers' and the challenge for them to loosen their control and to let the team be self-managed to a higher extent. Except explicitly stating that group managers have a challenge in loosening control, many answers stated that group managers should build more trust upon their team members. One answer was: "To give away responsibility but be updated on status and progress." Another answer was: "To support teams in the group enough so that they can work with high autonomy and assist in aligning the "hard" deadlines in projects where many other groups are dependent on delivery from the group...".

Communication and coordination

Some answers pointed out the challenges with communication and coordination. When it comes to coordination, there were answers both regarding the coordination within the group, e.g. between the group manager and Product Owner/Scrum Master, but also between the different groups that exist. One respondent gave an answer to why communication can be a challenge: "The communication between the team and the manager can get suffering as the team is working in an autonomous way and the input from the manager is not needed on a daily basis. Weekly group meeting is important for keeping the feeling of group belonging.".

Team needs and resources

Some respondents meant that it could be challenging for the group manager to keep track of the team's needs and to use the group in an optimal way. Respondents explicitly stated that it can be a challenge to "Understand the need for the team" and "Understand the need for the team".

Task management

Some respondents pointed out that it could be hard for a group manager to now how to break down different task. One answer was to the question of managerial challenges was: "To break down task into smaller issues to fit into the Sprint.", while another respondent stated that it is "hard to estimate the size of different jobs in advance.".

Vision and roadmap

A few respondent highlighted the issue of vision and long term goals. One respondent meant that the challenge was "keeping the long time goal, or even finding time to define the long term goal. Everything is just sprint goals.".

Other answers

Other respondents touched upon the prioritization, general overview, overheads, responding to demand, being a part of groups, and other.

How would you rate your group manager's work in terms of motivating, empowering and building your team?

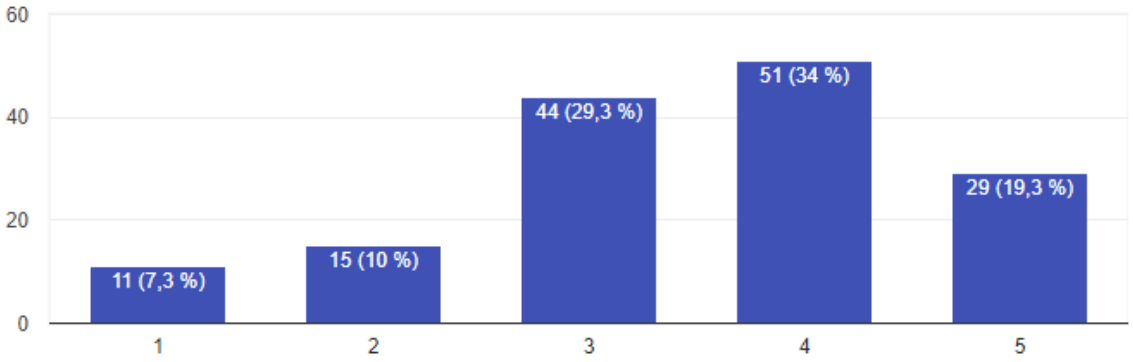

Figure 5.8: The figure shows the score distribution on the group manager's ability to motivate, empower, and build teams.

A self-managed team plan and manage their daily activities and duties, often with reduced supervision. Please estimate how self-managed your team is.

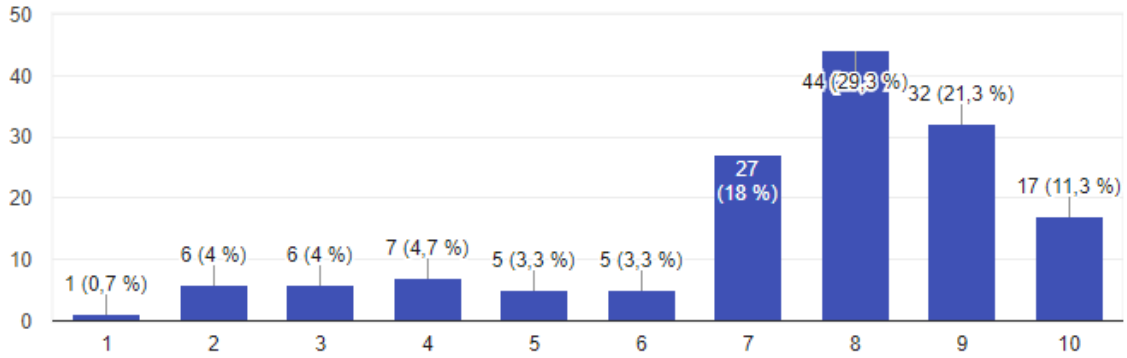

Figure 5.9: The figure shows the score distribution on how self-managed the teams are.

Do you feel that your group manager have too much control in what you do and how you do it? If yes, please explain in what way.

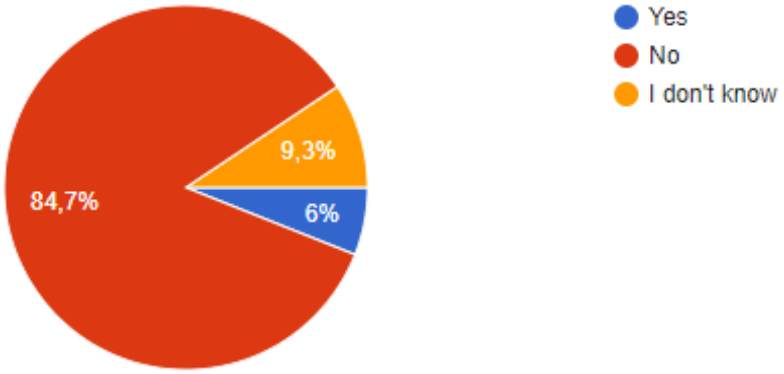

Figure 5.10: Proportion of respondents that answered Yes, No or I don't know.

A very large majority answered that they do not feel that their group manager has too much control. The question also encouraged the respondents to motivate why they answered "Yes" or "No", which 15 of the respondents did. The answers are listed below and sorted after the most recurrent.

Micromanagement

Three of the answers said that their manager had a tendency of micromanaging, where one of the answers even expressed it as "being put into a straitjacket".

Other answers

One answer suggested that group managers many times are engineers that have been rewarded the title, but that the company sometimes forgets to teach them the fundamental change in type of work that comes with the promotion. Another respondent perhaps saw something positive in this: "The Group manager is responsible for the Products so he has to put pressure on the team about deadlines.".

Do you think that the team should be a part of the recruitment process in your group?

