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**Challenges in SAFe® Methodology
implementation from the perspective of Project
Leadership roles**

Information Systems Science

Master's thesis

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Agile as a methodology is a broad concept that today includes several frameworks. Over time, these frameworks have evolved to meet the needs of companies of different sizes and to lead agile software development. Since then, this Agile working methodology has expanded into a general management model in an increasing number of organizations, as it has been used to observe improved transparency, adherence to project budgets, and improved self-direction of personnel. However, many organizations were managed with traditional project management methods for y, decades the transition to Agile has not been an easy experience for many organizations.

This master thesis focuses on exploring the Agile methodology framework Scaled Agile Framework SAFe challenges at the managerial level. The study has been carried out as a qualitative study and the aim of the study has been to independently identify the challenges faced by people in managerial positions in their daily work with the SAFe framework

The data for the study has been collected by interviewing seven people who have worked in managerial/leadership positions. The interviewees' experience of working with the SAFe framework has been verified before the interviews. The interview method followed a semi-structured interview model. Before the interviews, the interviewees were provided with a question frame that they were able to familiarise themselves with on their own time. During the interviews, the interviewees were asked more detailed questions for their answers when it was deemed necessary.

In the interviews, both the benefits and the problems of SAFe emerge. The interviewees explain how SAFe helps achieve the benefits it promises, but some benefits are not materialized due to partial or incorrect implementation of the framework. Human factors, such as established work habits and previous methods, are also highlighted as challenges. The interviews also underscored the importance of training and continuous support in daily work to properly implement the framework within organizations. Additionally, leading different parts of the organization in varying ways can conflict with the SAFe method, such as traditional budgeting, which does not fit with SAFe adaptive and iterative practices. Many of the challenges highlighted in the interviews have been addressed in the SAFe 6.0 update, which is where the discussion of this research concludes.

Keywords: Scaled Agile Framework®, SAFe®, Product Management, Scaled Agile, Large-Scale Agile, Agile Implementation, Project Management

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Agile-menetelmänä on laaja käsite, joka nykyään sisältää useita viitekehyksiä. Ajan myötä nämä viitekehykset ovat kehittyneet vastaamaan eri kokoisten yritysten tarpeita ja auttamaan johtamaan ketterää ohjelmistokehitystä. Sittemmin nämä ketterät työskentelymenetelmät ovat laajentunut yleiseksi johtamismalleiksi yhä useammassa organisaatioissa, sillä niiden avulla on havaittu että voidaan saavuttaa parantunutta läpinäkyvyyttä, projekti budjetissa pysymistä ja henkilöstön parempaa itseohjautuvuutta. Monet organisaatiot ovat kuitenkin hallinneet organisaatioita isossa kuvassa perinteisiä projektijohtamisen menetelmiä hyödyntäen vuosikymmenien ajan, ja siirtyminen ketterään toimintatapaan ei ole tämän vuoksi ollut helppo kokemus monille organisaatioille.

Tämä pro gradu-tutkielma keskittyy Agile-metodologiakehityksen Scaled Agile Framework SAFe haasteiden tutkimiseen projekti/hanke johtamisen tasolla. Tutkimus on toteutettu kvalitatiivisena tutkimuksena ja tutkimuksen tavoitteena on ollut itsenäisesti tunnistaa johtotehtävissä olevien ihmisten kohtaamat haasteet päivittäisessä työssään SAFe-viitekehyksen parissa.

Tutkimuksen aineisto on kerätty haastatteleamalla seitsemää hanke/projekti johtotehtävissä työskennellyä henkilöä. Haastateltujen kokemus työskentelystä SAFe-kehityksen kanssa on varmistettu ennen haastatteluja. Haastattelumenetelmä noudatti puolistrukturoitua haastattelumallia. Ennen haastatteluja haastateltaville toimitettiin kysymys runko johon he saattoivat perehtyä ennen haastattelua aikaansa. Haastatteluissa haastateltaville kysyttiin tarkentavia kysymyksiä kun se katsottiin tarpeelliseksi.

Haastattelu vastauksissa tulevat esiin niin SAFe-mallin hyödyt kuin myös sen ongelmat. Haastateltavat tuovat esiin kuinka SAFe auttaa saavuttamaan arvolupauksensa mukaiset hyödyt. Osa hyödyistä kuitenkin havaitaan jäävän saavuttamattomiksi osittaisen tai virheellisen mallin käyttöönoton vuoksi. Myös inhimilliset tekijät, kuten vakiintuneet työtavat ja aikaisemmat menetelmät, korostuvat haasteina. Haastatteluiden vastauksista korostui myös koulutuksen ja jatkuvan tuen merkitystä päivittäisessä työssä mallin asianmukaiseksi käyttöönotoksi organisaatioissa. Lisäksi eri osien johtaminen organisaatiosta eri tavoilla voi olla ristiriidassa SAFe-menetelmän kanssa, kuten perinteinen budjetointi, joka ei sovi SAFe-mallin mukautuviin ja iteratiivisiin käytäntöihin. Moniin haastatteluissa esiin nousseisiin haasteisiin on puututtu SAFe 6.0 -päivityksessä, johon tämän tutkimuksen keskustelu päättyy.

Avainsanat: Scaled Agile Framework®, SAFe®, tuote johtaminen, skaalattu ketteruus, ketteryyden laaja skaalaaminen, ketterän käyttöönotto, projekti johtaminen

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Acronyms and Abbreviations

LACE	Lean-Agile Center of Excellence
SAFe	Scaled Agile Framework
PO	Product Owner
PM	Project Manager
SAS	Scrum at Scale
BAVS	Business Agility Value Stream
OKR	Objectives and Key Results TYYn
siipisoihtu-kokardi	
VMO	Value Management Office
ART	Agile Release Trains
WIP	Work in process
PMO	Program Management Office
RTE	Release Train Engineer
IRT	Implicit reaction times

1 Introduction

1.1 Background and motivation

In project management, a high project failure rate has been recognized as an issue and one of the reasons is suspected to be traditional project management methodologies. Traditional project management methodologies are typically quite control-oriented, rigid, and inflexible. Since business environments get more complex companies have sought out other methodologies like for example Scaled Agile Framework (SAFe®) which brings collaboration between various teams in Agile software development. (Nyandongo and Madumo, 2022) SAFe® has been around since 2011 which makes today 2024, 13 years since it was developed. Many organizations use variations of different Agile frameworks, and the same phenomenon can be seen in using the SAFe® framework. Adopting Agile to a large organization is not an easy task and it requires a significant change to organization culture, which takes time, commitment, and customization. (Bowring and Paasivaara, 2021)

Agile as a methodology is seen as a solution to fix issues with software development and break silos between teams and different parts of the organization that cause communication breaks. (Paasivaara, 2017) This promise has been given to software development but what about the non-agile organizations and teams that don't do software development and have previously used traditional waterfall project management methods does SAFe® give them these Agile benefits or will it end up being only high hopes or are issues caused by some internal factors in organizations or by external influence? (Boehm and Turner, 2005)

Frameworks rarely work the same for all there are different industries and sizes of organizations, and different leadership styles depending on what part of the world you are from. (Dikert et al., 2016) In some cases, there might be this idea that Agile and its frameworks are easy to apply and it's not a necessary reason to prepare the implementation since it should make our work easier. Like all changes, Agile transformation should be prepared and understand what benefits you gain from implementing a certain methodology. Every change, no matter how big or small, in an organization requires some kind of strategy and change management model, otherwise,

the change typically encounters resistance to change and, at worst, ends up failing. (Boehm, 2002)

These larger organizations that SAFe® is designed for tend to still rely on traditional methodologies heavily in upper management positions, financial decisions, and strategic decision-making. This master thesis seeks to find out are there challenges related to implement SAFe on the project leadership level and what those implementation issues are. Research data is gathered by interviewing a group of experts who have worked in project management roles in projects that use SAFe® as their framework. By thematic analysis, interview answers are grouped based on reoccurring themes. These themes are then further analyzed and compared to existing literature and research. This master thesis concludes with the findings of these thematic themes and discusses could SAFe® late update 6.0 solve some of them and if not what the are there possibly help from other existing frameworks.

1.2 Prior Research

(Putta et al., 2018) A systematic literature review found that despite the popularity of the SAFe® framework in the software industry it lacks scientific research on the benefits and challenges of SAFe® adoption. This has been considered in interview questions and interviewees have been asked to provide examples of benefits if they have seen their day-to-day work.

Get ready for agile methods, with care published by Boehm and Turner, 2005. Has been cited 1002 times, and research that is citing it mostly focuses on agile transformation, its success factors, and human factors in it. Based on this it seems agile transformation succession is a rather studied topic but then on the other hand it seems like the following study on how transformations went and did this implementation recommendation work is lacking. In their research, Boehm and Turner researched how to find balance when implementing Agile processes in traditional development organizations.

