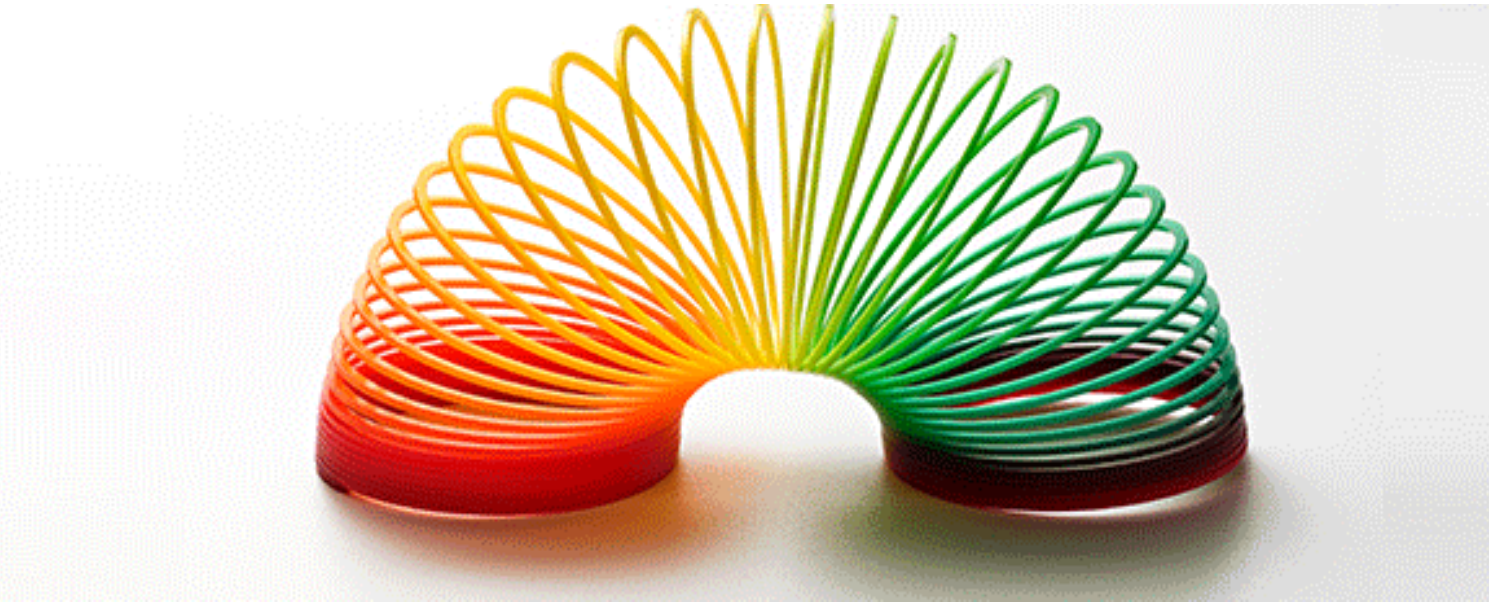

Becoming Agile

- The Application of Agile Project Methods in the Management Consulting Industry

Amanda Norstedt & Hilda Karlsson

Graduate School
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Supervisor: Rick Middel

UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

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- *The Application of Agile Project Methods in the Management Consulting Industry*

By Amanda Norstedt and Hilda Karlsson

School of Business, Economics and Law, University of Gothenburg, Vasagatan 1, P.O. Box 600, SE 405 30 Gothenburg, Sweden
Institute of Innovation and Entrepreneurship

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Contact: Amandanorstedts@gmail.com; Hildakarlsson94@gmail.com

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Gothenburg, June 4th 2019

Amanda Norstedt

Hilda Karlsson

Abstract

Background & Purpose: With continuous changes occurring in the business environment new project methods have emerged to accommodate the new needs. This has resulted in that the traditional ways to manage projects have become rigid which has given rise to the new concept of agile. Agile project methods had its breakthrough in the software development industry and have since then spread to other industries. One industry that work with projects and has to manage change is the management consulting industry, and agile project methods could thereby be efficient to apply in this industry. To be able to see how they apply these agile project methods it was seen as interesting to examine which agile project methods they apply most commonly and which key success factors and challenges can be related to its application. Due to the lack of literature on agile project methods outside the software development industry a need was identified to examine this in connection to the management consulting industry. The purpose of this study has thereby been set on examining how this industry applies agile project methods in their work processes.

Methodology: Since there is not much literature on the research topic the authors decided on the exploratory approach to the research and also a comparative multiple case study of management consulting firms. The literature review was conducted in a systematic manner to ensure an extensive overview of the topic. Moreover, the thesis's empirical contributions were made through a qualitative strategy using semi-structured interviews with 11 respondents in six different case companies selected through purposive sampling. Lastly, the authors analyzed the collected data using a thematic analysis.

Empirical Findings & Conclusions: The findings from the data collection showcased different agile project methods that are utilized in the management consulting industry. The main methods being: Scrum, Kanban and SAFe. However, the findings showcased that these methods are often used in combinations due to the element of adaptation that is made to suit the client and the project. There is furthermore a number of main key success factors and challenges which became evident from the research, some correspond both to the literature and the empirical data and some are exclusive to the data collection. Here, seven main key success factors for example transparent communication and alignment of organizational mindset and five main challenges for example organizational inertia and difficulties to implement were concluded to be of importance. However, there were also others that should be considered relevant but they are not part of the conclusions. The main findings for this research also underlined that the application of agile project methods are context dependent. Moreover, an aspect of the findings was the impact of IT elements on the choice of using agile project methods. Additionally, including IT in management consulting firms can also be a contributing factor to the pace of adoption of agile project methods. The findings also indicated that it can be difficult to understand agile practices and that previous experience ease this process.

Key words: Agile, Agile Project Methods, Agile Project Management, Project Management, Application, Management Consulting Industry.

Abbreviations

APM- Agile Project Management
DSDM- Dynamic System Development Methods
KSF- Key Success Factors
MCI- Management Consulting Industry
SDI – Software Development Industry
TPM- Traditional Project Management

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1. Introduction

This first chapter will provide an overview of the topic background as well as a presentation of the problem discussion for this master thesis. Then, the research purpose will be outlined followed by the research questions. The delimitations will then be stated and lastly the master thesis disposition will be presented.

1.1 Background

With an ever changing business environment and with unpredictable events appearing continuously (Meredith & Francis, 2000), firms can no longer apply the former hierarchical and control management practices that were common in the 20th century (Denning, 2016). For organizations to remain competitive in this environment they need to focus on innovation, variety, customization and especially rapid responsiveness to customer demands. Therefore, as of today it is the dynamic capability of the firm that will make them successful on the market, and adapting flexible and agile work processes is one of the primary reasons that companies can respond quickly to the business environment (Meredith & Francis, 2000). This led to the creation of agile methods in the mid 1990s (Jovanovic, Mas, Mequida & Lalic, 2017), and it has since then revolutionized the software development industry (SDI) (Rigby, Sutherland & Takeuchi, 2016).

Although agile methods are closely connected to the software industry, according to Rigby et al. (2016), agile methods are forecasted to transform almost every division in every industry. Thereby, giving agile methods possible future implications also outside the SDI. Meredith and Francis (2000) describe that becoming agile can be resembled to a wheel, where all parts are interdependent, and taking one away will harm the process of applying agile methods. Thus, becoming agile means that all the parts in an organization need to adopt the agile mindset including the strategy, the processes and the people (Meredith & Francis, 2000). Denning (2016) agrees with this and states that an agile mindset is essential and the leadership will have to be agile in order for the firm to become agile. The author further elaborates on the fact that today companies outside the SDI are applying agile methods and the transition is occurring even for big old firms (Denning, 2016), indicating that all firms could be able to transform their practices. This is corroborated by Gustavsson (2013a) who believes that agile project methods are applicable for any type of project outside the SDI. Additionally, the agile approach also provides the project with more flexibility and transparency compared to the traditional approach (Gustavsson, 2013a).

Agile project management (APM) is regarded as the optimal approach for managing projects today, and much attention is directed to these practices (Špundak, 2014). The reason why it has become popular in several industries is due to the balance it provides between control and transparency, but that it also creates a close collaboration with customers (Denning, 2016). Furthermore, agile methods are favorable to apply when the setting of a project rapidly changes (Gustavsson, 2013a; Newton, 2016). With a dynamic business environment with

continuous changes, it is the agile methods that provide companies with methods and tools appropriate to apply when managing today's business world. Still, Meredith and Francis (2000:142) state that becoming agile is not simple and describe this process as a:

"[...] journey, perhaps without an end".

1.2 Problem Discussion

As the world has evolved and becomes more open and dynamic, both researchers and practitioners have seen the need for developing better suited methods for managing their projects (Wysocki, 2014). The changing environment gave rise to the concept of agile projects (Gustavsson, 2013a). Much research can be found on how APM is utilized within the SDI (Conforto, Salum, Amaral, Da Silva & Da Almeida, 2014; Dingsøyr, Nerur, Balijepally & Moe, 2012). However, authors argue that agile methods can be adapted by other industries than the SDI, but that little research can be found on this (Conforto et al., 2014; Fernandez & Fernandez, 2008). Gemünden (2015) moreover expresses that he perceives a need for more research on agile methods and he explains that there is a need for more literature that focuses on projects that are outside the software field. An example of this is a study conducted at a Brazilian pharmaceutical company, which showcased several benefits that could be seen when applying agile methods instead of traditional ones. With applying agile methods the pharmaceutical company saved 80% in time and 50% in costs (Azanha, Argoud, Camargo Junior & Antoniolli, 2017). This illustrates a potential advantage that agile methods could contribute with if a company outside the SDI was to utilize it. However, research on this is still scarce (Conforto et al., 2014; Gemünden, 2015).

This gap in the literature presents an opportunity for the researchers of this master thesis. There are several industries which could be interesting to focus upon as the literature is scarce, and one of these are the management consulting industry (MCI). The MCI is according to Werr, Stjernberg and Docherty (1997) using methods to work with and manage change. The agile methods are described as flexible in the project process (Hallin & Karrbom Gustavsson, 2012) and it is highlighted by Tonnquist (2012) that agile methods can be used when the setting for the project is altered. Therefore, the MCI is considered by the authors as an interesting industry to examine in connection to the application of agile project methods. Moreover, as the MCI has been present for more than 50 years (Saint-Martin, 2004) and many traditional approaches exist which they can utilize, this could present challenges for the firms. This is further explained by Boston Consulting Group (2019) that describes that a hindrance to the adoption of agile methods is the traditional mindset in the firms, and Denning (2012) elaborates on this and states that it can be easier for new firms to adapt to the agile methods than incumbent firms. It is therefore important that management consultants develop their abilities and expertise to meet the new demands from the customer in this dynamic environment (Kubr, 2002).

It is believed that researchers in the future should investigate what is being done in organizations that use project management, showcasing a need for a project-of-practice perspective in research (Blomquist, Hällgren, Nilsson & Söderholm 2010). Conforto et al. (2014) elaborate on this and describe that more in-depth case studies should be conducted in terms of management practices. Here, Kwak and Anbari (2009) state that the previous research on project management have been limited in terms of the ability of transferring the research and they believe that the research has not reached the broader business audience. Thermistocleous and Wearne (2000) agree with this and state that research needs to be published on new ideas and techniques, and how these have been applied, to provide the professionals with support and advice. Therefore, research indicates that more connection between theory and the business world is desired and it is important to investigate how project management is applied by the organizations in the business world (Packendorff 1995; Thermistocleous & Wearne, 2000; Kwak & Anbari, 2009; Blomquist et al., 2010). The authors therefore see that a clear need can be identified. An interesting point of view according to the authors of this master thesis would therefore be to conduct a study of how management consulting firms are applying agile project methods in their daily work. This is done by examining which the commonly used agile project methods are in the MCI. Here, the focus will also be on the main key success factors (KSF) of agile project methods as well as the main challenges with applying these methods. This will contribute to the understanding of how these methods are being applied, as this will lay the foundation for the purpose and research questions of this thesis.

1.3 Research Purpose

The purpose for this master thesis is to obtain a greater understanding of how management consulting firms apply agile project methods in their work processes, and which methods are commonly used as well as what KSFs and challenges impact its application. These work processes entail when the management consulting firm have been contracted by a client to conduct a project in a team regardless of size, either at the place of the firm or at the client site. Throughout the thesis the client/customer will refer to the contractor of the project conducted by the management consulting firm. The purpose will be fulfilled by conducting interviews with management consultants with knowledge on the topic. Furthermore, the focus of the research process is on the interviewees' perception of agile project methods, and their experience with its use and application in management consulting firms. This master thesis will provide contributions both to the practitioners as well as the researchers, since literature on this specific topic is scarce, as described above. The theoretical contribution will be a broader understanding of how firms can use agile project methods outside the SDI. The practical contribution of this thesis is that professionals will be provided with insight on how they can utilize agile project methods in the MCI.

1.4 Research Questions

The main research question for this master thesis is:
How do management consulting firms apply agile project methods in their work processes?

Two sub-questions have been formulated to facilitate in answering the main research question:
What are the most commonly applied agile project methods?
What are the main key success factors and main challenges with applying agile project methods?

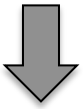
1.5 Delimitations

The study will only include firms which are defined as management consulting firms. Thereby, excluding all other types of consulting firms. This delimitation is done to limit the sampling to one specific industry and narrow the scope of the study. Moreover, the management consulting companies that are examined need to be present and operating on the Swedish market, however, they can also be present on other markets as well.

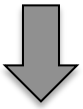
Another delimitation of this study is the size of the management consulting firms that the study focuses on. The management consulting firms which are a part of this study need to be considered as a medium or large firm, meaning that the firms have to have more than 50 employees (European Commission, n.d). The reason behind this choice it that the literature states that it is more common that big firms use the tools presented in project management and that smaller firms need simplified tools (Turner, Ledwith & Kelly, 2009), which is described as a "lite" version of project management according to Turner, Ledwith and Kelly (2010). Based on this argument it is seen as sufficient by the authors to examine medium and large management consulting firms to be able to see how they work with APM.

1.6 Disposition of the Thesis

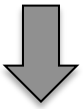
Introduction
This chapter includes the background and problem discussion to APM, as well as the purpose, research question and delimitations to the master thesis.



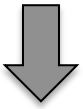
Theoretical Framework
The second chapter includes a literature review of the topic by first presenting projects, and then traditional project management (TPM) followed by TPM methods and roles in projects. After this agile projects are presented. Then, the different agile project methods are elaborated on in connection to the literature as well as the KSFs and challenges with agile project methods. Lastly, a summary of the theoretical findings is presented.



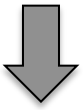
Methodology
The methodology chapter will outline how the master thesis has been conducted. It entails the research approach, research design, research strategy, research method, analysis process and research criteria and ethics.



Empirical Findings
The fourth chapter will include the findings from the interviews and the answers from the respondents will be outlined.



Analysis
This chapter will present the findings of the master thesis. The findings from the interviews will be compared with the theoretical framework in order to find patterns between theory and practice.



Conclusions
The last chapter of this thesis will aim to answer the posed research questions and the concluding ideas from the analysis will be presented. Lastly, the recommendations will be outlined as well as suggestions for future research.

2. Theoretical Framework

The chapter on the theoretical framework provides the reader with a literature review of the topic, starting with a presentation of what a project is, then a description of literature on TPM, traditional project methods as well as roles in a traditional project. Then agile projects are presented and also a background to the agile project management, as well as the roles in agile project management. After this there is an elaboration on the agile project methods and a closer description of two common methods. Here, the application of agile project methods is presented, and also the KSFs and challenges are described. Lastly, a summary of the theoretical framework is outlined and tables are presented to provide an overview.

2.1 What is a Project?

Working in projects is a practice that many firms and organizations utilize today. Still, according to Munns & Bjeirmi (1996) it can be hard to define what a project is. The definition that Munns and Bjeirmi (1996) use to describe what a project is, is that it has a specific time limit with specific requirements to fulfill, that the goal is distinctive and to accomplish the goal, certain activities and resources have to be used. Another definition stated by the Project Management Institute (2019), is that a project is unique which means that it is not a routine operation, but that specific activities are taken to reach an explicit goal. Furthermore, a project is temporary indicating that it has a time limit which also means that it has a budget to hold (Project Management Institute, 2019). Pinto (2016) moreover defines a project as a one-time process that will arise for a specific purpose to meet a goal and it is usually limited in terms of budget, time and resources. However, Wysocki (2014) states that today too many say that they are working on a project even if it does not fulfill the definition, and for it to be classified as a project the work must have specific requirements with a clear and single goal. These different definitions stated above give an indication that a project is similarly defined by different researchers. Generating from this the authors of this thesis will use the common features of the different definitions and define a project as:

A unique process that takes place in order to reach a specific goal with specific requirements within a set time limit and budget.

What is important to recall is that a project is a one-time process, which means that repetitive work that is done within the organization, cannot be classified as a project (Pinto, 2016). Furthermore, a project can be classified in different ways and it is the profile of the project that will determine how the project is classified, for example if the project concerns risk, length, business value or cost (Wysocki, 2014). According to Cleland and Ireland (2006) a project can be needed for several reasons with one reason being that you are unfamiliar with a situation and another being that the firm is facing a market change. Since firms today are operating in global markets there are several aspects that can occur on the market which can

challenge a firm, and a project can therefore be suitable (Cleland & Ireland, 2006). After defining what a project is the next section will elaborate more thoroughly on TPM.

2.2 Traditional Project Management

Project management has for the last decades become an efficient tool to use in order to handle both complex and novel activities (Munns & Bjeirmi, 1996), and this field is in constant development (Tonnquist, 2016). This is corroborated by Hallin and Karrbom Gustavsson (2012) but they also add that it took until the mid 1900s until the term of project was used. The theory of project management is said to originate from the American defense industry (Hallin & Karrbom Gustavsson, 2012). It was in the 1950s that the practice of project management became more widely known and researchers began to study it (Cleland & Ireland, 2006). The distinction between project and project management is that a project is more concerned with the long-term and what benefits the project can contribute with, while project management is more concerning short-term activities (Munns & Bjeirmi, 1996). According to the Project Management Institute (2019), project management is defined as:

"The application of knowledge, skills, tools and techniques to project activities to meet the project requirements".[1]

This definition is corroborated by Munns and Bjeirmi (1996) who extend this by stating that project management consist of different functions such as allocating resources, define the requirements needed, plan, execute and monitor the work and to see if changes have to be made. According to Wysocki (2014), the definition stated by the Project Management Institute is appropriate to use since it is simple, and it will therefore be used by the authors in this master thesis when defining project management. Furthermore, project management is becoming increasingly valuable for organizations worldwide since it contributes with critical components that can be used to make successful business operations (Pinto, 2016), also more organizations will see the need of adopting project management in their organization (Cleland & Ireland, 2006). In project management various project methods can be applied, and the next section will describe the traditional methods in project management.

2.2.1 Traditional Project Management Methods

When starting a project it is essential to decide upon a model or method that suit the goals of the project, and the model should be easy to adapt and use (Hallin and Karrbom Gustavsson, 2012). The advantages of using a model in project management are that it contributes with clarity and continuity. Furthermore, it is the model that will create the common language in the project, which will help when making decisions (Hallin & Karrbom Gustavsson, 2012). Tonnquist (2016) adds to this by stating that by using models the responsibilities and the authorities in a project become clarified. The models created in the 1950s were stage-gate

[1] https://www.pmi.org/about/learn-about-pmi/what-is-project-management

models, meaning that the overall goals are broken down into intermediate goals, which decreased the lead time, as argued by Hallin and Karrbom Gustavsson (2012). The stage-gate model could be seen as a TPM method since Hallin and Karrbom Gustavsson (2012) argue that it can be inflexible and rigid to use at times, and that it also is heavy to administer which can hinder the process of development and innovation. This model should be avoided when improvisations are needed since it is described as bureaucratic by Hallin and Karrbom Gustavsson (2012). This traditional method is however beneficial to use when the project conducted is similar to previous ones, since it provides the project team with structure that will create cost-efficiency (Hallin & Karrbom Gustavsson, 2012).