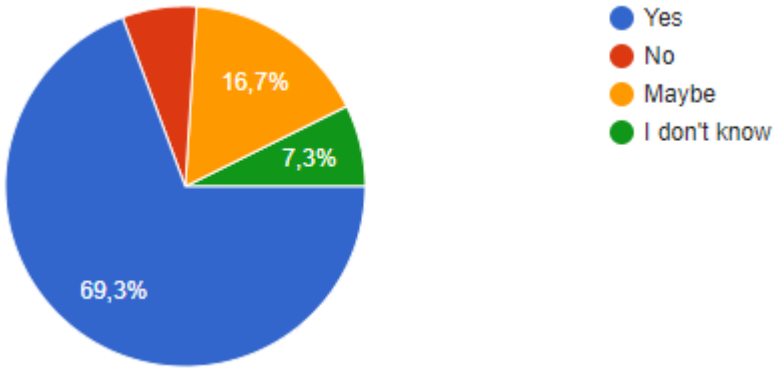

Figure 5.11: Proportion of respondents that answered Yes, No, Maybe or I don't know.

Is the team a part of the recruitment process today?

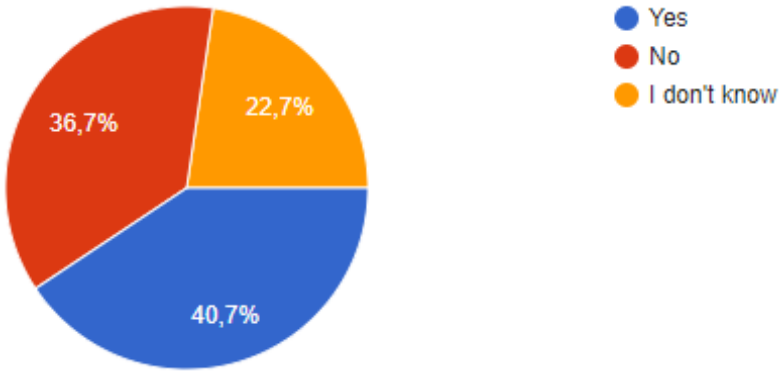

Figure 5.12: Proportion of respondents that answered Yes, No or I don't know.

How much do you consider your manager as a part of the team?

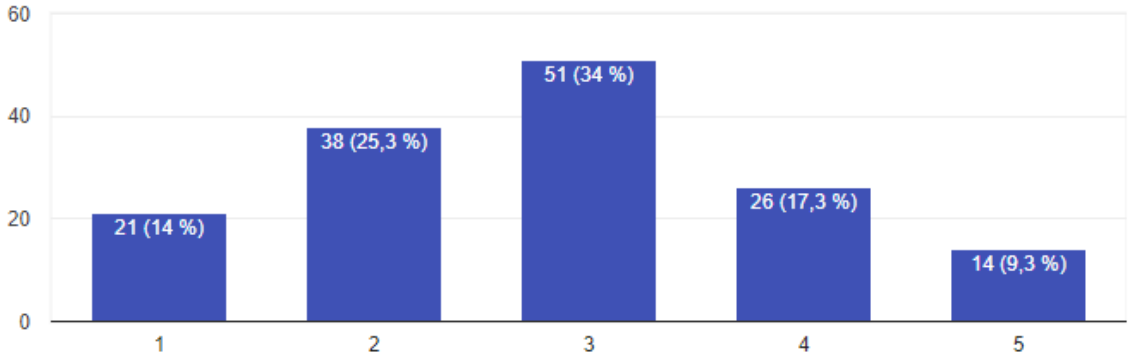

Figure 5.13: The figure shows the score distribution on how much the respondents consider the manager a part of the team.

Do you think that the group manager should be a part of the team?

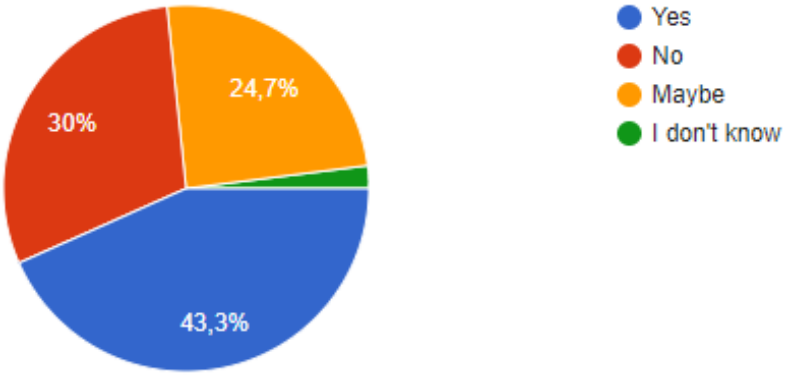

Figure 5.14: Proportion of respondents that answered Yes, No, Maybe or I don't know.

Today, it is sometimes the group manager alone that form different teams within the groups. Do you think that you should be a part of forming teams in the groups?

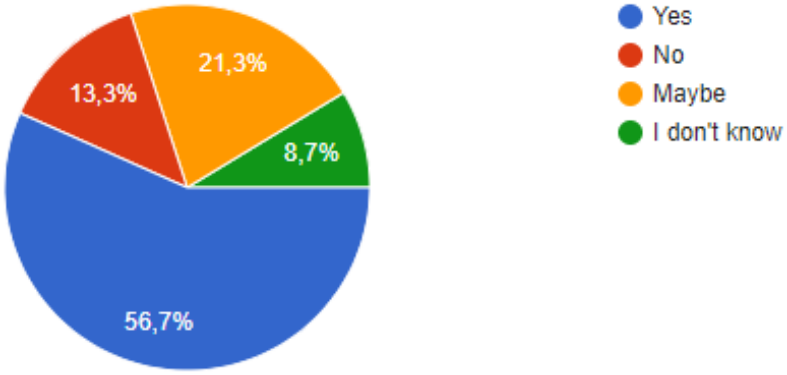

Figure 5.15: Proportion of respondents that answered Yes, No, Maybe or I don't know.

Should the Group Manager also have the role of the Product Owner? If yes/no, why?