Despite the known issue that it is harder to implement Agile Methodologies in larger companies, a rising number of organizations are more interested in potential benefits that can be achieved with agile methodology and its frameworks. Issues that have been identified related to large organization implementation for Agile are the need for additional coordination, how to handle inter-team coordination, and interfacing with

other organizational units, it can also cause internal stakeholders to become distant from developing teams. (Dikert et al., 2016). From the traditional role of a project manager to the agile program manager there is little research existing on how the role of a program manager is performed in practice at organizations. (Tkalich et al., 2022)

Dikert et al research refers to The State of Agile Survey that Version One that has been conducted annually since 2007. (Dikert et al., 2016). Looking the the survey from year 2023 State of Agile Culture Report: done as a collaboration between JCURV, Truthsayers, and the Agile Business Consortium. These three surveyed 1051 people in a range of organizations from small to large companies, to people from all levels of organizations that are dealing with these Agile challenges on a daily basis. With survey methodology that is based on implicit reaction times (IRTs) was for data collection. 2023 third report focused on the impact of leadership styles on agile culture, business agility, organizational resilience, and performance in a recession environment. What was noticeable in these survey results was a low level of trust from employee level to leadership capability of responding to market changes (“State of Agile Culture Report,” 2023)

Report finds out that there is also a significant gap in leadership’s awareness and understanding of agile behaviors since 97% of executive-level managers within a company (C-suite) members believed that they role model agile behaviors. But when the same was asked of delivery team members only 2% agreed. There was also a significant difference when asking about how C-suite members feel that leaders in their organization can adapt and pivot they were 80% confident and senior leaders only 15% were confident. Also, 91% of C-suite feel experimentation is encouraged but from a delivery team perspective, only 35% felt this way. From the C-suite level, they believed 97% were confident that they role model agile behaviour’s but only 2% of delivery team members agreed. The level of training people receive has also dropped from previous years and only 42% agreed that they are getting trained and coached, senior levels 29%, and delivery teams only 7%. Happiness to work and work-life balances have also dropped from the 2022 report from 72% to 60% (“State of Agile Culture Report,” 2023)

Based on the answers survey suggests that leaders can improve this performance by Investing in agile coaching and training for themselves and delivery team members,

providing greater clarity of intent/business focus and priorities, and creating and sustaining a safe agile working environment. To fix this issue companies also need more agile leaders all over the organization to help keep agile its needed phase and help with changes. (“State of Agile Culture Report,” 2023)

What was noticeable in the study was that C-suite level scored their impact and agile capabilities higher than they truly were and employees and senior leadership were giving C-suite low scores. What might explain C-suite scoring high in other aspects is that they scored rather low in their safety to experience failure, which was just 8%, compared to senior leadership 91%, and delivery team members 90%. This fear of failure might cause that it prevents C-suite teams to encouraging experimentation elsewhere. (“State of Agile Culture Report,” 2023)

37 attributes assessed in the study and as a conclusion were the top three leadership components that align with increased commercial performance. These were Prioritising agile coaching and training, providing greater clarity of intent, and Creating and sustaining a safe agile working environment (“State of Agile Culture Report,” 2023)

1.3 Research questions

This thesis research goal is to find are there some patterns why SAFe® seems to have issues in projects from a project leadership perspective. Most of the time it discussed the benefits of the SAFe® framework and how it will almost revolutionize work life and traditional industries. This thesis aims to find what issues project leaders have come across their daily work at environment that is going through SAFe® implementation. As final part of the research is to reflect simple solutions to overcome issues with SAFe® implementation.

RQ1: Implementation issues of SAFe® from the Project leadership perspective.

RQ2: What are simple solutions to overcome issues with SAFe® implementation?

The aim is to find out what are the issues and whether, are they related to the organization's operating model-related or are more about us as humans and how we learn do and work.

1.4 Research method, data collection, and analysis

The main source of data in this research is semi-structured interviews other sources of data are gathered from relevant studies literature reviews and articles. This master thesis research is done by using qualitative methods for the interviews with individuals who have worked on projects that have used SAFe® as a framework. Interviewees are pre-selected, persons that are known to have worked as project managers in projects that have used SAFe® as a framework.

The selected method for empirical research is semi-structured interviews. Interviews will consist same open-answer question pattern for all participants. Interviewees will receive a high-level plan for what and how long the interview session will take and a set of questions. Interviewees have noted that this is semi-structured and based on their answer questions order might vary and for some questions, participants are asked to specify. Interviews were recorded and automatically iterated with the Microsoft iteration tool and lastly summarized based on the recordings and sent to participants to confirm their answers.

To help summarise and validate interview data ChatGPT 3 & 4.0 has been used for this research. ChatGPT translation services have been used occasionally to help with the translation process. For automated language checks have been used Grammarly.

1.5 Expected results and contribution.

The expected results of this thesis is to expand the knowledge that already exists of SAFe® as a framework and how it can be used more effectively. This study aims to provide insights that can help to understand challenges in SAFe® from a project leadership perspective and its implementation. By the support of previous research interviews are validated and seen are there some similarities or are there potentially some new findings? With the support of previous studies, there will be formed conclusions and recommendations on what improvements to apply to get the most out of the SAFe® framework.

1.6 Structure

Chapter one includes an introduction to this thesis research topic and why the topic should be researched and goes through research questions. Chapter two then follows

with theoretical background from previous research and relevant literature and articles introducing agile as a methodology and its history. Chapter three then follows with details what is Agile Framework Scaled Agile Framework SAFe. Chapter four follows with an interview plan and validity, reliability, and ethics analysis. Chapter five presents interview results with a thematic analysis methodology. Chapter six focuses on the analysis of interview findings. Lastly, chapter seven ends the research with a summary containing suggestions for future research,

2 Literature review

This literature review presents Agile methodology and its most used frameworks since Agile has multiple framework sub-categories and variations all of them will not be presented in this study as those have been seen as irrelevant because most of the sub-categories are derivatives from the Scrum framework.

After we have gone through the basics of Agile, we will focus on what are the human values in Agile why they are there, and why they are important. From there this literature review follows more detail about SAFe® history and why it was developed, the benefits it tries to achieve, what are roles and responsibilities of SAFe®, and whether are there some issues with this framework. The overview ends with a summary of what has been updated in SAFe® latest release version 6.0.

This literature review lays the groundwork for the interviews. The research data is compared in the conclusions of the interviews section, and it is revealed whether the findings are already familiar or whether there is an angle that was particularly emphasized in the interviews that the previous studies have not emphasized.

2.1 Beginning of Agile

Agile software development came up around 1990. Before Agile there were plan-driven approaches, for example, waterfall development where requirements are first defined and then followed by the development phase. The waterfall methodology doesn't have an iterative feedback process and it was noted that this methodology to develop caused dissatisfaction with end results. Ever since Agile came around, it has been increasingly used in software development and even as a general leadership method for organizations. (Hussain et al., 2022)

When the business environment is increasingly more complex, companies require holistic product strategy and product development. Products must adapt to constant changes; the user needs to shorten the new product launch cycle. Also, the new emerging markets demand fast delivery of a product or a service. A Scaled Agile Framework Product Manager is responsible for translating business needs into practical software or products. To achieve this type of development process it needs continuous

end-to-end flow between customer demand, business strategy, and software development. (Tkalich et al., 2022)

Agile as the framework was first designed to work for smaller development projects. But then over the years, frameworks have been applied to it for example Scrum and Scaled Agile Framework (SAFe®) are designed to help manage larger projects in larger organizations. However, SAFe® was designed by a group of consultants as a generic model and it faces some issues while implemented and on day-to-day work. (Dikert et al., 2016)

A known issue of larger Agile projects is how to handle different organization units such as human resources, management, marketing, and development. Secondly on a day-to-day level issue is how to handle inter-team coordination and how to plan work and develop towards the bigger goal. Thirdly this type of change on a large scale also exposes organizations to the risk that different stakeholders become distant for this type of change and development. (Dikert et al., 2016)

We also live in a world where some organizations have done their work certain way for a decade or even longer. These types of organizations need some certainty that changing their ways of working will bring them value. In Agile this is tried by bringing frameworks that are designed to work in different situations and organizations. But still changing so fundamental that how you do your daily work might face some issues along the way. For example, human factors play here huge role and pressure from colleagues might even slower the change or even in a worst case completely prevent it. (Sanderson, 2021)

2.2 Time before SAFe® and other Agile frameworks



Figure 1.0 History of Agile frameworks. (Eby, 2022)

From the beginning of the Agile methodology to frameworks at the figure of 1.0 we can see the beginning of it that is Kanban, Design Thinking, Crystal, and Dynamic Systems Method these were the beginning of frameworks that today count 17 different ones. After these followed the Manifesto of Agile frameworks like Scrum, Extreme Programming PRINCE2, Feature Driven Development, and Agile Manifesto. From here, the need for Scaled Agile Frameworks for larger companies was recognized like Lean Development, Large-Scaled Scrum (LeSS) and. Second lastly was formed Discipline Agile, and Adaptive Project Framework. Lastly, most recent frameworks were designed these were more or less variations from other already existing frameworks. These frameworks were the Spotify Model, Scaled Agile Framework (SAFe), Scrum at Scale (SAS), Nexus, Project Half Double, Agile digital services, Biz and DevOps. (Eby, 2022)

Scrum is a methodology principle from the Agile Manifesto that combines different methods and their remains. Scrum is the most widely adopted Agile development

method in the industry. The benefits to small teams from the Agile raised interest in larger organizations but since large organizations do not work the same as small teams it did not fit as is. To adopt these methodologies, a scaled Agile framework SAFe® was aimed to bring benefits like increased communication, coordination and between the different units in the organization. The SAFe® framework is based on Agile and Lean principles. SAFe® has four core values; alignment, built-in quality, transparency, and program execution. (Hussain et al., 2022)

2.3 Human Values in Agile

As it was previously mentioned human values are core in Agile. An agile manifesto itself has four values that are following; Individuals and interactions over processes and tools, working software over comprehensive documentation, customer collaboration over contract negotiation, and responding to change over following a plan. (Boehm, 2002) These Agile manifesto values are high to basic human values that are, human survival as biological organisms, coordinated social interaction, and survival and welfare of groups. (Hussain et al., 2022)

These agile manifesto's four core values are designed to help organizations assess their large-scale Agile transformation and satisfy their business goals.(Hussain et al., 2022) Even though these have been designed to help businesses it also helps individuals to adopt this methodology and its frameworks. Basic human values play also big role how we adapt things in work how we see do we fit in to group if we act a certain way and in the worst case are left out of the group. (Sanderson, 2021)

3 Agile as a framework and SAFe® as a framework developed from it.

3.1 SAFe Framework

The SAFe® framework was introduced in 2011 and has since had six major updates. SAFe® as a term stands for Scaled Agile Framework and it is designed to help large organizations adopt and implement Agile practices on a larger scale. SAFe® as a framework guide how roles, responsibilities, events, and artifacts work in day-to-day work environments. The SAFe® organization provides different types of certifications from trainer to practitioner. The framework contains principles from Lean, Agile, and DevOps methodologies. (“Welcome to Scaled Agile Framework® 6.0! © Scaled Agile,” 2024)

Before SAFe® there were multiple Agile methodologies that elements can be found today in the SAFe® framework. As we can see from figure 1.0 Agile frameworks develop over time and SAFe® most certainly will not forever hold its place as one of the leading frameworks since it is rather new and markets develop all the time. (Eby, 2022) In a couple of years, we can expect AI to bring some new aspects also to Agile frameworks and maybe we will see a completely new way to develop software. As we are still in 2024 day-to-day use of AI is quite new and corporations are still on their learning journey so we should focus on how SAFe® currently works and what issues it has.