Another traditional project method is the waterfall model. Bassil (2012) highlights that the waterfall model is a sequential model where the phases must be completed one after another. Moreover, Balaji and Sundararajan Murugaiyan (2012) emphasize that each phase must be completed before moving on to the next one which means that changes cannot be made in a phase since it is frozen to match the requirements made in the beginning. The advantages of adopting this model is that the requirements are clear and that it is easy to apply, however it is quite inflexible since the model struggles with adapting to changes (Balaji & Sundararajan Murugaiyan, 2012). The traditional approach is efficient to use when the project team knows what the goal is and how to reach the goal (Gustavsson, 2013b). The next section will elaborate on the different roles that are present in a project, as they are an important part of a project.

2.2.2 Roles in Traditional Project Management

Hallin and Karrbom Gustavsson (2012) emphasize that a role in connection to a project refers to the actual function of that person in the project setting. In a project, a key aspect is determining the roles and Tonnquist (2012) describes that there are a number of different roles in a project: project owner, project manager, sub-project manager, project team members, steering committee, resource owner, the reference group and a quality controller. The most important roles are the project owner and project manager, as it is around these two that the project process will evolve (Tonnquist, 2012). The *project owner* has requested the project and is responsible for ensuring that the project has goals which are clear and that the result can be assessed correctly in the project process (Tonnquist, 2012). The *project manager* is the leader in the project and this person is responsible for delivering on the project goals (Tonnquist, 2012), and is also involved in daily project issues such as the communication with project stakeholders (Hallin & Karrbom Gustavsson, 2012). It is essential that projects have a clear division of roles as if more people have the same role, it can cause confusion resulting in important tasks failing to be done (Tonnquist, 2012). Moreover, when working in a project there are certain roles and methods that practitioners need to consider. This is elaborated on by Cleland & Ireland (2006) that state that the use and theory of project management is forecasted to evolve in the future to accommodate the new demands and needs by society. APM is one approach and it will be described in the following section.

2.3 Agile Project Management

Agile is described by Newton (2016) as a method of delivering projects which is different to the more traditional approaches to managing projects. Hallin and Karrbom Gustavsson (2012) describe how the word agile means flexibility and that the aim of agile projects is to increase the flexibility. Flexibility is also mentioned by Gustavsson (2013a) as a main driver for the development of agile and he also underlines that the origin for the word agile itself was that it highlights that these projects are flexible, but that there still is an element of control in the project. Moreover, agile work methods are a name for different work methods that involve dividing up the project work into pre-set phases (Tonnquist, 2012). Gustavsson (2013a) claims that in agile methods the process of doing a project is something intricate. Hallin and Karrbom Gustavsson (2012) explain that the work in an agile project is based on an iterative approach referring to that the content of the specific project is continuously shaped throughout the agile project. It is described by Newton (2016) that agile has contributed with new tools and concepts to project management. From this literature review the authors of this master thesis will define APM as:

A flexible approach to managing a project in an iterative manner.

Moreover, Gustavsson (2013a) states that communication is key in agile projects and that the approach provides transparency for the involved parties. Here, Cervone (2011) highlights that the agile method can lead to an increase in productivity as each member of the team communicates to a large extent. Newton (2016) also emphasizes that the agile approach aims to deliver value rapidly to the customer continuously. Furthermore, another key aspect in agile described by Wysocki (2014), is the involvement of the customers and clients in the project and that there needs to be a cooperation, something which distinguishes this from the more traditional approaches. Gustavsson (2013b) elaborates on this when saying that the focus is on communication and individuals rather than project processes. Moreover, the agile work method additionally entails the division of different short periods of the project according to Gustavsson (2013a) and he also states that the reason behind this is that it helps to avoid creating a large portion of work at the end of a project.

2.3.1 Background of Agile Project Management

To understand agile, it is of essence to look into the background of this approach. Agile is comprised of several different methods and it has its origin in the SDI in the 1990s, but the foundation for this way of thinking originates back to the 1970s (Gustavsson, 2013a). The reason why the SDI started to use the agile approaches instead of the more traditional ones, was due to the increased flexibility it provided, as well as it contributing with business alignment (Campanelli & Parreiras, 2015). Moreover, Tolfo, Wazlawick, Ferreira and Forcellini (2011) state that agile methods have emerged since it improves the performance and quality in software development. This was needed since the SDI was and is facing continuous change in the business environment and their customers require them to be flexible and deliver new processes fast (Abrahamsson, Salo, Ronkainen & Warsta, 2002).

This is corroborated by Dybå and Dingsøyr (2008), who describe that the SDI have for some time faced challenges with delivering better solutions at a faster pace and that the agile methods were created to accommodate this need.

An important aspect of the development of agile projects was in 2001 when the "Agile Manifesto" was made as a way to settle on a set of common principles that would describe how to work with software development (Gustavsson, 2013a). Wysocki (2014) describes that it has been a guide for other methods that have been developed since then. Furthermore, Gustavsson (2013a) describes that the "Agile Manifesto" contains 12 principles and these revolve around which activities are most important and valued in the agile project and that priorities are important. Although it begun in software development, Gustavsson (2013a) highlights that the agile approach to projects can be used outside of software development, here, Hallin and Karrbom Gustavsson (2012) elaborate further on this as they highlight that the agile methods are often used in other settings and projects which changes constantly.

2.3.2 Roles in Agile Project Management

Another factor in agile projects which differs from the traditional methods is described by Gustavsson (2013a) as he states that in the project group it is desirable not to have roles due to the risk that some tasks could be forgotten. There are still roles in agile projects, however, some of them differ from the traditional way described in 2.2.2. Moreover, in agile methods the role of the project manager is not to be the manager, but to be a coach for the team and this project manager should also ensure that all project team members are following the agile method (Gustavsson, 2013a). Furthermore, the focus for the project manager to ensure efficiency is to make sure that the project team can work without any disturbance (Gustavsson, 2013b). The project team in agile projects has more decision power than in traditional methods and the emphasis lies on having the appropriate sized group and the right competencies functioning in several ways (Gustavsson, 2013a). These agile teams which have an element of self-organization is the driver for value creation in the project (Hallin & Karrbom Gustavsson, 2012). He elaborates by stating that all tasks in the project should be executed within the project groups to function better, but that it can be difficult to achieve that (Gustavsson, 2013a).

2.3.3 Agile Project Methods

Within APM there are a number of different approaches. Authors describe that examples of these approaches are Dynamic Systems Development Methods (DSDM), Scrum (Hallin & Karrbom Gustavsson, 2012; Wysocki, 2014) and Kanban (Gustavsson, 2013b). These methods were developed in the 1990s within software development according to Gustavsson (2013a), and Wysocki (2014) highlights that Scrum and DSDM are iterative project management life cycle models and that the underlying assumption is that these projects will create learning and discovery. Moreover, Wysocki (2014) continues by stating that iterative project management life cycle models are used when the solutions needed are not clear, and the set process of this model repeats itself until there are solutions developing, or when one of

the constraints for the project is reached. Furthermore, Hallin and Karrbom Gustavsson (2012) highlight that the use of agile methods for projects has grown in recent years in firms since it enables innovativeness. In the article by Dikert, Paasivaara, & Lassenius (2016) they have conducted a literature review of transforming into agile in the software industry. This literature review indicated that firms were using several of the agile frameworks that exist, together, as well as indicating that most firms were using Scrum but another of the most used approaches was the lean approach (Dikert et al., 2016). Although this article is connected to software, it is considered relevant as there is a large body of literature in connection to that industry. Furthermore, Hallin and Karrbom Gustavsson (2012) and Wysocki (2014) state that Scrum is one of the most used approaches, as well as the lean method of Kanban, according to Gustavsson (2013b). Therefore, the following sections will more thoroughly describe two approaches, the Scrum framework and the lean tool of Kanban.

2.3.3.1 Scrum and its Tools

Scrum is the most common method to use in APM (Hallin & Karrbom Gustavsson, 2012). The origin of the framework comes from the 1980s and it was first used in software (Hallin & Karrbom Gustavsson, 2012), but the actual Scrum framework was created in 1995 by Ken Schwaber and Jeff Sutherland (Gustavsson, 2013b). Scrum is moreover described by Hallin and Karrbom Gustavsson (2012) as being a flexible method and that implementation in these projects is iterative, meaning that different aspects of the project are changing continuously. Schwaber and Sutherland (2017) also highlight that the Scrum framework is built on an incremental and iterative process, and this to optimize the predictability process. The word Scrum originates from rugby in England, and Scrum is here a reference to when people in a team group-together as the ball is put into play (Gustavsson, 2013).

Cervone (2011) describes Scrum when connecting it to projects, as an agile process that is relatively simple. Schwaber and Sutherland (2017) elaborate on this and state that even if it is easy to understand the Scrum framework it can be difficult to master. The Scrum theory consists of three main pillars according to Schwaber and Sutherland (2017) that should be a part of every implementation and these are transparency, adaption and inspection. Being transparent in Scrum means that all parties included should have access to the relevant information. The inspection ensures that the goals are met, but it is important to not have too many inspections to hinder the work. Lastly, adaptation means that the project should be aware that changes might have to be done throughout the process (Schwaber & Sutherland, 2017). Furthermore, the Scrum framework has grown in its attractiveness to be used in projects and this is partially explained by its ability to effectively handle rapid changes, and also that there is less focus on documentation of the project process when using Scrum (Hallin & Karrbom Gustavsson, 2012). Cervone (2011) describes that the Scrum framework is composed of three parts: the roles, the process and the artifacts. Schwaber and Sutherland (2017) describe these parts as being the Scrum team, the events and the artifacts. In figure 1 the main characteristics of the framework is showcased.

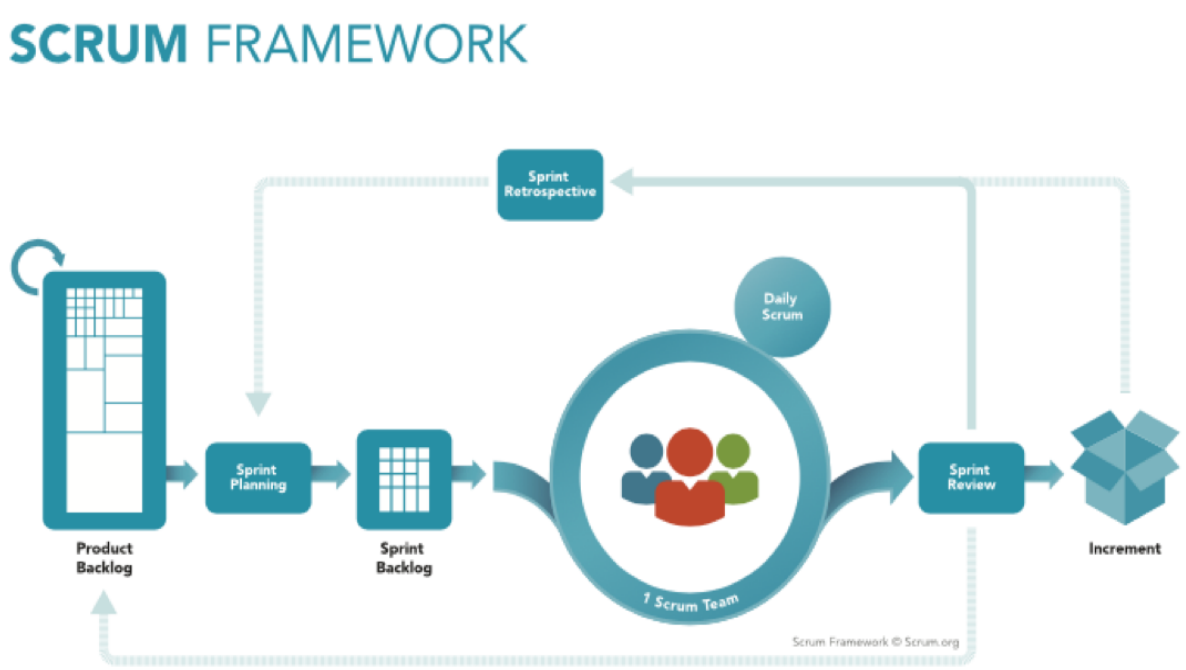


Figure 1: Overview of the Scrum process. Accessed from Scrum.org (2019) based on the readings by Schwaber and Sutherland (2017).

The figure above illustrates the Scrum process which will now thoroughly be described in the following paragraphs. Firstly, there are three roles which are emphasized in Scrum and these are: *the Scrum master*, *the project owner* and *the Scrum project team* (Schwaber & Sutherland, 2017; Cervone, 2011). An important part of a project is the project manager, which is called Scrum master in Scrum, and this role could be described more as a coach (Gustavsson, 2013a). It is the job of the Scrum master to promote and support the Scrum team and also have communication with the parties outside the team (Schwaber & Sutherland, 2017). The project owner is responsible for the project and aims at maximizing the value from the project. The development team is according to Schwaber and Sutherland (2017) a name for the Scrum team and is the people that perform the project tasks. They aim at delivering the end results and it is important that no titles or sub-teams exist. Schwaber and Sutherland (2017) state that the Scrum team is cross-functional, with all competencies needed, and self-organizing. By forming the group in this manner it provides the team with creativity, flexibility and productivity to manage complex projects (Schwaber & Sutherland, 2017). Hallin and Karrbom Gustavsson (2012) add to this and highlight that Scrum emphasizes that the project team is the base of the project. Moreover, Schwaber and Sutherland (2017) discuss that the teams within Scrum consist of few people in order to become flexible and easy to coordinate.

In Scrum although the process is iterative as described by Hallin and Karrbom Gustavsson (2012), there is a general process which is followed by firms when using the Scrum framework according to Cervone (2011). The events in the Scrum framework are described by Schwaber and Sutherland (2017) as *the sprint, the sprint meeting, the daily Scrum, the sprint review* and *the sprint retrospective*. Firstly, before starting the sprint the planning

meeting takes place and this is when the Scrum team plans the sprint and decides the time for it. When that is settled the sprint starts where the aim is to reach the sprint goal (Schwaber & Sutherland, 2017). A sprint is maximum a month long and during the sprint it is important that no changes are done that might harm the sprint goal (Schwaber & Sutherland, 2017; Hallin & Karrbom Gustavsson, 2012). Moreover, during each sprint a daily Scrum takes place, which is a daily 15-minute meeting where the team discusses the progress. When the sprint is completed a sprint review is conducted, which is a meeting where the sprint is evaluated. After the sprint review the sprint retrospective takes place and it is where the sprint is assessed to find improvements that can be made for the next sprint (Schwaber & Sutherland, 2017). Moreover, this sprint process will be repeated until the project goal is reached (Schwaber & Sutherland, 2017) and the number of sprints is dependent on each project (Hallin and Karrbom Gustavsson (2012).

Moreover, Scrum consists of two artifacts which are applied to provide the Scrum framework with transparency (Schwaber and Sutherland, 2017). One artifact is the product backlog. Gustavsson (2013b) explains that a product backlog is a list with the specific requirements from the client and the list is moreover prioritized and should be written with the clients wording. The product backlog is however never finished since the requirements can change and it is therefore essential that the product backlog is dynamic. The prioritization of the list is done by the product owner (Hallin & Karrbom Gustavsson, 2012; Cervone, 2011). They continue by stating that the most important parts of the product backlog are used in the sprint backlog, which is the agenda for the next sprint (Hallin & Karrbom Gustavsson, 2012). The sprint backlog is therefore the second artifact, and it is created by the Scrum team. The sprint backlog is not fixed but changes will be made as the work in the sprint progresses and the activities that the team undertakes are added to the sprint backlog (Schwaber & Sutherland, 2017).

2.3.3.2 The Lean Tool of Kanban

Many of the agile methods have been influenced to a large extent by the lean way of thinking (Hallin & Karrbom Gustavsson, 2012). Lean originates from Japan and the car industry, here the Toyota production system is highlighted as an exemplifying model and it is a method for striving towards and having continuous advancement of the work process (Tonnquist, 2018). Lean focuses on achieving an efficient workflow and it is described as having four levels: values, principles, methods and tools. An aspect of lean is Kanban, which is one of the tools (Tonnquist, 2018). According to Tonnquist (2018) Kanban is often used in different agile methods, and it is furthermore highlighted that Kanban is adaptive and that it is an approach with few constraints (Kniberg & Skarin, 2009). Kanban is described as a project board (Gustavsson, 2013a), and according to Tonnquist (2018) Kanban visualizes different tasks to increase the focus of the members' in a project team, and one of the simple versions comes from the Toyota Production System. Here, three columns are distinguished: Planned-work, Work-in-Progress and Finished (see figure 2 for illustration). Moreover, Gustavsson (2013a) describes that an important element of Kanban is that there are limitations to the allowed number of activities to work on in the middle column of the Kanban board. The purpose in

Kanban is to write down the tasks and move it from the left side of the board to the right side in these columns to show the different tasks and the progress (Tonnquist, 2018). Kniberg and Skarin (2009) elaborate further on three main elements of Kanban: visualizing the workflow, limit work in progress and measure the lead time. Kniberg and Skarin (2009) highlight that in Kanban the involved people have to make their own rules to decide who can alter the tasks on the Kanban board. Relating to this they continue by stating that the board is representative of a workflow, meaning that it does not have to belong to one team, but it is still important to decide who can use the board (Kniberg & Skarin, 2009).

Kanban Board		
Planned-work	Work-in-progress	Finished
* * * * *	* * *	* *

Figure 2: Kanban board compiled by the authors based on the readings by Tonnquist (2018).

Furthermore, Kanban is based on self-organizing teams according to Kniberg and Skarin (2009), however, they also emphasize that in using Kanban there does not have to be any specific roles given to people. Gustavsson (2013a) describes that Kanban can be useful to utilize when there is a continuously changing project where the sprint backlog needs to change during a sprint. However, Gustavsson (2013a) describes that one of the potential downsides with using Kanban, is that the benefits with sprints might be lost. Moreover, Kniberg and Skarin (2009) state that Scrum and Kanban, can and should be mixed to fit the needs. They also claim that if the iterations in Scrum are made shorter than a week, the process is approaching Kanban and a shift could be relevant (Kniberg & Skarin, 2009).

2.3.4 Application of Agile Project Methods

Agile methods have been described as revolving around making the process of projects smoother (Gustavsson, 2013b). However, Gustavsson (2013a) describes that there are situations when agile is not the best choice. Therefore, distinguishing when the agile way of running projects is appropriate to apply is important, and Gustavsson (2013a) highlights that there are certain situations when agile should not be applied to a project. This includes when there is a set contract with clear details which need to be accomplished in the scope of the project. Also when there is a fixed deadline and there are specifications as to the utility of the project, or situational constraints which prevent flexibility and alterations along the project process (Gustavsson, 2013a). Moreover, Tonnquist (2012) describes that agile is not as useful when there is a clear goal and the deadlines are predetermined. Both these authors then emphasize that more fixed conditions does not go well with agile work methods. It should be

noted that the 12 principles that the agile method is based on are adaptable and using an agile project method does not mean that all the aspects are used (Gustavsson, 2013b).

It is moreover also relevant to describe the specific setting when agile project methods can be applied with a beneficial result. In connection to this, Wysocki (2014) highlights that the actual agile project method is driven by change and that these methods need change to become successful. Gustavsson (2013a) describes that when the project can be seen and described as complex, agile is a suitable approach. Moreover, according to Hallin and Karrbom Gustavsson (2012) the agile method should be applied when there are no clear goals to the project, or the demands for the project are unclear or the end-result is difficult to envision (Gustavsson, 2013a). Tonnquist (2012) corroborates that agile is suitable when the project end goal is difficult to imagine. The agile method is also suitable when the context or setting changes (Tonnquist, 2012; Gustavsson, 2013a; Newton, 2016). Thereby, these authors highlight that agile methods are appropriate when there is a lack of clarity for the result and solution. Wysocki (2014) states that APM is a project management method used when there are set goals, but where the outcome and solution is unknown. Still, an aspect described by Tonnquist (2012) is that agile methods are many times not best used alone, but that it can be valuable to use a mix of different methods.