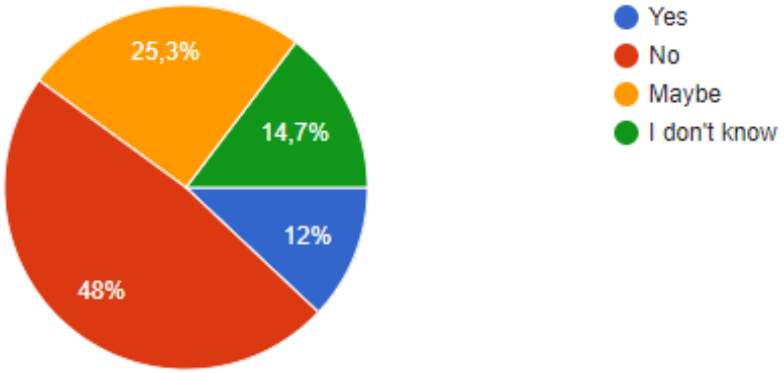

Figure 5.16: Proportion of respondents that answered Yes, No, Maybe or I don't know.

Yes

The small minority that answered "Yes" had several different motivations for why the group manager should also be the Product Owner. Two of the answers pointed

to the fact that the group manager owns the product and is responsible for the delivery. Another answer claimed that "The manager has the real power in the Group and will be listened to.". Finally, one person answered that the agile way is moving all the traditional manager tasks away from the manager.

No

Time and resources

Many respondents believed that it would be difficult for the group manager to have both roles as he or she would simply have no time: "Both group manager and Product Owner are full time jobs requiring full attention.". Furthermore, one respondent shared his experience of having a group manager as a Product Owner: "Our group manager currently has the PO [Product Owner] role for our team, as both previous POs stepped down on their own initiative. However, in my opinion the group manager is a too passive PO as he has too many other things to do.".

People

Another very common answer was that the group manager should have a focus on the people aspect of their job rather than the product: "I think the group managers focus should be on the team rather than the product. To support and help the team, as well as the individuals to develop in there roles, and as a team..". Some answers said that it would be "too big of a workload" to be able to focus both on the team and on the product: "I think it is more important that the group managers' focus is on the employees long-term development and satisfaction, acting as a mentor, assisting with escalations, ensuring resources to the team etc.".

Competence

Some answers claimed that the group manager does not have the technical competence to be the Product Owner: "The manager doesn't know the product best, but should be involved in major decisions.". One answer summed it up as the Product Owner having the technical competence and a curiosity regarding improvements while the group manager builds and empowers teams.

Conflict of interest

Some respondents also described something that can be regarded as conflict of interest, where one respondent claimed that having both roles can influence how decisions and priorities are made by the team: "I think these are different roles which will be difficult for one person to manage at the same time. Decisions and priorities by the teams and their members can be biased and less independent because of the dependency they would have towards their manager/Product Owner as this is the

person influencing salary, vacation and so on.".

Maybe

There were also a few answers that thought that it depends on several different factors, some pointed toward the manager's technical expertise: "If a product is one "software system", then the System Owner should be Product Owner, but it could also be the group manager if he/she has deep knowledge of the product and working process.". Others said it depended on the product, project, and on role definitions.

5.2.3 Agile Meetings

The Sprint Planning meeting is where tasks to be performed during the iteration are decided and inserted to the sprint backlog. How often should the group manager participate in the Sprint Planning (or an equivalent meeting in your group) in your opinion? If never, why not?

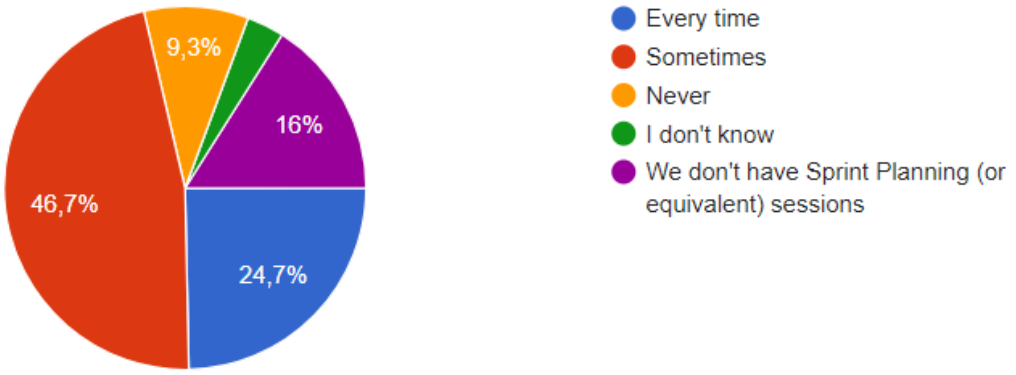

Figure 5.17: The figure shows how often group managers should participate in the Sprint Planning according to the group members.

Nearly half of the respondents answered that the group manager should attend the sprint planning meeting "Sometimes". The question also encouraged the respondents to motivate why they chose the option "Never", which 18 of the respondents did. These answers are listed below and sorted after the most recurrent.

Team responsibility

The results show that a majority of the motivations were leaning towards that the Sprint Planning meeting is not part of the manager's job but rather a team activity where the team should be independent: "It is the team's responsibility to decide what should be in the sprint after the PO has set what is most prioritized." Other

answers included that it is the Product Owner or Scrum Master that should manage the meeting and that they can brief the group manager in an another setting: "The manager should get information in some other forum, the Sprint Planning should be a very efficient, focused, meeting." It was also pointed out that the group manager should think about strategies forward and the long-term planning.

Other answers

One answer suggested that the group manager should be present every time in the beginning, and after that only on demand. Another answer is also similar: "If some major tasks are new or if something does not meet requirements.". Another person also touched upon the group manager being present only when needed, in the case of helping the team prioritize. Only one answer meant that the group manager had no technical competence.

How often should the group manager participate in the Daily Stand-up in your opinion? If never, why not?

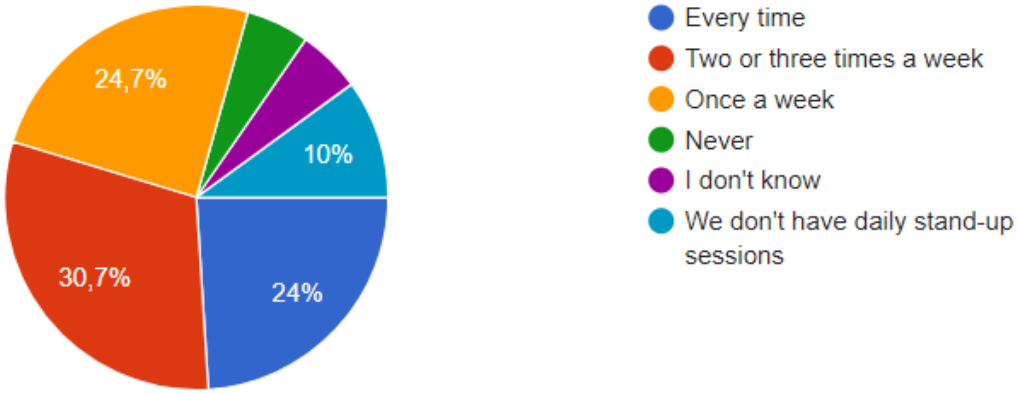

Figure 5.18: The figure shows how often group managers should participate in the Daily Stand-up according to the group members.