3.2 New in SAFe® 6.0

New six primary themes that have been updated in SAFe® 6.0 are; (“What’s New in SAFe 6.0,” n.d.)

1. Strengthening the foundation for Business Agility
2. Empowering teams and clarifying responsibilities.
3. Accelerating value flow
4. Enhancing Business Agility with Safe across the business
5. Building the future with AI, Big Data and Cloud

6. Delivering better outcomes with measure and growth and objectives and key results (OKRs)

3.3 1. Strengthening the Foundation for Business Agility

Business Agility Value Stream (BAVS) This is a newly introduced SAFe it leads the way for competing and thriving in the digital age it helps organizations visualize the steps when implementing the SAFe® core competencies. BAVS is needed when moving from identifying opportunities to delivering customer value in the shortest possible time. BAVS helps organizations quickly respond to market changes and emerging opportunities with innovative digitally enabled business solutions. (“What’s New in SAFe 6.0,” 2023)

3.4 2. Empowering teams and clarifying responsibilities

In this updated version of SAFe® 6.0, it has been noted that further enhancing performance requires clearer and more explicit responsibilities for each SAFe role. Roles that have been further clarified are Agile Release Train, Agile Teams, Business Owners, Enterprise Architect, Epic Owners, Lean-Agile Center of Excellence, Product Owner, Product Management, Release Train Engineer, SAFe® Practice Consultant, Scrum Master/Team Coach, Solution Management, Solution Train Engineer and System Architect. By clarifying these roles and their responsibilities it supports enhancing the performance and better support for the organization's goals.(“What’s New in SAFe 6.0,” 2023)

In SAFe® 6.0 there are also updates regarding terminological criteria. SAFe® has loosened up its criteria terminology and now has a scrum master/team coach in place. Also next to a terminological update responsibilities have been brought to optimize flow build high-performance teams and support organizational agility. It is highlighted that organizations can choose their role names to be either scrum master or team coach whichever is best suited for their context. This is new in the SAFe® framework environment since they have been previously very strict on terminology that you can use when talking about roles and work methods.

Agile Release Trains (ARTs) purpose has been clarified and its fundamental is to establish a fast flow of solution features. So, these teams develop solutions iteratively

constantly engaging with the customer and adjusting their course of action towards optimal solutions. For their success, it is critical to understand responsibilities and have clarified duties.

3.5 3. Accelerating value flow

In today's business world being competitive and fast-paced means that accelerating value flow it's an essential survival skill in the digital age. SAFe 6.0 has listed 8 properties of flow accelerators that are going to make the value flow faster these are visualize and limiting work in process (WIP), addressing bottlenecks, minimizing handoffs and dependencies, getting faster feedback, working in smaller batches, reduce queue length, optimize time 'in the zone', and remediate legacy policies and practices.

From Lean Agile to SAFe®, Team Kanban has been brought and it is designed to help agile teams facilitate value and its flow by visualizing work and establishing WIP limits. This value can be driven continuously, measure throughput, and improve the process.

Previously there was a Program Management Office (PMO), now in SAFe 6.0 it has been renamed to Value Management Office (VMO). PMO focused on providing support for understanding, measuring, and improving the flow of value. VMO supports portfolio flow this role's responsibilities include; helping to define the scope of the portfolio, supporting the improvement of the flow of the value delivery, facilitating with strategy formulation, and helping to communicate strategic teams. VMO also facilitates portfolio sync works together with LACE to develop, harvest, and apply ART execution patterns successfully across the portfolios. VMO facilitates Lean budgeting and governance and fosters decentralizing PI planning and operational excellence. Lastly, VMO fosters more agile contracts and leaner supplier and Customer partnerships.

3.6 4. Enhancing Business Agility with Safe across the business

It is critical that in business agility everyone learns how to perform their work better. This can be done with Lean-Agile principles by optimizing flow, working with small batches, building quality, organizing around value, using systems thinking, and more. SAFe® 6.0 has updated instructions for business and technology, how to include business-enabled ARTs, launch-business trains, create an agile executive team, apply

SAFe® to other business functions, and combine development and operation to value streams within the same portfolio.

Business-Enabled ART: Includes the technical and business people that are needed to ensure that the solution meets industry requirements and addresses the relevant concerns for the technology, business, and customer. Agile Business Train: contains one or more SAFe® operational value streams and all relevant ARTs that are needed to define, build, deploy, operate, and commercialize a complete business solution. Agile Executive Team: Aligns the senior leadership team across the organization towards running the company as a team communicates strategy and vision as one and aligns the strategic WIP. Agile Business Function: is a unit that utilizes Lean-Agile methods and SAFe principles to streamline to create transparency in its operations and create transparency in its value delivery.

Combined portfolio: This is a type of SAFe® portfolio that includes development and operational value streams. This type of combined portfolio provides clear strategic funding decisions and alignment for a various set of solutions with a business segment.

3.7 5. Building the future with AI, Big Data and Cloud

SAFe 6.0 offers guidance for AI, Big Data, and cloud that are currently changing the nature of software and systems development.

3.8 6. Delivering better outcomes with measure and growth and OKRs

Measure and grow: previously metrics icon has been renamed to Measure & Grow. It contains three measurement domains outcomes, flow, and competency. These measurements enable measuring progress toward business agility at all levels of SAFe. It aims to provide support for better decision-making and help identify opportunities for improvement.

OKR has been part of the SAFe® for a while but the 6.0 update is guidance. The update provides three main use cases for OKRs enhancing strategy, defining business, and defining epics with OKRs.

Enhancing strategic alignment: the goal of using OKRs is that strategic themes are defined and their progress is traced through concrete, specific, and measurable actions.

Defining business outcomes: This is achieved with epics and Lean business cases that use OKRs to help uncover potential Epics for entry into the Portfolio Kanban system.

Defining epics with OKRs: doing definitions for epics with the help of OKRs provides clarity for business outputs and outcomes. It sets improvement goals for SAFe® transformation. By applying OKRs SAFe® change program can be measured.

SAFe® 6.0 Has also standardized terminology on areas of ART, Solution Train Artifacts and events, and general terminology consistency updates.

3.9 Roles at SAFe

At SAFe® Traditional role and naming of Project Manager (PM) or Program Manager (PM) doesn't exist at SAFe practice they are either called Release Train Engineer (RTE) or Program managers. In general, the Agile environment Project Manager role might also play Scrum Master. Even though the traditional role name Project Manager doesn't exist in Agile methodology it doesn't mean that PM responsibilities don't exist any longer. Agile and SAFe® adjust it and move focus on essential components of the project and to that the PM is responsible for letting go of unnecessary work and distractions from themselves and from the team that they are working with. On SAFe® this RTE is responsible for coaching, facilitating ART events, and processes, and supporting teams in delivering value. There are also other roles in Agile for example Agile Team, the Product Owner owns the product high level and is responsible for its outcomes. (“Welcome to Scaled Agile Framework® 6.0! © Scaled Agile,” 2024)

Product managers are responsible for integrating technical, design, and business perspectives when developing software products and product portfolios. In other agile methods (e.g., Scrum) similar role is Product Owner (PO). At SAFe® you can find both Product Owners and Product Managers who sometimes compete. Take into consideration that the PM role involves responsibilities that the PO role doesn't cover for example contributing to the organizational strategy and acquiring additional resources.(Tkalich et al., 2022)

The SAFe® framework itself doesn't specify how continuous improvements should be driven, it also doesn't specify any role that is specifically responsible for it. In organizations, transformation to SAFe® is usually driven by the Lean-Agile Centre of

Excellence (LACE). LACE is responsible for starting the behavioural and cultural transition. To be successful in this transition LACE is also responsible for removing impediments that obstruct change. LACE is a small team of dedicated full-time change agents that work to implement the SAFe® Lean-Agile working methods. With time LACE evolves to a long-term centre of continuous improvement. (Bowring and Paasivaara, 2021)

3.10 Challenges in SAFe® Framework

Since organizations have used to have a plan-driven method and have an area that is responsible for it Agile comes and changes that the major milestones are cut into multiple smaller milestones called as micro milestones. These smaller milestones are planned to ease out for example change, schedule, budget, and resources. But with a change from major to micro milestones lies an issue that can be losing the vision of the result and when we can agree it is ready and coders develop only nice things not the most necessary. (Boehm, 2002)

What are then the challenges with SAFe® the framework has a defined set of core values that are, alignment with the business of the company, built-in quality of the products, transparency of the development process, and program execution for building manageable value streams. Now that we have core values what happens if one fails will it affect all others? (Ciancarini et al., 2022)

(Ciancarini et al., 2022) Have found out in their research that success factors for SAFe® lie in support from the organization it's all levels. So as with all methodologies and frameworks, you can't just partly use them if you want to gain the full benefit of it. So, it needs full commitment from the organization but what it is then in practice. The name that supports this is the key that the organization is ready to invest upfront in developing and educating their workers.

4 Interviews

Interviews were held from 15.01.2024- 07.02.2024 as semi-structured interviews, the main theme of interviews was to gain an understanding of issues in the SAFe® framework in project management practice (e.g., experience, role in projects, practices, tools, and general experiences). Questions were structured to first gain knowledge of participation experience on working as a project manager in a SAFe® environment. All persons invited to the interview participated in to interview as agreed.

Before the interviews, all participants received the same set of questions that they were able to go through beforehand and prepare for the interview. Participants were also provided data privacy notifications considering the recording of the interviews their storing time and the purpose of the recording usage. Beginning of the interview participants were briefly provided with background for this research after briefing the topic, we began with the actual interview part. During the interviews, participants were asked to elaborate on some of their answers.

The interviewees have been selected based on their role history, so all participants have worked as project managers or in a leadership role in large organizations that have used SAFe® as their framework. There was no pre-set limit of how long they should have been in the project manager role so experience varies from 2-26 years.

The interview's main goal was to understand the challenges that project managers had faced at their work with SAFe®. It was also questioned what benefits were achieved in these projects and did these projects got the benefits that SAFe® promises.

