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Exploring the Scaled Agile Framework in a Virtual Team Setting

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ABSTRACT (MAX. 200 WORDS):
The Scaled Agile Framework (SAFe) is an agile methodology that aligns collaboration between multiple teams in agile software development. SAFe is commonly being applied to global environments where team members are sitting distributed, through so-called virtual teams. The aim of this study is to investigate how the Scaled Agile Framework is perceived by employees working within a virtual team setting in terms of benefits, challenges and shortcomings. Semi-structured interviews with employees working at IKEA are conducted and analysed. The study is based on a research model that is developed from a literature review on agility and virtual teams. Perceived benefits of SAFe are increasing customer satisfaction, as well as giving structure that provides a shared goal and helps to deal with dependencies. Perceived challenges are interacting with other functions, management not working agile, coordinating between trains, not having technology that supports agility, and communicating with dispersed members. SAFe's identified shortcomings are providing too little guidance on the later stages of development, being costly, as well as rigid. Results from this study give further insights into the Scaled Agile Framework in a virtual team setting.

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List of abbreviations

ART	Agile Release Train
ASD	Agile software development
DAD	Disciplined Agile Delivery
HR	Human resources
ICT	Information and communication technology
LeSS	Large-Scale Scrum
PI	Product Increment
PO	Product Owner
PPM	Program Portfolio Management
RTE	Release Train Engineer
SAFe	Scaled Agile Framework
TDD	Test-driven Development
VSE	Value Stream Engineer
WIP	Work in progress
XP	Extreme Programming

1 Introduction

1.1 Background

Agile frameworks were initially created for small projects in *agile software development (ASD)* that were executed by a single team (Boehm & Turner, 2005). However, the positive outcomes of their usage in terms of faster delivery, better quality products, and more satisfied customers, have generated interest in adopting such frameworks to larger settings – so-called large-scale agile (Dingsøyr, Fægri, & Itkonen, 2014). Various definitions exist for large-scale agile, but most authors use the term to describe agile being used in a setting of 50 or more people, or two or more teams (e.g. Dikert, Paasivaara, & Lassenius, 2016; Dingsøyr et al., 2014; Paasivaara, 2017).

The interest to achieve large-scale agile has resulted in the emergence of new agile frameworks, that have been created specifically for large-scale software development settings with more members and teams, so-called scaling agile frameworks (Paasivaara, 2017; Paasivaara, Behm, Lassenius, & Hallikainen, 2014). The scaling agile frameworks are intended to support agile on an organizational level, as well as to help deal with dependencies and coordination between multiple teams (Knaster & Leffingwell, 2017). Examples of such frameworks are the *Scaled Agile Framework (SAFe), Large-Scale Scrum (LeSS),* and *Disciplined Agile Delivery (DAD)* (Ebert & Paasivaara, 2017; Turetken, Stojanov, & Trienekens, 2017; Vaidya, 2014). According to the 12th State of Agile survey, SAFe is considered to be the most popular scaling agile framework (VersionOne, 2018).

SAFe is intended to help enterprises scale agile to large-scale development settings ranging from 50 to thousands of people (Knaster & Leffingwell, 2017). It contains four levels – *team level, program level, value stream level,* which is optional, and *portfolio level,* and are explained on a high level by Knaster and Leffingwell (2017) as follows. The team level consists of agile teams that use *Scrum* for project management, and *Extreme Programming (XP)* practices for development, but *Kanban* can also be used, as well as a hybrid of all three. The program level brings the agile teams together in a so-called *Agile Release Train (ART),* which is managed by the *Release Train Engineer (RTE).* The portfolio level revolves around planning epics, which are significant development initiatives. The optional value stream level is used for developing big and complex solutions that require multidisciplinary software and system professionals.

Scaling agile frameworks are commonly being applied to global software development environments where team members are sitting distributed, through so-called virtual teams (Ferrazzi, 2014; Martins, Gilson, & Maynard, 2004; Niazi et al., 2016; Shameem, Kumar, Chandra, & Khan, 2017), due to the frameworks' observed competitive advantages (Shameem et al., 2017).

Virtual teams are predominately defined as two or more individuals that work together dependently with equal accountability and responsibility for achieving shared goals. They do not work in the same geographic location and/or at the same time, and use information communication technologies (ICT) for communication and coordination in order to finish their team's tasks (Hertel, Geister, & Konradt, 2005; Martins et al., 2004; Pearlson & Saunders, 2013). The key drivers for utilizing virtual teams are obtaining needed skills and expertise from around the world, getting relevant stakeholders together when it is difficult and expensive to do it physically, and taking advantage of a concept called *follow the sun* (Pearlson & Saunders, 2013). However, virtual teams bring managerial challenges in terms of communication, technology, and diversity of team members that need to be overcome (Pearlson & Saunders, 2013). Additionally, the dispersed nature of virtual teams makes it challenging to adopt agile frameworks, as it complicates fundamental activities in agile development, such as frequent communication and co-located collaboration (Hanssen, Šmite, & Moe, 2011; Holmström, Fitzgerald, Ågerfalk, & Conchúir, 2006). Shameem et al. (2017) state that scaling agile to a virtual team environment predominately brings challenges of coordination, communication, and lack effective requirements analysis, and that no scaling agile framework as of today has fully been considered to work in a virtual team setting when they were being developed.

1.2 Problem area

There is a lack of scientific studies on how SAFe is perceived in various settings. This research gap was also identified in Dikert et al.'s (2016) systematic literature review. It reveals a significant lack of academic papers on how scaling agile frameworks are being experienced, calling for more research in terms of the frameworks usage, benefits, challenges, customizations, and the contexts that they are suitable for. Paasivaara (2017) is also urging for more research on scaling agile frameworks, such as SAFe. She states that more case studies should be made on the frameworks in different contexts, to see what contexts they are suitable for, as well as what the challenges and successful practices look like. Further, researchers have previously studied SAFe in its adoption stages (Paasivaara, 2017; Turetken et al., 2017), where one of the studies looked at how SAFe was adopted in a globally distributed organization (Paasivaara, 2017). However, there are no studies on SAFe in a virtual team setting in a post-adoption state, where SAFe has been applied for several years and reached a more mature level with the framework.

1.3 Research question

In order to fill the gap on the lack of research and explore further the area of the Scaled Agile Framework in a virtual team setting, the research aims at answering the following research question:

How do employees working within a virtual team setting perceive SAFe?

1.4 Research purpose

The purpose of this thesis it to investigate how the Scaled Agile Framework is perceived by employees in a virtual team setting. The focus will be on the perceived benefits, challenges and shortcomings when using SAFe with virtual teams.

The answer to the research question will be based on empirical findings from a case study. The research will be conducted with participants that work with SAFe in a virtual team setting at IKEA.

Due to the current lack of empirical data and scientific papers on the topic, the research will contribute to the gap of knowledge on SAFe in a virtual team setting. It is particularly interesting to study SAFe in a large-scale virtual team setting, as virtual teams have dispersed members, which is known to complicate fundamental activities in agile development, such as frequent communication and co-located collaboration (Hanssen et al., 2011; Holmström et al., 2006), and because dispersed large-scale development settings are known to bring challenges of coordination and communication (Shameem et al., 2017), making it a challenging environment to use SAFe in.

2 Concepts of agility and virtual teams

Reading the literature review carefully and understanding the different concepts is essential to understand the Scaled Agile Framework (SAFe) and the empirical investigation of this study. First, SAFe's origin and the concept of agility will be presented. With this understanding in mind, the literature review continues with large-scale agile, where agility is considered in a setting with more than one team in an organization. It follows by the introduction of the Scaled Agile Framework (SAFe), which partly consists of other agile frameworks such as Scrum, Kanban, and Extreme Programming. Since the thesis focuses on SAFe, only the most important key principles of the other frameworks are presented. We advise to read the sections on advantages of agile methodologies and large-scale agile challenges carefully as they play an important role for the empirical investigation of this study. Finally, as virtual teams provide the setting of our study, introducing virtual teams is essential as the empirical investigation is also based on virtual team challenges. The literature review ends with a research model which summarizes the key concepts of the literature review. The empirical part of the thesis will be based on the research model.

2.1 Agile software development

Agile software development (ASD) is a term that causes confusion since it possesses different understandings. Hence, it is important to clarify the meaning and the range of agile software development.

Many practitioners tried to explain the core ideas of ASD and its key element *agility*. The concept of agility does not only exist in software development (Conboy & Fitzgerald, 2004). Therefore, when studying this concept, one has to consider the different industries and organizations that the definitions derive from. The non-profit software organization Agile Alliance (2018), for instance, explains *being agile* as the "ability to create and respond to change in order to succeed in an uncertain and turbulent environment". Conboy and Fitzgerald (2004) proceed by examining the underlying concepts of agility, namely *flexibility* and *leanness*. Thus, the concept of agility is connected to the non-static, permanent changing environment, which is augmented to a high degree in the IT sector. This study adheres to the definition of agility proposed by Conboy and Fitzgerald (2004) who considers different components that play a significant role in software development. According to Conboy and Fitzgerald (2004, p. 39), agility is "the continual readiness of an entity to rapidly or inherently, proactively or reactively, embrace change, through high quality, simplistic, economical components and relationships with its environment."

From this agile point of view, the concept of agile software development derived. ASD addresses the rapid change in business industry and technology as well as the uncertainty of customer requirements since the late 1990s (Drury-Grogan, Conboy, & Acton, 2017). One definition of ASD is found by the Agile Alliance (2018). They explain agile software development as "an umbrella term for a set of methods and practices based on the values […] expressed in the Agile Manifesto."

The first core value of the Agile Manifesto brings *individuals and interactions over processes and tools* (Fowler & Highsmith, 2001). Therefore, the agile organizational form is flexible and at the same time participative because it requires a cooperative form of social interaction (Nerur, Mahapatra, & Mangalaraj, 2005). Traditional software development, in return, is characterized by bureaucracy with a high standard of formalization (Nerur et al., 2005). Moreover, Fowler and Highsmith (2001) do not assess extensive documentation as unneeded or unnecessary for ASD, but they shift the *prioritization on the working software*, which is the second core value of the Agile Manifesto. According to practitioners, documentations *are* important, but it is essential to understand that the customer cares about whether or not they receive a working software and not how well the development process is documented (Fowler & Highsmith, 2001). Unlike traditional methods such as the waterfall model, ASD encourages lean thinking and cuts down documentation (Dybå & Dingsøyr, 2008; Fowler & Highsmith, 2001). The third core value of the Agile Manifesto advocates *ongoing collaboration between team members and client* in order to make team members fully understand what the customer desires (Fowler & Highsmith, 2001). Finally, referring to the concept of agility, ASD requires *responding to change*, the fourth core value of the Agile Manifesto (Dybå & Dingsøyr, 2008; Fowler & Highsmith, 2001). The iterative and incremental nature of ASD including frequent product releases help team members to respond quickly to the customers' needs or adapt to changing circumstances (Dybå & Dingsøyr, 2008).

2.2 Large-scale agile

Agile methodologies were initially created for small projects that were executed by a single team (Boehm & Turner, 2005). However, the positive outcomes of agile development methodologies in small, single team projects generated interest in adopting such methodologies to larger settings – so-called *large-scale agile* (Dingsøyr et al., 2014).

The definition of *large-scale agile* is still unclear (Torgeir et al., 2013). The term refers to the idea of adopting an agile method to a larger setting. However, it is not generally defined what constitutes a large-scale project or setting. Some authors use the terminology to describe a lot of members in a single team, while others describe projects with multiple teams ranging from various sizes, specialization and distribution (Bosch & Bosch-Sijtsema, 2010). Dingsøyr et al. (2014) identify in their literature review various definitions of large-scale agile. Their findings include size in terms of amount of people or teams, project duration, code size, and budget. Scientific literature describes cases that include 7 teams and 40 members (Paasivaara, Durasiewicz, & Lassenius, 2008), with a project duration of 2 years and a scope of over 70 features (Bjarnason, Wnuk, & Regnell, 2011), code size of over 5 million lines, and a project budget of over £10 million with over 50 team members (Berger & Beynon-Davies, 2009). Dingsøyr et al. (2014) created a taxonomy based on their findings where they defined large-scale in terms of the number of coordinating and collaborating teams: they defined 1 team as small-scale, 2-9 teams as large-scale, and 10 or more teams as very large-scale.

2.3 Scaling agile frameworks

The interest to achieve large-scale agile has resulted in the emergence of new agile frameworks, that have been created specifically for large-scale software development settings with more members and teams, so-called scaling agile frameworks (Paasivaara, 2017; Paasivaara et al., 2014). Scaling agile frameworks were needed, as adopting agile frameworks that were intended for single teams to large-scale, created misalignments between the various organizational levels, and lacked approaches to deal with dependencies and coordination with other teams (Knaster & Leffingwell, 2017). Examples of scaling agile frameworks are the *Scaled Agile Framework (SAFe)*, *Large-Scale Scrum (LeSS)* and *Disciplined Agile Delivery (DAD)* (Ebert & Paasivaara, 2017; Turetken et al., 2017; Vaidya, 2014). Next, the Scaled Agile Framework (SAFe) will be introduced as it plays the central part in the thesis.

2.4 The Scaled Agile Framework (SAFe)

The *Scaled Agile Framework* – or *SAFe* – gains increasingly attention in both the business and IT community. SAFe is a template for scaling agile methods to large organizations. The framework aligns collaboration between multiple agile teams (Scaled Agile Inc., 2018). More precisely, SAFe is considered as counterpart to Scrum at an organizational level as Scrum is used predominately on the team level (Paasivaara, 2017). However, implementing Kanban, Extreme Programming or other agile practices is also possible (Ebert & Paasivaara, 2017; Paasivaara, 2017; Turetken et al., 2017). Further explanation on agile frameworks that are part of SAFe can be found in Section 2.5.

SAFe is intended to enhance systems and software development (Ebert & Paasivaara, 2017; Scaled Agile Inc., 2018). SAFe is also configurable and allows organizations to adapt the framework to their own business needs (Scaled Agile Inc., 2018). Furthermore, it can be applied to smaller scaling solutions that employ 50 to 125 employees, but at the same time, it is able to support complex settings where thousands of people are involved (Scaled Agile Inc., 2018).

The knowledge base on SAFe can be accessed online and is free of charge (Scaled Agile Inc., 2018). The information is provided by its founder Dean Leffingwell and the Scaled Agile team who offer certifications, trainings, and courseware on SAFe (Scaled Agile Inc., 2018). According to the 12th State of Agile survey, SAFe is considered to be the most popular scaling agile framework (VersionOne, 2018). With a ratio of 29%, SAFe is more widespread than other scaling agile frameworks (Ebert & Paasivaara, 2017; Paasivaara, 2017; VersionOne, 2018).

2.4.1 SAFe principles

SAFe is based on lean-agile principles which are the core values, beliefs and economic goals that form SAFe's principles and roles (Knaster & Leffingwell, 2017). Furthermore, the principles are the theoretical foundation for the application of SAFe practices (Knaster & Leffingwell, 2017). They evolved from careful observations in successful practices, agile frameworks (such as Scrum, see Section 2.5), lean product development and systems thinking

(Scaled Agile Inc., 2018). These principles are used in the empirical investigation of this study in Chapter 3, 4 and 5. They are listed and explained below.

Principle #1: Take an economic view

According to Knaster and Leffingwell (2017), it is highly important for the project that all levels understand the economic impact of their decisions. This applies to leadership and management but also to developers or workers in general. Therefore, the first principle is *taking an economic view*. Knaster and Leffingwell (2017) recommend developing and communicating the strategy for incremental value delivery in the organization. Also, an economic framework should be created and communicated to all levels and roles that apply SAFe.

Principle #2: Apply systems thinking

Knaster and Leffingwell (2017) recommend 'Deming's *system thinking'* which focuses on a larger view of problems faced by people in different contexts. One important conclusion of this theory is that complex systems consist of complex components such as processes and people that drive the system. To improve the system, a shared understanding of the same goals is needed. Ideally, as a result, the components (people and processes) are aligned with the system's overall purpose. Aligning and optimizing only single components do not improve the system as a whole (Scaled Agile Inc., 2018).

Principle #3: Assume variability; preserve options

In opposition to traditional life-cycle practices where one single requirement is picked very early, the third lean-agile principle aims at *maintaining multiple options* (Knaster & Leffingwell, 2017). Keeping several options available for a longer time is proved to be better so that the course of action is not determined until the project goal is reached. Applying the third principle is also aligned with the first principle since it helps to create better economic outcomes.

Principle #4: Build incrementally with fast, integrated learning cycles

SAFe is based on the idea to develop small solutions in a series of *small iterations* (Scaled Agile Inc., 2018). When cooperating with the customer, the company benefits from quick customer feedback during the process of development, which helps teams to change their strategy in order to deliver the suitable end product (Knaster & Leffingwell, 2017). Hence, the fourth principle goes hand-in-hand with the third principle since team members have to stay flexible and adapt to changing circumstances, as outlined by Schwaber (1997).

Principle #5: Base milestones on objective evaluation of working systems

As already touched on in the fourth principle, teams and customers are constantly connected with each other since they share responsibility that contribution in new solutions delivers economic benefit (the first principle). For proper communication, it is essential that *milestones* based on *objective evaluation* within the development process are set. Milestones define the point of time when to evaluate the solution together with the customer (Knaster & Leffingwell, 2017).

Principle #6: Visualize and limit work in progress (WIP), reduce batch sizes, and manage queue lengths

Knaster and Leffingwell (2017) outline three important keys that help to achieve a continuous flow throughout the development project: First, visualizing and limiting the amount of work in progress (WIP) enables the team to focus on the most important issues and to balance its capacity; second, the batch size of work should be reduced to ensure a quick and reliable flow throughout the system; third, lengths of processes must be short so that new qualifications and requirements that are depended on the process do not have to wait that long (Knaster & Leffingwell, 2017). Respecting these key values enables lean-agile teams to move fast from concept to success.

Principle #7: Apply cadence, synchronize with cross-domain planning

Following the seventh principle requires to *apply cadence*. According to Knaster and Leffingwell (2017), cadence provides a rhythm of predictability and helps with synchronization among teams, resulting in the advantage that events become routine and are predictable. In order to operate effectively, cadence should be coupled with cross-domain planning since the team is then triggering rather than scheduling work (Knaster & Leffingwell, 2017). Synchronizing with cross-domain planning is realized through the periodical event called *Program Increment (PI) Planning*, which is explained in 2.4.2 furthermore.

Principle #8: Unlock the intrinsic motivation of knowledge workers

Knaster and Leffingwell (2017) invoke to minimize constraints and provide autonomy for the individual workers. Unlike incentive motivation, where the objective is clearly specified within an organization, the workers achieve higher outcomes for customers and the company when they motivate themselves independently (Knaster & Leffingwell, 2017). As Drucker (1999) states, successful knowledge workers know more about their work than their bosses. According to Alvaro, Ulf, and Surendra (2016), knowledge workers are main actors for companies who are responsible for generating knowledge. It follows that managers cannot effectively lead and supervise the work of people that know their tasks better than they do (Knaster & Leffingwell, 2017). Instead, they *should unlock their intrinsic motivation* by leveraging systems thinking, creating an environment of common goals (and not forcing to follow the objectives) and providing autonomy (Knaster & Leffingwell, 2017).

Principle #9: Decentralize decision-making

According to the ninth SAFe principle, strategic decisions should stay centralized, but all *other decisions should be decentralized* (Knaster & Leffingwell, 2017). To refer to Drucker (1999), knowledge workers can make better decisions about how to perform tasks than anyone else. In other words, decisions should be placed to the executer directly. Handing over this responsibility from the management requires trust towards employees (Drucker, 2005; Knaster & Leffingwell, 2017). Hence, the worker should apply the SAFe principles to understand the whole context in the decision-making process. Knaster and Leffingwell (2017) specify to decentralize (1) frequent and common decisions, (2) time critical decisions and (3) decisions that require local context. In essence, workers who have a precise understanding of technical and complex situations can make more effective and quicker decisions than management.

2.4.2 SAFe levels

SAFe operates at three levels within a company. The different levels are *team level*, *program level*, and *portfolio level* (Paasivaara, 2017). Knaster and Leffingwell (2017) suggest the optional *value stream level* which they propose between program level and portfolio. A careful study of SAFe's levels enables to follow the empirical investigation of this study as several interview questions are based around the perception of the different levels.

Team level

The team level consists of roles, activities, events and processes which agile teams (developers, designers, testers etc.) power the *Agile Release Train (ART)* (Scaled Agile Inc., 2018). The team level is a key part of the program level, and all teams partake in an ART, which is a primary construct of the program level and described in the program level below (Scaled Agile Inc., 2018).

In order to understand the roles, events and artifacts of the team level, it is a good idea to start explaining some highlights of the level, which Knaster and Leffingwell (2017) describe in what comes next. Iterations are standard fixed time boxes where teams deliver incremental value through new functionality, where the duration of the iterations is between 1 and 3 weeks. ScrumXP is a process for cross-functional, self-managing and self-organizing teams consisting of 5 to 9 people, where a combination of Scrum and Extreme Programming is applied (see Section 2.5). Scrum is used for project management, whilst XP-derived software engineering practices is used for the development part. Team Kanban is a way to manage the flow of value by visualizing *work in progress* (WIP), which helps to continuously improve work processes (see Section 2.5.2).

Within one team, there are different roles that are necessary for an iteration. Figure 2.1 shows the different roles when adopting Scrum, which are Product Owner, Scrum Master and the development team. They are further explained in Section 2.5.1 as they are key roles in Scrum which is used within SAFe on the team level.

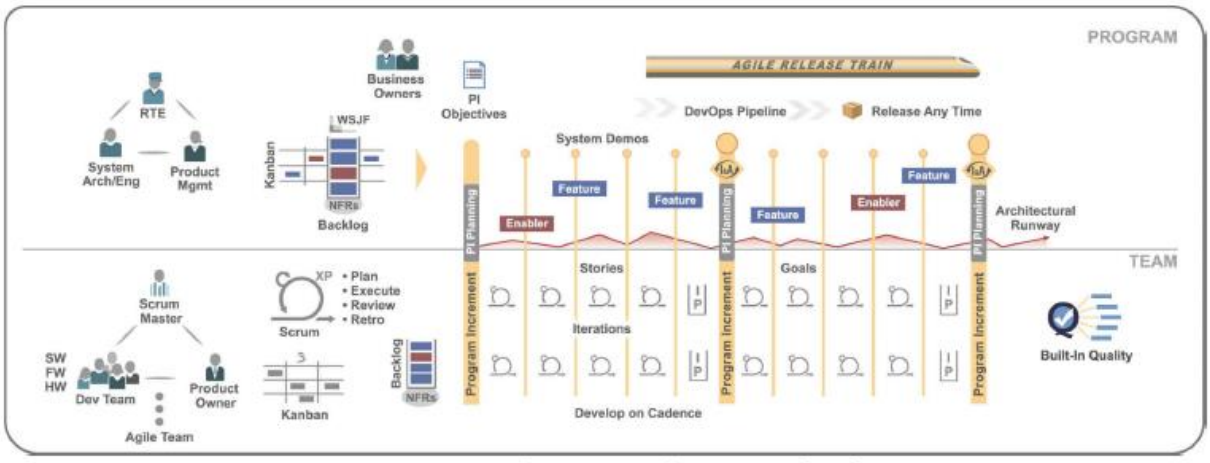

Figure 2.1: The team and program level

Adapted from: Knaster and Leffingwell (2017, p. 34)

Program level

Knaster and Leffingwell (2017) describe the *program level* as the heart of SAFe. At this stage, the different agile teams and key stakeholders collaborate by using a construct called *Agile Release Train (ART)* (Knaster & Leffingwell, 2017). An ART is a virtual organization which consists typically of five to twelve agile teams. Within an ART, stories from their Backlog are defined, built and tested in time-boxed Sprints (Knaster & Leffingwell, 2017). According to Paasivaara (2017), ARTs are analog to Sprints at the team level, but they work at a slower time frame. In opposition to projects, the teams in ARTs stay together for a long time since they are not disbanded after a project is finished (Knaster & Leffingwell, 2017).

Moreover, there are several key roles on the program level, but for this study, the most important role to understand on the program level is the *Release Train Engineer (RTE).* Knaster and Leffingwell (2017) explain that there are four key roles in the ART in the following way. RTE acts as the chief Scrum Master for the ART, and the role aims to improve the flow of value through the program by using activities such as PI Planning, Inspect and Adapt Workshop, and Program Kanban, which is a way to manage the flow of features through visualization. *System Architect* is fully dedicated to the second SAFe principle (apply systems thinking) by defining the overall architecture of the system. This role aids in defining non-functional requirements and designing interfaces, and it determines key elements and subsystems. *Product Management* is responsible for the Backlog and reflects the customer's voice in terms of needs through collaboration with customers and Product Owners, and it defines features and partakes in validation. *Business Owners* are a group of stakeholders that are responsible for return of investment, governance, and business and technical quality for a solution developed by an ART.

Further, Knaster and Leffingwell (2017) outline three main events that help to coordinate the ART on the program level, namely *PI Planning*, *System Demo*, and *Inspect and Adapt* workshop, and describe them as follows. The program level contains a concept called *Program Increment (PI),* it is considered to be the facilitator of the rhythm, so-called cadence, for the ART, and always starts with PI Planning. PI Planning is a face-to-face event (video-conference if dispersed) where teams make estimations about what is to be delivered and give time estimations for it, as well as acknowledging interdependencies, and is led by the Release Train Engineer. A PI is basically what an iteration is for a team, but for an Agile Release Train. It is a time frame in which the ART delivers value incrementally through running and tested software and systems, and are usually 8 to 12 weeks long. As part of a PI, the RTE and the Scrum Masters meet weekly in a so-called Scrum of Scrums to exchange information about progresses and dependencies among the teams. The second event, System Demo, gives a holistic view of new features delivered by all the teams in the ART in the latest iteration, giving the stakeholders a measure of progress and the ability to give feedback. The last key event, Inspect and Adapt workshop, is where the existent state of the solution goes through a demo and gets evaluated, and the teams participate in a structured problem-solving workshop where they reflect and attempt to identify improvement Backlog Items.

Value stream level

At this stage, companies get support in overcoming challenges in agile software development such as building large-scale software, hardware and IT systems (Knaster & Leffingwell, 2017). The derived complex solutions require multiple ARTs synchronized, and additional roles, artifacts, and events (Ebert & Paasivaara, 2017; Knaster & Leffingwell, 2017; Paasivaara, 2017). According to Ebert and Paasivaara (2017), the value stream level is an optional level, and is aimed for building large complex solutions, whilst enterprises that build small and independent systems typically do not need this level.

The value stream level consists of a triad of roles that are required to coordinate and advance the value stream solution (Knaster & Leffingwell, 2017). The roles will be descried briefly as they will not be encountered in the study. Knaster and Leffingwell (2017) outline the roles as follows. *Value Stream Engineer (VSE)* is a servant leader who mediates the work of several ARTs and suppliers. *Solution Management* is reflecting the customers' needs across trains, and the strategic themes found in the portfolio level. *Solution Architect* is collaboratively defining the architecture which connects the solution across several trains. Additionally, the *customers* are the final buyers of the solutions and are essential to the value stream. The outline of the value stream level is presented in Figure 2.2.

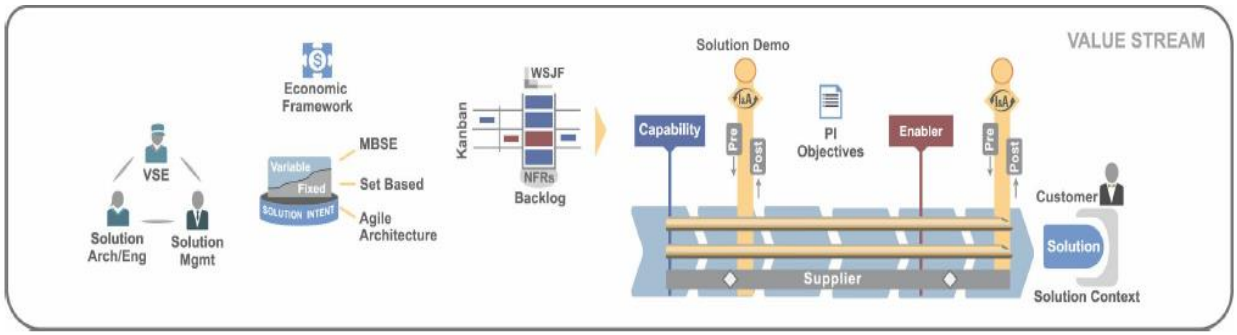

Figure 2.2: The value stream level

Adapted from: Knaster and Leffingwell (2017, p. 36)

Portfolio level

The portfolio level describes roles, principles, and practices that are needed to run one or more value streams (Leffingwell, 2011). The level uses strategic themes that are business objectives which align a portfolio with the business strategy (see Figure 2.3). The portfolio level defines investment funding and strategy for value streams (Leffingwell, 2011). At this stage, planning is done in form of "epics" by defining large development initiatives (Paasivaara, 2017).

In regards to roles, Knaster and Leffingwell (2017) describe the following. *Program Portfolio Management (PPM)* are individuals that are in charge of strategy and investment funding, program management practices, and governance for specific portfolios. *Epic Owners* deal with individual portfolio business epics from identification to the analysis process through the Portfolio Kanban, and are tasked with presenting the value of the epics to the PPM for approval. *Enterprise Architects* work with business stakeholders and Solution/System Architects

in order to establish holistic technology implementation across value streams, and shapes collaboration of programs and teams around a shared technical vision.

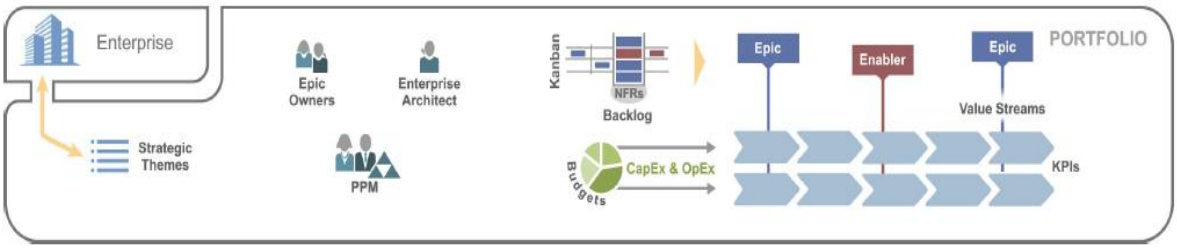

Figure 2.3: The portfolio level

Adapted from: Knaster and Leffingwell (2017, p. 37)

2.5 Agile frameworks applied in SAFe

The Scaled Agile Framework, which is in the center of our thesis, uses several practices of other agile frameworks, especially on the team level (see Figure 2.4). According to the 12th State of Agile survey, Scrum is the most common agile framework, which is also used within SAFe (VersionOne, 2018). Moreover, Kanban practices can be applied on all levels of SAFe (Knaster & Leffingwell, 2017; Paasivaara, Lassenius, Heikkila, Dikert, & Engblom, 2013). Lastly, SAFe can adapt several practices from Extreme Programming, another agile framework, or variations from different frameworks. We present a short reflection on the most important agile frameworks and tasks for SAFe. Understanding their basic concepts helps to follow the empirical part of the thesis.

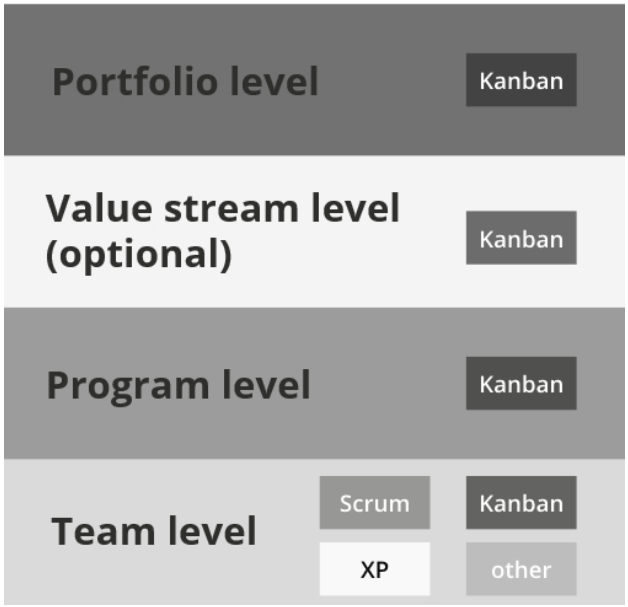

Figure 2.4: Agile frameworks applied on SAFe's levels

2.5.1 Scrum

The principles of the agile framework *Scrum* were firstly introduced by Takeuchi and Nonaka (1986) in an article published in Harvard Business Review. They describe Scrum as the *rugby approach*, where "product development process[es] [emerge] from the constant interaction of a hand-picked, multidisciplinary team whose members work together from start to finish" (Takeuchi & Nonaka, 1986, p. 138). Later, in the 1990s, Jeff Sufferland and Kent Schwaber used the rugby approach together in their companies (Sutherland, 2010). During this time, they collaborated and developed the rugby approach further to formalize Scrum (Pries-Heje & Pries-Heje, 2011; Sutherland, 2010).

In short, Scrum is an iterative framework which is supposed to be used for projects and product or application development (Sutherland, 2010). In both Scrum and SAFe, development is based around time-boxed cycles of work, the so-called *Sprints* (Sutherland, 2010). The main goal of each Sprint is to deliver a new functionality that can stand on its own, and it cannot be changed during a Sprint (Srivastava, Bhardwaj, & Saraswat, 2017). Each Sprint lasts from one to four weeks. At the start of each Sprint, a *Sprint Planning Meeting* takes place, where the scope of the upcoming Sprint is discussed (Pries-Heje & Pries-Heje, 2011). The Sprint Planning Meeting is based on the *Product Backlog* which is a list of requirements and identified as an important cornerstone for the Sprint by Pries-Heje and Pries-Heje (2011). Its elements, the *Backlog Items,* are prioritized by the Product Owner, as described below. During the Sprint Planning Meeting, the Backlog items with highest priority are selected and collected in the *Sprint Backlog.* The team holds a *Daily Stand-up Meeting*, which lasts not more than 15 minutes (Pries-Heje & Pries-Heje, 2011). Each day, the team members meet to discuss (1) what they did yesterday, (2) what they are working on today, (3) if and what problems occurred, and (4) if they can share any innovations that derived from their work (Pries-Heje & Pries-Heje, 2011). This procedure is identified as elementary for an agile framework, since a consistent status exchange supports transparency of knowledge between team members. Each Sprint finishes with a *Sprint Retrospective,* a meeting where all project members come together and reflect on their development process, and look for areas of improvement (Pries-Heje & Pries-Heje, 2011).

Sutherland (2010) defines three roles in Scrum, namely (1) the *Scrum Master*, (2) the *Product Owner (PO)*, and (3) the *team*. Altogether these three roles make up the *Scrum team* (Sutherland, 2010). At the same time, they are components of the Scaled Agile Framework. As Scrum Master and developer (a team member) are job roles of participants of the empirical investigation, we open space for a short reflection on these positions.

Firstly, the Scrum Master can be defined as a coach for the team. However, Sutherland (2010) points out that the Scrum Master is *not* the team manager or a project leader, but has more the responsibility to serve the team with its needs – the Scrum Master guides and teaches the team to use Scrum successfully. Moreover, this role assures that Scrum fits within a company's culture and still delivers the expected outcomes (Schwaber, 2004). For example, the Scrum Master manages meetings and brings the team back to the point when the discussed topic loses focus on the project's goal. Unlike a project manager, this role does not assign tasks to team members (Sutherland, 2010). Accordingly, there is no overall team leader in Scrum.

Secondly, the Product Owner represents the interests of the stakeholders in a project. The PO makes sure that the needs of management, customers or clients or whoever is in stake of the

product are brought into focus of the Scrum process (Cohn, 2018). According to Sutherland (2010), the Product Owner identifies product features, decides their priorities and continuously re-prioritises and updates this list. In particular, the PO focuses on the products' profits and losses in a commercial manner (Sutherland, 2010). That is why the PO has to decide which features should be on top of the next Sprint. In case that the product is an internal application such as an internal platform, the PO is customer at the same time (Sutherland, 2010).

Thirdly, there is the team that builds the product which is specified by the Product Owner (Sutherland, 2010). When implementing Scrum, the team typically contains a high level of autonomy, self-management and self-organization (Schwaber, 2004; Sutherland, 2010). In the literature, the team is frequently described as "cross-functional" (Sutherland, 2010). Ideally, it consists of five to nine people who are responsible for developing functionality (Schwaber, 2004). Each team member is collectively in charge of each iteration in the Scrum process (Schwaber, 2004). This approach underlines one main thought of Scrum – working in a team, and at the same time, contributing as an individual in whatever one can do to complete a task of a sprint (Cohn, 2018).

According to Sutherland (2010), the roles of the Scrum Master and Product Owner *cannot* be carried out by the same individual. It is an essential characteristic of Scrum that there is no classical project manager. In opposition, the typical tasks have been divided up among the different roles (Cohn, 2018).

2.5.2 Kanban

Kanban is another framework that can be found on all levels of SAFe. It helps to organize project tasks from SAFe's different levels around a Kanban board. The term *Kanban* is Japanese for *signboard* (Heidenberg & Porres, 2010). Current tasks are written out on so-called *tickets* which are placed in different columns from left (Backlog) to right (task completed), depending on their current status quo (Ikonen, Pirinen, Fagerholm, Kettunen, & Abrahamsson, 2011). Accordingly, Kanban's main task is to virtualize the workflow. In addition, Kanban measures the length of different iterations (Heidenberg & Porres, 2010), which helps to identify tasks that take too long in comparison to their added value. Al-Baik and Miller (2015) outline that Kanban is interpreted differently in scientific literature: Some declare Kanban as being *agile* (Heidenberg & Porres, 2010; Ikonen et al., 2011; Shinkle, 2009), while others categorize it as *lean* (Nikitina, Kajko-Mattsson, & Strale, 2012; Sjøberg, Johnsen, & Solberg, 2012). Ikonen et al. (2011), for instance, consider Kanban as a realization of the Agile Manifesto. Contradictorily, they state that the Agile Manifesto does not emphasize visualization as Kanban does. Moreover, Kanban has less prescriptive elements compared to traditional agile frameworks such as Scrum (Al-Baik & Miller, 2015; Nikitina et al., 2012; Srivastava et al., 2017).

2.5.3 Extreme Programming

Another agile framework that can be found on SAFe's team level is *Extreme Programming (XP).* XP is an agile software development framework that aims to deliver better quality software, and make development teams more efficient (Marchesi, Succi, Wells, Williams, & Wells, 2003).

XP's values revolve around communication, simplicity, feedback and courage, which essentially advocates collaborating with customers and programmers, keeping strong communication among them, use of simple programming and planning practices, and testing with feedback (Lindvall et al., 2004). Ultimately giving the team courage when working this way (Jeffries, Anderson, & Hendrickson, 2001).

Furthermore, there are 12 core practices that XP is built on (Dingsøyr & Hanssen, 2002). However, only three of them will be presented as those are the only practices that readers will come across in the rest of the paper. The first practice is *Pair Programming*, which is when programmers are paired and write the code using one machine per pair, letting the code to be instantly reviewed as it is being written, resulting in better quality code (Agarwal & Umphress, 2008). Next, *Test-driven Development (TDD)* revolves around writing tests first and then developing the software to pass the tests, making the software being developed to be constantly tested (Agarwal & Umphress, 2008). Lastly, *Continuous Integration* aims at continuously integrating the developed code into the main codebase, in order to reduce the chances of diversion in the code (Agarwal & Umphress, 2008).

2.6 Benefits of agile frameworks

The literature discusses several benefits in relation to agile frameworks such as Scrum and Kanban. They will be presented next as they will also be part of the research model that will drive the empirical study (see Section 2.9).

The first benefit relates to Kanban's ability to help *reduce production time* (Huang & Kusiak, 1996). Likewise, Mann and Maurer (2005) found out that Scrum reduces overtime of the developers. In their case study, all developers argue for the implementation of Scrum in future software development projects as it helps them to save time in their working processes.

Another benefit, outlined by Huang and Kusiak (1996), is that Kanban *increases productivity*. Additionally, Sutherland, Schoonheim, Rustenburg, and Rijk (2008) show how using Scrum leads to higher productivity than working waterfall in a distributed setting. Likewise, Cardozo, Araújo Neto, Barza, França, and da Silva (2010) generate from their literature review on 28 selected articles that Scrum is related to productivity in software projects.

Moreover, Schwaber (1997) states that Scrum supports developers in designing valuable solutions for the final product which results in a *higher quality of the product*. Therefore, we define high quality when customers' requirements are met. Similarly, Coram and Bohner (2005) conclude that when applying agile frameworks under the right circumstances, both increase of productivity and product quality can be achieved, due to a high degree of testing in short iterations.

