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Agile transformation and its implementation in large corporate institutions

A qualitative exploratory case study focused on consultants experience with implementing agile transformation in large corporate institutions based in the Czech Republic

Master's thesis in Computer Science and Engineering

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CHALMERS UNIVERSITY OF TECHNOLOGY
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Gothenburg, Sweden 2022

MASTER'S THESIS 2022

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Abstract

[Context] Agile transformation is a growing trend not only in software development companies, but recently also in traditional corporate environments. Waterfall-based strategies may no longer keep pace with the current business environment which may demand for an accelerated software delivery process and the ability to manage ever-changing customer priorities.

In order to maintain their presence on the market, an increasing number of corporate environments tend to transition to the agile way of working, which affords ground for incremental iterative development, ability to respond to change as well as supporting continuous integration and continuous delivery.

[Objective] The purpose of this study is to explore current trends in implementing agile transformation in large corporate institutions from a consulting firms' point of view. Specifically, the thesis is focused on understanding the approach of the consultants towards the agile transformation in large corporate institutions as well as investigating their overall experience with agile transformation and agile transformation frameworks, which represent the background of the thesis.

[Method] A qualitative exploratory case study was conducted. The research questions related to the usage of agile transformation frameworks in practice as well as the challenges that consultants encounter are answered based on 10 semi-structured interviews with individual consultants. A validation survey was also conducted, to validate the found results.

[Results/Conclusion] The results show that the agile transformation frameworks, as presented in literature, are not usually used in practice by consultants, nevertheless the consultants are often using the transformation elements of the target agile frameworks that are to-be implemented at the target company, e.g. SAFe. They further say that every agile transformation needs to be tailor-made for a specific target company, based on its needs, values and attributes. The consultants do not usually follow a strict schema when implementing an agile transformation at a large corporate institution, and they also mentioned several issues with the implementation. The most prevalent points are related to the topics of (1) Challenges with People and (2) Challenges with Organizational Structure.

Keywords: Agile, Software Engineering, Agile Transformation, Corporations

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1

Introduction

1.1 Background

Agile transformation is an increasing trend not only in software development companies, but recently also in traditional corporate environments, also beyond their system engineering departments. Hoeseb & Tanner [1] say that “in an ever-changing business environment stimulated by the new digital age, organizations must constantly evolve and adapt to meet customer demands”. They further say that waterfall-based strategies can no longer keep up with the current business environment “which demands for an accelerated software delivery process and the ability to manage ever-changing customer priorities”.

In order to maintain their presence on the market, these institutions tend to transition to the agile way of working, which affords ground for incremental iterative development, ability to respond to change as well as supporting continuous integration and continuous delivery [2]. However, multiple studies have highlighted several problems with adopting agile at scale. Conboy & Carroll [3] summarize several challenges with implementing agile transformation at scale, such as “defining concepts and terms”, “comparing and contrasting frameworks”, “readiness and appetite to change” between workers, and “balancing organization structure and frameworks”, among others.

Hoda & Noble [5] summarize agile adoption barriers and challenges to be “organizational culture, people, process, and tools”. They further say that “researchers have proposed a number of structured agile adoption frameworks, based on elaborate theoretical modelling and abstraction, but with little practical validation in industrial settings”. They mention transition frameworks like “The Agile Adoption Framework” [6], “Agile Adoption and Improvement Model” [7] and “The Distributed Agile Model” [8].

This study includes interviews with senior experts that have led (or have been a part of) agile transformations in large corporate institutions based in the Czech Republic (from a consultancy standpoint), specifically institutions based in the areas of finance and automotive. These senior experts give insight on how practical adoption of agile at scale differs from the theoretical frameworks presented in literature. They also define what are the challenges of adopting agile at scale from an organizational as well as from a cultural standpoint, based on their subjective experience.

This study contributes to the research in agile transformations. The intended audience for this paper is people generally interested in agile transition frameworks, researchers interested in agile methodologies and specialists eager to learn more about current trends, as well as challenges and solutions, in agile transformations in large corporate environments.

1.2 Statement of the Problem

Agile transformation at scale has multiple challenges that have been described by many various sources. Conboy & Carroll [3] highlight, among others, the following problems:

1. Defining Concepts and Terms – existing guidelines for frameworks are often misunderstood or misinterpreted when applied in large-scale environments.
2. Comparing and Contrasting Frameworks – there are many different frameworks out there, but there is a lack of any comparison models. They say that this “makes it difficult for agile transformation leaders to justify their choice of framework”. They say that although there is a lot of publications describing available agile transformation frameworks, there is “very little empirical research examining the common challenges associated across the range of large-scale agile frameworks”.
3. Readiness and Appetite for Change – people in an organization “need to be willing to transform”. The level of readiness varies, as people may be ready to change their software development practices but may not be willing to adopt the whole frameworks. They say that “there is little guidance on how organizations can assess their overall readiness or appetite to undertake a large-scale agile transformation process”. They further say that “there is no mechanism to clearly identify these issues”.

Hoda & Noble [5] find agile and scrum adoption challenges to be related to four major areas: (1) people, (2) organization, (3) project and (4) process.

1. People-related adoption challenges include “team size, lack of effective communication, lack of customer collaboration and lack of experience with agile methods, among others”.
2. Organization-related adoption challenges include “cultural mismatch with agile methods, and lack of capacity to change the organizational culture”.
3. Project-related challenges include “project size”.
4. Process-related challenges include “agility degree and anti-patterns”.

They further also summarize problems reported in industrial practice to be “initial adoption, struggles with regular practice, and failed attempts to adopt agile techniques”. They also conclude that “overall, the dominant research focus on theoretical modelling seems to be mostly misaligned with the needs of the industry looking for

practical guidance on holistic agile transitions”.

This thesis specifically investigates these problems, particularly in relation with implementing agile in large corporate institutions from the consultant’s perspective.

1.3 Purpose of the Study

The purpose of this study is to explore current trends in implementing agile transformation in large corporate institutions. Specifically, the thesis is focused on understanding the approach of the consultants towards the agile transformation as well as investigating their overall experience with agile transformation and agile transformation frameworks.

The study could also potentially provide background for larger publications dedicated to improving agile transition strategies across different industries. The results could further be used to gain a better understanding of the current agile transformation challenges and the proposed solutions could be adopted in to-be implemented agile transformations.

1.4 Industry Collaboration

This thesis was carried out in collaboration with **Deloitte**, more specifically with the Prague-based member firm of Deloitte Central Europe.

Deloitte in Prague provides services in the areas of digital technologies, inovations, audit, tax, legal, financial and risk advisory.

Specifically, *directors* and other *senior experts* from Deloitte were participating in the data collection process for this thesis. These people, interviewees, have led (or have been a part of) agile transformations in large corporate institutions from a consultancy standpoint in the past. They gave information on what challenges they have faced while implementing agile transformation as well as what were some of the example solutions for these challenges. This included implementing agile transformation in several different companies. These were made up of several companies from the financial and automotive industries based in the Czech Republic.

Consultants’ point of view may be quite interesting focus for this study, since consultants may have experience from wide range of companies and institutions also covering different industry areas, ultimately not being committed to a company in the same way as an employee.

Also, since all the interviewees and the companies are based in the Czech Republic, the results of this thesis only apply to Czech Republic-based consultants and corporate institutions. Czech Republic may be different than other European and non-European countries in multiple attributes. However, it is possible that the re-

sults may be relatable to other companies or consultants' experience in countries close to the Czech Republic in the social progress index, gross domestic product or similar indices. Czech Republic was chosen as a representative case since the study is carried out with the Prague-based member firm of Deloitte.

1.5 Research Questions

This section lists the research questions for this thesis, as well as briefly describes the results of the interviews for each specific research question.

RQ 1 *To what extent can consultants follow a strict schema when helping large organizations transition?*

The results of the interviews show that every agile transformation in large corporate institution is largely tailor-made for the specific target company, based on its needs, values and attributes. According to their opinion, there is a little chance that the implementers can follow a strict schema for implementing a successful agile transformation.

RQ 2 *To what extent are the agile transformation frameworks, as presented in literature, used in practice and are overall applicable in large corporate institutions from consultants point of view? Do they need to be improved?*

The results also show that the agile transformation frameworks, as presented in literature, are not often being used in the industry. This is also related to the fact that every transformation is largely tailor-made for the specific company. However, the interviewees also say that to accommodate the transformation needs, they often use the transformation elements of the target agile frameworks, such as SAFe or Spotify, that are the target agile frameworks that are to-be-implemented at the respective companies.

RQ 3 *What challenges with implementing agile transformation in a large corporate institution do consultants face?*

It was found that the consultants face several issues with implementing agile transformation in large corporate institutions. The most prevalent points were related to the themes of (1) Challenges with People and (2) Challenges with Organizational Structure. The "Challenges with People" theme can be further divided into the following sub-themes: (1) lack of agile mindset, (2) inability to create cross-functional teams, (3) disbelief of the agile benefits, (4) communication issues and (5) overall previous experience. The "Challenges with Organizational Structure" theme relates to the fact that different agile frameworks may be suitable for different companies based on their existing organizational structure. This may be one variable of many in a multivariate equation.

1.6 Thesis outline

The thesis is organized as follows:

Theory provides background that is needed to understand the contents of this study and its findings. It includes topics like agile definitions, agile methodologies, agile transformation frameworks and other agile frameworks.

Methods includes the research design of this study. Specifically, it discusses and reasons for the selection of different research methods, in relation with answering the research questions.

Findings lists the themes found during theme analysis of the transcripts and puts them into context.

Discussion discusses the findings of the study. It relates the findings to the existing literature, answers the research questions in the terms of implications for practice and implications for research, as well as describes the threats to validity of the results.

Conclusion and Outlook summarizes the study as well as includes comments on possible further research to be conducted in this area.

2

Theory

This chapter provides background information and the theory needed to understand the context of the thesis.

Specifically, this chapter deals with introducing the agile concept, discussing different agile methodologies, explaining agile at scale, the challenges identified with agile transformation at scale and several of the agile transformation frameworks found in literature.

2.1 Definition of Agile

Laanti et al. [10] say that “Agile Software Development is most typically defined via the ‘Manifesto for Agile Software Development’” [2].

Beck et al. in the Agile Manifesto [2] define Agile methods “as techniques that allow a team to track rapid changes in people, technology, and business”. They introduce the following 12 agile Principles:

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer’s competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity—the art of maximizing the amount of work not done—is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.

12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Laanti et al. [10] further say that the Agile Manifesto “is a document that is discussed and argued about a lot”. They identify two main reasons for this: (1) “how the Agile Manifesto is understood (or not understood)” and (2) “whether people agree or do not agree about it”.

Alternatively, Conboy & Fitzgerald [11] proposed a conceptual framework, called the Agility Assessment Framework, of Agile Methods, “explaining agility and flexibility which reflects the robust, proactive, reactive, and temporal dimensions”. They define agility as “the continual readiness of an entity to rapidly or inherently, proactively or reactively, embrace change, through high quality, simplistic, economical components and relationships with its environment”.

Goldman, Nagel & Preiss [12] also propose another definition of agility as a “comprehensive response to the business challenges of profiting from rapidly changing, continually fragmenting, global markets for high quality, high-performance, customer-configured goods and services. It is dynamic, context-specific, aggressively change-embracing, and growth-oriented. It is not about improving efficiency, cutting costs, or battening down the business hatches to ride out fearsome competitive ‘storms’, it is about succeeding and about winning: about succeeding in emerging competitive arenas, and about winning profits, market share, and customers in the very center of the competitive storms many companies now fear.”

Schuh [13] defines agile as “(1) building software by empowering and trusting people, (2) acknowledging change as a norm, (3) promoting constant feedback and (4) producing more valuable functionality faster.”

Ambler [14] sees agility as an “iterative and incremental (evolutionary) approach to software development which is performed in a highly collaborative manner by self-organizing teams with “just enough” ceremony that produces high-quality software in a cost-effective and timely manner which meets the changing needs of its stakeholders.”