However, even if agile project methods are seen as applicable there are still some critique against it according to Gustavsson (2013a) and he emphasizes that it will not work as well with beginners. Wysocki (2014) also describes that many agile projects have a high risk. Moreover, Blomberg (2013) argues that agile methods are becoming more similar to the traditional approaches and states that the innovativeness which is often attributed to the agile methods should be questioned, as it is unclear how the division of the project done in agile projects would aid innovativeness. Blomberg (2013) also claims that agile projects do in fact not contribute to agility.

2.3.5 Key Success Factors in Agile Project Management

In examining the KSFs of a project, it is important to explore the notion of what a successful project is defined as. Schelle, Ottmann and Pfeiffer (2006) explain that an important aspect of a project is that the customer formulates criteria for how to evaluate the project success. According to the Project Management Institute (2017) it is a challenge in project management to establish whether a project has been successful or not, and determining if a project has been successful is a part of a project manager's task when finishing a project by undertaking activities that determine the project's success. It is moreover, highlighted that there is a difference between how it is measured now and how it has been measured traditionally (Project Management Institute, 2017). Here, Tonnquist, (2018) describes that there are many ways in which it can be measured if a project has been a success, and researchers have established different factors that can lead to the success of a project (Munns & Bjeirmi, 1996). According to Pinto (2016) three common determinants of project success can be identified: time, budget and performance. This means that the project is limited to a specific time frame

and a budget and these needs to be met for the project to be successful. Moreover, the performance also needs to be considered to determine if the final product fulfills the requirements of the project (Pinto, 2016).

However, although traditionally a project's success has been measured by the time, cost, scope and quality of a project, more recently the focus has shifted towards looking more into the actual fulfillment of the project goals (Project Management Institute, 2017). Furthermore, project success can also be impacted to organizational strategy factors, as the stakeholders in a project may define a successful project differently. The project team needs to assess the project and determine which demands and criteria should be used (Project Management Institute, 2017). It should however be noted that a project might succeed in relation to some criteria and fail concerning others (Tonnquist, 2018). Relating this to agile projects, Tonnquist (2018) describes how agile projects are more successful in meeting the project budget and the deadlines set for the project, than a project that have more detailed and set planning which is common in traditional projects. However, it should be noted that in agile projects it is more common that the quality aspect of goals are not met (Tonnquist, 2018). Here, Hallin and Karrbom Gustavsson (2012) describe how a project might be considered a success at one point in time and a failure later.

After determining what the literature states in regards to project success, it is relevant to examine the success factors for projects. Conforto et al. (2014), as well as Dingsøyr et al. (2012) claim that much APM research is used in SDI. In this literature review articles directed to the MCI are not available, therefore, the following paragraphs are directed towards more general KSFs related to projects and agile projects that could have potential implications on the MCI. Schelle et al. (2006) describe how the author Lechler (1997) has examined a large amount of studies made on projects and has determined that there are a number of success factors in projects. Moreover, Schelle et al. (2006) emphasize that Lechler (1997) has defined success factors as the elements that have to be done right in order for the project to succeed and these are according to the study: objective definition, communication, planning, senior management, controlling, project manager's authority, project team's know-how, project team's motivation, project manager's know-how, planning and control tools and participation.

As the agile approaches originate from the software industry, Dikert et al. (2016) have in their article identified seven success factors for a large-scale agile transformation relating to the software industry and these are: choosing and customizing the agile approach, management support, mindset and alignment, as well as training and coaching. Another article which highlight several success factors in adopting agile practices in software development is written by Misra, Kumar and Kumar (2009) and they found that there are nine success factors of significance: customer satisfaction, customer collaboration, customer commitment, decision time, corporate culture, control, personal characteristics, societal culture, and training and learning. Also Van Waardenburg and Van Vliet (2013), describe how the agile method is introduced to the company is a key component in making the agile implementation successful. Moreover, relating to success factors generally in agile methods, Gustavsson (2013b) describes that the success factors are: a present product owner and a self-organizing group. As

can be seen from the literature there are common elements and therefore for this thesis eight KSFs can be distinguished. These are: traditional success factors, clear goal-setting, transparent communication, customization of agile project method, alignment of organizational mindset, adaptive culture, management support and coaching and training in agile values. There are also challenges with adopting agile project methods, this will be elaborated on below.

2.3.6 Challenges with Adopting Agile Project Methods

In project management there are also several aspects that can make a project fail, these include poorly defined tasks, having the wrong person as project manager, misuse of tools and techniques, lack of commitment and no support from the top management (Munns & Bjeirmi, 1996). This indicates that if certain aspects are not fulfilled the project is likely to fail. Therefore, when a firm is working with a project today it is likely that challenges arise that they need to take into consideration to succeed. Since the emergence of agile methods in the 1990s, many organizations have tried to adopt this way of working in their business (Jovanovic et al., 2017). However, according to Van Waardenburg and Van Vliet (2013) it can be difficult for managers to adapt to the agile project methods, and challenges related to applying agile project methods are thereby important to consider for managers. Studies that have examined the challenges of adapting agile methods is commonly concerned with more large-scale transformations (Javdani Gandomani, Zulzalil, Abdul Ghani, Md. Sultan & Meimandi Parizi, 2015; Jovanovic et al., 2017; Dikert et al., 2016). Due to this and the lack of specific literature on APM related to the MCI these paragraphs focus on general challenges with agile changes and agile projects, that could impact the MCI.

Dikert et al. (2016) conducted a systematic literature review on challenges related to agile transformations, and two of the most prominent challenges were the resistance to change and that agile was difficult to implement. Furthermore, in a study conducted on a broader setting by Javdani Gandomani et al. (2015), 35 agile experts in 13 different countries were interviewed to find factors influencing the adoption of agile methods in firms. The main challenge that was brought up by the authors was the training aspect, as they believed that training was needed on all related parts connected to agile methods. The results showcased several aspects that the experts believed was lacking in the agile training. These include lack of time commitment, unrealistic expectations and lack of understanding of agile values (Javdani Gandomani et al., 2015). Gustavsson (2013b) also highlights the importance of educating the employees in the agile values.

Moreover, Jovanovic et al. (2017) describe in their case study the difficulties that an organization can face when trying to transform the practices to become agile. Their focus is on the organizational roles, and they were able to identify several challenges connected to this. One of the reasons is that the team culture is very strong which hinders the process of establishing new roles and routines. Another aspect that influences the transition is lack of commitment and support from higher management (Jovanovic et al., 2017). Jovanovic et al.

(2017) also agree with Javdani Gandomani et al. (2015) and state that the organization and the employees do not have enough knowledge on what the agile values are due to poor education. Van Waardenburg and Van Vliet (2013) add to this by emphasizing the need for good communication and if the firms are to lack this, it can create difficulties for the firm. Furthermore, Tolfo et al. (2011) argue for the importance of having a culture that supports the notion of agile methodology, and describe that organizations need to check so that the values and beliefs of the company is aligned with those of agile. This is corroborated by Gustavsson (2013b), who explains that it is important to not lose the agile principles in the established organizational culture, meaning that the culture can hinder the company from applying agile methods. The customer aspect also needs to be remembered and Paulk (2018) believes that one of the biggest challenges for firms when adapting agile methods is to establish and maintain a close collaboration with the customers since this is stated in the Agile Manifesto. Another aspect that Boston Consulting Group (2019) emphasizes is that the mindset can have an impact on the adoption of agile methods. If the company is older their existing mindset can hinder the transfer to applying agile methods. From the literature several challenges can be singled out as relevant for this thesis. These seven challenges are: lack of agile training, lack of understanding for agile values, rigid culture, poor communication in organization, organizational inertia, difficulties to implement and lack of top management support.

2.4 Summary

Building upon this literature review which has focused on providing a thorough overview of projects, project management and different project methods, the authors have distinguished the agile project method as a new development in the field. This review provides the foundation for this study which will look further into the use and application of agile project methods in the MCI. In the tables below, the main factors related to agile methods and its tools, as well as the applicable KSFs and challenges are illustrated. The tables are representative of the two sub-questions and showcase the theoretical contribution.

Theoretical Contributions: Commonly used Agile Project Methods		
Agile Project Methods	**Characteristics**	**Literature**
Scrum	*Transparency, Inspection & Adaption*	Schwaber & Sutherland, 2017
	Iterative Process	Schwaber & Sutherland, 2017; Hallin & Karrbom Gustavsson, 2012; Wysocki, 2014
	Self-organizing & Cross-functional Teams	Schwaber & Sutherland, 2017
	Artifacts: Product Backlog & Sprint Backlog	Schwaber & Sutherland, 2017; Gustavsson, 2013b; Hallin & Karrbom Gustavsson, 2012; Cervone, 2011
Kanban	*Tool: Visual Board*	Gustavsson, 2013a; Tonnquist, 2018
	Planned-work, Work-in-progress & Finished	Tonnquist, 2018
	Self-organizing Teams	Kniberg & Skarin, 2009
	Continuous Work Process	Gustavsson, 2013a; Tonnquist, 2018

Table 1: A summary of the theoretical findings of agile project method

Theoretical Contribution: Themes KSFs & Challenges in Agile Project Methods			
KSFs	**Literature**	**Challenges**	**Literature**
Traditional success factors: cost, time & quality	Pinto, 2016; Project Management Institute, 2017	*Lack of understanding for agile values*	Javdani Gandomani et al. 2015; Gustavsson, 2013b
Coaching and training in agile values	Lechler, 1997 in Schelle et al. 2006, Dikert et al. 2016; Misra et al. 2009	*Lack of agile training*	Javdani Gandomani et al. 2015; Jovanovic et al. 2017
Transparent communication	Lechler, 1997 in Schelle et al. 2006	*Poor communication in organization*	Van Waardenburg & Van Vliet, 2013
Management support	Lechler, 1997 in Schelle et al. 2006; Dikert et al. 2016	*Lack of top management support*	Munns & Bjeirmi, 1996; Jovanovic et al. 2017
Alignment of organizational mindset	Dikert et al. 2016; Lechler, 1997 in Schelle et al. 2006	*Organizational inertia*	Dikert et al. 2016; Boston Consulting Group, 2019
Adaptive culture	Misra et al. 2009	*Rigid culture*	Jovanovic et al. 2017; Tolfo et al. 2011; Gustavsson, 2013b
Customization of agile project method	Dikert et al. 2016	*Difficulties to implement*	Dikert et al. 2016; Van Waardenburg & Van Vliet, 2013
Clear goal-setting	Lechler, 1997 in Schelle et al. 2006		

Table 2: A summary of the theoretical findings of key success factors and challenges in agile project methods

3. Methodology

The methodology for the research is important to describe thoroughly to ensure that the research is transparent to the readers. Firstly, the research approach and purpose will be described as it forms the base for the study. Thereafter, the research design will be presented followed by the research strategy. Then, the elements of the research method are described with the literature review process as well as the sampling and the presentation of primary and secondary data. Then, there is an in-depth description of the analysis. The last parts of the methodology chapter are the research quality and the research ethics, which will be presented in detail.

3.1 Research Approach and Purpose

The purpose of the study is an important aspect of the research, as the authors believe that it sets the boundaries of the study. For this study, the purpose which was considered most relevant was the exploratory one, which strives towards finding new insight to a topic by doing a review of the existing literature or conducting interviews with people who are knowledgeable on the subject (Saunders, Lewis & Thornhill, 2009). This suited this study as it aimed to highlight potential new aspects regarding how management consultants work with agile project methods. The researchers saw the exploratory approach as allowing for flexibility, and flexibility also being one of the meanings of agile (Hallin & Karrbom Gustavsson, 2012). This research purpose was for these reasons considered appropriate for this study.

3.2 Research Design

The overall research design can dictate the directions for many of the choices made during the research. There are many different designs that can be used, however there are two designs that were relevant for this thesis. The first one was the comparative design. This design aims at studying different cases with a similar method and then to contrast and compare them (Bryman & Bell, 2011). Therefore, for this study the authors decided to use the comparative design, as by using this design, it enabled the researchers to get a broad overview of the topic by studying an issue over more cases. However, this design does not have to be used exclusively and the research can be defined as a multiple case study, which is the second design. The case study design is a way to do an in-depth study of one or more cases (Bryman & Bell, 2011). This was relevant since the authors studied multiple cases, and the way to receive a comprehensive overview was eased by contrasting them. Bryman and Bell (2015) state that multiple case studies have become popular in business research in recent years and that the multiple case study is often comparative in nature. Therefore, the research design of this thesis was a comparative multiple case study, as the researchers were interested in finding new insight connected to each unique case and see if they could be compared.

3.3 Research Strategy

There are two main approaches when choosing research strategy, the first one is the quantitative research approach which often concentrates on measuring the occurrences of different issues (Bryman & Bell, 2011). The second approach is the qualitative strategy, where the emphasis lies on the individuals' own interpretations and way of looking at the reality (Bryman & Bell, 2011). For this master thesis, the most suitable approach to use was decided to be the qualitative one. This allowed the researchers to study the research question in a way, which could not be measured or quantified, but was rather aimed at gaining a better understanding of the management consulting firms through the perspectives of the respondents on how they use agile project methods in their work processes either at the firm or at the client site. After choosing a qualitative strategy it is important to state whether an inductive or deductive perspective was used. Commonly a quantitative approach is described as deductive and a qualitative approach is inductive (Bryman & Bell, 2011). However, it does not necessarily have to be this way. There is also a third way, the abductive approach. It is described as a way to move past the difficulties of the inductive and deductive reasoning. It is moreover emphasized that the abductive reasoning is used when there is an issue in research, which the literature cannot fully explain and the researchers aim to find out the underlying reasons for it (Bryman & Bell, 2015). For this thesis, the topic of agile project methods has underlying theory, but there is no clear explanation in literature for how agile project methods are applied in the MCI. Therefore, the researchers believed that the abductive reasoning provided the best foundation for conducting and collecting data to explain it.

3.4 Research Method

3.4.1 Secondary Data Collection

Secondary data is defined as data, which someone else has collected previously for another use (Saunders et. al, 2009). The secondary data which was utilized was in the form of the articles and books, which were found and chosen through the literature review. It was deemed relevant to use secondary data, as the authors believed that it was important to have a relevant research background to the field, as it provided a basis for the research. The secondary data collection was conducted first since it enabled the researchers to gather relevant information that could be used when performing the study.

3.4.1.1 Literature Review

For this research the author conducted a literature review which aimed at establishing a base for the research question and how it has been structured (Bryman & Bell, 2015). The relevant literature for the review was found in databases and books. The databases that were used were: Emerald, Business Source Premier, Google scholar and Supersearch. Bryman and Bell (2015) describe that an essential aspect of a literature review is to determine what to include and what to exclude. This was important in this research process as there was a large amount

of literature on the agile in general, but a criterion which was utilized was to strive to ensure that the journal articles used had been peer reviewed. This was to add legitimacy to the literature used. Moreover, to ensure that the material chosen for the literature review in this study was consistent, a systematic approach was employed. The systematic literature review enabled the potential biases of the authors to be minimized, something which made the literature review more transparent to the readers (Bryman & Bell, 2015). The first step was to establish a research question, which has been done accordingly and after this the review of the literature was conducted (Bryman & Bell, 2015) and this was done by using keywords and search words to specify the areas in which the searches provided answers. The last aspect was then to be able to report the findings from the literature review in a clear way (Bryman & Bell, 2015). When conducting the systematic literature review, published material on two main concepts relevant for this master thesis was singled out; TPM and APM.

3.4.1.1.1 Traditional Project Management

The literature review concerning TPM was conducted using the databases mentioned above. The keywords and search words utilized for this review on TPM is presented below:

Keywords: Project Management, Traditional Project Management, Project Methods
Search words: Project management, research project management, traditional project methods, project, project methods, consulting, consultants, management consulting.

The table below illustrates the inclusion and exclusion criteria that were utilized when performing the literature review, and articles and books that have been published before 1980 was excluded. Even if the research on project management had its breakthrough in the 1950s much research on the subject have been conducted (Packendorff, 1995), and it was therefore seen as most relevant by the authors to not use articles and books published more than 30 years ago. This was in order to present appropriate data on the subject at hand. Moreover, it was important that all articles used were peer reviewed and published in an Academic Journal. It was also seen suitable to utilize both Swedish and English sources since research on TPM have been conducted by Swedish researchers.

Theoretical Framework	
Inclusion criteria	Peer review journal articles Articles and books published 1980 and after Articles concerning: Projects, Project methods and Project management Articles and books in Swedish and English
Exclusion criteria	Articles not published in an academic journal Articles and books published before 1980 Articles and books concerning the IT industry

Table 3: Literature review criteria on traditional project management

3.4.1.1.2 Agile Project Management

The review of APM in the theoretical framework was undertaken using the previously mentioned databases. Here, the keywords and search words which were used in the literature review will be stated:

Keywords: Agile, Agile Project Methods, Agile Project Management, Agile Key Success Factors, Agile Challenges.
Search words: Agile project management, agile methods, agile, scrum, sprint, kanban, lean, consulting, management consulting, key success factors, success factors, challenges

The literature review on agile project methods focused on books and articles that were published after 1990, this is due to the fact that agile methods had its breakthrough in the 1990s (Gustavsson, 2013b). Moreover, peer reviewed articles were used as it presents a thorough and believable background on the subject. The review was moreover, focused on literature which describe agile methods and this is reflected in the inclusion criteria. Also, articles and books in both Swedish and English were included to broaden the literature, however articles in other languages were not purposively excluded. Excluded were articles that were not published in academic journals as well as literature published before 1990 due to the above described reason of the emergence of agile.

Theoretical Framework	
Inclusion criteria	Peer review journal articles Articles and books published 1990 and after Articles concerning: Agile projects, Agile project methods, Agile project management, Agile methods in software development industry Articles and books in Swedish and English
Exclusion criteria	Articles not published in an academic journal Articles and books published before 1990

Table 4: Literature review criteria on agile project management

3.4.2 Primary Data Collection

An important aspect of the data collection process is the collection of primary data. Primary data is defined as the collection of data for the research study, which is being conducted (Saunders et. al, 2009). The primary data for this report was collected by doing interviews with the chosen participants, that were selected through the sampling. The primary data was important in the research as it represented the data contribution of this thesis. The following paragraphs thoroughly describe how the sampling and primary data collection was conducted.

3.4.2.1 Interviews

In a qualitative method there are several ways in which it is possible to collect data. For this work, the qualitative interviews were considered suitable as it enabled the researchers to gain in-depth knowledge, by only focusing on one respondent at a time and attain the interviewees' perspective. A semi-structured interview approach was chosen and it allowed the interviewer to use a predetermined interview guide, but there was still an opportunity to ask follow up questions or alter the order of the questions if the interview required that (Bryman & Bell, 2011). As the interviews for this study were conducted to gain a deeper understanding of agile project methods that the individuals were involved in, and qualitative interviews allowed the interviewee to determine the direction of the interview (Bryman & Bell, 2015). This was regarded as important to the authors as they wanted to understand the underlying perceptions of the interviewee of the matters at hand. Furthermore, in the semi-structured interviews the questions were aimed at being open. As it allowed the interviewee to answer as freely as possible and guide the interview, and open and not leading questions are recommended (Bryman & Bell, 2011; Bryman & Bell, 2015). Saunders et al. (2009) moreover describe that semi-structured interviews are suitable when the questions are open. Moreover, interviews were conducted with interviewees who had knowledge about agile project methods. The interviews were held in person and in a quiet environment when possible, something which is recommended by Bryman and Bell (2011). The authors saw this as enabling to get perceptions of the nuances of the answers given by the interviewee, as it was possible to see the person being interviewed. However, some of the interviews could not be held in person due to the geographical distance and they were therefore held on the phone or on Skype.