Lastly, Tripp, Riemenschneider, and Thatcher (2016) confirm direct effects between the use of agile frameworks and job satisfaction. They refer to Balijepally, Mahapatra, Nerur, and Price (2009) who noted that the agile practice Pair Programming contributes to *increased employee satisfaction* over independent working. According to their study, intensive collaboration makes employees happier. Likewise, Mann and Maurer (2005) outline that employees are more satisfied with Scrum than without as employees perceive a better product in terms of quality. Increasing employee satisfaction when using Scrum is also observed by

Papadopoulos (2015). Moreover, Mann and Maurer (2005) identify a positive effect on *customer satisfaction*, as the customer is more involved in the product development. Daily Scrum Meetings helped the customer to lower confusion about what should be developed, and it helps developers to understand customers' requirements and deadlines. Moreover, the customer is informed about problems faster, thus, problems can be eliminated faster, resulting in higher customer satisfaction (Mann & Maurer, 2005). According to Papadopoulos (2015), achieving customer satisfaction is the main focus of agile methodologies, which is realized when following its core values.

In summary, the literature revealed benefits of using agile frameworks in terms of *time*, *productivity*, *product quality*, and *employee and customer satisfaction*. Turetken et al. (2017) state that the collected benefits of agile frameworks are still not proven for the Scaled Agile Framework in academic papers, although non-scientific reports of success stories on SAFe exist.

2.7 Large-scale agile challenges

Dybå and Dingsøyr (2008) outline that using agile frameworks becomes more difficult the bigger the organization becomes. This view is shared by Livermore (2008), who states that the difficulty is caused by organizational inertia, which is common in larger organizations, and brings stagnation to organizational change. An agile development approach is holistic in nature and often forces the firm's entire culture to change (Mishra & Mishra, 2011). Lindvall et al. (2004) explain that a major difference between being agile in a single team versus large-scale, is that there are more dependencies between projects and teams in larger organizations, which increases the need for documentation. As a result, the increased documentation often leads to reduced agility (Dikert et al., 2016).

Additionally, the large-scale setting for agile development brings problems in terms of coordination between teams (Larman, 2008), unlike agile development in a single team with co-located members (Crowston, Chudoba, Watson-Manheim, & Rahmati, 2016). Small interactive teams with co-located members that are also responsible for the decisions, can be efficiently coordinated internally (Crowston et al., 2016; Strode, Huff, Hope, & Link, 2012).

Dikert et al. (2016) conducted a literature review on large-scale agile challenges, which were grouped into seven categories, and are listed and explained below. Something important to note with this review, is that the majority of its sources came from experience reports published by practitioners on web-sites of agile frameworks. There is still a lack of scientific studies on what kind of challenges are related to large-scale agile (Dikert et al., 2016). The challenges mentioned in the review are related to agile being used in a setting of 50 or more people, or 6 or more teams.

Challenge #1: Resistance to change

Dikert et al. (2016) state that a common challenge related to large-scale agile is resistance to change. They explain that implementing agile top-down is known to cause resistance to change. Other reasons mentioned were lack of understanding why it is needed, as well as scepticism and distrust towards an agile way of working.

Challenge #2: Lack of investment

Dikert et al. (2016) reveal in their review that many times there was a lack of investment in terms of training and coaching to support the agile way of working. Other mentioned factors are workload that was too high to efficiently have the teams working agile, as well as a problem with old commitments being kept, such as deadlines, resulting in agile practices being ignored. Another issue that was raised is having re-arranging physical spaces, in order to have the members co-located in accordance with the agile principles.

Challenge #3: Agile is difficult

Dikert et al. (2016) outline several cases and reports where agile was considered difficult. A common example is misunderstanding of agile concepts which caused problems, and lack of understanding of the purpose of the activities. Examples of misunderstandings are no need for documentation whatsoever, or that agile is a solution to all problems. Many times, this would result in a drawback to the waterfall approach. Other mentioned difficulties by the authors were lack of guidance from literature on how it should be adhered to; poorly customizing agile because in many cases it simply does not work to apply it by-the book; people going back to old ways of working as they prefer familiar behaviours; and exaggerated enthusiasm by some, resulting in sides being created – for and against agile.

Challenge #4: Coordination challenges in multi-team environments

Additionally, Dikert et al. (2016) observe that coordination challenges between several agile teams is commonly expressed by practitioners. The dependencies remain after the agile deployment making the development difficult, which is also mentioned as a general issue for large-scale agile by Larman (2008) and Crowston et al. (2016). Further, Dikert et al. (2016) also describe that many practitioners stressed issues with geographically dispersed teams, which has a negative effect on communication and meetings, especially when time zones differ. Moreover, they state that this problem is easier to overcome within a waterfall approach, as parts of the project could be isolated, but this is not allowed in an agile way of working. Lastly, Dikert et al.'s (2016) review mentions difficulties in achieving technical consistency such as, standardized scripts, synchronization of software interfaces among teams, and differences in coding styles.

Challenge #5: Different approaches emerging in multi-team environments

Dikert et al. (2016) describe a common challenge of different approaches emerging in teams when they have interpreted the agile way of working differently, due to lack of consistent guidance. This results in higher cost due to different processes, difficulties in benchmarking teams and time estimations. They also mention that an agile way of working side by side to a waterfall approach emerges when agile is being implemented gradually, causing frustration.

Challenge #6: Hierarchical management and organizational boundaries

Dikert et al. (2016) summarize 17 experience reports by practitioners, expressing challenges to hierarchical management. The summary of the findings is that middle managers experience their new role as unclear, and that they are not used to the self-organizing approach that made them give up authority and control that they previously had. Other issues encountered are also

that management stayed in a waterfall approach despite the need of organizational change; that bureaucracy from the waterfall approach remained; and old silo were kept.

Challenge #7: Interacting with other functions

The last category by Dikert et al. (2016) covers challenges that applying agile to a larger context calls for other organizational functions, such as marketing, sales, design and human resources (HR) to work in an agile way too. For example, 8 practitioners state that HR hampered the agile adoption as individuals' performance is evaluated rather than having a team oriented rewarding concept, resulting in several members resisting the change to agile.

Furthermore, Paasivaara (2017) conducted a case study of a large-scale agile transformation. She expresses similar challenges described by Dikert et al. (2016), such as lack of training and external coaches, resulting in chaotic events, resistance to change and reduced work satisfaction. Additionally, an interesting finding in her study is that employees got frustrated over not seeing issues or problems that were highlighted at Retrospectives being resolved.

After now having discussed possible challenges that come along with SAFe, we open space for the challenging environment of virtual teams, as this is the setting that SAFe is studied in.

2.8 Virtual teams

Scaling agile frameworks are commonly being applied to global software development environments, through so-called virtual teams (Ferrazzi, 2014; Martins et al., 2004; Niazi et al., 2016; Shameem et al., 2017), due to the frameworks' observed competitive advantages (Shameem et al., 2017).

Virtual teams can be defined in various ways. This paper adheres to the most predominately encountered definition in our literature review by Hertel et al. (2005) – that virtual teams consist of two or more individuals that work together dependently with equal accountability and responsibility for achieving shared goals, do not work in the same geographic location, and use information communication technologies (ICT) for communication and coordination in order to reach their team's objectives. Virtual teams began to be initialized as a response from many organizations to their dynamic environments, due to increased de-centralization and globalization of work processes, and thanks to technological advances (Lurey & Raisinghani, 2001; Orta-Castañon, Urbina-Coronado, Ahuett-Garza, Hernández-de-Menéndez, & Morales-Menendez, 2018). They are today commonplace in most organizations (Martins et al., 2004). A survey from 2002 by the Gartner group found that over 60 % of employees work in virtual teams (Kanawattanachai & Yoo, 2002). A similar survey conducted by Harvard Business Review in 2014 shows that 79% of knowledge workers work or have worked in virtual teams (Ferrazzi, 2014).

2.8.1 Drivers of virtual teams

A major driver for virtual teams is the fact that it enables expansion of the knowledge base via team membership (Pearlson & Saunders, 2013). Thanks to the advancements in ICT, managers are able to obtain team members that are best fit for the task, as they possess the needed

skills or expertise from around the globe, without having to worry about the geographical constraints (Brewer, Mitchell, Sanders, Wallace, & Wood, 2015; Krumm, Kanthak, Hartmann, & Hertel, 2016; Lipnack & Stamps, 1999; Pearlson & Saunders, 2013). Another driver is related to cutting companies' travel expenses (Bergiel, Bergiel, & Balsmeier, 2008; Krumm et al., 2016). As they avoid huge travel expenses, particularly because it is often difficult to get relevant stakeholders together physically (Pearlson & Saunders, 2013). Having team members in different time zones additionally enables a concept called *follow the sun*, which aims to reduce the development life-cycle duration (Kroll, Richardson, Prikladnicki, & Audy, 2018; Pearlson & Saunders, 2013). Boudreau, Loch, Robey, and Straud (1998) give an example of following the sun that is applied at Tandem Services Corp Inc, where the developed code in London gets transmitted each evening to the U.S. members for testing, which in turn is sent to Tokyo for debugging, and then finally arrives back in London in the morning, where another cycle is started. One last mentioned driver of virtual teams is the flexibility and responsiveness that it brings (Bisbe & Sivabalan, 2017). This is achieved by reduced relocation time, time to market, and cost, which brings an agile competitive advantage (Lipnack & Stamps, 2008; Martins et al., 2004; Martins & Schilpzand, 2011; Serrat, 2017).

2.8.2 Challenges

Virtual teams come with numerous challenges (Martins et al., 2004; Pearlson & Saunders, 2013). The challenges can be divided into communication, technology and team diversity (Pearlson & Saunders, 2013).

Communication

Firstly, there are several communication challenges as the members mainly have to communicate through e-mail, teleconferences or messaging systems (Gibson & Gibbs, 2006; Paul, He, & Dennis, 2018; Pearlson & Saunders, 2013). Different time zones can result in greater efficiencies when leveraged, but can also make communication hard in regards to interactions and scheduling meetings (Pearlson & Saunders, 2013). The lack of face-to-face communication is believed to hinder the creation of trust among dispersed team members (Jarvenpaa, Shaw, & Staples, 2004; Pearlson & Saunders, 2013). Therefore, many authors that have looked into success factors for virtual teams have advocated the importance of frequent face-to-face meetings with virtual team members in order to foster trust (e.g. Coppola, Hiltz, & Rotter, 2004; Jonsen, Maznevski, & Canney Davison, 2012). Similarly, several authors claim that the lack of face-to-face communication brings additional challenges like conflict management, knowledge transfer and performance management (e.g. Kirkman, Rosen, Gibson, Tesluk, & McPherson, 2002; Montoya-Weiss, Massey, & Song, 2001). Likewise, the lack of communication dynamics such as gestures, verbal cues, and facial expressions are absent, which reduces the richness of the communication (Pearlson & Saunders, 2013).

Technology

Secondly, the need for ICT available means that all virtual team members need the same, or compatible technologies at their sites, thus, support staff to maintain and update the systems must be in place, including the importance for security (Pearlson & Saunders, 2013). Further, there is a need from managers to provide a framework for using the technologies, which includes the policies and norms in regards to how members ought to use the technology, as for

example conversation etiquette, how often to check for messages and maximum time to answer (Pearlson & Saunders, 2013). Norms as such are particularly important when team members are not working from the same office and are unable to see when members are unavailable (Saunders, Van Slyke, & Vogel, 2004).

Team diversity

Many times members in virtual teams come from different cultures and organizations, which in general has been observed to result in more creative solutions, but can also bring a set of challenges that may make it harder for members to establish trust, communicate, and to form group identity (Pearlson & Saunders, 2013; Winkler, Dibbern, & Heinzl, 2008).

An example of a dimension of diversity that may need to be addressed is how members from different parts of the world can have different views of time (Saunders et al., 2004). Individuals from Anglo-American cultures view time as a continuum from past, to present and future, which makes each unit of time the same for those individuals, and can be interchanged with one another or be used as a basis for pay (Pearlson & Saunders, 2013; Saunders et al., 2004). Those individuals are also likely to be concerned with deadlines and often prefer to complete one task before starting another, which makes software for planning and scheduling suitable for them (Pearlson & Saunders, 2013; Saunders et al., 2004). On the other hand, individuals from e.g. India have a cyclical view of time, do not get excited about deadlines, are not likely to make a decision as it is likely to cycle back, and tend to also be polychromous, meaning they prefer to do several activities at once (Pearlson & Saunders, 2013; Saunders et al., 2004). For such members, software as instant messaging or Skype may be more useful for them in order to communicate with team members and still work on other activities (Pearlson & Saunders, 2013; Saunders et al., 2004).

Another dimension of diversity that may need to be addressed is communication styles that may differ between various countries, which can make communication challenging, lead to misunderstandings, hinder collaboration, or even result in conflicts (Stringfellow, Teagarden, & Nie, 2008).

2.9 Research model

A research model was created based on the literature review above in order to guide the research process (see Figure 2.5). The model includes fundamental concepts that are identified as important to answer the research question.

Concept 1 represents the *conditions* that need to be examined when exploring the outlook of SAFe. We distinguish in Concept 1 between two elements that are mentioned in the literature on SAFe. We define them as *SAFe principles* and *SAFe levels*. SAFe principles are the nine principles presented in Section 2.4.1. According to Knaster and Leffingwell (2017), the principles are the theoretical foundation for the application of SAFe practices. The sub-concept SAFe levels (presented in Section 2.4.2) summarizes the different events, the (key) roles of the different levels and how the appearance of the levels looks like, as it is still unexplored in a virtual team setting. This concept is important for construct validity reasons in regards to SAFe.

Concept 2 summarizes *benefits* that are considered to be relevant for this study. The literature review on agile frameworks that are part of SAFe, such as Scrum and Kanban, reveal benefits in terms of *time*, *productivity*, *product quality*, and *satisfaction* (see Section 2.6).

Concept 3 collects *challenges* that are considered to be relevant to answer the research question based on the literature review. The challenges can be divided into *large-scale agile challenges* (presented in Section 2.7), and *virtual team challenges* (presented in Section 2.8.2). Further, for the empirical investigation, we add the sub-section *shortcomings* of SAFe to the framework. There is no scientific literature on SAFe's shortcomings. However, shortcomings are considered to be important for the purpose of the study.

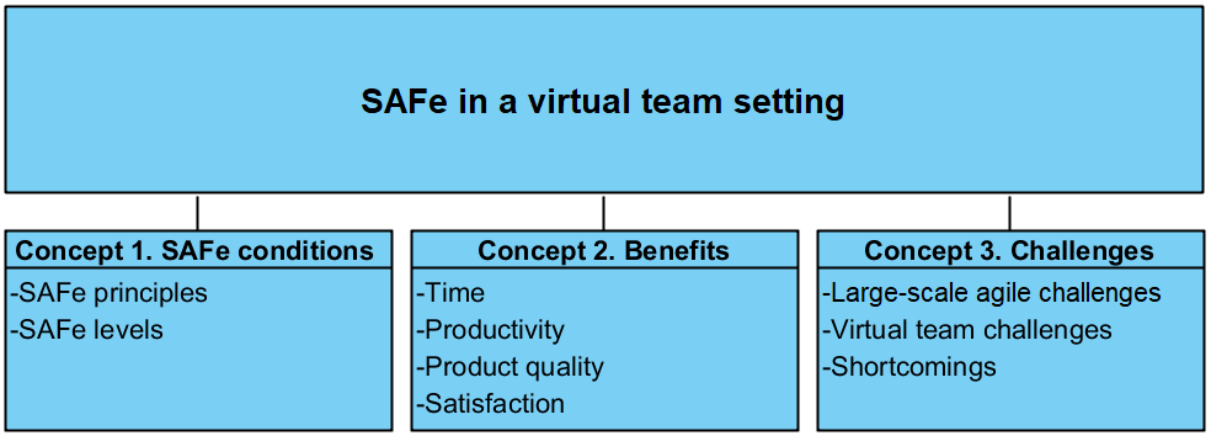

Figure 2.5: The research model that drives this study

The empirical investigation presented in Chapters 3, 4 and 5 will be structured based on the research model.

3 Research method

This chapter describes the used research method for the study. It includes choice of literature, data collection and analysis. The empirical investigation is based on the research model (Figure 2.5). Lastly, the chapter explains the steps that were taken to ensure research quality and ethics.

3.1 Choice of literature

The used literature for the literature review is based on different search queries. We conducted our search in Google Scholar and the Search Engine LUBSearch from Lund University. When formulating the queries, we decided to use SAFe's full notation "Scaled Agile Framework" instead of its acronym "SAFe" due to its homonymous meaning of "security from danger, risk, or difficulty" (Merriam-Webster, 2018). However, it is possible that we missed literature that calls the framework only by its acronym.

To begin with, a suitable query related to our research question is:

- Set 1: ("distributed" OR "virtual") AND "scaled agile framework"

In LUBSearch, we received 3 results on 13th April 2018. Only one result (Paasivaara, 2017) was relevant for the scope of our study. However, Paasivaara (2017) case study evaluates the *transformation process* of the company Comptel towards SAFe, whereas we focus on the *current state* of SAFe in the much bigger company IKEA, since Comptel employs only 750 workers in total (Paasivaara, 2017). In addition, Paasivaara's (2017) study compares Comptel's business lines which is out of our scope. Moreover, IKEA implemented SAFe several years ago, thus, is more mature with SAFe than a company that is transforming into SAFe. The two remaining results lack in both its evaluation of the Scaled Agile Framework and a distributed team setting.

In Google Scholar, we found 333 papers on the same day for query "Set 1". However, we did not find any other scientific article that corresponds to our research question in that specific way. No paper contained either "distributed" or "virtual" and at the same time "Scaled Agile Framework" in its title or keywords. Examining the results of Set 1 in Google Scholar showed that current literature is focusing on agile principles most when scaling up. However, the results helped us to receive a clear image of the concepts of agility and virtual teams. Valuable queries for LUBSearch and Google Scholar were for instance:

- Set 2: "agile principle*" OR agility AND principle*

We argue that it is necessary to search for both expressions in order not to exclude the other one. The star ensures that the query searches for both singular and plural forms. Results of Set 2 were used in Chapter 2.1 and 2.2. Fowler and Highsmith (2001) turned out to be the main source for introducing Section 2.1 on agile software development.

In addition to the results from different sets, we applied the method of *traditional pearl growing* (Schlosser, Wendt, Bhavnani, & Nail-Chiwetalu, 2006). We used keywords from articles

that we already identified as relevant for our study. Accordingly, new keywords derived, that we tested in different combinations. Papers on SAFe were also looking, for instance, at "Scrum", "Kanban", "Extreme Programming OR XP" and "agile OR agility". For Scrum, for example, we used several papers by Scrum gurus such as Schwaber (1997, 2004) and Sutherland (2010).

For Section 2.4, we used among other literature SAFe's official book "SAFe® 4.0 Distilled: Applying the Scaled Agile Framework® for Lean Software and Systems Engineering", which is published by Knaster and Leffingwell (2017). In addition, we used information from SAFe's official website (Scaled Agile Inc., 2018), which is managed by its founder Dean Leffingwell as well.

Literature on virtual teams derived from different combinations of keywords such as "virtual team*" and "distributed team*", which can be used interchangeably, at the same time, they can have different understandings. We only used papers on distributed teams that actually refer to virtual teams according to our definition. Namely, team members have to be dispersed and use ICT to work towards a common goal. This sorting had to be done manually by reading the abstract or browsing the content respectively. An example for a suitable query for Section 2.8.2 in the scope of virtual teams is:

- Set 3: ("virtual team*" OR "distributed team*") AND ("challenges" OR "difficulties")

After perceiving challenges within a virtual team setting, we combined the query with already familiar and valuable keywords, so that another query for Section 2.8.2 was stated as:

- Set 4: ("virtual team*" OR "distributed team*") AND ("challenges" OR "difficulties") AND ("agile principle*" OR "agility principle*" OR "Scrum")

This query resulted in 16 scientific articles listed in LUBSearch, which turned out to be very useful in terms of researching challenges of agile approaches in virtual teams. Google Scholar, in return, revealed 1,310 results. Accordingly, we evaluated articles with many citations (more than 15) and a high h-index. According to Hirsch (2005), h-index marks scientific output of a researcher, meaning that a high h-index is indicator for a valuable academic paper.

In addition to scientific papers on virtual teams, we identified the book "Strategic Management & Information Systems" written by Pearlson and Saunders (2013) as a relevant source, as it was already known as course literature from our Master's programme.

3.2 Research design

In order to examine how SAFe is *perceived* by employees in a virtual team setting, the study takes a qualitative approach.

A qualitative approach brings understanding of people's own subjective experiences of a phenomena in great detail (Brinkmann & Kvale, 2005; Johnson & Onwuegbuzie, 2004), which makes the qualitative approach suitable for our research question as we are looking into perceptions. Additionally, a qualitative approach allows for more diverse findings and knowledge contributions (Recker, 2013).

Moreover, according to Recker (2013), studying a certain case helps to gain valuable insights into a new, emerging subject, which is the case in our study, according SAFe in the unexplored setting of virtual teams.

3.2.1 Case selection

The context for the case was selected in accordance with Bhattacherjee's (2012) statement that case sites should be chosen through a process of theoretical sampling and not random sampling, which means that the site is chosen based on theoretical considerations, and should be fit with the nature of the research question (Bhattacherjee, 2012). With this in mind, we started searching for a site that applied SAFe to virtual teams in a large-scale context with 50 or more people, or 2 or more teams.

We began contacting companies that we thought were likely to have virtual teams and applied SAFe. We adhered to Bhattacherjee's (2012) recommendation – to contact an executive level inside the firm with the authority to approve the project, or someone that can identify a person with authority do to so. Information was sent to executives as an e-mail describing our research, its purpose and the desired interviewees. We received a reply from a HR Manager at IKEA, who referred us to one of their Managers at their Multichannel Service Delivery Area, as they are working with SAFe. The recommended Line Manager was contacted first through email, and then through a phone call, to ensure that first, they have virtual teams in accordance with our definition, and second, SAFe is applied in a virtual team setting. More information was also given in terms of the project, the estimated amount of time and effort it would take, the desired interviewees, as well as assuring confidentiality if requested. Again, adhering to Bhattacherjee's (2012) recommendation on what information should be given when requesting permission to perform this kind of project. After reaching consensus with the Line Manager, we decided to have IKEA's Multichannel Service Delivery Area as the site for our case study.

3.3 Data collection

The data was collected through interviews. According to Myers and Newman (2007), interviews can be structured, semi-structured and unstructured. A semi-structured interview approach was taken. The advantages of a semi-structured interview are that it encourages two-way communication, enables flexibility, can be used to confirm what is known, while at the same time giving an opportunity for learning, and is characterized as having a more conversational nature rather than a structured one (Recker, 2013). The semi-structured interview was structured in a typical fashion, with questions formulated before the interview in a structured way, but giving space for on-the-fly questions that are unstructured for related topics and issues that may emerge during the interview (Myers & Newman, 2007; Recker, 2013). Ultimately, this approach allows us to get a deeper understanding of SAFe in a large-scale virtual team setting.

3.3.1 Design of the interview protocol

An interview protocol should be created when data collection is made through interviews in order to guide the interview process (Bhattacherjee, 2012). The important part when designing the interview protocol is to ensure that the created interview questions aim at answering the research question, and are based on a good grasp of the subject matter (Rabionet, 2011).

The interview protocol was created based on our research model and the conducted literature review accordingly. In order to visualize our structure, we decided to use the main concepts of our research model (Figure 2.5), namely *SAFe conditions, benefits* and *challenges.* In the following, we treat the concepts as themes as it adds structure to our line of action.

Since we want to study the *perceived* benefits and challenges by people working with SAFe, we adapted our research model and segmented our interview questions into the following themes:

- Theme 1 – SAFe conditions,
- Theme 2 – perceived benefits,
- Theme 3 – perceived challenges.

Each theme consists of questions that are thought to reveal how SAFe is perceived in a large-scale virtual team setting. To answer our overall research question, we argue that it is necessary to explore SAFe's conditions (Theme 1), its perceived benefits (Theme 2) and its perceived challenges (Theme 3). Moreover, we decided to ask the same questions to everyone, although not every question is answerable for each employer since they are active at different organizational levels. However, we did not change the questions when interviewing different job roles in order to see how much the employees know about other workflows and levels, since knowledge transparency is an important factor for agile approaches as outlined by Ostergaard (2016).

We prepared an opening in which we introduced ourselves and the purpose of our study briefly to the participants as recommended by Myers and Newman (2007). Before asking the participants the main questions related to the three themes, we started the interview with introductory questions. This helped us to get a clearer image of the interviewee and its function at the case site. Moreover, we first looked at the overall image on how SAFe is perceived. By asking broad questions without a certain context, it was possible to see which key words the interviewees consider to be important related to SAFe. The introductory questions are presented in Table 3.1.

Table 3.1: Introductory questions

Introductory questions
• Please tell us a bit about your role. How long you have been working with SAFe? • Please tell us a bit about the IKEA Multichannel Area and your product. • How are the teams organized? • What is SAFe in your opinion? What is the purpose of SAFe at IKEA Multichannel Area?

Regarding Theme 1, SAFe conditions, we asked questions regarding the nine SAFe principles to find out which ones are being applied and which ones are not, and how they are perceived at the case site by its employees, and if the perception is in alignment with how Knaster and Leffingwell (2017) have presented them. We argue that this is important for construct validity and ensuring replicability. We asked one question for each principle. The interview questions related to the SAFe principles (Theme 1) are presented in Table 3.2.

Table 3.2: Interview questions of Theme 1 (Part 1)

Theme 1: SAFe conditions (Part 1)	
SAFe principle	**Interview question**
#1: Take an economic view	• Do you consider costs/take an economic view when conducting your tasks?
#2: Apply systems thinking	• Do you feel like there is a common goal between the different teams, and that there is a shared overview of the big picture, or are the teams working in silos?
#3: Assume variability; preserve options	• Do you feel like the team(s) are still open for changes after agreeing on a requirement/approach?
#4: Build incrementally with fast, integrated learning cycles	• Do you receive quick customer feedback? Who is the customer?
#5: Base milestones on objective evaluation of working systems	• Do you have frequent milestones where you evaluate the solution with the customer together?
#6: Visualize and limit work in progress (WIP), reduce batch sizes, and manage queue lengths	• Do you visualize your work in progress, also to other teams?
#7: Apply cadence, synchronize with cross-domain planning	• Do you feel like there is an efficient planning of people and resources? *(More about this principle is revealed through questions about the team level)*
#8: Unlock the intrinsic motivation of knowledge workers	• What is your motivation to work on the project and what drives you in your line of work?
#9: Decentralize decision-making	• Do you feel like the management trusts you and other workers? Do they let you make decisions independently?

Thereafter, questions are asked regarding the different levels of SAFe in order to analyse how the comprehension of the levels look like, if any modifications to the theory have been made, and how the various levels are ultimately perceived. Table 3.3 summarizes the questions related to SAFe's levels (Theme 1).

Table 3.3: Interview questions of Theme 1 (Part 2)

Theme 1: SAFe conditions (Part 2)	
SAFe level	**Interview question**
Team level	• Do you apply the team level? • What is the team level in your opinion? • Are you applying Scrum, Kanban, Extreme Programming, a mix, or something else at the team level? Is it reflected in all teams or can it vary from team to team? • If no, do you see it as problematic or is it working without obstacles? (Challenge #5) • What kind of activities are you having related to the team level (e.g. Daily Stand-up Meetings)? • Do you have difficulties in obtaining shared space? • What is your overall experience with working with the team level? (roles, activities, events, …) •

Program level	• Do you apply the program level?
	• What is the program level in your opinion?
	• Which roles do you see as key roles on the program level?
	• Are you doing the activities
	  ○ PI Planning
	  ○ Inspect and Adapt workshop
	  ○ Program Kanban?
	• Do these activities help to manage the workflow? (overall experience and workflow around them)
	• How is the PI Planning done?
	• How many Agile Release Trains do you have? Are there dependencies, any challenges?

	• What is your overall experience with working with the program level? (roles, activities, events, …)
Value stream level	• Do you apply the value stream level? • If yes: Do you experience it as needed? • Which roles do you see as key roles on the program level? • What is your overall experience with working with the program level? (roles, activities, events, …)
Portfolio level	• Do you apply the portfolio level? • If yes: How many portfolios you are working with? • If yes: Does the portfolio level help to support the organizational strategy? • If no: Who is in charge of the strategy and investment funding for IKEA.com?
All levels	• How much would you say you know about the different SAFe roles and the responsibilities they have? (Challenge #3)

Thereafter, questions are asked that belong to Theme 2, the perceived benefits. They are open-ended with a high degree of flexibility. According to Myers and Newman (2007), this "incompleteness" requires openness and improvisation from the interviewees. We decided to ask about the created sub-categories of our framework (time aspects, productivity, product quality and satisfaction) not until having asked very open question in order to see if there might be any other benefits that we did not assume. The interview questions related to Theme 2 are presented in Table 3.4.

Table 3.4: Interview questions of Theme 2

Theme 2: Perceived benefits

• Do you think SAFe is beneficial for IKEA Multichannel area?
• If yes: What kind of benefits?
• Is there something in particular that works well in your line of work thanks to SAFe?
• Do you experience any benefits in terms of
  ○ time
  ○ productivity
  ○ product quality
  ○ satisfaction (own satisfaction and towards the customer)?
• Do you feel like the Multichannel area is truly agile with SAFe, or is it just on paper?

Lastly, we examined what challenges the interviewees are facing when working with SAFe in a virtual team setting. We started by asking a very open question in order to see if they address issues that are related to a virtual team environment. If not, then we ask specifically for the aspect of sitting distributed. Thereafter, we raised questions about the seven large-scale agile challenges and virtual team challenges that derived from the literature review. We closed with a question related to perceived shortcomings. Table 3.5 shows the interview questions related to Theme 3. The main references from the literature review can be found in Table 3.9.

Table 3.5: Interview questions of Theme 3

Theme 3: Perceived challenges	
• What kind of challenges or issues are you currently experiencing when working with SAFe? • … when working with dispersed team members?	
Large-scale agile challenges	
#1: Change resistance	• Would you say there is still some scepticism among members, or that SAFe and an agile way of working is part of the member's mindset?
#2: Lack of investment	• Do you feel like the management invested enough to support SAFe? (trainings…)
#3: Agile difficult	• Was it easy to learn and understand the SAFe levels and work according to them?
#4: Coordination challenges in multi-team environments	• Are there any coordination or communication difficulties between different teams or trains?
#5: Different approaches emerging in a multi-team environment	*(Asked earlier in Theme 1, team level)*
#6: Hierarchical management and organizational boundaries	• Is management adhering to an agile way of working too?
#7: Integrating non-development functions in the transformation	• Are you feeling any difficulties in terms of interacting with other functions at IKEA?

More documentation in larger organizations resulting in reduced agility	• Do you feel like you need to do more documentation than SAFe advocates?
Issues at Retrospectives not getting resolved	• Do you feel like the problems or issues emerging in Retrospectives get dealt with afterwards?
Other	• Is there anything in particular that you would like to change, or that you feel like is not working currently? Any show-stoppers?
Virtual team challenges	
Communication	• Are you experiencing any communication challenges with dispersed members?
Technology	• Are you experiencing any technology challenges to support collaboration & communication with dispersed members?
Team diversity	• Are you experiencing and challenges in terms of culture or language?
Shortcomings	
• Does SAFe have any drawbacks/shortcomings according to you?	

We finished the interview with closing questions which is recommended by Myers and Newman (2007). In particular, we asked the interviewees about their overall opinion on SAFe after a detailed and critical discussion. By doing so afterwards, the interviewees are more able and likely to give an honest answer because of an increasing level of trust between participant and interviewer (Myers & Newman, 2007). The closing questions are presented in Table 3.6.

Table 3.6: Closing questions

Closing questions
• During your time here, have there been any specific changes made towards the SAFe approach? • What is your overall opinion about SAFe? • Do you have any documentation on SAFe at IKEA that you could share with us? • Do you have any comments you would like to add?

In order to ensure rich data from the interviews, we designed the interview protocol in accordance to an appreciative interview strategy. An appreciate interview strategy makes the questions revolve around what has worked, what is currently working well, and the future state that the interviewee aims for, rather than focusing on the problems and what is not working (Schultze & Avital, 2011). The benefit of focusing on positive aspects before negative ones is that the interviewee is more likely to open up and discuss areas that they consider work well. They are more prepared to talk about what is working, and are more likely to get engaged than if an approach related to problems was taken (Schultze & Avital, 2011). Our interview was therefore structured to start and continue in an appreciative manner, in order to get the interviewee engaged and comfortable. Questions that are directly targeting problems and issues were left till the end.

3.3.2 Informant selection

We followed Bhattacherjee's (2012) recommendation and selected the informants from different organizational levels to obtain different perspectives on our phenomenon of interest. Therefore, we chose interviewees that are acting on different SAFe levels and possess different job titles. Thus, we identified the job roles RTE, Line Manager, Scrum Master and developer as suitable for our study. Unfortunately, we did not get access to an interviewee who is directly involved in the value stream level.

The informant selection was supported by Participant 2, our contact person for this study. As she is the Line Manager at IKEA Multichannel Service Delivery Area, she knows several people having different job roles when working with SAFe. As she was familiar with our purpose, she established contact to her RTE, two Scrum Masters and a developer who have expertise in IKEA's virtual team environment from different locations. We scheduled the interviews with the informants through her. Basic information about the participants is presented in Table 3.7.

Table 3.7: Overview on informants and interviews

	Participant				Interviews	
Appendix	**Number**	**Job title**	**SAFe level involvement**	**Located in**	**Date and duration**	**Type**
B	1	RTE	Program	Helsingborg, Sweden	26.04.2018, 30 minutes	Face-to-face
C	2	Line Manager	Program	Helsingborg, Sweden	26.04.2018, 60 minutes	Face-to-face
D	3	Scrum Master	Team + Program	Helsingborg, Sweden Before: India	26.04.2018, 60 minutes	Face-to-face
E	4	Developer	Team	Helsingborg, Sweden Before: India	11.05.2018, 70 minutes	Skype
F	5	Scrum Master	Team + Program	Helsingborg, Sweden	11.05.2018, 80 minutes	Skype

3.3.3 Conducting the interviews

We sent out the questions to the interviewees a couple of days before the interviews as recommended by Myers and Newman (2007). We intended to improve the quality of the interviewees' answers by giving them time to prepare beforehand. We are aware that some might criticize this approach as resulting in reactivity. However, it was needed to obtain good quality data as a lot of the questions, such as challenges, benefits and shortcomings require time to reflect. Additionally, we tried to mitigate threats to reliability due to reactivity by looking for indications such as overly positive answers.

Bhattacherjee (2012) and Recker (2013) list various options for conducting interviews, namely face-to-face, telephone or focus group. We aimed for face-to-face interviews which enables to collect most qualitative data as asserted by Bhattacherjee (2012). The interviews were conducted at the IKEA office in Helsingborg. However, due to unavailability, not all interviews could be done face-to-face.

Before asking the questions, we introduced ourselves and explained the purpose of the study. Moreover, we asked the interviewees for their permission to record their answers for our following interview transcription and analysis. We ensured that they would stay confidential

since anonymity is hard to preserve when conducting interviews (Bhattacherjee, 2012; Recker, 2013). The interviews were recorded with two smartphones (one as a back-up for security).

We clarified with the Line Manager the term "virtual team" in a pre-interview. She suggested us to address to a "distributed setting" instead so that the interviewees share the same understanding as we do. This is aligned with Schultze and Avital (2011) who recommend using the same vocabulary as the interviewees to avoid ambiguity.

When conducting semi-structured interviews which aims to explore a phenomenon, it is necessary to stay flexible when formulating the questions as recommended by Myers and Newman (2007). At the same time, it is important not to ask questions that the interviewees already answered. Therefore, we were very familiar with our interview protocol and the themes we intended to cover.

As the interview length was restricted due to IKEA's resources, we designed an interview protocol for an interview which takes around 60 minutes. We changed our interview protocol slightly for the interview with the RTE as time with her was limited to 30 minutes. Hence, we excluded the questions related to the nine SAFe principles (Table 3.2). We argue that it is more beneficial for our study to focus on the perceived benefits and challenges in this interview as we get access to the most important representative of the program level. Assessing whether a SAFe principle is applied or not can be done by any person working with SAFe at IKEA, while an RTE has a specific function as she is engaged on the program level, having great responsibilities (Knaster & Leffingwell, 2017).

3.4 Data analysis

3.4.1 Data transcription

Transcribing is defined as the transformation or change from one form to another (Kvale, 1996). In our study, we transformed oral language into written words which resulted in transcripts.

Hancock, Ockleford, and Windridge (2007) state that only a small portion of a conversation is transmitted through words. Rather it is communicated through the way *how* people speak. Upon Hancock et al.'s (2007) recommendation, we used punctuation marks as commas or full stops in our transcript to illustrate the conversation close to reality. Furthermore, we included "ehms", pauses and laughter. To ensure a transcript of high quality, we decided to use the software Trint and correct the generated transcripts manually. In order to capture important observations during the interview, we followed Bhattacherjee's (2012) recommendation and took additional notes on their body language and our personal impressions. Furthermore, we executed the transcription directly after the interview. Hence, we were able to add our thoughts and comments to the transcript as our memories were still fresh. Lastly, since phrases of the interview can be caught differently when transcribing, we cross-checked the transcript by the other research partner as shown in Table 3.8.

Table 3.8: Summary of the data transcription

Appendix	Interview number	Participant	Transcribed by	Checked by
B	1	Release Train Engineer (RTE)	Lou Hinterberg	Fredrik Hoffman
C	2	Line Manager	Lou Hinterberg	Fredrik Hoffman
D	3	Scrum Master 1	Lou Hinterberg	Fredrik Hoffman
E	4	Developer	Fredrik Hoffman	Lou Hinterberg
F	5	Scrum Master 2	Lou Hinterberg	Fredrik Hoffman

3.4.2 Coding of the transcription

The concept of coding reduces a large amount of data into less analytical units and supports data retrieval (Miles & Huberman, 1994). As data analysis is dependent on an appropriate data coding (Recker, 2013), we used coding as a tool for structuring our empirical data which helped us with the analysis later.

We agreed on a coding scheme before conducting the interviews as we created the interview questions around it to ensure receiving the intended data. We used our research model for the coding (see Table 3.9).

Table 3.9: Coding scheme

Code	Element from the research model	Main references from the literature review
COND	**Theme 1: SAFe conditions**	
COND-PRI-1 COND-PRI-2 COND-PRI-3 COND-PRI-4 COND-PRI-5 COND-PRI-6 COND-PRI-7 COND-PRI-8 COND-PRI-9	SAFe principles	Knaster and Leffingwell (2017), Section 2.4.1
COND-LEV-TEAM COND-LEV-PROG COND-LEV-VALSTR	SAFe levels	Ebert and Paasivaara (2017); Knaster and Leffingwell (2017);

COND-LEV-PORT		Paasivaara (2017), Section 2.4.2
BEN	**Theme 2: Perceived benefits**	
BEN-TIM	Time	Huang and Kusiak (1996); Mann and Maurer (2005), Section 2.6
BEN-PROD	Productivity	Huang and Kusiak (1996), Araújo Neto, Barza, França, and da Silva (2010), Section 2.6
BEN-QUA	Product quality	Coram and Bohner (2005); Schwaber (1997), Section 2.6
BEN-SAT	Satisfaction • Employee satisfaction • Customer satisfaction	Balijepally et al. (2009); Mann and Maurer (2005); Papadopoulos (2015); Tripp et al. (2016), Section 2.6
CHA	**Theme 3: Perceived challenges**	
CHA-LGSCA-1 CHA-LGSCA-2 CHA-LGSCA-3 CHA-LGSCA-4 CHA-LGSCA-5 CHA-LGSCA-6 CHA-LGSCA-7	Large-scale agile challenges	Dikert et al. (2016), Section 2.7
CHA-LGSCA-DOC	Increased documentation causes less agility	Lindvall et al. (2004), Section 2.7
CHA-LGSCA-RETRO	No actions after Retrospectives	Paasivaara (2017), Section 2.7
CHA-VT-COMM CHA-VT-TECH CHA-VT-TEAMDIV	Virtual team challenges • Communication • Technology • Team diversity	Pearlson and Saunders (2013), Section 2.8.2
CHA-SAF-SHO	SAFe's shortcomings	(No literature)

Miles and Huberman (1994) motivate to use words instead of numbers for the coding process. They argue that one should be able to get back to the original concept as fast as possible without any circuitous translation. Accordingly, we named the codes very close to the related themes. For example, all codes according to Theme 1 start with "COND" (for conditions) and are followed by either "-PRI" (for SAFe principles) or "-LEV" for levels. The principle of using the first letters extends to all three themes. If a finding only fits into a main theme category, but is not related to any sub-category, it received the capital code lines only. For example, a benefit that does not refer to time aspects, productivity, product quality, or satisfaction received the code "BEN". We thereby ensured to include completely new benefits and challenges in our analysis as well.