Almost 80% of the respondents answered that the group manager should attend the Daily Stand-up "Every time", "Two or three times a week" or at least "Once a week". The question also encouraged the respondents to motivate why they chose the option "Never", which 12 of the respondents did. These answers are listed below and sorted after the most recurrent.

Team responsibility

Similar to the answers on the previous question, the motivations for why the manager should never attend the Daily Stand-up are that it is a team activity: "The team

should manage to raise issues that appear to the manager in other channels. The Daily Stand-up is for the team, not the manager.".

Observer

Two answers encouraged the group manager to attend the Daily Stand-up but only as an observer: "Our rule of thumb is to have this meeting open for anyone to listen but that only the team members may speak...".

Other answers

One answer commented on the group managers presence: "When present, the meeting shifts focus, it is better to observe from a distance to see if the meeting is working ok, and talk to the members often.". Another respondent thought that it depended on the project and the phase of it.

The Backlog Refinement meeting is where the prioritization of the tasks in the product backlog can be managed. This meeting is usually scheduled once a week. How often should the group manager participate in the Backlog Refinement (or an equivalent meeting in your group) in your opinion? If never, why not?

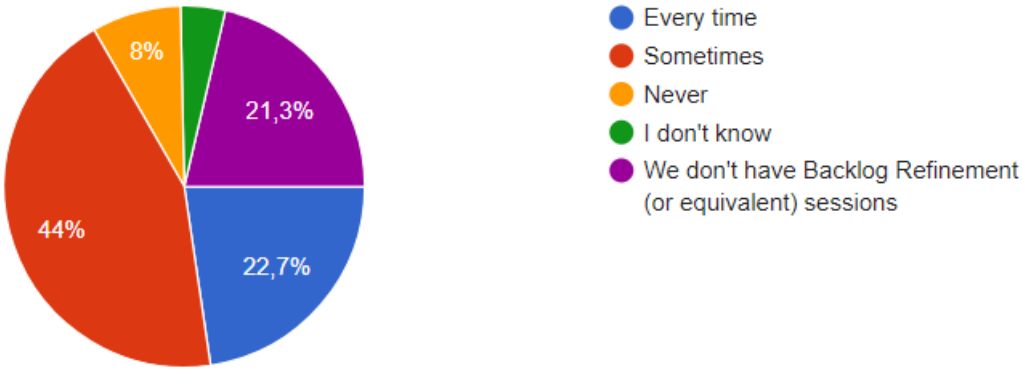

Figure 5.19: The figure shows how often group managers should participate in the Backlog Refinement according to the group members.

Nearly half of the respondents answered that the group manager should attend the Backlog Refinement meeting "Sometimes". The question also encouraged the respondents to motivate why they chose the option "Never", which 15 of the respondents did. These answers are listed below and sorted after the most recurrent.

Product Owner responsibility

A majority of the motivations for why the group manager should never attend the Backlog Refinement meeting were that it is the job of the Product Owner to manage and handle it: "Because PO [Product Owner] should be responsible for his/her backlog and ensure he/she know what is prioritized. PO and Group manager can discuss the backlog in separate meeting."

Other answers

One answer suggested that the group manager should not be there as it was on a too low level. Another answer meant that the group worked more individually with the backlog: "My group handles components so the backlog is very much personal. But we should be able to share and help each other with the group backlog more than we do today."

The Sprint Retrospective meeting is where the previous sprint is evaluated in regards to people, relationships, processes and tools. The meeting is scheduled after every sprint. How often should the group manager participate in the Sprint Retrospective (or an equivalent meeting in your group) in your opinion? If never, why not?

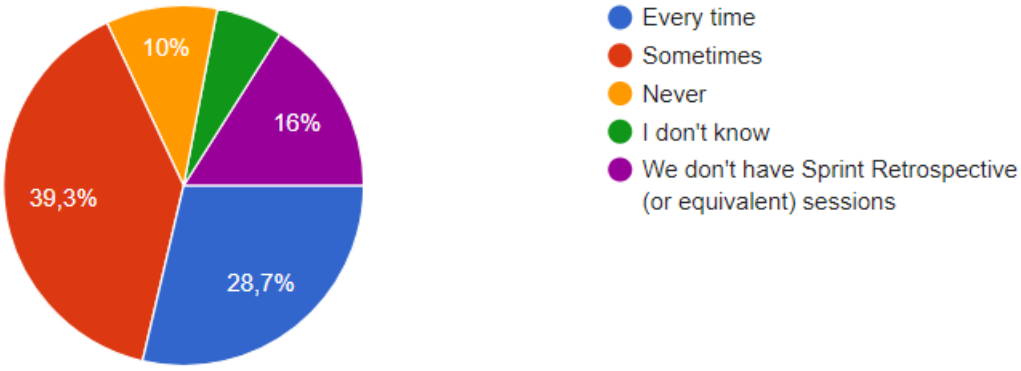

Figure 5.20: The figure shows how often group managers should participate in the Sprint Retrospective according to the group members.

Over 28% answered that the group manager should always attend the Sprint Retrospective while over 39% answered that the group manager should attend it "Sometimes". The question also encouraged the respondents to motivate why they chose the option "Never", which 18 of the respondents did. These answers are listed below and sorted after the most recurrent.

Prohibits openness

A third of the 18 answers pointed towards that the group manager should never attend the Sprint Retrospective as it can prohibit openness: “Having a manager responsible for your salary might prohibit openness. ... Result from Retrospective can be presented to manager if team feel it’s OK.”

Team responsibility

Several answers pointed out that the Sprint Retrospective session were aimed towards the team, not the group manager. One answer meant that it was a meeting for the team, and if they chose to elect for the manager to be invited, this may be the case. Another answer concluded that individual reflections should not be considered by the group manager: “The manager should get an outcome of what the group considers and not what specific individuals consider. The team shall be quite independent from its manager because we shall focus on working together and not showing who is better or not”.