ID	Role	Experience as a Project Manager or similar leadership role	Experience working with the SAFe® framework	Certified with SAFe® framework. yes/no	Interview duration min/sec.	Industry experience in a public or private company
1	Project manager, Scrum Master	10	11	yes	33.04	Both
2	Program Manager	8	8	yes	34.54	Both

3	Project manager	15	7	yes	39.57	Both
4	Project manager and trainer for SAFe®.	10	10	yes	39.57	Both
5	Project manager, ART engineer.	25	10	yes	35.20	Both
6	Project manager, client manager, business owner	2	2	yes	37.23	Both
7	Value stream engineer, Support Portfolio Manager, Project manager, Program manager, Release train engineer, and trainer for SAFe®.	26	8	yes	37.49	Private

Table 1.0 General information of the interviews and the backgrounds of the interviewees.

4.1 Interview analysis

The research was concluded as qualitative research, research method was chosen for its possibility to analyze and gain an understanding of people's experiences working as experts in the project leadership field and its change from traditional project management methods to agile methodologies. (Valli, 2018) Interview participants' backgrounds and expertise were verified that they have worked in traditional project management and Agile environments and understand and have experienced this type of change impact on teams, work planning, organizing, budgeting, and organizational higher-level strategy e.g.

4.2 Researched change

The research focus is to gain an understanding of the impacts and change effect on traditional project management roles in an agile environment and the challenges they face in daily work, do these previous Project Managers face some issues in their

emerging role and new work environment how do teams adapt to this change and are there some other organizational issues that come from this issue.

SAFe® is designed for large organizations to gain benefits from Agile methodologies. The problem that was with other methodologies was that they were designed for small software development teams, not for larger organizations.

4.3 Research data gathering and analysis:

Research interview data was gathered via semi-structured interviews. The benefit of semi-structured interviews is that we are able to first format a basic set of questions so that we can keep the conversation ongoing. Next to this structured set of questions, we are then able to ask participants more defining questions as the interview progresses. (Kallinen et al., 2021) The research method was chosen since it gives structure to the research questions that we aim to cover within this research, it also grants freedom to ask more defining questions for interview participants. Semi-structured interview method also allows participants more open discussions with interviewees when it is not so solid in which order you answer the questions and answers are not pre-defined.

To respect all interviewee's privacy their current job titles or companies will not be part of the iterated interview material. Also, all personating information like former employers and companies that might have been mentioned during interviews is anonymized or neutralized to only the state industry. Interviewees' names, sex, and nationality, are not part of this analysis material OR any type of sensitive personal information since it's not relevant to the reliability of this research and research questions.

All the interviews were held remotely via Teams. The interview language was Finnish for 6 participants and for 1 it was held in English. All the interviews are iterated with Microsoft Teams' automated iteration tool. These automated iterations have been then simplified and sent to all participants for confirmation of information rightfulness check. 6/7 confirmed information rightfulness and requested changes or corrections, the remaining ones were given reminder but confirmation was not received. Corrections have been made to iterations after this all interviews will go through a simplifying process to more understandable language and simplified form, after these 6 interviews that we held as Finnish were translated to English. At SAFe® Traditional role and

naming of the Project Manager (PM) or Program manager don't exist at SAFe® practice they are called Release Train Engineer (RTE). (“Welcome to Scaled Agile Framework® 6.0! © Scaled Agile,” 2024) During the time of interviews participants referred to these traditional roles and they might appear in the analysis.

Interviews were analyzed one by one gathering the most valuable points from each interview to Excel by thematic analysis method. (Kallinen et al., 2021) With thematic analysis, the aim is to identify themes that are re-appearing depending on the interviewee or are relevant to the research question. Relevant literature was used to identify possible themes also the aim was to seek deviations. Team classifying was done with the thematic categorizing lower class to the upper class. To help reassure themes and findings AI technology Chat GPT 3.0 was used to validate summarizations and point out the most relevant findings. The texts that were used for AI technology summarization were fully anonymized.

4.4 Validity, reliability, and ethics

The researcher is aware of possible validity and reliability threats and they are attempting to identify prior research.

4.4.1 Prior research and research results validity

Misinterpretation of the equivalence might have occurred when mapping themes of the interview results. Misinterpretation might have also occurred when reviewing and summarizing previous research and studies.

4.4.2 Internal validity

The years of experience of the interviewees differ from each other, and some of the interviewees are significantly more experienced in working with the SAFe framework. Since the study does not investigate differences in years of experience, this was not seen to affect the reliability of the respondents' responses but has been noted. Concerning the respondents, practical experience was valued as critical in favor of the survey result. Six of the seven interviews were translated into English after the transcription phase this translation process might have caused bias.

The researcher has followed intellectual honesty and integrity. The researcher's background in project management positions and working with the SAFe framework may have influenced the interpretation of the research results. Researchers' bias might have affected the interpretation of the interview data as well as on reflection. During the research period and the interviews, the researcher didn't work in the role of project management.

4.4.3 External validity

The experiences of the interviewees vary from different companies to industry, and this study does not represent the way an individual company utilizes the SAFe® framework. The interviews provide an independent view of how the implementation of the SAFe® framework faces challenges. Since the research has been carried out independently of the industry, the results of the study can be utilized as a general.

4.4.4 Reliability and Ethics

The researcher has aimed high ethics for this research. The answers to the interviews are based on the interviewees' own experiences of working with the SAFe® framework. Some of the interviewees had prepared for the interview with prepared notes based on a list of questions provided in advance. The researcher tried to be independent and not to take a stand when some of the interviewees hesitated in their answers about how the SAFe® framework worked correctly. Furthermore, the researcher did not specify the level of one's competence in the SAFe® framework to avoid leading the interviewees. The researcher has aimed high ethics for this research.

5 Interview Results

5.1 Key Findings

Interview findings are sectioned into two main categories first section contains findings related to challenges in SAFe® and the second positive impacts of SAFe® and how to solve these challenges. The last section discusses the findings and gathers them as a form of summary. These two sections then contain grouping based on upper classes that were discovered by the thematic analysis process.

The first section challenges in SAFe® contains 15 upper classes, and the second one overcoming issues with SAFe® contains 10 upper classes. These upper classes were formed by gathering highlighted information from interviews to Excel by grouping findings that contain similar information together forming lower classes and lastly upper classes that are present here on this research document as a title level.

5.2 Challenges in SAFe

Many of the findings of this research reoccur in previous research studies and literature reviews for example communication and collaboration, change in operational model change resistance to other existing methodologies, and changing terminology.

Main deviations to existing research, studies, and literature reviews where that interviewee repeatedly said that there is no notable difference between the public and private company SAFe® implementation. When we proceeded with the interviews it was clear that almost all respondents said that bureaucracy was higher in the public sector caused issues with SAFe® iterative work and low hierarchy ideation.

One thing that existing research doesn't highlight enough based on these interview answers is that companies have had a hard time seeing and adopting SAFe® as an organizational methodology since many see it still as a way to lead and direct development work not any other type of work like business and budget decisions.

5.2.1 Collaboration and Transparency

SAFe® provides ways to collaborate and coordinate work among multiple teams on projects. To successfully coordinate these efforts, it needs to be ensured that these efforts align with objectives and manage dependencies between teams. At times this can

be complex and require careful planning and facilitation. At the leadership level, it was noted that ensuring transparency was identified as challenging especially maintaining visibility to the process and state of the work, dependencies, and addressing risks effectively.

For example, in multi-vendor environments, there can be different teams and vendors taking part in the project delivery and it can cause resource constraints. So, this means that there can be competition for expertise and limited availability of certain skill sets this can impact the efficiency of SAFe® implementation especially if different teams must compete with the same resource. This highlights the need for collaboration and transparency since in certain moments some resources can be limited leadership level needs to know when these resources are available, and it is important also to prioritize their work, so they do the most important tasks at the right time frame.

Communication across the teams plays a major role since it was noted that at times communication and collaboration between the teams especially across the trains was difficult. This caused a hard time in the ability to address issues and coordinate work effectively between the resources.

5.2.2 Other methodologies

Interviews widely noted that before SAFe® companies typically had other methodologies in place for their work for example waterfall methodology. This caused organizations to struggle with reconciling traditional line management decision-making to the value-driven approach of SAFe®. It created tension and challenges to aligning decision-making, priorities, and workflow management, particularly at the lower organizational levels.

There were cases also where SAFe® needed to be integrated with existing frameworks for example Scrum, and Kanban. In theory, these should have worked together quite seamlessly but that was not the case. It posed challenges in aligning processes and caused conflicts between the different frameworks.

Old methodologies also posed a significant challenge to management and leadership approaches especially in organizations that have had previously traditional leadership approaches. Many leaders were unsure and scared of what would happen to their role and some even resisted any changes to the existing role. Many leaders didn't feel

comfortable giving away their possibility to influence development work detailed design and process management. Organizations also struggled with reconciling traditional line management decision-making to the value-driven approach of SAFe®. This created tension and challenges to aligning decision-making, priorities, and work workflow management, particularly at lower organizational levels.

To tackle these issues interviews noted that it is important to have an effective change management strategy in place to overcome change resistance on the managerial and leadership level and to clarify new roles so they are easier to adapt.

5.2.3 Understanding the Benefits of SAFe®

One of the SAFe® main intentions is to improve teams' efficiency and transparency. Challenges typically appear in terms of coordination work between the teams and ensuring the visibility of project goals in the bigger picture. Interviewees stated that in some cases it was hard to communicate between the teams and other work streams. A notable difficulty came from parts of the organizations that were not working with the SAFe® framework. They even refused communication, sharing valuable information, or cooperation. Also in some cases, it caused problems that these teams that were not using SAFe® did not understand why work needed to be prioritized in advance and why agile teams were not able to take extra work when they were told to do so.

The interviews brought up that many teams, team members, and other stakeholders lacked an understanding of agile working culture and framework models like SAFe®. This caused scepticism or pushback against agile practices. Teams also faced challenges in managing their time effectively, it wasn't ensured enough that teams spent their time on actual work rather than administrative tasks. This impacted on productivity and effectiveness of the work.

It was noted that particularly in in-house team's team members were not familiar with SAFe®. This led to difficulties in understanding and adhering to the framework, impacting its effectiveness.