Regarding how fine coding should be executed, Miles and Huberman (1994) state that the adequate coding level depends on the study. We added a code appendix to Theme 1 and 3 as explained next. All statements related to SAFe's first principle "Take an economic view" received the code "COND-PRI-1". Furthermore, statements about the team level were coded as "COND-LEV-TEAM". A sub-categorization within the codes helped us to get a more detailed structure for the analysis afterwards.

A quote that we linked to COND-LEV-TEAM is for example:

"And I handle one of the Scrum team here that is located in… mainly in Helsingborg and in India, in Bangalore. And I have a small team in Chennai also. Again, in India two cities. Bangalore and Chennai." (I3:16)

For the coding process itself, we took advantage of team research. In particular, we applied investigator triangulation as recommended by Seale (1999) and Johnson (1997). Investigator triangulation involves that multiple observers describe the participants' behaviour separately (Johnson, 1997). In our case, we conducted the coding process of the interview transcripts individually based on the coding scheme that we agreed on (see Table 3.9). In order to calculate the intercoder reliability we counted the number of agreements which are the codes that both of us assigned for the same text passages and divide it by the total number of agreements and disagreements (see Figure 3.1). According to our understanding, we counted it as disagreement (1) when we assigned two different codes, or (2) when a text passage is coded by only one person. When one person assigned only part of the code (e.g. BEN) and the other person a full code (e.g. BEN-QUA), we treated it as an agreement.

$$\text{reliability} = \frac{\text{number of agreements}}{\text{total number of agreements + disagreements}}$$

Figure 3.1: Equation of intercoder reliability

Adopted from: Miles and Huberman (1994, p. 64)

Miles and Huberman (1994) recommend having an intercoder reliability close to 80% or higher. However, they state that researchers generally do not get much better than 70% intercoder reliability when coding the first interview, which we also experienced. Accordingly, we discussed our disagreements and explained our coding process to each other. After finding compromises, we continued with cross-checking for Interview 2 to 5 to increase intercoder reliability. The results for intercoder reliability of all interviews are presented in Table 3.10.

Table 3.10: Conducting intercoder reliability

Interview number	Number of agreements	Number of disagreements	Intercoder reliability
1	49	20	71 %
2	82	19	81 %
3	77	20	78 %
4	50	11	82 %
5	103	15	87 %
Total	361	85	**81 %**

3.5 Ensuring research quality and ethics

3.5.1 Reliability and validity

The quality of this study is considered in terms of reliability and validity. Reliability is the "degree to which the measure of a construct is consistent or dependable" (Bhattacherjee, 2012, p. 56). In other words, we ensured consistency in our results. Therefore, we included several activities that improved the reliability of our study. The other concept, validity, "describes whether the data collected really measure what the researcher set out to measure" (Recker, 2013, p. 70). Johnson (1997) noticed that most qualitative researchers refer to the concept of validity when they show which studies are better than others. We argue that both reliability and validity help to achieve a higher quality of our study, as both are needed to assure precise measurement of our constructs of interest in accordance to Bhattacherjee (2012) and Recker (2013).

We followed Randolph's (2009) advise and disclaimed non-scientific articles in our literature review as it is hard to ensure their reliability. Also, when we were uncertain about an article's reliability, we took advantage of team research and discussed whether a source is reliable or not, as recommended by Randolph (2009).

In the beginning of each interview, we situated ourselves as well as the interviewees. We followed Myers and Newman's (2007) recommendation and asked them about their background and experience. By doing so, we collected useful information for the writing up, which ensures validity for the readers of our papers.

When conducting interviews we have the possibility to determine how the interviewees interpreted the questions as recommended by Johnson and Onwuegbuzie (2004). In particular, we checked with the interviewees if we share the same understanding of a requested term, for example Retrospectives or dispersed/virtual teams. After transcribing the interview, we sent the

transcripts to the interviewees. Due to the limited time of the interviewees, it was not possible to involve them in the data analysis, which is known as member checking. This disadvantage of member checking is also mentioned by Santos, Silva, and Magalhaes (2017). However, the participants were given the opportunity to correct their statements.

We argue that our results are more defensible since we conducted investigator triangulation. After cross-checking, we possess an intercoder reliability of 81 % on average. Miles and Huberman (1994) recommend having an intercoder reliability of at least 80 %, depending on range and size of the coding scheme. As we used a high number of 30 different codes, we state that our intercoder reliability of 81 % supports the reliability of our study.

3.5.2 Ethics

Besides ensuring reliability and validity of our study, we also consider ethical aspects for our study. According to Bhattacherjee (2012), ethics consider whether an action is right or wrong. In order to ensure the right ethics for our study, we followed several ethical guidelines suggested by Bhattacherjee (2012), Recker (2013) and Walsham (2006).

When conducting face-to-face interviews, *anonymity* is hard to preserve (Recker, 2013). Therefore, Walsham (2006), Bhattacherjee (2012) and Recker (2013) highly recommend to treat the answers with *confidentiality*. It means that the researcher does not uncover the interviewee's identity in any publication. Therefore, we did not state their name in the paper. On the other hand, it may be possible with a little detective work to assume who the interviewee is. Especially in our study, certain roles are unique as there exists only one Release Train Engineer working for IKEA's Multichannel Service Delivery Area. Therefore, we asked all informants in the beginning of the interview for their permission that we can mention their name in our paper. We recorded these agreements via smartphone and included it in the transcripts. However, we decided not to mention their names as it is not necessary to present and justify our results. We also removed names from other people and companies that were mentioned in the interviews from the transcripts.

Moreover, we ensured *voluntary participation* which means that people are free to choose whether or not they want to participate in a study (Recker, 2013). In our case, the Line Manager asked the participants if they want to take part in the research. She ensured them that a rejection would not affect their work at IKEA in any negative way.

In addition, we followed Bhattacherjee's (2012) recommendation and establish *disclosure* by sending the participants the interview guide beforehand. By sharing more information, they still had the possibility to discontinue participating in the study before conducting the interview. In addition, we introduced ourselves and described the purpose of our study since it helps the participants to get a better understanding of the research in which they are involved. Also, unexpected findings and disagreements with the literature are fully disclosed as recommended by Bhattacherjee (2012).

For writing up the results, it was necessary to describe *ethnical groups* as IKEA employs people from various locations. Recker (2013) advises to refer to cultures and countries instead of ethnical classes of "Hispanics" or "Asians". Accordingly, we referred to "the Indian Department" or "employees from India" instead of "the Indians".

We also considered standards for *storage and analysis* of data set by Recker (2013). He states that all research materials such as recordings and transcripts including coding need to be saved on reliable storage facility. Thus, we store the research data on an external hard disk for at least 5 years, keeping the key concepts of ownership, privacy and confidentiality, access and re-use in mind, as recommended by Recker (2013). Considering data analysis, we assured that we fully report how our data is analysed. For example, we decided to provide the complete transcripts including the coding in the appendix and refer to single sections and quotes in our analysis and discussions.

3.6 Limitations

One of the potential limitations of this study is the low number of participants. Our intention was to have 8 to 12 participants. However, due to availability only having 5 were possible. The reason for it is that we got only access to a limited number of employees as IKEA was in a busy release period. Thus, for this project, it was not feasible to interview more people. However, we contribute to the gap of knowledge, as we gain further insights into the employees' perception of SAFe as the participants are involved in a virtual team setting to a very high degree. Suitable and most valuable persons were identified and gained for this study, which supports us in defending of our results.

4 Empirical findings

This chapter presents the empirical findings of the interviews in accordance to the research methods (Figure 2.5). Direct quotations from the transcripts are cited by the following notation: I2:73 refers to Interview 2, Section 73.

4.1 Site information on IKEA Multichannel Service Delivery Area

IKEA is the world's largest furniture retailer with 355 stores in 29 countries (IKEA, 2017). The company employs over 149,000 co-workers and has more than 780 million customers (IKEA, 2017). Its business model is adapting to the digital revolution, and IKEA counts now more than 2.1 billion visits to their website IKEA.com (IKEA, 2017). IKEA is developing from traditional to digital market places and is dealing with upcoming global challenges in terms of new technology, a high volume of work and distributed team settings within the company (I3:327).

The case site of this study is the Multichannel Service Delivery Area, a business area within IKEA that delivers IKEA's e-commerce system through an initiative called the Multichannel Transformation Programme (I2:13; I5:33). Currently, IKEA has different solutions for each of its customer channels – a solution for the web, a solution for the stores, and a solution for mobile (I3:24). The Multichannel Transformation Programme aims to create one solution that consists of all the different solutions that they are using today (I3:24). The Multichannel Service Delivery Area adopted SAFe three years ago (I3:18). The employees that were interviewed for the scope of this study are working on the web solution IKEA.com.

Around 19 teams partake in the Multichannel Transformation Programme (I1:13; I2:17). The first Scrum Master that was interviewed outlined how his team consisting of 12 members is dispersed over three different locations – four members working from Helsingborg, and the rest of the members working from Bangalore and Chennai (I3:38). The RTE described that they have a team with some people in Egypt (I1:49), a team with people in Helsingborg and India (I1:17), and a team in London with three of its members in Helsingborg (I1:17). The remaining teams are mostly located in Helsingborg (I1:15; I2:18). However, some of the members also work from Malmö a few days per week (I2:79). One interviewee also mentioned connections to Germany, Belgium, Slovakia and Lithuania (I5:74).

4.2 Theme 1: SAFe conditions

4.2.1 SAFe principles

Principle #1: Take an economic view

Four interviewees stated that they consider costs and take an economic view when conducting their tasks. The Line Manager expressed that this is definitely happening as it is a core value

of IKEA (I2:31). The first Scrum Master said that this is occurring through a measured velocity for each team, and if the teams take features that are not difficult in comparison to their velocity, they will be questioned (I3:54). The developer gave an example of proposing modifications to original requirements so that it can reduce cost and internal effort (I4:23). The second Scrum Master stated that cost is considered on a train level, whilst the teams have a fixed amount of people and try to deliver as much value as possible for the amount of money that they have (I5:44).

Principle #2: Apply systems thinking

The Line Manager stated that all the teams within an Agile Release Train have a common goal and overview of what needs to be done based on the Product Manager's prioritization (I2:33). Similarly, the first Scrum Master said that there is close coordination within an Agile Release Train, and that everyone collectively in the train decides on how they should proceed to reach objectives (I3:56-60). This view is also shared by the Release Train Engineer who says that collaboration around the same goal is achieved by the Agile Release Train which acts as a collaboration vehicle (I1:53). The second Scrum Master, like the previous informants, believed that a common goal is achieved during the PI Planning, and that all the teams work collectively to make the train succeed (I5:50). The developer described that the common goal is achieved by a shared Backlog where the teams collectively aim to release the functionalities to the market as soon as possible (I4:27-31).

Principle #3: Assume variability; preserve options

The Line Manager expressed that the teams are open for changes after agreeing on a requirement or approach (I2:37). However, that is not really the case for the people working with epics, as they are more keen to stick to what was initially decided (I2:39). Additionally, the Line Manager thought that making changes in terms of resources becomes easier thanks to the SAFe way of prioritizing features, and expressed it as follows.

"…So if a Product Owner comes to me and says: We need one more developer. Then I say… Yeah, we don't have enough money, but if you prioritize your feature above others, ask your colleague, to get some from that team, and that works quite… I wouldn't say easy, but at least, that's how I can relate to SAFe. In another way without working with SAFe, you have a team and yes, you have a Product Owner, but then, those are not really connected and you cannot utilize that kind of problem solving." (I2:171)

Furthermore, Scrum Master 1 felt that his team and other teams are open to changes after initial agreements, but he did not go into any specifics (I3:63). The developer outlined that they are open to changes by giving an example of when they identify dependencies between functionalities, requiring multiple teams to work together (I4:44). The second Scrum Master talked about being flexible and using whatever is needed (I5:113), but he said that overall there is a mindset where some people are more open to changes than others (I5:70).

Principle #4: Build incrementally with fast, integrated learning cycles

The RTE talked about how a SAFe way of working enables continuous customer feedback, making it possible to quickly adapt and change to new requirements and ideas, which she said is harder to do when working in a traditional way (I1:99). The Line Manager interpreted the customer as the end-customer, i.e. the person purchasing from IKEA.com, and stated that the

end-customer's feedback is reflected in the sales figure and does not fall into quick customer feedback category (I2:41). On the other hand, the first Scrum Master interpreted the Product Owner and the marketing team as the customer, from which his team receives quick customer feedback, as they have a Systems Demo after every Sprint (I3:66-68). The developer also mentioned frequent demos and getting feedback, and mentioned that they have two layers of customers – one being the end-customer, from which they basically never get feedback from, and the other one being Product Owners and Business Analysts, with whom they interact often (I4:46-50). The second Scrum Master is on the same page as the developer. He stated that they do not get feedback from the end-user, but from the Product Owners, though, not as fast as he would like, and stated that they are working on reducing lead times so that changes can be easily made, or ideas be tested (I5:84).

Principle #5: Base milestones on objective evaluation of working systems

The Line Manager uttered that they have frequent milestones where they evaluate the solution with the marketing team, but not with the end-customer, through System Demos (I2:43). Likewise, the first Scrum Master, along with the developer, shared the same understanding of regular evaluation from the marketing team through System Demos as soon as a requirement is done (I3:68-72; I4:54). The second Scrum Master conveyed that he would not use the term milestones, but that they have frequent meetings and demos with POs who meet the marketing team (I5:86).

Principle #6: Visualize and limit work in progress (WIP), reduce batch sizes, and manage queue lengths

All the interviewees mentioned that they visualize the work in progress. The RTE said that they map out features that are to be delivered through Big Room Planning, and they follow up on that plan (I1:63). The RTE also mentioned that they use RealtimeBoard in the Scrum of Scrum meetings to visualize what all the teams are working on, as well as a software from IBM called CLM, where they handle the Backlog (I1:63). The Line Manager concurred with the RTE in terms of visualizing, expressing that they visualize a lot and uses the feature board as an example (I2:45; I2:65). Scrum Master 1 also agreed that work in progress is being visualized, both through physical boards, and virtual boards, through software as CLM, and through burndown charts (I3:74-82). The developer expressed that they visualize work, too, but referred to System Demo as visualizing what they have developed (I4:57). The second Scrum Master conveyed that visualization is a big part of how they work, as it gives a better overview of where they are, how they are progressing, and what condition they are in, ultimately helping to manage work overload (I5:88; I5:92). The developer also mentioned that visualizing helps to plan and manage the work flow (I4:61).

Moreover, we also took pictures of visualizations that they do at IKEA, which they showed us as examples. They can be found in Appendix G.

Principle #7: Apply cadence, synchronize with cross-domain planning

The interviewees outlined cadence in the following way. The RTE expressed that the teams have a three-week cadence for iterations, but she stated that she does not think it is needed in a more mature agile organization (I1:65). The Line Manager outlined that the ART applies a fixed cadence of 12 weeks (I2:114). Scrum Master 1, 2, and the developer shared the same overview, saying that each Sprint is usually between three to four weeks long, and that the

ART runs in a period of three to four months (I1:54; I4:13; I5:50). Moreover, the Line Manager expressed that event calendars are established well in advance, typically two months in advance (I2:108).

The interviewees mentioned cadence-based synchronization being applied routinely as follows. They apply Scrum of Scrums to keep track of teams' work and dependencies (I1:67; I2:65; I3:145-149), having frequent System Demos after each Sprint to evaluate overall viability (I1:47; I2:43; I3:68; I5:212).

They also describe synchronization with cross-domain planning by having PI Meetings, where teams and stakeholders from different functional areas get together to plan the next PI (I1:57; I2:104; I3:54; I4:94; I5:50).

Principle #8: Unlock the intrinsic motivation of knowledge workers

Both the Line Manager and Scrum Master 1 stated that their motivation to work on the project is the fact that they are being part of something big, which will affect many people and countries (I2:49; I3:88). Scrum Master 1 also emphasized that it is a challenging project which will be a big achievement for him (I3:88). The developer outlined how he finds seeing his work in use satisfying (I4:65), and Scrum Master 2 is motivated by driving organizational change and enhancing an agile mindset (I5:101). Scrum Master 1 also expressed an environment of mutual influence, where everyone in the Agile Release Train agree collectively on how to proceed to reach objectives (I3:63).

Principle #9: Decentralize decision-making

All interviewees outlined that they feel like the management trusts them and lets them take decisions independently. The RTE remarked that one of advantages with SAFe is that it lets employees take more decisions on their own which enhances trust (I1:97). The Line Manager said that she thinks management trusts them, but mentions that in her line of work, many times decisions need to be taken one step above her, meaning that they cannot take all the decisions they want (I2:51). Scrum Master 1 agreed that the management trusts them to make their own decisions, and he pointed out that management is always available for consultation if needed (I3:91-93). So does Scrum Master 2, but he refers to his direct management on the program level (I5:105). Similarly, the developer thinks that the middle management trusts him and provides them with additional responsibilities (I4:67-69).

4.2.2 SAFe levels

Team level

All interviewees stated that the team level is being applied (I1:30; I2:55; I3:109; I4:71; I5:109-111).

The RTE described the team level as the Scrum teams (I1:33), which the developer did as well (I4:73). The Line Manager interpreted it as the different teams that partake in an Agile Release Train (I2:55). Scrum Master 1 described it as the ground level where they execute things for IKEA (I3:107). Scrum Master 2 explained it as the development team along with the Product Owner (I5:109).

All interviewees agreed that they apply Scrum on the team level, and that some teams also apply Kanban (I1:35-36; I2:56-57; I3:111; I4:75-77; I5:113). Three interviewees also mentioned that it is up for the teams themselves to decide whether they want to apply any other agile frameworks than Scrum, or other methods in general (I1:35; I2:61; I3:118). Scrum Master 1 said that his team is not using XP fully, adhered to its practise of Test-driven Development (TDD) (I3:111-116). The Line Manager explained that some teams tried to use XP, but ended up abandoning it, without being able to give any further details on the matter (I2:59). Moreover, four interviewees stated that the teams apply the typical Scrum activities of Daily Standups, Sprint Planning, Sprint Demo and Sprint Retrospectives (I1:44–47; I2:69; I3:69; I4:77).

Lastly, the interviewees experienced the team level in various ways. The RTE felt that she is not as involved in the team level as she would like to due to time constraints, but she uses the Scrum Master as her interface to the team level through Scrum of Scrums (I1:51). Scrum Master 1 and the developer perceived the team level as engaging and collaborative, where one cannot work in silos (I3:135; I4:80).

Program level

All interviewees mentioned that the program level is used (I1:53; I2:75; I3:137; I4:82; I5:126).

The RTE described the program level as the organization that they are in, the Agile Release Train, which gives the structure to collaborate towards the same goal (I1:53). The Line Manager described the program level as the Agile Release Train, in which many teams are combined (I2:75). Scrum Master 2 gave a similar explanation (I5:126). The first Scrum Master outlined the program level as the level where goals are defined, from which they target iterations (I3:137).

Both the RTE and Line Manager believed that the Release Train Engineer, Product Manager, and the Architect are key roles for the program level (I1:55; I2:77). The RTE also included the Release Manager as a key role, but stated that it is vaguely defined in SAFe (I1:55). The first Scrum Master mentioned the importance of the Release Train Engineer in accordance with the other interviewees (I3:143).

Moreover, all interviewees expressed that they are doing the program activities of PI Planning, Inspect and Adapt workshop, but there are different answers regarding the Program Kanban (I1:57-61; I2:87; I3:152-156; I4:84-86; I5:134). The Release Train Engineer initially stated that they are using the Program Board with the PI Planning, and not really Program Kanban (I1:61). But later the RTE states that the RealtimeBoard that they use to visualize what each team is working on, and CLM software for Backlogs, is kind of their Program Kanban (I1:67). The Line Manager said that she does not know about Program Kanban, but that they use Value Stream Kanban (I2:87). The first Scrum Master expressed that Program Kanban is in fact there (I3:155). He also mentions software such as RealtimeBoard, CLM, and Burndown chart, like the RTE, but does not specifically refer to them as Program Kanban (I3:74). Scrum Master 2 and the developer stated that they are using Program Kanban (I4:84; I5:134). Further, on site, the Line Manager and the first Scrum Master showed us their Value Stream Board and Program Board, which we took pictures of and can be found in Appendix G. In addition to the physical boards that they have at the Helsingborg office, they also have

virtual boards that can be accessed online, through software as CLM (I1:67; I3:219). The Program Board is used in conjunction with the PI Planning, where the outcome of the PI Planning is visualized in terms of teams, features, and dependencies (Appendix G).

Furthermore, the Line Manager, the RTE and Scrum Master 2 were not exactly sure about the number of Agile Release Trains that exist, but apart from their own train, they mention a second one, and that there are dependencies between the two trains (I1:71-73; I2:115; I5:37). According to the first Scrum Master, there are three Agile Release Trains, one that is consumer-facing, one that interacts with legacy systems, and one that deals with order management (I3:162). Scrum Master 2 expressed dependencies between the trains as well (I3:168). Which the developer expressed as well (I4:102). Three interviewees stated that they have 8 teams in their train (I1:18; I2:16-18; I3:160). Both the Line Manager and the RTE mentioned that the two trains with dependencies do their PI Planning at the same time, in order to deal with their dependencies (I1:73; I2:118). Additionally, the RTE outlined that the weekly meetings between the two trains also help to manage the dependencies between the trains (I1:73).

Value stream level

Four interviewees – the RTE, Line Manager, Developer and Scrum Master 2 expressed that they apply the value stream level (I1:77; I2:128; I4:104; I5:150). However, the first Scrum Master stated that the value stream level is not applied (I3:178).

The Line Manager explained that she is not involved at that level, but sees it as collaboration between the trains, and that the value stream level is needed because they previously had features in the trains with different priorities, which led to total chaos because of the different priorities (I2:130). The RTE and Scrum Master 2 explained the value stream level in a similar fashion, it is in the picture in order to deal with the various dependencies between trains (I1:77; I5:150).

The developer outlined the value stream level as the value that is evaluated by the business and gets associated with a particular PI and feature (I4:104).

Portfolio level

The RTE explains that they are not applying the portfolio level yet (I1:79). Both the Line Manager, Scrum Master 1, and the developer were uncertain whether or not it is being applied (I2:132-134; I3:180-182; I4:108). The RTE explained that the portfolio level is not applied as it is not currently needed, as they are the only area within IKEA that uses SAFe so far (I1:81). However, Scrum Master 2 expressed that they do apply the portfolio level (I5:158-160).

4.2.3 High level summary of Theme 1

SAFe principles

- All interviewees have expressed that they are experiencing the SAFe principles to a high degree. However, there are different interpretations of the customer (end-customer / Product Owner) (I1:53-99; I2:31-51; I3:54-93; I4:23-69; I5:44-105).

SAFe levels

- All interviewees stated that team and program level is applied (I1:30-53; I2:53-55; I3:109-137; I4:71-82; I5:109-126).
- Four interviewees stated that the value stream level is applied, and one stated that it is not (I1:77; I2:128; I3:178; I4:104; I5:150).
- One of them expressed that the portfolio level is not applied, one stated that it is applied, and the remaining three were uncertain (I1:79 I2:132-134; I3:180-182; I4:108 I5:158-160).
- Team level uses Scrum, and typical Scrum activities are applied (I1:35-47; I2:57-69; I3:111-125; I4:77).
- Some teams also use Kanban (I1:35; I2:57; I3:111-125; I4:73).
- Extreme Programming practices such as Test-driven Development (TDD) and Pair Programming were mentioned (I3:111-116; I4:73-75).
- It is up to the teams if they want to use other frameworks or methods besides Scrum (I1:35; I2:57-63; I5:115).
- There are 8 teams in the interviewees' ART on the program level, among which 3 teams are virtual teams that are dispersed over 3 different countries (I1:18; I2:16-18; I3:160).
- Dependencies to another ART exist (I1:71-73; I2:115; I3:168; I4:102; I5:37).
- On the program level they use PI Planning, Inspect and Adapt workshops, Value Stream Board, and Program Board, but here are different answers on whether or not Program Kanban is applied (I1:57-61; I2:87; I3:152-156; I4:84-86; I5:134).
- Features, WIP and dependencies are visualized both on physical boards, and digitally for everyone to access online (I1:67; I2:87; I3:219).
- Value stream level is considered needed due to dependencies with another ART (I1:77; I2:130; I5:150).
- Portfolio level is not implemented yet, as there is only one business area working with SAFe so far. Value stream level acts as the portfolio level. Investment and strategy is not done the SAFe way through a portfolio level (I1:81).

4.3 Theme 2: Perceived benefits

Overall, four out of five interviewees perceived SAFe to be beneficial and useful in the setting that it is being applied to at the Multichannel area (I1:146; I1:95; I2:271; I2:160; I2:263; I3:323; I3:195; I4:186). The Line Manager stated that SAFe is needed for IKEA to succeed with agile:

"For IKEA, I see that without it, we would need something similar anyway to succeed." (I2:263)

However, Scrum Master 2 could not say whether SAFe is beneficial for IKEA (I5:184). In opposition to the Line Manager, he outlined that there are more possibilities than SAFe and refers to some shortcomings that will be discussed in Section 4.4.3.

RTE, Line Manager, Scrum Master 1 and the developer highlight the need for a framework like SAFe which provides structure for doing large-scale agile in a big organization (e.g. I1:25; I2:29; I3:199; I4:135). They stated that structure makes the teams collaborate around the same goal and deal with dependencies. The RTE expressed it as follows.

"But if you have a big organization, you need to have a structure on how to get a number of teams how to work towards the same goal and have a framework for how to… how to collaborate and how things to have and how to make decisions. And SAFe provides that framework. So, instead of coming up with your own, you can just follow SAFe because they have thought about things, I mean they have, yeah, what roles do you need? What meetings should you have? How do you work with features and prioritization... It gives structure." (I1:25)

Likewise, the Line Manager pointed out structure. In fact, she mentioned it 15 times in the interview (I2:29; I2:61; I2:92; I2:126; I2:164; I2:169; I2:171; I2:181; I2:189; I2:229; I2:275), and that without SAFe it would be difficult to make the teams see the bigger picture from an agile perspective:

"I see that without it, we would have… If we would just say, now, let's work agile, the teams would have done that themselves, they would not gather it to totality so to say. And that now, we are so many multiple teams that could be quite tricky to get to work." (I1:162)

Furthermore, the Line Manager outlined that the structure that SAFe brings helps with virtual teams, in the sense of giving a standardized way of working with scheduled ceremonies and activities.

"Yes! And it helps us working with people that are on other locations. We know about these ceremonies that we have and then where we meet up and so on." (I2:94)

Moreover, two interviewees pointed out that SAFe's program level gives the structure that enables teams to work towards the same goal.

"…so we are an Agile Release Train. So, the program level is the level that provides the structure that everybody can collaborate around the same goals." (I1:53)

"The teams within one Agile Release Train have one common goal of what we should do. There is one Product Manager, there are defining what is the priority so we have to follow that." (I2:33)

Likewise, all interviewees' mention that SAFe helps the teams in the ART to deal with dependencies through SAFe's various activities (e.g. I1:63; I:296; I3:122; I4:44; I5:214).

As we asked questions related to Theme 2 of our research model, the following results are presented according to the sub-sections.

4.3.1 Time

There are different opinions whether or not SAFe takes less time to fulfil tasks. The Line Manager stated that SAFe definitely takes more time, but she said that there is in return "an upside to that" (I2:181). The RTE stated that SAFe saves at least time in the beginning because "[…] you don't spend a lot of time […] to write a lot of requirements and documents […]" (I1:99). Similarly to the Line Manager, she outlined that "the chance […] to do the right things much greater when you do SAFe […]" (I1:103). However, she hesitated when giving a statement whether SAFe really saves time (I1:101). On the contrary, Scrum Master 1 believed that SAFe directly saves time. In this context, he also referred it to be beneficial in terms of saving time for virtual teams (I3:229). His view is also shared by the developer (I4:129). Scrum Master 2 did not see any benefit in terms of time (I5:186).

4.3.2 Productivity

When it comes to evaluating how efficient the production process with SAFe is, the employees perceived it in a different manner. Three employees pointed out that it helps them to manage their workflow (I1:65; I2:94; I3:158), but not all of them linked it to a more productive way of working. The Line Manager, for instance, stated:

> *"I would say that at the moment, we are not that as productive as I would like and comparing it to a company... I haven't worked at IKEA without SAFe in the development fashion, so I can't compare it because if I compare it with how it worked now here in SAFe towards another company only agile, we were more productive in the other way. But it's hard to compare." (I2:182)*

While the Line Manager could not say whether SAFe increases productivity, the first Scrum Master and the developer identified a clear link to productivity (I3:227; I4:131). In particular, Scrum Master 1 expressed that IKEA has evolved a lot in terms of delivery, thanks to SAFe (I3:317). The developer added that the setting of having dispersed members helps to be more productive by having "different people coming up from different time zones so that [IKEA] can deliver 24 hour time" which is managed through SAFe (I4:141). Scrum Master 2 did not believe that SAFe helps to be more productive. Referring to the virtual team setting, he conveyed that sitting dispersed hinders productivity (I5:194; I5:281). In particular, he referred to the fact that IKEA has doubled their capacity and deliveries since they moved people such as the participants Scrum Master 1 and the developer from India to Helsingborg (I5:64), but without any relation to SAFe.

4.3.3 Product quality

Three out of five interviewees perceived SAFe as beneficial for increasing quality of the product (I1:105; I3:237; I4:133). According to the interviewees, working with SAFe increases the chances of creating what the customer is requesting. The RTE pointed that out particularly in a different question regarding time aspects (I1:103). She referred to a core value of the Agile Manifesto, a quick reaction to changing conditions which ensures that the customer gets what is asked for (I1:105). Line Manager and Scrum Master 2 did not mention any benefits regarding quality improvement directly linked to SAFe.

4.3.4 Satisfaction

Overall, the respondents said they enjoy working with SAFe in the virtual team setting (I1:146; I2:189; I3:313; I4:186). They expressed that they find it more collaborative and engaging than working waterfall. However, one participant was not that satisfied with SAFe in this setting, but that is due to the fact of having dispersed teams (I5:194). According to him, "SAFe is just a framework" (I5:184; I5:192). Moreover, there are differences in their perception of how satisfied other employees are. The RTE, who is operating on the highest position of all interviewees, named satisfaction of employees as the first overall benefit because of increased trust and independent decision-making:

"Ehm… I think that people working in an agile way are much more happy in general because they are… they feel more trusted and take more decisions themselves." (I1:97)

The developer supported her view. He said that SAFe's defined way of working in this dispersed setting causes better manner for all the employees involved (I4:135). The Line Manager, in return, referred to a bigger advantage in working agile than with SAFe in particular (I2:189). She assumed that SAFe's focus on structure slows the satisfactory level down. According to her, "the totality is probably not super happy about SAFe" (I2:189). Scrum Master 1 did not draw any connection between SAFe and employee satisfaction, in opposition to the Line Manager. In his opinion, it depends more on team management than whether or not SAFe is being applied (I3:239).

The majority thought that SAFe is improving customer satisfaction (I1:99; I2:191; I3:246; I4:23). An explanation is provided by the RTE, who said that SAFe helps the customer to get what they ask for, as it reveals higher customer satisfaction (I1:99).

4.3.5 High level summary of Theme 2

- The interviews revealed one new finding – the perceived structure – which is not part of the research model. The interviewees mentioned several times the benefit of having a structure which is beneficial for working towards the same goal and dealing with dependencies (e.g. I1:25; I1:53; I3:122). Structure is believed to help when working with virtual teams (I2:94).
- Three out of five interviewees expressed that SAFe takes more time than working without it, but it comes along with other benefits that help to prevent revisions which saves time on the overall picture (I1:99-103; I2:181).

- Improved work productivity is perceived by three out of five participants (I1:65; I3:227; I4:131), whereas another interviewee believed that working only agile instead of using SAFe causes higher productivity (I2:182).
- Three out of five respondents believed that working with SAFe increases product quality (I1:305; I3:237; I4:133).
- Overall, the participants themselves are happy when working with SAFe (I1:146; I2:189; I3:313; 14:184), and they experienced it to be beneficial towards customer satisfaction (I1:99; I2:191; I3:246; I4:23). Nonetheless, a finding is that three out of five interviewees did not think that SAFe increases employee satisfaction due to its rigid structure (I2:189; I3:239; I5:184).

Table 4.1 summarizes the findings for Theme 2.

Table 4.1: Summary of SAFe's benefits from the interviews

	RTE	Line Manager	Scrum Master 1	Developer	Scrum Master 2
Time	✗	✗	✓	✓	✗
Productivity	✓	✗	✓	✓	✗
Product quality	✓	✗	✓	✓	✗
Employee satisfaction	✓	✗	✗	✓	✗
Customer satisfaction	✓	✓	✓	✓	✗

4.4 Theme 3: Perceived challenges

4.4.1 Large-scale agile challenges

Challenge #1: Resistance to change

Three interviewees agreed that they do not experience any scepticism among members in terms of working with SAFe and an agile way of working (I2:227; I3:268; I4:143). However, the RTE believed that there probably is some scepticism, but that it is mostly outside of the train (I1:118). The second Scrum Master described that it can vary from person to person, where some people prefer to be work in a more flexible way, whilst others prefer to know long before in advance on how things should be done (I5:196).

Challenge #2: Lack of investment

Four interviewees agreed that management has invested enough to support SAFe (I2:233; I3:270; I4:145; I5:200). The Line Manager explained that new personnel who join the teams in the trains go through SAFe education, which is the normal education that is needed to get a

certificate (I2:144), as well as that they invested a lot in tools to help working with SAFe (I2:231; I3:270). The RTE answered the question by stating that the management should take more training (I1:124).

Challenge #3: Agile is difficult

None of the interviewees provided any information that would indicate that applying and learning SAFe is hard, and difficult to do. In particular, the RTE mentioned that there are clear guidelines on how it should be adhered to, where one essentially just follows the framework (I1:25).

Challenge #4: Coordination challenges in multi-team environments

The interviewees mentioned that they run into situations where dependencies between the teams and other trains emerge, but most of them do not convey it as a challenge, stating that they communicate with other teams and trains as soon as the dependencies are identified (I1:73-75; I5:212-214).

The Line Manager described that they have a dependency to another train, thus they are having the PI Planning together, which can be hard to organize sometimes, but overall does not express it as a challenge (I2:118-120).

The developer mentioned that it is difficult for him to get in touch with key personnel from other trains when issues emerge, stating that the information regarding hierarchy and single point of contact is missing with other trains (I4:153-157).

Challenge #5: Different approaches emerge in a multi-team environment

None of the interviewees mentioned any challenges related to different approaches emerging in the different teams, despite the teams being able to choose other agile frameworks besides Scrum (I1:39; I2:63; I3:153; I4:120-122; I5:115)

The RTE said that as long as there are clear guidelines on what approaches need to be common and which can be chosen team-wise, different agile frameworks will not cause any problems (I1:39).

Challenge #6: Hierarchical management and organizational boundaries

One interviewee pointed out that management does not adhere to an agile way of working (I1:132). A second one said that they are getting better and better at it (I2:243). The remaining interviewees stated that management does adhere to an agile way of working, but they referred to their (direct) middle-management, the RTE and Line Manager, at the program level (I3:290; I4:159; I5:216-218).

Challenge #7: Interacting with other functions

Four interviewees mentioned difficulties interacting with other functions at IKEA. The RTE expressed that it is caused by their surroundings, such as stakeholders and other systems at IKEA not working according to SAFe, but in a traditional way (I1:112). She added that this causes issues such as stakeholders expecting her to work in a project management style where she controls everything, rather than being empowering and acting as a Servant Leader

(I1:112). She also mentioned that it is difficult to interact with other functions because they have a different way of planning, and they do not share the same vocabulary (e.g. talk features) when working waterfall (I1:75). The first Scrum Master sometimes encountered difficulties when interacting with the function that supports their releases, and with other teams in general outside of the train, but he said that it is caused by them not having a well-defined way of working, and not because they do not apply SAFe (I3:293-303). The Line Manager mentioned difficulties interacting with other functions that work in an agile way:

"… so in the Multichannel solution, if we need something from the selling system we have within IKEA, they work waterfall, having long lead-times and projects and kick-offs, so when we say we need something we have to wait six months before it's there. And that is of course challenging. And so we cannot come and say "no, we want this now." (I2:239)

Scrum Master 2 also described that a mismatch with other functions that are not working in an agile way can create difficulties, especially when they work in a traditional way where they are measured on time, quality and cost, instead of value, resulting in high lead times (I5:230). Further, the second Scrum Master highlighted the importance adapting the whole organization to an agile way of working when introducing an agile framework like SAFe:

"What you have to think about when you're introducing SAFe or other agile frameworks is that you have to adapt the organization for it as well. Otherwise you will still have all the mechanisms that consume a lot of lead time. So that is something that wasn't working with us as well. Shortening the lead times and processes." (I5:232)

More documentation in larger organizations resulting in reduced agility

Three of the interviewees felt that they are doing more documentation than what is required in accordance to an agile way of working, however, it is still less than in a traditional way of working (I1:126; I2:233; I5:206-208). The Line Manager believed that there are two reasons to the increased documentation. The first one is that not all levels have adopted SAFe correctly, and instead they set fixed scope, date and quality, which then gets pushed as a traditional project (I2:233). The second reason for the increased documentation is according to her due to an IT-landscape of hundreds of connected solutions that require a lot of verification in order to not risk breaking something (I2:235). On the contrary, both the first Scrum Master and the developer experienced that they are lacking documentation. The first Scrum Master mentioned that they focus on only documenting the most critical aspects in an agile way of working often results in decisions being forgotten (I3:315). Similarly, the developer stated that the reduced documentation results in newcomers needing more time to start working on the project, because they are not able to read the documentation and start working from Day 1 (I4:149-151).

Issues at Retrospectives not getting resolved

Two of the interviewees on the program level stated that they are not very good at resolving issues or problems that emerge at Retrospectives, but do not indicate any frustration because of it (I1:136; I2:247). The RTE said that it is not always easy to focus on improving what has been mentioned at the Retrospectives (I1:136). The Line Manager described it as being due to the complexity of the organization and the IT-landscape:

"The complexity of the organization and the landscape as I said before is making it difficult to things. So, for me, on the team level, we should be able to make decisions that make you faster and so on, and that is not always the case. It's like "oh no, but you need to verify that with that person" and yeah, that organization is impacted by what you deliver." (I2:249)

The first Scrum Master and the developer experienced that issues and problems that emerge at Retrospectives get dealt with efficiently (I3:154; I4:170).

Technology not supporting agility

Furthermore, the RTE outlined an additional challenge by stating that IKEA does not have the tools to support continuous delivery, which is creating frustration:

"Another challenge is more on a technical level… is that, if you work agile, you want to deliver your results continuously in small chunks, but we don't really have the tools that support that, so we develop a lot of things, a lot of software, and then we have to wait for a long time until we can release it and that creates problems and frustration because then we don't get the fast feedback that we wanted to." (I1:112)

The Line Manager also mentioned that the complexity of the IT-landscape at IKEA makes people refrain from doing changes without doing a lot of impact analysis, as they are scared they will ruin something, which she believes works against their agility:

"So if we do something that affects some flow in the Multichannel, you need to verify the hundred different solutions. That's quite a lot, meaning that the ones who are driving the totality of this is of course really afraid that, if you do something, you break something else. And that is not helping us implement an agile way of working." (I2:235)

Lastly, the RTE shared the challenge and danger that she sees at IKEA is that some follow the framework, but do not change the mindset, and she points the finger at management:

"The danger is, that's what kind of happening at IKEA is that we follow the framework and that everybody understands how to do things. But SAFe is a lot about the mindset and the culture. And that is much harder to get everybody to understand that. And that's when we say management. Many of them have understood SAFe. But they haven't really understood how they need to change their way of acting." (I1:148)

4.4.2 Virtual team challenges

Communication

The RTE explained communication challenges because of a lot of communication happening face-to-face, which resulted in the dispersed members to initially miss a lot of important information, and even be forgotten –

"Because so much of the communication and collaboration is face-to-face. We are lucky, because we are all sitting in one of those corridors or the next floor here. So, people walk around and talk and sort things out and then it's easy to forget about those people who aren't always here, so they don't always get all the information, maybe. Ehm… It takes longer when you have to send a mail and then wait for an answer." (I1:21)

In addition, the RTE outlined that the lack of communication brought challenges in terms of trust and collaboration when they initially had all the Indian team members in India, but that the situation improved after moving their Scrum Master and two other members to Helsingborg:

"... they started off being in India and it was really difficult to get it to work. The collaboration with the other teams was not working at all. And the trust between teams was really low. But now, we have actually the Scrum Master and two team members in Helsingborg and then the rest of the team in India, and now it works really well, so that really helped." (I1:17)

The developer, who previously worked in India and was moved to Helsingborg to be close to business, witnessed an increase of understanding, collaboration and communication after being moved:

"The collaboration has improved massively after I have moved to Helsingborg. So I can say that, ehm, as I said, we are now interacting and able to put a face to a name. Over a telephone conversation you are only limited to a particular release, or the particular requirement that you're dealing with. However, being over here... we can speak with different key individuals and we can understand the problem in a much better way and we can help out in much broader scope than we are initially enlisted for. So the communication or the collaboration has in fact improved after coming to Sweden." (I4:120)

Similarly, the second Scrum Master outlined that the majority of the team was off-site when he started working, which he felt like did not work at all:

"It's, eh... It's hard to create the togetherness feeling – creating the "one team". (pause) And creating something that's total transparency and getting a sense of includement for everyone. And is that why they've changed so that now you have more members from for example India here at Helsingborg close to the business." (I5:58)

Furthermore, the second Scrum Master expressed that distributed settings are challenging, even if it is in the same country (I5:62). He advocated having co-located members, recommending to move as many members on-site as possible (I5:60). He stated that they have doubled their deliverables after moving the members to Helsingborg (I5:64). Additionally, he described that it becomes more difficult to build relationships through ICT tools, and that video-calls are the best to talk to dispersed members, but nothing beats face-to-face (I5:236).