Laanti et al. [10] say that “most of the newest definitions (as of 2013) of Agile Software Development have stopped talking about effectiveness, but describe agile rather as a set of practices that you can try when doing systems improvement”, although they point out with respect to large organizations that “agile must be more than just set of practices that are applied: while the first attempts at putting agile into use in large organizations were about trying out some practices, there was a lot of complaining that agile must mean a lot more than some teams (or even individuals) following some Agile Practices only: for example, you could well do pair coding and still follow a traditional process”. They further say that it has been commonly stated that “agility is rather the mindset with which to approach the problems at hand, but an organization cannot simply change to an agile mode by

simply stating that it has done so”, saying that “a large organization would need something it can develop, deploy and measure”.

2.2 Agile Methodologies

Matharu et al. [17] say that “agile based software development methodologies offer systematic software production resulting in enhanced quality of software products”. They further say that “agile based methods are characterized by improved productivity, flexibility, enhanced customer engagement and responsiveness to changes in user requirements”. They have conducted an empirical study into several of the most popular agile methodologies - Scrum, Extreme Programming and Kanban.

2.2.1 Scrum

Matharu et al. [17] say that Scrum (see Figure 2.1) “manages the software development in various short iterations known as sprints, each sprint includes all the phases of a software development life cycle model such as designing, implementation, testing, customer review, etc.”

They say that the characteristics unique to Scrum are the following:

1. **Collaboration** - “Scrum based development promotes collaboration as it is driven by cross-functional teams where every person with his or her skills and experience, contributes towards the best design solution. A crossfunctional team includes a mix of programmers, software architects, software analysts and QA experts.”
2. **Daily Meetings** - “Scrum methodology is marked by short-duration daily scrum meetings where the product development team communicates and evaluates the progress status of software development, thus increasing productivity of team members.”
3. **Product Backlog** - “The product backlog captures the requirements for a software product to be delivered successfully. It maintains an ordered listing of features, bug fixes, non-functional requirements.”
4. **Sprint Backlog** - “The sprint backlog records the list of tasks to be performed by the development team during the next sprint. This list is drafted by picking up tasks from the top of the product backlog until sufficient work is arranged for the next sprint, considering the work capacity and past performances of the development team.”
5. **Roles** - There are three roles in Scrum:
 - Product Owner*: “Responsible for defining, prioritizing and communicating product requirements and guides the product development process. ”
 - Development Team*: “Responsible for executing the tasks allocated by the product owner within the sprint deadline. Usually, a cross-functional team of 3 - 9 individuals implements the product development tasks envisioned by the product owner.”

Scrum Master: “Responsible for enforcing the rules and principles of Scrum based development. The Scrum Master removes impediments to development and helps improve the process, development team and software product being developed.”

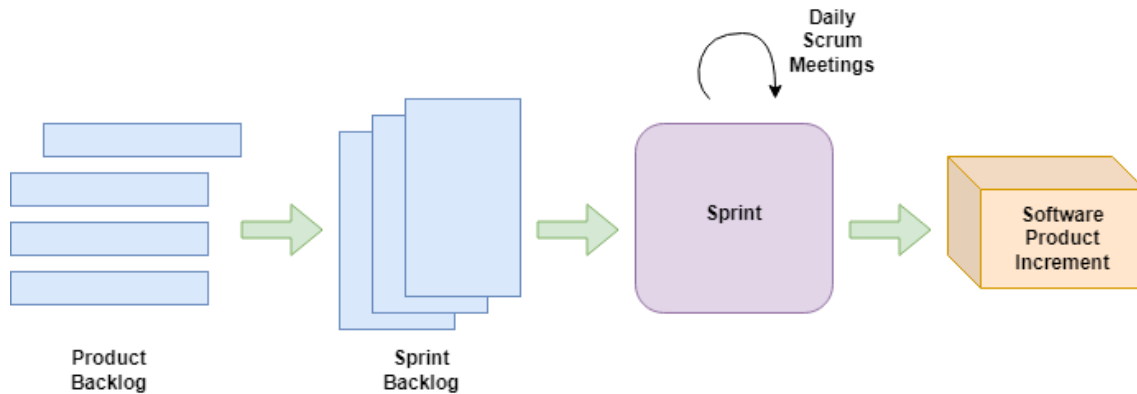


Figure 2.1: Scrum process (reconstructed from [17])

2.2.2 Extreme Programming

Newkirk [18] defines Extreme Programming (see Figure 2.2) “as a lightweight methodology that facilitates planned and iterative software development by small teams of developers to achieve higher software quality and enhanced productivity, in response to rapidly evolving requirements”.

Matharu et al. [17] find the following distinguishing features of Extreme Programming:

1. **Requirements as Story Cards** - “The requirements are represented as scenarios by users, which are then formulated as Story Cards. The developers split each story card into a series of small tasks, which are further prioritized by the customer for being implemented.”
2. **Simplicity** - “XP favours initiation of software development with the simplest design, while additional functionalities can be added as and when required by the customer. Further, a simple design and simple coding can be easily understood by the team developers.”
3. **Continuous Interaction** - “XP includes extreme levels of customer interaction via established feedback loops. The customer engagement occurs in small frequent iterations, ensuring that the customer remains acquainted with the progress of software development. Also, this allows for quick accommodation of changes in software as per customer feedback.”
4. **Test Driven Development** - “XP employs test driven development where test cases for a task are written before its coding takes place. Testing remains an integral part all through the Extreme Programming method. ”
5. **Refactoring** - “XP encourages striving for best design and high quality solution by refactoring of existing solutions, thus achieving enhanced code reliability and reduced complexity.”

6. **Pair Programming** - “Another unique concept in XP is pair programming where programmers work in dynamic pairs of two, resulting in enhanced communication and reduction in working hours and workload.”

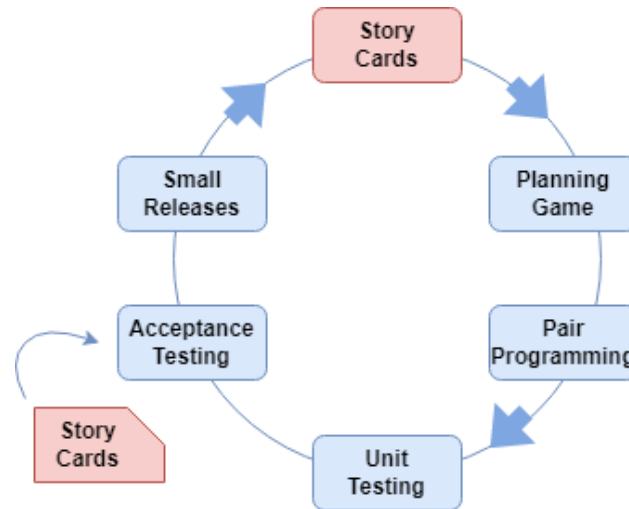


Figure 2.2: Extreme Programming process (reconstructed from [17])

2.2.3 Kanban

Anderson [19] says that Kanban (see Figure 2.3) “provides a means to visualize and limit the work-in progress during software development process.”

Matharu et al. [17] say that Kanban method “lays emphasis on scheduling of work so as to facilitate the delivery of software product just-in-time for implementation.” They found the following distinguishing characteristics:

1. **Kanban Board** - “Kanban board is a workflow visualization tool that enables the optimization of work and guides the workflow by dividing the work into categories, including to-do works, in-progress works and works done.”
2. **Maximizes Productivity** - “Kanban software development approach promises workflow optimization and scheduling, maximizing productivity of the team by reducing idle time.”
3. **Continuous Delivery** - “Kanban methodology is closely related to continuous delivery of software increments instead of releasing functionalities in batches. Release of small parts of product in successive iterations is directed at meeting the dynamic requirements of customers.”
4. **Waste Minimization** - “In Kanban approach, tasks are executed only when they are actually required. This results in elimination of over-production and cuts down on wasted work and wasted time.”
5. **Limits Work in Progress (WIP)** - “The main objective in Kanban methodology is to limit the Work-in-progress so as to optimize the workflow of the system in accordance with its capacity. A WIP constraint can be applied either to parts of the workflow or to the entire process.”

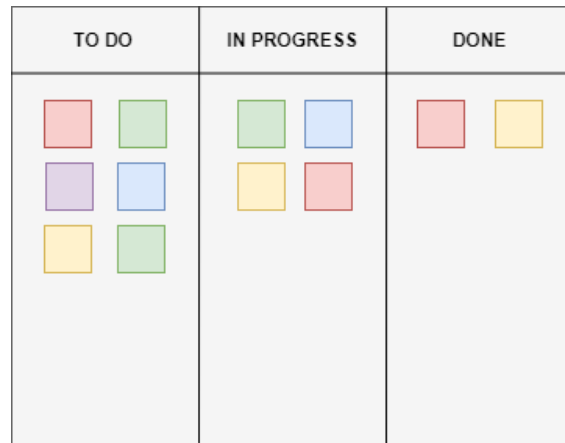


Figure 2.3: Kanban board (reconstructed from [17])

2.2.4 Spotify

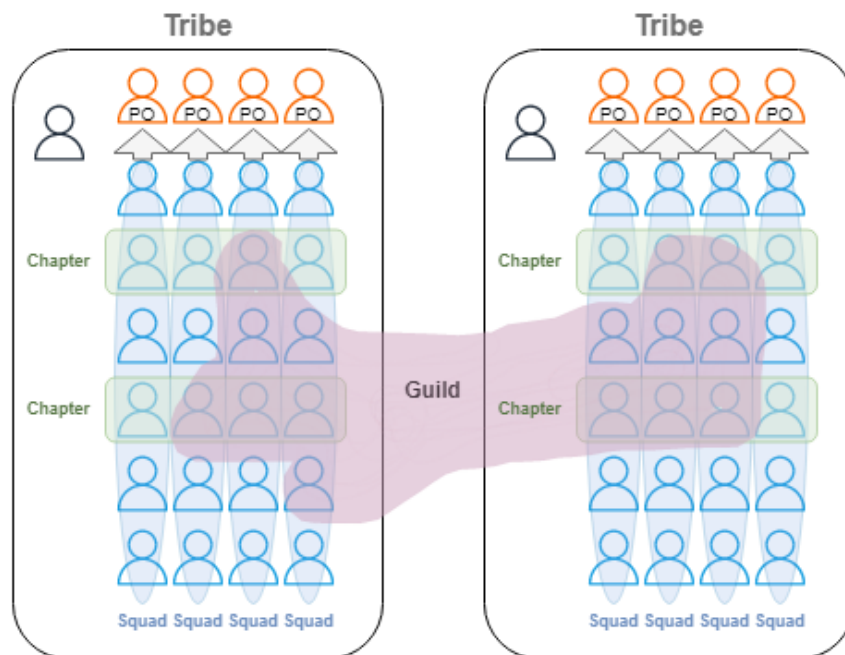


Figure 2.4: The Spotify model (reconstructed from [22])

Alqudah & Razali [21] say that “the main purpose of Spotify (see Figure 2.4) is to deal with multiple teams in a product development organization.” They describe it further: “Spotify has numerous Squads, in which similar to Scrum team. Each Squad is a self-organizing team that uses its own preferable method; some of the Squads use Scrum, the other ones use Kanban, and some others use the combination of both. Squads in Spotify are encouraged to implement Lean Startup principles such as MVP (Minimum Viable Product) and validated learning. However, each Squad has a longterm mission and it sticks with the mission which is part of the product. There is no such appointed squad leader in each Squad, but it has a Product Owner.”

They [21] further say that “the Product Owners of different squads collaborate to maintain a high-level roadmap document that shows where Spotify as a whole is heading. Moreover, maintaining a matching product backlog for each squad is also the Product Owner’s responsibility.”

There are also “tribes” in Spotify, they [21] say that “it is a collection of squads whose aim is to minimize dependencies that can obstruct or slow a squad. These squads work in the same location of office in order to promote collaboration between squads. Each tribe is led by a tribe leader whose responsibility includes providing the best possible habitat for the squads within the tribe.”