Some teams focused too much on SAFe® methodologies rather than adapting them to the specific needs of each project in the long run hindered the project's ability to address unique challenges and requirements effectively.

Since SAFe® introduces new terminology and roles and these might be new to people, it needs to be ensured that teams understand and adopt SAFe practices effectively. This requires training, support, and ongoing communication to promote understanding. Other vice people might take variations and mix and match something old and something new and create hybrid models.

5.2.4 Organization support

Implementing SAFe® requires involvement and alignment from the organization. This can be challenging to achieve since it needs necessities from various stakeholders, this can be especially challenging in larger companies with diverse teams and priorities. Many times, this first needed some proof of SAFe® framework effectiveness to gain proper support from organizations.

5.2.5 New Roles in Leadership

When implementing SAFe® requires some changes to traditional roles particularly to line managers. There where a lack of understanding and clarity regarding new roles in the SAFe® framework, especially among middle and lower management levels. This resulted in inefficiencies in decision-making and workflow management. A major shift is to role responsibilities where teams and Product Owners make decisions instead of managers or previous Project Managers. This causes discomfort and resistance among some managers.

New Role as Release Train Engineer (RTE) ahead of the rest of the group, anticipate issues, and provide effective leadership, which requires a deep understanding of SAFe® principles and effective communication skills. If the role of RTE wasn't fully understood it posed challenges to guiding development direction and facilitating collaboration.

5.2.6 Leadership support and understanding

When there is a disconnect between the leadership vision and Agile implementation it can make SAFe® practices aligning challenging. Many organizations face challenges with leadership learning, understanding, and acceptance. Leaders lacked a deep understanding of SAFe® concepts and it led to resistance and misunderstanding of the

need for change. Ensuring alignment and adapt it at all levels is crucial for driving successful Agile transformations.

SAFe® brings a new perspective to funding decisions instead of funding quarterly development of work it shifts its budgeting iterative and for need. This to work it needs top-level management prioritization and budgeting for work-based and value streams and strategic alignment rather than individual projects.

5.2.7 Training to SAFe

SAFe® has a base of training sets that typically take two days. SAFe® offers different levels of training and for different roles. It's important to ensure that teams fully understand SAFe® principles and embrace them. This is a continuous challenge that requires ongoing training, coaching, and efforts to align with organizational goals to facilitate successful adoption. Some organizations also have insufficient training provided to team members and managers causing gaps in understanding and implementation of SAFe® practices.

Organizations tend to balance the investment with the perceived benefits and organizational priorities pose a challenge to effective implementation of SAFe®.

Also, implementation projects lack education. define, design, and develop is the model that is taught in SAFe® practice but from a leadership perspective implementation part is missing. How to implement what we just got ready to existing systems and processes and how to manage that work is lacking guidance in the SAFe® framework.

5.2.8 Resistance to change

Even though most people might have been fine adopting SAFe® practices it was common that teams had some individuals who resisted change. This in the long run caused issues in teams that SAFe® maturity was not able to reach the desired level in organizations. Resistance also happened from the employee level including project teams and client representatives. Resistance to change happened either because of a lack of understanding or a reluctance to change established ways of working. Since some individuals in the organization perceive SAFe® as not applicable to their context this leads to scepticism and reluctance to adopt new ways of working.

If team members and line managers are accustomed to traditional waterfall approaches, they might resist Agile methodologies. This is because it challenges the way they have always done the work. Shifting this mindset and practice towards agile ways of working requires buy-in and support from all team members, which may not always be easy to achieve.

Organizational resistance to change appeared in different ways for example a reluctance to change established ways of working. Some individuals also refused to use SAFe® correctly and created hybrid models. To overcome these issues, it was noted that it is essential to foster a culture of continuous improvement. This way with time SAFe® implementation reaches successful implementation.

5.2.9 Organization's current culture

Organizations with traditional project management structures may struggle and want to keep hold of waterfall methodologies challenge agile culture cause change resistance to new operating methods and make it hard to integrate SAFe® effectively. These organizations tend to have hierarchical decision-making processes and bureaucratic procedures among interviewees it was on industries like banking and public organizations. In public sector faced challenges due to limited practical support and varying interpretations across teams. Within the public sector implementation, teams had varying interpretations of SAFe® practices. This led to inconsistencies in how teams operated and applied SAFe® principles, impacting the overall effectiveness of the framework.

Inconsistencies in operational practices were a reoccurring theme This doesn't align well with the Agile principles promoted by SAFe® and causes friction in implementation, particularly in transitioning from traditional waterfall methodologies.

Organizations that have limited autonomy in in decision-making may find SAFe® implementation challenging since project teams are constrained by the approval process and strict budgeting models that don't align with agile principles it can affect the flexibility and adaptability that SAFe® implementation requires to be successful. Organizations with slow decision-making struggled to adapt to the iterative and collaborative ways of working that SAFe® promotes. If approvals were required from multiple levels of management or if decisions needed to wait for scheduled meetings, it

slowed down the pace of development and lowered responsiveness to changing market conditions.

When introducing SAFe® it might cause administrative overhead. This happens especially if the framework isn't fully embraced or tailored to the organization's needs. It was noted among the interviewees that it can cause additional meetings, documentation, or processes that distract from the core goals of agility and efficiency.

Changing to SAFe® involves not only technological and structural changes but also cultural transformation within the organization. Overcoming rooted ways of working, shifting mindsets, and fostering a culture of collaboration, transparency, and continuous improvement are ongoing challenges.

Large organizations with over 10k people and diverse project portfolios add complexity to SAFe® implementation. Managing dependencies between the portfolios and ARTs, prioritization, and capacity planning across multiple teams and projects becomes challenging, requiring robust frameworks and processes.

This alignment faced issues among the interviewees for example in quarterly budgeting, giving a flat budget, and seeing what work gets done within its limits, and what needs to be left out.

5.2.10 Bureaucracy in Organization and its effect on maturity

In the public sector, there is a bureaucratic nature that poses additional challenges to SAFe® implementation. Limited resources and these bureaucratic processes inhibited the ability to provide adequate support and mandate changes in operational practices.

Challenges arose from the fact that different parts of organizations had different levels of understanding and application of SAFe® principles. This inconsistency could lead to difficulties in implementing SAFe® effectively across teams and projects.

5.2.11 People do as they see best

SAFe® implementations may become fragmented across different departments or teams within an organization. Inconsistent interpretations or practices can hinder alignment and collaboration, impacting the overall success of Agile transformations.

The lack of a unified operating model with SAFe® can result in varied practices and workflows it makes challenging to achieve cohesion and alignment across the organization. For example, it caused teams in other parts of the organization to use SAFe® as they saw fit this affected the team's performance and other teams performed better than others. One interviewee also said that the leadership level also had a different understanding term work is in progress. Some at the leadership level interpret it as work started and some that it is designed for what needs to be done.

Challenges implementing SAFe® in projects were mentioned by methodologies, particularly in areas such as inter-team communication, prioritization of customer needs, and integration with other methodologies.

From a leadership perspective challenges in SAFe® implementation often come from inadequate understanding, lack of comprehensive training for team members and managers, and difficulties in unifying practices across different departments or teams. Even though SAFe® provides a structured framework it's not one-size-fits-all for every organization. Tailoring SAFe® practices to suit the unique needs and context of the organization can be challenging, requiring flexibility and adaptation to ensure successful implementation. Interviews pointed out that in the long run, organizations may struggle to prioritize continuous improvement and refinement of SAFe® practices over time. Without a dedicated focus on ongoing optimization, implementations may become stagnant or fail to gain the full potential of SAFe® implementation.

5.2.12 Continual improvement

SAFe® provides a valuable framework but to implement it effectively it needs continual improvement and adaptation in organizations. While training is important, so is practical implementation and continuous learning when seeking higher maturity with SAFe®. It cannot be just expected that people go through one training and then they know how SAFe® works in day-to-day work.

5.2.13 Remote adaption

The transition from face-to-face working to remote work during the COVID-19 pandemic presented challenges in conducting SAFe® ceremonies and maintaining communication within teams, affecting efficiency.

5.2.14 Lack of practical support

In the public sector implementations, it was noted that they lacked practical support for teams to adopt SAFe® more than in private companies, this led to inconsistencies in operational practices and difficulties in interpreting SAFe® principles and methodologies.

5.2.15 Tooling

With agile methodologies and SAFe® new tooling that is used to manage and plan work caused issues like security concerns that then limited tools available for project management, reporting, and visualization of the work. New tooling also requires training and learning how to use it in a matter of SAFe® practices. In some cases, it was noted that new tooling faced some resistance, especially on higher levels of leadership that didn't want to change the reporting that they had always had. In some cases, this also conflicted with other methodologies for example traditional project management in other parts of the organization.

5.3 Overcoming issues With SAFe

5.3.1 Structure

SAFe® provides a clear governance structure that defines roles, responsibilities, and decision-making authority at different levels of the organization. This helps streamline operations and mitigate conflicts, ensuring smoother execution of SAFe® practices. Utilizing established frameworks like SAFe® provides a structured approach, guidance, and support for scaling Agile practices. It helps organizations achieve better outcomes in terms of speed, quality, and value delivery. It helps organizations not to need to find out everything by themselves.

SAFe® has been praised for its flexibility and scalability. It allows organizations to tailor frameworks for their specific needs while adapting to changing market conditions and customer requirements. Among the interviewees, they stated that flexibility enabled quicker responses to emerging opportunities and challenges. SAFe® provides structure to project planning and execution, promoting clarity in work allocation and customer prioritization.

If SAFe® was utilized effectively to manage complex projects such as System Analysis Program Development (SAP) implementation and the merger between two companies. It provided structure and framework for managing large-scale initiatives and facilitating collaboration among teams.

Since SAFe® has seamless integration to DevOps practices it was highlighted as a key advantage, facilitating the continuous delivery of high-quality software development. This integration helped the development pipeline and accelerated time-to-market for products and services.

5.3.2 Transparency and Efficiency

Improvement in Predictability and Transparency: Implementing SAFe® has led to improvements in predictability, turnaround & lead times, quality, employee satisfaction, and customer satisfaction by providing better visibility into operations and value delivery. In day-to-day, work SAFe® improved workers' focus and delivery, this, in the long run, resulted in better alignment with strategic goals and enhanced efficiency in completing work items. Events like PI planning received positive feedback from teams.