"[...] So if you can get people to sit together teamwise and trainwise I can almost certainly guarantee a lot higher output than sitting distributed. It's one of the most important things getting people co-located. It definitely raises, raises efficiency and effectiveness by a lot more than you think." (I5:68)

Technology

Scrum Master 1 talked about technological challenges during his Daily Stand-ups, where they initially had video-conferencing, but had to switch to solely audio-conferencing due to latency issues (I3:131).

The first and second Scrum Master and the developer mentioned that there is a need to manage a call with dispersed members, as situations may occur where two people start talking at

the same time, or that people with differing opinions can go on a long time and discuss it (I3:225; I4:184; I5:260). However, they said that the teams have a shared understanding a training on how to deal with calls, and that the organizer is managing the call (I3:225; I4:184; I5:257).

Team diversity

The RTE mentioned a challenge in terms of culture, saying that the empowerment and ability to take more decisions independently can be difficult in some cultures, and used India as an example where they expect their managers to take more decisions for them (I1:150-152).

The Line Manager did not point out any particular challenges in terms of team diversity, but she mentioned that people from India tend to be quiet and do not challenge anything (I1:211), whilst members from London tend to speak up and take a lot of space (I1:213).

Scrum Master 1 and the developer did not experience any cultural challenges with Swedes in terms of work place (I3:262; I4:180).

However, the developer mentioned going through cultural awareness trainings where he was taught about different work ethics between Sweden and India, and gave an example of Indian people not being punctual, whilst people from Sweden are very punctual and do not like it when others arrive late (I4:147). The second Scrum Master also expressed that cultural awareness is an important factor to discuss within the team in order to create better togetherness and understanding (I5: 256)

4.4.3 Shortcomings

The RTE sees a shortcoming with SAFe that it is focused on the earlier stages of development:

"Well, it doesn't really describe the later stages of development, how to release and how to… it's very focused on the earlier stages of the development chain." (I1:140)

She also mentioned that she thinks that the Release Manager role at the program level is vaguely defined (I1:55).

The Line Manager stated that she would never apply SAFe to a non-large-scale setting, which she mentioned in the interview four times (I2:259; I2:271; I2:273; I2:275), and that there needs to be at least 10 teams, with two trains, otherwise the cost will not be worth it –

"Yeah, it's costly. If you are a small organization, I would never do that. I mean, it's a lot of layers, and a lot of overhead if you are a small company, I would say as well." (I2:259)

"I would say if you are above 10 teams. If you are 10 teams or less, I would never do it… At least two trains. Yes, Definitely." (I2:273)

The second Scrum Master shared her view (I5:136), and added that SAFe might drive the wrong behaviours, stating that the layers and rigid structure that it brings creates a lot of hier-

archy that makes it more controlling rather than supporting (I5:275). He also argued that decisions should be pushed down as far down as possible, and that releases should be made as soon as something is ready, rather than stopping the train to release (I5:180).

The first Scrum Master believed that the reduced documentation sometimes results in people completely forgetting what was decided in discussions and collaborations, but that it is something one learns to deal with (I3:315). Similarly, the developer believed that the reduced documentation by working agile makes it more difficult to include newcomers and put them into work as quickly as possible (I4:149-151).

4.4.4 High level summary of Theme 3

Large-scale agile challenges

- Interacting with other functions at IKEA that do not work with SAFe or in an agile way is demanding (I1:75-112; I2:239; I5:230).
- It is perceived as challenging that management is not working agile (I1:132; I2:243).
- Coordination challenges in a multi-team environment occur (I4:149-151).
- Not having technology that supports continuous delivery and flexibility is perceived as challenging and frustrating (I1:122; I2:235)

Virtual team challenges

- Due to most of the communication happening face-to-face, dispersed members can be forgotten (I1:21).
- The case site moved key members from India to Sweden which the employees perceive as beneficial for communication and collaboration (I1:17; I4:120).
- The case site mainly switched from video-conferencing to audio-conferencing due to connectivity issues (I3:131).
- Technological trainings are conducted that teach organizers how to deal with calls (I3:225; I4:184; I5:257).
- Cultural differences between the countries occur (I1:150-152; I1:211-213).
- Cultural trainings are conducted to create better togetherness and understanding (I4:147; I5:256).

Shortcomings

- SAFe's focus is set too much on the earlier stages of the development chain (I1:140).
- SAFe is costly due to the high number of roles, levels and trainings (I2:259; I2:271; I2:273; I2:275; I5:136).
- The rigid structure creates a lot of hierarchy that makes it more controlling rather than supporting (I5:275).

5 Discussion

This chapter discusses our empirical findings with the components of the literature review. The discussion is again structured according to the three themes that we adopted from the concepts of the research model (Figure 2.5).

5.1 Theme 1: SAFe conditions

The aim of this theme was to ensure construct validity of SAFe, and to provide rich detail on how IKEA is using SAFe if the information was to be needed for replicability purposes, or to be compared with other studies. Moreover, by assessing the SAFe condition it was also intended to reveal benefits and challenges, e.g., what is stopping them from taking an economic view, if that was the case.

Overall, the findings regarding SAFe's nine principles and SAFe's levels of team, program, and value stream that they apply at IKEA, showed a good resemblance with Knaster and Leffingwell's (2017) description of the stated levels. It is therefore safe to say that IKEA does in fact apply SAFe from the perspective of the three levels, given the high extent of adhering to the framework on the mentioned levels. However, something noteworthy is that the majority of the respondents were only certain about the levels being applied up to the program level. Some of the respondents were unsure about the value stream level and portfolio level, and some even stated that the portfolio level is being applied, and one mentioned that the value stream level is not applied. However, we know for a fact that the actual levels being applied are the team level, program level and the value stream level, as the RTE who provided us the information was one of the people who partook in the SAFe implementation, and was referred to as the expert about the levels by the remaining respondents. Thus, given the lack of knowledge by the majority of the respondents on the levels above the program level, and the fact that they are predominately involved at the team and program level, the findings in this study show how SAFe is perceived by its employees at the team and program level.

5.2 Theme 2: Perceived benefits

The empirical findings of the study show that applying SAFe in a large-scale virtual team context is perceived predominantly as beneficial, especially in terms of having more structure with SAFe. This perception is a new finding in this study, as it is not considered in the research model. Reason for it is that the model focuses on benefits for agile frameworks such as Scrum and Kanban that are implemented in SAFe, but not to SAFe's benefits in particular, due to the lack of scientific studies on that topic (Turetken et al., 2017). At the case site, structure was considered as enormously affecting the employees' perception of SAFe, due to scheduled meetings helping them to deal with dependencies for bigger solutions related to SAFe's constructs on the program level, especially to the Agile Release Train. This is supported by the fact that the middle management (Line Manager and RTE) who coordinates on this level perceives SAFe's structure as supportive for their tasks. In particular, a strong cohesion between perceiving structure and the second SAFe principle "Apply systems thinking"

can be drawn as structure helps to collaborate around the same goal and deal with dependencies in an organization. However, based on our findings, not every employee is enjoying the structure, resulting in drawbacks accordingly.

Participants mainly involved in the team level do not have to deal as much with dependencies with other teams in comparison to the program level. The program level is characterized by stronger dependencies to a larger extent in the organization (Knaster & Leffingwell, 2017). Therefore, we state that SAFe is perceived as highly beneficial for large companies that are characterized by dependencies between multiple teams or even larger units on the program and value stream level. Having the construct of Agile Release Trains is perceived as beneficial of all interviewees, therefore we motivate this finding and recommend SAFe to other companies that deal with dependencies to a similar extend, which is also possible in a virtual team setting.

We identify the benefit of dealing with dependencies within a company as most noteworthy, more than benefits in terms of *time*, *productivity*, *product quality* and *satisfaction* of the research model. This can be explained by the difference that SAFe is intended to scale agile to more than just one team (Knaster & Leffingwell, 2017). However, now we will reflect on the suggested benefits that are found in our research model.

5.2.1 Time

Mann and Maurer (2005) argue in their study that applying Scrum within one team helps employees to *cut down time in their working processes*. However, their finding cannot be supported by our case study when scaling agile with SAFe. Especially RTE and Line Manager, who have the best overview on the working processes as it is their job to coordinate people from different teams within the Agile Release Train, do not perceive SAFe as time saving. A possible reason for it could be SAFe's structured nature, due to having deadlines set beforehand, despite the fact that it could be delivered faster. Although the majority of participants does not perceive SAFe as time saving in a virtual team setting, it is not regarded in a negative manner as it delivers other benefits.

5.2.2 Productivity

According to the empirical findings of this study, *increasing productivity* with SAFe in a virtual team setting is not perceived. The case site reached higher productivity when the company moved people from offsite (India) to onsite (Sweden). Since then, IKEA has doubled their capacity and deliveries (I5:64), and the interviewees perceive this procedure as very beneficial. We identify a positive relationship between having people sitting co-located and higher productivity based on these empirical findings. However, one interviewee also mentioned benefits for having dispersed members leading to more productivity as you can deliver 24 hour time (I4:141). Literature calls this concept *follow the sun*, which aims to reduce the development life-cycle duration (Kroll et al., 2018; Pearlson & Saunders, 2013). However, when looking at the workflow processes on the program level and not only product delivery on the team level, co-location is much more likely to support team productivity, based on our findings. This is supported by the fact that the case site decided to move certain key employees from offsite to onsite. Although we observed a positive relation between having people sitting co-located and increasing productivity, Interviews 2 and 5 did not reveal any relation

between applying the Scaled Agile Framework and increasing productivity. One interviewee compared applying SAFe with working "only agile" without SAFe, and it turned out that she perceived the work with "only agile" as being more productive (I2:182). Therefore, Huang and Kusiak's (1996) and Sutherland et al.'s (2008) conclusions that working agile leads to higher productivity can be confirmed, but the empirical findings are not strong enough to support the claim that scaling agile *through SAFe* leads to higher productivity, especially with regards to the distributed environment which we identify as a challenging influence, based on our findings (e.g. I1:116; I3:88; I5:240; I5:279-281).

5.2.3 Product quality

Schwaber's (1997) findings that applying Scrum leads to *higher product quality* than without working agile cannot be generalized from this study. Although three out of five interviewees support that the product quality is increasing with SAFe, the focus in the interviews shifted on managing the workflow, rather than on increasing the quality of the product. Therefore, the shift is more set on improvement of internal quality process improvements rather than on the actual output, which is again related to the perceived benefit of having a structure. Therefore, we do not highlight the benefit of increasing product quality, although we do not refuse it. Based on our findings, it is unclear whether short iterations lead to increasing quality of the delivered product in context of scaling agile, which is a finding of Coram and Bohner (2005) for applying Scrum.

5.2.4 Satisfaction

The positive relation between working agile and job satisfaction, described by Tripp et al. (2016) and Balijepally et al. (2009), is discovered in the case setting with constraints. The majority of the interviewees are very satisfied with SAFe in this setting, they find it more collaborative and engaging. However, not everyone seems to be happy, as outlined by the Line Manager. Based on our findings, SAFe's rigid structure can lead to both increasing and decreasing job satisfaction, as the interviewees perceive the structured way of working agile differently. The interviews show that the given structure is more beneficial for people working on the program level than on the team level. This can be explained by the fact that the program level deals with more and bigger dependencies, since the program level has to organize bigger events with multiple teams from different locations (Knaster & Leffingwell, 2017). In short, employees on the program level have to find more complex solutions in a more complex setting than employees on the team level. Looking at the findings from the team level, the developer points out the advantage of applying Pair Programming with SAFe, which is still an activity on the team level in which only two people are highly involved (Agarwal & Umphress, 2008). This activity is much less complex than events of the program level such as PI Planning (Knaster & Leffingwell, 2017). As simple agile methods such as Scrum, Kanban and Pair Programming are also included in SAFe, it is possible that employees on the team level perceive these events as highly beneficial and crucial to their perception, as these are activities of their daily work. Moreover, the findings show that moving people from offsite to onsite make people happier as things work better. According to our study, this finding can be generalized as it is perceived by employees from different levels. Moreover, it is perceived by both employees that were actively moving from offsite to onsite such as Scrum Master 1 and developer or just passively involved without moving such as RTE, Line Manager and Scrum Master 2.

Moreover, Mann's and Maurer's (2005) finding that working agile increases customer satisfaction can be transferred to working with SAFe in a virtual team setting, according to the perception of the participants of this study. In terms of customer satisfaction, the Product Owner is understood as the customer at the case site. The PO is highly involved in the development process. Due to prioritization and constant feedback, the PO is more likely to get what is requested. The level of involvement is the same as when working with only Scrum, which explains the similarity to Mann's and Maurer's (2005) observation. Moreover, Papadopoulos (2015) states that agile frameworks' main focus is customer satisfaction. Our findings support customer satisfaction with SAFe when the PO is perceived as the customer.

5.3 Theme 3: Perceived challenges

5.3.1 Large-scale agile challenges

Three of the challenges outlined in Dikert et al.'s (2016) systematic literature review on having agile large-scale can be found in the results. The most predominant challenge stated by the train's middle management (RTE, Line Manager, and Scrum Masters) was interacting with other functions at IKEA that do not work with SAFe or in an agile way, creating a mismatch in the ways of working, which was the second highest rated challenge by practitioners in Dikert et al. (2016) review. Additionally, a similar finding to Dikert et al. (2016) of HR's rewarding model not being teamwork centric and thereby hampering other functions from applying agile was found, but in the context of other functions being evaluated in a traditional way of time, money and quality, rather than value, making them reluctant to start working agile (I5:230).

A second challenge found in the results that was also identified in Dikert et al.'s (2016) systematic literature is related to management not working agile, as expressed by the RTE and the Line Manager that operate on the train level as the middle management, and do not see the managerial levels above them working agile (I1:132; I2:243). The respondents gave explanations to this phenomena in a similar fashion to Dikert et al. (2016), outlining a need from management to be in control and command, rather than to invoke a mindset of self-organization for the teams (I1:148; I2:105).

A third challenge that can be found in the results, as well as in Dikert et al.'s (2016) study is related to coordination challenges in a multi-team environment. Dikert et al. (2016) outlined a challenge related to dealing with dependencies with multiple teams. Although all the respondents agree that SAFe is efficient in terms of dealing with dependencies within the same train through PI Planning and Scrum of Scrums, one of the interviewees believes that there is a lack of information on key contact personnel in different trains when a dependency to a different train has been identified, and would like this to be documented (I4:149-151).

Apart from the three challenges mentioned above, the remaining challenges identified by Dikert et al. (2016) were not experienced at the case site. Genuine training appears to have worked against scepticism towards SAFe (I2:233; I3:270; I4:145; I5:200), SAFe does not seem to fall into the category of being difficult to learn (I1:25; I2:138; I3:189; I4:114), and there were no mentioned challenges relating to different approaches emerging in the different

teams, as there were clear guidelines on what should be followed collectively, and what is up for the teams to decide themselves (I1:39; I2:63; I3:153; I4:120-122; I5:115).

Moving on, Lindvall et al. (2004) state a need for increased documentation when doing agile large-scale due to more dependencies between different teams, which reduces the overall agility. An increase of documentation due to dependencies between IKEA's different interconnected systems was identified in the results, but it is still experienced as being less than working in a traditional way and does not appear to be considered a challenge by the respondents (I1:126; I2:233; I5:206-208).

Furthermore, Paasivaara (2017) explains in her study about SAFe implementation how employees found the lack of actions being taken on issues and problems emerging at Retrospectives as challenging and frustrating. Although some respondents stated that it can be difficult to take actions on issues that are outside of their control, they overall think that improving after Retrospectives is working fairly well (I1:136; I2:247; I3:154; I4:170).

Lastly, it is worth mentioning that the challenges outlined by Dikert et al. (2016) and Paasivaara (2017) were observed from an early stage, when agile had just been implemented. Whilst this study took place where SAFe had been implemented several years ago, thus, the challenges are related to a more agile-mature setting, and may also be a reason to why they differ on a high level.

Furthermore, a new challenge related to large-scale agile was found that was not encountered in the literature before, revolving around not having technology that supports agility. Two of the respondents described that they do not have technology that supports rapid releases and delivery, as well as having a complex IT-landscape of hundreds of interconnected systems that people are scared of changing due to fearing that they will break something, which works against agility (I1:112; I2:235). In SAFe, rapid releases and delivery is referred to as continuous delivery (Knaster & Leffingwell, 2017), something IKEA is struggling with. Although there is no reference to studies with similar problems to the one mentioned above in this paper, it can still be generalized as having highly-coupled systems is known to hamper flexibility and rapid changes, thus, agility, in the field of information systems. Additionally, this information comes as no surprise, as IKEA is an old non-tech company, which tend to have legacy systems, which are known to be inflexible and have high complexity (I3:162). The Scrum Master's information that there is a train designated specifically to deal with legacy systems further strengthens this explanation.

5.3.2 Virtual team challenges

Again, we group the virtual team challenges into the categories of communication, technology, and team diversity as suggested by Pearlson and Saunders (2013) for the discussion.

Communication

Gibson and Gibbs (2006), Paul et al. (2018) and Pearlson and Saunders (2013) describe that communication becomes challenging in VTs as members mainly have to interact through ICT, which makes the interactions and scheduling of meetings harder, especially when the members are in differing time zones. Further, the lack of face-to-face communication has been observed in several studies to hinder the creation of trust among members (Jarvenpaa et al.,

2004; Pearlson & Saunders, 2013). These communication challenges were evident in the interviews. Majority of the respondents outlined how the collaboration had improved drastically after they started moving parts of the dispersed team members on-site to Helsingborg, to be co-located with business (I1:17; I2:27; I4:120; I5:58-62). Previously, when the teams were completely dispersed from the business people, one interviewee mentioned that the situation did not work at all (I1:17). Now, they have the Scrum Masters, and the lead-developers on-site close to the business. The explanation to why the situation was not working when being completely dispersed by some of the respondents goes hand in hand with Shameem et al.'s (2017), Hanssen et al.'s (2011) and Holmström et al.'s (2006) outline of how agile in virtual teams is difficult, due to the difficulties of having frequent communication and co-located collaboration, which are fundamental activities in an agile way of working. The respondents described how working with SAFe made the environment highly interactive and collaborative, and a lot of the interactions were happening in the hallways with the business people, which the dispersed members were missing out on (I1:21). Interestingly, one of the respondents mentioned that the lack of face-to-face communication can even make some of the members be completely forgotten, which we have not encountered in any literature. Low levels of trust between the members was also mentioned by one of the interviewees, when they had none of the members co-located (I1:17). The lack of face-to-face communication hindering the creation of trust has been observed in previous studies, and is considered to be a key challenge for virtual teams (Jarvenpaa et al., 2004; Pearlson & Saunders, 2013). Interestingly, by moving the Scrum Master and the lead-developers to be co-located with business, IKEA appears to have created a bridge between the business and the dispersed virtual teams to mitigate the communication challenges. The co-located members handle the frequent communication and co-located collaboration with the key business stakeholders and ensure that they do not miss out on the co-located interactions that happen daily, and pass this on to its team offshore. As one of the respondents mentioned, previously, they were interacting through ICT which limited them to a specific release or requirement, but being co-located, he is able to interact with key individuals and understand the problem in a better way and in a broader scope (I4:120). This goes hand in hand with Gibson and Gibbs (2006), Paul et al. (2018) and Pearlson and Saunders (2013) who describe that communication becomes challenging and more difficult when it is limited to ICT, and can reduce the richness of the information being conveyed.

Additionally, Pearlson and Saunders (2013) mention that communication can be challenging with virtual teams when there are large time zone differences. The time zone challenge was mentioned by one of the respondents (I3:285). We believe that more respondents did not see it as an issue, given the Line Manager's explanation that most workers come into the office around 9 or 9.30, which is around the time when the dispersed members start working in India, which has the biggest time zone difference to Sweden in terms of where the virtual teams are located. By starting work later, they appear to have synchronized their working hours with India. But nevertheless, it is still important to consider the time difference when scheduling meetings and interactions, as one of the respondents mentioned (I2:219).

Technology

Pearlson and Saunders (2013) describe that the need for ICT available means that all the virtual team members need the same or compatible technologies at their site. Challenges that may be encountered include maintenance of compatible technologies and security issues, as well as problems with bandwidth (Pearlson & Saunders, 2013). Only one of the respondents mentioned that they experienced technological issues, when having Daily Stand-ups through video, as they were facing issues with the internet speed, and switched to having Stand-Ups

with merely audio (I3:131). Overall, the remaining respondents felt that the technology worked in a smooth way to support the communication with the dispersed members. This indicates that compatible technologies to support the virtual team setting exist at IKEA.

Furthermore, Pearlson and Saunders (2013) state that virtual teams need a framework for using the technologies, including policies and norms in regards to how members ought to use the technology, as for example conversation etiquette. Saunders et al. (2004) mention that norms as such become particularly important when members are not working from the same office. Three of the respondents mentioned having defined ways of interacting through ICT as described by the authors above. They conveyed that the team members go through trainings, as well as have internal team agreements on how to behave during calls, and how interactions through ICT should be managed, in order to avoid situations with having multiple people talking at the same time, or not letting people talk (I3:225; I4:184; I5:260).

Team diversity

Pearlson and Saunders (2013) state that members of virtual teams often come from different cultures, which has been observed to result in more creative solutions. One respondent mentioned a similar positive aspect of having members from different cultures, giving an example that people from different cultures may look at a problem differently, which may be beneficial as it adds additional aspects to a functionality or product (I5:248).

However, it is also known that different cultures may bring a set of challenges that may make it harder for members to establish trust, communicate, and to form a group identity, thus, many times there is a need to address certain dimensions of team diversity (Pearlson & Saunders, 2013; Winkler et al., 2008). Two of the respondents gave an example of how adopting the SAFe principle of decentralizing decision-making, as well as being empowering, can be difficult for members from certain cultures, as members from those cultures tend to obey and follow management's orders, and do not challenge anything (I1:150; I2:211). Moreover, two of the interviewees mentioned how different work ethics, such as importance of being punctual or not differ between India and Sweden (I4:147; I5:254). In order to avoid conflicts and build better understanding between team members, two of the interviewees mentioned cultural training, and spreading cultural awareness within the teams is important. It was mentioned that cultural awareness is an efficient way to mitigate possible conflicts that may arise in a cross-cultural setting. Further, co-locating some of the members in Helsingborg were mentioned as being beneficial for them to adapt to Swedish culture as well as IKEA's corporate culture (I2:223; I4:176; I5:78).

5.3.3 Shortcomings

Three of the interviewees mentioned what they perceive as shortcomings with SAFe. These are new findings, since there have not been any other scientific papers that looked into SAFe's shortcomings. Interestingly, the shortcoming of SAFe being costly is in misalignment with SAFe's first principle "Take an economic view", which ensures that all levels understand the economic impact of their decisions and considering costs. However, considering costs of applying SAFe itself is a shortcoming that has not been described in scientific literature, given the lack of studies. Therefore, the high costs of having many different roles, levels, and trainings, should be stressed out clearer to the industry, so that other companies are aware of this shortcoming when considering scaling agile with SAFe.

Another shortcoming that is worth discussing is due to the rigid structure, which is already identified as beneficial for tasks especially related to the program level (see Section 5.2). According to the findings, bigger events such as PI Planning are scheduled already months before, due to the necessary agreements and dependencies to another Agile Release Train. However, SAFe is still developing and steadily growing in importance (Knaster & Leffingwell, 2017). With this new finding, perhaps a new way of scaling agile in a later Version of SAFe can be found, which ensures that tasks that require more flexibility can be carried out faster and small releases are not that much restricted to events, so that a faster release is possible. Especially in a virtual team setting, being flexible with SAFe is even more challenging, as communication is dependent on technologies, making it harder to take decisions and establish trust among members (Gibson & Gibbs, 2006; Paul et al., 2018; Pearlson & Saunders, 2013). SAFe's rigid structure is therefore identified as a drawback for some employees, as it slows down agility in a virtual team setting even further – at least for activities that require a high degree of flexibility on the team level.

6 Conclusion

6.1 Research question and purpose

The purpose of this thesis is to investigate how the Scaled Agile Framework is perceived by employees in a virtual team setting. The focus is set on the perceived benefits, challenges and shortcomings when using SAFe with virtual teams.

The research aims to answer the following research question:

How do employees working within a virtual team setting perceive SAFe?

The answer to the research question is based on empirical findings from this case study. The research was conducted with participants that work with SAFe in a virtual team setting at IKEA.

6.2 Key findings

Employees working with SAFe in a virtual team setting perceive several benefits. Firstly, SAFe is perceived ***to bring structure in terms of scheduled events, meetings, activities and cadence***, which supports agile large-scale and helps to coordinate the virtual teams, and deal with dependencies. Secondly, SAFe is perceived to ***increase customer satisfaction***, since customers (Product Owners) are highly involved in the development process and are more likely to get what they are requesting through prioritization and constant feedback.

However, applying SAFe to a virtual team setting comes with several perceived challenges. To begin with, a virtual team setting makes ***communication difficult*** as many times there is lack of face-to-face interactions. The lack of face-to-face interactions results in reduced understanding of problems, members missing out on information, members being forgotten, and difficulties in fostering trust. A way to mitigate this is by moving key members to be co-located with business, who will act as a bridge between business stakeholders and the dispersed virtual team members. Co-locating has a positive impact on collaboration, trust, communication and ultimately productivity. Moreover, virtual teams come with ***team diversity***, which generally is a positive aspect. However, agile values such as empowerment and self-organization can be difficult for certain employees, especially when coming from cultures where management tends to be in full control and employees adhere to orders without questioning or challenging. Furthermore, different work ethics in different cultures can create a misaligned way of working between members, and even result in conflict between members, making it important to have cultural awareness and decide on a shared way of working and values within teams. Additionally, the need to use ***technology*** to communicate in a virtual team setting during SAFe's meetings can sometime result in issues with connectivity or bandwidth. Moreover, norms and policies on how to interact in conference calls are needed in order to avoid problems of having multiple members talking at the same time or arguing. Furthermore, there are also challenges related to the large-scale nature of having SAFe in a virtual team setting. Firstly, ***interacting with other functions*** that do not work according to SAFe or agile,

creates a mismatch in regards to ways of working and wrong expectations. Secondly, ***management not working agile*** is experienced as hindering the organization to fully become agile. Management may tend to keep old habits of being in control and command, rather than to invoke a mind-set of self-organization and empowerment for the teams. Thirdly, ***coordination challenges between trains*** are experienced when dependencies to other trains get identified, but there is a lack of documentation in regards to key persons of contact in other trains. Lastly, ***technology that does not support agility*** by forcing long waiting times before new features are released, instead of supporting continuous delivery through having small chunks released frequently is perceived as frustrating. Having an IT-landscape of hundreds of interconnected systems that require significant impact analysis before changes can be made creates reluctance for changes in the first place, and reduces the overall agility.

In terms of shortcomings with SAFe, employees in a virtual team setting perceive the following. SAFe focuses on earlier stages of development, and ***lacks information about the later stages of development*** related to releasing. It is ***costly***, by adding a lot of overhead through its many different roles, levels and requiring training. Lastly, it can also be perceived as being too ***rigid***, creating hierarchy that makes it feel more controlling.

6.3 Future research

We invite researchers to continue filling the gap on how scaling agile frameworks are perceived in different settings, in terms of benefits, challenges, and shortcomings. Future research should continue studying SAFe in various settings as recommended by Dikert et al. (2016) and Paasivaara (2017), but also investigate other scaling agile frameworks, such as Large-Scale Scrum (LeSS) and Disciplined Agile Delivery (DAD). Besides looking at different settings, studying the frameworks in different stages could be interesting, such as during an implementation stage or a post-implementation stage, where the maturity levels differ in terms of the frameworks' usage.

Furthermore, the participants for this study were engaged in SAFe's team level and program level. Studying how SAFe is experienced by employees that are involved in the value stream level and portfolio level could give additional insights to how SAFe is perceived from a managerial perspective. In this study, this was not possible as the portfolio level was not applied at the case site. Additionally, a quantitative study that compares employees' perceptions of SAFe from the different levels could give insights on how satisfied employees from different levels are when working with SAFe. Certain challenges, benefits or shortcomings could perhaps be linked to specific levels.

Additionally, there are no scientific studies on the amount of companies that use scaling agile frameworks. This could be studied in a quantitative way. Moreover, exploring how companies have chosen a scaling agile framework could be interesting. This can be achieved by looking at if it was evaluated based on certain criteria, if it was compared to other frameworks, or if it was merely because an agile coach recommended it. Studying the selection process of a framework could provide additional insights regarding scaling agile frameworks' benefits, challenges and shortcomings, and enable better comparisons between them.

Appendix A: Interview guide

Introductory questions

- Please tell us a bit about your role. How long you have been working with SAFe?
- Please tell us a bit about the IKEA Multichannel area and your product.
- How are the teams organized?
- What is SAFe in your opinion? What is the purpose of SAFe at IKEA Multichannel area?

Theme 1: SAFe conditions

SAFe principles

- Do you consider costs and take an economic view when conducting your tasks?
- Do you feel like there is a common goal between the different teams, and that there is a shared overview of the big picture, or are the teams working in silos?
- Do you feel like the team(s) are still open for changes after agreeing on a requirement/approach?
- Do you receive quick customer feedback? Who is the customer?
- Do you have frequent milestones where you evaluate the solution with the customer together?
- Do you visualize your work in progress, also to other teams?
- Do you feel like there is an efficient planning of people and resources?
- What is your motivation to work on the project and what drives you in your line of work?
- Do you feel like the management trusts you and other workers? Do they let you make decisions independently?

SAFe levels

Team level

- Do you apply the team level?
- What is the team level in your opinion?
- Are you applying Scrum, Kanban, Extreme Programming, a mix, or something else at the team level? Is it reflected in all teams or can it vary from team to team?
- If no, do you see it as problematic or is it working without obstacles?
- What kind of activities are you having related to the team level (e.g. Daily Stand-up Meetings)?
- Are the members within a team co-located? Do you have difficulties in obtaining shared space?
- What is your overall experience with working with the team level? (roles, activities, events, …)

Program level

- Do you apply the program level?
- What is the program level in your opinion?
- Which roles do you see as key roles on the program level?
- Are you doing the activities
    - PI Planning
    - Inspect and Adapt workshop
    - Program Kanban?
- Do these activities help to manage the workflow? (overall experience and workflow around them)
- How is the PI Planning done?
- How many Agile Release Trains do you have? Are there dependencies, any challenges?
- What is your overall experience with working with the program level? (roles, activities, events, …)

Value stream level

- Do you apply the value stream level?
- If yes: Do you experience it as needed?
- Which roles do you see as key roles on the program level?
- What is your overall experience with working with the program level? (roles, activities, events, …)

Portfolio level

- Do you apply the portfolio level?
- If yes: How many portfolios you are working with?
- If yes: Does the portfolio level help to support the organizational strategy?
- If no: Who is in charge of the strategy and investment funding for IKEA.com?

All levels

- How much would you say you know about the different SAFe roles and the responsibilities they have?

Theme 2: Perceived benefits

- Do you think SAFe is beneficial for IKEA Multichannel area?
- If yes: What kind of benefits?
- Is there something in particular that works well in your line of work thanks to SAFe?
- Do you experience any benefits in terms of
    - time
    - productivity
    - product quality
    - satisfaction (own satisfaction and towards the customer)?
- Do you feel like the Multichannel area is truly agile with SAFe, or is it just on paper?

Theme 3: Perceived challenges

- What kind of challenges or issues are you currently experiencing when working with SAFe?
- … when working with dispersed team members?

Large-scale agile challenges

- Would you say there is still some scepticism among members, or that SAFe and an agile way of working is part of the members mindset?
- Do you feel like the management invested enough to support SAFe? (trainings…)

- Was it easy to learn and understand the SAFe levels and work according to them?
- Are there any coordination or communication difficulties between different teams or trains?
- Is management adhering to an agile way of working too?
- Are you feeling any difficulties in terms of interacting with other functions at IKEA?
- Do you feel like you need to do more documentation than SAFe advocates?
- Do you feel like the problems or issues emerging in Retrospectives get dealt with afterwards?
- Is there anything in particular that you would like to change, or that you feel like is not working currently? Any show-stoppers?

Virtual team challenges

- Are you experiencing any communication challenges with dispersed members?
- Are you experiencing any technology challenges to support collaboration and communication with dispersed members?
- Are you experiencing and challenges in terms of culture or language?

Shortcomings

- Does SAFe have any drawbacks/shortcomings according to you?

Closing questions

- During your time here, have there been any specific changes made towards a SAFe approach?
- What is your overall opinion about SAFe?
- Do you have any documentation on SAFe at IKEA that you could share with us?
- Do you have any comments you would like to add?

Appendix B: Interview transcript 1

F = Fredrik Hoffman

L = Lou Hinterberg

RTE = Release Train Engineer

Section	Person	Text	Code
1	RTE	Yes, it is okay when you record my voice and mention my name.	
2	F	To give some quick feedback, I mean, explanation, what we are doing is, we are looking at how SAFe is basically perceived in a setting like this with a… We're interested in how it's perceived in a setting with dispersed teams and dispersed members like you have at IKEA if I understood it correctly.	
3	RTE	Hm hm. Okay.	
4	L	So, our first question is… ehm, is… that you please tell us a bit about your role and how long you have been working with SAFe.	
5	RTE	Okay. So, I am a Release Train Engineer. At IKEA, it's actually called Delivery Manager, but it's the same thing. And I started in IKEA in that role in August last year. So that would be nine months or something like that maybe. Ehh… I have worked with SAFe since 2013 where I worked at Ericsson before where I drove the transformation to SAFe. We didn't really know it was SAFe when we started because SAFe was just coming up at the same time. So we were basically scaling up agile and then we realized that there was a method called SAFe that we could steal things from, so… and I was part of driving that transformation. And then I also took a role as a Product Owner or Product Manager… ehm… in that organization. Ant then when I started at IKEA I also had a role more as a Product Manager in a smaller team, so I have tried some different roles.	

6	L	But not at the same time?	
7	RTE	Not at the same time.	
8	L	Okay.	
9	RTE	And then I am a SPC… SAFe… So I have been given a lot of training as well. Different courses and so on.	
10	L	How many teams are working with SAFe? And how are they organized?	
11	RTE	Here at IKEA?	
12	L	Mh.	
13	RTE	I actually don't know for the full IKEA. In the Multichannel program… in my Release Train we have 8 teams and then there is another Release Train called SOF and they have I think something like 10 teams and then outside of that I am not really sure how many… like, that are really doing SAFe.	COND-LEV-PROG COND-LEV-VALSTR
14	L	So, at the Multichannel area, are they in Helsingborg or where else are they located?	
15	RTE	Eh… in my train, the majority are in Helsingborg, but there are also… there is one team that is in London.	COND-LEV-PROG COND-LEV-TEAM
16	L	Hm hm.	
17	RTE	And there is one team that is mainly in India, but we have actually three people from that side in Helsingborg. So, they are all from India, but some of them are here, just to make the collaboration. They started off being in India and it was really difficult to get it to work. The collaboration with the other teams was not working at all. And the trust between teams was really low. But now, we have actually the Scrum Master and two team members in Helsingborg and then the rest of the team in India, and now it works really well, so that really helped. And the team in London, we have three people from London in Helsingborg every week and they have a rotating schedule so that	CHA-VT-TEAMDIV COND-LEV-TEAM

		there is always somebody from that team in Helsingborg.	
18	L	Okay!	
19	RTE	Yeah. We have found that it's difficult to have teams that they are completely in another side.	CHA-VT
20	L	Hm. Why?	
21	RTE	Because so much of the communication and collaboration is face-to-face. We are lucky, because we are all sitting in one of those corridors or the next floor here. So, people walk around and talk and sort things out and then it's easy to forget about those people who aren't always here, so they don't always get all the information, maybe. Ehm… It takes longer when you have to send a mail and then wait for an answer and… yeah.	CHA-LGSCA-4 CHA-VT-COMM CHA-VT-TECH
22	L	No, we understand. What is SAFe in your opinion? And what is the purpose of SAFe at IKEA Multichannel area? So how, would you define SAFe?	
23	RTE	Ehm… well, if we assume that, if I don't have to explain what agile is…	
24	L	No! *(laugh)*	
25	RTE	*(laugh)* So, I mean, I believe that working in an agile manner and an agile team is really… if you have done it once, that's how you want to do it. But if you have a big organization, you need to have a structure hot to get a number of teams how to work towards the same goal and have a framework for how to… how to collaborate and how things to have and how to make decisions. And SAFe provides that framework. So, instead of coming up with your own, you can just follow SAFe because they have thought about things, I mean they have, yeah, what roles do you need? What meetings should you have? How do you work with features and prioritization? And, eh…	BEN
26	L	Okay. So, it gives you structure.	

27	RTE	It gives a structure.	
28	L	Thank you. Okay. Then we go on to some questions about the SAFe levels. We would like to ask some specific questions to that. Do you apply… so, we have the team level, from the literature, the program level, the value stream level and the portfolio level, you are familiar with these levels, right?	
29	RTE	Yeah.	
30	L	Do you apply the team level?	
31	RTE	Yeah yeah. Sure.	COND-LEV-TEAM
32	L	And what is the team level in your opinion?	
33	RTE	Eh… it's the Scrum teams.	COND-LEV-TEAM
34	L	Okay. And are you applying Scrum, or Kanban, or Extreme Programming, or a mix?	
35	RTE	Probably a mix. It's actually left to the teams basically how they want to do it. They have to participate in the big room planning and so on. I think the teams mostly use Scrum. Eh… but there might be some teams that have more like… Scrumban.	COND-LEV-TEAM
36	F	So it's possible that the different teams use different types of methodologies?	
37	RTE	Yeah, but they have… even if they have… they do…. Pure Kanban would be difficult because we expect Sprint Planning, for example, so… But I think if they do a mix, Scrumban or something, eh… then I think it's possible. But you have to then agree on what the expectations are from the rest of the train.	CHA-LGSCA-5
38	F	So you haven't seen any problems with different… caused by different methods in different teams?	