3.4.2.2 Sampling

The sampling used for this research was in the form of purposive sampling. This means that the participants have been chosen based on their relevance to this research question and topic (Bryman & Bell, 2015). It can be used to find relevant individuals in an organization (Bryman & Bell, 2015) and this is an aspect of this research, as the aim was to interview consultants in management consulting firms. The sampling has focused on management consulting firms that work with agile project methods. Therefore, the purposive sampling was seen as the sampling method that would generate the most relevant respondents in the limited time and scope of the study. For the purposive sampling, which has been conducted in this study, it was decided that the career level of a consultant, is not a determinant of whether they will be included in the sample or not. It was rather seen as beneficial to have consultants in different stages of career development to get more diverse responses regarding experiences and knowledge. This resulted in different level of experience of agile project methods comparing the respondents. The main aim of the sampling was to sample management consultants that work with agile project methods, however, a pattern could also be seen that five of the six firms operated on an international level. Moreover, the sampled companies work in similar business areas which facilitates a comparison between them. Furthermore, concerning choice of sampling, the authors also used snowball sampling. It entail that the respondents which

have been chosen by the researchers from the beginning, provide information to the researcher regarding potential new respondents (Saunders et. al, 2009). The authors considered this as an effective way of gaining access to new respondents through contacts of a first respondent. This has contributed to a broader sample. However, a disadvantage for the authors with using snowball sampling was that the anonymity of the respondents that were sampled through snowball sampling might be compromised, since the person that provided the contact details of the interviewee knows that person. The authors however, still considered this sampling type relevant, as it provided many benefits. Table 5 below illustrates the sampling criteria used in this master thesis.

Sampling Criteria
- Respondents that work at management consulting firms that have current or previous experience of working with APM in their firm or at a client.

Table 5: Sampling criteria

3.4.2.3 Interview Guide

An interview guide was established before conducting the semi-structured interviews. In order for the authors to establish a relevant interview guide a meeting was held with two management consultants before the interviews took place. The discussion held at the meeting guided the focus of the research and thereby influenced the interview guide. This was seen as beneficial to do since it provided the authors with input before the actual interviews. According to Bryman and Bell (2015), when preparing an interview guide it is of importance to keep the research question in mind and to make sure that the questions asked contribute to answering the research question. Another aspect that was seen as important to consider was that the interview questions were focused on experiences of the interviewees that the researchers felt were interesting. The language was also considered by the authors, since it helped to ensure that the interviewees understood the questions, and unclear concepts were avoided to not create any misunderstandings.

Moreover, when preparing an interview guide it can be useful to divide the questions into certain topics to ensure a satisfactory flow (Bryman & Bell, 2015). The authors prepared the interview guide for this thesis by reading the theoretical framework as well as the purpose and research question to ensure that the questions would be relevant. Since all the interviews were conducted with management consultants, the same interview guide was used in all interviews. This eased the process when comparing the data since the respondents answered the same questions. The interview guide was used as a tool to facilitate the interviewers with relevant questions to ask, and it was used flexibly and questions were altered if needed. Moreover, follow-up questions were also asked. The interview guide firstly contained general questions about the respondent, then questions regarding agile project methods, followed by questions regarding their learning experience. A few days before the interview was conducted the interview guide was sent to the respondents since this was requested by the interviewees. The interview guide can be found in Appendix A.

3.4.2.4 Interview Process

Before the interview, the interviewees were asked for permission to record the interviews, as it would, if permitted, allow the interviewers to transcribe the interviews afterwards. It is described as important to ask for permission from the interviewee (Saunders et. al, 2009). By recording the interviews the interviewer was fully aware of what was being said since no focus had to be made on making notes. This made the interview more flexible since follow-up questions were asked (Saunders et. al, 2009). Transcription of interviews is beneficial to do if possible, as it gives a more comprehensive overview of the answers given by the interviewee (Bryman & Bell, 2011). The number of interviews that were seen as sufficient due to the time limit to receive an overview of how different management consulting firms work with agile project methods was 11. Before the interview started the interviewers asked if the respondents wanted to be anonymous, in order for them to feel comfortable when answering the questions. The aim of the research was also presented as well as ensuring the interviewee that they could interrupt the interview or decline to answer a question if they wanted to. Several of the interviewees requested to be anonymous and therefore the authors decided to have all the respondents anonymous. Upon request from some of the respondents that wanted the company to be anonymous as well, the authors decided to have all the companies anonymous to be consistent, however the case companies have similar operations. When the interviews had been conducted the transcripts were sent to the respondents to ensure the internal validity of the thesis. Table 6 below illustrates the interviews.

Interview Outline

Respondents	Professional Title	Company	Date & Duration	Interview Type	Interview Language
Respondent 1 (R1)	Consultant/ Scrum Master	Company A	2019.03.06 30 minutes	Face-to-face	Swedish
Respondent 2 (R2)	Project Manager	Company A	2019.03.06 45 minutes	Face-to-face	English
Respondent 3 (R3)	Digital Transformation Consultant	Company B	2019.03.08 50 minutes	Face-to-face	English
Respondent 4 (R4)	Management Consultant	Company C	2019.03.11 45 minutes	Face-to-face	Swedish
Respondent 5 (R5)	Management Consultant	Company C	2019.03.12 45 minutes	Face-to-face	English

Respondent 6 (R6)	Management Consultant/ Agile Coach	Company D	2019.03.13 45 minutes	Face-to-face	Swedish
Respondent 7 (R7)	Management Consultant/ Agile Coach	Company D	2019.03.14 30 minutes	Face-to-face	English
Respondent 8 (R8)	Management Consultant/ Agile Coach	Company D	2019.03.14 50 minutes	Face-to-face	English
Respondent 9 (R9)	Management Consultant	Company E	2019.03.25 35 minutes	Phone Call	Swedish
Respondent 10 (R10)	Management Consultant	Company F	2019.03.27 50 minutes	Skype	English
Respondent 11 (R11)	Senior Management Consultant	Company F	2019.04.01 50 minutes	Phone Call	English

Table 6: An outline of the interviews

3.5 Analysis Process

The analysis approach that is commonly used is grounded theory and this is the approach that to some extent was utilized in this research. The process in grounded theory is iterative which means that the data collection and analysis proceed simultaneously and are closely connected (Bryman & Bell, 2015). The reason that the grounded theory approach was chosen was because the research aims to understand how different management consultants work with agile project methods and it was therefore important to analyze the data as extensive as possible as it provided the authors with a greater understanding of the phenomenon. However, all the different tools and aspects in grounded theory were not utilized in this master thesis since they were not all seen suitable. It was the mindset of grounded theory, that the data collection and analysis should be iterative, that was used.

According to Bryman and Bell (2015) the most common way to analyze qualitative data is to use a thematic analysis. This includes identifying themes within the data, hidden meanings that can be seen from the answers from the interviewees. The thematic analysis often includes transcribing the interviews. Transcribing also contributes with the ability of using quotes and citations from the interviews in the report and allows others to evaluate the analysis. However, the problem with using this method is that it can be time consuming (Bryman &

Bell, 2015). For this research, the authors felt that the advantages were bigger than the disadvantages for transcribing the interviews, since it contributed with the opportunity to detect hidden meanings in the answers that could be valuable for the research. The authors have transcribed before which eased the process, making them aware of the time consuming process and what was expected. After this the answers were color coded into different themes as the transcription eased the process of coding. The process of coding means that the data is broken down into smaller parts that are given labels. A researcher usually starts at a descriptive level with several codes/concepts that can be seen from the interviewees' answers and these concepts can then be categorized into more common themes (Bryman & Bell, 2015). They moreover state that it is important to start the coding as soon as possible since this might give the researcher a better understanding, which can contribute to the literature review. Throughout the process of coding the researcher should read through the transcripts several times and review the codes before finalizing them and categorizing them into themes (Bryman & Bell, 2015).

The authors started to color code as soon as possible before all interviews were conducted, this to keep the iterative mindset. The color coding was based on the interview guide and the answers from the interviews, as well as the theoretical framework since this laid the foundation for the questions asked. The codes and themes that were distinguished can be found in Appendix B. Moreover, the color codes and transcripts were reviewed several times by the authors to ensure that nothing was missed and that they were relevant. One of the problems with coding is that the research can lose the context of what is said if only fragments are being chosen (Bryman & Bell, 2015). In this research this was mitigated in the way that the authors continuously reviewed the research question and kept that in mind when coding.

The process of thematic analysis makes the data more manageable since the researcher is making sense of the data and interpreting it. A problem that can arise is that it can be hard to decide what a theme is (Bryman & Bell, 2015). To prevent this, the researchers discussed relevant themes in this research to ensure that both approved the themes that were chosen. From this description, the analysis approach that was chosen was a combination of the grounded theory mindset and the thematic analysis. The authors have decided upon this to create a broad and solid foundation for the analysis process of this master's thesis.

3.6 Research Quality

To ensure that the qualitative research conducted is trustworthy and authentic, the research should fulfill certain quality criteria. According to Bryman and Bell (2015), researchers have suggested that either the quantitative criteria of validity and reliability, or other alternative criteria are used. For this thesis the criteria of external reliability, internal reliability, internal validity and external validity described by LeCompte and Goetz (1982) in Bryman and Bell (2015) were utilized to ensure the quality of the research. The authors have chosen this approach as it is widely recognized by researchers and it is seen as applicable to this study.

3.6.1 External Reliability

External reliability examines to which degree the research can be replicated. This criterion has been argued to be difficult to meet in qualitative research since it can be hard to find a similar social setting. In order for other researchers to replicate a qualitative study, they should strive towards utilizing a fairly identical research process as the original researchers utilized (Bryman & Bell, 2015). For this thesis this was ensured by the researches by thoroughly describing the method and process used in the thesis to support other researchers in their ability to replicate the study.

3.6.2 Internal Reliability

This criterion refers to if the research is conducted by more than one person, that all the researchers agree on what they can see and hear (Bryman & Bell, 2015). It was important to ensure that the two researchers agreed on the information gathered, therefore the researchers have had continuous communication when conducting all the phases in this thesis. This was particularly important when performing the analysis, since it is in this chapter that the authors have to agree on how the data collected is related to the theoretical framework. By constant and continuous communication the researchers strived to fulfill the criteria of internal reliability.

3.6.3 Internal Validity

Internal validity is an important criterion to fulfill since this criterion ensures that a good match can be found between the theoretical framework and the data collected (Bryman & Bell. 2015). According to LeCompte and Goetz (1982), this is the criterion that strengthens qualitative research. To increase the internal validity of the thesis, triangulation is a method that is recommended to use. Triangulation means that the research includes several sources of data when studying the phenomenon at hand (Bryman & Bell, 2015). In this thesis triangulation has been utilized since data has been gathered from interviews, books and articles. To ensure that the data matches the theoretical framework respondent validation has been used. According to Bryman and Bell (2015), respondent validation refers to that the researchers invite the respondents to read and take part of what was said during the interview. This aims to ensure that a connection between the findings and the experiences and perspectives of the respondents exist (Bryman & Bell, 2015). In this thesis, respondent validation was conducted since the transcripts of the interviews were provided to the respondents. By utilizing triangulation and respondent validation, the authors aimed towards achieving the internal validity criteria.

3.6.4 External Validity

External validity means to which degree the findings of the thesis can be generalized to other settings. This research criterion is the one that qualitative research struggles with the most

since qualitative research is often based on smaller samples, and it can therefore be hard to know if the sample is representative to a larger population (Bryman & Bell, 2015). This thesis has not aimed towards achieving generalizable results and this criterion can therefore be deemed as less important to fulfill than the other criteria mentioned. Even if the results were not made for generalizations, because the methodology was thoroughly described a similar study could take place in another setting or context if the aim is not to develop the same findings. Therefore, it could be argued that external validity will not likely be fulfilled.

3.7 Research Ethics

When conducting research, ethics should be considered continuously throughout the research process. However, it is also emphasized that it is difficult to distinguish a clear boundary between ethical and unethical practices (Bryman & Bell, 2015). It is therefore seen as essential to integrate ethics into this thesis. There are a number of areas which is of importance in research ethics, and in the book by Bryman and Bell (2015) they describe four main areas by Diener and Crandall (1978): harm to participants, lack of informed consent, invasion of privacy and deception.

Harm to participants refers to both the physical harm to participants and the harm to the career of the participant (Bryman & Bell, 2015). Therefore, it is important to ensure that the research that is being conducted does not cause harm to the participants. An aspect of this is to respect the participants wish for anonymity and confidentiality and it is described that if it is not followed the participants can be harmed (Bryman & Bell, 2015). For this research the authors were dedicated to respect confidentiality and anonymity throughout the process, and in the published work. Also lack of informed consent refers to the participants being given sufficient information regarding the research for the person to make a well-informed decision of their participation. It is described that for the researchers to receive informed consent they can ask the participants for the consent in a recording at the beginning (Bryman & Bell, 2015). For this study the researcher therefore thoroughly described the study and how the data will be used before the interview begun. Invasion of privacy is concerned with the study's potential invasion of privacy from participating in the study. It is described that even though a participant could have given their informed consent they may during the interview say no to answering questions and it is important that the researcher allows the participants to stop the interview (Bryman & Bell, 2015). Therefore, the authors informed the participants of their right to not answer questions during the interview, or to stop the interview if they felt uncomfortable. Deception is concerned with the presentation of the research to the participants, and deception happens when the research is presented misleadingly (Bryman & Bell, 2015). To make sure that this research was free of deception, thorough information was given to the respondents throughout the research to have them informed about the study.

4. Empirical Findings

This chapter outlines the collected empirical data, which will be presented according to the themes that were found in the data analysis. Firstly, the data on the agile project methods from the interviews will be presented in connection to the processes and roles in the different relevant methods as well as the tools. The next part of this chapter will focus on the KSFs of APM which has been highlighted in the interviews. Then the corresponding challenges will be presented. Both the KSFs and the challenges will be presented in the order of the case companies. After this the empirical data on the application and adoption of agile project methods is stated. Here, the effectiveness of the mentioned methods will be described along with the data on measurements of success and future implications.

4.1 Agile Project Methods

4.1.1 Applied Agile Project Methods

During the interviews the respondents mentioned various agile methods that they applied in their projects when contracted by the client. Two of the methods from the literature were mentioned more thoroughly by the companies and they were Scrum and Kanban. These two methods are therefore described in more detail below. Some additional methods were also mentioned by the interviewees and these will therefore be elaborated on in the end. It was highlighted by several respondents that the method applied usually depends on the specific context and project. R2 explained how there are usually discussions on which method to apply before the project begins and that it all depends on the project's specific requirements. R9 stated that the company is not tied to any specific framework but that they adapt to the customer. Moreover, R10 corroborated this and described that the project process is very dependent on the project but also what the customer needs are.

4.1.1.1 Scrum

Respondents from five of the six companies mentioned using Scrum. Scrum was mentioned by both the respondents from Company A, R1 and R2, as a method which they use and these projects mostly have an IT focus. Also in Company B Scrum was brought up as an agile method and R3 stated that Scrum is the preferred method to utilize. Moreover, in Company C, Scrum was emphasized by both the respondents, however they do not apply in their own projects but it can be used at the customer site. In Company D R6, stated that Scrum was often used in the projects, while R7 mentioned Scrum as a method that is used at the firm but claimed not to be using that method in the current project. Company E did not mention Scrum in the interview. In Company F, R10 mentioned that Scrum was applied at the company but mostly when they work with IT development projects and that they do not use it in their current project.

4.1.1.1.1 The Process of Scrum

Several of the respondents mentioned different process steps which they utilize in Scrum. Here, R1 emphasized that the process is readjusted continuously. Moreover, R6 at Company D highlighted that their project process is based on an iterative process that closely resembles Scrum, with several parts in the process: sprint planning meeting, stand-up meeting, sprint review and a retrospective. Moreover, R6 highlighted that Scrum can be applied for any type of project. Another respondent that described the process of Scrum was R2 who explained that they would start the process with a kick-off, followed by a workshop with the client to make a list of requirements that will shape the user stories. The next step that R2 mentioned was the sprint planning meeting and after that the sprint starts, during the sprint the team has a daily stand-up, then the sprint demo ends each sprint which is followed by a sprint retrospective. R10 from Company F mentioned that the daily stand-ups and the retrospective part from the Scrum process are utilized in their project even if they do not apply the Scrum framework. R11 also described that they apply certain aspects of Scrum, for example sprints and daily stand-ups. Regarding the meeting held in Scrum, R1 stated that:

"We have dailies, so every day in our team in Gothenburg and then since we have two week sprint we have sprint planning and sprint review and retrospective once every other week."

R5 highlighted that from experience the way that Scrum is used can differ, it can be more according to the framework or it could be less standardized and continued by stating that:

"So it varies a lot depending on the project and the context and which company you working in and these kind of things."

4.1.1.1.2 The Roles in Scrum

Several of the interviewees mentioned a number of different roles that is used within the Scrum framework. One of the roles is the Scrum Master and R1 in Company A had the title of Scrum Master. Moreover, both R2, R3 and R11 mentioned that the Scrum Master has the role of taking care of and managing the different sprints, as well as responsibility for managing the resources. Another role in Scrum, described by R1 and R3 is the product owner whose role is according to them to make the priorities for the project. R5 described that at the customer there have been roles such as Scrum Master and product owner, but not at Company C. In Company A R2 had the role of project manager and stated that they work as a Scrum team and here the role of the project manager was described as:

"The ones that always foresees the risks, the one that mitigate the risks, the one that deals with issues, the one that allocate resources."

Moreover, R1, R2, R6 and R10 described that the Scrum team is often self-organizing. Connecting to this R5 described how the development team in Scrum should have ownership of the content of work in the project. Moreover, R10 also highlighted that the team is

constructed in a cross-functional manner, and R8 added to this when stating that the team is built around the necessary competences. R6 underlined that they work in a way which is close to Scrum and stated the importance of teams for the success of the projects that:

"But the result that we accomplish by working together is so much higher than if we would have worked as individuals."

Furthermore, a few of the respondents highlighted that in Scrum there is often a few roles which are linked to the IT side such as developers mentioned by R1, R2 and R5 and testers described by R1 and R2. R2 summarized the meaning of these two roles by stating:

"Tester they test, developers they develop."

4.1.1.2 Kanban

Kanban was the only agile project method that all of the companies mentioned, and everyone stated that it was a method that they applied at the company. However, Company C explained that they used Kanban to some extent if they thought it was needed but that it was mostly used at the client site. R1 described that Kanban is a method used at Company A, however, both R1 and R2 said that they are not applying Kanban in their current project. In Company B, R3 emphasized that Kanban is a method applied at their firm, mostly when the project concerns change or people. R6, R7 and R8 from Company D explained that Kanban is a commonly applied method at the company, however, not all of the respondents were applying the Kanban methodology in their current projects. R7 stated that in their project the Kanban methodology was fully used while R6 and R7 explained that they only used parts from the Kanban methodology in the current projects. R9 in Company E and R10 and R11 from Company F also said that Kanban is one of the agile methodologies that they apply.

4.1.1.2.1 The Process of Kanban

The process of Kanban was not described to a large extent by the respondents. Since neither R1 nor R2 were currently working with Kanban they did not describe this process. According to R3, the Kanban methodology is less defined than other agile project methods but that is also the true essence of Kanban. It is explained by R3 that it is flexible when working Kanban and that requirements from the backlog can pulled into the process continuously, which was corroborated by R2 and R6. R4 from Company C described that all of the agile methods use an iterative process with a foundation in lean management, and that they adjust themselves to the processes that the customers use. This is corroborated by R5 who explained that their company does not have an agile process that they follow, and that it all depends on the customer and how they work. However, R5 furthermore described that if they could identify a need where the Kanban methodology is seen useful, they will apply it. Company D is the company that have applied the process of Kanban to the largest extent. R6 explained that Kanban does not really say that much and described the process in this way:

" [...]in Kanban you talk more about visualizing what you are doing and to measure lead time and not to have too many tasks at one time."

Furthermore, R6 also mentioned that it is essential to minimize the tasks you are working on to receive a flow in the work. R7 described that when they work with Kanban they do not have that many steps. The process starts with that all the stakeholders in the project decide on requirements and then they are prioritized by the product owner who analyzes them. If they are found valuable they are added to the product backlog and when the work starts the tasks from the product backlog are pulled out constantly and worked on. Moreover, R8 described that it sometimes can be difficult to work fully in the Kanban methodology so that it often becomes a mix between agile project methods. R9 highlighted that they are using the Kanban way of working, and it is prioritized to break down elements quickly so that value can be delivered to the client in an early stage of the project. However, even though R9 stated that they use Kanban, it is described connected to a specific project process for agile projects that:

"*I wouldn't say that we have an agile project process, I would say that we utilize those methods that we believe work best for each project."*

4.1.1.2.2 The Roles in Kanban

Moreover, relating to the roles in Kanban the respondents in Company A, B and C, did not describe any specific roles or teams that they used in the Kanban methodology. However, Company D elaborated on the roles and R6 stated that there are not any specific roles in the team and that everyone has the same title. R8 added to this and said that they try to have different expertise within the team. R7 moreover stated that there usually is a product owner in the team that prioritizes the product backlog but the team was described in this manner:

"I would say that we are kind of a cross-functional very high performing team"

Relating further to the team, R7 and R10 stated that in Kanban it is important to have a supporting team. Furthermore, in Company E where R9 stated that they use Kanban it is emphasized connecting to the construction of the teams that:

"[...] the team is built around what the client's needs are and challenges and how to best meet them and deliver what we have agreed upon."