From the managerial level, SAFe® implementation has led to tangible benefits including increased transparency, capacity management, improved decision-making, and better delivery planning accuracy, ultimately contributing to organizational efficiency and effectiveness. From the team level teams were able to deliver results more quickly and effectively, leading to increased productivity and positive outcomes for the business.

5.3.3 Cost reduces

Aligning SAFe® with business strategy can be beneficial since it aligns agile initiatives with strategic business goals enabling organizations to prioritize work and maximize return on investment. Although this alignment faced issues in the interviews for example quarterly budgeting giving the flat budget and seeing what work gets done with these limits and what needs to be left out.

To tackle these issues one interviewee said that streamlined meetings and processes were identified to optimize resources and reduce product timelines potentially leading to cost savings and improved product outcomes. Among the other interviewees as a way to tackle these issues were said that upper leadership most of the time needed to prove that SAFe® is truly working as it promises and they needed to see the cost savings before they started to direct their way of working towards more agile.

5.3.4 Supporting roles

Essential factors that were repeatedly mentioned for successful SAFe® implementation were ongoing support, training, and alignment with organizational goals. In addition to these continuous efforts were required to ensure that teams understood and embraced the new way of working. To these, leadership, LACE, ART engineers and Agile coaches, and Scrum masters were the ones that were able to impact.

One of the interviewees described their leadership role as follows; they were involved in influencing teams to adopt more agile approaches, particularly in environments with lingering waterfall methodologies. They emphasized the importance of adapting SAFe® to specific project contexts rather than rigidly adhering to methodologies.

Multiple interviewees played the role of RTE, responsible for guiding development direction and facilitating communication and coordination among teams. This role was

noted to be crucial in implementing SAFe® practices effectively within the organization.

While working with SAFe® it presented challenges, such as the need for organizational involvement and facilitation, but generally interviewees found the process and experience rewarding. They emphasized the importance of communication, support, and adaptability in successfully implementation of SAFe® practices.

Lean-Agile Centre of Excellence (LACE) was named as one supporting role amongst the interviewees however only 4/7 mentioned that they had LACE as part of their SAFe® implementation process.

5.3.5 Usage industry-wide

Challenges were encountered in all organizations and among all the interviewees. Challenges encountered on varying levels of understanding and application of SAFe® principles. These challenges included ensuring transparency, managing time effectively, and adapting SAFe® methodologies to specific project needs.

The SAFe® was primarily utilized in IT technology development operating model projects, leadership roles applying SAFe® and agile methods, and health check audits. SAFe® has been applied across various including software development, system integration, and network cloud development, demonstrating its adaptability to different domains and project types. More recently it has gained more popularity to lead organization strategy and general work not only information systems development work. Based on the interviewee's experience we can tell that SAFe® has gained significant adoption across various industries, including manufacturing, telecommunications, academia, government, and security sectors.

5.3.6 Training and support

SAFe® provides ready-made training materials, certified trainers, and consultants, making it easier for organizations to implement and manage Agile transformations effectively. This makes it easier for organizations to adopt SAFe® practices. It was mentioned that it's also more cost-effective to organizations apply a purchase existing methodology than try to develop their own and try to maintain all the training materials and processes. Not to mention matching it to all times developing competition and

markets in some cases outsourcing this is more profitable than creating it in-house. Since organizations should continuously refine and adapt SAFe® practices to suit their specific needs while leveraging the foundational principles provided by the framework it is hard to maintain a framework like this from organization-based.

As a general benefit SAFe® offers a comprehensive framework to scaled agile and lean practices across enterprises. SAFe® guides roles ceremonies artifacts and principles. So, organizations don't need to know themselves they can learn and adapt to ready made materials.

SAFe® also establishes common language terminology and standards within the information systems world, improving communication and understanding across organizations. However, this is not completely problem-free since SAFe® doesn't allow other agile terminology from a copyright issue point of view. In real life, this causes issues in daily work when people use lend terms from other agile frameworks like sprint, retro, and retrospective which are terminology in the Scrum framework. This causes confusion and resistance to change. Interviewees said that in some cases they haven't even used these agile terminologies to employees because it has caused more issues, confusion, and frustration than benefits. They have rather used traditional project management terminology still utilizing agile methodologies.

Language and terminology in SAFe® are a standard in the IT world and this improves communication and understanding across the organizations. So, each time you go work in a new organization that already uses SAFe® you don't need to again learn those terms and rules and what everything means SAFe® standardized it's easier to adapt to a new company and start working right away with the issues and goals that you have instead of learning new terminology and methodology to use for your work

After the successful adoption of agile methods, deepened team familiarity and training so teams embraced agile principles and received adequate training demonstrating better performances and adaptability in executing SAFe® practices.

But like in all new methodologies training and coaching play's crucial role in overcoming implementation challenges so with SAFe® Agile coaches and SAFe® organizations for example LACE provided support and guidance to facilitate this transition. To gain full benefit from training and all the material that SAFe® provides

interviewees said that they noted the importance of hands-on support in people's day-to-day work.

5.3.7 Time impact on maturity

Amongst all the interviews, the organizations experienced progression in SAFe® maturity over the years starting from initial challenges and resistance and slowly and gradually increasing understanding and acceptance on all levels but particularly in higher management levels and positions.

5.3.8 Tooling

Interviewees named general tools that were used such as Jira, Confluence, and Qlik Sense these tools were utilized for project management reporting and visualization. These tools were also utilized to help and support SAFe® implementation and grow maturity over time at all levels.

It wasn't so that these tools did not need any training, all these tools were needed to be implemented and taught to people to gain the full benefit of them in day-to-day work. Maturity and usage of these tools grew over time and kind of went hand in hand with the learning process of SAFe®. With these tools, teams could make their work more visible and communicate between the teams in different parts of the organization.

5.3.9 Other Agile Methodologies Next to SAFe®

In some cases, it was seen as beneficial not to use SAFe® with all teams since it was seen that SAFe® did not fit all team's needs to follow and design their work. So, at certain times some organizations had SAFe® as their primary methodology then Scrum as their minor methodology. This of course needed work and support from scrum masters and ART engineers to match these teams' work and make it as seamless as possible.

5.3.10 Change resistance and how to get over with it

Change resistance is very normal when we are fundamentally changing people's ways of working. Also, with SAFe® it was common for people to have confusion with the new roles and tool limitations communication. To tackle these challenges, the needed coaching community of practices and management support interviews could not

highlight enough the importance of proactive management problem solving and obstacle removal during SAFe® implementation.

5.3.11 End summary

Despite all the challenges that were faced during the implementation phase utilizing agile methods including SAFe® principles, led to several benefits. These benefits included improved predictability, transparency, and adaptability in project delivery, ultimately resulting in successful project completion within deadlines.

None of the interviewees said that they had encountered completely pure SAFe® in any organization where they had worked. What seems to be a conclusion is that some variations work better than others.

One interviewee said it greatly that even though agile brings continuous work and gives you results much faster than traditional ways of working it doesn't always mean that the result gets ready faster than it used to. Because even though we see results faster it doesn't mean the thing we are working on is ready after two weeks there is just something that we can show and here comes what makes work more visible than it used to be. So, to summarize it is that we can organize a demo after two weeks and show the first versions, but the result still gets ready only after six months like they used to so the process didn't get any faster but leadership and other participants on the project gained more visibility on what for example development was doing. This is the whole idea of an iterative process that people can impact on the results in its early stages so by this we can fix some issues and mistakes in the predefined phase and from this comes cost savings and time savings. We don't need to design everything all over again once we are ready, instead, we can adjust our process and design as we go on.

5.3.12 What issues SAFe® 6.0 solves

Chapter 3.2 presents the newest updates to SAFe®. The framework that should be paid attention to in updates are the six headers that are: strengthening the foundation for business agility, empowering teams, and clarifying responsibilities, accelerating value flow, enhancing business agility with SAFe® across the business, building the future with AI, big data and cloud and delivering better outcomes with measure and growth and OKRs.

6 Conclusion

6.1 General findings

Overall SAFe® provides a wide range of benefits and tools to be more effective in continuous development. To implement these benefits, we can state that regardless of the interviewee we can conclude that SAFe® challenges are partly operational but in day-to-day work, they are both psychological than methodological. It's natural for us humans to stick to our old and safe habits and SAFe® changes people's way of thinking and doing their work changes.

6.2 Challenges with SAFe

One of SAFe® challenges was cooperation and transparency. The challenge turned out to be the coordination of work between several teams. At the same time, it was also not certain whether this work now followed the will of the senior management. The cooperation and transparency of the work phases were considered difficult to maintain as the process progressed.

Multi-vendor environments were named to be environments where these challenges most typically occur. Competition between suppliers was found, which could avoid using the same framework. In addition, some suppliers were not trained to use the SAFe® framework. However, this kind of multi-vendor environment is very typical for large projects, for which SAFe® has been specifically designed. So, in the big picture, it would be in everyone's interest if every project in the environment for no reason followed the same working method and frame of reference in its daily work. Competition between companies is natural, but it's also good to remember that it shouldn't hinder your daily work.

Communication between teams also poses a challenge, and its weakness: communication breakdowns were observed especially between trains. However, communication between trains is the responsibility of a release train engineer, who is responsible for communication between the different trains. It is not clear from the interviews whether this casting has been clear for everyone responsible for maintaining and taking care of communication. The updated SAFe® version 6.0 has refined this role description precisely in terms of role description and responsibilities.

In the time before SAFe®, there have been other frameworks and work management models. Employees who have worked with previous methods for most of their careers may not want a change in the way they operate. It was repeated among the interviewees that this caused numerous problems, such as resistance to change, using one's own habits together with SAFe® and unwillingness to learn new things.

Although SAFe® does not acknowledge or encourage hybrid models, none of the interviewees had witnessed the use of pure SAFe® in any organization during their careers. As the results of the interview suggest, the old operating methods and models will live on alongside SAFe® in organizations. The challenges were particularly evident in the pursuit of benefits by SAFe®, when the method is not utilized correctly, often its benefits are lacking. The interviewees also brought up situations where attempts have been made to implement SAFe® into other methods or frameworks such as Scrum, but this has not been without its problems, even though the framework has all been designed from Agile.