39	RTE	Not as long as you are agreeing on what you have to do in the same way.	CHA-LGSCA-5
40	L	Okay. So then, if you achieve the goal, it's most important?	
41	RTE	Yeah.	
42	L	And not how?	
43	RTE	If you do Sprint Planning, so you always… you, you plan the Sprint and then you are able to predict what you are going to do, then you are not doing Pure Kanban, but that you probably would have to do, because otherwise it is difficult to meet the expectations from the other teams.	COND-PRI-7
44	L	And what kind of activities are you having related to the team level? So you are having Daily Stand-Up Meetings?	
45	RTE	Yeah.	COND-LEV-TEAM
46	L	Are there any other activities that you would say that are…?	
47	RTE	Sprint Planning, and the Sprint Demo, and the Sprint Retrospective.	COND-LEV-TEAM
48	L	So, these typical from Scrum, you all apply that. And are the members within a team co-located?	
49	RTE	No, not always. So actually, I forgot before, because there are… there are some teams that… one team that has a few people in Egypt and I think there is some team that have people both here and in India. So, I think some of the teams aren't co-located. Actually. Yeah.	COND-LEV-TEAM
50	L	What is your overall experience with working with the team level? So, about the roles, activities, events…? How much are you involved in the team level?	
51	RTE	I am not very involved in the team level. Scrum Master is my interface. I wish I would have more	COND-LEV-TEAM

		time to visit the Daily… and so on, but I don't really have time for that. So, I more meet the Scrum Master at Scrum of Scrums and get information basically.	
52	L	So, now we come to the program level, that you also apply. And, what is the program level in your opinion?	
53	RTE	Eh… well… that's the… for us, that's the organization that we are in, so we are an Agile Release Train. So, the program level is the level that provides the structure that everybody can collaborate around the same goals. And we also release together. I mean, we plan all the releases together. And the releases are quite challenging, so.	COND-LEV-PROG COND-PRI-2 BEN CHA-LGSCA
54	L	So, and which roles do you see as key roles on the program level?	
55	RTE	Ehhh… it's Release Train Engineer, Product Manager, and we have the Architect, and then we also have the Release Manager, which is kind of vaguely defined in SAFe, but that's a very important role as well. So that what I think are the main roles.	COND-LEV-PROG CHA-SAF-SHO
56	L	And we were wondering, are you doing the activities PI Planning?	
57	RTE	Yeah.	COND-LEV-PROG
58	L	Inspect and Adapt workshop?	
59	RTE	Yeah.	COND-LEV-PROG
60	L	And Program Kanban?	
61	RTE	Yeah. Or the Program Board. Not really the Program Kanban, but the Program Board. Do you know the difference?	COND-LEV-PROG
62	F	Not sure.	
63	RTE	So, in the Program Board, which we do at the Big Room Planning, I can show you when we walk up, it's eh… we have on the whole wall… the features map out what… oh, sorry. The teams map	COND-LEV-PROG

		out which features they deliver within each Sprint. So, we do that during the Big Room Planning. So, it's basically the whole plan on the wall. And then we use that to follow up show where are the dependencies between the teams. I'll show you on the way out. I think you should see that.	COND-PRI-6 COND-PRI-7
64	L	Okay! And do you think that these activities help to manage the workflow?	
65	RTE	Yeah. Absolutely. But then I think that it's one of the… when you become a more mature organization maybe you don't need the third-week cadence, maybe could plan in an even more continuous manner. But then you have to be pretty mature agile organization.	COND-LEV-PROG BEN-PROD
66	L	How does it look… ehm… when you have this… Kanban Board and you collaborate with people who are located at a different location?	
67	RTE	So, we try to use different tools. We use Realtime-Board. This is one tool that we use in our Scrum of Scrums to visualize what each team is working on. And then we use CLM which is an IBM tool for working with the Backlogs and so on. And lately, we have… because we use our boards on the walls so much, we have… we started to have video conferences on one of the phones, so that they can be part of the discussion and see the board as we talk about where we are with the different features. And that's actually kind of our Program Kanban I think. We are looking at them and we have that as well. I will show you.	COND-LEV-PROG CHA-VT-TECH
68	F	And do you feel like these approaches work well?	
69	RTE	Eh… no. Not really. *(laugh)* It's as good as it gets. It works much better when people are all in the same place.	CHA-VT-COMM CHA-VT-TECH
70	L	Mh. Eh… how many Agile Release Trains do you have here?	

71	RTE	Ehm… well, so I think we really have two in IKEA, but I think there are more starting and I don't really know exactly how far they have come.	COND-LEV-PROG
72	F	Do you have any dependencies between the two trains?	
73	RTE	Yeah. We do. So that's why we have… So that is actually when the value stream comes in. So, we have the Big Room Planning kind of separate but at the same time so that we can handle dependencies. We have weekly, various different weekly meetings between the trains.	COND-LEV-PROG
74	F	So, would you say that it's a challenging environment to deal with those dependencies between the two trains? Or do you feel like working smoothly as is?	
75	RTE	Eh… it's working fairly smoothly between the two trains. They are also here in the same house, so that is working fairly well. But we also have dependencies to other systems in IKEA that are not agile. And that is much more difficult because they have a different way of planning and eh… they don't talk about features, and eh… that's more difficult.	COND-LEV-PROG CHA-LGSCA-6 CHA-LGSCA-7
76	L	Okay, so you see, when I understood that right, the Agile Release Train in the program level but also on the value stream level. So, you apply the value stream level?	
77	RTE	Yeah.	COND-LEV-VALSTR
78	L	And do you apply the portfolio level as well?	
79	RTE	No. Not yet.	COND-LEV-PORT
80	L	Okay! Why not?	
81	RTE	Well, I think that's the aim for IKEA to do that, but it's taken really long time for other organizations to start so… the Multichannel is kind of a value stream and eh… there aren't any other trains that coordinate to that so there is no need for the portfolio level at the moment. I mean, you need	COND-LEV-PORT CHA-LGSCA-6

		the portfolio level if you have many more organizations that are working agile.	
82	L	You don't apply it because there is no need for it.	
83	RTE	Well, I think it would help… I think they tried but it is not working.	COND-LEV-PORT
84	F	So, because the portfolio level is also about strategy and investment…	
85	RTE	Yeah.	
86	F	So, if you don't have the portfolio level, who is currently in charge of the strategy and the investments you do?	
87	RTE	So, the value stream or the program here. I mean, we are to a large extend working towards the objectives and the goals of the program, and the program has a budget that, like… they give out to the different systems involved. Systems or trains, so, so in some sense, the value stream acts as a portfolio level. But if you look at IKEA, the full IKEA enterprise, the portfolio level should be one level above because there is much more than you would… yeah. But we were not really working… but it isn't really working like other… we were not really working with the investments and the budgets in the 'SAFe way'. So, there is much more that we could do on that level.	COND-LEV-PORT COND-PRI-1
88	L	How much would you say you know about the different role and the responsibilities they have?	
89	RTE	I think I know a lot about them. *(laugh)*	
90	L	*(laugh)* And was it easy to understand SAFe and the SAFe levels and work according to them when you started learning SAFe?	
91	RTE	Ehhhh… nooooo… I think, it's… it depends how experienced you are with agile, I mean, the whole mindset is different. For example, in my role it's easy to… people outside expect me to work more as a project manager and control things and track things and tell people exactly what to do. But that is not the role of a Release Train Engineer. I	COND-LEV-PROG CHAL-LGSC-3

		should be more like empowering everybody and making sure that they have the support.	
92	L	How did you learn it? Did you have a coach how to be a RTE?	
93	RTE	Yeah, yeah, kind of a coach, but I think… I read books and looked, I mean, visited other organizations and… well, I was in a group of people where we kind of, like, discussed a lot and coached each other and… yeah.	
94	L	Do you think SAFe is beneficial for the IKEA Multichannel area?	
95	RTE	Yes.	BEN
96	L	What kind of benefits do you experience while working with SAFe?	
97	RTE	Ehm… I think that people working in an agile way are much more happy in general because they are… they feel more trusted and take more decisions themselves.	COND-PRI-9 BEN-SAT
98	L	So, their own satisfaction. And do you feel like you also think it's beneficial towards the customer?	
99	RTE	Eh… yeah, when it's done in the right way I think it is because you have a much closer continuous discussion about what they need. It's a much bigger chance that the customer actually gets the things they need and you don't spend a lot of time in the beginning to write a lot of requirements and documents but you get feedback continuously and you can adapt if the customer has new requirements and new ideas, you can quickly change. It's much more difficult when you work in a traditional way.	BEN-SAT BEN-TIM COND-PRI-4
100	L	Do you think it's also beneficial in terms of time? Does SAFe save time?	
101	RTE	Ehhhh…	
102	L	Or does it even take more time to reach a goal?	

103	RTE	No, but I wouldn't say it's… well, I think, the chance is that you do the right things much greater and create what the customer asks for when you do SAFe, I would say.	BEN-TIM BEN-QUA
104	L	So it's the quality.	
105	RTE	The quality and… the predictability, maybe. I mean… But I'm not sure that is faster. If you have perfect requirements from the beginning, then maybe it's faster to work in a traditional way but that never happens in reality. There is always changes along the way. And then… it's much easier to react to the changes if you work agile or SAFe.	BEN-QUA BEN-TIM
106	L	Do you feel like the IKEA Multichannel area is truly agile or is it just on paper?	
107	L + RTE	*(laugh)*	
108	RTE	No, I think… the Multichannel Delivery Area or the Multichannel program? Because it's different. The… No, I think we are not truly agile. Because we still have, as I said, many other systems that are not agile so we always have to adapt a little bit so we can… and also our stakeholders are not agile yet, so we have to…	CHA-LGSCA-6 CHA-LGSCA CHA-LGSCA-7
109	L	The Multichannel area also? Or you mean IKEA?	
110	RTE	The program… Those organizations that the program are delivering things to are not agile, so, so we are somewhere in between. I mean, we are really trying to be agile, but we don't have all the tools and… there are a lot of reasons why we are not truly agile.	CHA-LGSCA-6 CHA-LGSCA CHA-LGSCA-2
111	L	Now, we come to the challenges, so… what kind of challenges or issues are you currently experiencing when working with SAFe?	
112	RTE	Ehm… Well, the one, the biggest challenge, what I just said is… that the env… the surroundings are not working according to SAFe. So, they have different expectations than me. I really want to be an	BEN-SAT CHA-LGSCA-6

		Agile… in SAFe, they call it the Servant Leader, and that's how I want to work. But there are different stakeholders that work more in a traditional way which I don't… at all want to… I don't feel happy about that, but I have to do it. That's a challenge. And then, another challenge is more on a technical level… is that, if you work agile, you want to deliver your results continuously in small chunks, but we don't really have the tools who support that, so we develop a lot of things, a lot of software, and then we have to wait for a long time until we can release it and that creates problems and frustration because then we don't get the fast feedback that we wanted to. Eh… that's a learning… you should read about agile and SAFe, it says that usually one of the people that have done the transition have learned that one of the first things that you should make sure you have a continuous integration and a continuous development… eh, employment chain.	CHA-LGSCA-2 BEN-TIM CHA-LGSCA
113	L	Do you feel like the dispersed team members are a big issue when working with SAFe?	
114	RTE	Ehhhh… no… I mean, it makes it more difficult, but I think it's probably more challenging if you have people onboard that don't want to work agile.	CHA-VT
115	L	Okay!	
116	RTE	If you have the right people, then it works, even if it's dispersed. But of course, it's easier if everybody is in the same site.	CHA-VT
117	L	Now we just need some quick anRTEers for some quick questions. Would say that there is still some scepticism among members, or that SAFe and agile way of working is part of the members mindset?	
118	RTE	I am sure there is some scepticism, but probably more outside of the train than in the train.	CHA-LGSCA-1
119	L	Mh. So, outside of SAFe? Or in the company?	

120	RTE	Well, so, when I say the train, then I mean my 8 teams basically. I think, most of them that have started to work… I have never heard anybody who is questioning it, but all the people around that haven't understood it are sceptical.	CHA-LGSCA-1
121	L	Do you feel like the management invested enough to support SAFe? Like trainings?	
122	RTE	Ehm…	
123	L	Or could that be more?	
124	RTE	Ehm… I think management themselves need to take more time to take training. *(laugh)* Yeah, it's more like that, I think!	CHA-LGSCA-2 CHA-LGSCA-6
125	L	*(laugh)* Do you feel like you need to make more documentation than SAFe advocates?	
126	RTE	Ehm… yes. But SAFe isn't really clear about what documentation we need or not.	CHA-LGSCA-DOC
127	L	We understand it as it's less focus on documentation and more just exchanging.	
128	RTE	Yeah. But yeah. But you still need some documentation. But much, much less than the traditional ones.	CHA-LGSCA-DOC
129	L	Are there any coordination or communication difficulties between different teams or members?	
130	RTE	Yes. Always, I think. Independent of what you… what you do.	CHA-LGSCA-4
131	L	Is management adhering to an agile way of working too?	
132	RTE	No.	CHA-LGSCA-6
133	L	No. Are you feeling any difficulties in terms of interacting with other functions at IKEA?	
134	RTE	Yes.	CHA-LGSCA-7
135	L	Do you feel like the problems or issues emerging in Retrospectives get dealt with afterwards?	

136	RTE	Sometimes. It's not always easy to keep the focus on that.	CHA-LGSCA-RETRO
137	L	Is there anything in particular that you would like to change or that you feel like nothing is working as is? Any show-stoppers when working with SAFe?	
138	RTE	Not related to SAFe, no.	
139	L	Does SAFe have any drawbacks/shortcomings according to you?	
140	RTE	Well, it doesn't really describe the latest stages of development, how to release and how to… it's very focused on the earlier stages of the development chain.	CHA-SAF-SHO
141	L	Okay. Now we come to our last closing questions. And during your time here, have there been any specific changes made towards a SAFe approach?	
142	RTE	Yes, there are some things. There is an IKEA version of SAFe that we are following. Ehm… the names of the roles are slightly different. Ehm… we have made some changes… I have actually been part of it, but now I can't remember, now I am so used to it. *(laugh)*	
143	L	*(laugh)* Okay.	
144	RTE	Maybe no, maybe not, we are actually kind of following SAFe pretty close. We have just re-named some things.	
145	L	Okay. So just more the names. And that you don't have the portfolio level. What is your overall opinion about SAFe? Do you enjoy working with SAFe?	
146	RTE	Yeah, yeah, absolutely. Yeah.	BEN-SAT
147	L	Is there anything you would like to add? Or anything, you would say like it's… from your experience when working with SAFe?	
148	RTE	I think… I think, the most important thing… The danger is, that's what kind of happening at IKEA	CHA-LGSCA-1

		is that we follow the framework and that's everybody understood how to do things. But SAFe is a lot about the mindset and the culture. And that is much harder to get everybody to understand that. And that's when we say management. Many of them have understood SAFe. But they haven't really understood how they need to change their way of acting.	CHA-LGSCA-3
149	L	Do you feel like there are differences with the different locations when adopting to the culture to understand SAFe? That it's maybe more difficult for people in India applying SAFe than here in Helsingborg? Because they also have a different culture?	
150	RTE	Yeah, I think so. Yeah. (pause) Probably. Yeah. I mean this is about empowerment and it's more difficult in some cultures.	CHA-VT-TEAMDIV
151	L	In which cultures would you say? You said you are in Egypt, in India…?	
152	RTE	I haven't actually been there enough to be able to say. I think that they expect their manager to take much more decisions for them. And in SAFe you really want all the team members to take decisions themselves and I think, that's it.	COND-PRI-9
153	L	Then, we would like to thank you a lot.	
154	F	Yep. Sorry, we went over three minutes.	
155	L	Thank you so much!	
156	F	Thank you so much!	
157	L	Thanks. I think you covered everything in your questions. *(laugh)*	

Appendix C: Interview transcript 2

F = Fredrik Hoffman

L = Lou Hinterberg

LM = Line Manager

Section	Person	Text	Code
1	F	So, just some background. What we are doing is, we are looking at how SAFe is perceived in a setting where you have different… you have dispersed teams and also dispersed members because we think that this is a very interesting setting to look at. Ehm… so we have some questions we would like you to answer… ehm…	
2	L	But first of all, would you like to stay confidential? Can we mention your name?	
3	LM	Yeah, you can mention my name.	
4	L	And we can record?	
5	LM	Yes.	
6	L	Thank you.	
7	F	Let me start.	
8	L	Then, first of all, please tell us a bit about your role and how long you have been working with SAFe.	
9	LM	Yes. So, I have been working with SAFe for a year almost to the day now. First of May. Before that I have just heard about it, not worked with it. Eh… My role is Line Manager for the people working within an Agile Release Train. So eh.. yeah, you can say the Resource Owner or the Line Manager for the ones. I don't have a specific role in the SAFe model as a Delivery Manager or a Release Train Engineer.	

10	L	Hm… and is it, is the Line Manager special at IKEA or is it…? Because you… changed SAFe in a way?	
11	LM	No, but I don't think… I don't know how other companies do it, so, as I haven't worked, but in all settings I have been involved in [name of a different company] before where we have worked with agile methods, but not with SAFe. There was always a Line Manager responsible for the people and you had the project dimension, so yes, you can say SAFe is… so in that sense, no we had not adjusted SAFe or anything, it's just the matter that SAFe is not part of it. Maybe I am more part of the Agile Release Train Manager, maybe the… yeah…	COND-LEV-PROG
12	L	Mh. Mhhhh… Please tell us a bit about the IKEA Multichannel area and what it is that you are actually creating. What is your product?	
13	LM	We are delivering the e-commerce solution for IKEA. In this Agile Release Train, we are releasing the web solution.	COND-LEV-PROG
14	L	Hm hm.	
15	LM	And the we have another Release Train delivering the order handling and the order fulfilment parts.	COND-LEV-PROG
16	L	How many teams are working with SAFe? We have heard there are 8 teams?	
17	LM	In this, in this train. And then I think that there are 9 or 10 or something in the other train.	COND-LEV-PROG
18	L	In the other train. Hm… and how would you say that they are organized? We have heard when talking to Sofie before, most of them are located here?	
19	LM	Yes.	
20	L	But also in between the teams, the members are sometimes…	

21	LM	Yeah.	
22	L	… located …	
23	LM	It's different. And actually we are redoing the teams at the moment because we want… The target is to have one team on one location but then the whole train… we have different teams on different locations, so… going forward, if we look at how we set it up. We will have two teams that we, we call co-located. And one team will be on three locations and one team… the other one will be on two locations and then the rest will be on the same locations.	COND-LEV-TEAM
24	L	Okay, so you are planning to do that?	
25	LM	To do that, yeah.	
26	L	But why?	
27	LM	Because the… the… the communication around it is so much easier when being on the same location. So today, or when we started a year ago, all teams were spread out all over and, yeah. So that's the reason.	CHA-VT-COMM
28	L	What is SAFe in your opinion? And what is the purpose of SAFe at IKEA Multichannel area?	
29	LM	SAFe in my opinion is agile on steroids that's quite heavy, and I do not recommend it for any company that has LMall… eh, a few agile teams, but for large-scale enterprise I think it gives you the structure.	BEN
30	L	Now, we come to some very quick questions. Do you consider costs or do you take an economic view when conducting your tasks?	
31	LM	Yes. That's in the core value of IKEA.	COND-PRI-1
32	L	Do you feel like there is a common goal between the different teams and that there is a shared overview of the big picture, or are the teams working in silos?	

33	LM	The teams within one Agile Release Train have one common goal of what we should do. There is one Product Manager, there are defining what is the priority so we have to follow that. The PIs. If you talk about different Capability Area or Agile Release Trains… we change the words, so that is why I sometimes say Capability Area and that is Agile Release Train.	COND-PRI-2
34	L+F	Ah!	
35	LM	Eh… We have different… eh… then, there might be different priorities between…	CHA-LGSCA
36	L	Do you feel like the teams are still open for changes after agreeing on a requirement or an approach?	
37	LM	The teams for sure. Yeah, they are.	COND-PRI-3
38	L	The teams? Is there someone who is not open for changes?	
39	LM	Yeah, I think… ehh… if you say SAFe on the different levels, I think the program and the epic are quite: "We have set this now."	COND-PRI-3
40	L	Okay, that's interesting! Do you receive quick customer feedback? And who is the customer?	
41	LM	For us, the customer is always the person buying something at IKEA. That's my interpretation of it. And getting quick customer feedback would be one, to understand that e-commerce is not working, then we get feedback about that, but do we get feedback if they do like the features that we have created and delivered? Note that we only see it in the sales figures, I guess. So if we do something good and the sales figures go up. That's how we track them.	COND-PRI-4
42	L	Do you have frequent milestones when you evaluate the solution with the customer together?	
43	LM	Eh… yeah. You can say that the system demo we do on the solution. No, not the end-customer, it's	COND-PRI-5

		not part of that. It's the Markets we have. No. Eh… No, then.	
44	L	Do you visualize your work in progress, also to other teams? And do you experience work overload often?	
45	LM	Yeah, we have a lot, yeah, we have too much things to do. And how Sofie explained, we visualize it quite a lot and I can show you upstairs.	COND-PRI-6
46	L	And… do you feel like there is an efficient planning of people and resources?	
47	LM	It could be better. I think, even if yes, we have a, as I said, IKEA now is a big enterprise of scaled organization meaning that there are quite a lot of people, so we could be more efficient for sure.	COND-PRI-7
48	L	What is your motivation to work on the project or to work, and what drives you in your line of work?	
49	LM	So, my motivation is the product we are doing, in terms of IKEA and actually, the IKEA website then. And being part of something that is that big and affecting that many people.	COND-PRI-8
50	L	Do you feel like the management trusts you and other workers and do they let you make decisions independently?	
51	LM	Ehm… *(pause)* Often, the management trusts us, yes. Eh… I feel like in this SAFe, we have, I think, a lot of decisions that need to be taken on a step above me, meaning, yeah, we are not able to take all the decisions we want.	COND-PRI-9
52	L	Hm. Okay. And the management is not working in an agile way, right?	
53	LM	Exactly. Eh, it could be that… IKEA, if going through a transformation that are going to agile, this is only one part of it that is, but in the totality, in the portfolio when we are working within IT at IKEA it's not agile, I think.	CHA-LGSCA-6

54	L	Ehm… now, we come to the different levels. So you apply the team level, for sure. What is the team level in your opinion?	
55	LM	So, the team level is the different teams we have in an Agile Release Train.	COND-LEV-TEAM
56	L	And you are applying mostly Scrum that we have already heard? You also apply Kanban?	
57	LM	Yes, some teams are using Kanban.	COND-LEV-TEAM
58	L	Extreme Programming as well?	
59	LM	I don't think so. Not heard of it. I think they tried but they don't utilise it.	COND-LEV-TEAM
60	L	Okay. Ehm…	
61	LM	So, we have set more in terms of… the structure we have is more in terms of PIs and having Sprints, at least 3 weeks Sprints. That's the structure that we have set now. Then, the methods that they use is up to the teams.	COND-LEV-PROG COND-LEV-TEAM
62	L	Does it cause any problems because they work with different agile methods?	
63	LM	I would not say that. I would say that… No, I wouldn't say that it causes any problems.	CHA-LGSCA-5
64	L	Okay. What kind of activities are you having related to the team level, you would say? You have Daily Stand-up Meetings?	
65	LM	Yes, Daily Stand-up, Scrum of Scrums is also there, and then something we call "Feature Board" which is where all the Product Owners from all the teams meet and discuss the priorities between them. The totality of the Backlog. Ehm, what do we more have… eh… yeah, and then we have the Big Room Planning, we call it, PI Planning, where all them meets, the System Demo, the Retrospective, and Inspect and Adapt.	COND-LEV-TEAM COND-LEV-PROG
66	F	But these different activities, they are just to the team level? Or…?	

67	LM	No, so okay… No, for the System… Okay, mostly I noticed now in the end is of course on the ART level, the train level.	COND-LEV-PROG
68	F	Yeah. Okay.	
69	LM	That's the Scrum of Scrums as well. But the teams have their own Retrospectives of course, and their Sprint and their Planning and so on.	COND-LEV-PROG COND-LEV-TEAM
70	F	I'll just put it to the team… program level.	
71	L	PI? Isn't that program level?	
72	F	Yeah.	
73	LM	Yeah, PI is where all the teams…	
74	L	So what is the program level in your opinion?	
75	LM	Yes, the program level is then… I don't know the fact but I am assuming that is the Agile Release Train and that is where we combine a lot of teams and also having multiple levels meaning that in our case, the Agile Release Train is the full we call it. And eh… we have 8 teams and those teams together have this PI Planning and we have a Demo Retrospect and so on.	COND-LEV-PROG
76	L	Which roles do you see as key roles on the program level?	
77	LM	So it's the, we call it Delivery Manager, but the RTE is the important one. And the Product Manager holding the backlog of the principality of that train. I would say that those two, together with the Architect.	COND-LEV-PROG
78	L	Okay, and here, they are all located in Helsingborg?	
79	LM	So, the Product Manager is located in Malmö, but he is here three days a week. Tuesday, Wednesday, Thursday this year.	COND-LEV-PROG
80	L	Hm-hm.	

81	LM	That's how we do that.	
82	L	But otherwhise you also have to contact him when he is in Malmö but it's much easier when he is here?	
83	LM	Yeah, it's of course. So, we have those meetings where it's good to be face-to-face. We have them on those days. And then the rest is taken on phone.	CHA-VT-COMM
84	L	And that works well?	
85	LM	Yeah. That's working well. We are working in an environment where a lot of us… in Sweden at least, we have kids, we pick up early, so a lot of times, it's also on phone or something, so someone is sitting at home.	CHA-VT-TECH CHA-VT-COMM
86	L	So, you're doing the activities PI Planning, Inspect and Adapt workshop, and Program Kanban?	
87	LM	Yeah. Yeah, Program Kanban, I don't know. We call it value stream.	COND-LEV-PROG
88	L	Value stream? So it's on the value stream level?	
89	LM	No, we call it our value stream, but it's on the… there is a value stream level as well.	
90	F	Yeah.	
91	L	And do these activities help to manage the workflow, you would say? What's your overall experience?	
92	LM	These activities put the structure in what we need. Combine all of this, so as I said, I worked in agile companies before with development, and we have had for a large [inaudible] scale, eh… but I think SAFe, being at SAFe, it gives us a structure, combine these and get it.	BEN
93	L	And the structure also helps you to manage the workflow?	

94	LM	Yes! And it helps us working with people that are on other locations. We know about these ceremonies that we have and then where we meet up and so on.	BEN BEN-PROD
95	L	Hm… Can you tell us very briefly how the PI Planning is done?	
96	LM	Yeah, eh… basically, we gather everybody, but everybody is wrongly said, because we still keep people where they are, we don't fly them here from India. So, we bring everybody together. The gathering starts with information on where we are going, the PI objectives, or the whole totality, if we change anything in terms of how that affects the next coming Sprints and so on. That information, release information. And then the teams break out and start do their planning, identify the dependencies, start to work out the dependencies with the other teams. And then we do in the middle some checkings how it's going, how well we are with the risks we identified for this PI and then we go through them and then we do break out again and then in the end, we do our final review: where are we?	COND-LEV-PROG BEN
97	F	And then, sorry. And then, the people you don't fly in, from India for example, they join in through video or just audio?	
98	LM	Just audio I would say. In the big session in the beginning they join audio and Skype so that they can see what we are presenting.	CHA-VT-TECH
99	F	Yeah.	
100	LM	Then in the team breakout they have their phone and they have them actively on the phone. But it's, I would say, [name of Scrum Master 1] who will be there later will explain that better because he has been sitting in India while we had a Big Room Planning here. He has been here now while his team is sitting over there. I would say it's quite bad experience sitting at the other side of the team here for the planning. But he can explain that better.	CHA-VT-COMM CHA-VT-TECH

101	L	So then it's usually just one person who is somewhere else or are there some?	
102	LM	No. I think in India, so for his team, it's like we are three people here and there might be like 7 in India.	COND-LEV-TEAM
103	L	Okay!	
104	LM	So on the Big Room Planning few people here and the rest are in India. And then in some other teams it could be that 8 people are here and only one on the phone. That could also be the case. We have more in London. So, from London, we fly in more people because it's closer, so in the beginning in the Big Room Planning let's say there are 10 here and maybe 10 in London. Yeah.	COND-LEV-PROG
105	L	And when you do this PI Planning, you have those checkups you said with the teams, did you already tell before when you meet and checkup or…?	
106	LM	Yeah, so the schedule is on the Big Room Planning or PI Planning is set like. To today, we do a checkout to see where we are today and how much we have left. And then we do plan that, okay. And tomorrow morning at 9, we have the review and so on.	COND-LEV-PROG
107	F	How, how long… or how much in advance are there like Big Room Plannings or PI Plannings scheduled?	
108	LM	Eh… if you ask us now, because we haven't send out the invite for the next one, then it's in end of May. But usually it's like sent out two months in advance.	COND-LEV-PROG COND-PRI-7
109	L	And are you still flexible when you realize that you need more checkups, or…?	
110	LM	Yeah, I think, the last times we have had like, okay, we have to skip this, because the teams are not ready, they haven't finalized the dependencies, but everytime we do a PI Planning, we also do Retrospective, right, so we learn, that we, okay, next time, we do it like this. So we have adjusted a	CHA-LGSCA COND-LEV-PROG

		bit, I would say. It's like the 11th, we are doing now, so… PI 11 is the one we are planning. We are in the middle of PI 10 now. So we have done it 10 times already. It should be better. Yeah.	
111	L	How long is it usually?	
112	LM	The planning, you mean? Or a PI?	
113	L	Yeah.	
114	LM	A PI is 12 weeks. So it's quite long. 4 Sprints.	COND-LEV-PROG
115	L	And you have two Agile Release Trains?	
116	LM	Yeah.	COND-LEV-PROG
117	L	And do you feel like there are dependencies between each other?	
118	LM	There are a few dependencies, yes. So that's why we have the PI Planning together. So we have the PI Plannings the same days with both trains which is quite a lot of trouble to get everything organized. Yes, that's the intention. We have the planning the same day. So if there is dependencies between the trains we can sort them out as well.	COND-LEV-PROG CHA-LGSCA
119	L	Okay.	
120	LM	But that has not always been the case. I think in the past we had a couple of different days or so on. But it's not the most… I mean, the dependencies to the other train is not the heavy part. It's between the teams.	CHA-LGSCA
121	L	Between the teams. *(pause)* What is your overall experience with working with the program level? With the roles, with the activities, with the different events? Does everything work well? Do you feel very involved in the program level?	
122	LM	Yeah, I am involved cause I have people in the whole train meaning that I am involved in that level, not in the team level. So I think I fit well in there. I don't, as I said, I don't have a role in that SAFe context, but I work really close with Sofie	COND-LEV-PROG

		and the Delivery Manager as she is operational responsible and I am more line and competence responsible to make sure that she has the people she needs in the train.	
123	L	Ah, you are kind of her manager?	
124	LM	No, not in a sense, because that is… She, she is delivery responsible and making sure that what we committed to deliver what she needs to utilise the people I have line-wise, so I need to help her to utilise the goals. So she could easily come to me and say: "This team is not performing right." And then, if there is a competence gap, I can, I should be able to…	COND-LEV-PROG
125	F	Sounds a bit like HR.	
126	LM	HR, but more part of the Agile Release Train, meaning that, for instance, I am now when redoing the teams, I am heavily involved in setting up on what is the team structure and way of working I would say. Maybe even if it's a Delivery Manager's operational focus in terms of "We should change the way with the testing", that is much coming from me, and that aligned organizational change.	COND-LEV-PROG
127	L	Do you apply the value stream level, which is optional?	
128	LM	Yes.	
129	L	And do you experience it as needed?	
130	LM	Oh, eh… For me, value stream level is between the trains having both trains there. And, I would say, Sofie has more answers on that. I am usually not involved in that level. So, guessing, it is needed, because we have had features where we had one part in our train and the other one in the other train. We had different priorities in the… so what are we supposed to do, the delivery, it was a total chaos, because we pushed it to get it out, and the others where like "no, we have other priorities,	COND-LEV-VALSTR CHA-LGSCA

		we won't do it", and we did not get the value out to the customer.	
131	L	Do you apply the portfolio level?	
132	LM	Yes, I think we do. I am rarely there and in that sense, so to say. But yes, there is… I am guessing that there is more to the totality what we want to do in… in the Multichannel area. Because there are more parts of… Because now we are more running SAFe, but there are more parts of the delivery of Multichannel that only is for Agile Release Trains and they are covering that.	COND-LEV-PORT
133 (25: 44)	L	So, would you say that the portfolio level helps to support the organizational strategy of IKEA?	
134	LM	(pause) Yeah… I don't really know… I mean… I don't see it that much, so I maybe don't tell.	COND-LEV-PORT
135	L	Hm hm. How much would you say you know about the different roles and the responsibilities they have? On the different levels?	
136	LM	On the different levels? I mean, I know about… as high as I can go is the Epic Owners and I understand their role. And then down to the… if you are taking the requirements I have, I think, Product Manager, Product Owner, I understand the architecture, so I would say, most of them. I have done this SAFe certification, so I am certified, but I am pretty sure I don't know all the roles and the responsibilities.	
137	L	Was it easy to learn and understand the SAFe levels? And work according to them?	
138	LM	Eh… I was started one year ago, so then they had done 5 or 6 PIs already, so that was easier than to start it up. At least to a sense where people around me knew everything around SAF I had a hard time understanding the different levels. Definetely. But, one year in, I would say it's quite understandable.	CHA-LGSCA CHA-LGSCA-3
139	L	Did you have some Agile Coaches or SAFe Coaches here at IKEA? Or would you just say…?	

140	LM	The Agile Coaches we have do not teach us SAFe. They try to teach us on the team level how we run more agile. So SAFe is more the method we choose to scale it and do it in a bigger context. So, we have people doing introduction. As soon as you start in this organization, you need to go to a two day SAFe education.	CHA-LGSCA-2 COND-LEV-TEAM
141	L	All the teams that work with SAFe? All the members?	
142	LM	All the members.	
143	L	From the Multichannel area?	
144	LM	Yeah. That's how it's set up. So everytime we onboard someone, they should go through the SAFe education. And then, that's… *normal* SAFe education you do a certification. However, we have the teachers in-house, so they do a special training for us. And then everybody can do a certification if they want.	CHA-LGSCA-2
145	L	And do other team members, I mean team members that are located in London or India, do they get the same education?	
146	LM	Eh… no? Most likely not. Eh… at least we say… for example, we work together with consultant companies, we have them outsourced, not that we have IKEA employees in India or in London in this case, so… Then we usually ask the consultant firm to make sure to ask them have onboarded people with SAFe knowledge. In other ones, they need to educate them.	CHA-LGSCA-2
147	F	And do you feel like, that works? Do they achieve the agile mindset?	
148	LM	Eh… for me, agile and SAFe is really not the same thing. For me, I am okay if they understand an agile way of working, but they will probably be working in the team level. Then we can help them understand SAFe aspects of it. And the ceremonies and the roles we have. They don't need to understand all the things on the program level or the value stream level. But we always request it and I	COND-LEV-TEAM

		am pretty sure that the companies require it as well.	
149	L	But it's a different… I mean, you changed SAFe at IKEA? So they maybe teach another way of working?	
150	LM	Yeah yeah yeah. So in the education we have today, we have one and a half day standard one and then, they take, what is the IKEA approach.	
151	L	But not when they are located in India for example. They don't have it but they also don't need it.	
152	LM	No, I would say that we target and handle the Scrum Master to show that they understand the roles and the changes we have made.	
153	L	But not the developers?	
154	LM	No, I would say no. They don't do that. I mean if they are here, they will be adapt to it, but…	
155	L	Hm… and did you have the same education or did you have a personal coach?	
156	LM	No, I got the same education.	
157	L	How often is it organized?	
158	LM	I think it's… depends on how many new people you onboard, but it's a couple of times, maybe 6 or 7 times a year or something.	CHA-LGSC-2
159	L	Okay! Hm hm. *(pause)* Do you think SAFe is beneficial for the IKEA Multichannel area?	
160	LM	Yes.	BEN
161	L	And why? What kind of benefits do you see?	
162	LM	I see that without it, we would have… If we would just say, now, let's work agile, the teams would have done that themselves, they would not gather it to totality so to say. And that now, we are so many multiple teams, that could be quite tricky to get to work. I see the only, now when we are working is when we do testing which has nothing	BEN

		to do with SAFe but if we ask thinking agile in our team saying "let's adapt it to this way, and do it this way", but then, the reporting out of it changed, but then, someone who sits on the value stream or program level say: "but now I have one train reporting that way and another train reporting that, how should I get the totality out of it?" So, and that is just one LMall thing as he knows. So if we would have done the totality of how we do the backlog and the planning and the prioritization in our own ways, then it would be quite messy to keep it together at the Multichannel area.	
163	L	So it's the structure that is…	
164	LM	Yeah, I think that's it. That's helping us, even if we look at it and it's not, yeah, maybe not the first thing you think of agile is maybe not when you look at SAFe, maybe.	BEN
165	L	Is it also beneficial for working with people who are located somewhere else? Do you think SAFe is also beneficial for this?	
166	LM	I think SAFe is… I think that's regardless. The parts there is that we can keep it together. Yes, maybe, it would be even harder if you had the teams globally and spread out. But we don't follow the same structure, that might be. But I don't know if that is SAFe or not.	
167	F	No, it's fine, just continue.	
168	L	Is there something in particular in your line of work that works well thanks to SAFe?	
169	LM	I think I rarely need to think about prioritization which is good. So the structure we have with the Product Manager and then Product Owner of each team, and the Product Manager talks to the Epic Owners, and then they have the prioritization. That works. I would not say perfect, but it works. And that means that I always can say if I get a question regarding people or, I can always say: "How is the prioritization? How is the Backlog?" and then we get the answer there instead of…	BEN

170	L	You have a good overview.	
171	LM	Yeah, or I actually feel like there is a good governance structure for all of it, so I know all the different roles. So if a Product Owner comes to me and says: "We need one more developer." Then I say "Yeah, we don't have enough money, but if you prioritize your feature above others, ask your colleague, to get some from that team, and that works quite… I wouldn't say easy, but at least, that's how I can relate to SAFe. In another way without working with SAFe, you have a team and yes, you have a Product Owner, but then, those are not really connected and you can not utilize that kind of problem solving.	COND-PRI-1 COND-PRI-3 BEN
172	L	Do you also experience this with dispersed teams? Or is the communication about prioritization here in the house?	
173	LM	No, it could be that we need one more developer working with front-end, and I say "Yes, we have one here in India if you like", but then the other team needs to down-prioritize that feature. How is that compared to what you ask about? And then I let the Product Owners fight it out. So it doesn't really matter about the location.	
174	L	Okay, but if they have to agree on something, how do they communicate?	
175	LM	So, the Product Owners are all co-located here. So even if we have a team that is sitting in London, their Product Owners are here. That is quite… strange, maybe you could say. But that's how it is. And same goes for India. We don't have a Product Owner in India. He is here.	COND-LEV-TEAM
176	L	Only the developers are in India?	
177	LM	Developers and testers are in India. And then we brought here. So there is a couple of developers and Scrum Master is actually located here now, which is a bit strange because the Scrum Master is here with a couple of people in the teams and then the rest is of on the other side. And then [name of	COND-LEV-TEAM

		Scrum Master 1] coming here is one of the examples for that.	
178	F	Do you know the reason for that structure?	
179	LM	The reason for the structure is that IKEA do not have an office in India, for instance, at least not an IT office, so we have… the ones that are our Product Owners in the business side is located here. And then, we as a development organization utilize costs and benefits and utilizing India for it. That's how it is.	COND-PRI-1
180	L	Do you experience any benefits in terms of time? Does it save time to use SAFe, you would say? Or does it even take more time?	
181	LM	It… probably, it takes more time, but in the long run, you get a structure and that frames around that. But it might save time in another way that I haven't calculated on. Yes, if you look at it, yes, they take time, but there is an upside to that.	BEN-TIM
182	L	Hm. And do you experience benefits in terms of productivity? Would you say you are more productive when using SAFe?	
183	LM	I would say that at the moment, we are not that as productive as I would like and comparing it to a company... I haven't worked at IKEA without SAFe in the development fashion, so I can't compare it because if I compare it with how it worked now here in SAFe towards another company only agile, we were more productive in the other way. But it's hard to compare.	BEN-PRO
184	L	Okay. Why do you think it's so hard?	
185	LM	Because there are totally different solutions and IT architects, so it's quite… it's not easy to compare. It would have been easy to compare if I would have worked with this solution before we introduced SAFe. But I haven't. So…	
186	L	Ehm… do you feel like it's beneficial in terms of product quality?	

187	LM	No, I think… No, I don't think it impacts that you get better quality. It's about how we work in the teams.	BEN-QUA
188	L	Okay. And for… and the last one, do you experience any benefits in terms of satisfaction? Like, are the people more satisfied when working with SAFe and when working in an agile way?	
189	LM	Oh… I think, if I compare it to another company, then I would say we are more happy about the agile method used compared to SAFe. SAFe is rigid, it is a lot focus on structure. And as I said, I enjoy that, I would say. If you are located in the team level, maybe you don't enjoy that fully structure. That could be. The totality is probably not super happy about SAFe. However, it's helping us in a bigger picture.	BEN-SAT
190	L	Hm… that's interesting. And do you feel like it's towards the customer? Does it improve satisfaction for the customer using SAFe?	
191	LM	I mean, we are using it because we think that we get out more value to the customer… so… and, then, do we get enough customer value out of it at the moment? So I think, we can improve it, but I think SAFe is helping us do that.	BEN-SAT
192	L	Do you feel like – sorry for this question, but – do you feel like the Multichannel area is truly agile with SAFe or is it just on paper?	
193	LM	I do *not* think we are truly agile with SAFe. Not as we implemented it yet. I think on team level, yes, we managed to do it somehow. But on all levels, we are not applying that.	CHA-LGSCA-6 CHA-LGSCA-7
194	L	Why not?	
195	LM	We set a release with a fixed scope. And then we say, we should do deliver that. And that is one of the… so, on the program… we haven't really understood it on the program level and the value stream level how to work with releasing that. So, if we are doing the Program Increment and the ceremonies according to SAFe, there are still	CHA-LGSCA-3 CHA-LGSCA-6

		some directions and decisions that is not understanding it.	
196	F	So, has it to do with change of mindset?	CHA-LGSCA
197	LM	*(pause)* Yes.	
198	L	What kind of challenges or issues are you currently experiencing when working with SAFe?	
199	LM	*(long pause)*	
200	L	Or do you think everything works well?	
201	LM	No. I am maybe just not referring to the challenges we have with SAFe. *(pause)* No, it could be as it said before, about… we are having two release trains and not all the time the priorities are the same within those and then, there is a conflict. We don't get the customer value out. That's for me according to how we apply SAFe. How we handle the epic level, the prioritization there.	CHA-LGSCA
202	L	Epic level is… ?	
203	LM	On the epic level, all the epics we have… how that prioritization is done. There have been discussions here. On epic level, they state in what order they see the benefit and the value out, but… in the reality, maybe 1 and 2, we should not start with number 2 until we're done with number one. That could be the reality. And then they still push it on the epic level that this is the second most important thing to do. And then, we on the team level are forced to do even more things for number 2 but it slows us down in that level. So that's quite something we haven't figured out.	COND-LEV-PORT CHA-LGSCA CHA-LGSCA
204	L	And are you experiencing any challenges or issues when working with dispersed team members?	
205	LM	Yeah, I mean yes. We don't have the same communication and discussions and decisions. Not as easy, I would say.	CHA-VT-COMM

206	L	Do you think you have less communication with dispersed team members?	
207	LM	Yes. Definetely.	CHA-VT-COMM
208	L	And… ehm…	
209	LM	I mean, [name of Scrum Master 1] will come and will give you that view better because he has been sitting off-site for a couple of years for this project and now he is here. And, yeah. It's a lot of things. You get small portions of the information. And that is not done intentionally, but a lot of things are visualized here or actually discussed in the corridor. Because that's how we try to do a lot of it.	CHA-VT-COMM
210	F	What about any challenges related to culture or time zones? Have you experienced any of those?	
211	LM	Yeah, I mean… usually… we have two different major cultures at the Agile Release Train. So, the Indian is… they are quiet, they do not challenge anything and say "Yes, we'll do it."	CHA-VT-TEAMDIV
212	L	And does it work?	
213	LM	No, that… I mean, yeah, it works in terms of that they do it, but … they key thing would be to have [name of Scrum Master 1] here now, so he is the Scrum Master for that team, so he understands, looking him in the eye and then say what we really need, not having him on the phone line. And that was quite hard to get… and then, it felt like… okay, we have that team, but we are not that close to them. For the other team, London, which is the other team, they are quiet… English is their mother tongue, they just speak up and take a lot of space in that. Meaning, they are different nature of that.	CHA-VT-TEAMDIV
214	L	Okay, so it's a lot of… in terms of culture?	
215	LM	Yeah.	CHA-VT-TEAMDIV
216	L	And language? If it's their mother tongue or not?	