Other than tribes, there are “chapters” as well. They [21] say that “chapter is a small group of people having similar skills ‘different testers from different tribe’ and working within the same general competency area, but within the same tribe. Chapters are the glue that sticks the company together by giving the company some economies of scale without sacrificing too much autonomy. The regular meeting of chapters of testers and chapters of designers, for instance, can help to identify and solve the problems faster.”

And ultimately, there are also “guilds”. They [21] say that these are “groups of people whose desire is to share knowledge, tools, code, and practices. There may be technology guild, tester guild, agile coach guild and many others. A Guild is more organic and wide-reaching. While Chapters are always local to a Tribe, a Guild usually cuts across the whole organization.”

Although the Spotify model is not necessarily considered as an agile transformation framework, it does have agile transformation elements. It appears that its effective communication channels may allow for fast knowledge sharing between people, helping them to fill in the gaps of agile knowledge, ultimately helping with the agile transformation.

2.2.5 The Scaled Agile Framework (SAFe)

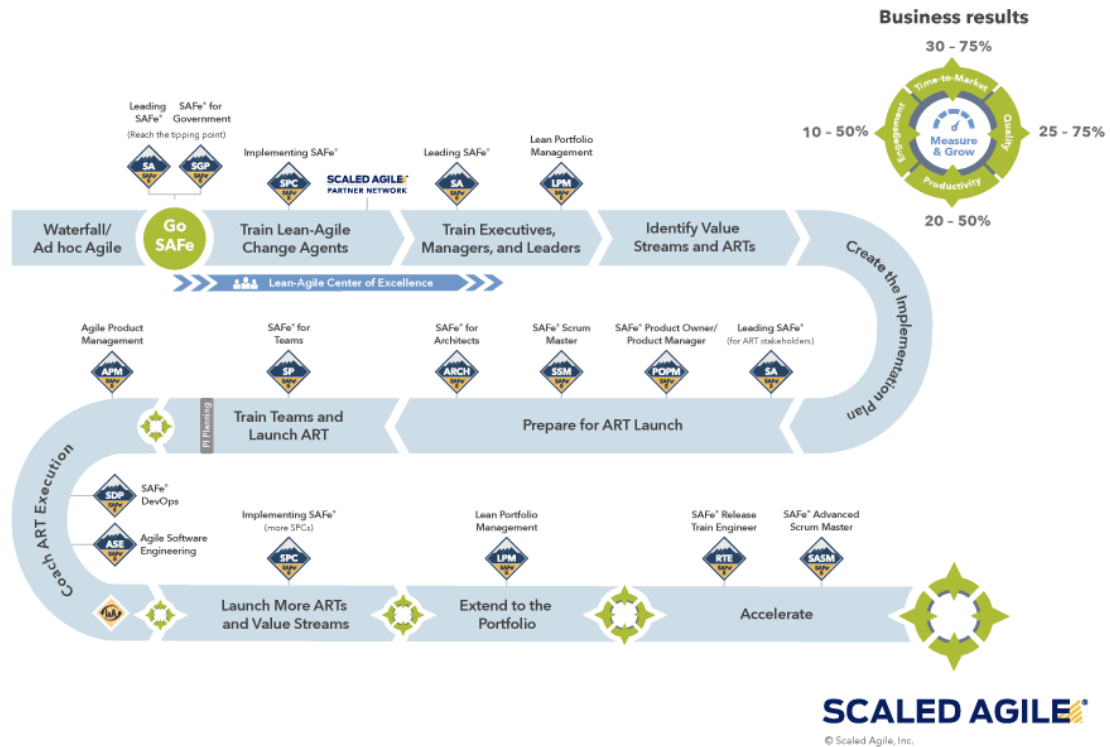


Figure 2.5: The SAFe transformation model (from [33])

Paasivaara [20] says that The Scaled Agile Framework, or SAFe, “claims to provide a recipe for adopting agile at the enterprise scale. It contains the levels of teams, programs, and portfolio, as well as the optional value stream level. At the team level, it adopts Scrum with XP engineering practices, but using Kanban is also possible. At the program level, it defines the concept of an agile release train (ART), which is the analogy to Sprints at the team level, working at a slower time frame. The program level contains additional roles, e.g., system team, product manager, system architect, release train engineer (RTE) and release management team. At the portfolio level, planning is done as epics that define large development initiatives. The optional value stream level supports the development of large and complex solutions, which require multiple, synchronized ARTs.”

SAFe also includes agile transformation elements. In terms of adopting SAFe, they say that the “SAFe 4.0 Whitepaper suggests ‘Implementing SAFe 1-2-3’ pattern, which includes the following three steps: 1) train implementers and Lean-Agile change agents, 2) train all executives, managers, and leaders, and 3) train teams and launch agile release trains”. This pattern is considered to be the agile transformation part of SAFe, which can be seen in Figure 2.5.

2.3 Challenges in Agile Transformation

Conboy & Carroll [3] highlight several areas of challenges in implementing large-scale agile transformations. Among the ones that were already presented in this thesis, they say that further challenges arise in choosing between top-down versus bottom-up implementation. They say that “while bottom-up implementation is well known to be most effective for small Scrum implementation, it is not that clear in large-scale frameworks, such as SAFe, where senior management support and involvement is needed to ensure success. They further say that there might be an “overemphasis on 100% framework adherence over value”, meaning that to measure agile transformation, the leaders would use metrics such as “number of tribes established” or “number of teams participating in Scrum of Scrums”, rather than the value the agile way of working provides. Another challenge is “lack of evidence-based use”. They say that while foundation papers to several large-scale agile frameworks exist, there is “a lack of empirical case studies that apply those frameworks in the wild. During agile transformation, there might come up difficult problems for which the original framework “has no guidance”. Lastly, they mention the topic of “maintaining developer autonomy”. They say that “autonomy becomes increasingly difficult at scale”, referring to the fact that “autonomy to tailor and improvise how developers work was always facilitated by traditional agile methods. People’s requests for tools or processes might “no longer be accepted because they were not viewed as compliant with the new SAFe implementation”.

Paasivaara et al. [4] have identified several challenges in large-scale agile transformations. They summarize these to be “change resistance”, referring to the fact that some members of the leadership team may “not fully support going agile”, focusing on deliveries rather than focusing on transforming the organization. Further, they mention “lack of investment”, referring to “the lack of training, coaching, too high workload” and the fact that “agile is difficult to implement”, referring to “misunderstanding agile concepts” and “lack of guidance from literature”.

Dikert, Paasivaara & Lassenius in their systematic literature review [15] found the following challenges with implementing large-scale agile transformations:

1. **Change resistance** - mostly about the “skepticism towards the new way of working”
2. **Lack of investment** - mostly “lack of coaching” and “challenges in rearranging physical spaces”
3. **Agile difficult to implement** - mostly about “lack of guidance from literature”, “misunderstanding agile concepts” and “reverting to the old way of working”
4. **Coordination challenges in a multi-team environment** - mostly “interfacing between teams being difficult”
5. **Different approaches emerge in a multi-team environment** - about “interpretation of agile differs between teams” and “using old and new approaches side by side”

6. **Hierarchical management and organizational boundaries** - mostly about “middle managers’ role in agile unclear” and “management in waterfall mode”
7. **Requirements engineering challenges** - mostly the “gap between long and short term planning” and “creating and estimating user stories being hard”
8. **Quality assurance challenges** - mostly about “accommodating non-functional testing” and “lack of automated testing”
9. **Integrating non-development functions** - mostly about “other functions unwilling to change” and “challenges in adjusting to incremental delivery pace”

Sidky & Arthur [6] have identified several issues with adopting agile, specifically (1) the organization’s readiness for agility, (2) the practices it should adopt, (3) the potential difficulties in adopting them and (4) the necessary organizational preparations for the adoption of agile practices.

2.4 Agile Transformation Frameworks

This section provides information on several of the existing agile transformation frameworks, as they are presented in literature.

2.4.1 The Agile Adoption Framework

Sidky & Arthur [6] try to address these issues, they have introduced “The Agile Adoption Framework” (see Figure 2.6), which should “assist the agile community in supporting the growing demand from organizations that want to adopt agile practices”. They also mention that this framework is “only one essential ingredient, the other is an agile coach who knows how to apply that framework”. This framework has two components: (1) a measurement index “for estimating agile potential” and (2) a “4-stage process that employs the measurement index in determining which, and to what extent, agile practices can be introduced into an organization.

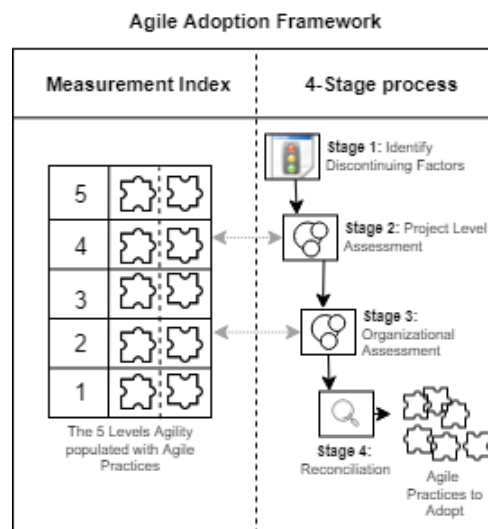


Figure 2.6: The Agile Adoption Framework (reconstructed from [6])

The first component, The Sidky Agile Measurement Index (SAMI) is composed of five levels: (1) Collaborative, (2) Evolutionary, (3) Effective, (4) Adaptive, (5) Ambient.

1. **Collaborative:** refers to the “communication and collaboration between all stakeholders”.
2. **Evolutionary:** refers to the “early and continuous delivery of software”.
3. **Effective:** refers to “developing high quality working software in an efficient and effective manner”.
4. **Adaptive:** refers to the agile quality of “responding to change in the process”.
5. **Ambient:** refers to focusing on “establishing a vibrant environment needed to sustain and foster agility throughout an organization”.

The second component, the 4-stage process, consists of the following stages:

1. **Stage 1: Identification of Discontinuing Factors** – “discovers the presence of any showstoppers that can prevent the adoption process from succeeding”.
2. **Stage 2: Project Level Assessment** – “utilizes the agile measurement index to determine the target level of agility for a particular project”.
3. **Stage 3: Organizational Readiness Assessment** – “uses the agile measurement index to assess the extent to which the organization can achieve the target agility level identified for a project”.
4. **Stage 4: Reconciliation** – “determines the final set of agile practices to be adopted by reconciling the target agile level for a project (from Stage 2) with the readiness of the embodying organization (from Stage 3).

The goal of the Agile Adoption Framework therefore is to find out whether an organization is ready for agile, and which agile practices can be adopted at a project level. It does not deal with an actual implementation process of the agile transformation in a company.

2.4.2 Agile Adoption and Improvement Model

Qumer et al. [7] present an “Agile Adoption and Improvement Model (AAIM)” as can be seen in Figure 2.7. This model was created “for the adoption, assessment and improvement of an agile software development process”. They say that AAIM “has been organized and ordered in three agile blocks, from basic to advanced”: (1) an agile-prompt, (2) an agile-crux and (3) an agile-apex. They say that “at each block the degree of agility of an agile process is measured quantitatively by using the agility measurement modelling approach”. Next, the AAIM is composed of six agile stages, which are embedded in the three agile blocks. They refer to these as Agile Adoption and Improvement Model Levels (AAIML).

1. **Agile Block: Agile-Prompt**
 - a. AAIML 1: Agile infancy: “a software development organization does

not apply an agile method off-the-shelf; the focus is only to introduce and establish the basic agile properties (speed, flexibility and responsiveness).

2. **Agile Block: Agile-Crux**

a. AAIML 2: Agile Initial: “the focus is to enable the communication and collaboration among the people by establishing good communication and cooperation protocols within and outside the organization”.

b. AAIML 3: Agile Realization: “this level emphasizes the production of the executable artifacts with a minimal and reduced documentation”.

c. AAIML 4: Agile Value: “the practices are established and focused to value the people both within (developers) and outside (customers) the organization without ignoring the importance of the software development tools and processes”.