Other answers

One respondent meant that the group manager only should attend in case of emergency, e.g. when conflicts are present or when inability to deliver occur. Another answer points out that the group managers would not contribute to anything during this meeting: “It is hard to see what the Group Manager could contribute with when they are already now not involved in Daily business. Worst case is when the Group Manager use these meetings to invoke whining and then gathers ammunition for mudslinging with other Groups. This is not very constructive.”. One respondent meant that there is not enough time for the group manager to attend this meeting.

Chapter 6

Analysis and Discussion

In this chapter, the purpose is to analyze and discuss the findings in the previous chapter and, when possible, attempt to contextualize these findings within the existing literature. The chapter follows a similar structure to the previous chapter where the results are largely discussed in accordance with the research questions. The chapter therefore includes discussions around work activities, roles, meetings, leadership and challenges.

6.1 The Role of the Manager

As the role of the manager contains several perspectives, the following section is divided into different topics to provide the reader an understanding of the manager role in different contexts.

6.1.1 The Key Activities of the Manager

The group managers did not mention that there had emerged any new key activities with the introduction of agile methods. One of the reasons for this may be that Scania have had a long history of working lean, with concepts not too far from the agile mindset. The factors that contributed to the changes in existing key work activities can be summarized with introducing Scrum but also with the structural transition. The former gave the group manager the possibility of delegating certain work activities, while the latter provided the group managers with a new setting in regards to both physical placement and group composition. From the results, it can be interpreted that five key activities changed; “Prioritizing tasks”, “Group vision”, “Managing impediments”, “Information escalation”, and “Recruitment”. All of these activities already existed before the agile introduction at Scania but they were now performed differently.

There seemed to be a clear connection between the changes in "Prioritizing tasks" and "Group vision" after the introduction of Scrum. According to several group managers, the new role of the Product Owner has played a big part in reducing the manager's daily operational work as the manager is no longer needed to prioritize tasks or manage the product backlog. Furthermore, the role of the Scrum Master has also reduced the workload of the group manager in most cases by scheduling and leading the agile meetings. This led to the group manager being able to work more long-term but also to focus on soft issues and involving the group in those discussions. In the case of "Managing impediments", "Information escalation", and "Recruitment", the structural transition meant that the group manager had a different group composition to relate to, but also having the group members being placed physically closer to group managers and each other. For these three work activities, this meant a change in the character of the activity. There seem to be new kinds of impediments to manage, while others naturally were not as prevalent anymore. The general opinion was that it had become somewhat easier to escalate information because of the changes, and that recruitment was an activity involving the team to a higher degree. The change for these was therefore different compared to "Prioritizing tasks" and "Group vision"; it was not a matter of shifting focus from one activity to another, but rather a shift in what the activity consist of, or how it is performed.

Maximini (2015) writes that traditional management in agile should be focused on developing the individual rather than having a responsibility for the performance of a whole team and for some managers, it seems that the agile approach have given the manager an opportunity of doing precisely that. Furthermore, the survey results show very clearly that command-and-control or micromanagement is not applied by the vast majority of group managers. Additionally, with almost 80% giving a score of 7 or higher out of 10, the groups clearly feel they are self-managed. Appelo (2011), Parker et al. (2015) and Polley & Ribbens (1998) all agree that the role of the manager becomes more focused on facilitation and empowerment in agile environments. Whether the aforementioned results are due to the recent agile introduction can be debated but they, together with the interviews with the group managers, are indications of the manager becoming more of a facilitator and empowerer.

Referring back to Appelo (2011) three-level model of empowerment (low-moderate-high), one can find managers at the company hovering between the first two levels. The first level can be regarded as fulfilled, as there are internal workshops initiated by managers and guidelines for coding, and so on. But the second level, which should be the long-term goal of a large traditional organization shifting towards agile, is

a much harder one to reach, and cannot be done so by an instant. What can be mentioned here as an improvement towards the moderate level of empowerment, is the recruitment process. As mentioned in the result section, managers are generally involving team member in this process to a higher extent than before according to themselves, which would mean a moderate level of empowerment for this part. But even here, there seem to be more to do according to the team members. Almost 70% of them being of the opinion that team members should be involved in this process, and only 7% answering no, whereas only 41% think that they are a part of the process, 37% stating no, while the rest are not sure.

6.1.2 The Manager and the Team

Most group managers and their Scrum Master had both a scheduled meeting and daily spontaneous conversations, where agile methods, processes of work and other common team-related topics were discussed. More interestingly, in the cases where group managers did not have any Scrum Masters in their group, it was usually their own decision, as some thought it was unnecessary, while others actually had a person acting as a Scrum Master before, with no success due to lack of knowledge. As the authority given to the Scrum Masters actually should come indirectly from knowledge he possess (Schwaber, 2004), it can seem fully understandable that group managers with such experiences do not see the value of a Scrum Master. This perhaps highlights the notion that Scrum Masters should be trained to a certain level before taking the role. Furthermore, the daily interactions between the group managers and Scrum Masters could be viewed as very positive, as the role of a Scrum Master is a way to grow in leadership to some extent too (Yi, 2011), why meaningful competence could be transferred from the group managers here. However, generally speaking, the effect of the Scrum Master on the group manager's work is fairly limited and this may be due to, as one interviewee puts it, Scania being a technology-minded organization which results in more frequent talks with the Product Owner.

The case with the Product Owners and the group managers is quite similar when it comes to the frequency of their interactions; it is both scheduled meetings and spontaneous conversations during the work. The most usual topic between them seem to be the product, the product backlog and prioritization of different projects and tasks. Highsmith (2009) meant that line managers could help to prioritize based on strategy, which managers otherwise work with a lot. Though, the line between helping to prioritize and getting too involved into technical details could be hard to draw for some managers. However, as mentioned earlier, having a Product Owner in the team has also resulted in reduced daily operational work for the manager.