217	LM	Yeah.	CHA-VT-TEAMDIV
218	L	And did you experience issues with the different time zones? Especially with India?	
219	LM	No, I think it's quite good because India, they start to work a bit later than we do in Sweden usually. So they come in around 9 or 10 and then, Swedes leave quite early, and then maybe work later on, but… so they work 9 hours a day in India, so I mean, it's no big issue I would say. I have *never* experienced "oh, we can't have this meeting because we need to have it with…", so…	CHA-VT-COMM
220	F	And the Scrum Master, [name of Scrum Master 1]?	
221	LM	[Name of Scrum Master 1], yeah.	
222	F	Do you think he is kind of adapted to the culture here when he is here? Onsight?	
223	LM	Yes, more and more I guess. Even if he has the style of Indian culture in him as "yes, we will do it, we don't challenge that" and some would say "you need to improve it", the other teams here would just say "let's do it, it's our decision, let's just do it." So, that is the difference.	CHA-VT-TEAMDIV
224	L	Would you say there is still some scepticism among members?	
225	LM	Around SAFe?	
226	L	Yes! Or that SAFe and an agile way of working is part of the members mindset?	
227	LM	I would say… agile development would be part of everybody's mindset. I think, I would say 99% is covered there.	CHAL-LGSCA-1
228	L (45:06)	And SAFe?	
229	M	But SAFe, as I said before, most of the people we have is of course in the teams and they are adapting to an agile way of working. So, you can do	CHA-LGSCA-1

		that without really digging deep into SAFe. They need to understand the ceremonies and I think that they understand that the value of actually doing planning for the PI and so on, that is the constant challenge that you have, right? Working agile. Especially in this company, the way you need to explain that agile is not ad-hoc, it's a lot of planning and structure to get it work.	
230	L	Do you feel like the management did enough to support SAFe? Like trainings.	
231	LM	Yeah. I think that's done, definitely. And then I think, maybe… there always comes like a tooling in point of it in terms of what tools to use for a connection for that. It's invested *a lot*, so I wouldn't challenge that we invested, maybe we should re-evaluate what we, what we choose.	CHA-LGSCA-2
232	L	Do you feel like you need to do more documentation than SAFe advocates?	
233	LM	Yeah, here it is. And that is, as I said before, not levels have really adapted to the way SAFe is intended to. So, we set a fixed scope and a fixed date and, of course, with the quality. And then, we push it as the normal project-wise.	CHA-LGSCA-DOC
234	F	Could is also be… because you are experiencing more dependencies with other functions of IKEA and other teams?	
235	LM	Yeah! So, so IKEA architecture, so the IT landscape we call it is quite connected. All systems are connected somehow. So in the Multichannel solution we have hundred different solutions that at least work together. So if we do something that affects some flow in the Multichannel, you need to verify the hundred different solutions. That's quite a lot, meaning that the ones who are driving the totality of this is of course really afraid that, if you do something, you break something else.	CHA-LGSCA-DOC CHA-LGSCA
236	F	Hm.	

237	LM	And that is not helping us implement an agile way of working.	CHA-LGSC
238	L	Are there any coordination or communication difficulties between different teams or members you would say?	
239	LM	Yeah… yeah. Of course. People come from different background and have different ways of how we should implement it. There is the "all the way of doing things" at IKEA IT and then agile and SAFe is introduced and we are doing that in one part of it. But we are of course meeting the other way where… so in the Multichannel solution, if we need something from the selling system we have within IKEA, they work waterfall one having long lead-times and projects and kick-offs, so when we say we need something we have to wait six months before it's there. And that is of course challenging. And so we cannot come and say "no, we want this now."	CHA-LGSCA-4 CHA-LGSCA-6 CHA-LGSCA-7
240	L	But in SAFe it's working better with communication?	
241	LM	Within us, that's our part of it. But the difficulty is that when you are a larger organization and not everybody is part.	CHA-LGSCA-7
242	L	Is management adhering to an agile way of working too?	
243	LM	*(pause)* Becoming better and better. *(laugh)*	CHA-LGSCA-6
244	L	Are you feeling any difficulties in terms of interacting with other functions at IKEA? Yes, because they are working waterfall…?	
245	LM	Yeah, yeah. Definitely. That's problematic.	CHA-LGSCA-7
246	L	Do you feel like the problems or issues emerging in Retrospectives get dealt with afterwards? Do you learn from them?	
247	LM	Ehhhhh… yes… some… we are quite good at having Retrospect. We are quite bad at taking action, and what we should do would change.	CHA-LGSCA-RETRO

248	F	And do you feel like… that's because – sorry for saying this word, but – you don't have time to do it, or is it because of dependencies between other…?	
249	LM	I think other… the complexity of the organization and the landscape as I said before is making it difficult to things. So, for me, on the team level, we should be able to make decisions that make you faster and so on, and that is not always the case. It's like "oh no, but you need to verify that with that person" and yeah, that organization is impacted by what you deliver.	CHA-LGSCA-6
250	L	Is there anything in particular that you would like to change, or that you feel like is nothing working as it is? Any show-stoppers?	
251	LM	No, but I would work… I would for IKEA SAFe, I would work on the level program… well, ah, not program, but value stream where you can get more understanding in how do we do releases. And utilize the actual good things in SAFe and get value out.	
252	L	So that's what you are very interested in?	
253	LM	Yeah!	
254	L	And what would you like to change in SAFe as a system? Or do you think it's…?	
255	LM	No, I… (pause)	
256	L	Everything has a reason?	
257	LM	No, but I think… Going to the SAFe education, that was the framework, then I think we are adapting to it as we go along and changing. Yeah. I don't think I have to pin-point anything like "oh, this you need to change." I think… I look at it quite open eyes and saying that team level is quite… we have some specific roles and some specific ceremonies and then the rest is quite old.	
258	L	Does SAFe have any drawbacks or short-comings according to you?	

259	LM	Yeah, it's costly. If you are a small organization, I would *never* do that. I mean, it's a lot of layers, and a lot of overhead if you are a small company, I would say as well.	COND-PRI-1 CHA-SAF-SHO
260	L	Because of the different roles and the education?	
261	LM	The different roles, the different steps to get something prioritized and then, yeah.	
262	L	Okay, but for IKEA, you don't see… ?	
263	LM	For IKEA, I see that without it, we would need something similar anyway to succeed.	BEN
264	L	And now we come to the last questions. During your time here, have there been any specific changes made towards a SAFe approach?	
265	LM	I think we just called things differently. That… what can it be more? Eh…	
266	L (52:36)	But also when you started in last August to now, has there been any changes?	
267	LM	Maybe has, maybe Sofie was better to answer that because she is more involved in the SAFe processes than I am, so…	
268	L	Or do you plan more changes?	
269	LM	No, I don't know.	
270	L	No? Okay! Then we can go on. And… what's your overall opinion about SAFe?	
271	LM	Yeah, it depends on where it is implemented, so if it is a large-scale, then it's good. If it's something smaller, I would say, I would *never* do it.	CHA-SAF-SHO
272	L	When does a big company start for you?	
273	LM	I would say if you are above 10 teams. If you are 10 teams or less, I would *never* do it.	CHA-SAF-SHO
274	L	Okay, but you are 8.	

275	LM	Yeah, but then we have two trains. Okay, so I would say, I would *never* do SAFe if it would only be us. Because then we could have a lot of agile teams working together and then setting a structure for that.	CHA-SAF-SHO
276	L	Okay, so you also need at least two trains, if I…	
277	LM	At least two trains. Yes. Definitely. Eh… because otherwise the investment of the value stream level on those levels are quite… yeah.	
278	L	Do you have any documentation on SAFe at IKEA that you could share with us?	
279	LM	I think we have done something that we call 'Agile Handbook' that is our interpretation of SAFe, but I don't know if I am allowed to share it. But I can check and see. Because Sofie, who was here, she was part of writing it, because she was part of… she was something called Agile… Implementation Team… where they looked at SAFe and then looked at… how can we… how does it fit into… and then they translated it into the Agile Handbook that is trying to educate people on SAFe, and at the same time translate it to the IKEA way. So, I can check if that is something that we can share to you or not.	
280	L	Thank you very much. And the last question: Do you have any comments that you would like to add?	
281	LM	*(pause)* No. *(laugh)*	
282	L	Then, we would like to thank you a lot first and I have some chocolate from Germany. *(laugh)*	
283	LM	Thank you so much. I love Milka.	
284	L + F + LM	*(laugh)*	
285	L	That's great.	
286	LM	Do you want me to go up and show you the board? Because I can find [name of Scrum Master 1] because he usually sits upstairs. You can leave	

		the stuff and then we can just come back down again. Is that fine?	
287	F	Yeah. That would be good.	

Appendix D: Interview transcript 3

F = Fredrik Hoffman

L = Lou Hinterberg

SM1 = Scrum Master 1

Sec-tion	Person	Text	Code
1	L	Yes, thank you. So, then we don't mention your name in the thesis.	
2	SM1	Perfect.	
3	F	Or do you want us to mention that?	
4	SM1	No. *(pause)* I didn't get your question.	
5	F	Eh, so, would you like in the thesis us to leave out your name that we have interviewed.	
6	L	Like we have interviewed for example [name of LM], so that we mention her name in the thesis?	
7	F	Or would you…?	
8	SM1	I can give you my name.	
9	F	But you are okay with that?	
10	SM1	Yeah.	
11	L	Are you okay? Okay. Thank you. And we have our record here.	
12	SM1	Hm hm.	
13	L	So, then we have to speak a bit louder that we have everything here. And ehm… first of all, please tell us a bit about your role and how long you have been working with SAFe.	
14	SM1	Okay, my roles is a… I am a Scrum Masters.	
15	L	Yeah.	

16	SM1	And I handle one of the Scrum team here that is located in… mainly in Helsingborg and in India, in Bangalore. And I have a small team in Chennai also. Again, in India two cities. Bangalore and Chennai.	COND-LEV-TEAM
17	L	Okay.	
18	SM1	And I am working on SAFe since last three years.	
19	L	Hm… And sorry, you have a small…?	
20	SM1	I am working on… since last three years. SAFe we have adopted around one and a half year back. Yeah, SAFe is that.	
21	L	Hm hm. Then you started working with SAFe?	
22	SM1	Yeah. Okay, okay, good.	
23	L	Please tell us a bit about the IKEA Multichannel area and what it is that you are creating. What is your product?	
24	SM1	Okay, so… IKEA heard previously eh… basically different, different… eh… we are trying to create a solution for the IKEA online stores. But that through the different, different channels. Right now, they have our different solutions for their web channels. Different channels, different solutions for their… kiosk. Different solutions for their mobile things, aim two. So we are giving one solution which will be combined of all and that will use IKEA in their cost and everything. And even the project management will be easy… and the cost management will be easy. That is why it is called Multichannel Transformation Program. So we are in a… all the channel… we are giving one even solution for that.	
25	L	Hm hm. Hm… (pause) What is SAFe in your opinion? And what is the purpose of SAFe at IKEA Multichannel area?	
26	SM1	So SAFe basically gives you to handle your entire Product Backlog and your Scrum team handling in a particular way. But we are more than	COND-LEV-PROG

		SAFe. We… say… I would say we distributed SAFe. The reason for that one is that we are located in different, different locations around the world. So our team is in Helsingborg, in Sweden itself, Malmö, and then our team is in UK, then in our team is in India again in different, different, cities. So we adopted SAFe technology but it's more a distributed SAFe and that's a… where I told you that, there is a Big Room Planning Session where all the people who are involved are at. They come to one place and they decide what is the plan they have for their solution. *(pause)* Yeah.	
27	L	Hm. And how many people are in your team? How many members?	
28	SM1	Right now my team size is 12.	COND-LEV-TEAM
29	L	12.	
30	SM1	12 including Solution Owner and Product Owner.	COND-LEV-TEAM
31	L	And how many different locations?	
32	SM1	We are located countrywise in India and Sweden. I am talking about my Scrum team. Not entire…	COND-LEV-TEAM
33	L	Yeah. Your Scrum team.	
34	SM1	So my is India and Sweden. Again India…	
35	L	Not UK?	
36	SM1	No.	
37	L	Okay.	
38	SM1	And in India we are in two cities again. Bangalore and Chennai. So you can say three locations.	COND-LEV-TEAM
39	L	Hm hm.	
40	F	How many… is it just you from the team here?	

41	SM1	No, you have me, and three developers and one tester.	COND-LEV-TEAM
42	F	Okay.	
43	L	Hm hm. *(pause)* The tester, what is his… ?	
44	SM1	Test quality analysis. So whatever we develop, they test it.	
45	L	Okay.	
46	SM1	So the entire methodology… as I… works always like this. We do incremental development and incremental testing. So whatever component we develop, we give to the test team and they test it. And then development go there and test it in parallel. And so it works.	COND-LEV-TEAM
47	L	Hm hm. Cause on the typical team level there is no tester, right?	
48	F	There is. Yes, development team, so.	
49	SM1	So… again, the team is divided in… in a little bit different way because we are… based on the component also… and… we are mainly technology wise we are using for our middle layer… we are using LTG and WCS. And our front-end team, we use Sprint and those things, so based on that one, there is a core team for each component.	COND-LEV-TEAM
50	F	Okay.	
51	SM1	So there is a core team for ATD, for core team for WCS, and core team for… eh… I used to be like that. And towards whatever component we… and there is a cross-functional team which I am handling. This cross-functional team will have the expertise from all, all those components. And we take a feature… where we solution them and we deliver them. So, wherever there is a feature which is interdependent, which will know all the components, all the different components, that comes to the cross-functional team. And when there is one feature which is	COND-LEV-TEAM COND-PRI-7

		only dependent on a particular component that goes to the core team. That's how it works.	
52	F	Okay.	
53	L	And now we come to some questions where we just need some brief answers. Do you consider costs or do you take an economic view when conducting your tasks?	
54	SM1	Definitely… we try to… we have a velocity where it says the feature what we deliver. So, we have to justify that. So, the way it works is, we first basically say, the first layers, we say, PI, which is a Program Increment, so that is a period of three months. Three or two months. It depends on what we did inside that one, we have a different, different Sprints. So each Sprint can be either of three weeks or four weeks, or two weeks again, it depends on how… eh, again it depends on like Multichannel program has a view of country roll out plan. So we are not in… we are going to target 32 across live for IKEA. The same solution will run in the 32 countries. So that is not possible in one day. So we are taking one-one countries and we are rolling out for one of those countries. So keeping those countries roll out in mind, we do a called PI Planning, okay this PI require more work, so a PI's solution will be more, and based on that one again we will go back to Sprint. And for each Sprint we take the velocity of our team. And based on that velocity we take the features. So, if we are taking a feature which is not difficult to our velocity, then we will be questioned. So, definitely, we do the costs.	COND-PRI-1 COND-LEV-PROG COND-PRI-7
55	L	Hm hm. Do you feel like there is a common goal between the different teams, and that there is a shared overview of the big picture, or are the teams working in silos?	
56	SM1	No, it's very close… close coordination… coordination. And that is where we do a BRP and that is where not… so we are a part of eh… Agile Release Train.	COND-PRI-2 COND-LEV-PROG

57	L	Hm.	
58	SM1	So, there is another team, within a coach it's a program team.	
59	L	And they all have the same goal, you would say?	
60	SM1	Correct. Program… no this is where they want to go in three months, six months, and based on that, the Agile Release Train decides together how we should proceed. And it's a very collaborating… even when the business team comes with a picture there.	COND-PRI-2 COND-LEV-PROG
61	L	Okay. Do you feel like the team(s) are still open for changes after agreeing on a requirement/approach?	
62	SM1	Yes. Yes.	COND-PRI-3
63	L	Do you receive quick customer feedback?	
64	SM1	Yup.	COND-PRI-4
65	L	And who would you say, who is the customer?	
66	SM1	Eh… we get the question mark feedback from Product Owner which is the owner of that one. And Product Owner involves the Product… eh, the Marketing Team and all those things.	COND-PRI-4
67	L	So, you would say the Marketing Team is the customer?	
68	SM1	That is correct. After each Sprint, whatever we develop in that Sprint, we do a Demo. So we show our Demo first to Product Owner, and if the product owner feels like he needs to get a view of the market and other stakeholders then we give them the demo also. And then we do a Demo at the entire team level because if something which I am developing may impact in future to some other team to develop, so they will	COND-PRI-4

		come to know what I develop in this Sprint, and then they decide that "okay".	
69	L	Do you have frequent milestones where you evaluate the solution with the customer together?	
70	SM1	I think I didn't get it completely.	
71	L	Do you have frequent milestones where you meet and evaluate the solution with the customer together?	
72	SM1	Yeah, correct, correct. We do this.	COND-PRI-5
73	L	Yes. Ehm… Do you visualize your work in progress, also to other teams?	
74	SM1	Yes, anybody can go to CLM and look into my… burn down chart.	COND-PRI-6
75	L	And that's digital?	
76	SM1	Yes. It is a CLM tool we use.	
77	L	Eh – CLM? CLM tool… and this you share…?	
78	SM1	Rational, it's a rational…	
79	L	And this you share with other Scrum Masters?	
80	SM1	Yes. We have our Dashboard and you can go and see it. Even I can go and see that.	COND-PRI-6
81	F	But it's not a Kanban Board? It's a… ?	
82	SM1	It's upon your team how… what do you want to… how many values… so there you can see the burn down chart.	COND-PRI-6 COND-LEV-TEAM
83	L	Do you experience work overload often?	
84	SM1	No.	COND-PRI-6
85	L	No. *(pause)* Do you feel like there is an efficient planning of people and resources?	
86	SM1	Yes.	COND-PRI-7

87	L	Yes. Ehm… What is your motivation to work on the project and what drives you in your line of work?	
88	SM1	Okay. The first motivation is that this a very big context. If you see in terms volume of the market we are going to deliver is around half of the world. Not only geographic wise, population wise also. So it's 32 countries we are going to roll out for a customer like IKEA. And that itself is a big achievement, a solution to give. And it's challenging also because lots of infra-related changes require like… I'll give, give you an example. We are working in a situation where we have a server in… in… for the European Union, for North America, but when we go to China, they want everything to be in China. They are closed. They want their server to be setup there, the application to be there, the developers should [inaudible]… So that kind of economy we are working… then the volume wide if you see. China and India itself half of the world population we are covering. So that's really a challenging in both technical and market-related. I have never worked with such a big product before. And working since three and a half years and it's really… really challenging and motivating, too, again.	COND-PRI-8 CHA
89	F	Yeah.	
90	L	Do you feel like the management trusts you and other workers?	
91	SM1	Definitely. *(smile)*	COND-PRI-9
92	L	Okay. And do they let you make decisions independently?	
93	SM1	Yeah, yeah. Very, very open. Nobody comes to… Obviously if you need consultation, they are open to consultation but they trust on you are basically in the team.	COND-PRI-9
94	L	What is the team level in your opinion?	

95	SM1	What is the… ?	
96	L	What is the team level in your opinion?	
97	SM1	Team level, I didn't get it.	COND-LEV-TEAM
98	F	Like… how do you see the team level? What is it? What's it's purpose, kind of?	
99	L	Team level… maybe you call it differently at IKEA. Ehm… like you are the Scrum Master of your team which is the team level.	
100	F	Then there is the program level where they do PI Planning…	
101	SM1	Hm hm.	
102	F	… and a Big Room Planning …	
103	SM1	Hm hm.	
104	F	… and they have the train. So the train and the PI Planning is part of the program level. And at the team level is where you have the Scrum teams.	
105	SM1	Okay, so if you see where we… I got your question, so you mean to say that at organizational level, what is, we are on the bottom or at the middle level, or on the top level you mean to say?	
106	L+F	Hm hm.	
107	SM1	So I would say in that case I… we are in the ground level where we actually execute the things for the IKEA.	COND-LEV-TEAM
108	L	Yeah. You are team level?	
109	SM1	Correct.	COND-LEV-TEAM
110	L	And in your team, are you applying Scrum, or Kanban, Extreme Programming, or a mix of these agile approaches?	

111	SM1	Eh… we... we… we apply Scrum, we apply Kanban, that one, but Extreme Programming we are not doing because we have a test-driven development approach.	COND-LEV-TEAM
112	L	Okay.	
113	F	Test and development approach?	
114	SM1	Correct. So we write test first and then we develop on… to make sure that our code fails in fail cases, and then passes in pass cases.	COND-LEV-TEAM
115	F	Okay.	
116	SM1	TDD. Test development.	
117	L	And I have heard that other teams maybe use other agile methods?	
118	SM1	Hm hm.	
119	L	And not all of them apply mostly Scrum? Did you experience it when collaborating with other teams that there were any issues?	
120	SM1	No. No.	CHA-LGSCA-5
121	L	No.	
122	SM1	We don't have. And that is… where… we have a… weekly twice a Scrum-of-a-Scrum calls where all the Scrum Masters and the ART Managements come together there and we… we highlight about different dependencies and we learn… and they get caught there.	CHA-LGSCA-5 COND-LEV-PROG
123	F	Yup.	
124	L	Hm… What kind of activities are you having related to the team level? Do you have Daily Stand-up Meetings?	
125	SM1	Yes. We have Daily Stand-up Meetings at a particular time where… and that, that not change unless it is a very, very legit reason. So, it's a fixed time when we do. And all the team mem-	COND-LEV-TEAM COND-LEV-PROG

		bers, Product Owners, Solution Architects, everyone joins that one. Then we have a Scrum-of-a-Scrum call, as I told you, weekly twice, and again, if I need to coordinate at the team level, they are always open so people are easily approachable there. But as ceremonies, we do… Big Room Planning, Scrum calls, and Scrum-of-a-Scrum-calls.	
126	L	And how does it look since your team is dispersed? Do you have Skype conversations or…?	
127	SM1	We have a… a dedicated bridge. I have a number… eh… with a host call I join, and all of the other participants join that call. So, I initiate start call.	CHA-VT-COMM
128	L	So, it's on the phone?	
129	SM1	It's on the phone and we have Skype for Business also. So normally for a Scrum… Daily Scrum we do not use Skype because we don't need to be on face-to-face, so…	CHA-VT-COMM CHA-VT-TECH
130	L	Why not?	
131	SM1	The reason for that one is that eh… we started that one, but being on… different, different location, we failed a time latency for the Skype… if you go to the image, it depends upon your internet speed also.	CHA-VT-COMM CHA-VT-TECH
132	L	Ahhhh! So because of technology.	CHA-VT-TECH
133	SM1	Correct. So we realized attended… And we have… There is a Scrum call we allow in to target internet only. So we come here and there and we say what we have done. What we have planned for today. That's it. And If there are any issues. Three things we take.	CHA-VT-COMM CHA-VT-TECH COND-LEV-TEAM
134	L	What is your overall experience with working on the team level? You feel very…? I mean… that's your level.	
135	SM1	Yeah. I feel very engaged here because it's a very engaging program I will tell you because	COND-LEV-TEAM

		it's not a very… and it's a complex program also in terms of… eh… large systems are involved which is… which is related to need in technology as well as legacy systems. So it's very, very involving so you cannot work in your silo, right, isolated. You have to work in a more collaborative way and bring the solution and take idea to the new countries and make them… it's more to make it happen for IKEA. So it's very engaging and very collaborative.	COND-PRI-2
136	L	Do you apply the program level at IKEA?	
137	SM1	*(pause)* Program level… I told you… we target the iterations from the program that this is their certain goal, long-term goal and this is… and that is very defined. That is defined in terms of data and months also. That this day, this month. They go their planning to roll out for this particular country. And we get that target from the program. We achieve the target. Because it's not only the program I think. The market also gets involved in that because they started advertising based on those particular data in time, so… Even when the release has different, different steps than we do. We go for the Technical Release, we go for the Co-worker Release, and then we go to the End-customer Release. That's how it works.	COND-LEV-PROG
138	L	Which roles do you see as the key roles on the program level?	
139	SM1	I will say that… eh… this Delivery Manager kind of role.	COND-LEV-PROG
140	L	Who is the Release Train Engineer, but that's your name for it, right?	
141	SM1	Correct. Correct.	
142	L	Yeah.	
143	SM1	So, this is very… they have the people who drives the Scrum Master, the Delivery Manager, these are the people obviously, in every program developers and the testers are always important.	COND-LEV-PROG

144	L	How often do you collaborate with the Delivery Manager?	
145	SM1	I told you as process-wise, we collaborate twice in the Scrum-of-a-Scrum-call that is driven by the Delivery Manager only which is [name of RTE] working for this… this… for our ART.	COND-LEV-PROG
146	L	How often was it?	
147	SM1	If you need her help, she is always willing to…	
148	L	No, no, I mean how often do you…?	
149	SM1	Twice official, twice in a week. That is far… otherwise if you ask me, we interact daily because if we have any issues, we can share with the Delivery… we have to reach out to her. If she has anything to tell to us, she will reach out to us. It's not an official meeting but daily you have to collaborate because otherwise this kind of large program will not work. It needs a lot of interaction and collaboration to make it happen. It's a technology… it's a complex program. We have taken all the latest technology for this Release.	COND-LEV-PROG
150	F	Continue.	
151	L	Are you doing the activities PI Planning?	
152	SM1	Yeah.	COND-LEV-PROG
153	L	Alright. Inspect and Adapt workshop?	
154	SM1	Yes, we do. That is part of process improvement and all those. We do workshops and we do Retrospectives after each Sprint to understand what we missed in that particular… what went well and what went wrong in that particular Sprint. And we improve on that one. And we have a… this KPIs also where… (pause)	COND-LEV-PROG
155	L	Do you also apply… Program Kanban?	
156	SM1	Program Kanban is also there.	COND-LEV-PROG

157	L	And do you think those activities help to manage the workflow?	
158	SM1	Yup. Yup.	
159	L	How many Agile Release Trains do you have?	
160	SM1	Right now we have 8… eh… Agile Release Train… So ART ways, we are 3, but inside each ART, we have different, different… like the ART which we work we have 8 teams.	COND-LEV-VALSTR COND-LEV-PROG
161	L	Okay. You have 3 Agile Release Trains?	
162	SM1	Correct. That is again based on the solution which we are giving to IKEA, so we are on the consumer-facing, that is one system which interacts with the legacy system, that is IAP, and there is one system which does the Order Management for IKEA.	COND-LEV-VALSTR
163	L	Okay, Order Management. Ehm…	
164	SM1	And… interacting with the legacy systems.	
165	L	Legacy?	
166	SM1	Legacy, yeah. So, already there are some systems which is there in IKEA for the long-term and that is in the main frame. So we don't want to change that one. And that is very cost... And it's not cost-effective to change that one. So we have a layer which gets the information from there and we interact with that one.	COND-LEV-VALSTR COND-PRI-2
167	L	And are there dependencies between the different ARTs? Yes.	
168	SM1	Yes. So, I am nodding my head, yes.	CHA-LGSCA
169	L	Yes. *(laugh)* Ehm… What is your overall experience with working with the program level? Are you involved?	
170	SM1	Yes, yes, I am working for this. Again, this entire program is divided into different, different	COND-LEV-PROG

		Waves. So right now we are in Wave 4. So I joined this project when 3 was there.	
171	L	In a Wave… what do you mean by wave?	
172	SM1	It's a super set of everything. So we say that in these two years, in this Wave, we will be… we will be live in these many countries with these many features. So that is decided. So that is called Wave.	COND-PRI-2
173	L	Is it your goal?	
174	SM1	It's our goal. Yes, you can say. It's not a short term, it's a very long-term goal.	
175	L	Okay. Very long-term goal. *(pause)* Not a goal for Sprint?	
176	SM1	No. For keeping the IKEA goals in a line to the program decides. So I started working from this project from Wave 3. And Wave 3 was for one and a half years and…	
177	L	Do you apply the value stream level? *(pause)* Do you know this? *(pause)* If you don't know, it's no problem.	
178	SM1	No… definitely… we do not apply the value stream…	COND-LEV-VALSTR
179	L	You don't apply… and do you apply the portfolio level?	
180	SM1	Maybe we will be saying in a different way, can you elaborate what portfolio level means… what do you mean by eh… portfolio level?	COND-LEV-PORT
181	F	Well, we… we just want to… we are more like… it's a term, it's a level… in the SAFe framework… But we just want to know how much you have perceived from all of this, so if you feel like you don't know if you are applying it? Then you can just say "no". It's fine.	
182	SM1	Okay.	

183	L	How much would you say you know about the different SAFe roles and their responsibilities?	
184	SM1	At least for our SAFe roles we are using here we are clear on that. And we have a… IKEA is specific… responsibilities are defined, and we also have a separate repository for that one, so… you can go and look at that one. So, a Scrum Master, if you take a Scrum Master, that is a Scrum Master as [inaudible] definition. But what is expected within IKEA from a Scrum Master? What he has to do. That is also defined very clearly. Similarly, for the Product Owner. For Solution Architect. Everything.	CHA-LGSCA-3
185	L	So you also know about the roles on the program level?	
186	SM1	Correct, correct. And we have… we have actually agreed ways of working. How we will work as a team. That is also documented. So, agreed and documented.	
187	F	Hm hm.	
188	L	And was it easy to learn and understand the SAFe levels and work according to them?	COND-LEV
189	SM1	Yes. Since I am working with them since last six, seven years, so…	CHAL-LGSC-3
190	L	Okay, so you learned it before…	
191	SM1	I started as a developer. Then I moved to the different, different roles.	
192	L	Also, already as a developer you worked with SAFe?	
193	SM1	Yes.	
194	L	Do you feel like SAFe is beneficial for the IKEA Multichannel area?	

195	SM1	Yes. Yes.	BEN
196	L	And what kind of benefits do you have?	
197	SM1	First of all is that we… we feel that if you would have not this model then we would have not realized the liveliness of this project. So, we are a different, different small team but we work in a very collaborated way and SAFe gives you that platform for where everyone can come to the different, different ceremonies like Big Room Planning, Scrum of a Scrums… that is one thing. And another thing is that we have a big Backlog. And that Backlog is again bifurcated based on the teams which we have. Then there is a super set of… taken an example of… 500 features. That is always there business people come and write their requirements from first they agree on big epic... and then it is broken down to features. . and then it gets broken down. So always whatever comes in, it is getting out also. Because of this collaborative method we are working on.	BEN
198	L	Does it help you to prioritize?	
199	SM1	Yes. We have a rank for each of the features. So… we cannot take a lower rank feature if there is an upper rank feature unless there is a very valid a justified reason. So, you will be questioned in the Big Room Planning if you are taking the low priority features and you have to justify that, yes, okay, this is because of this, this reason we are taking this. Or you need to work with the Product Owner to get it. If Product Owner thinks that this feature is very important, then he has to improve the rank also. And we also… this… there is a separate business team. They meet once in a week themselves. And they read through all the features and they re-prioritize them also.	BEN COND-LEV-TEAM COND-LEV-PROG
200	L	Okay, and they are all located here in Helsingborg?	
201	SM1	Most of them are located in Helsingborg.	

202	L	Okay, but not all of them?	
203	SM1	Not all of them. But…	
204	L	How do they communicate?	
205	SM1	They have this…	
206	L	Also by calling?	
207	SM1	By call. They can see all their screens and all these facilities there.	
208	L	And do you think that also works well for them?	
209	SM1	Yes, yes. I have been part of couple of full meetings. What happens there is that there will be one presenter who will be the Program Manager for we say… the Program Manager who owns the entire Product Owner teams. And he… he… he drives that call. He goes one by one. Everyone sees the same screen.	
210	L	Sorry?	
211	SM1	The screen which is… he is explaining he shares among all the participants within the call. So everyone sees the same things and then it's…	
212	F	I have a question about ranking the features. Do you feel like that's sometimes a feature is high-ranked, but perhaps a feature under it would be better to start with first, but you feel like business kind of forces you to take the higher one?	
213	SM1	Yes. We feel that. Because… that is the business priority for them. Like, if we are taking a feature which we think that based on our velocity and the team structure… Sometimes we feel like taking this lower level feature will be important, but if like... next we are going live next Sprint in Portugal. So if there is a legal feature there, that is very important for them. So we need to take them on priority. We have no other choice there.	CHA-LGSCA
214	L	If we come back to the phone call. How many people are on the phone at the same time and is	

		it… no, at first this. So how many people are calling?	
215	SM1	So I tell you that this is a bridge where everybody joins. So if people in Helsingborg like my team, I am driving this call with my people from Helsingborg… so we are five people here, so we all go to a room here in Helsingborg. But four people are in India, so they will be joining those calls. Again, there, if Bangalore team, they book a room, so they join from there.	CHA-VT-COMM COND-LEV-TEAM
216	L	Okay so not everyone is sitting at their desk?	
217	SM1	Correct.	COND-LEV-TEAM
218	L	So like, you are five here and four there. And you are like two big parties that call each other.	
219	SM1	Correct, correct. And we share the screens like I… whatever I am printing in CLM, they are seeing in Bangalore.	COND-LEV-TEAM
220	L	And does everyone have their own screen? Or do they have a big screen?	
221	SM1	The projector, you can project it.	COND-LEV-TEAM
222	L	So, you hear the voice loud so you don't have a phone? Like this?	
223	SM1	No, no, no, no, no. Like from this kind of phone. *(he points at a speakerphone standing on the desk)*	
224	L	Okay! Are there any issues when people want to talk at the same time?	
225	SM1	Yes. Sometimes it happens because… people working in… we are working in a remote… we don't know this, so two people… at a time you have to… whoever it is organising the call he has to manage the call, so… kind of, that kind of understanding and training we have. If two people have opinion on the same things, then it can go on well, so… unless we don't (pause) But that happens mainly because people are not knowing	CHA-VT-COMM

		what kind of activities we are doing here that are in Bangalore.	
226	L	Do you experience any benefits in terms of time?	
227	SM1	Yep. SAFe is… hm, maybe in terms of productivity and delivery ways…	BEN-TIM BEN-PRO
228	L	But in terms of time? Do you think SAFe saves time, or takes more time?	
229	SM1	No, SAFe takes less time. *(pause)* It is really good if we use it in a distributed location.	BEN-TIM
230	L	Why do you think that?	
231	SM1	Because you have a common… you have a driven as the same view of… even if we are distributed, everyone has the… everyone knows that "this is a Product Backlog, this is a rank", everyone knows everything, and everyone contributes on that. It's, it's… and this is helping us to bringing a good delivery very fast.	COND-PRI-2
232	L	Okay, so everyone knows what… you showed us the board upstairs, but because you have it virtually?	
233	SM1	Correct, correct.	
234	L	Okay.	
235	SM1	Everyone has access to the same tool where they can see "this is a Product Backlog, this is *my* Team Backlog, this is *my* Backlog", that kind of granular low level we have broken there.	COND-PRI-6
236	L	So, it improves productivity, does it also improve quality of your product?	
237	SM1	Yes. Definitely.	BEN-QUA
238	L	And… what do you think about satisfaction? Are the people satisfied that work with SAFe?	

239	SM1	Eh… it's a… I would not say it's SAFe or non-SAFe in my view… overall here… it more depends on the Team Management I will say.	BEN-SAT
240	L	Not because of SAFe?	
241	SM1	SAFe or unSAFe. I will not put in there to it.	BEN-SAT
242	L	Yes. Of course.	
243	F	But I think that developers, they would like a lot of flexibility, and do you think that the different ceremonies that SAFe eh… brings, kind of, makes them feel like they are being limited with their flexibility?	
244	SM1	Ehhh… not… it, it is in another way. Because they feel more engaged and more collaborative… if we would have not picked the SAFe methodology, this kind of program running from our different, different location with such a large volume would have been difficult. Because… another thing which I cared as… because I have worked for SAFe for the different… another claims also. But one good thing that I cared was it involves all levels on all the ceremonies. So, everyone has a say on things.	COND-PRI-9 BEN
245	L	Do you think it improves satisfaction of the customer?	
246	SM1	Yes. Yes.	BEN-SAT
247	L	And do you feel like the Multichannel area is truly agile with SAFe, or is it just on paper?	
248	SM1	No, it's eh… I will not say that it's on paper, but I will also not say that it's *completely* agile. Because we have customized it little bit based on our requirements.	
249	L	What kind of challenges are you currently experiencing when working with SAFe?	