3. **Agile Block: Agile-Apex**

a. AAIML 5: Agile Smart: “the focus is on the establishment of a learning environment – the learning of the people (involved in a software development), software process (before, after and during the execution of a software process), product (before, during and after the production) and tools (the new tools and a technology) lead toward overall organization learning and improvement.

b. AAIML 6: Agile Progress – “the practices are focused on the establishment of a lean production environment (the quality production with minimal resources and within a minimum timeframe) and to keep the process agile.

The AAIM appears to be quite holistic in its approach, although it lacks the go/no-go criteria to help assess the readiness of transitioning between the different stages.

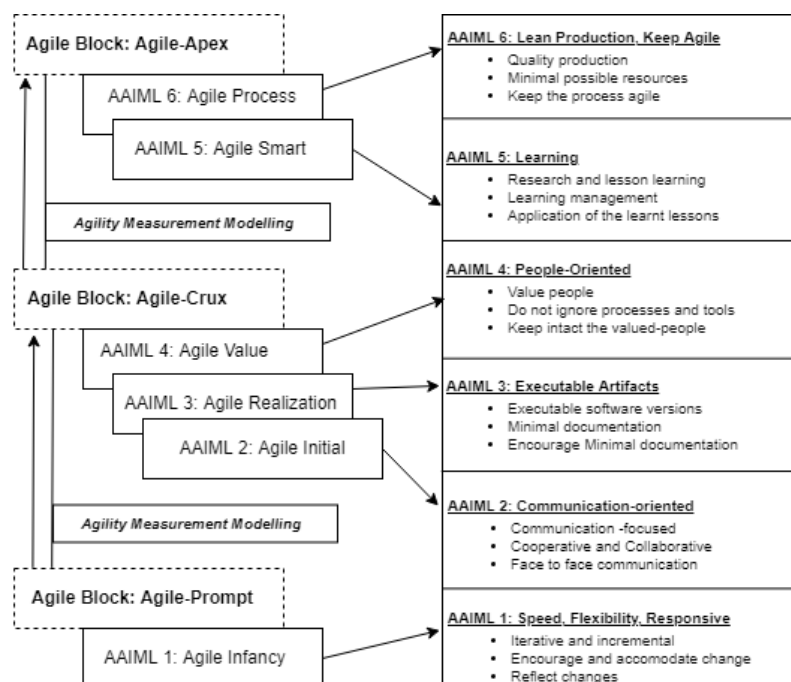


Figure 2.7: The Agile Adoption and Improvement Model (reconstructed from [7])

2.4.3 Stairway to Heaven

Olsson & Bosch [9] presented a multiple-case study where they “explored barriers associated with the transition towards continuous deployment”. They identified a pattern that “most companies follow as their evolution path”, referring to an over-time software development practices evolution. This model as can be seen in Figure 2.8, called “Stairway to Heaven”, includes five stages: (1) Traditional Development, (2) Agile R&D Organization, (3) Continuous Integration, (4) Continuous Deployment, (5) R&D as an Experiment System.

1. **Traditional Development:** refers to the “waterfall-style interaction between product management, product development, system test, the customer and customer feedback processes”.
2. **Agile R&D Organization:** a stage where “product development has adopted agile practices, but where product management and system verification still work according to the traditional development model”.
3. **Continuous Integration:** a stage where a company “has succeeded in establishing practices that allow for frequent integration of work, daily builds and fast commit of changes.
4. **Continuous Deployment:** a stage where “software functionality is deployed continuously, or at least more frequently, at customer site”.
5. **R&D as an Experiment System:** final step, the entire R&D system “responds and acts based on instant customer feedback and where actual deployment of software functionality is seen as a way of experimenting and testing what the customer needs”. This step is also seen as “a starting point for further ‘tuning’ of functionality rather than delivery of the final product”.

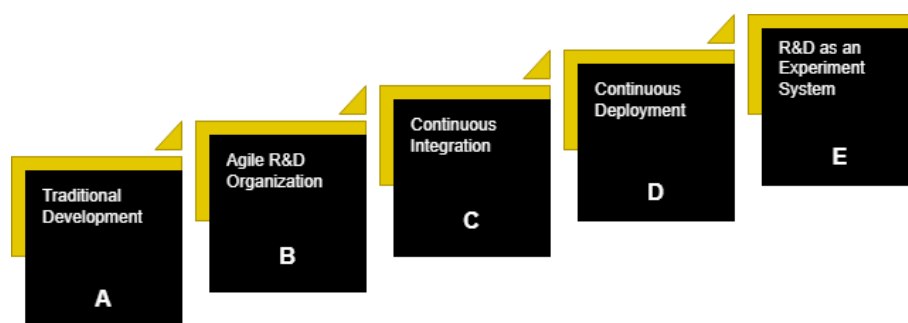


Figure 2.8: The Stairway to Heaven (reconstructed from [9])

The “Stairway to Heaven” appears to also be quite holistic, but it seems that the different stages are not distinct enough. For example, it seems that there is quite a small step between stages D and E, when compared to the other steps, suggesting that they might overlap to some extent, prompting a question if these stages need to be differentiated at all. This is this thesis’ author’s opinion.

2.4.4 Theory of Becoming Agile

Hoda & Noble [5] introduced the “Theory of Becoming Agile”, which “explains how development teams transition to agile practices”. They say that “rather than single change, or even a staged progression along a linear axis, the Theory of Becoming Agile considers an agile transition to take place within a multi-dimensional network of on-going changes in different areas of practice. They identified five dimensions of transitions; all of these include three stages of transition:

1. **Software development practices:** traditional → hybrid → agile
2. **Team practices:** manager-driven → manager-assisted → team-driven
3. **Management approach:** driving → adapting → empowering
4. **Reflective practices:** limited → focused → embedded
5. **Culture:** hierarchical → evolving → open

They have also identified the inter-relationships between these dimensions:

- “A transition in software development practices from traditional to agile cascades to other transitions”.
- “Transitions in the team practices and management-approach tend to reflect and adapt to each other, moving towards self-organization”.
- “The above transitions are necessary though not sufficient for a transition in the reflective practices”.
- “All transitions are influenced by a combination of organizational, team and individual culture”.

3

Methods

This chapter presents the research design of the study, it discusses the methods used during data collection and data analysis including transcription, coding and theme analysis.

3.1 Qualitative Exploratory Case Study

This section deals with describing and reasoning for the selection of qualitative and exploratory approaches to data collection in relation with the study objective.

3.1.1 Qualitative Research

Creswell [23] says that “qualitative research is an interpretive research, in which you make a personal assessment as to a description that fits the situation or themes that capture the major categories of information”. Creswell further says that “the interpretation that you make of a transcript, for example, differs from the interpretation that someone else makes. This does not mean that your interpretation is better or more accurate; it simply means that you bring your own perspective to your interpretation.” This statement is accurate in the case of this thesis, since the qualitative-type data from the interviews have an “interpretive” character. The people to-be interviewed are all consultants that talk about their personal view on agile transformation in large corporate institutions. The data collected is analysed and interpreted by one person (the person elaborating this thesis) to find codes and themes, which should try and answer the research questions.

3.1.2 Exploratory Study

Exploratory research is utilized in the context of this thesis to try and uncover possible new knowledge about implementing agile transformation in large corporate institutions. Stebbins [25] says that “social science exploration is a broad-ranging, purposive, systematic, prearranged undertaking designed to maximize the discovery of generalizations leading to description and understanding of an area of social or psychological life.” The aim of the thesis is to learn about consultants experiences with implementing agile transformation in large corporate institutions. The research questions cover points like learning about the specific challenges that the consultants had/have with implementing agile transformation in large corporate institutions, as well as learn if they are using any agile transformation frameworks, as mentioned in

literature, and if these frameworks are applicable in large corporate institutions or if they need to be improved. Therefore it is clear that this research has an exploratory character.

3.1.3 Case Study

According to the Merriam-Webster dictionary [31], a case study is “an intensive analysis of an individual unit (such as a person or community) stressing developmental factors in relation to environment”. Also, according to Yin [32], a case study is “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context”.

According to Runeson [26], there are five major process steps to be walked through when conducting a case study: (1) Case study design, (2) Preparation for data collection, (3) Collecting evidence, (4) Analysis of collected data, (5) Reporting.

This study is specifically focusing on analyzing the consultants’ experiences with agile transformations in large corporate institutions, who are all from one environment/company, Deloitte. The study does include all the mentioned steps by Runeson [26], with planning the study, preparing for the data collection by choosing the best research method, collecting evidence by executing the research method, analysing the collected data in relation with existing literature and reporting the results in relation with answering the research questions. Therefore, it is valid to label this study as a case study.

3.1.4 Study Objective

The objective of this qualitative exploratory case study is to learn about current trends in agile transformation in large corporate institutions in the Czech Republic, as well as find out what are the current challenges and possible example solutions, and also learn which agile transformation frameworks, as presented in theory, are being used in the industry, if there is a room for improvement and in what respect.

Since the study has an exploratory character, the goal is also to generate new insights that could be used in further research in the area of agile transformations.

3.2 Interviews

Runeson et al. [26] says that “in interview-based data collection, the researcher asks a series of questions to a set of subjects about the areas of interest” in the study. Robson [27] says that “interviews can, for example, be divided into unstructured, semi-structured and fully structured interviews”. Robson [27] also says that “in a semi-structured interview, questions are planned, but they are not necessarily asked in the same order as they are listed. The development of the conversation in the interview can decide which order the different questions are handled, and the researcher can use the list of questions to be certain that all questions are handled.

Additionally, semi-structured interviews allow for improvisation and exploration of the studied objects”. This is the case in the instance of the created interview guide for this thesis (see Appendix A). The reason for using semi-structured interviews is the nature of the interviewees and their availability. Since the interviewees are mostly directors or senior managers, their available time is scarce, and if unstructured interviews would be conducted, there is the risk of badly developed conversations. In the case of a badly developed conversation, there is a little chance that the interview would be able to be repeated, so the semi-structured interview method was chosen to mitigate this threat, having a concrete structure, but still open to possible exploration of specific topics, possibly different from the interview guide questions, raised during the conversation.

The interview guide (see Appendix A) follows the following structure:

1. Introduction
2. Introductory questions
3. Investigative questions about specific case of Agile transformation from the consultants experience
4. Frameworks discussion
5. Wrap-up questions

3.2.1 Sampling Strategy

Pseudonym	Role	Years in role	Years in IT	Years in IT in Agile	Cases
Person 1	Director	6	10	8	3xB, F
Person 2	Consultant	1	2	2	B, T, A
Person 3	Senior Manager	3	15	4	2xB, A
Person 4	Senior Manager	4	5	4	A
Person 5	Senior Consultant	3	4	3	A
Person 6	Director	<1	16	5	2xB
Person 7	Senior Consultant	5	11	2	A
Person 8	Director	7	12	6	B
Person 9	Director	5	9	4	F
Person 10	Director	3	15	6	2xB

Table 3.1: Interview participants

See the list of all the participants in Table 3.1. The table shows for each participant what role do they currently occupy, how many years of experience do they have in IT deliveries in general, how many years of experience do they have in IT deliveries in agile, and also how many agile transformation cases (also showing the industries) have they been a part of. Here, the letter 'A' stands for automotive, 'B' stands for banking, 'F' stands for finance and 'T' stands for telecommunications.

The sampling strategy was based on purposive sampling, focusing on the participant's experiences. Specifically, the interviewee profile had the following attributes:

1. Is familiar with agile methodologies
2. Works in Consulting/Advisory or similar in any role
3. Been a part of an agile transformation project for a “large corporate institution” in any capacity (leading/supporting)

3.2.2 Interview Guide

The Interview Guide (see Appendix A) was made to give a structure to the interviews, although the questions were created so they would be as open as possible, to give the interviewee the room to openly think and deliver more interesting data, important in qualitative research. The questions were based on the research questions for this thesis and literature review.

3.3 Data Analysis

Data analysis describes the process of inspecting, transforming, and modeling data in order to discover useful information [28].