4.1.1.3 Other Applied Agile Project Methods

During the interviews a few other agile methods were mentioned by the different respondents. It was especially one method that five out of the six companies mentioned, and that was the SAFe methodology. This methodology is described by R3 in this way:

"It is the scaled way of working with agile. It is like a mixture of the traditional waterfall but with agile methodology."

Furthermore, R3 stated that this has become a popular method recently that many seek to apply. According to R3, SAFe is suitable to apply when you are working with a more extensive project for a few years because then it is easier to work in a scaled way. This is corroborated by R7 who stated that when you work with a larger project it is more suitable to apply a scaled agile method. In SAFe the process with sprints is called increments where it is more common that you have periods of three months where the first period is a discovery period before the actual work starts, according to R3. Moreover R3 stated that working with SAFe is called working "wagile", since it is a combination between waterfall and agile that allows the team to manage the expectations with combining structure with feedback loops. However, R10 highlighted that they do not recommend using a combination between agile and traditional in the long-run, except during the transition phase.

R3 also described that several meetings take place during a SAFe project, which are a daily stand-up meeting, standardized weekly meetings, biweekly or monthly meetings with the steering committee and also a planning meeting before each sprint. Moreover, R4, R5, R6, R7, R9, R10 and R11 described that they apply SAFe when contracted by their clients. Moreover, the respondents from Company C mentioned that they are certified within the SAFe framework. R10 and R11 highlighted that they use some of the roles mentioned in the Scrum framework, such as the product owner, Scrum master and Scrum team when applying SAFe. Also R11 described that their project process can be resembled to a life cycle where the process starts with meeting the stakeholders, doing the planning and prioritizations, conducting the work and tests before the actual delivery. R10 also mentioned that different agile tools connected to other frameworks are utilized, for example Kanban boards and daily stand-ups, and described the project process like this:

"So this is kind of my basic toolset but then otherwise I would say that my agile process depends a lot on the customer and a lot on their agile maturity as well."

Company C and Company F also mentioned another scaled agile framework which is called LeSS, but R10 mentioned that this framework is not commonly used by the company in the Nordics. R11 moreover mentioned the Prince2 framework. Two other agile methods that were mentioned were pair programming and extreme programming. This was underlined by R1 from Company A when the interviewee described agile methods that the company applied, however, these methods are specifically connected to when working with an IT project. R4 moreover mentioned that most agile methods are conducted in an iterative way. Moreover, when the interviews were held at Company D, R6 and R8 described that they used a combination of Scrum and Kanban and R6 mentioned that they incorporate parts of Kanban when they work with Scrum. It was also emphasized by R6 that they use the best of both worlds when it comes to Scrum and Kanban when working in a project. This is corroborated by R8 as well who stated that their company uses a combination, which is referred to as scrumban. R8 elaborated on this in the following quote:

"[...] our delivery model which is based on some kind of scrumban thinking a bit of Scrum a bit of Kanban [...]"

4.1.2 Applied Tools

There are a number of different tools that the respondents described that they use in different methodologies. Respondents in all the companies mentioned sprints when working with Scrum and SAFe. R2 highlighted that the number of sprints conducted in Scrum depends on the project, and that when the sprint has started no changes can be made. R3 described the element of sprints as:

"The sprints can vary in their length, normally they run from two to three weeks periods."

Moreover, in all of the companies respondents mentioned a product backlog as a tool used in Scrum and SAFe. It is described by R6 that the backlog is continuously updated in the projects. Relating to another tool used in agile, there were respondents in all of the companies that stated that they utilized different software programs as tools in their work processes concerning several methods. However, it was also emphasized by R3 and R8 that it could be that functions are added to the tools even though it is not needed. R8 described it as follows:

"[...] do not build complexity into tools [...] keep it as simple as possible you do not need to have control of everything and every aspects [...]"

Visual management tools were also mentioned by several respondents, and R5 described how the visual management tool of Kanban is being used in projects at the client site. Kanban boards are described by respondents in five of the six companies. Also R10 and R11 stated that they have the Kanban board digitally with a software program. Another tool is User stories which according to R6 is where the experience of the user is described, this tool is also mentioned by R1, R2 and R10 when working with Scrum. R6 also stated that User stories might not be applicable when not working with IT. Moreover, post-it notes were also mentioned as a tool by R3, also R7 and R8 state that they use post-it notes with Kanban in projects. R8 described using post-it notes as:

"[...] going back to the basic usually works pretty good."

Video calls was also highlighted as a tool that could be used for communication and R1 described that it eases the communication process when the team is not in the same place. It is described by R10 that they adapt the tools that they use in projects to the tools that the clients already have in place. Also R7 explained that they have chosen to use a tool in the current project because the customer is using it.

Applying Agile Project Methods						
	Company A	**Company B**	**Company C**	**Company D**	**Company E**	**Company F**
Methods	-Scrum -Kanban -Extreme Programming -Pair programming	-Scrum -Kanban -SAFe	-Scrum -Kanban -SAFe -LeSS	-Scrum -Kanban -SAFe -Scrumban	-Kanban -SAFe	-Scrum -Kanban -SAFe -LeSS -Prince2
Tools	-Product backlog -Kanban board -Scrum board -Sprints -User stories -Software programs -Video calls	-Product backlog -Software programs -Sprints -Post-its	-Product backlog -Software programs -Kanban board -Sprints	-Sprints -Software programs -Kanban board -Video calls -User stories -Post-its -Product backlog	-Software programs -Product backlog -Kanban board -Sprints	-Product backlog -Kanban board -User stories -Software programs -Sprints

Table 7: Agile project methods and tools mentioned by the different companies

4.2 Key Success Factors with Agile Project Methods

After conducting the interviewees various KSFs were identified that management consulting firms should strive towards achieving when working with agile project methods. Some of these KSFs were highlighted amongst several of the companies to have a significant impact on the transformation to APM as well as the application of agile project methods. These KSFs will now be presented company-wise and a table will summarize the KSFs mentioned by the respondents at the end of this section.

4.2.1 Company A

The interviews held at the management consulting firm Company A with R1 and R2 showcased several KSFs which were emphasized as important to the respondents. One KSF that both the respondents at Company A mentioned was communication. R1 described referring to important aspects in the project that:

"[...] it is important with transparency to the project and that you have a good communication in the team."

Referring to the importance of communication R2 underlined in the interview that communication has to function very good in the teams. R1 also stated that tools for example software programs which are utilized in agile projects could ease the communication in the project. A further KSF which was brought up by R1 is the tools role in enabling for an easy visualization of the project and the motivation they can bring because of its clarity of the project goals. R2 moreover discussed that when mitigating potential hinders with agile methods, an important factor is to educate the client in agile. R2 furthermore emphasized that it is key in agile to adjust the project to meet the needs of the customer. In comparing traditional projects to agile projects R1 claimed that in agile projects a good aspect is that the client can provide feedback on the progress of the project.

4.2.2 Company B

One interview was conducted at the management consulting firm Company B and R3 highlighted various KSFs that the interviewee thought was important to consider to achieve well-functioning agile project methods within the company. One aspect that was recurring in the interview was that R3 emphasized that the organization needs to be aligned and an interdependency within the company must be present. This was described by R3 in this way:

"People need to understand holistically what is actually happening, what is going on within the business."

Another aspect that R3 mentioned was that different software programs help the team to maintain a key structure in the work, and this facilitate in aiding the team to see the progress throughout the project process. It was also emphasized by R3 that having skilled team members that know what is expected of them is important for the project to function in a good way. Communication was another KSF described by R3 where it was mentioned that communication often is underestimated and that it is easier to motivate people if they have all the information needed. Moreover, R3 stated the importance of customer involvement early on in the process to receive feedback. Lastly, R3 pinpointed a KSF which was that the agile project methods applied should be customized to each project and firm since they are all different. This was explained by R3 like this:

"[...] every organization is different, so you cannot apply one rule fits everyone."

4.2.3 Company C

At Company C two interviews were held with R4 and R5 and they emphasized several KSFs which they found important. R4 stated that one KSF is to have clear goals as this makes it easier for the team members to know their tasks and it creates a clearer transparency. R4 furthermore highlighted that cross-functional teams is an important KSF since it contributes

with expertise and competence within the team. The importance of having a culture that understands the agile values is emphasized as a KSF by R5 and is explained like this:

"[...] you need to have an organization that is sort of set on I mean a culture and an understanding and a leaderships when it comes to agile [...]"

R5 moreover explained that having a well-functioning communication is key when working agile, and that it is essential that the communication is continuous and face-to-face. The change management in the organization is also highlighted by R5 to be important to ensure that everyone is onboard on the agile transformation, and having support from top management is vital. This is described by R4 in this way:

"[...] the most important part is that you believe in agile all the way and that you clarify within the organization that it has to work, everything from management down to the bottom."

Another KSF that R5 emphasized is that having continuous feedback loops in agile helps the project since they get first-hand information from the customer. R4 furthermore elaborated on the fact that you cannot apply the same methods everywhere but that you rather have to find the way or method that suits you.

4.2.4 Company D

In Company D three interviews were conducted with R6, R7 and R8. These interviews showcased a number of KSFs which can be emphasized as important. In the interview with R6, it was stated that the agile way of working in teams is a KSF. Moreover, R6 underlined that the tools applied in agile need to be altered if there are aspects in the team that are not functioning well. The respondent continued by emphasizing that the mindset needs to be that the tools should give support to the team in the project. R8 also underlined that for a project to be successful the tools need to be structured simply from the beginning. Furthermore, R7 stated that software is easily understood. When responding to what the KSFs of agile are R6 stated in regards to value creation and agile methods that:

"In order to be able to create the best possible value then this is the best way to work according to me."

Another KSF mentioned by R7 is the transparency in the agile way of working. Relating to a further KSF with agile project methods, all the respondents in Company D stated that feedback is a KSF for using the agile methods. R6 moreover stated that learning the agile way of working continuously in the teams is a KSF in the context of agile project methods. R6 furthermore stated that it is important to talk about the methods for everyone involved in the project to have an understanding of the mindset in agile and feel involved. R8 also emphasized the importance of the understanding of agile as a KSF and described:

"I mean agile for me that is a state of mind [...]"

4.2.5 Company E

In Company E there was one interview held with R9, and here a number of KSFs were mentioned by the respondent. The first KSF which was brought up by R9 was the need for having clear goals in the project. Another element which was mentioned by R9 was the importance of the client being involved in the project with being present and also prioritizing in the project. Furthermore, R9 underlined that in an agile project a KSF is the presence of a transparency in the project. This is described by R9 as follows:

"So this transparency and clarity."

4.2.6 Company F

The respondents in Company F highlighted a number of different KSFs in agile projects. R11 stated that it is an important KSF to understand the principles of agile. Also R11 stated that trainings are essential and that it should not be underestimated. R10 highlighted that one thing that is needed is a knowledgeable and empowered team involved in a project. Moreover, it was also described by R10 that one of the KSF with working agile was:

"So I mean key success factor is cross-cultural collaboration, that is number one for me."

Moreover, R10 discussed in connection to tools in agile methods that the involved people in a project needs to have a joint understanding of the tools input data. Continuing with the KSF of the tools R10 stated that there should be a continuous training and education for the users of the tools for it to be used properly. R11 also stated that a KSF is to make people comfortable with tools through training. Furthermore, R10 highlighted that the organizations that use the agile project methods need to have an ongoing communication across different functions in the company, R11 also underlined the communication as a key factor here. Here, R11 emphasized the need for transparency and that they strive towards it in projects. R11 furthermore underlined that an understanding of the connection between IT and business must be present and stated:

"I think a key success factor is that you cannot have business stakeholders that didn't understand the basics of IT and you cannot have IT like architects who don't understand the basic business needs."

KSFs with APM	
Company A	Communication, Visualization, Motivation, Training in agile values, Software programs, Customization of agile methods, Client feedback, Transparency.
Company B	Organizational alignment, Software programs, Communication, Customer involvement, Customization of agile methods, Skilled team members.

Company C	Clear goals, Transparency, Cross-functional teams, Support from top management, Understanding of agile, Change management, Communication, Customization of agile methods, Culture, Continuous feedback.
Company D	Value creations, Team structure, Continuous learning and feedback, Documentation, Understanding of agile values and methods, Transparency, Easy to understand agile tools, Software programs, Agile mindset.
Company E	Clear goals, Transparency, Customer involvement.
Company F	Cross-cultural collaboration, Knowledgeable and empowered teams, Common understanding of information, Continuous training in tools, Cross-functional communication, Understanding of agile values, Transparency, Understanding connection between business and IT, Training in agile.

Table 8: Key success factors mentioned by the different companies

4.3 Challenges with Agile Project Methods

The following paragraphs will present the different challenges with agile project methods that the interviewees brought up during the interviews. Some of the challenges were highlighted by more companies to have an impact on the application of agile project methods. As above, the challenges are presented company-wise and at the end of the section a table which summarizes the challenges mentioned by all of the respondents is presented.

4.3.1 Company A

In Company A the two interviewees R1 and R2 mentioned some challenges that they thought were important to consider when applying agile project methods. R1 highlighted that when using software tools it is a challenge with the documentation because the demands need to be updated continuously. It was moreover emphasized by R1 that cultural differences can be a challenge when the team is international. R2 discussed the challenge of managing expectations when working in an agile project like this:

"[...] it is very hard to tell them how much it will cost them in the end and when it will be ready or done."

Something that R1 pinpointed as a challenge when working in agile projects was that the responsibility on the individual team member is larger since the team is self-organized and no clear directions is coming from above. R2 also explained the challenges connected to the collaboration with the customer, because if they are not used to working agile it can create difficulties, so the maturity of the customer is an important aspect to consider.

4.3.2 Company B

The challenges which are present when applying agile project methods were discussed by R3 in Company B. Here, R3 talked about the challenge of governance where the interviewee emphasized that in working agile governance is needed. Another challenge which was brought up by R3 was the long-term sustainability and the many different elements which can impact it. In stating that resources can be an issue in working with agile project methods R3 highlighted the challenge of resource allocation. Moreover, R3 discussed that a problem is that people have different expectations of the deliveries of a project, which underline the challenge of managing the expectations in agile projects. R3 described this as follows:

"[...] so you might deliver something that is up to one person's expectations but it might not meet someone else's expectations, which causes an internal problem as well."

Talking about transparency, R3 mentioned that transparency with the firms that they are working with can be unclear and that it can be a challenge. R3 furthermore underlined the presence of an IT focus with agile which could be challenging because it can cause the mindset in business to not be right. Another challenge with agile projects which R3 stated was the actual process of a project roll out as it was described as being difficult.

4.3.3 Company C

The two respondents in Company C, R4 and R5 discussed in their interviews several challenges which can be present when using agile project methods. R4 described that certain departments in organizations can have difficulties changing as compared to others and that can be a challenge in companies. Moreover, R4 mentioned the following in connection to the work situation for people working in agile project:

"Just a thought, that as time passes this can be quite demanding to work like this if you do not have rotation."

Discussing implementation of agile, R4 stated that if it is not possible to fully implement the method this can present a risk which can be challenging. Furthermore, R4 underlined a challenge in that if a team organized according to waterfall should be aligned into an agile team then there could be issues with commitment from the members. Moreover, R4 described that a hindrance in agile could be that the meeting structure makes it necessary to have a lot of administration which could be a challenge if it takes too much time. Another challenge mentioned by R4 is that in agile the traditional aspect of projects can be difficult and that time and budget need to be less specific. According to R4 communication can be seen as a general challenge in agile. Both respondents also described change management as a challenge. R4 discussed that change management is hard in agile as there might not be possible to allocate time to it. R5 stated referring to the change management not working that:

"[...] if that doesn't work it becomes a big problem and people sort of go against the change and then it will take a lot more time and people will be angry and then you will have organizational problem."

4.3.4 Company D

The respondents R6, R7 and R8 in Company D emphasized various challenges that should be considered by organizations. R6 and R7 discussed the difficulties related to breaking down the work into sprints and estimating the scope, and planning is therefore highlighted as a challenge by R6. Another challenge is that the structure of who is taking decisions is changed, it is no longer the top management but the teams and R6 and R8 believed that it can be a great challenge in overcoming this, especially for those who are used to taking decisions. This is elaborated further by R8 who stated that it could be a large cultural change for companies to start working agile and let go of the previous hierarchical structures. This is related to what R7 discussed, that it can be a challenge for people to start working in teams. R7 highlighted that a big challenge can be the organizational culture when trying to transform the practices to become agile and described it in this way:

"[...] I think the bigger the company the bigger the struggle and it also depends on the culture in the company [...]"

R8 added to the challenges mentioned and stated that the tools utilized can create difficulties if they are not updated because this will add unnecessary administration. Another challenge highlighted by R8 is that the project cannot have a fixed scope, budget or time because the agile project needs to be flexible. Moreover, communication was highlighted as a challenge and that it is important that no communication happens through tools according to R8. R6 also described that when working in an agile project and in short sprints it can become difficult to envision the end goal, and it is described like this:

"This is a bit of a challenge, to understand what we are going to accomplish when we are working in these sprints [...]"

4.3.5 Company E

At Company E, R9 described two challenges that the interviewee faced when working with agile project methods. The first challenge that R9 mentioned was that it can be hard to embrace the flexibility and openness that should be present when working with agile project methods. Another challenge emphasized by R9 was that since the business environment continuously changes it can be a challenge in keeping up and adapting the agile project methods and work to new environments. However, overall R9 stated that they experienced few challenges and described it like this in the following quote:

"[...] we apply agile methods where we perceive that it will provide meaning, and that it is logical, and therefore we have not encountered any larger challenges."

4.3.6 Company F

R10 and R11 at Company F underlined several challenges they experienced when applying agile project methods. R10 emphasized that one challenge is to get everyone to understand

how the agile tools function, and also to get them to work with the backlog grooming since that is often a struggle. Another challenge highlighted by R10 is to get people to understand that a lot of planning needs to be in place for the work to proceed. Many struggle with understanding how long time the different parts take that much time needs to be dedicated towards planning and other activities before you can start working with a backlog according to R10. This is corroborated by R11 as well who described that people often misinterpret agile and what agile stands for, many believe that it is open for chaos. This can then lead to that the stakeholders fear agile and that they lose their engagement, according to R11. R10 also discussed that agile can be difficult to implement for some and described it in this way:

"[...] I think it is more difficult for the business side to take on the agile ways of working."

Furthermore, R11 underlined lack of communication as one challenge where it is important that all the parties involved in the projects get the information needed. R10 also stated that one challenge is that some companies have a rigid organizational culture and they have a hard time to adapt to the agile mindset, they would rather see the final product at once instead of understanding that agile is more focused on continuous progress. This is connected to the discussion by R11, that it can be hard to overcome previous experience and described this in the following quote:

"So I think our biggest challenge is to look past our old or original competence profiles when we look at how to staff our now projects [...]"

Challenges with APM	
Company A	Demanding ownership structure, Expectation management, Documentation, Updated demands, Cultural differences, Maturity of client.
Company B	Governance, Long-term sustainability, Transparency, Expectation management, IT focus, Resource allocation, Difficult to roll out project, Lack of understanding for agile values.
Company C	Organizational inertia, Demanding work structure, Difficult to implement, Difficult to adapt to agile, Communication, Too much administration, Traditional success factors, Resource allocation, Change management.
Company D	Difficult to break down work, Planning, Hard to envision end-goal, Difficult to overcome hierarchies, Organizational culture, Difficult to work in teams, Traditional success factors, Not updated tools, Communication.
Company E	Embracing agile openness and flexibility, Changing environment.