One interesting discovery is that some group managers seem to be willing to delegate full authority to Product Owners, while others do not think that a Product Owner fits in their teams. One thing that differs greatly between teams is the size of the teams, which in turn have shown to be an important aspect in this discussion. In too small teams, the Product Owner role is redundant according to some group managers. The only definition of a "small team" that was given in the interviews was "only 6-7 persons". However, what is interesting about this is that this size is an average team size in Scrum. Sutherland & Schwaber (2013), some of the first ones to formulate Scrum development, talk about teams with a size of 3-9 persons. What is then the issue with having Product Owners in small teams of 6-7 persons at Scania, when it seems to be the norm in general? There could be several explanations to this question. First and foremost, there is already an established role within Scania that some group managers consider to be equal or similar to the Product Owner, which is the System Owner. Many group managers point out that there needs to be a clearer distinction between the two roles, and that this uncertainty about the roles can partly be blamed on higher management. Some of the group managers therefore believe that adding yet another role to such a small team is unnecessary. However, when you consider the work methodologies that these two roles have emerged from and the actual role definitions, there are differences. Product Owner stems from Scrum and is therefore customized for that particular methodology while System Owner is an in-house term that exists throughout the entire organization, but is adapted to the context, in this case software development. Looking at the definitions, there are not many similarities between the two roles as there is no mention of managing a product backlog, or expressing and prioritizing tasks in the role definition of the System Owner. However, with that in mind, the System Owner seem to be a reasonable outpost for becoming a Product Owner as the person will have had an understanding of an entire system in contrast to, for example, a single function. To summarize the point being made, there is little reason to exclude the Product Owner role because of the established System Owner role. Another possible explanation may be that the group manager consider himself or herself as the Product Owner, and that in such a small team, it is unnecessary to delegate that authority to another person. It is difficult to make a general case against the argument as it depends on the group manager and the surrounding circumstances to know whether the group manager is capable of doing both jobs to the desired capacity.

The issue of a single person being both group manager and Product Owner has mainly been raised by higher management at sector E. The team members gave their view of it in the survey. The results showed that only 12% of team members believe that the group manager should also have the role of the Product Owner.

48% answered no, while the rest were not sure or did not know.

6.1.3 The Manager's Role in Agile Meetings

As seen in the span of the different answers, every group manager decides for themselves which meetings they attend. However, in theory, Scrum has already defined the attendees of these meetings and the group manager is never included as the role is non-existent in this work methodology. As mentioned in the literature study, the Scrum team is comprised of the development team, the Product Owner and the Scrum Master. In Sprint Planning, Sprint Review, and Sprint Retrospective, it is this team that is present. In the Daily Stand-up, the Product Owner and Scrum Master are not required attendees. In Scrum, there is also a continuous process called product backlog refinement managed mainly by the Product Owner and the development team, however, at Scania, it is a scheduled meeting every week.

Reviewing what role the group manager should have in these meetings seems to be down to the answer of whether the group manager should be considered as a part of the Scrum team or not. From the survey question "How much do you consider your manager as a part of the team?", it is evident that the manager is not viewed as part of the team by at least 14% of the respondents. However, it can be argued that scores of 2 and 3 out of 5, chosen by 25% and 34% respectively, are still not convincing enough to consider the group manager as part of the team. Additionally, approximately 55% are either against or have mixed feelings toward the group manager being a part of the team while 43% think that the manager should be a part of the team. The general understanding from the interviews with the group manager is also that this matter is ambiguous. However, by looking at some of the work activities that the manager actually has, it is clear that it would be very difficult to suddenly exclude the manager from the team. Some managers still prioritize and manage the product backlog themselves and many manage external impediments and escalate information every day. Therefore, getting and passing information in, for example, the Daily Stand-ups is valuable for the group managers which is one of the reasons to why there is a high attendance there. In the case of Sprint Planning, Sprint Review and Sprint Retrospective, most of the group managers acknowledge that they attend as observers or are at least aware of not influencing the team too much. However, Highsmith (2009) is of the opinion that line managers participation in planning sessions in agile would make them better understand issues from a strategy point of view.

Looking at the overall picture, where the manager still attend and sometimes participates in several meetings and has some key work activities, it seems that the

group manager is a part of the team today, at least if put in relation to the Scrum methodology. Whether he or she should be a part of the team or not, is up to the company, and maybe the group managers themselves, to decide. However, what is obvious is that the roles of the Scrum Master and Product Owner would play a vital part in moving away from the current state. There is a lot of room to give to these two roles to enable the manager to take a step back from the meetings. In the Sprint Retrospective, the Scrum Master could have a bigger role to play in improving processes and practices and making the team work effectively. Similarly, the Product Owner could be delegated to manage any technical matters or issues that arise in Sprint Planning, Sprint Review and the Daily Stand-ups without the need of the manager to attend the meeting. This would obviously save the manager several hours where he or she could focus on other concerns, such as the people perspective.

6.1.4 Leadership Model

Analyzing the results from both the interviews with the group managers, and the survey, there seems to be an underlying discussion about leadership. As explained in the literature study, transformational leadership has been one of the most commonly adopted leadership model and there seem to be signs of it among some of the group managers at Scania as well. Some characterizations of the transformational leader are present; the group manager holds meetings to discuss group vision and roadmap while also having daily interactions with individuals of the group. Over half of the survey respondents gave a score of 4 or 5 out of 5 when rating the manager's work in terms of motivating, empowering, and building the team. However, one of the problems of transformational leadership is also present; the leader's point of view, in some cases, is overstressed. Some group managers do not see the benefits of having a Scrum Master or a Product Owner as they, among other reasons, think that their role will become either obsolete or meaningless. On the other hand, there are also group managers that embrace these new roles and are promoters of shared leadership. As sector E at Scania is slowly implementing Scrum methodology, shared leadership will become increasingly important as the new roles of Scrum Master and Product Owner are better understood. Additionally, as Scania introduces more and more software in their products, the sector's environment will become even more complex and fast-changing which is also one of the drivers of shared leadership (Barnett & Weidenfeller, 2016). The motivations from the team members on why the group manager should not be the Product Owner are also interesting and clearly point toward shared leadership. It is therefore easy, based on the results of the interviews and surveys, to envision a new shared leadership model where the group manager is focused on people, the Scrum Master on processes and the Product Owner on

products.

Looking back at the leadership agility model presented in Chapter 2, one can see that the companies early initiatives in lean and a move toward a more flat organization, have probably affected the managers and their style of leading teams. Joiner & Josephs (2007) meant that 90 percent of managers operate at the three first heroic stages, but looking at their concept of a pre-expert and expert manager, the managers at Scania seem to have surpassed these. As actual teams exist, not just in the sense of a group of individuals, and that managers are regarded as fairly good in terms of motivating and creating a vision, it is fair to draw this conclusion. The next level, the achiever one, is probably where one can find most managers at Scania, scratching on the surface of the catalyst one. The managers are strategic and have their concept of leading and motivating, therefore reaching an achiever level without any greater difficulty. But as Joiner & Josephs (2007) point out, the biggest step, and the most needed today, is to evolve into a catalyst leader with a post-heroic mindset. To see fully catalyst leaders at the company, the facilitative orientation must be more prevalent, which of course demand even larger organizational initiatives.