This section will explain the methods used during data analysis, namely transcription, coding and theme analysis.

3.3.1 Transcription

Transcription was done after the respective interviews were conducted, using a self-developed transcription program. This way the videos of the interviews were converted into audio files, and these were converted into raw text, which was further manually processed to distinguish sentences, paragraphs, etc.

The program was created using Python and mainly the SpeechRecognition [34] library (which utilizes the Google Web Speech API), to be able to convert speech to text. The decision to create a custom program was made after a review of existing transcription software. It is the case that most of these programs are quite expensive, and although they do often offer free license, this license is limited for just minutes or a few hours of transcription. Since most of the interviews were longer than one hour, it made sense to create custom software instead.

Although the transcription was not 100% accurate, as no automatic audio-to-text software ever is, it did produce tangible results. The transcribed text was easy enough to understand, although some words were unclear or otherwise misinterpreted. In this case there was a need to go back to the original videos, find the corresponding part of the video, and manually re-write the incorrect word or sentence. This was done only for the coded sections found during the coding phase.

3.3.2 Coding

Coding is a phase which followed the transcription. It is a way to assign different symbolic meanings or attributes to parts of data from the transcripts. Ultimately, this method should help with categorizing similar information to help relate them to the research questions, eventually help answering them.

Since the interviews were conducted in Czech language, this is also the stage when the text was translated to English language. Only identified coded sections were translated to English.

3.3.3 Thematic Analysis

According to Castleberry et al. [24], thematic analysis is “a method for identifying, analyzing, and interpreting patterns of meaning (‘themes’) within qualitative data”. They describe its usage as “codes are the building blocks for themes, (larger) patterns of meaning, underpinned by a central organizing concept - a shared core idea. Themes provide a framework for organizing and reporting the researcher’s analytic observations.”

Thematic analysis was mainly chosen for its high level of flexibility. It was used to identify patterns throughout the found codes in the transcripts. These were named and are used to encapsulate related transcript excerpts mentioned further in Section 4.

Below in Table 3.2 is an example of a quote-to-code-to-theme process.

Quote	Code	Theme
<i>“At the last company where we were doing this [agile transformation], there was no designation of how we implemented the transformation. We just went to apply SAFe.”</i>	Target agile framework dependent transformation	Custom Transformation
<i>They [agile implementers] are not all completely unified, they all have a slightly different approach, no one follows an official transformation framework, but everyone adapts it to their own needs.”</i>	Agile transformation custom framework adaptation	

Table 3.2: Quote to code to theme example process

3.3.4 Validation Survey

A validation survey (see Appendix B) was conducted in order to validate the results found from the interviews' transcriptions. The validation survey was chosen for its low level of intrusiveness. Since most of the interviewees are directors or senior experts, their availability is low, and therefore it would be problematic to find a date where everyone would be available for an alternative approach, such as a validation workshop, for instance.

4

Findings

This chapter discusses the results found from the executed interviews. Specifically, different common themes found among the transcripts are listed, and further context is provided.

Generally, the interviewees talked about their experience with implementing agile transformations in large corporate institutions based on the questions from the Interview Guide (see Appendix A). For each quote there is also the information of how many participants have mentioned the same topic of the quote in the respective interviews. Therefore this number shows how many participants are in agreement with the presented quote. After transcription, coding and theme analysis, the following common themes and sub-themes were found:

- Theme 1 - Custom Transformation
- Theme 2 - Framework Implementation
- Theme 2.1 - Different Specific Framework Implementation per Company
- Theme 2.2 - Possible Role Retainment
- Theme 2.3 - Tools and their Administration
- Theme 2.4 - Realization of Ceremonies
- Theme 2.5 - Lack of Case Studies or Best Practices
- Theme 3 - Challenges with People
- Theme 3.1 - Lack of Agile Mindset
- Theme 3.2 - Inability to Create Cross-functional Teams
- Theme 3.3 - Disbelief of Agile Benefits
- Theme 3.4 - Communication Issues
- Theme 3.5 - Overall Previous Experience
- Theme 4 - Challenges with Organizational Structure

4.1 Custom Transformation

The agile transformation frameworks are largely used as a background for this thesis. One of the research questions (RQ2) also deals with the question of to what extent are these applicable in large corporations. The interviewees have largely agreed that the transformation is largely custom, or tailor-made, for the given target company.

“Supposedly there are some industry standards, like Stairway To Heaven and such, but as I understand it, the transforma-

tion frameworks are always customized [by people] according to their preferences and needs. It isn't done methodologically as the frameworks are defined on team or enterprise level."

- Person 5 (mentioned by 4 participants)

Person 1 agrees with Person 5, saying that there is little chance that a 1:1 implementation of any agile transformation will be successful. The reason for this statement is the interpretation of the framework by the consultant.

"The framework doesn't tell you concrete things, if you did it 1:1 it is not possible, it may or may not be functional. The motivation of people is the main reason for success."

- Person 1 (mentioned by 7 participants)

Person 6 says that the main driver for agile transformation is the value that the implementers are giving to the target company through the agile transformation. Person 6 mentions that there is a lot of things one needs to consider, specifically in the banking industry, and these things don't fit well into any of the Agile transformation frameworks they know.

"You basically deal with value and how to manage value, how to prioritize it, how many projects you have, how big are they, how to divide them, etcetera. These are tailor-made things, where you, based on the experience of other banks, solve the main painpoints that there usually exist. For example dividing IT and business, marketing and product management divisions, a lot of systems and things that are there, a lot of system-specific experts. You also have things about the legislation, which is a very huge topic there [in banking industry]. You can make a map of the business value and come to the conclusion that there is no business value, but the actual value might be that you do not get a fine. There is a lot of things you have to go through and these don't fit into those basic fits [of agile transformation frameworks]."

- Person 6 (mentioned by 5 participants)

Person 1 says that it is possible that the implementers do not use any transformation framework at all, they just set out to implement Scrum on team-level at a target company, in this instance. The strategy they used was based on their previous experience.

"In [company name] we didn't use anything, we used prior experience. At that time, there weren't any of these frameworks like SAFe. It didn't exist yet. For example we had an agile coach who taught people to write user stories, etcetera."

- Person 1 (mentioned by 3 participants)

Person 2 similarly says that they have experience of not using any agile transformation framework, or they just strictly use the SAFe transformation aspects, since they were implementing SAFe at the target company.

“At the last company where we were doing this [agile transformation], there was no designation of how we implemented the transformation. We just went to apply SAFe.”

- Person 2 (mentioned by 5 participants)

Person 2 also agrees with the point made before that agile transformations are tailor-made based on the needs of the specific target company. One cannot just follow one framework or one strict schema across different companies.

“They [agile implementers] are not all completely unified, they all have a slightly different approach, no one follows an official transformation framework, but everyone adapts it to their own needs.”

- Person 2 (mentioned by 9 participants)

4.2 Framework Implementation

This theme is similar to the first theme “Custom Transformation”. The difference is that the transformation strategies, although different, may have similar traits, but different implementation. For example, two different transformation strategies may choose SAFe as the target agile framework that is to-be implemented at these two different companies. However, the implementation of SAFe in these two cases may be quite different, although one is dealing with the same target agile framework.

4.2.1 Different Specific Framework Implementation Per Company

Person 4 says about framework implementation, that there is a huge risk that the developers will become quite a bottleneck of the project, because since they are needed to implement the features, they can take advantage of the situation and make up higher than actual estimates for their work and cover for each other.

“The main problem was non-transparency. The agile team sits together, and they cover each other’s backs. Two of them work [and the rest doesn’t], for example, and they share the work among themselves.”

- Person 4 (mentioned by 3 participants)

Person 3 also mentions this issue, saying that based on how one implements the framework, in this case the Spotify model, the tribes that are created could seemingly represent the original existing organizational hierarchy at the target company. This way they would just trade one type of silos for another type of silos.

“They [the target company] wanted to destroy the current hierarchy, the departments, heads of departments and such. But there was this opinion that basically you just traded one type of silos for another type of silos. In its own way, tribes can also represent silos.”

- Person 3 (mentioned by 5 participants)

4.2.2 Possible Role Retainment

Person 7 says that another framework implementation difference may be related to role specializations. Although in agile, the teams should be largely cross-functional, it seems that in a large corporate institution some teams may retain the original role specializations, such as business analyst, developer or tester. This sub-theme is also related to the "Inability to Create Cross-functional Teams" theme, mentioned later.

“The implementation was not as clean as in an ideal agile world, where you have a self-organized team, where everyone can do everything. As a result, those teams to some extent retained the role specialization, so you had a business analyst, architect, developer, tester. It progressed a bit that they started working also in those other specializations, but there was still this division. It was specific to the teams, some of them worked better [more cross-functional], but somewhere it was not overcome and those teams still work in some kind of role specializations.”

- Person 7 (mentioned by 8 participants)

4.2.3 Tools and their Administration

Person 4 further says that the tools that are used and the methodology that comes with them creates a lot of administration, which needs to be addressed. This would create the need to make a dedicated administration team, which handles the correct usage of these tools and the methodology itself.

“There is an administration overkill. It [the tools] is supposed to simplify and speed up the job, but in reality you have the whole administration team doing it. The developer would just write something in two sentences about what the feature does and say how long it will take and wouldn't care about the rest.”

- Person 4 (mentioned by 7 participants)

Person 4 describes the issue further, saying that all the administration artifacts are not actually needed for the project, the solution would be to create only the absolutely needed artifacts.

“The administration behind it is mad. It is a time and budget overkill. You are putting information to Confluence, which nobody will ever read. The only important thing is velocity, timeline, how many people do you need for the task and the feature description.”

- Person 4 (mentioned by 3 participants)

4.2.4 Realization of Ceremonies

The interviewees have brought up that the kind of implementation of the agile ceremonies can be quite different across different agile transformation cases.

Person 5 mentions that the kind of implementation of the same agile framework, in terms of adopting ceremonies, may be very different across different environments in corporate institutions. This is all largely also connected to the "Challenges with People" theme, mentioned further in the paper.

“A lot of things didn’t go right, but it wasn’t because of the framework that was chosen. I can’t say that switching to that framework is the reason for this, no. SAFe has been implemented there in some way but with some bugs. If it was perfect by the book, there might not have been any problems there. It’s just the culture, or that the people don’t know how it should be working. For example, within SAFe, there is a confidence vote that you give at the end of PI planning, with each team member evaluating how confident you are with that delivery. When I was dealing with [other case company], I cooperated with [another company] and I was there for their PI planning and there I dealt with this process within the confidence vote and it was quite common for people to give 1 or 2. And what happened was that the program manager called these people himself privately and actually asked them what programs they saw, why they didn’t have confidence in, what kind of blockers they see, impediments, what he could work on so that it would be better and the bad scenario would not come true. But back here [at the original company] it was so that people also voted, but you had a hall of 150 people and you gave a confidence vote and when you gave 2 or 3 they gave you a microphone and you had to defend in front of that hall of people why do you

think that backlog or commitment will not be fulfilled and what are your concerns within that. That seemed like an absolutely misguided thing to me. The confidence vote fell into the fact that it was not looked at at all, people gave 4-5 to have peace, and then the plans were fulfilled from 60-70%, but these votes were not used in any way, it was like an artifact of the PI planning which is supposed to help mitigate bugs but it was handled the wrong way. Maybe you have a developer at the team level who doesn't believe that he will be able to handle the planned delivery, but this person will never stand on the stage in front of 150 people, in front of program-level people and department heads and argue for his concerns, because he would be quite shy. This was a drawback of how the framework was implemented, but it's not a framework error, it's an implementation error."

- Person 5 (mentioned by 4 participants)

4.2.5 Lack of Case Studies or Best Practices

Person 8 says that there are no best practices mentioned for agile transformation frameworks or agile frameworks. In this case, Person 8 is talking about the agile transformation elements of the SAFe agile framework. They say that there isn't explicitly mentioned, what should one definitely avoid when implementing agile transformation in a large corporation.