The interview also highlights the challenge of implementing the new framework that many managers are unsure of what their role will be with the new framework, whether it will endanger their role, possibly even their jobs. Well, certainty is a natural part of change, but it shouldn't get in the way of things. Many managers would like to be supported: clarification of what the new role will bring, what responsibilities will be there in the future, and which responsibilities will be transferred to other persons. Although SAFe® does not recognize the traditional role of project manager, this does not mean that responsibilities will not remain in the organization, the designation of the role and responsibilities will only change slightly.

Do employees and managers in organizations then understand these benefits of SAFe®? The interviews found that it was difficult to communicate to the teams how visibility improves in the big picture and over a longer period. In understanding the benefits, it was also repeated that if some organizations operate using different methods, both the SAFe® team and the team using traditional methods had challenges in understanding and seeing the benefits brought by SAFe®, because the benefits were not realized as intended. This caused friction between the teams, as teams using traditional methods did not understand SAFe® way of working or prioritizing work.

There were two types of teams working on the framework: there were teams that tried to closely follow SAFe® instructions and work exactly as SAFe® instructs, in the long run, however, this poses challenges to the lack to solve unique problems when the process is squeezed too tightly into a certain way. Another example was a team that took SAFe® self-control too far and the team no longer followed the overall strategic goal of the organization and started defining its own goals. In the big picture, these goals conflicted with the organization's strategic goals.

The interviewees emphasized that successful training and subsequent support in daily work are extremely important in the implementation phase of the framework. A particular theme that emerged from the interviewees was that organizations would not expect a few days of intensive training to be sufficient. LACE had been found useful by the organizations that had used it, but not all interviewees indicated that they had utilized this role as part of the SAFe® framework and its implementation. In addition to understanding the benefits, SAFe® training also provides an understanding of roles, however, if training and support are lacking, it is very understandable that everyday work faces challenges.

SAFe® as a framework provides organizations with ready-made training materials, trainers, models, and ways of working. These training and materials are constantly updated in line with changing technology and organizational developments. Maintaining a similar framework would require a lot of resources as well as financial investment. In other words, if SAFe® is utilized correctly and as intended, it will provide the organization with a framework that they do not need to develop themselves but can focus on getting the maximum benefit out of it.

One of the most significant challenges highlighted in the interviews was budgeting challenges. SAFe® provides a model for budgeting and its management, however, many organizations do not take advantage of this. In general, budgeting is handled using traditional project management, which is not flexible to the planning and changes of SAFe® iterative work. SAFe® 6.0 has specified and refined these budgeting methods and refined the models, but it is up to the organizations themselves to change this and to try a different way of budgeting development and work.

SAFe® will not escape resistance to change, as individuals, teams and parts of organizations will resist this change. It was noticeable that teams with the highest

resistance to change did not reach the same maturity level in SAFe® understanding as teams that overcame or were at a low level from the start.

SAFe® processes were observed to be slowed down by bureaucratic organizational structures or organizations with high hierarchical structures. The goal of SAFe® is to ease these hierarchies, but often only parts of such organizations follow the SAFe® framework. In these kinds of organizations, however, these challenges were addressed by not attempting to impose SAFe® terminology and practices on teams that did not follow the SAFe® framework. Instead, work was planned collaboratively so that both methods were used to achieve the desired outcome with an agile touch.

Some organizations start working with SAFe® very strongly, but over time, as the work becomes routine, the prioritization of tasks and the support for continuous improvement become more difficult. From this, it can be concluded that the SAFe® method is not something that no longer needs support, oversight, and training once it has been integrated into the organization.

The interviewees were asked about the differences between public and private sector entities, and no significant differences in SAFe® implementation were observed. However, in the public sector, it was highlighted that daily support was generally lacking, whereas private companies prioritized support related to SAFe®.

6.3 New tools and issues related to it

New ways of working bring with them new tools, and in the case of SAFe®, the most typical examples were Jira and Confluence from the Atlassian product family, which were mentioned by all interviewees. New ways of working also introduced new reporting methods, which was particularly challenging for those in leadership roles, as their traditional ways of monitoring and tracking work progress changed. To get the leadership to adopt the new methods of reporting, viewing, and planning work, it required support, training, and continuous evidence that the new method works.

To facilitate the adoption of tools, methods from Open Agile can also be utilized. Open Agile advises that in agile organizations accountability extends throughout all levels, with employees responsible to their peers, managers, and customers, and managers accountable to their teams, higher-level leaders, and society. Since agile management system facilitates goal-setting and accountability relationships between employees and

managers through constructive dialogue. This accountability can be used to guide and motivate employees to take new tools into use in their daily work. Transformation dimensions from figure 2.0 new ways of working, management systems, and organizational structure can be utilized to guide work and help employees to adapt new tools. Open Agile notes that the change to take hold it needs experiences successfully operating in the new agile organization. (Miguel de Andrade et al., 2022)

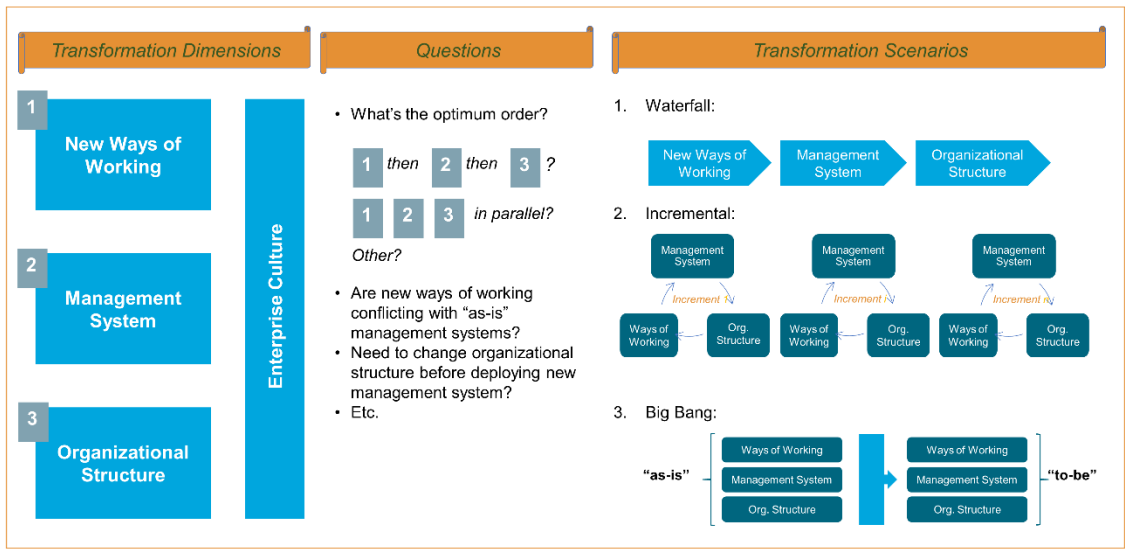


Figure 2.0 Agile Transformation. Note! The photo has been created for Open Group 7.1 Accountability, A Standard of The Open Group Copyright © 2019-2020, The Open Group All rights reserved <https://pubs.opengroup.org/architecture/o-aa-standard-single/fulltoc.html#fig-agile-transformation>

7 Summary

The conclusion of this study is that no matter how well-designed a methodology or framework is if its implementation does not consider human factors and variables, it can be partially or largely implemented incorrectly. People and employees need support and guidance to learn new ways of working; otherwise, most of us will revert to familiar and safe ways of operating that we already know and master.

When working with people, it is fundamentally important to remember our desire for comfort and that, as individuals, we largely rely on what we have learned in the past. This has kept us alive and existing as a species for millennia. Even though the world around us has changed significantly, from an evolutionary perspective, we humans have changed relatively little. (Sanderson, 2021)

It could be worth considering that if the study were to be continued, it would be important to look more into this human factor in the implementation of frameworks and how much successful adoption is influenced by people management rather than the methodology itself. This research could be conducted either from a framework-led perspective or from a psychological research perspective.

In this research and its results, challenges and problems were identified within the SAFe® framework itself. However, it should be noted that the latest SAFe® update, 6.0, addresses many of these issues raised by the interviewees. Only time will tell, though, whether these 6.0 updates will resolve these problems. It requires organizations that they need to continuously learn and update their knowledge related to framework.

It would be also worth researching what it would take to correct an incorrectly learned framework. It would be beneficial to investigate whether employees need more mentoring-like support or continuous teaching of the framework. Using a framework where different approaches are tried and their success validated in practice would be valuable and useful for many organizations to understand which aspects of the framework have been beneficial and how it could be improved in the future and what it would require.

The interviewees were also asked about the positive aspects of SAFe®, and the responses indicated that benefits are indeed being achieved in the current situation of the organizations. In summary, the SAFe® framework delivers its promised value to

organizations, but the full value proposition cannot be realized if the framework is not utilized entirely. Nonetheless, the complete benefits were not fully realized, and over time, some of the practices might even be forgotten by employees in their daily work.

It is also useful to consider that typically SAFe® needs to work together with another framework, as some parts of the organization may never become agile. Since many operational models unfortunately cannot easily adapt to the agile model, and like the traditional waterfall model, some tasks must be done in a certain order and cannot be developed iteratively. Therefore, those who have created hybrid models for their work might be on the right track, as a hybrid approach could be better than a pure SAFe® implementation. The indication also for this is that none of the interviewees had ever encountered a pure SAFe® implementation in their careers.