Company F	Understanding of agile tools, Backlog grooming, Difficult for business side to adopt agile, Planning, Lack of understanding for time needed, Rigid organizational culture, Lack of communication, Misinterpreting agile, Lack of continued stakeholder engagement, Difficult to look past old competence profiles.

Table 9: Challenges mentioned by the different companies

4.4 Application and Adoption of Agile Project Methods

4.4.1 Effectiveness of Applied Agile Project Methods

To understand if the respondents thought it was efficient to utilize agile methods in their projects, questions were asked on how they perceived that the agile project methods were working. One respondent, R4, raised concerns and critique regarding agile methods, however, a majority of the respondents felt that they worked well and several aspects were highlighted. R11 stated in connection to how the agile methods are working that:

"I am personally 100 percent convinced that this is the way to work with software development with larger IT implementation, it's the way to run the next generation because you, like I said earlier, you will not be able to separate business and IT much longer."

R1 moreover emphasized that the feedback loops and the continuous communication that are incorporated in agile is an important part in reaching a good result and helps in not missing important parts. This also makes it easier in visualizing the end result, according to R1. This was corroborated by R5 who also emphasized that having feedback loops with the customer works very well. R11 underlined that working agile decreases the lead time which means that you can deliver to the market faster. Furthermore, R8 stated that agile is suitable to apply when the setting is complex and this is when agile is most useful. R6 stated that agile is the reasonable way of working and described the application of agile methods in this way:

"[...] what I think is so beautiful with working agile is the human aspect of it, that you really see the individual and the team and that this becomes the core of everything [...]"

However, R4 described that it can be difficult to apply agile methods when you are producing a physical product because it takes time to do it. R10 also mentioned that becoming agile is a process and not something that happens over a night. Moreover, R2 mentioned that even if the agile project methods work fine, it might not be suitable for every project, sometimes a more traditional approach can be preferable, especially if the customer wants a set budget and time plan. R10 added to this and stated that the agile methodology might not be applicable for everyone but the interviewee still used the agile philosophy when structuring the work. This is also mentioned by R3 who discussed that it is common today to want to have a set budget and deliverables and R3 described this way of working as:

"[...] very contradictory to the true way of agile working, which is why the true agile is more adapted for minor changes in a fluent environment [...]"

Training was also emphasized in the interviews and at Company A, R1 described that they had received internal training in agile and the interviewee highlighted that this was very important in order to get all the employees to understand what agile is. R1 elaborated on the training aspect in the following quote:

"[...] it is probably a good start that we have started having training in it and for example I perceive that the organization is very positive towards it [...]"

R3 also said that they have internal training at Company C and that you can be trained in many different things, however, R3 emphasized that there is nothing better than working with agile and that is when you learn the most. R9 highlighted that it is both practical experience and training that has contributed with learning how to work agile, but that it was easy to start to work agile. R4 and R5 from Company C both stated that they had received training within SAFe but that they do not have any internal training, and R5 said that they currently did not have any mature agile practices in the company. At Company D and F all the respondents said that they had received internal training in agile, and at Company D it was stated that it helped them prepare in working agile. R6 and R11 however highlighted that it was difficult to start working agile, and R8 stated that agile works very well when you have understood it. R8 also said that it is easier to start working agile if you have no previous baggage behind you. The respondent also emphasized that it is usually harder for older companies that have a culture that is built on hierarchies to start working agile than if no previous experience exist. This was corroborated by R1 who mentioned that if an organization have not worked with agile a lot, more changes have to be made. R10 contributed to this and stated that it usually is harder for older people to start working agile because they need to change their way of thinking but R10 described its own experience like this:

"I think that I am a kind of agile person by nature so for me it has never really been anything else."

Moreover, it was also stated by R3, R10 and R11 that agile is "hyped" today, and that can be a reason why many use it. Furthermore, R5 emphasized that agile is the way that people should work today and that it is here to stay, but R1 stated that you cannot generalize how you work in the projects and this is described by R4 in the following quote:

"*I think you always have to find your own way [...]"*

4.4.2 Measuring the Success of an Agile Project

When the interviewees were asked how they would know and measure if an agile project has been successful there were a variety of different replies. One element of measuring success

that a number of respondents, R1, R2, R4, R5, R7 and R11, mentioned using was the client satisfaction. Here, R7 described the measurement in the context of a project as following:

"[...] so far we measure if we has been successful or not if the customer is pleased with us it's really hard to measure it in any other way [...]"

Building upon this R6 highlighted that an aspect of measuring a successful agile project is by the value that has been created for the client with the work that has been done. There were also three respondents, R1, R2 and R8, who brought up the team and employee satisfaction as something which should be measured when doing an agile project. Three respondents, R4, R8 and R11, also stated that they see KPIs as a way to measure success in an agile project. R8 continued by mentioning different types of KPIs that could be relevant for example lead time and value flow, but emphasized that it depends on each project. Another way of measuring underlined by R10 at Company F was if the project had been completed within the time and budget set for the project. R11 in Company F described in connection to the use of budget and timing that:

"That's a misconception of agile, that to whatever cost as long as it produces something cool that's a blatant lie."

Moreover, R3 explained when answering how they would measure the success of an agile project that tools can be of help, however continued by stating:

"[...] but there is always the budget, time and quality."

However, R2 stated that the budget, scope and deadline cannot be fixed when working agile. Moreover, R8 emphasized that the way that they deliver to the client in an agile manner is time consuming in order for it to be successful. Here, R4 highlighted that it can be a difficult task to know which aspects to measure when working agile in projects. R9 stated that they do not measure the project's success at Company E, but underlined that from the personal view of R9 client satisfaction and the satisfaction of the people in the team would be measured. R10 highlighted the learning process as a measurement as well, and said that they looked at if they had learned and improved during the project process.

4.4.3 Future Implication of Applied Agile Project Methods

During the interviews the respondents highlighted various aspects that they learned from applying agile methods. At Company A, R1 emphasized that working with agile methods is a work in progress which means that the process always can be improved. It was also mentioned by R1 that it is essential to get everyone to understand why we are working agile. This was corroborated by R6 and R8, who mentioned that you need to tell people why you have started to work agile because this will more likely increase their motivation. At Company F, R10 underlined that the interviewee had learnt that it is important to have knowledgeable people in the teams and that the teams should be empowered to receive value.

This was corroborated by R11 who stated that it is the people that matter, and that it is valuable that they complement each other. R2 and R7 described that communication is of essence when working agile. R3 and R9 also stated that communication, transparency is important, R3 also added that feedback loops are essential when working agile. Both respondents at Company C, R4 and R5, corroborated this and highlighted that the continuous feedback loops are essential when delivering value, and it is described by R5 like this:

"I have learned what everyone else is sort of learned I mean the strength of this continuous feedback loops [...]"

Moving over to recommendations, R1 highlighted that a recommendation to give to other management consulting firms is that they need to be adaptable to changes and have a positive view towards it, and then it can be easier to have some guidelines in how to work agile in the firm. R4 recommend that management consulting firms should adapt the methods to their work, implementing a framework straight off is not likely to work. R2 continued by stating that it is important that the project method is adapted to the client's needs, and that the people that take the assignment understand the scope of the project. R6 and R8 from Company D underlined that you need to remember to have a continuous communication with the customer since this ensures if the project is on the right track or not. R9 mentioned another recommendation which was that the work in progress in Kanban should be limited to ensure that you do not work on too many tasks at one time. In the following quote R1 moreover recommended management consulting firms this:

"[...] you have to abandon certain ways of working that you have had before, try new things."

However, R4 mentioned that it could be challenge to apply agile project methods. Here, R3 and R4 underlined that agile project methods are still very focused on IT and it has been difficult for companies outside the SDI to understand the mindset of agile. R10 contributed to this and stated that agile project methods are still more applicable when it comes to systems development. This was discussed by R11 as well, when stating that we can no longer separate IT from business, they will only become more interconnected so companies cannot fear it. The recommendation that R11 described is that everyone should try it. R7 mentioned the agile mindset as well and described it like this:

"[...] you should train people and it's important that they understand the agile mindset because it is actually a mindset [...]"

Furthermore, R6 at Company D emphasized that they try to disconnect the word project from agile and not use the word project because it is so closely connected to the traditional ways of working. This was also emphasized by R7, R8 and R9. Lastly, R11 in Company F stated that in connection to the agile methods:

"So I think for me it is about reinventing what is the old management consulting ways of working and understanding what is the need of the market to do so."

5. Analysis

The analysis chapter will focus on connecting the theoretical framework to the empirical data. The first part is regarding the methods which the interviewees described and here it is contrasted to the literature from the literature review. Then the KSFs and challenges are highlighted both first in connection to the literature but then also the aspects which were specific to the interviews are depicted. Lastly, a section regarding the application and adoption of agile project methods is presented.

5.1 Agile Project Methods in Practice

The usefulness of agile in projects was highlighted by the respondents in the interviews. Here, R6 emphasized that the agile way of working is the only reasonable way. Several methods were underlined in the empirical data and the most prominent were Scrum and Kanban, these methods were also underlined as being some of the most utilized in the literature (Hallin & Karrbom Gustavsson, 2012; Wysocki, 2014; Gustavsson, 2013b). However, since other methods were brought up by the respondents in the interviews, they will also be discussed further. Consequently, this part of the analysis strives towards describing the methods and their application both from the literature and the empirical data. Relating this further to the application of agile project methods, most of the respondents highlighted that the agile way of working is good, however, there were also more critical viewpoints which were brought forward by R4. Here, in addition Gustavsson (2013a) states that there are situations when agile should not be applied, and Gustavsson (2013b) finishes by stating that the use of an agile project method do not have to imply that all the elements of that project method is or should be used. This creates relevance for comparing the literature on these methods with the empirical data to enable for an understanding of how these agile project methods are applied in the MCI. Table 10 below illustrates the agile project methods and their characteristics that were highlighted in the literature, Scrum and Kanban, and the connection between the literature and the empirical data will be elaborated on after the table. However, since the literature review did not describe any other agile project methods in detail, such as SAFe, it will not be included in this table. This will be elaborated on later in this section.

Applied Agile Project Methods: Comparing Literature with Empirical Data											
Applied Agile Project Methods	Company A		Company B	Company C		Company D			Company E	Company F	
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11
SCRUM	**X**	**X**	**X**			**X**	**X**	**X**		**X**	

Transparency (T), Inspection (I) & Adaption (A)	T;A	A;I						A;I			
Iterative Process	x	x				x		x		x	
Self-organizing (SO) & Cross-functional (CF) Teams	SO	SO				SO				SO CF	
Artifacts: Product Backlog (P) & Sprint Backlog (S)	P	P;S	P			P;S		P		P	
KANBAN	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Tool: Visual Board		x		x	x	x	x	x	x	x	x
Planned-work, Work-in-progress & Finished						x	x		x		
Self-organizing Teams							x			x	
Continuous Work Process		x	x			x	x				

Table 10: An outline of the applied agile project methods comparing the literature and empirical data

5.1.1 Scrum

The framework of Scrum is today one of the most common agile project methods applied (Hallin & Karrbom Gustavsson, 2012; Wysocki, 2014). This was corroborated by the data collection where five of the six companies mentioned Scrum as a framework applied. However, several of the respondents highlighted that Scrum was often applied in IT projects or software development, and a reason for this could be that it originates from the SDI according to Hallin and Karrbom Gustavsson (2012). It was also mentioned by R10 that Scrum is more applicable when it comes to systems development and that it is easier for IT departments to start working with Scrum. In contrast to this, R6 emphasizes that Scrum is a framework that the interviewee believes could work for any type of project, and not only IT. Moreover, to understand the usefulness of Scrum in projects it is important to consider the

foundation of the framework in itself. According to Schwaber and Sutherland (2017), the foundation of the Scrum framework is the three main pillars of transparency, adoption and inspection. R1, R2 and R8 were the only respondents that mentioned these concepts (see table 10). A reason for the lack of connection between the literature on Scrum and the data collection in this instance is not because these were not mentioned at all but rather that they were not linked by the respondents to Scrum. Therefore, when R3, R4, R7, R9, and R11 mentioned these characteristics it was more in connection to projects in general and not specifically relating to Scrum. Thereby, indicating that the pillars of Scrum could be applied more generally to agile projects in the instance of the specific projects of the respondents.

5.1.1.1 The Process of Scrum

The process of Scrum is described as fairly standardized by R5 and this is underlined in the literature as well where Cervone (2011) highlights that Scrum has a general process which firms follow. The process consists of five phases according to Schwaber and Sutherland (2017), and it is the sprint, sprint meeting, daily-scrum, the sprint review and the sprint retrospective. However, it was only R1, R2 and R6 who described that they applied this process straight off, while other respondents instead emphasized that they applied specific aspects of the Scrum framework that suited their current project. This can be connected to what Tonnquist (2012) argues, that agile methods might not be best used alone and this can indicate that the respondents apply some of the Scrum aspects in their projects. However, even if few respondents mentioned the Scrum process almost half of the respondents underlined the core idea of Scrum, and that the work should be done in an iterative process (see table 10). This is corroborated by Hallin and Karrbom Gustavsson (2012), as well as by Schwaber and Sutherland (2017). R4 moreover highlighted that almost every agile methodology is based on iterative development since this is stated in the "Agile Manifesto". Also as described by Gustavsson (2013a) the "Agile Manifesto" emphasizes the most valued principles when working agile. This can therefore indicate that having an iterative process is important when working agile in general and not only in Scrum.

5.1.1.2 The Roles in Scrum

The roles in Scrum are described by Schwaber and Sutherland (2017) and they are the Scrum master, the Scrum team and the project owner. These roles were mentioned by the respondents as well, here Company A and D described the role of the Scrum master in connection to Scrum. Although this could be indicating that the Scrum master is a relatively important role within the MCI, it should be noted that these firms have an IT component in their company or project. Therefore, this could impact the actual usage of the Scrum master and the number of respondents who reported using it. Relating to the other roles in Scrum, it was only R2 and R5 who emphasized the role of the project owner and R2, R4, R5 and R10 talked about the Scrum team. There were instead other roles that were highlighted by the respondents, and many of the roles were connected to IT development such as testers and

developers. This would support the argument that management consulting firms work with IT projects and that IT currently becomes integrated into more industries.

Schwaber and Sutherland (2017) moreover state that the team in Scrum should be self-organizing and cross-functional to be become as flexible and creative as possible. Here, the literature and the empirical data only correspond to some extent (see table 10). R1, R2, R6 and R10 mention that the team in Scrum should be self-organizing, but only R10 highlights the importance of cross-functional teams. However, R4 expressed the importance of cross-functional teams when talking about agile methods in general. The reason why the literature and the empirical data do not correspond to a great extent in terms of roles in Scrum, could be due to the fact that few of the respondents use all of the aspects mentioned in the Scrum framework. However, looking at this from another viewpoint it could also mean that the teams within the management consulting firms are cross-functional in nature and that their teams already are constructed in this manner, or that it is in fact not considered relevant with cross-functionality. Still, the authors consider the first explanation more plausible as several of the respondents discussed elements surrounding that topic.

5.1.1.3 The Applied Tools in Scrum

Within Scrum one of the most common tools is the backlog, where Schwaber and Sutherland (2017) mention two, the product backlog and the sprint backlog. More than half of the respondents described that they use a product backlog when applying Scrum, however it was only mentioned by R2 and R6 that they also use a sprint backlog (see table 10). Moreover, several of the other respondents emphasized that they applied a product backlog, but in connection to other agile project methods, such as SAFe. It illustrates that parts from the Scrum framework have been adopted into other agile project methods, maybe due to the functionality it provides. However, there were a few tools mentioned by the respondents that were not brought up in the literature. Accordingly, all the companies highlighted that they applied software programs in Scrum. User stories was another tool underlined by four of the respondents, R1, R2, R6 and R10, but R6 stated that this tool is specifically connected to IT development and might not be applicable in the MCI. The reason why these tools are not mentioned in the theoretical framework could be because the authors excluded much of the literature connected to software development, but an indication could be that it can be hard to make a separation between agile projects methods and the IT industry, especially since Scrum was created for software development (Hallin & Karrbom Gustavsson, 2012).

5.1.2 Kanban

All of the respondents in the companies mentioned Kanban and several described the use of Kanban as a method in projects, which would correspond to the view by Gustavsson (2013b) who elaborates on the aspect that Kanban is one of the most utilized agile methods that exist. Moreover, R3 described that Kanban could be used when the projects concern change. Here, Gustavsson (2013a) also describes that Kanban is beneficial to use when there are changes happening throughout the project. This thereby indicates that the respondent sees a similar

usage for Kanban as is described in literature in connection to its applicability. However, it is mentioned by R6 and R7 that they only practiced certain elements of Kanban in their work, something which is partially explained by the writings of Kniberg and Skarin (2009) that state that Kanban is highly adaptable as a method. This would thereby explain why some elements could be used while others are not employed in a project.

5.1.2.1 The Process of Kanban

The literature does not specify a path which all Kanban projects follow, however, the process in Kanban is described in literature as a continuous work process by Gustavsson (2013a) and Tonnquist (2018). This was also brought up in the interview with R2, R3 and R7 who stated that the process of working is continuous in how elements are being added to the backlog. Thereby, the characteristics set for Kanban by the authors of this thesis (see table 11) based on the literature, appear to have a place also in the way of working that is evident in the respondents companies. Kanban is described both as continuous (Gustavsson, 2013a; Tonnquist, 2018), but also adaptive (Kniberg & Skarin, 2009). It could therefore speak to the appeal of this framework for practitioners in the management consulting firms, as they can adapt the framework to their needs and continuously carry out the tasks in a project. Moreover, even though one of the respondents, R7, accounted for an entire process which would be followed in Kanban. Some of the respondents, R2, R3 and R6, did not underline a specific process, but rather pointed towards the different characteristics of Kanban and the important elements. This would connect to the initial statement, where the continuous nature of Kanban was underlined. Subsequently, this would add substance to the notion of a less structured process being applied in Kanban, as the work is shaped throughout the project. This could be indicative of a partial explanation for the usefulness of Kanban in projects, which handle change (Gustavsson, 2013a), as Kanban is highly adaptive (Kniberg & Skarin, 2009).

Moreover, authors also emphasize that the Kanban board, which can be described as being at the center of Kanban, it consists of columns which are: Planned-work, Work-in-progress and Finished (Tonnquist, 2018). Here, R6 emphasized that they have a limited number of tasks which is worked on, meaning the work-in-progress. This would connect to the statement by Gustavsson (2013a) who states that a vital part in using Kanban, is to limit the number of permitted tasks in the work-in-progress column. Another aspect was emphasized by R8, who stated that the Kanban method is difficult to fully embrace and that it might therefore be that several agile methods are combined. This align with what R9 described, namely that they use the methods that are most suitable to the project. Here, it is discussed by Tonnquist (2018) that Kanban often is applied in different agile methods. This connects to Kniberg and Skarin (2009) that state that methods such as Kanban and Scrum work best when they are mixed with each other to suit the needs of the project. This could point to the aspect that the methods and processes in agile are connected, and that utilizing them together could yield the best outcome. This would be in line with the statement by Tonnquist (2012) who underlines that agile methods are better when they are used with each other. Mixing the elements of different

agile methods, including Kanban is therefore appearing to be both an element in the literature, but also something that some respondents who work in the MCI emphasize.

5.1.2.2 The Roles in Kanban

Literature on Kanban is clear on stating that with this method roles are not used, however, it is emphasized by Kniberg and Skarin (2009) that the team in Kanban is self-organizing. Here, R7 and R10 claimed that the Kanban team needs to be supportive. These two statements could be connected to each other in that the supporting members of a team could indicate that it is more self-sufficient and is able to organize and solve issues internally. This is something which speaks to the independence of the Kanban team. Relating further to the roles in Kanban, none of the respondents described fixed roles which they use in Kanban, which correspond to the literature. The exception was R7 who stated that a product owner is usually present in the project. However, the general alignment can be said to be indicative of a flexibility in the method of Kanban which goes in line with the foundation of the agile methodology as such where Gustavsson (2013a) underlines both that the flexibility in itself is a driver in agile and that in agile projects it is desirable to have roles.