"SAFe is fine at team-level. SAFe lacks the exact implementation - they tell you to "coach managers" but don't really tell you how. There are no best practices mentioned, what to avoid. The theory is fine and all but the reality is different. SAFe is very big, you can use it to create a space station, but it lacks the detail on how to use it in practice."

- Person 8 (mentioned by 5 participants)

4.3 Challenges with People

People and culture are usually one of the main topics found in literature when discussing challenges with agile transformation in general. According to the interviewees, this is also the case for agile transformations being implemented specifically in large corporations.

4.3.1 Lack of Agile Mindset

Some of the main reasons that the interviewees mentioned, were people's experience with agile, and their overall conviction of agile benefits. For instance, Person 1

mentioned the people's mindset.

“Mindset of the people that had no experience with agile. They [target company] were creating an analysis document for over 10 months, and then [when we took over] we told them to throw it away. We needed them to change the mindset, to make them create user stories and such. There was also a different technology stack and zero appetite for change to a new one.”

- Person 1 (mentioned by 6 participants)

Person 9 also agrees that it is the mindset that is one of the biggest issues.

“The challenge was to convince the people, the teams, to change the mindset to incremental releases, set-up the technology stack.”

- Person 9 (mentioned by 4 participants)

4.3.2 Inability to Create Cross-functional teams

Person 5 adds that the lack of skillset among the people means that the teams cannot be cross-functional, as they should be to be able to fully embrace agile practices. Lack of skillset means that people, again, divide into silos that are present in waterfall. For example one person can be an expert in JAVA, but has no knowledge about automated testing or CI/CD, meaning they cannot aid the team in other than JAVA issues.

“What was often a big problem was that [the project] was agile in some way but [the target company] hired people that didn't have a background in scrum at all, and these people had to suddenly work in scrum teams. There are some artifacts, like backlog [that you need to understand first], some ceremonies. They needed to learn it on the go, the whole problem was in the skillset of those people. [The team] should be crossfunctional, everyone should have an awareness and understanding of what the other is doing, so that they can add value to the delivery, but again, some silos were created [just as in waterfall]. You (an individual) simply know this coding language, you are this kind of developer or tester, you have no idea what is the essence of what we are doing here. The skillset was very limited, it was not cross-functional. But this is not [an issue] at the level of agile transformation, but rather as a precursor about what kind of people with what kind of skillset come to that corporation.”

- Person 5 (mentioned by 8 participants)

4.3.3 Disbelief of the Agile Benefits

Person 4 agrees with the mindset issue as well saying that it is hard to convince people of the benefits of agile ceremonies.

“Culture, mindset of the people, it’s the worst. It’s hard to get them off the tracks, to get them at 8 o’clock to come on a standup and such.”

- Person 4 (mentioned by 6 participants)

Person 5 agrees with this and adds a bit more to the topic about how, in his experience, people in large corporations perceive agile transformation from the cultural standpoint. Person 5 mentions that this might be the issue of insufficient training or leadership.

“The main challenge across industries is that these people will not master the agile change in the sense that they would believe that it would be like a cultural change for the better. They take it only as a change of processes and terminology. This means that you will not be called a manager but a product owner, now we have a scrum master and we are a team. The naming has changed several times, but the processes do not change. Although that is the essence of the ceremonies, they are here to help and improve the delivery or the value of the team, but the people look at it more like a mandatory meeting and the like. The cultural aspect of the agile mindset often doesn’t work for people, maybe it’s the lack of training or some leadership in those agile roles that are supposed to represent something like a culture roadship, whether it’s a scrum master, or an art team.”

- Person 5 (mentioned by 4 participants)

Person 3 adds to this that even people within the working group of people who should lead the agile transformation in the company, would be sabotaging the transformation.

“One of the biggest challenges was that the working group was on the level of B-1 and B-2 managers, and like eight people had their opinion, one person didn’t care, and one or two people were against and wanted to block the decision for agile transformation. Some people didn’t want to transition at all. The obvious solution was to go to the CEO and tell him that there are these people that are deliberately ruining the workshops, trying to replace them.”

- Person 3 (mentioned by 3 participants)

4.3.4 Communication Issues

Person 3 also adds to this that another challenge was about communicating to the people how the transition is going to be implemented. In this case, the company was transitioning to the Spotify model. People would have preferences over which tribes they wanted to join, but since the implementers decided to create the tribes incrementally, this created a lot of confusion.

“Another big challenge was how to communicate to the people that something like Agile transformation is going to be happening. Even though the communication was transparent, people were uncertain and the worst thing was that you had the old world, like marketing, distribution, IT and such, and out of nowhere you had guilds and squads and tribes with completely different roles which were supposed to be mapped to the old ways of working. That was a failure. It was decided that the tribes are going to be created incrementally, so the first tribes started to cherry-pick the organization. The subsequent tribes said that “so we will just have the B-list people that will be left?”. This was a big mess, how to transition the people. People got invitations from some tribe, but weren’t sure if they should accept it, because they might be invited to another tribe that they would like better down the line. But if they would decline now, maybe they wouldn’t like any other tribes down the line, the original invitation would expire, and they would end up somewhere they wouldn’t want to be. I think the staffing should have been done all at once, in a timespan of like a month, according to some sensible rules, not incrementally with no rules over several months, like it was done in this case.”

- Person 3 (mentioned by 5 participants)

4.3.5 Overall Previous Experience

Person 5 says that the skillset, or the overall previous experience, of the people is an issue that is not very well mitigated. Basically it depends on the company’s hiring policy, and the overall culture of the company. Person 5 says that better learning methods in higher education in the Czech Republic could be used to make the people more compatible with agile methods. This could be one of many variables.

“I read an interesting case study about how the Agile principles can be adopted during studies, during some courses. In some cases, assignments could be solved on team-level, so people would be divided into teams, every team would have some kind of delivery, they would divide roles such as scrum master and such, they would have regularly scheduled meetings, they

would have tools, and functioned in a cross-functional manner. This is how you can adopt the Agile mindset not only across industries, but also in education.”

- Person 5 (mentioned by 4 participants)

4.4 Challenges with Organizational Structure

Another challenge that came up frequently during the interviews, was the current organizational structure of the target company. In corporations, the organizational structure may be quite hierarchical, but that is not universally true. One cannot say that every corporate company is strictly hierarchical or strictly flat, it is not black and white type distinction, it is rather a kind of a spectrum. The target company has different needs for the agile transformation, different pre-requisites, also based on its position on this spectrum. Person 10 says that SAFe is usually used in bigger corporations, while the Spotify model could be used in Medium-sized firms.

“That is the reason why all the big corporations are adopting SAFe, because it has roles that they are used to already. Even Spotify don’t have these. The existing organization structure is the main predictor for the framework selection. If it is a non-standard company, more flexible and lean, Spotify is better for them to use, since it is not so hard and complex. Medium firms can use Spotify, big corporations always use SAFe.”

- Person 10 (mentioned by 6 participants)

Person 10 also says that the existing roles in corporations, based on their organizational structure, might work on small projects, but it is not scalable.

“It was a small project, so although it was successful, it wasn’t scalable. For example there wasn’t a scrum master, or product owner, There was a project manager instead, so the structure was different but they used user stories, standups, the team was basically self-organized without the need for a scrum master, and the project manager more-less had the role of the product owner.”

- Person 10 (mentioned by 5 participants)

Person 6 adds to this that the challenges with the organizational structure may be related to the hiring policy of the given target company.

“Not all people are compatible with these things, depending on the internal organization of the company that is there, it may not be compatible with agile principles. If you have someone who has been doing waterfall for 20 years, they will have problems with agile, and also you have to manage a strategy at the company level.”

- Person 6 (mentioned by 8 participants)

To conclude, Person 9 says that the agile transformation can never completely replace the waterfall model in large hierarchical corporations. Person 9 says that this is dependent among other things on how many releases the company commits to per year. This can be also connected to legislation matters or dependencies with other companies.

“The transformation is never full, there are still committed releases, that you need to meet. The whole company is structured for four releases a year.”

- Person 9 (mentioned by 4 participants)

4.5 Validation Survey

A validation survey (see Appendix B) was conducted to validate the results found from the transcripts, as they were presented in the previous chapters. Microsoft Forms was used to create the survey. The validation survey consisted of two sections - (1) Theme Validation and (2) Theme Importance. The survey also included open optional fields to allow the participants to share their thoughts about the survey or to say if anything is missing in the findings. The survey was sent out to the same people that were part of the interviews. Seven out of the ten interviewees have filled out the survey.

The first section, Theme Validation, introduced the found results to the participants, and asked the participants to fill out the level of their agreement per theme or sub-theme. The second section, Theme Importance, asked the participants to sort the found themes and sub-themes based on their importance according to the participants opinion. For both of these sections, stacked bar charts were created to convey the data. The charts have a legend, saying what color defines what information. There is always also a number showing for each theme, or definition, how many votes does the theme, or definition, have. For the second section, Theme Importance, the participants were asked to sort the themes or sub-themes from 1st choice to 4th or 5th choice, based on their level of importance.

The themes and sub-themes found are referenced as follows:

- Theme 1 - Custom Transformation
- Theme 2 - Framework Implementation
- Theme 2.1 - Different Specific Framework Implementation per Company
- Theme 2.2 - Possible Role Retainment
- Theme 2.3 - Tools and their Administration
- Theme 2.4 - Realization of Ceremonies
- Theme 2.5 - Lack of Case Studies or Best Practices
- Theme 3 - Challenges with People
- Theme 3.1 - Lack of Agile Mindset
- Theme 3.2 - Inability to Create Cross-functional Teams
- Theme 3.3 - Disbelief of Agile Benefits

4. Findings

- Theme 3.4 - Communication Issues
- Theme 3.5 - Overall Previous Experience
- Theme 4 - Challenges with Organizational Structure

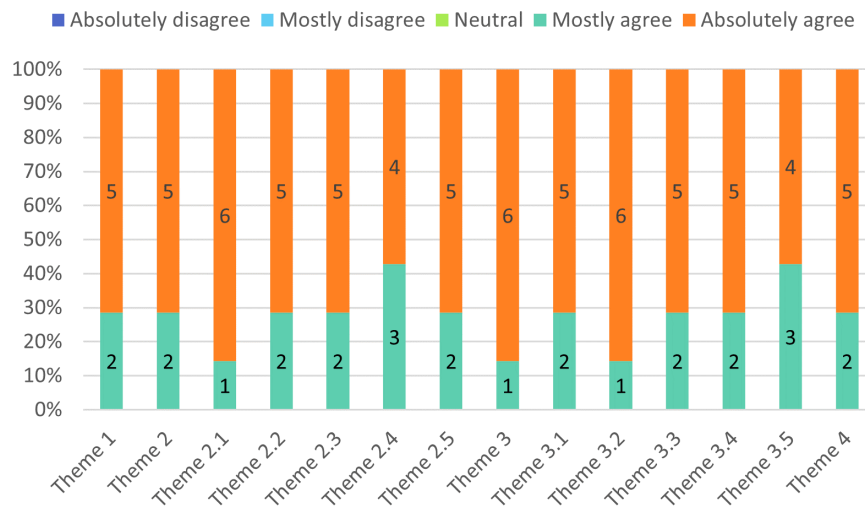


Figure 4.1: Theme validation - Chart

Figure 4.1 shows that the participants “absolutely agreed”, or “mostly agreed” with all the themes and sub-themes found from the transcripts. It can be seen that themes “Theme 2.1 - Different Specific Framework Implementation Per Company” and “Theme 3.2 - Inability to Create Cross-functional Teams” are the most agreed with themes found. On the other hand, “Theme 2.4 - Realization of Ceremonies” and “Theme 3.5 - Overall Previous Experience” are the least agreed with themes from the list.