6.2 Managerial Challenges and Barriers

One of the most obvious topics that arise in the discussion around challenges for the manager in an agile transition is the one regarding communication and coordination. In the waterfall model, processes tend to be more linear, wherefore Dikert et al. (2016) meant that additional coordination will be needed when agile is being introduced in more complex environments. This was confirmed during the interviews with the group managers, which many times seemed to struggle with coordinating between the different teams and groups. The problem of communication and coordination was not only mentioned by the group managers themselves, but was the third most common answer when team members in the survey was asked what they thought was the managerial challenges in agile. Given the insight that the consequences seem to reach the team members, the problem in itself magnifies. This could partly be because, as some group managers framed it, the existence of different approaches to agile among the managers. Furthermore, there seemed to be a lack of systems or processes aimed at synchronization on a higher level.

As synchronization on a higher level is missing, this creates an obstacle for the group managers that they cannot solve by themselves. There is a clear consensus among the group managers that this is a problem that must involve higher management instances to be fully solved, and will remain a problem as long as the support

from section, or even higher, management is not improved. Ahimbisibwe et al. (2015) found that top-level management support, as a cited critical success factor in projects, was more frequent in the agile case than in the traditional, why one must not believe that an agile environment would need less support from higher levels of management. Thus, changing to agile in a large and complex organization without the proper support can seem doomed to not be fully successful. This obstacle is therefore not self-caused by group managers, but by lack of support, why it cannot be solved solely by them either.

A challenge that is naturally not mentioned by the group managers themselves is the one of loosening their control and establishing the right level of autonomy in their groups. This is a subject perhaps not noticed by the managers themselves to the same extent as team member, or even a subject that managers rarely want to speak out loud about. Usually, this common challenge is mentioned parallel with an agile transition in the literature, as agile, by its nature, tend to give the team member the right to be a part of a decision making process. In the survey sent out to team members, this was the second most common answer to the question of managerial challenges. This can be interpreted as team members not being trusted to the extent that they actually want, or feel comfortable with prioritizing or executing tasks within the agile model. This challenge or problem could easily be passed unnoticed by only looking at empirical data gathered from interviewees with group managers, why the survey and the perspective of the team member can give insights to problems otherwise not discovered. As the second most common answer by team members, and very much highlighted by literature, the problem seems evident. Furthermore, what one could interpret from this that, in contrast to other challenges and problems, this one meets resistance from the managers themselves. The problem then translates into managers being unwilling to let go of control, and therefore not allowing teams to be self-managed enough. If this is due to a fear of losing their role in the bigger picture or simply due to a background in engineering where one would want a bigger influence on the product, or both, remains unknown. Conboy et al. (2011) found that traditional managers could have anxiety of losing traditional power. Nevertheless, the fact remains that team members seem to want to be trusted to a higher extent, and to be working more autonomously. At the same time, one must take under consideration that, in the survey, almost 85 percent meant that their manager does not have too much control over them.

The most recurring answer in the survey sent to the team member, regarding the managers' challenges in the agile transition, was simply to master the actual agile methods. Approximately one sixth of all the answer to the question, which was totally open, concerned this subject. To be able to relate this to the answers given

by the group managers during the interviews, one must look at the problem from the two different perspectives. To be able to master agile methods, in many case what is needed is the appropriate training. In the interviews, several group managers talked about the issue of insufficient training prior to the change, hence, one could see a parallel between the statements from the group members and the ones from the group managers. To clarify, the alleged lack of ability to master agile among group managers could possibly stem from a lack of sufficient training. If this lack of training is due to low top-level management support, or because their own unwillingness to prioritize training that actually is offered, is not clear as there was some ambiguity in the results regarding this, which of course is not strange due to bias in answers. But the fact remains that group managers seem to be undertrained in agile, which can result in an inability to master agile methods.

Another challenge, or perhaps even disagreement, that one is meeting resistance from the group manager is the issue of correctly balancing between administration, leadership and a technical role, for the group managers. From the empirical results, it is obvious that a majority of the group manager at the company did not like the route that a more extreme agile way could push this balance - towards leaving out the technical part completely. One could believe that this is due to the fact that at this particular company, group managers have had a heavily technical-influenced role historically, and usually got a degree in engineering. This plays it part, making group manager understandably not willing to give up technical work. The solution to such a problem could perhaps lie in clearer directives from higher management upon employment, better training, or clearer roles in their way of agile. In some cases, as mentioned, group managers act as Product Owner, thus keeping a technical role too.

Chapter 7

Conclusions

The chapter aims to provide the conclusions that were arrived at by analyzing the results. These are presented by answering the research questions that were formulated in Chapter 1. The chapter concludes with a description of how one can further research the topics of this thesis.

The purpose of this study was to evaluate the role of the traditional manager in an organization that is becoming increasingly agile in terms of the manager's interaction with the group and the new roles that arise. The thesis was conducted by interviewing ten group managers and one employee while also sending out a survey to all the employees at the software development department, receiving 150 responses. In the following section, the authors will attempt to answer the research questions and provide the conclusions.

7.1 What is the role of the traditional manager in an increasingly agile organization?

The first research question was divided into two sub-questions with the purpose of working in a systematic and organized way. The two sub-questions attempted to find out how the manager's key work activities change and how the interplay between the manager and his or her group affect the role of the manager.

7.1.1 How do the manager's key work activities change?

- **Most of the work activities did not change at all**. In established and global organizations, there are many activities, routines, and processes already in place. Introducing an agile method did not affect most of these work ac-

tivities, some examples being "Securing resources", "Work environment", and "Staff liability" as these have to exist either way.

- **Some of the work activities changed in character**. Three of the activities mentioned by the group managers changed and these were "Managing impediments", "Information escalation", and "Recruitment". These changes were mainly due to the structural transition that resulted in new group compositions in addition to the group members being placed physically close to each other.

- **In some cases, the group managers shifted their work focus from one activity to another**. This was applied to "Prioritizing tasks" and "Group vision". The reduced workload of the group manager, with the help of the Product Owner and Scrum Master, meant that he or she could now focus more on long-term discussions and soft issues.

7.1.2 How does the interplay between the manager and the group affect the role of the manager?

- **New roles to consider**. The introduction of Product Owner and Scrum Master means that the group manager has two new roles to relate to. In the case of Scania, every group manager had the choice of having these roles in their group or not, resulting in different interpretations of the roles or even the need of them. Additionally, this presented another issue as some group managers struggled to see the differences between the Product Owner and System Owner, especially in smaller teams where both roles were not needed according to some group managers. Generally, Product Owner is a more controversial role than Scrum Master, and is likely to be so in other technical-heavy organizations as well, as it reduces the group managers influence in daily operational work surrounding the product.