250	SM1	Eh… *(long pause)* I will… say that… eh… it's not… related to SAFe methodology as such.	CHA-LGSCA
251	L	Yeah.	
252	SM1	Because it's very well program and very well-established methodology. So, process-wise we are not facing any challenges. But as a team level we are facing challenges in terms of making the environment ready and going multiple countries roll out and those things. But as it process-wise, we are all working long-time with this process, so it came under as not well-known.	CHA-LGSCA-4
253	L	So, you mean it's more in terms of dispersed teams?	
254	SM1	Dispersed team and different team at different, different… eh… not within on ART, but different, different ART may have different, different priorities.	CHA-LGSCA-4 CHA-LGSCA-5
255	L	Okay.	
256	SM1	So for me, it can be a priority of delivering a particular feature, but for other team we have another priority. Then we need to think of and do that. And this is where we have Big Room Planning and lots of discussion.	CHA-LGSCA-4
257	L	Between the trains?	
258	F	So the dependencies between?	
259	SM1	That's what you saw down, down. The other systems, they are not part of our train, but we highlight them that…	
260	F	Yap.	
261	L	Hm. And when it comes to culture, do you think there are any problems within your team? Like that people understand each other differently?	
262	SM1	Eh… no, not like that. I have not faced any such problem.	CHA-VT-TEAMDIV

263	L	And when it comes to language maybe?	
264	SM1	No. Because everyone speaks English.	CHA-VT-TEAMDIV
265	F	And when you are here, do you experience any differences in body language, for example? That there is miscommunication between… Swedes have a kind of, different body language, perhaps?	
266	SM1	No, I have not… at least, I have not faced it and realized that.	CHA-VT-TEAMDIV
267	L	Would you say there is still some scepticism among members, or that SAFe and agile way of working is part of the members mindset? Are the people sceptical when it comes to that?	
268	SM1	No, no, we don't have that. People… I never got a push-back that they don't want... That they don't want or anything. It's a well-proven industry.	CHA-LGSCA-1
269	L	Do you feel like the management invested enough to support SAFe, like trainings or education?	
270	SM1	Yes. We have lots of planning. Even anyone can develop those planning materials and put it in the repository as well. That is another good thing in this project.	CHA-LGSCA-2
271	L	That it's well supported from the management?	
272	SM1	Yeah. Good.	CHA-LGSCA-2
273	L	Do you feel like you need to do more documentation than SAFe advocates or do you do enough documentation?	
274	SM1	We don't need more than that. Whatever we do is efficient.	CHA-LGSCA-DOC
275	L	What you do is efficient. Ehm…	

276	F	But do you feel like it's more than you should do?	
277	SM1	*(pause)* No. Whatever we are doing is…	
278	L	It's perfect?	
279	SM1	Perfect.	
280	L	Do you think you do more or less when you compare it to companies that don't have SAFe?	
281	SM1	No, we do whatever is required is we document them. And then we have different, different, ehhh… different, different tests, you call this… which… which is…	
282	L	And without SAFe, you would do more or less?	
283	SM1	Without SAFe, we will do more.	CHA-LGSCA-DOC
284	L	More documentation, now you do less, yeah. Ehm… Are there any coordination or communication difficulties between different teams or team members?	
285	SM1	Sometimes we fail. Because we are working … Again, I told you, from multiple locations. So, one challenge we face is in terms of the time differences between different, different countries. But that gives another benefit in terms of that we are towards 24/7 working.	CHA-LGSCA-4 CHA-VT-COMM BEN
286	L	Yeah. Okay, in which countries are you facing challenges in terms of time zones?	
287	SM1	We are working… between here and UK, it's not much difference, but with the team in India, there is a gap of three and a half or four hours. So, we have to be careful in terms of treating the meetings according to their times, and if we need a hand of our… from them, then it should be a perfectly plan and we have to hand over something to them. That should be also perfectly planned.	CHA-VT-COMM
288	L	How much would you say you collaborated with your team members in India? Is it during the day	

		all the time? You have to be available, they have to be available?	
289	SM1	Soooo… it's not like that. We have a common communication channel again. For that we use a Slack. Slack communication channel where we can create a channel, different, different channels, so like, for my Scrum team, I have created a channel, so… if we need a common discussion, we put our questions, and answers there from the team members, and if one-to-one communication is also possible, so… that's how it works.	CHA-VT-TECH
290	L	Is management adhering to an agile way of working, too?	
291	SM1	Yes, the delivery manager and Sofie are working agile.	CHA-LGSCA-6
292	L	Are you feeling any difficulties in terms of interacting with other functions at IKEA?	
293	SM1	Sometimes. Sometimes we face.	CHA-LGSCA-7
294	L	For example?	
295	SM1	Eh… like… again… there is a difference in [inaudible]. So we are mainly delivering the code and the program but the support team is also there to support our release and those things. Like, to support our hardware, to support our deployments, code deployments, the server… like that.	CHA-LGSCA-7
296	L	Hm. And they are also working with SAFe?	
297	SM1	Eh… eh… no, they don't.	
298	F	And do you feel like that becomes challenging when you are working with SAFe while they are not working with SAFe?	
299	SM1	No, we are not facing challenges in that term. But we are facing challenges in terms of… because different management layers is there. For them. So sometimes we face challenges in that way. Not because of the… I will say that within our ART and within the ART we have our ways	CHA-LGSCA-7

		of working defined. But that is not defined on the inter-team level. That is… and that is what we are working on.	
300	L	On the inter-team? Which means like… in your team?	
301	SM1	With the different team.	
302	L	With the different teams. So in your team, it's working well?	
303	SM1	Well, but with the different teams… different teams not within the ART, but different ART, taking different teams within the IKEA organization that ways of working is not well defined. We are working on defining that.	COND-LEV-VALSTR CHA-LGSCA-6 CHA
304	L	So that's on the program level then?	
305	SM1	Correct.	
306	L	Hm, that's interesting. And do you feel like the problems or issues emerging in the Retrospectives get dealt with afterwards?	
307	SM1	Yes.	CHA-LGSCA-RETRO
308	L	So, do you also document what you… ?	
309	SM1	No, we do it, whatever we go to the… whatever we discuss in the retro call… we… mainly we discuss on two points. What went well for that Sprint, and what went wrong. And we measure what went wrong. And we work on the improvement areas for that one like taking an example like: For the last PI, we had one person who joined the team recently, and he could not picked off his work in a very well way, so we realized that he needs a training on that one. So, on the next PI, we have kept some of his time and once… [inaudible] So that's how it works. [inaudible]	COND-LEV-PROG

310	L	Is there anything in particular that you would like to change, or that you feel like is nothing working as it is? Any show-stoppers with SAFe?	
311	SM1	No, I didn't realize anything.	
312	L	Everything is… you are satisfied?	
313	SM1	Yeah, yeah.	BEN-SAT
314	L	And does SAFe have any drawbacks or short-comings according to you?	
315	SM1	Yeah, I will say that… there are a few draw-backs which I will realize is that sometimes we face in terms of… because we are not document-ing everything, so sometimes we face challeng-ing in terms of… everything is based on the dis-cussions and collaborations, so sometimes if people foregate or try to foregate, it doesn't re-ally see that challenge, but we try to whatever is a critical things, we try to document them. At least so. It's more of a working-learning kind of thing we are doing, so.	CHA-LGSCA-3 CHA-SAF-SHO
316	L	Always improving.	
317	SM1	We have evolved a lot in the last two and a half years in terms of delivery.	BEN-PRO
318	L	Now we come to the closing questions. During your time here, have there been any specific changes made towards a SAFe approach?	
319	SM1	Eh… yes. In terms of… based on our… based on our… based on our experience. It's not like the way we have started.	
320	L	What did you change for example?	
321	SM1	We are not… I meant to say… we have not changed many things but we changed… like pre-viously, we were not working in a… this… what we were doing is also very resilient, but we were not working on a… what comes in what is going out… eh… methodology. We were taking the work, and we were delivering it at the end.	

		Again, those work is broken into small pieces, but right now what is happening is that we are taking and making a [inaudible] to the productions. So, it's more of a… you can say more than what comes in is going out. And that approach we changed. We started from there and we realized that it takes a long time for us to realize the value. So that's why we went on this.	
322	L	What is your overall opinion about SAFe?	
323	SM1	I will say that SAFe is very good. *(laugh)* I work on that so I will always say.	
324	L	*(laugh)* Okay, so thumbs up! Do you have any documentation on SAFe at IKEA that you could share with us?	
325	SM1	I have to check on that because that's… maybe it's confidential to a… yeah.	
326	L	Yes, of course. Any other comments you would like to add?	
327	SM1	No, I am fine. So as I told you, it's a very challenging work in terms of making this program to happen and realize both in terms of technology and the volume of work we are delivering for the IKEA. Again, we started at IKEA where IKEA was obviously on the way but they were not having complete e-Commerce solutions. There is a part of this Multichannel transformation program we are giving to an end-to-end e-Commerce solution to the IKEA, and so, so they have a system where you can order the products and you need to go and collect from the stores. But as a part of this solutions you can order any tool you deliver to your home.	CHA
328	L	One last question: How long were you working for the department in India? How long was it?	
329	SM1	I just came three months back. Before that I was working in India.	

330	L	Okay, so you are here then since just three years seven months.	
331	SM1	Three months back, yeah.	
332	L	And how long in India?	
333	SM1	In this project, I am three years seven months.	
334	F	Quite a long time. Okay!	
335	L+F	Thank you very much!	
336	F	I know you are busy as a Scrum Developer and we…	

Appendix E: Interview transcript 4

F = Fredrik Hoffman

L = Lou Hinterberg

Dev = Developer

Section	Person	Text	Code
1	F	So we can give you some background here what we're doing. We're two students from the University of Lund, writing our master's thesis about SAFe in the context of dispersed teams and dispersed members, which you have here at IKEA. So we find that setting very interesting and we have some questions for you and...	
2	L	You received also the interview guide we sent you?	
3	Dev	Yes, I have that open in front of me.	
4	L	Okay great. Then let's start. So we would like you to tell us a bit about your role and how long you've been working with SAFe.	
5	Dev	Yes. So, I have been a part of the IKEA project for nearly five years now. So I started some time during July 2013 and it's almost went by 5 years now. Am I serving the role of a principle ATG lead developer. So that's one of the technology that we use for developing the website. You can basically treat it as the backbone where the functional logic type, or the business logic resides. It is an e-commerce suite, called ATG.	
6	L	APD?	
7	Dev	I am working with that and I am... ATG yes.	
8	L	ATG?	
9	Dev	Yes, it is e-commerce.... and the full form of ATG is Art Technology Group. It is A-R-T – Art Technology Group.	

10	L	Alright.	
11	Dev	Okay? Yes, so I am basically the role of a lead developer leader for this project now. So we have features coming in as you know. So basically this is how our model works, ehm, maybe I will give a bit of detail about how we plan and all that maybe will answer the questions that you have already lined up... so shall I go ahead?	
12	F	I think we can wait a bit with that. Could you first tell us a bit about the Multichannel area and what it is you're creating, what the product is?	
13	Dev	*(pause)* Yes, for the IKEA Multichannel area as I told... Basically we are creating the... we call ourselves new web platform, that's IKEA's newest web platform for us, where both the back-end and the front-end teams interact. We get the business requirements from the actual consumers and the business people who want the feature or some functions to be developed for a particular... or the website IKEA, they give us small requirements and it sits as part of the Product Backlog. So we go through the requirements, our Solution Owner and the Business Analyst they provide a priority of these requirements. And if it falls during particular.... depending upon the priority we see if we should pick up as of the current release or not. If it is a part of the current release then we have first the design cycle. So we keep a target in mind. Basically that our feature needs to go to the customer, say within the time we visualize to 8 to 9 weeks of active designing and development testing also included in that, and it should be able to reach the customer within three months from the time we envision that idea.	
14	L	Alright, thank you.	
15	Dev	So yes, we go through the requirements... Yeah we have the design in front of us and we start implementing it then we provide a handover to the testing team where it's tested for defects, where we address those defects if possible and then we release it to production.	

16	L	Okay.	
17	Dev	And after that we have a successful [inaudible] or handover to the testing team... that the post go live for support team for the production, who look into to the incidents that might come up from release. So yes, in a nutshell we basically look in to the requirements that comes from business and we develop corresponding to those requirements.	
18	L	Mhm, and we go on to. What is SAFe in your opinion because you're working with SAFe and what is the purpose of SAFe at IKEA Multichannel area?	
19	Dev	So all of the new 8 projects needs to incorporate SAFe in my opinion, it's an agile framework that everyone should adhere to, because it's much better than the normal waterfall model. Because in Waterfall model if we get to know about a bug then it takes a lot of time to fix it because we go back to the requirement. Then, we try to reinvent the entire cycle, start from the very basic thing again, modifying the design again to the development. And then do the testing also accordingly, then try to fix it. So waterfall process is a very lengthy process and it has its cons. So that's why we in IKEA have adopted to the SAFe, that agile framework for us, and we try to have small chunks of functionality that should be delivered within particular PI, that is Planning Increment, or you can say sprint cycle for us. It's the cycle for the Sprint which normally lasts for 3 weeks in normal IKEA, ehm, business technologies and we tried to get, as I said, the design, deliver, test it and deliver the project, OR deliver the requirements within a single Sprint if possible. That is our basic cycle.	BEN-TIM COND-LEV-PROG
20	L	Thank you.	
21	Dev	It is much better because all the designing [inaudible] and testing go hand in hand, so we can't fix the loop holes that we identified during the	BEN-TIM

		waterfall approach and have a small fallback time for that.	
22	F	Okay, and do you consider costs or take an economic view when you're conducting your tasks?	
23	Dev	Yes, yes, we do. Not only the economic view we also see... so if we get a requirement. We see what kind of purpose it will serve in the overall IKEA landscape, what the use for this particular requirement is and whether it can be delivered in a better way or not. That would be cost effective and also.. customer.. whether the customer will be satisfied in a better manner. So you also propose what kind of modifications we can make to the original requirements so that it can reduce the cost of the project, as well as reduce the effort internal also.	COND-PRI-1 BEN-SAT
24	F	Okay. And could you give an example of how you take ... taking an economic view?	
25	Dev	Yes, so suppose if there is… So suppose there are products in IKEA with SAFE that we normally display, eh, in the PIT or the product information page. So there is a requirement of showing certain kind of deliverables or information like warnings, hazards and all. So it… also about having legal requirements. So if we roll out to future market… oh you already know that we went ahead with Belgium some month back and we have a light version for Belgium running currently. So when we were developing in Belgium, there were certain legal requirements that we need to make at that time. Otherwise we couldn't have rolled out to that country. So we tried to incorporate all the legal requirement at first, then we also priorities the GDPR features that might affect IKEA business also. Because those are legal requirements and then it might affect the economic situation or the economic fluctuations of IKEA landscape.	COND-PRI-1
26	L	Great. Thank you. Do you feel like there is a common goal between the different teams and	

		that there is a shared overview of the big picture, or are the teams working in silos?	
27	Dev	Correct, as I was saying the requirement comes from business, I have discussed that. Now, whenever the business, or the when the requirement come from business we save it somewhere called Product Backlog where all the requirements are there. Now, according to the functional area that requirement falls into, suppose, we need to modify something in the profile area or in the checkout area, the particular team will pick it up. So there are different functional teams working within the Multichannel program, for our NWP, where they're dedicated for a particular function area like profile or order or the shopping bucket or the check out.	COND-PRI-2
28	L	And do you think that that works?	
29	Dev	We will pick it up depending upon the... sorry?	
30	L	Do you think that that works, that there is a common goal. In the Backlog?	
31	Dev	Yes. So the thing is. There is the common goal. The common goal is that we should roll out the functionalities as soon as possible and also keep the markets rolling. So we should enable a new market that's our primary goal, so that...	COND-PRI-2
32	L	Great.	
33	Dev	…work whenever we reach all the functional areas on the individual teams we have a BRP session called Big Room Planning where all the teams are invited and they themselves pick up the feature and they discuss with each other what they're going to deliver as part of that PI, we commit to that goal what we are going…	COND-LEV-PROG
34	L	Yeah [inaudible].	
35	Dev	..to deliver and the other teams know also what we do... what we have for the deliverables for that particular PI you are on multiple Sprints. Also the other multiple rounds of Demos that has	COND-PRI-2 COND-LEV-PRO

		been planned after every successful sprint completion by the team, where other teams are made aware of the functionality that a particular team has delivered. So it's not like, if I am working on the profile part.. I will get to know what's being developed in checkout, because both of these functionalities go hand in hand. So I should have a lot of overview of what the other team been delivering also.	
36	L	Mhm.	
37	Dev	So that's why the BR sessions and the Sprint, Demo sessions are very much required in IKEA.	
38	F	Okay.	
39	L	Do You…	
40	Dev	And that is how we get an idea of what other teams are developing.	COND-PRI-2
41	L	But if there's some changes that have to be done. Do you feel like the teams are still open for changes after agreeing?	
42	Dev	Yes.	COND-PRI-3
43	L	Why do you think so?	
44	Dev	Yes, because in BRP suppose... a requirement might require a particular requirement that has come from business might require input from both order team and profile team as an example. Me from the order team might, might develop the functionality but I will have a dependency on the profile team also. So we can do this in three... couple of ways. During the BRP sessions, the Big Room Planning sessions also, we call out the dependency, we inform the profile team that, yes, your help is also required for achieving this functionality, since you have a better understanding of that particular area. And also, we are the overall owners of that functionality, but it will be a collaboration between multiple teams in order to achieve this functional area. So we call out dependencies, we seek help.	COND-PRI-3 COND-LEV-PROG

		We have regular knowledge transfer also, and also part of the Demos help out.	
45	L	Do you receive quick customer feedback, and who do you think, or who is the customer for you?	
46	Dev	So the customers for us are the end users. So who are regularly traversing the site...	COND-PRI-4
47	L	Yeah.	
48	Dev	…and buying the products, for IKEA. But before rolling out the feature to the end end-customer, we will have the requirements coming from the Product Owner, so there are Product Owners in each and every team, and the Business Analyst in each and every team. They evaluate whenever a feature is done, if only they are happy with whatever we from the lead development team have achieved as part of the sprint, then they will only will go ahead and roll out to the customer. They are the end-user. But for us the first layer of user is the BA and Product Owner. If they are only happy, then only will they roll out to customers. So there are two levels of consumers for us.	COND-PRI-4
49	L	Oh great, and you receive quick feedback from the product owners? Is it quick?	
50	Dev	Yes, we do. We receive... first inputs from the Product Owner. We try to incorporate them as soon as possible and then once again, show them Demo of them Demo of the modified functionality that they have requested.	COND-PRI-4
51	L	Great, do you…	
52	Dev	We get very quick feedback loop that we have at IKEA. So otherwise the agile methodology won't be going so strong over here. So that that is pretty much required in IKEA terms.	
53	L	Great, thank you. Do you have frequent milestones where you evaluate the solution with the customer together? Milestones?	
54	Dev	Milestones, yes. As soon as a feature is done. So we never directly interact with the customer as such, the end-user is the customer. But as I said, the customer from our Sprint perspective, or the	COND-PRI-5

		team perspective... the Product Owner and the Business Analyst, we evaluate the solution together... and then we show the working functionality to them, as soon as the function is developed and also, we show to other teams also. But it's never with the end-customer. It's only with the product analyst, the BA, Product Owner, the Business Analyst, and different teams within IKEA. Not with the end-customer, that is only done whenever we roll out the functionality to the market.	
55	F	Okay.	
56	L	Then we go on very quick so that we can ask all the questions. Do you visualize your work in progress? Also to other teams? And do you experience work overload often? Does it help you? *(pause)* So do you visualize your work in progress?	
57	Dev	Yes, as I said, that we have Demos where we can visualize our work that is getting done and also the work that is done by other teams. So suppose if a functionality is so long that it might take 2 to 3 Sprints we have small Demos that is planned after every Sprint. That the different teams will show us. What they have achieved as that part of the single Sprint. Then in the next sprint Demo they will show what they have built on top of their initial development effort, and finally will get the total output.	COND-PRI-6 COND-LEV-PRO
58	L	And do you feel...	
59	Dev	So that is how we visualize the work that is getting done within our. Yes. Sorry.	
60	L	Sorry. Do you feel like it helps you to reduce work overload when you visualize?	
61	Dev	*(pause)* In terms of IKEA, I do not experience that there is much work overload. But in terms of planning perspective, yes, it helps us to plan better, and also help us to enabling delivering the functionality in a much better planned way... so that the overload is not there. However, in terms of IKEA, if we are stressing, suppose after a few	COND-PRI-6

		hours for a particular day, we have the opportunity to take leaves or even compensatory the next day, so that we can balance our work and life as well. And what is [inaudible] overloaded not from my experience at least.	
62	L	So we understand that, yes, and so we understand that there is an efficient planning of people and resources in your opinion?	
63	Dev	Exactly.	COND-PRI-7
64	L	What is your motivation to work on the project and what drives you in your line of work?	
65	Dev	My motivation is to see the functionalities that we develop... so I can see them... suppose I'm working on a functionality for the [inaudible] couple of Sprints. My biggest motivation is that... when I see that functionality live in IKEA website. I can go and actually test out or buy a product using my own functionality that I have developed. Or I've contributed to. That's a big motivation for me at least. And also the motivation... there is an added motivation that I get to interact with multiple people coming from different teams. So there are multiple teams not only in [inaudible]. So I am [inaudible] but there are some where they manage the order fulfilment also. Then there is the integrated platform where we work between web-services. Then there is Product Owners. We get to interact with lot of people and we can see the requirement getting visualized or... getting ehm.. brought in to our Product Backlog from the very first instance and then getting rolled out to production. It's a complete lifecycle and it's very motivating for all the developers to see... in front of our eyes in couple of months what we're getting developed.	COND-PRI-8
66	F	Okay thank you. And do you feel like the management trusts you and other workers, and do you feel like you can take decisions independently?	
67	Dev	Yeah, the management trusts us a lot. They provide us with a *lot* of responsibilities in addition to what we have doing in a normal day to day activity like normal development. So if I'm work-	COND-PRI-9

		ing on development it doesn't stop me to contribute to, suppose, design activities or even cut over planning or release planning. The management provides us with all the opportunities that one need in IKEA platform and they can contribute to multiple things at a single point of time. If the work is not becoming a burden for us, if you are not [inaudible] you are feel free to contribute to whatever area you like. And hence there is no sense of boredom inside IKEA.	
68	L	Who is the management for you? Is it [name of RTE] or is it one stage above you you're addressing right now?	
69	Dev	As of now it is [name of RTE] and [name of Line Manager] for us, yes.	
70	F	Okay, so we would like to ask you about the different SAFe levels. So you do apply to team level correct?	
71	Dev	Correct.	
72	F	And what is that team level in your opinion? Just briefly.	
73	Dev	The team level I believe... Oh I might be wrong but please correct me. I believe there are new agile methodologies for [inaudible]. So for agile which enable us to deliver in proficient ways. So something like Pair Programming, then having Standup Meetings, ehm, Demos to the Product Owner. Uhm. Then having a Kanban Board where we were [inaudible]. All these things contribute to towards team development level and also it help us in achieving the goal in a better planned way.	COND-LEV-TEAM
74	L	Great, and are you applying Scrum, Kanban, or Extreme Programming or mix on the team level? Or what are you using in your team?	
75	Dev	Yes, we have a Kanban board. Yes then we are using a real-time dashboard to keep track of all the progress. Then we have a Pair Programming concept where multiple programmers help each other. So one programmer codes and another one reviews at the same time. It also helps us in delivering the solution in a better review to it.	COND-LEV-TEAM

76	L	And Scrum?	
77	Dev	And we have regular morning Standups as well. So, there is, suppose, morning team [inaudible]. Everyone in my team attends the Standup call, and they provide the progress that they have done on the last working day. And what is their objective for the current day. And we also... it also helps us to track the progress and also remove any blockers in case they have faced any. So yes. These are the things that we have applied to our team.	COND-LEV-TEAM
78	F	Okay. And what is your overall experience or opinion about working with team level?	
79	L	You're very involved?	
80	Dev	This is my first agile... yeah, so this is my first agile... I have been working in this project for five years but before this all the projects that I had previously worked on had a waterfall model. We didn't add all these concepts of Kanban, morning Standup Meetings. I have personally felt that this is very much required so that we can contribute on a better team lev...on a better team perspective. So we are suppose, five to eight guys in my team, I get to know what the others are doing and also what I can contribute so that I can remove their dependencies or remove their blockers also. So this has been very good planning for me and the team also.	COND-LEV-TEAM
81	L	Then we come to the next one. Do you apply the program level at IKEA?	
82	Dev	Yes we do. We apply the program level at IKEA also. We have a PI planning and a BRP also… sorry?	COND-LEV-PROG
83	L	No, you have PI planning, yeah?	
84	Dev	And also we have Program Kanban board where all the Scrum Masters provide their input every Tuesday and Thursday on the overall progress for every Scrum team. Then we have the BRP session also lined up after every PI. So in the BRP sessions, we call it the Big Room Planning session. It's a program level initiative. And here	COND-LEV-PROG

		multiple teams, or all feature teams comes together to discuss the features that they want to take up during this particular PI that the program increment and what they want to achieve or what goals they have, what blockers they have from a program level and what kind of dependencies do they have on other teams also. We raise all these things and we evaluate the solution whether it is possible to deliver within that particular PI or not. What kind of dependencies we have with other teams and what... how we try to... help us in achieving that goal. So we discuss all these things.	
85	F	And Inspect and Adapt workshop. Are you applying that too?	
86	Dev	No, I am not knowledgeable about the Inspect and Adapt workshop. I don't believe I have attended that in this part of IKEA.	COND-LEV-PROG
87	L	Who are the most important roles on the program level for you?	
88	Dev	Can you give me a minute?	
89	L	Sure.	
90	Dev	Yes, please go ahead, sorry about that.	
91	L	Which roles do you see as key roles, as the most important people on the program level?	
92	Dev	I believe that the position of everyone is equal for ensuring that it goes through smooth. However the Scrum Master holds a very important key position in delivering or ensuring that the goal is achieved. It comes down to individuals also. Everyone is progressing towards the same goal, but it's the Scrum Masters responsibility to ensure and to make sure that the goal is achieved. I believe that the Scrum Master role is very important. The role of a [inaudible] manager it is very important where we ensure that our release go through smoothly. So [inaudible] Manager, Release Managers, Scrum Masters, these are few of the roles I believe that are very important in the program level.	COND-LEV-PROG
93	F	And the various activities you're applying, for example PI Planning, Program Kanban, do you	

		feel like they help to manage the workflow you you're having?	
94	Dev	It helps to plan us in better efficient way, and it also helps us to identify the dependencies as I said, in a much earlier state and they can and other teams also can plan for their activities that is linked to this. So both of the teams in tandem can put their dependencies and put a pointer that we work... this...work the particular release in collaboration so that that particular end goal is ensured. So it helps us definitely everyone from the developers to the management [inaudible] we are progressing towards only one common goal and what we need to do in achieving that. And BRP or the PI Planning plays a very important role in ensuring that things.	COND-LEV-PROG BEN
95	L	How many Agile Release Trains do you have? And are there any dependencies between them?	
96	Dev	Are you referring to the perceived challenges theme 3 or which section?	
97	L	No, no, we are still in the SAFe levels program level. And then how many agile release trains do you have?	
98	Dev	Okay... So from what I know the Agile Release Train is the one that is run by the ART manage-ment.	
99	L	And how many do you have?	
100	Dev	The one that is run by [name of RTE].	
101	L	Yes.	
102	Dev	We have multiple I won't be able to talk about all of them. So there is one that is running for the architect team...the Solution Architects, one for the management team so there are multiple of them but I won't be able to recall exactly how many. So there is one for the business, one for the architects, one for the management. But apart from that. There might be many more but I'm not aware of that can of warehouse.	COND-LEV-VALSTR
103	F	Yeah, that’s fine. And are you aware whether or not you're applying the value stream level?	

104	Dev	Yes. So from the business we have this initiative called value so they come up with the value evaluation. So for every requirement they have an overall value associated with it or what kind of importance will it hold for a particular PI. And depending upon that only multiple teams dedicated to ensure that all of those values are active as part of that particular PI. So we incorporate value since we divide the features based upon the values and what kind of [inaudible] can we show for a particular PI. Suppose, for a particular PI we have rolled out Belgium that would be one goal. Then there's a couple of functions that that was required for the existing UK market that is another value goal. So we take care of all of these things in account with business analyst and the lead business people. They ensure that the value streams are incorporated and also propagated to individual developers.	COND-LEV-VALSTR
105	F	Okay. And do you know if you are having the roles of Value Stream Engineer and Solution Management at IKEA, on this level?	
106	Dev	I know that there is the role of value stream engineer and also for the solution owner there is a particular role dedicated.	COND-LEV-VALSTR
107	F	Okay that's fine. And do you know if you apply the portfolio level at Ikea?	
108	Dev	Sorry this one I am not aware of.	COND-LEV-PORT
109	F	OK OK that's fine. And how much would you say that you're aware of the different safe roles and the responsibilities they have?	
110	Dev	So... so, the key SAFe roles... as I said are of the Product Owner, Business Owner, Business Analyst with ehm, Release Manager, then the ART trains that we have. Then the [inaudible] manager then individual developers. Then we have a dedicated feature [inaudible] for every release.	
111	L	And you are aware of the responsibilities they have, you are familiar?	
112	Dev	Yes, I know them.	

113	L	And was it easy for you to learn and to understand?	
114	Dev	Not at an initial level. But after a couple or say two to three months ...so it could be a bit difficult particularly of anyone new coming in to the project to understand these different SAFe levels that we have in our project. But anyone who spends two to three months I believe they can pick it up easily after.	
115	L	We've heard that you have worked in India before and now that you work in Sweden and in India did you learn and understand about the SAFe levels as well? *(pause)* Or do you feel like you didn't really have to know about SAFe when working there?	
116	Dev	Let me put it in this way, I had an idea about the different SAFe levels from India also, what kind of SAFe levels are there. But I got a lot more details when I arrived in Helsingborg and started working with the teams and... when I actually communicated with the different SAFe levels on a daily basis. It provided me for further insight into the roles and the responsibilities that they play. So I had an idea but what then what they developed an idea of when they were Theo. So I would say coming to Sweden helped me out on understanding the roles and responsibilities better.	
117	L	What was the reason for coming to Sweden?	
118	Dev	So as I said, I am one of the lead developers for my team and it will give us much more insight to have a face-to-face interaction with the Business Analyst and the Product Owner or actually getting to know the customer, and also to interact with the cutover team planning this release better. So all of these factors and all of the technical perspective I was there to help out as there was not enough ATG expertise in Helsingborg... on site in Helsingborg. So, it helped me in reading those graphs. So yeah.	CHA-VT-COMM
119	F	Yeah and we've heard from a few interviewees before that before all the members were in India and they felt like their collaboration and trust	

		wasn't working very well as it is now. Do you experience the same?	
120	Dev	I would not say that the trust was not there. However, the collaboration has improved massively after I have moved to Helsingborg. So I can say that... ehm... as I said, we are now interacting and able to put a face to a name. Over a telephone conversation you are only limited to a particular release, or the particular requirement that you're dealing with. However, being over here... we can speak with different key individuals and we can understand the problem in a much better way and we can help out in much broader scope than we are initially enlisted for. So the communication or the collaboration has in fact improved after coming to Sweden. But from India we were focused... we had our deliverables in place. We were delivering at a rapid pace. But the collaboration as such has improved after coming to Sweden.	CHA-VT-COMM
121	F	Okay. And now we would like to ask you a bit about the benefits. So what benefits are you experiencing from working with SAFe? And is there something that works well in particular in your line of work thanks to SAFe?	
122	Dev	So for SAFe I would like to mention that Pair Programming is one of the key learnings that I had as part of this project. So during Pair Programming one developer... so both of them share a.. share a laptop, a particular person codes and the other one reviews at the same time. I found that concept very interesting where you don't need to re-do the code, based on the review comments you are coding and reviewing at the same time.	BEN
123	F	And you're doing this with dispersed members too?	
124	Dev	So these are one of the concepts that we are doing… sorry?	
125	F	Are you doing Pair Programming with dispersed members too?	
126	Dev	It is mainly the developers I would say. Sometimes we incorporate the testers too. We, we also come up with a testing plan. Okay. So it's not	BEN

		only between the developers, between the developer and tester also. And as I mentioned the Standup Meeting. Standup Meeting I believe is a must for every project where you can track the progress that you can listen in and be made aware of all the blockers and the dependencies that we have in our project and how we then resolve those. So the Standup Meetings, the PI Planning, Pair Programming, these are the few concepts that I really like in SAFe. I would like to implement them in any future projects that I might work with also.	
127	F	Okay what about time do you experience any benefits in terms of time?	
128	L	Do you feel like SAFe saves time or does it take more time?	
129	Dev	It takes less time as for me if we are working with SAFe. So we have a short feedback time and we can get back to the drawing board, along with the architect, we can fix the things that goes wrong and we can modify the test cases at the same time, so everything goes hand in hand.	BEN-TIM
130	L	What about productivity? Do you feel like you're more productive? Or are you productive when working with SAFe?	
131	Dev	Yes. The same thing applies for... The same thing applies for productivity also. I believe that SAFe has increased the productivity for everyone involved with the project.	BEN-PRO
132	L	And what about the quality of your product and the quality of your work? Do you think it's better with SAFe? Does SAFe improve the quality of your product?	
133	Dev	Yes, yes, right. As you said the time, productivity, quality has increased efficiently with incorporating SAFe in our project. So everything I can see has an upside only. I can't find any cons with the SAFe methodology. So it is a much more efficient model than what we had for waterfall. Everyone should target having SAFe methodology in their project.	BEN-QUA
134	L	Do you also feel like the employers… eh employees are more satisfied when working with	

		SAFe? Do you feel like.... We, we experience that it's really structured. Do you feel like sometimes the other employees have maybe issues with that?	
135	Dev	*(pause)* Oh no, none that I know of. I believe that SAFe has worked in a better manner for all the employees involved. The structure is pretty firm. Everyone has the roles and responsibilities defined for them. We have particular people that have been identified for the key roles that everyone can reach out to in a much better and efficient way. And we have a short... as I mentioned feedback time to get everything sorted out within a single PI.	BEN-SAT
136	F	OK. Thank you. So now we would like to ask you about some challenges.	
137	Dev	Yup.	
138	F	Are you facing any challenges right now when working with SAFe?	
139	Dev	*(long pause)* No, none that I can think of. Not at this moment.	
140	F	Okay. And you feel like it is working with the dispersed teams too? That they are involved in the ceremonies as well?	
141	Dev	Yes, it works fine with the dispersed team members. Suppose, as you cited the example someone sitting in India, there is a pro to that also. Suppose, we are only working from 8 am to 5 PM over here in Sweden. So, many times the release demands that we have a deployment plan for any environment during night. So that will be early morning for India. They can easily help out over there. So in fact it helps us to have different people coming up from different time zones so that we can deliver 24 hour time. I'm not saying that any particular resource should really be dedicated for a project for 24 hours but we can have activities lined up for 24 hours and it helps to have people from different time zones. Though they are working for eight hours from their perspective. But eventually we are working in a much longer day from IKEA's perspective. We	BEN BEN-PRO

		have better productivity from IKEA's perspective.	
142	F	OK. And would you say that there is still some members that are sceptical towards SAFe or the agile way of working?	
143	Dev	It only comes if people are new to the project, or do not know much about the agile framework. They're only acquainted with the waterfall or the spiral framework. Then only they will find it difficult to understand, and understanding all these meetings that we are having. At times it might seem more than what we used to have in the normal waterfall model. But at the end of the day, as I said, 2 to 3 months they will understand the need for it and it will also help them to grow as an individual and also contribute more to the total or the single call of the projects. So yes. People might be sceptical at the beginning but we come around it and they will understand that this is a much better process compared to any other model that we have been defined for development.	CHA-LGSC-1
144	F	All right. That makes sense. And do you feel like the management invested enough to support SAFe in terms of training and giving you tools to support the agile way of working?	
145	Dev	Yes, yes, I feel like management invested enough. When I joined IKEA five years back we had trainings about the agile methodology and what are the differences between the culture, between India and Sweden and how you can get accustomed to whatever people like in Sweden and how we can contribute in a better manner. Also trainings for Pair Programming I was working with another consultant for IKEA for ATG when I joined in 2013. At that project I also learned of the concept of Pair Programming, as I told you a couple of times in this meeting itself. It also opened up a new dimension for me. I was not aware of Pair Programming till that point. But I felt like it's a much more beneficial process. For the entire cycle people are engaging in procuring that requirement.	CHA-LGSCA-2 CHA-VT-TEAMDIV

146	F	And, sorry, the cultural trainings you were talking about. Could you briefly just tell us what that included?	
147	Dev	So that was something done from the individuals venders that IKEA had at that time. So we are from Sweden... oh sorry. We were primary working from India and then we came to Sweden. So something is that we Indians are always late. *(laugh)* So one of the points that was repeatedly made that part of that training was that yes, people in Sweden are very punctual. They can arrive a bit before time. But they don't like whenever people come up late. So that was one of the examples that was cited to us. Then there is... then we were made aware of that Swedes love all meatballs at that time. *(laugh)* And when you are in Sweden you need to try out meatballs. Yeah something like that. Then one of the goals given to us was go to an IKEA shop, spend a day in an IKEA shop. Not the development office, of course, the IKEA stores. See how people are working at the store. What all options we have and how we take this way and put it in a proficient way in our live I would say. So some of the experiences which shared with us [inaudible]. So yeah, we were made aware of all these things.	CHA-VT-TEAMDIV
148	F	And you feel like you're doing more documentation than an agile way of working advocates?	
149	Dev	Oh no I still believe that on a personal level we are lacking on documentation. I believe we should document even more than what we actually do.	CHA-LGSCA-3 CHA-SAF-SHO
150	L	Why do you think so, can you give an example?	
151	Dev	Yes, so suppose any new joiners there in the team, and they don't have an initial hand holding. Suppose, if the thing is they develop or involved in some high stake, or high importance release, then we cannot dedicate enough time for the new joiners. Then we have a documentations platform for IKEA called [removed] Atlassian where all the project materials are listed and how the development normally rolls out, and who the key people responsible are for them to reach out to. So, I believe that the documentation is not good enough for them so that they can’t get started	CHA-LGSCA-3 CHA-SAF-SHO

		from the one week. Request till the initial hand holding for one of the members in their team to have a productive output from the resources. I personally fill that the documentation should be so that they can just read the documentation they can get the level of the project and begin to get started from the very next day. It's not like that. I've feel that the documentation can get better. So yeah. But then again this is my personal opinion.	
152	F	Of course and that's what we're after. And do you feel like there any coordination or communication difficulties between the different teams or trains right now?	
153	Dev	*(pause)* Ehm… no. Oh sometimes it becomes a bit difficult. So as I said we are the NWP part of it and then there is an [inaudible] order management system who basically helps out with the order fulfilment. Then there are various [inaudible] systems who have been rolling out for the market at the same time. If, suppose, an issue comes in the order fulfilment part and I'm asked to look into it. I'm not aware of the counterpart or the technical lead from the [inaudible] or the order fulfilment to reach out to. It's much better within NWP where I know, as I cited the example, who is working on orders, who is working on payments, who my lead is, who is my Business Analyst, who is my Product Owner. But I do not know exactly who is working with order fulfilment. Or who is working with the ISW. If any issue comes, what is the hierarchy that I need to go through? Who is the single point of contact for me? That kind of information I believe is still lacking.	CHA-LGSCA-4
154	L	So that's in another train then? In a different one?	
155	Dev	Yes. Exactly. In multiple train environment we are not aware of the different stakeholder.	
156	L	And it would help you to have more information on that?	
157	Dev	Yes, yes. I would like to have much more information on that or dedicated people supporting us for any release, yes. From multiple trains.	CHA-LGSCA-4

			CHA-LGSCA-3
158	F	And his management adhering to an agile way of working too?	
159	Dev	Yes, they are, they are, they are providing PI goals. Or sorry the program goals to us. So we are revamping our team we are re-designing our team and they are also following the agile way. We have trains set up and we work towards only one common goal as I have said. The ART Management Train and then we have Architect Train, so everyone is working in parallel and everyone publishes their updates in a common forum so that we can be aware of that.	CHA-LGSCA-5 COND-LEV-VALSTR
160	F	Okay. And you refer to management as [name of RTE], the Delivery Manager?	
161	Dev	*(pause)* Yes. It's been really nice experience working with [name of RTE] till now. I would like to continue working with [states name] during my time at IKEA her. It's been a nice experience. She is interesting as with a lot of additional responsibilities and possibly... It helps us. So if I work hard if someone is acquisition someone is putting much more trust in us. It also helps us to stray a bit further and show that, yes, I am capable of much more things than the role that I am of. So it's been a nice experience working with [name of RTE] so far.	COND-PRI-9
162	F	All right. And do you feel like you're experiencing some difficulties when you try to interact with other functions at IKEA?	
163	Dev	The same example that I cited. Someone from middle management a [inaudible] needs to know a contact point. That gives me a little bit of difficulty, and I have seen my peers getting that information they will normally ask me. Who does this incident go to, or who does this defect go to in this order fulfilment part or in the [inaudible] part. Then we struggle with that information and go up to our Scrum Master. They figure it out by speaking with the train and resolving that. But I would like to have at the developer level, and the lead developer level, where the lead developer is aware of this information and we don't need to	CHA-LGSCA-7 CHA-LGSCA-4

		go up till that point where…for such small information. Within the team it's fine, within NWP it is fine but not across a few.	
164	F	We've heard some from some previous interviews that they feel like they're having difficulty interacting with other functions that are working… *(call disconnects)*	
165	F	*(call reconnects)* Yeah, just a few more minutes. We won't to keep you much longer. So what I was saying is….	
166	Dev	No, it is fine for me.	
167	F	OK. Great. So from some previous interviews we've heard that people are having problems interacting with other functions at IKEA that are not working in a SAFe way and are not working in an agile way. And it creates a mismatch. Have you experienced anything like that?	
168	Dev	*(pause)* Not with the delivers that I am owning. I have not seen that till now.	
169	F	Do you feel like the problems or issues that emerge doing Retrospectives get dealt with afterwards?	
170	Dev	We try to post the solution for all the points that come across at Retrospectives, but some of the points are on a general level that will take some time to address. Yes. But the good thing about that is that we, or from the management, or we from the team try to provide an update, even if the resolution is not provided. An update on the status about [inaudible] task and not the resolution... the resolution might take four to five months. But at the end of a particular PI after a two months, yes we will provide with an update, this has been worked on, and this much has been achieved till now and we're trying to have a problem sorted out with [inaudible] manner. I feel that this is the right thing taking in Retrospectives and we are progressing in the right direction.	CHA-LGSCA-RETRO
171	F	Do you feel like that sometimes there are dependencies where it's out of your control to change something so you have to live with those issues or problems?	