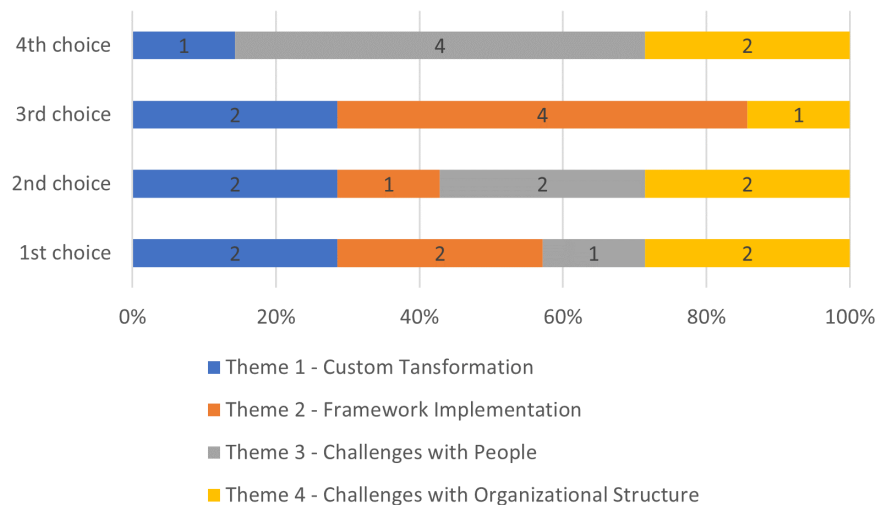


Figure 4.2: Sorted themes based on their importance - Chart

Each participant has also sorted all the themes and sub-themes based on their level of importance, according to the participant's opinion. First, as shown in Figure 4.2, the participants were asked to sort all the main themes based on their level of importance.

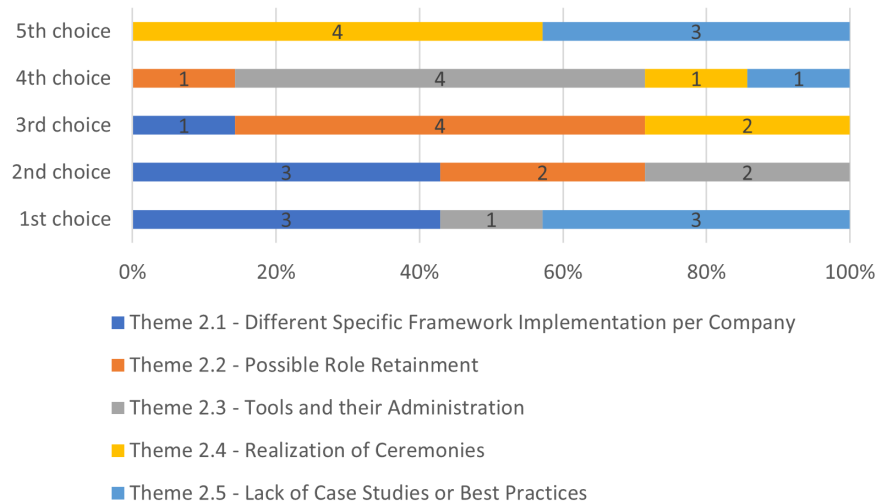


Figure 4.3: Sorted sub-themes of the Framework Implementation theme based on their importance - Chart

Figure 4.3 shows that the participants consider the “Theme 2.1 - Different Specific Framework Implementation per Company” to be the most important sub-theme within the “Framework Implementation” theme. On the other hand, “Theme 2.4 - Realization of Ceremonies” seems to be the least important sub-theme.

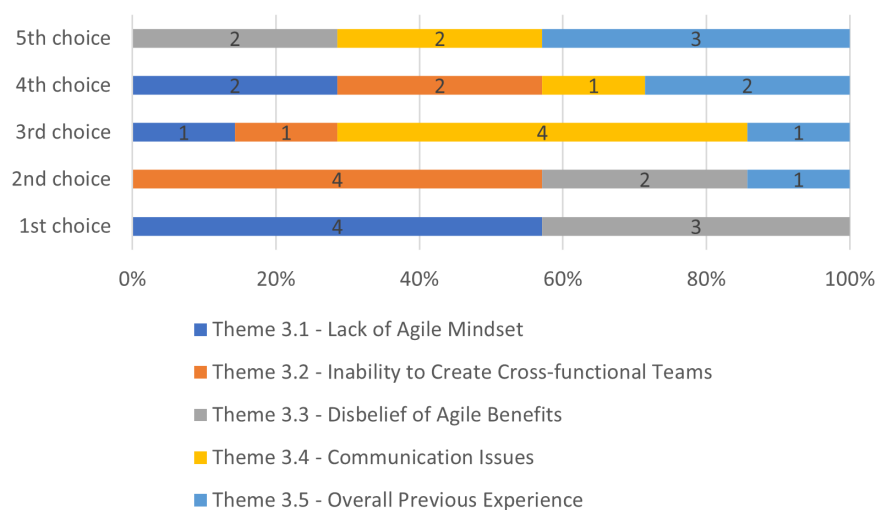


Figure 4.4: Sorted sub-themes of the Challenges with People theme based on their importance - Chart

Figure 4.4 shows that the participants consider the “Theme 3.1 - Lack of Agile Mindset” to be the most important theme found. Closely behind is the “Theme 3.2 - Inability to Create Cross-functional Teams”. The least important theme found according to the participants is the “Theme 3.5 - Overall Previous Experience”.

The importance of each theme and sub-theme can also be related to the level of participants agreement with each theme or sub-theme, as shown in Figure 4.1. The Theme Validation chart in Figure 4.1 shows that the least agreed with themes or sub-themes are “Theme 2.4. - Realization of Ceremonies” and “Theme 3.5 - Overall Previous Experience”. Figure 4.3 shows that “Theme 2.4 - Realization of Ceremonies” is voted as the least important sub-theme found. Figure 4.4 shows that “Theme 3.5 - Overall Previous Experience” is also voted as the least important sub-theme found. This supports the fact that these sub-themes are truly the least important themes found.

5

Discussion

This chapter discusses the findings of the study. Specifically, it discusses how the themes and sub-themes found from the interviews relate to the practical issues as well as to the existing research, and how they answer the research questions. The limitations of the study are also considered.

5.1 Implications for Practice

The findings of this study show what challenges do the consultants, who are implementing agile transformations in large corporate institutions, face. The results also show that the majority of agile transformations in large corporate institutions are tailor-made for the specific company, based on its needs, values and attributes. Based on the results, the implementers may adjust their focus while implementing an agile transformation in a large corporate institution. Although the interviewees were not often familiar with the agile transformation frameworks, as they are presented in literature, they were interested in them during the interview. They have also shown an interest in creating a comparison model of several different agile transformation frameworks, to help them with transformation strategy decisions. Therefore, a major discovery of the study is that since the agile transformations, in their experience, are all tailor-made, it would be quite valuable for the consultants to have a sort of collection of best practices, case studies or a comprehensive comparison model of different agile transformation frameworks. This was also said to be more valuable than creating a new holistic agile transformation framework, which may solve some issues in some areas, but there is a little chance this new framework could be successfully applied across different cases and also across different industries. The new comparison model may focus more on the frameworks' usage patterns and on how they can be customized further using an agile-based adaptation process.

Furthermore, the study also serves as a collection of consultant's experiences with agile transformations in large corporate institutions and it could provide some examples of what to avoid, or what to be aware of, when implementing an agile transformation in a large corporate institution.

5.2 Implications for Research

The agile transformation frameworks, as they are presented in literature, are generally not being used by consultants in the industry. The interviewees mostly agree

that the transformation is always very much tailor-made for the specific target company, based on its needs, values and attributes. This corresponds to the results of the survey conducted as a part of the 15th Annual State of Agile Report [29] from 2021. This survey is not a part of the related work for this thesis, since it is only used in relation with the nature of the found results. In the survey, the main reasons for agile adoption listed are (1) Business value delivered, (2) Customer/user satisfaction and (3) Velocity.

The 15th Annual State of Agile Report [29] also discusses “what are the most significant barriers to adopting and scaling agile practices”, which lists the following most significant challenges - (1) Inconsistent processes and practices across teams, (2) Organizational culture at odds with agile values, (3) General organizational resistance to change, (4) Lack of skills/experience with agile methods, (5) Not enough leadership participation and (6) Inadequate management support and sponsorship. This is in line with the findings of this study, where the found themes and sub-themes largely cover the aforementioned challenges.

As a part of the literature review for this study, Paasivaara et al. [4] have summarized the challenges in large-scale agile transformations to be (1) change resistance, (2) lack of investment and the fact that (3) agile is difficult to implement. This is also in accordance with the results of this study, similar to the main theme of “Theme 3 - Challenges with People” and its sub-themes and the theme “Theme 2 - Framework Implementation”.

Conboy & Carroll [3] also listed the following challenges in implementing large-scale agile transformations - (1) Defining Concepts and Terms, (2) Comparing and Contrasting Frameworks, (3) Readiness and Appetite for Change. The findings of this study confirm numbers two and three, but they do not explicitly cover the first point about defining concepts and terms.

Hoda & Noble [5] related the adoption challenges to four major areas - (1) people, (2) organization, (3) project and (4) process. The results of this study confirm the first and second points, but do not explicitly cover the third and fourth point.

Furthermore it was found that the agile transformation implementers rather than using explicit agile transformation frameworks, such as the Agile Adoption Framework [6], they are more often using the agile transformation elements of existing agile frameworks, such as SAFe, which are the target agile frameworks of the agile transformation. Putta et al. [30] say that organizations do often opt to use SAFe for their agile adoption, confirming this fact. The 15th Annual State of Agile Report [29] also mentions that in terms of scaling agile, 37% of respondents say that SAFe is the framework that “they most closely follow”. It seems that the agile transformation strategy is dependent on the target agile framework selected. More research in this area would be valuable.

From The 15th Annual State of Agile Report [29], it also appears that not even

SAFe can be strictly followed to achieve a successful agile adoption. There is always some level of customization. Also, it seems that the majority of the found themes and sub-themes are quite general in nature. They are quite often reported in similar studies, meaning that the case of agile transformation in a large corporate institution may, to some extent, be generalizable to the case of agile transformation in general, or in a wider extent of environments.

In terms of explicitly answering the research questions:

RQ 1 *To what extent can consultants follow a strict schema when helping large organizations transition?*

The interviewees mostly agree that every agile transformation in large corporate institution is largely tailor-made for the specific target company, based on its needs, values and attributes. There is a little chance that the implementers can follow a strict schema for implementing a successful agile transformation.

RQ 2 *To what extent are the agile transformation frameworks, as presented in literature, used in practice and are overall applicable in large corporate institutions from consultants point of view? Do they need to be improved?*

The interviewees agree that the agile transformation frameworks, as presented in literature, are not often being used in the industry. This is also related to the fact that every transformation is largely tailor-made for the specific company. However, the interviewees also say that they often use the transformation elements of agile frameworks, such as SAFe or Spotify, which are the target agile frameworks that are to be implemented at the respective companies.

RQ 3 *What challenges with implementing agile transformation in a large corporate institution do consultants face?*

The interviewees mentioned several issues with implementing agile transformation in large corporate institutions. The most prevalent points were related to the themes of (1) Challenges with People and (2) Challenges with Organizational Structure. The “Challenges with People” theme can be further divided into the following sub-themes: (1) lack of agile mindset, (2) inability to create cross-functional teams, (3) disbelief of the agile benefits, (4) communication issues and (5) overall previous experience. The “Challenges with Organizational Structure” theme relates to the fact that different agile frameworks may be suitable for different companies based on their existing organizational structure. This may be one variable of many in a multivariate equation.

5.3 Threats to Validity

The results of the study are limited only to the agile transformations based in large corporate institutions in the industries of banking, finance and automotive, based in the Czech Republic. The generalizability of the results across different industries may be possible but is not expected.

The area of agile transformation is quite vast, there are multiple challenges that transformation leaders encounter. This thesis tries to identify the current challenges that consultants face in agile transformations based in large corporate institutions. Therefore, the thesis is less concerned with solving issues in agile transformation in general, or from a general point of view. Also, the thesis tries to answer questions about whether consultants use agile transformation frameworks, as they are presented in literature, during these transformations, and whether these frameworks are even applicable in such environments. The study is based on specific industry areas and the participants for interviews are all consultants delivering the transformations from a consultancy standpoint.