- **The manager's role becomes more of a facilitator and/or empowerer**. To grow and evolve in the role of an agile manager, a more facilitative orientation of leadership is needed, rather than solely a problem-solving one. The intent should be to create a highly participative team.

- **Delegating work activities becomes an opportunity**. In the groups where Product Owners and Scrum Masters exist, delegating important work activities is a real opportunity. One work activity in particular, "Prioritizing tasks", is very well-fitted to the role of the Product Owner but one can also envision some or all of the agile meetings being held by the Product Owners and Scrum Masters. Furthermore, the roles can ultimately be divided in three

different areas: people to the group manager, product to the Product Owner and processes to the Scrum Master.

- **New leadership model**. Many organizations today still have transformational and transactional leadership in place. In addition to new roles, agile methods also promotes self-managing teams which results in a leadership model closer to that of shared leadership. However, as the leadership agility model illustrates, there are certain levels of leadership agility that needs to be reached before one can make the jump from heroic, transformational leadership to post-heroic, shared leadership.

- **The group manager's role in agile meetings is dependent on the relation to the team**. If the manager is considered as part of the Scrum team, then it is reasonable for him or her to attend and participate in the meetings to not miss any valuable information. However, if that is not the case, the manager's attendance may distort the discussions during the meetings.

7.2 What are the main managerial challenges in such a transformation?

The second research question was to identify which challenges that lie ahead the manager when the organization embraces an agile transformation. The following text will summarize the main challenges that were discovered from both the interviews and the survey.

- **Communication and coordination**. Specifically, the inter-group communication and coordination is suffering, as there is no standardized or linear way of performing it. Synchronization on a higher level must be taken under consideration to avoid major obstacles in coordination.

- **Loosening control**. A challenge rarely mentioned by managers, as the barrier and resistance stems from themselves. The new agile way of working demands a lot more trust from the managers side towards the employees, as the aim in the long run should be self-managed teams.

- **Mastering agile methods**. In many cases, managers can be severely undertrained for their new role as an agile manager. Companies should not expect managers to perform impeccable when the right training has not been offered all along, why big responsibility lies on organizations to improve the managers skills before such a transition. At the same time, managers must be willing to grow in their leader role.

7.3 Further Research

The experience of this study shows that managers will continue to exist in the foreseeable future even when agile methodologies that, in theory, do not embrace managers, are implemented. Also, the agile concepts are still relatively young and their boundaries could still be changing. Therefore, it is suggested that future studies attempt to establish the role of the manager in these environments and, preferably, these should be conducted at several different companies.

In a large portion of the literature that has been reviewed, agile managers and their leadership, but also self-organized teams, have been studied and examined right after a change or transition to agile, or after the creation of such teams. The same is true for the case study conducted in this research. Hence, the understanding we have of these things do not cover a long period of time in the life of a company. To expand the understanding, and to question the possible benefits of agile leadership and self-organizing team have in the long run, longitudinal studies are needed in these areas. Also, as the popularity for agile methodologies and modern forms of leadership is rising and is been adopted at a higher rate, more extensive and critical research is needed for its implications and the consequences it could have for control. This should also be done cross-sectorial.

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Appendix A

Survey questions

Background questions

1. Which department do you work at?
2. Please select your role. You can choose multiple options.
3. Have agile methods (e.g. Scrum, Kanban etc.) been introduced in your group?
4. How many years of work experience do you have with agile methods (at Scania and past)?
5. Have you had any training or courses in how to work in an agile way at Scania?
6. If yes, how would you rate the training/courses?

Agile Methods and the Group Manager

7. Do you think that agile methods fit the work that you do?
8. What do you think are the major challenges for the group manager when working in an agile way?
9. How would you rate your group manager's work in terms of motivating, empowering and building your team?
10. A self-managed team plan and manage their daily activities and duties, often with reduced supervision. Please estimate how self-managed your team is.
11. Do you feel that your group manager have too much control in what you do and how you do it?
12. If yes, please explain in what way.

13. Do you think that the team should be a part of the recruitment process in your group?
14. Is the team a part of the recruitment process today?
15. How much do you consider your manager as a part of the team?
16. Do you think that the group manager should be a part of the team?
17. Today, it is sometimes the group manager alone that form different teams within the groups. Do you think that you should be a part of forming teams in the groups?
18. Should the Group Manager also have the role of the Product Owner?
19. If yes/no, why?

Agile Meetings

20. The Sprint Planning meeting is where tasks to be performed during the iteration are decided and inserted to the sprint backlog. How often should the group manager participate in the Sprint Planning (or an equivalent meeting in your group) in your opinion?
21. If never, why not?
22. How often should the group manager participate in the daily stand-up (pulsmöte/morgonpuls) in your opinion?
23. If never, why not?
24. The Backlog Refinement meeting is where the prioritization of the tasks in the product backlog can be managed. This meeting is usually scheduled once a week. How often should the group manager participate in the Backlog Refinement (or an equivalent meeting in your group) in your opinion?
25. If never, why not?
26. The Sprint Retrospective meeting is where the previous sprint is evaluated in regards to people, relationships, processes and tools. The meeting is scheduled after every sprint. How often should the group manager participate in the Sprint Retrospective (or an equivalent meeting in your group) in your opinion?
27. If never, why not?

Appendix B

Interview questions

Introduction

1. What are agile methods in your view?
2. When were agile methods introduced in your group?
3. How many members does your group have?

Work Activities

4. What are your key work activities today?
5. What changes in work activities have you experienced since Scania introduced agile methods?
6. Can you briefly explain your recruitment process?

The Role of the Manager

7. What is your role as a group manager in relation to the Scrum Master, the Product Owner and the group?
8. How often do you communicate with the Scrum Master, the Product Owner and the group?
9. How do you feel your work and role have changed since the introduction of the Scrum Master and Product Owner?
10. What do you think of the current division of responsibilities between the group manager and the Product Owner?

11. How do you feel about having both a Product Owner and a System Owner?
12. How do you find out what the group needs and what do you do to solve the problem? Please give examples.
13. How often do you attend these meetings and what is your role there?
    - Sprint Planning
    - Daily Stand-up
    - Sprint Review
    - Sprint Retrospective
    - Backlog Refinement

Managerial Challenges

14. What advantages and disadvantages have you seen in your role as a group manager after the agile introduction? Do you have less or more responsibility?
15. What challenges or barriers have you seen in your role as a group manager after the agile introduction?