5.1.2.3 The Applied Tools in Kanban

The tools in Kanban are few and from the literature review, it can be stated that Kanban in itself can be considered as a tool as it originates from the lean methodologies (Tonnquist, 2018). Further literature also describes Kanban as a project tool (Gustavsson, 2013a). Although the interviews revealed that there are respondents in Company A, C, D, E and F who use Kanban only as a tool, some of the respondents reported using Kanban as a more comprehensive method. Thereby, showcasing differences in its use but still that both respondents and literature highlight that it can be used as a tool (see table 10). Other literature considers that Kanban can and should be adapted to other methods such as Scrum to suit the project (Kniberg & Skarin, 2009). This thereby indicates that Kanban can be used both in connection with other approaches to agile and as a visual management tool, but also on its own and that the evidence from practice supports this claim from literature. Relating further to tools within Kanban, Tonnquist (2018) states that Kanban is used to visualize different tasks. Several respondents reported using different ways to facilitate the presentation and continuous use of the Kanban board. R7 and R8 underlined that they use Post it notes to showcase tasks on the Kanban board, while R10 and R11 claimed to be using software programs for maintaining the Kanban boards updated in the projects. As literature does not specify the medium for presenting the different tasks on the Kanban board and evidence from the interviews show that the respondents used different ways of showcasing the tasks. This indicates that the Kanban board can be used to suit the project, which correspond to the literature where it is stated that Kanban is an adaptable method (Kniberg & Skarin, 2009).

5.1.3 Other Agile Project Methods

In the empirical data it was clear that other agile project methods were also applied in practice in the MCI. It was described by several of the respondents that they applied scaled agile frameworks, which is a combination between the traditional and the agile project methods. R3 emphasized that this framework is a method that many seek to use, and a reason for this could be that it might be easier for firms to start using a combination of the traditional and the agile methods. However, no literature connected to the combination of agile project methods and traditional project methods could be identified. R10 provided a partial explanation for this when the interviewee described that combining agile and traditional is not sufficient to do in the long-run and should only be applied in the transition phase. Still, an indication of why scaled agile methods have become popular to apply in practice could be as R10 stated that you cannot become agile overnight and R6 and R11 moreover said that it is difficult to start working agile. Scaled agile frameworks could thereby be used to ease the transition. Moreover, Kniberg and Skarin (2009) also state that Scrum and Kanban should be used with each other to meet the needs. This is corroborated by Company D, where R8 highlighted that their delivery model is based on a combination of Scrum and Kanban. R7 and R11 also described that a product backlog is used when working with Kanban, and R10 and R11 underlined that they use roles and tools from Scrum when applying SAFe. Thus, an indication could be that it might be more common that a combination of agile project methods are applied, rather than applying one framework exclusively. A reason for this can be as explained by R2, R3 and R4 that the agile project methods must be adapted to the needs of the client, and then it might be easier to apply a combination than only one framework. This was also explained in the article by Dikert et al. (2016), where they concluded that firms often apply several agile frameworks together, indicating a connection between literature and practice.

However, as argued by R2 and R3, agile project methods might not be applicable in every project, sometimes a traditional approach might be better suited. This is corroborated by Gustavsson (2013a), Gustavsson (2013b) and Tonnquist (2012) who also argue that agile is not applicable in every project, especially when there is a set budget, time and scope. Hence, this indicates that both the literature and the empirical data illustrated that even if agile project methods are efficient to apply, sometimes it needs to be considered that it might not be applicable. As stated by R4, the important part is to find your own way when working with agile methods, and you cannot use the same methodology for every project according to R3.

5.1.4 Comparison between the Cases

To understand how the different cases relate to each other it was seen essential to compare them. Concerning applied agile project methods the cases shared more similarities than differences. As highlighted above, all companies mentioned Kanban and everyone except one company mentioned Scrum. This indicates that Scrum and Kanban are methods that the management consulting firms in this thesis apply in practice. Concerning Scrum, it was

evident that the main characteristics of Scrum projects mentioned by the respondents could be applicable to other agile project methods as well. Moreover, all case companies except one also emphasized at least one scaled agile framework, which was applied in practice. A reason why the different cases correspond to a great extent may be because there are not that many agile project methods that can be applied, due to the clear connection of many frameworks to software development. It is therefore the agile project methods mentioned that might have reached a more mainstream audience and could be applicable to the MCI.

5.1.5 Key Takeaways

Relating to the main research question, and the first sub-question it can be seen that management consulting firms are applying agile project methods in their work processes. The most used methods are Kanban followed by Scrum and SAFe. However, very few of the respondents are using one framework exclusively, and it is more common to use a combination of several agile project methods to suit the customer needs. These combinations can be in the form of tools, roles or ceremonies, which are taken from different methods but that are used together. Here, it became apparent from the cases that the traditional methods are being utilized alongside the agile project methods. Thus, Tonnquist's (2012) statement that the agile methods should be mixed is applicable and it can be extended in the context of these cases where the traditional methods can be mixed with the agile project methods.

5.2 Key Success Factors and Challenges: Applying Agile Project Methods

Today, it is argued by Špundak (2014) that APM is the suitable alternative to utilize when conducting a project, which is corroborated by some of the respondents when they explained that applying agile project methods is the way to work today. Moreover, Rigby et al. (2016) state that the agile methods are forecasted to transform every industry. Therefore, considering the impact agile project methods are predicted to have, it is essential to examine which routes a company should take to make their transition to agile smoother. Thus, the KSFs and challenges with applying agile project methods should be elaborated on to increase this understanding. As described by Gustavsson (2013a), agile is applicable in some situations and contexts but not in others and it might thereby be of importance for companies to understand what aspects they should focus on to succeed. However, in the literature, much research on KSFs and challenges are directed towards agile transformation in general and literature connected to the SDI (Conforto et al., 2014: Dingsøyr et al., 2012; Javdani Gandomani et al., 2015; Jovanovic et al., 2017; Dikert et al., 2016).

The empirical data illustrated various KSFs and challenges that the respondents felt were important to consider, however, these varied both between the cases and between the respondents, indicating that it could be related to the experience of the interviewees. Thus, the KSFs and challenges that emerged could be seen when comparing both the empirical data and the theoretical framework. Therefore, to see which KSFs and challenges exist when applying agile project methods, the authors decided that respondents in at least half of the case companies have to mention the same one for it to be considered to have an overarching

impact on the management consulting firms in this study. Since this is a comparative multiple case study it was decided that the number of cases was the deciding factor for it having a more all around impact on the case companies. Furthermore, there were KSFs and challenges that two of the companies mentioned and they will also be discussed further as they are of interest in the context of this research.

5.2.1 Key Success Factors

When applying agile project methods certain KSFs have been distinguished by researchers that companies can consider in order for an agile project to become successful. In table 11 below, a comparison between the literature and the empirical data can be seen, and as illustrated few KSFs correspond to a great extent. The following section will elaborate on the similarities and differences between the literature and empirical data in terms of KSFs, and they have emerged both from the literature and solely from the empirical data. The KSFs that emerged only from the empirical data will not be illustrated in table 11 since those exclusively concern the KSFs highlighted in the theoretical framework. Furthermore, this section will describe the KSFs that will be stressed as main since they are mentioned by at least three of the case companies, but other KSFs also emerged that two companies emphasized and these will therefore be discussed as well.

5.2.1.1 Key Success Factors: Evidence from the Literature and the Data Collection

According to the literature eight KSFs could be distinguished to have an impact on the application of agile project methods. However, due to the origin in the SDI much research on KSFs have been directed towards this industry (Conforto et al., 2014: Dingsøyr et al., 2012). This has impacted the relationship between what the literature stated in terms of KSFs and what the respondents emphasized (see table 11). A reason for this relation could be that the theoretical framework is directed towards more general literature connected to KSFs in agile transformations as well as some of the literature is connected to the SDI. However, three of the KSFs, *Transparent communication, Alignment of organizational mindset* and *Customization of agile project method,* are mentioned by both the literature and empirical data. Why these have been highlighted by both could be due to the fact that it is difficult to start working agile if you do not communicate it throughout the organization and align everyone to work in this manner. Communication was also underlined by Gustavsson (2013a) as key in agile projects. Moreover, that it is important to customize the agile project method both to the organization as well as to the client, since this could contribute with advantages that could be missed if an organization would try to apply one framework straight off. It could therefore be argued that certain agile project methods might be best suited for organizations in a specific type of industry, for example Scrum might be better suited for software development since it originates in the IT industry (Hallin & Karrbom Gustavsson, 2012). Building on this it could be stressed that it could be better to customize the approach to organizations' needs than applying a framework that has been created for another industry.

This illustrates that the MCI has realized the need for customization. Therefore it could also be applicable to other industries even though the literature is not specific to the MCI.

Moreover, none of the other KSFs in table 11 have been identified to have an overarching impact. This could be due to the lack of specific research on KSFs related to this specific industry, here, a gap in the literature has been identified by the authors, as much literature on APM is concerned with another industry, software development (Conforto et al., 2014; Dingsøyr et al., 2012). This can give an indication that the MCI is not affected by the same KSFs as the IT industry is, but that they rather need to focus on other aspects to succeed with working with agile project methods. Thus, it could be argued that more research needs to be directed towards the industries that apply agile project methods since the authors identified that the KSFs highlighted in connection to IT is not relevant for the MCI. However, one KSF stands out, and that is traditional success factors, which is not mentioned by any of the respondents. According to Pinto (2016), traditional success factors consist of the three factors of time, budget and performance, but the Project Management Institute (2017) emphasizes that measuring a project with time, cost and quality is not common anymore and that the focus has shifted. This can indicate why none of the respondents mentioned it, since literature indicate that it has decreased in importance over the years (Project Management Institute, 2017). Another alternative is that when working agile you cannot have a fixed time limit and budget according to Tonnquist (2012) and Gustavsson (2013a). Thus, it might have been more contradictive if the respondents had mentioned traditional success factors as a KSF when working with agile projects since it goes against the concept of working agile. This was highlighted by R2 and R3 who underlined that if the customer wants a set budget and scope, working agile is not applicable.

Furthermore, a few main KSFs emerged solely from the empirical data that was highlighted by at least half of the case companies. The first main one is, *Understanding of agile*, where respondents at company C, D and F emphasized the importance to understand the agile methods and values before applying it, since as R10 and R11 mentioned that many misinterpret what agile is. The second main KSF is, *Knowledgeable teams,* where the importance of skilled team members with different expertise are vital to have according to company B, C and F since the majority of the work in agile is done in teams. The third main KSF is, *Customer involvement*, where it was highlighted that having the customer involved in the process and providing feedback is an important part to achieve a successful end result according to company A, B and E. The last main one is, *Software programs*, here R6 stated that software programs should facilitate the work and according to company A, B, D and F software programs are an efficient contributor when working with agile project methods. The first three main KSFs that emerged can be somewhat connected to what the literature states. For example, Schwaber and Sutherland (2017) and Kniberg and Skarin (2009) underline the importance of teams in Scrum and Kanban, and this can indicate that the literature correspond to what the MCI emphasize in practice. It is also stressed by Misra et al. (2009) that having a collaboration with the customer is an important key success factor in the SDI. This can therefore indicate that some of the KSFs connected to the IT industry are important to

consider for the MCI as well. This can also be related to that software programs have not been highlighted in the literature, which can indicate that the literature has not captured this yet. This corresponds to what R11 described, that IT cannot be separated from business much longer, and an indication could be that the management industry is heading in this direction as R11 emphasized, that the MCI needs to reinvent itself.

Additionally, as stated in the beginning of this section a few KSFs were mentioned by two of the case companies and these will therefore be elaborated on since they can have an impact on the management consulting industry as well. Two of these were mentioned by both the literature and the empirical data and those are, *Coaching and training in agile values* and *Clear goal-setting*. However, the empirical data stressed another KSF that was described by Company C and D and this was, *Continuous feedback*. Here, the respondents in these companies emphasized the importance of having continuous feedback loops in place to improve the learning as well as the project process. This has not been identified in the literature indicating that a gap exists but it could also mean that this has not been seen as important in the IT industry or in agile transformation in general (Conforto et al., 2014; Dingsøyr et al., 2012), and that continuous feedback therefore is something which could be more exclusive to the MCI.

KSFs: Comparing Literature with Empirical Data											
KSFs: from literature review	Company A		Company B	Company C		Company D			Company E	Company F	
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11
Traditional success factors											
Coaching & training in agile values		x									x
Transparent communication	x	x	x	x	x				x	x	x
Management support				x	x						
Alignment of organizational mindset			x			x	x	x			x
Adaptive culture					x						

Customization of agile project method		x	x	x							
Clear goal-setting				x					x		

Table 11: An outline of the key success factors comparing the literature and empirical data

5.2.2 Challenges

There are a number of different challenges which became apparent from the literature and the data collection. This section will focus on the comparison which can be made between the evidence from the literature review and the results from the empirical findings, as can be seen in table 12 below, and this table will only include the challenges stressed in the theoretical framework. Moreover, the data also showcased a variety of new challenges which were not present in the literature and these will also be discussed. In this section the challenges described will be distinguished between main, which means that they have to be emphasized by at least three case companies, and other challenges that emerged from the empirical data that were emphasized by two companies but are seen valuable to elaborate further on.

5.2.2.1 Challenges: Evidence from the Literature and the Data Collection

The focus from the literature review on several challenges which could emerge when adopting an agile way of working is mainly on the software industry and concerns large scale transformations (Javdani et. al., 2015; Jovanovic et al., 2017; Dikert et al., 2016). The reason for this focus in the literature review is because there is a gap in the literature concerning the challenges in the MCI. This has partially resulted in that this thesis has revealed a distance between the challenges that the respondents reported having and the challenges which became evident in the literature review. From the data collection it could be seen that there were four main challenges from the literature review that enough respondents from the case companies mentioned in order to qualify in this thesis as having an overarching impact on the process of applying agile project methods (see table 12). An additional main challenge was mentioned by three case companies but was exclusive to the data collection.

Four main challenges were mentioned in the interviews, which also were evident from the literature review in this thesis. These challenges were: *Organizational inertia,* mentioned by Companies C, D and F, *Difficulties to implement,* as described by Company B, C, D and F, *Lack of understanding for agile values,* stated in Company B, E and F and *Poor communication in organization* described by Company C, D and F. It should be noted that in literature all these were highlighted in relation to the larger transformation processes, the software industry or more generally concerning agile (Javdani Gandomani et al., 2015; Gustavsson, 2013b; Dikert et al., 2016; Van Waardenburg & Van Vliet, 2013; Boston Consulting Group, 2019). Building upon this, it could therefore be regarded that the challenges in the other contexts could be relevant to some extent also in the MCI. This would

indicate that perhaps there are some overall challenges with applying agile project methods regardless of the context. However, there were only four challenges which were consistent between the two and thereby several of the challenges from the literature were not mentioned as such, this must also be taken into consideration as this showcase clear distance between the two contexts as well.

Still, the challenges which were alike can be reflected upon. Relating to the challenge, lack of understanding for agile values it could be argued that to succeed in implementing an agile method in a project, it would be necessary to understand the method as such. Here, also in literature Gustavsson (2013a) highlights that agile methods in projects are complicated, which would further emphasize the need for understanding agile before implementing it. Moreover, the core of three of the challenges: the communication, the implementation and the organization could all play an important role in any industry. Here, the lack of a specific situational connection of these challenges to the MCI could be an explanation of why it is also applicable in both larger software transformations and in management consulting. As an example from the literature, Cervone (2011) underlines that having good communication between the members in an agile project team could increase the productivity. This could account for its relevance both in the larger transformations and the MCI, as communication appears to be essential in providing with the productivity of agile project methods in general.

The challenge which was most prominent in the empirical findings was difficulties to implement, four of the case companies brought this up, highlighting a vast importance for the cases at hand in the MCI. This can be connected to the statement by Gustavsson (2013a) where it is underlined that agile methods are not always applicable to a project. Thus, as the method was created to accommodate certain needs and challenges present in the SDI (Dybå & Dingsøyr, 2008; Abrahamsson et al., 2002), it could be that implementing and transferring it to a new industry and situation could cause difficulties in the implementation and adoption as the need and situational context differs from the initial necessities. Thereby, providing a potential explanation for its importance in both the contexts. Relating more to the specific views of the respondents there were some alignment between them concerning another main challenge which have not been presented in the literature review. Here, a majority of the respondents highlighted exclusively to the interviews, *Cultural difficulties*. It relates to the difficulties that can appear when the culture in the organization contributes to a difficulty in adjusting to the new agile way of working as old routines could be in place, according to Company A, D and F. A similar challenge was identified in the literature, rigid culture (Jovanovic et al., 2017; Tolfo et al. 2011; Gustavsson, 2013b), however, the focus of the cultural difficulties in the interviews were broader and not only specifically referring to rigidity. Therefore, the authors of this thesis regards the challenges in the empirical context as presenting cultural differences at large as a challenge specific to the MCI evident in the cases.

Furthermore, there were challenges which were only mentioned in the empirical findings which although they do not classify as overarching according to the definition in this thesis, will be brought up here in order to broaden the discussion. These challenges were:

Expectation management, *Demanding work* and *Traditional success factors*. The reason behind their importance is considered to be that since two case companies mentioned them it could have an impact on the companies that have been studied. Thus, bringing them up creates transparency in the thesis. Moreover, one challenge from the literature which was not mentioned at all was the lack of top management support. The reason behind it not being evident from the data collection could be due to it being specific to large scale transformations (Javdani Gandomani et. al., 2015) and that the MCI seen from the perspective of the interviewees do not have that same challenge. However, it should be noted that several challenges which were brought forward in the interviews were different between the respondents and therefore it could be that the perception of challenges is something which is not only personal but also dependent on specific situational factors.

Challenges: Comparing Literature with Empirical Data										
Challenges: from literature review	Company A		Company B	Company C		Company D			Company E	Company F	
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11
Lack of understanding for agile values			x						x		x
Lack of agile training					x						
Poor communication in organization				x				x			x
Lack of top management support											
Organizational inertia				x		x		x			x
Rigid culture										x	
Difficulties to implement			x	x		x	x			x	

Table 12: An outline of the challenges comparing the literature and empirical data

5.2.3 Comparison between the Cases

What generally could be seen was that the KSFs and challenges mentioned could not be connected to a specific agile project method, for example Scrum or Kanban, this since the provided answers were related to more general aspects. Concerning the KSFs that could be seen, three main KSFs corresponded between the literature and the data collection. This showcases that there seem to be an alignment of certain perceptions with the respondents in the same company, but also that it can differ between cases. Furthermore, there were also KSFs which were only brought up in the interviews and there were four KSFs which the respondents mentioned. This emphasizes that there are seven main KSFs which were mentioned by at least half the case companies, highlighting a common ground for the different firms in the MCI. Concerning the challenges, four main could be identified when comparing the literature and the empirical data. However, it was also one main challenge that was emphasized in the empirical data, which summarizes that five main challenges could be identified that was mentioned by at least three case companies.

Overall what could be distinguished from the empirical data both regarding the KSFs and the challenges was that they were context dependent and sometimes hard to compare due to the differences in experience of agile project methods. In terms of KSFs, what can be seen is that there were more KSFs which the case companies had in common than challenges. Concerning the challenges it was illustrated that all the main challenges identified was mentioned by Company F while Company A only described the main challenge that was presented from the empirical findings, indicating that they did not correspond to the literature at all. A reason for this could be the level of experience the respondents at these companies have. Because the respondents at Company F had more experience of working with agile projects methods than the respondents at Company A had. This could thereby indicate that if a management consultant has more work experience with agile project methods, they would also have experienced more different challenges surrounding a project which would imply why they mention the same as the literature describes. Therefore, a conclusion could be that if the respondents would have had similar work experience of agile project methods the answers could have corresponded to a larger extent. But it could also be important to consider the personal opinions of the respondents, since all humans are different and what is considered is also challenge may also differ.

5.2.4 Key Takeaways

From the analysis of the KSFs and the challenges a few key takeaways can be identified. Concerning the main KSFs it has be shown that the data collection only partially supports the KSFs found in literature but that the similarities between the data collected highlight several KSFs that they have in common. Relating to the main challenges, it could be shown that there also are some similarities between the data collected and the literature. However, there were distinct differences between the KSFs and challenges when it came to which case company described them. With KSFs it were quite an even spread between the different cases of which

they mentioned, while with challenges one case company mentioned all while another case company did not mention any stated in the literature. This difference could have several possible explanations including situational differences, personal opinions, the project environment and most likely the work experience related to agile project methods.