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- What’s New in SAFe 6.0, 2023. URL <https://scaledagileframework.com/whats-new-in-safe-6-0-2/>

8 Appendices

	Tutkimuksen tausta:		
	<p>Tämä haastattelu on osa Turun yliopiston maisterivaiheen opintojen opinnäytetyötä. Tutkimuksen tavoitteena on vastata seuraaviin tutkimus kysymyksiin (Tutkimuskysymykset ovat englanniksi, sillä tutkimuksen pääkieli on englanti. Haastattelut ja niiden johtopäätökset tullaan käntämään tämän tutkimuksen aikana):</p> <p>RQ1: Implementation issues of SAFe from a Project Management perspective.</p> <p>RQ2: What are the simple solutions to overcome issues with SAFe from a Project Management perspective.</p> <p>Haastattelun ajallinen kesto on 45 minuuttia sisältäen alku- ja loppusanat. Haastattelussa hyödynnetään ennalta toimitettua kysymysrunkoa, joka sisältää sekä ohjattuja kysymyksiä, että myös vapaamuotoisia. Kysymyksiin on annettu ohjaavia tarkennuksia, mutta vastauksen täydentämistä ei ole rajoitettu</p>		
	Haastattelukysymykset:	Tarkennuksia:	Lisäkysymykset:
Q1	Tausta: Kuinka pitkään olet toiminut projektipäällikön roolissa	Yhteensä työvuosina	Lisäkysymys: Kuinka pitkään olet työskennellyt ketterien/SAFe menetelmien parissa. Oletko ollut SAFe-sertifiointikursseilla? Millä?
Q2	Millä toimialoilla olet työskennellyt SAFe:n parissa	Julkinen, yksityinen vai molemmat?	Tarkennus: Millä toimialoilla olet toiminut ketterien menetelmien kanssa
Q3	Minkä tyyppisissä projekteissa/hankkeissa SAFe on ollut käytössä?		Tarkennus: Minkä tyyppisissä hankkeissa/projekteissa

			SAFe on ollut käytössä (esim. uusien tuotteiden tai palveluiden kehitys, platform-kehitys, pienkehitys)
Q4	Oletko tyypillisesti tullut mukaan projektin/hankkeen alkuvaiheessa vai kesken sitä?		Tarkennus: Missä vaiheessa hanketta? Oletko tullut "kypsään" ympäristöön
Q5	Millaiselta SAFe parissa työskentely on yleisesti tuntunut	Helpolta, suht helpolta vai vaikealta.	Tarkennus: yleinen näkemyksesi SAFen käytöstä kehitystyössä
Q6	Onko SAFe metodologiana ollut tuttu koko projektitiimille?	Kyllä, ei vai jotakuinkin.	Tarkennus: Mitä SAFen käytäntöjä on ollut käytössä kehitys-/projektitiimeissä (esim. PI Planning, Retrot, Dailyt, Demot,). Tiimi- ja/tai ART-tasolla
Q7	Mitä hyötyjä olet havainnut SAFe käytöstä projekteissa		Tarkennus: Mitä hyötyjä olet havainnut SAFen käytöstä kehitystyössä (esim. ennustettavuus. Läpinäkyvyys, läpimenoajat parantuneet. Laatu parantunut. Henkilöstön tyytyväisyys parantunut)?
Q8	Millaisia haasteita olet havainnut projekteissa projektipäällikön näkökulmasta, joissa SAFe:a on hyödynnetty metodologina		Tarkennus: (esim. liittyen implementointiin, koulutukseen, maturiteettiin, työkaluihin,)
Q9	Koitko voivasi omassa roolissasi vaikuttaa haasteisiin		Tarkennus: Miten omassa roolissasi pystyit vaikuttamaan haasteisiin?

Q10	Miten näitä haasteita on ratkottu	Kuka niihin on puuttunut sinä itse projektipäällikkö roolissa, tiimi, muu projekti johto joku muu kuka?	Tarkennus: millaisia parannuksia saavutettiin esim. tuloksiin tai toimintatapoihin?
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	Background of the research:		
	<p>This interview is part of the Master's thesis at the University of Turku. The aim of the study is to answer the following research questions</p> <p>RQ1: Implementation issues of SAFe from a Project Management perspective.</p> <p>RQ2: What are the simple solutions to overcome issues with SAFe from a Project Management perspective. The duration of the interview is 45 minutes, including the opening and closing words. The interview utilises a pre-submitted question frame, which includes both guided questions and free-form questions. Guiding clarifications have been given to the questions, but there are no restrictions on supplementing the answer.</p>		
	Interview questions:	Specifications:	Additional questions:
Q1	Background: How long have you been in the role of project manager	Total in working years	Additional question: How long have you been working with agile/SAFe methods? Have you been to SAFe certification courses? With ones?
Q2	In which industries have you worked with SAFe	Public, private or both?	Specification: In which industries have

			you worked with agile methods
Q3	What types of projects has SAFe been used in?		Specification: What type of projects/projects SAFe has been used in (e.g. development of new products or services, platform development, small-scale development)
Q4	Have you typically joined in the early stages of a project or in the middle of it?		Specification: At what stage of the project? Have you come to a "mature" environment
Q5	How has working with SAFe felt in general	Easy, relatively easy or difficult.	Specification: Your general view on the use of SAFe in development
Q6	Has the entire project team been familiar with SAFe as a methodology?	Yes, no or more or less.	Specification: What SAFe practices have been used in development/project teams (eg. PI Planning, Retros, Dailys, Demos,...). At team and/or ART level
Q7	What benefits have you seen from using SAFe in projects		Specification: What benefits have you observed from using SAFe in development work (e.g. predictability. Transparency, lead times improved. Quality improved. Improved employee satisfaction)?

Q8	What kind of challenges have you observed in projects from the project manager's point of view, where SAFe has been used as a methodology		Specification: (e.g. related to implementation, training, maturity, tools,...)
Q9	Did you feel that you can influence the challenges in your role		Specification: In your role, how were you able to influence the challenges?
Q10	How these challenges have been solved	Who has intervened in them, you yourself in the role of project manager, team, other project management, someone else, who?	Specification: what kind of improvements were achieved, e.g. in the results or operating models.

8.1 Privacy notice

Includes information required by Articles 13 and 14 of the EU General Data Protection Regulation:

1. Name of the register:

Challenges in SAFe Methodology implementation from the perspective of Project Management

2. Data controller & responsible person:

Jennika Solakuja, 050 9195759, jennika.k.solakuja@utu.fi

4. Purposes of processing personal data and legal basis for processing:

The survey collects interviews that ask about the experiences and perceptions of professionals who have worked in the role of project manager about working with the SAFe framework. Email addresses are used to send you an interview invitation. The interviews collect information about the experiences and perceptions of the people who have worked in the role, for example, about the everyday life of the project, making choices and planning for the future.

The legal basis for processing personal data pursuant to Article 6 of the EU General Data Protection Regulation is:

processing is necessary for the purposes of scientific research (public interest, Art. 6(1)(a))

the data subject has given his or her consent to the processing of personal data (consent Art. 6(1)(e))

5. Categories of personal data processed:

The following information about the data subject is stored in the register: Interview recording, role, number of years of work, experiences, and perceptions of working.

6. Recipients and categories of recipients of personal data:

Data will not be transferred or disclosed outside the research group.

7. Information on transfers of data to third countries:

Personal data will not be disclosed outside the EU or the European Economic Area.

8. Retention period of personal data or criteria for determining it:

Text files are written from the interview recordings and the recordings are destroyed. At the same time, direct identification data will be removed from the research data. The data will be stored until 1.6.2024 at the latest, after which the data will be destroyed in a secure manner.

9. Rights of the data subject:

The data subject has the right to request access to personal data concerning him or her, as well as the right to request rectification or erasure of his or her data, restriction of processing or to object to its processing. The right to erasure of personal data does not apply for scientific or historical research purposes where the right to erasure is likely to prevent or seriously impede the processing.

Tietosuojailmoitus

Sisältää EU:n yleisen tietosuoja-asetuksen 13 ja 14 artiklan edellyttämät tiedot:

1. Rekisterin nimi:

Challenges in SAFe Methodology implementation from the perspective of Project Management

2. Rekisterinpitäjä & Vastuuhenkilö:

Jennika Solakuja, 050 9195759, jennika.k.solakuja@utu.fi

4. Henkilötietojen käsittelyn tarkoitukset ja käsittelyn oikeusperuste:

Tutkimuksessa kerätään haastatteluita, joissa kysytään projektipäällikkö roolissa toimineiden ammattilaisten kokemuksia ja käsityksiä työskentelystä SAFe frameworkin parissa. Sähköpostiosoitteita käytetään haastattelukutsun lähettämiseen. Haastatteluissa kerätään tietoa roolissa työskennelleiden henkilöiden kokemuksista ja käsityksistä esimerkiksi projektin arjesta, valintojen tekemisestä ja tulevaisuuden suunnittelusta.

Henkilötietojen EU:n yleisen tietosuoja-asetuksen 6 artiklan mukaisena käsittelyperusteena on

käsittely on tarpeen tieteellistä tutkimusta varten (yleinen etu 6 art. 1 a-kohta)

rekisteröity on antanut suostumuksensa henkilötietojen käsittelyyn (suostumus 6 art. 1 e-kohta)

5. Käsiteltävät henkilötietoryhmät:

Rekisteriin talletetaan rekisteröidystä seuraavia tietoja:

Haastattelu nauhoite, rooli, työskentely vuosien määrä, kokemuksia ja käsityksiä työskentelystä.

6. Henkilötietojen vastaanottajat ja vastaanottajaryhmät:

Tietoja ei siirretä eikä luovuteta tutkimusryhmän ulkopuolelle.

7. Tiedot tietojen siirrosta kolmansiin maihin:

Henkilötietoja ei luovuteta EU:n tai Euroopan talousalueen ulkopuolelle.

8. Henkilötietojen säilyttämisaika tai sen määrittämisen kriteerit:

Haastattelunauhoitteista kirjoitetaan tekstitiedostot ja nauhoitteet tuhotaan. Samalla tutkimusaineistosta poistetaan suorat tunnistetiedot. Tietoja säilytetään enintään 1.6.2024 asti, jonka jälkeen aineisto hävitetään tietoturvallisesti.

9. Rekisteröidyn oikeudet:

Rekisteröidyllä on oikeus pyytää pääsy häntä itseään koskeviin henkilötietoihin sekä oikeus pyytää tietojensa oikaisemista tai poistamista taikka käsittelyn rajoittamista tai vastustaa niiden käsittelyä. Oikeutta henkilötietojen poistamiseen ei sovelleta tieteellisessä tai historiallisessa tutkimustarkoituksessa silloin, kun poisto-oikeus todennäköisesti estää käsittelyn tai vaikeuttaa sitä suuresti.