Furthermore, the interviews were conducted in a language other than English, specifically in the Czech language. Therefore, the transcription excerpts used in this study are translations from the Czech language into the English language.

This study used thematic analysis to find, analyze and interpret common patterns found throughout the interview transcripts. However, in larger studies there might be a need for handling big data, using codebooks and such. Therefore this method may not be a substitute for a codebook detailed analysis.

5.3.1 Threats to Internal Validity

The interviewees were not randomly selected across different companies. They were all selected from one company, Deloitte, due to the overall collaboration on this study with this company. It is possible that Deloitte hires a certain type of consultants and therefore the results might differ if multiple companies were selected for the data collection. However, it is expected that the results may be valid across different consultancy companies, which are similar to Deloitte, in size and culture.

The interviewees mostly know each other, they might have history, they might have similar mindsets and knowledge about the domain. Therefore, there may be an existing interaction between their answers. Also, in thick culture companies, interviewees might not be comfortable to speak their mind and state freely what they believe, even though they are assured that no name will be revealed. To mitigate this issue, anonymous interviews were conducted online for a specific profile of people who were more open with this type of private interview.

5.3.2 Threats to External Validity

The Hawthorne effect or the Situation effect may be present threats to external validity. The participants may have possibly changed their behaviour when they were being interviewed. Also, there was only one interview per participant conducted, which may raise the threat to external validity through the Situation effect. This may have been possibly mitigated through conducting the validation survey.

6

Conclusion and Outlook

This qualitative exploratory case study explored the current trends in implementing agile transformation in large corporate institutions from consultant's point of view. Specifically, it was focused on investigating the consultants' overall experience with agile transformations and agile transformation frameworks. An individual interview method was conducted for the data collection, to extract information from 10 participants. An interview guide (see Appendix A) was also created, the interviews were semi-structured to allow for improvisation and exploration of the studied topics. The interview participants were selected based on purposive sampling, focusing on participant's experiences. An interviewee profile was also created to help with the sampling process. The interviews were transcribed using a self-developed transcription software. Subsequently, coding and thematic analysis were conducted, to find common themes and sub-themes throughout the transcripts. The results found were further validated with 7 out of the 10 interview participants, using a validation survey (see Appendix B). The survey has shown that the participants "mostly agree" or "absolutely agree" with all of the found themes, also giving importance to different themes. The results were also discussed, specifically the implications for practice and implications for research were considered and research questions were answered. In terms of threats to validity, the main concern is about the interviewees all being from only one company. This is also discussed, the results may be valid also across different consultancy companies, which are similar to Deloitte, in size and culture.

As mentioned in the previous chapter, the results show that there is a need for more research, specifically for more case studies, in the area of the applicability of agile transformation frameworks, as they are presented in literature, in large corporate institutions.

Another focus which may be further explored is why are large corporations more inclined to use the agile transformation elements of agile frameworks such as SAFe or Spotify, instead of using explicit agile transformation frameworks to satisfy the needs of the specific case of agile transformation.

Finally, this study has also identified a need, more specifically a lack of, case studies or best practices or guidelines on what to avoid, for each of the presented agile transformation frameworks. These would be valuable in practice as well as in research.

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A

Interview Guide

A.1 Introduction

1. Present myself and the topic of the thesis.
2. Present the interview goals.
 - a) Learn as much as possible about the interviewee's experience with implementing agile transformations in corporate institutions.
 - b) Identify challenges and example solutions with agile transformations in corporate institutions.
3. Tell the interviewee that the data will be anonymized, the name or the company's name will not be associated with interviewee's answers.
4. Ask the interviewee for their approval to record the interview for later transcription.
5. Tell the interviewee to feel free to ask me to clarify a term or definition if needed.

A.2 Introductory questions

1. What is your role in the company? Briefly describe your responsibilities.
2. How long have you been working in this role? If the role changed in last two years, what role was it before?
3. How many years of experience do you have in IT deliveries?
4. How many years of experience do you have in IT deliveries in Agile?
5. Which industries have you had experience with?
6. How many agile projects in general have you been a part of? What role did you have in these?
7. How many agile transformation projects have you been a part of? What role did you have in these?

A.3 Investigative questions

Interviewee's knowledge

- Q1 How much would you say you are familiar with Agile? Less, more, or very much?
- *Briefly describe the difference between agile methodologies and agile transformation frameworks.***
- Q2 Briefly describe the agile techniques or methodologies that you are familiar with from your experience in the industry.
- Q3 How much would you say you are familiar with Agile transformation frameworks?
- Q4 Briefly describe the agile transformation frameworks that you are familiar with from your experience in the industry.
- Q5 Do you think agile transformation is a more of a linear axis or rather a multi-dimensional network of on-going changes? Or would you say it is something different?
- Q6 Do you see the selection of software development framework and values would have impacted agile transformation outcome?
- Q7 How do you believe the software development process will look like in the future?

Case Introduction

Ask the interviewee to think about one of the concrete cases.

- Q8 At which company have you been a part of this agile transformation?
- Q9 How big would you say this project was in terms of budget, time, and people involved?
- Q10 How big would you say was this transformation? Team-level, Department-level, Company-level or different?
- Q11 Did you use any existing agile transformation framework, or its parts - theoretical or practical? If yes, which?
- Q12 Did you consider using several different agile transformation frameworks before deciding? What was the main reason you chose this one?
- Q13 Was there any significant support for the transformation project from externals such as consultants or subcontractors?

Case Investigation

- Q14 What was the reason for agile transformation? Did the company identify the need for agile transformation themselves?
- Q15 At what level the transformation project was sponsored and owned?
- Q16 Was it holistic integral approach, or department incremental approach?
- Q17 How did you assess the current level of agile maturity at the company?

- Q18 What would you say were the goals of the transformation?
- Q19 How did you measure the progress of agile transformation? What metrics have you used?
- Q20 What challenges did you encounter in implementing the agile transformation and how did you approach them?
- Q21 What would you say were the most problematic points of this agile transformation? Why?
- Q22 Would you say that the framework you have used had any drawbacks? If yes, which drawbacks did you identify?
- Q23 Did you find something that the selected agile transformation framework lacked?

Case Conclusion

- Q24 Do you think that implementing agile transformation is different in 'traditional' corporate companies than in system engineering based companies? Why?
- Q25 Do you think that implementing agile transformation is different in large companies than in smaller companies? Why?
- Q26 Did you identify any clear distinguishing points between implementing agile transformation in your different cases?
- Q27 Was the agile transformation successful? How and when were you sure if yes/no?
- Q28 Would you say that the existing culture of the organization helped to the success of the agile transformation?
- Q29 What would you say could have been done better?

Frameworks

- Q30 Are you familiar with these frameworks? (The Agile Adoption Framework, Agile Adoption and Improvement Model, Stairway to Heaven, Theory of Becoming Agile, SAFe, Spotify)
- Q31 (If they are familiar with some) - How would you describe the frameworks that I just presented that you are familiar with?

Briefly present the frameworks from the comparison model.

- Q32 Would you be interested in learning more about these frameworks in terms of their possible usability in future agile transformation projects?
- Q33 Would you, hypothetically, be open to trying out some of these frameworks in future agile transformations? Why yes/why not?
- Q34 Would you be interested in a comprehensive comparison model of several different agile transformation frameworks, to help you with deciding?
- Q35 If yes, what main points would you like to be covered in this comparison model?

A.4 Wrap-up questions

1. Is there anything I forgot to ask you that you would like to add?
2. Do you recommend anyone else we should talk to about this topic?

Thank the interviewee for their time.

B

Validation Survey

28.05.22 15:25

MSc thesis - Validation Survey

MSc thesis - Validation Survey

Hello!

Welcome to the validation survey for the master's thesis on the topic of **Agile Transformation and its Implementation in Large Corporate Institutions**.

This survey will be used to validate the results, more specifically the common themes and sub-themes, found from the individual interviews, which were conducted with you during the previous weeks.

The survey is composed of two sections - (1) Themes Validation and (2) Themes Importance. It should take about **7-10 minutes** to fill out.

If you have any questions about the survey, or if there is anything unclear, please let me know using my work email: mscheibinger@deloittece.com

Thank you very much for your time and contribution to the thesis, I greatly appreciate it.

Marek Scheibinger
Department of Computer Science and Engineering
University of Gothenburg | Chalmers University of Technology

* Required

Themes Validation

There are the following themes found throughout the interview transcripts, also provided with a brief description:

1. Custom Transformation

1. Agile transformations in large corporate institutions are largely tailor-made for the specific target company, based on its needs, values and attributes. There is a little chance that the implementers can follow a strict schema for implementing a successful agile transformation in a large corporate institution.

2. Framework Implementation

1. The agile transformation frameworks, as presented in literature, are not being often used in the industry. However, the consultants often use the transformation elements of agile frameworks, such as SAFe or Spotify, which are the target agile frameworks that are to-be implemented at the respective companies. The framework implementation may differ between different cases, which may be related to the following:

1. Different specific framework implementation company to company (for example implementing SAFe at one corporation can be different than implementing SAFe at another corporation)
2. Possible role retainment (retaining roles such as business analyst, architect, project manager, developer, tester in agile teams)
3. Tools and administration of these tools (such as Jira, Confluence)
4. Realization of ceremonies
5. Lack of case studies or a list of best practices for implementing the specific framework

3. Challenges with People

1. "People" here refer to the people who are to-be transformed from waterfall to the agile ways of working. These challenges can be divided into the following sub-themes:

1. Lack of agile mindset
2. Inability to create cross-functional teams

1. Based on the themes description above, do you agree with the found common themes? *

	Absolutely disagree	Mostly disagree	Neutral	Mostly agree	Absolutely agree
Theme 1 - Custom Transformation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Theme 2 - Framework Implementation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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B. Validation Survey

28.05.22 15:25

MSc thesis - Validation Survey

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Theme 2.1
- Different specific framework implementation on company to company

Theme 2.2
- Possible role retainment

Theme 2.3
- Tools and administration of these tools

Theme 2.4
- Realization of ceremonies

Theme 2.5
- Lack of case studies or a list of best practices for implementing the specific framework

Theme 3 - Challenges with People

Theme 3.1 - Lack of Agile Mindset

Theme 3.2 - Inability to Create Cross-functional Teams

Theme 3.3 - Disbelief of Agile Benefits

Absolutely disagree Mostly disagree Neutral Mostly agree Absolutely agree

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MSc thesis - Validation Survey

Theme 3.4 - Communication Issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Theme 3.5 - Overall Previous Experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Theme 4 - Challenges with Organizational Structure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Do you have anything to add to your choices?

3. Do you have anything to add to the found themes and its descriptions?

4. Do you think there is something important missing?

Themes Importance

Please sort the themes and sub-themes by their level of importance in the context of an agile transformation in a large corporate institution according to your opinion.

5. Please sort the found themes and sub-themes based on their importance.
(top = most important, bottom = least important) *

Theme 1 - Custom Transformation

Theme 2 - Framework Implementation

Theme 3 - Challenges with People

Theme 4 - Challenges with Organizational Structure

6. Please sort the sub-themes of the "Framework Implementation" theme based on their importance.
(top = most important, bottom = least important)

*

Theme 2.1 - Different specific framework implementation company to company

Theme 2.2 - Possible role retainment

Theme 2.3 - Tools and administration of these tools

Theme 2.4 - Realization of ceremonies

Theme 2.5 - Lack of case studies or a list of best practices for implementing the specific framework

7. Please sort the sub-themes of the "Challenges with People" theme based on their importance.
(top = most important, bottom = least important)

*

- Theme 3.1 - Lack of Agile Mindset
- Theme 3.2 - Inability to Create Cross-functional Teams
- Theme 3.3 - Disbelief of Agile Benefits
- Theme 3.4 - Communication Issues
- Theme 3.5 - Overall Previous Experience

8. Do you have anything to add to the themes and sub-themes importance?

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