5.3 Application and Adoption of Agile Project Methods

The agile thinking had its breakthrough in the 1990s when it became popular to utilize in the SDI (Gustavsson 2013a; Campanelli & Parreiras, 2015). However, in recent years several researchers have stated that agile methods can be applicable in almost every industry (Rigby et al., 2016; Denning, 2016; Gustavsson 2013a). This was corroborated by the empirical data as well, where R2, R6, R7 and R8 highlighted that agile project methods can be applicable for any type of project. However, while some experienced it to be easy to start working with agile project methods, some respondents had more difficulties. This relates to the challenge, difficulties to implement, mentioned by several of the case companies. Gustavsson (2013a) partially corroborates this when stating that it is difficult for beginners to start applying agile. Depending on how one would interpret this, the empirical data can both contradict and corroborate Gustavsson's (2013a) statement above. Here, R8, R10 and R11 described that it is a smoother transition to start working agile if no previous experience exist of working with traditional project methods. It could be understood that if you are a beginner at agile project methods it might be easier than if it is necessary to re-educate from a traditional context. Thus, what Gustavsson (2013a) stated could be problematized since it is unclear what type of beginner he is referring to. This since the empirical data underline that it is easier for people in an organization who have no previous experience of projects to start working in agile projects. Thus, they might not face the challenge of having to overcome an old mindset that creates an overall organizational inertia. Thereby, it is emphasized by the different companies that training and practicing agile is of high importance and this is aligned with the KSF of understanding agile values since if the training that is needed is received in agile it will be easier to understand the concept. This can also be related to the KSF of transparent communication where the exchange of knowledge can ease the process to start working agile.

Moreover, it could be argued that the challenge of implementing agile project methods is indicative of why scaled agile frameworks have become popular, since it could be assumed to be easier to start doing a smaller transition to agile if it is overall difficult to apply. Thereby, the identified challenge of perceiving difficulties to implement is relevant to consider here. Thus, it could be presumed that the scaled agile methods work as a bridge between traditional and agile to ease the process of beginning to work with agile project methods. This can be related to the concept of "wagile", which R3 described in the interview, where it was emphasized that working "wagile" combines the structure that traditional methods provide, with the agile feedback loops. Since working purely with a waterfall model can lead to inflexibility (Balaji & Sundararajan Murugaiyan, 2012), the scaled agile methods can reduce the rigidness present in this model by combining it with the flexibility highlighted in agile by Hallin and Karrbom Gustavsson (2012) and Gustavsson (2013a). Therefore, one could argue

that the scaled agile frameworks might have been created because working with agile is difficult. Here, Blomberg (2013) continues this line of thinking and states that the methods in agile are becoming more similar to the traditional project methods.

Additionally, a perception the authors captured during the interview with R4 was that agile project methods might not be as efficient and suitable to apply as everyone believe. R4 described that it can be a challenge to apply agile project methods when you are not working with IT, which is contradictory to much of the literature that states that agile is applicable outside IT (Conforto et al., 2014; Fernandez & Fernandez, 2008; Rigby et al., 2016; Denning, 2016). Hence, one should perhaps not make rushed conclusions about the effectiveness of agile project methods, this since it is described as a current "hype" by R3, R10 and R11. This could indicate why many apply agile project methods today. But as argued by Blomberg (2013), agile projects are not contributing with agility and flexibility, which could indicate that agile might not be as efficient as other literature states.

5.3.1 The Impact of IT on the Adoption of Agile Project Methods in Management Consulting Industry

Furthermore, even if agile project methods can be applied outside the SDI (Gustavsson 2013a), the majority of the research on this topic is related to the IT industry (Conforto et al., 2014; Dingsøyr et al., 2012). This could be indicating that it still might be highly connected to this industry. This could create challenges for other industries such as the MCI that want to start applying agile project methods. This was emphasized by R3, R4 and R10 who mentioned that agile is still related to the IT industry to a great extent and according to R10 it is still more applicable when it comes to systems development. However, it could be seen that the companies with an IT department within the firm, also had more agile project methods in place. Furthermore, having IT as an integral part of the company could contribute to a wider usage of software programs, it could be of importance since this is highlighted as a KSF in this thesis. Additionally, this can indicate that the management consulting firms that have IT integrated in their organization have made more progress towards working agile. As both the literature and empirical data illustrate, this could lead to a gradual adoption rate for management consulting firms that want to start applying agile project methods since it still is primarily linked to the IT industry.

However, even if the master thesis poses that a gradual adoption rate can be presumed in the MCI, the empirical data showcased that a separation between IT and agile might not be possible much longer. R11 also underlined that we cannot separate ourselves from IT anymore. This indicates that it might be possible that the MCI will move in the direction of IT, which could create an adaptation in the future. This is contradictory to what the literature states, that agile project methods are applicable outside the SDI (Gustavsson, 2013a). Thus, by becoming efficient in the application of agile project methods according to R11, management consulting firms should be willing to integrate IT aspects in their organization. Also by giving IT a greater place in firms that are applying agile project methods, it could potentially improve these firms' project performances and the quality of the projects in this

industry, as it has accomplished in software development (Tolfo et al., 2011). This could indicate that the IT development in management consulting firms could contribute to a faster adoption rate of the agile project methods for these firms. But it is also essential to recall what R1 and R4 highlighted, that a project process cannot be generalized and it is important to do it your own way, in order for both the organization and the project to become a success. This highlights the importance of the KSF of customization of agile project methods. IT is here only one element which has emerged as an important and driving factor for adopting agile practices, and it is essential to look further into the other potential future implications for agile project methods in this industry.

5.3.2 Future Implications of Adopting Agile Project Methods in the Management Consulting Industry

When looking into the aspects that management consulting firms need to consider according to the interviewees, a specific focus will here be on the elements which could have a future implication for the development of agile in the MCI. This is of importance since it strongly affects the direction of the answer to the main research question. Before looking more into the development of agile it is important to look into how to measure success as it will affect the directions that the interviewees can perceive that agile is heading or should be heading. According to several respondents they revealed that customer satisfaction is the main focus for them in creating a successful project when working in an agile way. This would mainly align with the statement by Schelle, Ottmann and Pfeiffer (2006) as they highlight that the customer is the one that needs to determine what constitutes a successful project. This moreover relates to the KSF of customer involvement where it was underlined that including the customer in the project process could achieve a more successful end result, than if they were not included. Here, Denning (2016) also underlines that working agile enables for a more close relationship with the client, and Wysocki (2014) continues by stating that the client involvement is a distinguishing factor for agile project methods compared to the traditional methods. Thereby, the literature and the interviews underlined the client involvement as essential and to the agile project methods. However, Paulk (2018) also stated that the client involvement is not necessary included in the agile way of working but rather something which needs to be strived towards achieving. Thus, underlining the importance of continuously working on retaining the customer collaboration in the application of agile project methods.

Taking this discussion further it became apparent during the interviews that the methods chosen for a project was highly dependent on the requirements of the client, indicating the importance of the KSF customization of agile project methods. This was elaborated on by R2 who explained that they discuss which method they should apply before the project begins, and that it all depends on the specific requirements of the project. This evolvement from the traditional ways of measuring the success could point toward a development in the field of project management. This is corroborated by Project Management Institute (2017) who states that the traditional success factors are recently no longer the main focus in projects. Hence,

the importance of the project success in the context of this thesis relates both to the notion of determining what needs to be undertaken in order to succeed but also to the evolvement of how to measure success. If the way to measure success is evolving and becoming more people-oriented, projects and how to connect them might follow, or they might lead and the success criteria could follow. This is of importance to consider when moving into the recommendations, which the respondents described that they would provide to other management consulting firms that would want to start to work agile in their projects, as the successful projects form the basis of this. Subsequently, R1 and R11 stated that they recommended other firms to try the agile way of working, whereas R1, R2 and R4 highlighted that firm need to adapt and customize the agile methods to fit into their way of working. Hence, this can be connected to the KSF which underline the importance of customizing the agile method to the situation. Thereby, the recommendations are somewhat aligned and the differences could potentially be due to the individual experiences of the interviewees.

Connecting further to future implications for agile project methods conveyed by the evidence from this thesis. Two respondents, R6 and R9, highlighted a notion which was noteworthy for the development of agile, that projects and agile are somewhat contradictory to combine with each other. This prompts a question of if agile projects exist or if it is an inherent conflict between those two? Since a project can be described as having a set goal, time and resources (Pinto, 2016) and this also corresponds to the definition which the authors of this thesis have presented for a project of having set time-limit and a budget. It could be relevant to question the association between agile and projects. Agile is highlighted as not working well when there is a fixed deadline and constraint which prevent flexibility (Gustavsson, 2013a) or when there is generally fixed conditions in the project (Gustavsson, 2013a; Tonnquist, 2012). These two different descriptions are highly contradictory which would corroborate the statement from R6 and R11. Debating on the difference and the possible implications of these differences is difficult given the limitations of the scope of the research in this thesis. However, it can be reflected that the reason for the contradictory nature of agile projects and that they still coexist could be due to the lasting nature of projects as a preferred method and that the agile way of working has only been added to it. If so, agile and projects might in fact not be productive when they are interlinked. Still, what will happen going forward cannot be predicted and therefore the authors of this thesis will simply underline this observation. Similarly this connects well to the initial statement by Meredith and Francis (2000), that agile and becoming agile is a continuous process and essentially a journey where the last part is undiscovered at this point in time.

6. Conclusions

The concluding chapter will provide this master thesis with the main answers to the posed research questions. Firstly, the answers to the two sub-questions will be presented in order to provide the foundation for answering the main research question which will follow in this chapter. Then, the recommendations which can be formed from the thesis with the literature review and the empirical data collection will be stated. This will be followed by the points for future research where suggestions will be provided for further research on the research area going forward from this master thesis.

6.1 Answering the Research Questions

The aim of this thesis was to examine how management consulting firms apply agile project methods in their work processes and a main research question was formulated: *How do management consulting firms apply agile project methods in their work processes?* To answer this question two sub-questions were formulated, which will be answered first in this chapter and they are: *What are the most commonly applied agile project methods?* and *What are the main key success factors and main challenges with applying agile project methods?* The focus of the thesis has been to compare and contrast the different case companies, and insights from this will be presented here, along with general insights to the research questions that can be concluded from examining the empirical material.

6.1.1 Sub-question 1

In answering the first sub-question, it could be concluded that the most commonly applied agile project methods when analyzing the literature with the empirical data were:

- Kanban
- Scrum
- SAFe

Kanban was the only agile project method that all companies mentioned and Scrum was underlined by five out of the six companies. Thus, the answers between the different companies proved to be corresponding to a large extent, indicating that the different management consulting firms apply similar agile methods in their projects in practice. Which could indicate that these agile project methods have reached a more mainstream audience at this point. However, these agile project methods were not always applied alone, but the companies rather used a combination of them and integrated elements of Scrum when applying Kanban or the other way around. This was exemplified by some of the respondents where it was mentioned that a product backlog that is used in Scrum was also applied when working Kanban. This provides an indication that elements of Scrum can be applicable in combination with other agile project methods as well. Furthermore, the applied agile project methods were dependent on the client's request and needs of the project at hand, indicating that the customer has a large impact on the method chosen. Moreover, other agile project

methods were highlighted by the respondents that the literature did not mention, here SAFe was underlined as a popular method. As described, SAFe is a combination between agile and traditional project methods, and a reason for its increased popularity might be because the transition to agile project methods becomes easier, this since smaller steps are taken towards starting working with agile project methods. Thus, this might have led to the concept of "wagile", indicating that agile project methods might become more resembled to the traditional project methods. However, it was also highlighted by some respondents that they applied specific tools and roles connected to Scrum, such as Scrum master, product owner, sprints and a backlog when applying SAFe.

6.1.2 Sub-question 2

In providing the answer to the second sub-question, it could be concluded that some main KSFs and main challenges with applying agile project methods emerged from the literature and from the data collection.

The main KSFs seen to have an overarching impact are:

- Transparent communication
- Alignment of organizational mindset
- Customization of agile project methods
- Understanding of agile
- Software programs
- Knowledgeable teams
- Customer involvement

The main challenges seen to have an overarching impact are:

- Organizational inertia
- Difficulties to implement
- Lack of understanding for agile values
- Poor communication in organization
- Cultural difficulties

Although seven main KSFs and five main challenges could be identified there were also other KSFs and challenges that could be singled out from both the theoretical framework and the empirical findings. These have not been classified as main since not enough case companies highlighted them, although not stated in the conclusion, it does not imply that they are not important to consider and have in mind when applying agile project methods. Moreover, the second sub-question illustrated differences both between the literature and the empirical data, as well as between the cases in terms of KSFs and challenges. A reason why the literature did not correspond with the empirical data to a great extent may be because there are no previous literature on this connected to the MCI, but more on agile transformations in general and connected to the IT industry. Another reason why the different case companies did not correspond in terms of their answers may be because it is very dependent on experience. Since the respondents have different experience of working in agile projects they encounter

different KSFs and challenges, and it has therefore been difficult to compare the answers between the companies since the respondents in the companies also emphasize different aspects. This was present regarding challenges, where it became apparent that the case companies that had more experience of working with agile project methods also corresponded to a larger extent with the literature. Here, a case company with less years of experience of working with agile project methods did not underline any of the challenges presented in the theoretical framework. However, it could also be related to personal opinions since what one person experience as a challenge might not be present for another, which could then depend on the personality of that person. Thus, it could be concluded that in specifically comparing the cases, the challenges in the MCI studied in this thesis are context dependent. To conclude, overall evidence could be seen that there were both KSFs and challenges mentioned that could be applicable to agile project methods in general as described in the literature.

6.1.3 The Main Research Question

In providing the answer to the main research question on how the management consulting firms apply different agile project methods, different aspects line up the content of the answer. Firstly, the authors of this thesis found a number of agile project methods which are applied frequently in the MCI as well as KSFs and challenges which impact the application. Here, a majority of the respondents have started to apply agile project methods in their work processes and it has been found that a large element of the application of agile project methods is context dependent. Subsequently, how they applied the existing methods were highly dependent of situational factors surrounding the project at hand, therefore evidence suggested that the roles, processes and tools were applied different between the case companies. Thereby, the result was that rather than using one specific framework exclusively, they utilized a combination of the existing methods. The conclusion is that the methods can be resembled to a smorgasbord where the methods are lined up and the professionals can browse through the selection of available methods and select and integrate them to create the best combination. This suggests that there is not one suitable way to apply agile project methods that could be distinguished. It is rather a process of combining them with each other, which align both with the literature and the empirical data.

Moreover, another angle to answering the main research question is that from the different cases in this study it became clear that the companies that have an IT department of large components in their projects, are more likely to have an agile methodology in place at their company and also that they are more likely to have a set method. Therefore, since there still is an element of agile project methods that is based in IT, including IT in the management consulting firm can make the rate of adoption of the agile project methods in the MCI faster. This could be connected to the notion that the IT aspects of the business and other elements are becoming more interconnected to each other according to several of the respondents. This could therefore impact the adoption rate of the agile project methods for the management consulting firms. Relating to another aspect of the application of agile project methods, it can be concluded that the process of beginning the application can be affected by the previous

experiences and that it in itself can be a hindrance to the application. This due to the fact that agile can be difficult to grasp in the initial stages of the work process, here training was underlined as an essential aspect to applying agile in a beneficial way.

Finally, in concluding the main aspects of how management consulting firms apply agile project methods. A different viewpoint is that the term project and the term agile does not go in line with each other as the definition of a project is having a time, budget and a fixed scope, which inherently goes against the main principles of agile methods which focus on flexibility. The implication of this is difficult to predict, it could be a matter of adapting the language to the new trends, or it could have an impact of the more fundamental principles of agile and projects as such.

6.2 Recommendations

After answering the posed research questions two main recommendations were concluded that the authors believe are important for management consulting firms to consider when starting to apply agile project methods. It should be noted that the findings are applicable to the MCI and the cases which were studied in this thesis and the aim is not generalizable results as previously mentioned in regard to external validity. The first recommendation is connected to what should be in place before a management consulting firm starts applying agile project methods. Here, it is vital that everyone in the firm understand what agile is and to understand the agile mindset and thinking. Thereby, closely connecting to the KSF understanding of agile values and its importance for management consulting firms to consider. It is therefore essential to educate the employees and prepare them for working agile since it has been highlighted by respondents that many misunderstand what agile really is and that it can be difficult to grasp. By educating employees this can help in bridging the struggle that is presented in the challenges difficulties to implement and organizational inertia as the KSF transparent communication can aid in making the organization understand both the need for agile as well as why it is being implemented. This can provide a management consulting firm with insight on how they can get the whole company thinking and working agile to avoid misunderstandings and resistance when doing a transition from traditional to agile.

The second recommendation is related to the actual application of agile methods in a project. The authors saw the importance of adapting the agile method to each project, and this could be eased if the company has experience of working with IT components in their projects. This because it could be concluded from the case companies that management consulting firms that work with IT often have more set agile project methods in place, and it could therefore be underlined that these companies have a broader knowledge of agile project methods that they can apply to fit the needs of the customer. Building further upon this recommendation, every project and customer is different and has different needs and requirements and it is therefore essential that management consulting firms adapt their agile project method to the specific project. This recommendation is linked to the KSF of customization of agile project methods and if management consulting firms consider this when they are starting a new project there

might be a higher possibility that the customer is satisfied with the project. This since the agile method would be customized to the specific needs of that customer.

6.3 Future Research

The final aspect in completing the research is to bring forward potential research areas where this master thesis has revealed an opening. The first angle which could be of interest to focus upon is to look into other agile project methods which could be applicable in the MCI based on the data in this research. As the findings of this thesis underline the importance of SAFe for the case companies, it would be a potential focus of future research as it was not brought up in the literature review. Here, a study which focuses on the application of SAFe and its use in the MCI could provide new insight and broaden the literature concerning agile project methods. Another potential research area would be to maintain the focus on the MCI and more specifically on the customers' impact on the applied agile project methods in the firms in this industry. It could be seen from the empirical data in this thesis that the customer appears to have an impact on the agile project methods chosen. Firstly, customer involvement emerged as a main KSF of this report, and secondly the customer impacts how success is measured in the management consulting firms. Therefore it would be interesting to examine the nature of the collaboration between MCI firms and the customer and to what extent this collaboration impacts the choice of methods. Finally, a third potential area of future research became apparent from the findings of the main research question. Here, an area of interest would be to examine the relationship between the MCI and the SDI, and to see if IT aspects have become more integrated in the MCI. This potential area which emerged from the empirical data showcased that IT could influence the application of agile project methods in the MCI. Thus, a study that focuses on the impact of IT on the application of agile project methods in the MCI could broaden the literature with new knowledge and provide practical contribution to management consulting firms.

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8. Appendix

Appendix A
Interview Guide

Background

1. What is you professional title?
2. How familiar are you with agile project management?
3. How long have you been working with agile project methods?
4. Does your current company have pre-set guidelines for how to work in an agile project?

Agile Project Methods

1. What kind of agile project methods are you applying?
2. How do you apply these agile methods in a project?
3. Which tools are you applying when working with agile projects?
    A. What key success factors and challenges do you perceive with applying these agile tools?
4. How do you perceive that these methods are working?
5. How is your agile project process constructed?
6. How does your communication function in an agile project?
7. How are your teams constructed when working in an agile project?
8. What are the different roles in your agile projects and what are their functions?

Future Implications

1. How would you measure if an agile project has been successful?
2. What would you say that you have learned from applying and using agile project methods?
3. What recommendation would you give to other management consulting firms that are applying agile project methods?

Appendix B
The Coding Process

Presentation of the Coding Process	
Codes	**Themes**
Methods	**Agile Project Methods**
Tools	
Roles	
Processes	
Key Success Factors	**Key Success Factors and Challenges**
Challenges	
Effectiveness	**Application and Adoption of Agile Project Methods**
Measure Success	
Future Implications	