172	Dev	Yes. So there are some points that come up at Retrospectives that are not in our control as such to address but from a broader perspective that applies to all the teams. So it can be solved in a small way and smooth duration of time. But yeah we try to achieve that but again only then we can make. So we provide a provider an update. But yes, we might not be able to achieve the whole thing if it is out of our hands.	CHA-LGSCA-RETRO
173	F	Okay. I would like to ask you some if you're having some specific challenges with dispersed teams and dispersed members? So for example do you have any communication difficulties with dispersed members? Do you feel like it's hard to obtain trust or to efficiently have knowledge sharing, conflict management or for example performance management?	
174	Dev	As I said, we do not have communication difficulties with the other teams that I can say, from my perspective. I can safely interact with the teams that we have from London and also India.	CHA-VT-COMM
175	F	And what about difficulties in terms of culture or language? You mentioned the culture training. How was it before the culture training? Did you experience any culture difficulties then or are you still experiencing difficulties or challenges in terms of culture?	
176	Dev	No not after spending so much time in Sweden. I have been in Sweden for nine years now. So I've been going to India and then coming back again, from my perspective. I don't feel that there is more cultural challenge as of now. But initially yes. It is a foreign land, you are coming away from your home. It takes some time for us to get acquainted to the ways or the people over here. So it is a new set of people with new culture or traditions of their own. You need to get to know them. Then you'll get acquainted to them.	
177	F	Could you give us an example of a cultural conflict?	
178	Dev	A small example would be the traffic crossing. That we have over here. So here you... So we have those traffic polls better on the roads. You need to press the icon, and then we have the	

		rules of pedestrians first. The car stops in front of you. We were not aware of that before we came to Sweden. It's a much better... It's a much better functionality how you guys or how the Swedes are having this incorporated in their daily lives where they give importance to the pedestrians. But in a country like India.... We have so many people, we have so many cars. We literally don't wait for the light to turn green. Even if it is red, even if the cars are not coming towards us, we try to run towards the opposite side. That is a small difference that I can think of now.	
179	L	And also in your line of work not only in your daily life, were there some difficulties in terms of culture that you understand something maybe a bit differently?	
180	Dev	No, in the work place I did not find any such cultural difficulties in the work place. People were pretty open in terms of the daily work that we were interacting for. And also both... there were... We had meeting starting from the early morning to late evening. People were pretty open. We had exchanges over multiple interactions in a single day. I didn't find any such cultural difference, at least in the office.	CHA-VT-TEAMDIV
181	F	Okay. What about technological difficulties do support collaboration and communication with the dispersed teams and members? Do you for example have lag problems, or you don't get software to work to communicate and collaborate?	
182	Dev	*(pause)* We didn't have any technology challenges as such. But... none that I can remember of. The only thing is, as I told you guys, the lack of documentation. It is very difficult for a newcomer to get to know the daily routines of how we work. We do an initial handholding where they only look at the documentation which is very clean up. We need to work on our documentation process and then it can be much more efficient.	CHA-VT-TECH CHA-LGSCA-3 CHA-LGSCA-DOC
183	F	And do you feel like the conference calls you're having with the team that they are structured for	

		example that people don't talk at the same time or do you have like a policy for how to interact in conference calls?	
184	Dev	Yes, we… So from our vendor site we have regular trainings for this. How we should interact during a conference call or so. So you might know that I am from [company name]. We have a target for 40 years per year in order to achieve all the mandatory hours of training. So that's 40 hours of training per year that is dedicated for us. So there are multiple trainings that we need to adhere to. One of them definitely would be how to speak proficiently in a work place. And also in a conference as you stated. We should apologize if we are interrupting someone. Or we should wait for the other people to complete their turn. And the normal way how to drive a discussion. These things are pretty much made aware to us whenever we go through those trainings.	CHA-VT-TECH
185	F	And one last question. What is your overall opinion about SAFe? Do you feel like it's really good, does it have any shortcomings, what do you think about it?	
186	Dev	On an overall level I'm pretty much impressed with SAFe and the methodologies and ideologies that it provides. I believe that it enables us to deliver in a much more planned and efficient way. I see it as a win-win for everyone - for the customers involved, for the business people, for the developers, everyone is getting their own share of profit from SAFe. So, it's a technology, or it's a mechanism that we should adhere to in every project that want to deliver in a proficient way should adhere to. I don't see any shortcomings in it. And I can only be a good advocate for SAFe as of now.	BEN
187	L	Is [name of SM1] your Scrum Master by the way, is he in your team?	
188	Dev	Yes, he is my Scrum Master.	
189	L	And you already knew him before in India, right? Did it help you that you already knew him when you came here?	

190	Dev	Yes, it helped me. So the funny thing with [name of SM1] is that we have known each other outside of this project also. We have a different sort of relation, which is even beyond normal office hours. But in terms of daily Scrum Master activities. So it's like that he doesn't only see me as a dev lead, he also sees me as an enabler who can add in multiple ways to the project, I can get the things done. And he has a lot of trust in me. And I think you'd speak with him also the same thing will reflect. He entrusts me with a lot of responsibilities and I deliver them in a much bigger plan [inaudible]. So there are a lot of things that can be only achieved from being in Sweden. So while it driving the thing back from India, currently, till the point he goes back, I will be the force for him over here. I train to get the trains to run smoothly till the point that he gets back so. And so [states name] or [states name] has also provided us with opportunity, yes, you are not only a dev lead, you can also contribute to the cutover release activities or even the Scrum Master responsibilities wherever you feel that you can provide us… provide them with any sort of activities that can benefit the project overall, so yeah.	
191	F	OK. We don't have any more questions.	
192	Dev	Okay sure. It was a real pleasure for me to speak with you guys.	
193	F	Yeah pleasure on our side as well.	
194	Dev	Thank you all.	
195	L	Thank you very much for taking so much time, you really helped us. Thank you and all the best for you and we will send you the transcript when it's transcribed. Then you will get it as soon as possible. Thank you. Goodbye.	

Appendix F: Interview transcript 5

F = Fredrik Hoffman

L = Lou Hinterberg

SM2 = Scrum Master 2

Section	Person	Text	Code
1	SM2	How are you?	
2	F	We're pretty much the same.	
3	L	We're excited. It's our last interview with you. And we would like to know if we can record the phone call is. Is it ok?	
4	SM2	Sure.	
5	L	Cool.	
6	SM2	Yeah, of course.	
7	F	So, I can give you some… we can do video too.	
8	SM2	Yeah, no worries. That's per default.	
9	F	OK. So maybe you'll be able to see us in a second. But I can give you some quick background information. So, we're two masters students from Lund University. We're writing about SAFe in the context of dispersed members and dispersed teams. So that's an interesting setting we would like to look at.	
10	SM2	Dispersed meaning multiple sites or…?	
11	F	Yeah.	
12	SM2	Yeah.	
13	L	Exactly. When the… when the teams or the team members are ehm… located on different places. So that's what we're interested in. And at first we would like you… you have got the interview	

		guide we sent you? Just that you have an overview. I mean you don't necessarily need it but just in case.	
14	SM2	No, [name] didn't send it to me. Did you?	
15	F	Yes. Yes, we did.	
16	SM2	It must… it might have been just…	
17	L	It's in the e-mail from Wednesday... Otherwise...	
18	F	I think we'll manage without.	
19	SM2	Yeah, I have it.	
20	L	Ok. Cool. But we also... just in case... so at first, we would like to start that you could tell us a bit about your role and how long you have been working with SAFe.	
21	SM2	So in... in this company or in general?	
22	L	Both, please.	
23	SM2	So, I've been working with agile basically for… seven years or something? I had role such as a Scrum Master which I have now as well. I've had the RC role as well in [name of a different company] when I was working there.	
24	L	Oh no, there is a problem with the image now. No, now it works.	
25	SM2	Great. So, in [name of a different company] I was an RTE. We have been five teams with five different Scrum Masters. And teams working on multiple sites there as well. Since that is of your interest. So, we have teams in Tokyo and in Lund, Sweden. And here in eh… both in [name of a different company] and there was multiple times where we had a Scrum team but with people in different locations, so I had one team... I was the main project manager or, or eh... Scrum Master... for four teams in another constellation where we	

		had teams in Beijing, Tokyo, Lund and Stockholm, Sweden.	
26	L	And at IKEA, how long have you been… or there, have you been working with SAFe as well?	
27	SM2	Eh... SAFe... SAFe is... I have been working with IKEA for 14 months now and out of those it has been like eight or 10 within SAFe.	
28	L	Okay, and you have worked with SAFe before?	
29	SM2	Yeah, at [name of a different company] as well. Yeah.	
30	L	Okay. Then please tell us a bit about the IKEA Multichannel area and what it is that you are creating.	
31	SM2	We are delivering the new e-commerce solution. Yeah. So, IKEA is currently working and rolling out new e-commerce solutions for the entire world. And we are working with rolling out the new one.	
32	L	And that's called IKEA Multichannel area?	
33	SM2	Eh... Multichannel... Sir... Let me see... It's a complicated name to complicated, see, since I have to think about it... *(laugh)* Multichannel Service Delivery Area.	
34	L	Thank you. *(laugh)*	
35	SM2	Yeah. So MCSDA.	
36	F	Okay, so how many teams are currently working with SAFe at the Multichannel area and how are they organized?	
37	SM2	I think it's… I'm not quite… I'm not a hundred percent sure but I think it's only two teams that are working with SAFe… or two… two teams or two trains...	COND-LEV-PROG
38	L	Two trains.	
39	SM2	... two trains working with SAFe... yeah. And within each train there's about a hundred plus people.	COND-LEV-TEAM

40	L	Okay.	
41	F	And what is SAFe in your opinion and what is the purpose of SAFe at the Multichannel area?	
42	SM2	There have been many, ehhh… There have been many problems with… with… with rolling out such a complex solution. So, the way they have tried setting it up is, okay, so let's try agile and since it's a bigger thing to deliver a con… in a context, let's try applying SAFe. So multiple teams delivering one solution. So, then they said, okay, let's try SAFe… eh… for both. So, they started the two trains and we have been working with SAFe for I think it's about two years now or something? I'm not quite sure about the timeframe. But something like that.	
43	F	Do you consider costs take an economic view when conducting your task. And if so could you give an example how you do it?	
44	SM2	Eh... Both, yes and no. It's an, it's an interesting question. SAFe or costs when working with a Scrum team or a train – yes, we always consider costs. The RTE, in our case here, they get the bills directly. So, all of the tools we're using, all the consultants were using, we were... follow that up... on a cost basis. The team, for instance, I work as Scrum Master here, we don't... we don't consider costs. We have... a... we have a fixed amount of people. We have a team and with that team we try to deliver as much value as possible for the given amount of money that we have.	COND-PRI-1
45	L	Okay.	
46	SM2	So we really have... eh... it's the way I would say that you get as much value as possible out if you get, if you have functioning... if you have teams and working... working agile and you hand them a bag of money together with the... the Product Owner of course saying what they, what they want. ”Do as much as you can with this amount of money.”	COND-PRI-1
47	L	Great.	
48	SM2	Then... now we start planning and we break it down and we get a list saying that I want, I want one to a hundred. This is the priority and then we	COND-PRI-1

		can say quite roughly what, ”okay, you will get, for this amount of money, you will get up until points thirty three.”	
49	L	Do you feel like there is a common goal between the different teams and that there is a shared overview of the big… big picture or are you maybe feel like the teams are working in silos?	
50	SM2	For us it's, it's very much a common picture of what we're supposed to deliver. Ehhh... At least, at least when we have the PI Plannings. So when we have the PI Plannings with... we break down the coming four Sprints and then it's really both on an epic level and a feature level. What, what's the focus for the coming period of time. *(pause)* So are we going live in a new country or are we focusing on, for instance, a few... if you're using applications or the Internet you can see a lot of updates about new terms and conditions. And this is the way we handle your information, information, eh... called GDPR – [corrected into: General Data Protection Regulation] – which is something rolling out right now in the, in the... across all the companies in the world. They have to be more transparent with, eh... with what they collect and how they use your information. So, for instance that has been a big focus for ours now. So, GDPR is the focus during the coming twelve weeks or 10 weeks or whatever the time period is. So, I definitely feel that there is a common goal. But then after the PI Planning everyone kind of scatters into, into the teams, and then we, we have a structure where we, we the Scrum Masters have set up so we, we continuously – I think it's twice a week – that we sit down and discuss if there is anything blocking us, and if there is anyone needing any help with any of their work or their commitments. So, we definitely help each other out to make sure that the train succeeds rather than all the team succeed.	COND-PRI-2 COND-LEV-TEAM COND-LEV-PROG
51	L	And these meetings where those Scrum Masters meet – are you all in Helsingborg? Or do you also have Scrum Masters in London or India?	
52	SM2	Yeah, we have Scrum Masters in different locations. So today we have a call setup with Skype. Yeah. But it's definitely.... it's a very interesting subject that you are studying. Eh... Especially for	COND-LEV-TEAM CHA-VT-TECH

		me because when I... when I started here I had three people onsite and I think it was nine people off-site. And other people sitting off-site were in different locations, almost every one of them. So, we had, I think it was six or seven different geographical locations.	
53	L	At IKEA?	
54	SM2	Yes, in one, in one team.	COND-LEV-TEAM
55	L	Wow. But now they...?	
56	SM2	Yeah. It's the worst I've ever seen.	
57	L	Why? What did you experience?	
58	SM2	It's, eh... It's hard to create the togetherness feeling – creating the "one team". *(pause)* And creating something that's total transparency and getting a sense of includement for everyone. And is that why they've changed so that now you have more members from for example India here at Helsingborg close to the business.	CHA-VT-COMM
59	F	And is that why they've changed so that now you have more members from for example India here at Helsingborg close to the business?	
60	SM2	Yeah, it's eh... I told the manager that brought me in here that the first thing I would do is to start moving people here.	CHA-VT-COMM
61	F	And do you feel like it's working better now when you have more of their members here?	
62	SM2	Yes. *(pause)* In all of the roles I've had, in all of the places I've been, I've been at [name of a bank], a Swedish banking… bank as well, working with their applications and their Internet solutions where they work was just one or two Scrum teams working with it. But even though in [name of a bank] where it was just Malmö and Stockholm, so same time zone, same culture, same, same everything. It creates challenges. Sitting… sitting distributed as is always a challenge. And I, I express it as it's a cost. So it's a cost in the terms of effi-	CHA-VT-COMM CHA-VT-TEAMDIV

		ciency. So if we, if we choose to distributed, perhaps it's cheaper in direct costs, so in direct costs meaning, meaning money for, for… per hour per consultant. But it has an impact on how much we can do and how much we can put out.	
63	L	So you think you're more efficient now when you move the people to Sweden to Helsingborg than before?	BEN-PRO
64	SM2	Yeah. I know that we are right know, that we are about... that we have doubled our capacity and deliveries.	
65	L	Wow, that's a lot.	
66	SM2	Yeah. I think it's the cost is between 40 and 60 percent of the loss in efficiency sitting distributed.	BEN-PRO
67	F	So when you move the members here to Helsingborg, are you trying to achieve some kind of like ”middle man thing” where you have the members here that you can trust and then they can communicate with the members in India which they trust. Kind of like that, or… ?	
68	SM2	Yes and no. Yes in the sense that yes, we need something from that... from another team. It's easier if they speak the same language, sure, and come from the same culture in getting them, getting the message across about the importance and having technical discussions or whatever it may be. But I would... I would rather have everyone here. So if you can get people to sit together teamwise and trainwise I can almost certainly guarantee a lot higher output than sitting distributed. It's one of the most important things getting people co-located. It definitely raises, raises efficiency and effectiveness by a lot more than you think.	
69	F	Yeah, I think we're going to come back to challenges with the dispersed teams soon. But we also want to ask if you feel like the teams are still open for changes after deciding on a requirement or approach.	
70	SM2	On an individual basis some are more, some are more open for change or open for... re-working stuff than others. So it's more of a mindset approach.	COND-PRI-3

71	L	Do you feel like it depends on the culture maybe?	
72	SM2	Definitely, but… yeah, yeah definitely, so more, so than... and then more so than anything else I would say. I would say there are definitely people from Sweden who has problems with adapting to change much depending on your background. Yeah, but if you're coming from Egypt it's more, more like, yeah, or especially India you do what the manager says. It's more like that.	CHA-VT-TEAMDIV CHA-LGSCA-1
73	L	So you have people sitting in Sweden, in Egypt, in London and in India, right?	
74	SM2	Yes and in many other places. We are in Germany, Belgium, Slovakia, Lithuania, yeah.	
75	L	Also in your Multichannel area?	
76	SM2	Oh yeah, much more than that in the whole Multichannel area.	
77	F	And do you feel like when you bring members here from India, you feel like they adapt to the Swedish cultures and they kind of... ?	
78	SM2	Yeah. Yeah, definitely. We have that... they have rotation, so some of them are here for two years or 18 months and then they go back or stay longer... and I wouldn't… I would have to say that almost everyone who is here for a, for a longer period of time, they... they adapt to the way, the way we want to work. In a very good way.	CHA-VT-TEAMDIV
79	L	So, maybe it's then kind of a connector between the two cultures, you would say? Because he still understands his old culture but also the new one.	CHA-VT-TEAMDIV
80	SM2	Yeah. *(laugh)* Because it's... *(laugh)* They basically don't have any choice because it's about how we talk here. And the agile way of thinking or as I sometimes say the IKEA way of thinking. I mean [inaudible] said... if you read the agile manifesto and the actual values is basically what like [inaudible] said but 20 years later. So I mean it is, it's... it's a matter of focusing on customer value, right? So getting value out to the customer, delivering in small, smaller broken down packages, delivering value fast, getting... getting feedback on the work we do or the product fast so that we can learn and	COND-PRI-3 COND-PRI-6

		adapt. And that is something that we talk about *every day*.	
81	L	Who is the customer for you?	
82	SM2	The people buying online or in the store.	COND-PRI-4
83	L	Hm hm. And do you have… So do you also get quick customer feedback from them?	
84	SM2	Not from them directly but we get, get quite quick feedback from the markets and they're not as quick as we would like to. That is something that we're currently working on... to shortening. Basically what we're working on is always as you should do is shortening lead times. In, in every sense. So if you're talking about customer feedback, we're always talking about how can we reduce the lead time so that the people or the teams that needs to make a change or fix something or try something new, so that they get the information that they need to try it. To try the new.	COND-PRI-4 CHA-LGSCA BEN-SAT BEN-TIM
85	F	And do you have frequent milestones where you evaluate the solution with the market?	
86	SM2	I wouldn't use the term milestones. But yes, we meet them frequently. And it's the Product Owner and the Product Managers, they meet the market frequently.	COND-PRI-5
87	F	And do you visualize your work in progress?	
88	SM2	Yes, very much so. We don't... we don't talk about or visualize it for the markets in the same sense that we are visualize... visualizing it on a train level. So... our main... our focus is always on, what always is... It's on visualizing very much because it's great, it creates a lot of value and a whole other overview of where we are and where we're going. And how we're feeling or how we are.	COND-PRI-6 COND-LEV-PROG
89	L	And it's also important for you to know where the other teams are and that's done through visualization if we understood that right?	COND-PRI-6
90	SM2	Yes.	COND-PRI-6
91	L	Do you feel like it helps you to reduce work overload?	
92	SM2	Good question. *(pause)* Reduce... *(pause)* Yeah, I would say so. Definitely. Helps me understand	COND-PRI-6

		who is working on what and not only me but more importantly the team. And on a train level which team might be under heavy workload as well. So we're visualizing both, we have the Scrum Boards for the different teams and we have Scrum Boards for the train as well and by visualizing that we can always we can always see if or... we can see if someone needs help or someone, someone can easily show up their hand and say that they need some help and get someone in to understand what it might be because we visualize as much as we do.	COND-LEV-TEAM COND-LEV-PROG
93	L	And that's also done with teams from other locations?	
94	SM2	Yes. So before where I got almost everyone here, we used visual... visual tools that, for instance Trello.	CHA-VT-TECH
95	L	Yeah, we know Trello.	
96	SM2	Trello or RealtimeBoard or JIRA or... yeah, we try to make it, but nothing nothing beats a board, a physical board. If you ask me. I started... in the beginning it was... it made no sense of having a broad since everyone in my team was, eh... was sitting, sitting in different parts of the world. So I made a little board for myself because I really... by visualizing that work in progress and what's, what's going on, you as Scrum Master can, and an TRE for that matter, you can ask the right questions. You can see if they're bottlenecks and you can ask questions... based on what you see.	COND-PRI-6
97	F	So would you say that there's an efficient planning of people and resources?	
98	SM2	I don't really know if there an efficient planning. I'm thinking about... if we were to remove like 50 percent of the people what would happen. *(pause)* I don't know to be honest. I don't know.	COND-PRI-7
99	L + F	Okay!	
100	L	What is your motivation to work on the project and what drives you in your line of work?	
101		Ehm... *(pause)* I think it's for, for me at least it's people. So I'm working with... working with people, getting a team together. Ehm... and also a driving organizational change is something that I do a lot as well. Helping the organization. Get the	COND-PRI-8 CHA-LGSCA-DOC

		right mindset because it's a common problem in almost all of the places where I've been that people were very, very keen on following a process or they're very keen on... creating documents and... reports... and a lot of other stuff that's really... when you start to dig down and by asking questions like, ”what's... okay, you will need some information. What do you need that information for?” And then drilling down to what what's actually going on. You often end up in that it's quite unnecessary or that they're just they're just asking or wanted to know one small piece of information. So helping drive that as well as getting the team together, creating a... a well working team is something that I really enjoy.	
102	F	And do you feel like the management trusts you and other workers and that you're able to make decisions independently?	
103	SM2	Yes. On some levels no. Our direct management yes. I would say that we have their trust.	COND-PRI-7
104	L	Who is that for you? Do you mean [names of RTE and Line Manager]?	
105	SM2	Yes. But it's more of a... it's, it's more of a people problem. If you're can state it like that. *(laugh)* It's more of a people problem than it is a management layer problem because certain, certain people, they have a very... a very big need for control. So in order to satisfy their control, control... just stimulate their control behavior, they need a lot of information which often results in micromanagement. And for us, [names of RTE and Line Manager] they are much more trusting in coaching which is, which is the way it should be. The way we work... the same way that we work with a team. So how do you build trust within a team and how do you build efficiency within a team? By letting them take responsibility and encouraging communication. Just tweaking here and there the whole time. Always. Yeah.	COND-PRI-7 COND-PRI-9 COND-LEV-TEAM COND-LEV-PROG
106	L	Thank you. And now we come to some questions about the SAFe levels. So you we already heard that you apply the team level, but what is the team level for you? What is it in your opinion?	
107	SM2	In SAFe or for me as a Scrum Master?	

108	F	How do you perceive that? Like what's your opinion about it?	
109	SM2	If you ask team level, for me, it's the Product Owner and the... and the development team.	COND-LEV-TEAM
110	F	Okay.	
111	SM2	That's the team level for me.	
112	F	And your team, you're applying Scrum, Kanban, Extreme Programming or perhaps anything else?	
113	SM2	For me it's... whatever is needed, but just now... or whatever works I would say, but now it's Scrum [inaudible], you know, a version of Scrum for another team it's Kanban.	COND-PRI-3
114	F	Okay. And we've heard that it's up to the teams to decide themselves how they want to run, but do you think that that could create a challenge that different teams use it use different kinds of frameworks?	
115	SM2	No, I don't think it will create a challenge. No, I don't think so depending on how much you, how much you have to work *together*. But in the current setup we have it's totally preference of the team. Well, that's what works well for the team work often works well for... for what they're going to deliver. So.	COND-PRI-5
116	F	Okay.	
117	L	What is your overall experience with working on the team level or what's your opinion with working on the team level?	
118	SM2	What do you mean by opinion?	
119	L	Do you feel very much involved?	
120	SM2	Ahhh! Hehe. Yes. Yes I do. But there is a difference between me being a... in the role of a Project Manager or as a Scrum Master or Delivery Manager is as a Product Manager you, eh... you're often asked to be the one that's on top of everything, so you need to be up-to-date and up-to-speed with everything that's going on. And to me it really doesn't make sense to have that kind of mindset	COND-PRI-9

		and that kind of way of working. So, what I'm trying to do and what we're trying to do here is getting the team to be the ones that are responsible.	
121	F	Okay.	
122	SM2	So that is, that is, this if you will my opinion about the team level, always optimize on making the team responsible. What I do, eh... the things that I'm responsible for or if the team is not performing. If there are some conflicts that needs the resolving, if the team is not improving, that is something that I would have to answer for. But if it's a delivery or if it's code quality or if that's other things like that, it's definitely the team. That is not my problem to solve. It's the team's problem to solve. If they have a challenging task I'm there to help them if anything is blocking them or if they need to get in touch with anyone. But it's a team's problem to solve. I don't... I try to spend as little time as possible in... in helping them with that because they're the experts. I'm not. Yeah.	COND-PRI-9 COND-LEV-TEAM
123	F	And we've also understood that you apply the program level, so similar question here: What is the program level in your opinion?	
124	SM2	It's a program within IKEA, so it's a big thing. The Multichannel Service Delivery Area that we're working on is a big, big program. I think it's one of the bigger ones in the world actually.	
125	L	And the program level, that's ...?	
126	SM2	And if you mean program level, many, many Release Trains, many, many different Release Trains together with everything else.	COND-LEV-PROG COND-LEV-VALSTR
127	F	Alright. And then on the program level. Are you applying... are you doing activities: PI Planning, Inspect and Adapt workshop, Program Kanban?	
128	SM2	No.	
129	F	No to all of those?	
130	SM2	We, we're... not that I'm aware of I should say on a program level. Since we are only two teams working with, with... eh... with SAFe. They have mechanisms of course for Inspect and Adapt, and eh...	COND-LEV-PROG COND-LEV-VALSTR

		lessons learned and all of those things but it's nothing that we are part of or I am part of.	
131	F	Big Room Planning?	
132	SM2	Yes, for the trains yes, but for the program level no. That's very much waterfall plan that's… that's more so of a [inaudible] scheme.	COND-LEV-PROG COND-LEV-VALSTR
133	F	But when the train does that planning, then they use the Big Room Planning and they use Inspect and Adapt workshops?	
134	SM2	Yes.	COND-LEV-PROG
135	F	And do you think that those activities help to manage their workflow?	
136	SM2	*(pause)* In... in... in some way... Yes. Do I think that it's necessary? No. I think it will... I think many of the... Many of the things that the PI Planning is... Many of the things that are happening during the are PI Planning I think that would happen anyway... Even you didn't have the PI Planning. It's a big thing. If you if you bring four in our case a hundred, a hundred and thirty people together for three days or two days doing all the planning. It's a lot of money that costs.	COND-LEV-PROG COND-PRI-1 CHA-SAF-SHO
137	L	And so you feel like maybe sometimes it's a bit too much and not necessarily needed you invest for the PI Planning?	
138	SM2	Yes.	
139	L	Also when communicating with the dispersed teams or the dispersed members?	
140	SM2	Within the PI Planning, you mean?	
141	L	Hm hm.	
142	SM2	Yeah, yeah. It's a, it's a *real* challenge. Unfortunately they are… It's not the same thing if you're not in the same place.	CHA-VT
143	F	What do you feel like they're missing out on when they're not there?	
144	SM2	Almost, almost everything to be honest. Because when I had almost everyone off-site, we had to have a meeting room with a phone where we sat and planned our... the teams... the teams' commitments for the coming PI. And then we weren't part	COND-LEV-PROG BEN-TIM

		of the other train... the other train... the other teams in the train that were doing their planning. And now that we have changed so we went we almost everyone here it's more or less, ”yes, they are with us on phone but we are running around making sure that we sort out all of the dependencies, all of... all of the technicalities with all of the features and all of the products rather than keeping the team informed, the whole team informed even the ones sitting off-site.” Because it's a problem with meetings and... not only meetings but the work that we do with people sitting off-site. And it's a question, really a question of what do you want to optimize on. So if you have for instance a Sprint Planning or PI Planning, is it more important that everyone is involved or is it more important that we get something really good out of it? Because you *really* can't have both. Because it takes a *lot* of time and a *lot* of effort of keeping everyone involved that's not here.	
145	L	What is your experience. Where did you focus on? Or where do you focus on?	
146	SM2	I always focus on... on... on the people here and getting, getting as much value as possible out of the Planning sessions rather than keeping everyone involved. It's more important to me that we get to get something that we can use from the PI Planning and the Sprint Plans.	
147	F	And do you know if you're also applying the value stream level?	
148	SM2	Interesting. What do you mean by value stream level?	COND-LEV-VALSTR
149	F	Well, the value stream level is where you have the roles of Value Stream Engineer, Solution Management and you try to kind of coordinate multiple trails.	
150	SM2	Yeah, that's true! They changed the name of that, right? With SAFe?	
151	F	I think so, we… we, we've only looked at the latest version, SAFe 4.0, so maybe in the older version it was called something else. So yeah.	
152	SM2	Aha! Ok. Ehm...	
153	L	So maybe you use a different name at IKEA.	

154	SM2	Yeah. We're so keen on that. So it's definitely possible. No, I get confused because value stream to me is something where do you visualize... Let's say that have a product. So a value stream to me is where you visualize how do you get functionality or a feature or a defect fix from, from the point that you see it to you until you get it out to the customer and that's... that flow within the organization is also called a value stream. That's why I'm confused.	
155	F	Yeah, I was a bit confused about it, too, when I was reading it because in SAFe you have the value stream but then you also have the value stream *level* which is an optional level used to deliver what they say are the most complex systems. Yeah.	
156	SM2	Yes. So I can say that... it's... I mean, yes we do in some sort of if that's, if that's the level. So let's say that it's I said before that it's a very, very big program and IKEA think, yes, very, very big. I mean we have so many different applications and so it's a really complex structure that we have which involves that many, many people needs to deliver something at the same time. Yeah. Yeah and that is something that's always very, very painful. And for instance when we launch a new country it's one of the examples.	COND-LEV-VALSTR CHA
157	F	And do you know if you're using the portfolio level too?	
158	SM2	Yes, we are.	COND-LEV-PORT
159	F	Okay.	
160	SM2	Yeah.	
161	F	And do you know if you have one portfolio or if you're having many portfolios?	
162	SM2	No, but I don't know unfortunately.	COND-LEV-PORT
163	F	So the portfolio level for you, is that the epics?	
164	SM2	No. Higher.	COND-LEV-PORT
165	F	Higher.	
166	SM2	Yeah. Epics... Epics are more like... We need to deliver a country. We need to have support for	COND-LEV-PORT

		GDPR, the new legal requirements from EU. That's on an epic level and then higher up than there are other functionalities or... what's the word? ... Other more complicated or bigger, bigger customer value points than that even.	
167	L	So it's more about the organizational strategy?	
168	SM2	No, it's definitely customer or it's definitely value based. So far I would say it like that. I think... I don't know if I'm allowed to discuss any of that. An example would be for instance Amazon. They have something now called "Prime Air" where you can get stuff delivered within... If you live in a big city area you can get it by a drone in 30 minutes or something. That would be one of the examples. I'm not saying that we're doing that but it might be that that type of service or what we would say.	COND-LEV-PORT
169	L	Okay. How much would you say you know about the different SAFe roles and the responsibilities they have?	
170	SM2	I don't think I've read the latest version but that's something that we discuss or that we talk about regularly.	
171	F	You feel like it's well defined at IKEA?	
172	SM2	No. It depends on what you mean. So if it's SAFe by the book? No. I would say that we discuss. I don't know if that's what we discuss or if it's, if it's our version or what you would say.	CHA-LGSCA-DOC
173	L	With the book you mean your agile handbook?	
174	SM2	No! No. For God's sake, no.	
175	F + L + SM2	*(laugh)*	
176	SM2	I don't think anyone has ever read the book with [inaudible]. It's really... Let's leave it like that. *(laugh)*	
177	L	*(laugh)* Okay. And do you think SAFe is beneficial for IKEA Multichannel area?	
178	SM2	*(pause)* I don't know. I'm still, I'm still not convinced that that SAFe is a really good way to go.	BEN BEN-SAT

179	L	Okay, why not?	
180	SM2	To be honest. It adds a lot of... It adds a lot of layers... of new rules... and control... And it creates some behaviors that are not particularly [inaudible] of because it drives the wrong, it drives the wrong behavior in controlling. And a common misconception about that is that since we have Sprints and you have PIs many people connect the release or the team releasing something at the end of those, for instance, whether, whether it should drive, you should have the mindset that you should be able to release as soon as you have stuff ready.	CHA-LGSCA-6 CHA-SAF-SHO
181	L + F	Ahhhh.	
182	SM2	I think they release every week or every two weeks. But I can guarantee you that they have hundreds every day within Facebook.	
183	F	But do you think that given IKEA structure right now, you have so many teams, different trains. Do you think it will be possible to do agile large-scale without these layers?	
184	SM2	Yes. Definitely. Because you could... *(pause)* It's a matter of adapting the set up or the and the organization about what you want to achieve. And SAFe? It's definitely one way of doing it but it's not the only way. That's why I mean when I say that I'm not convinced that... That SAFe is eh... is the best way or one. It's definitely one way of doing it but I'm sure there are... We could adapt even more or, or tweak it to fit us better. Because there is really no... how shall I put it... we are not delivering SAFe... is a good way of saying it. Because many think that you need to be 100 percent Scrum or 100 percent SAFe. Then we have achieved something, you achieved *nothing*. You have to deliver something so SAFe is there to assist. And SAFe and Scrum and all of the other frameworks and process optimizations like Kanban, they're down there to support you in what you need to deliver. *(pause)* And if you need to change something, change it. And if you need to use something else, use something else. If you have another role,	COND-PRI-1

		have that role. If you need to remove something, remove something.	
185	F	So you don't see any benefits in terms of time, productivity, product quality or satisfaction related to SAFe directly?	
186	SM2	No, I would say no. Not related to SAFe directly. I would say that if, if you can avoid... Wait as long as you can to scale agile is basically what I, what I would do. I mean we are a lot of people, SAFe is definitely supporting us and in... in *one* way of working but it's also driving a lot of the wrong behaviors. And it's also... unfortunately introducing some of the bottlenecks and eh... what other problems that we have.	BEN-TIM BEN-PRO BEN-QUA CHA-LGSCA
187	L	So what kind of challenges or issues are you currently experiencing when working with SAFe? Can you give an example?	
188	SM2	It is mainly focused on around... getting value out to the customer in a fast and efficient way... which it *shouldn't* be. It shouldn't be. But here is an example of where... it has created that behavior. At the end of the PI you're going to demo something and then you're going to release something. And at the end of a Sprint you're going to demo something and then release something... rather than creating the mindset about getting things up when they're ready. But I think, I think the SAFe analogy with the, with the train. It's a very good analogy. I make the analogy I think probably a few times a week. But right now I'm using the analogy that we stop the train every week. And whatever is ready we left off!	BEN-TIM CHA-LGSCA
189	L	And do you see any specific challenges when working with SAFe when you look at the dispersed team members?	
190	SM2	I don't think it's connected to using SAFe. It's, it's just a matter of... It's as simple as people sitting together are much more efficient than people not sitting working together.	BEN
191	L	But it's not that SAFe causes any problems?	
192	SM2	No. No. I wouldn't say which… I mean it's, it's just a framework.	
193	F	But it's hard to apply with dispersed teams.	

194	SM2	Yes. Definetely. Definetely. But the key to success is meant to help people working sitting together working together in the same location. That's really a key to high productivity.	BEN-PRO
195	L	Would you say there is still some scepticism among members are that safe and agile way of working as part of the members mindset?	
196	SM2	*(laugh)* Good question. Ehm... from, from a person to person. Some people are *really* getting a sense and seeing the value of working in this way while others are more keen on being... not being told what to do in that sense but more in planning, planning further ahead. And more controlled in some sense, does it? I'm not sure it comes across right but out being more controlled in basic planning. Long before. They want to know more and they're are not... they're not that...	CHA-LGSCA-1
197	L	Flexible.	
198	SM2	Yes! That's the word. Flexible. Yeah.	CHA-LGSCA-
199	L	Do you feel like the management invested enough to support SAFe? With trainings?	
200	SM2	Yes. Too much. *(laugh)*	
201	L	*(laugh)* Too much.	
202	SM2	Yeah because, I mean, the first thing that they do is send someone off to, to get the SAFe certificate as soon as you get in here. You don't have to but today you're asked do you want to go a SAFe course, for instance, and then when you get out and you think you know or many people think that they are, okay, now I know about the roles and responsibilities. And then it's SAFe, I would say, SAFe in theory and SAFe in practice. It's two different things. So if you, if you read about it that's one thing and then when you are working at it you can see immediately that you have to... that you have to change or we have to tweak depending on what you're delivering or what your team looks like or... yeah.	CHA-LGSCA-2
203	L	And with management you mean [name of RTE] and [name of Line Manager] or you mean the management...?	

204	SM2	Yeah. Yeah. [Name of RTE] and [name of Line Manager] and the people above them as well. I mean it's, it's a good thing that we have it to... it's a good thing that we have it to offer if you want to be to learn from the start and from the basic, that's of course a good thing... to get the basics right. But it's a different thing. In theory it's one thing and practice it's another. Yeah.	CHA-LGSCA-1
205	L	Do you feel like you need to do more documentation than save advocates?	
206	SM2	No, I would say less.	CHA-LGSCA-3 CHA-LGSCA-DOC
207	L	You would say you need less documentation. You do too much?	
208	SM2	Yes. We don't do too much. But from what SAFe advocates, I think we do... yeah in some sense we do more and in some sense we do less. We have tools supporting different types of documentation and reporting and information but we work with as we said we visualize a lot. So that's basically our key source documentation.	CHA-LGSCA-3 CHA-LGSCA-DOC
209	L	Just a quick question. Is it possible that we can talk to you for five more minutes?	
210	SM2	Yes, sure. Go ahead. I have all afternoon.	
211	L	Oh great, thank you! Do you experience any coordination or communication difficulties between the different teams?	
212	SM2	No, not really. We have... We have set up a Scrum of Scrums which is basically this Scrum Master meeting twice a week where we talk about team dependencies or problems that someone needs help with or yeah stuff like that.	CHA-LGSCA-4 COND-LEV-PROG
213	F	What about if there is dependencies with teams in other trains?	
214	SM2	And that is something that we run into quite a lot... And we sort it out on a neat, neat basis. So as soon as we know about the dependency we, we always go and talk to them. It's important. It's a very important thing to, to say that we talk to them. We don't send e-mails or we try not to send e-mails, I should say. And it's also a mindset thing that's to do with agile. If you can go and talk to someone always do it. If you can. If you can't go see them, call them, talk to them. If you can't call them, then	CHA-VT-COMM

		it's okay to send an e-mail. It's always... It's... We've experienced it here *a lot*. If you go talk to them, there's a whole other commitment and there's a whole other way of collaborating and communicating afterwards.	
215	L	And do you think management is adhering to an agile way of working too?	CHA-LGSCA-4
216	SM2	Yes. Absolutely here. If you mean [name of RTE] and [name of Line Manager].	
217	L	And the management, like the layer above?	
218	SM2	Ehhh... Yes, I would say they, too, but a few layers.... Ahhh I would say probably the whole company is on board with agile but it's, it's... It's a tricky one because many people don't know what agile is. And then one... They can understand it theoretically but then when you have to adapt your way of thinking or way of doing things or the way that you're used to it. So it's a whole other ball game.	CHA-LGSCA-3
219	L	Do you think SAFe and agile is the same?	
220	SM2	No, not at all. Not at all. I mean, I think, I don't know how for how long we've been working with SAFe where I am but it's definitely a couple of years I think. But when we arrived here for eight or 10 months ago, there was nothing at all about it. They were working according to SAFe but this wasn't agile at all.	
221	L	And now it's more agile?	
222	SM2	Yes. Much much more.	
223	L	Why?	
224	SM2	We were pushing for the right effort for the... the core values of agile. An example would be going talking people instead of sending e-mail. Solving problems together instead of following a process. Focusing on getting value out the door rather than following the development process or eh... delivery routine. So we're trying to break down a lot of barriers which creates a lot of... What can you say.	COND-PRI-8
225	L	I think we understand.	

226	SM2	You understand and they will get upset if you don't follow their process. Yeah. And then when you start questioning what's the value of following a process if it's only, if it only adds lean time and they can't answer it. It's always difficult discussions.	
227	L	Are you feeling any difficulties in terms of interacting with other functions at IKEA?	
228	SM2	No. Not at all. IKEA is a... *(laugh)* Now I am marketing IKEA. But IKEA is a really great place to work because Ikea hire people based on their values. So it's a it's an entirely about value based company. So they hire you based on your values first, your competence second. So almost all of the employees at least and almost all of the consultants, I mean everyone is here to help one another. That's something I really appreciate and everyone is always, almost always open for discussion and nice pleasant to talk to. Somewhat in the right place.	CHA-LGSCA-7 COND-PRI-8
229	F	Some of the previous people we talked with mentioned that for example they find sometimes it's difficult to interact with other functions at IKEA because they work in a waterfall approach and it creates a mismatch. Have you experienced anything like that?	
230	SM2	*(pause)* Yeah. Ehm... It's a mindset thing again. People that are used to working with... with project management. I was one of them of course a long time ago a long time ago... some time ago. But there... You can usually get around it by discussing and talking about delivering value. Yeah... And we're not... There is no value in... eh... How do I usually put it? So what I talk to project managers – I usually talk to them about... they are very keen on following a process of PPS or crops or [inaudible] or whatever they use and they get measured. I understand the behavior drives! They get measured on time, quality and costs. Three aspects. They're not being measured on how many are using the product that you deliver and how many are – sorry, just have to move – and how well the product developed selling. So it's a it's a tricky thing to measure. If you don't measure on an actual, on the actual output.	CHA-LGSCA-7 BEN-TIM BEN-PRO BEN-QUA CHA-SAF-SHO

231	F	So maybe it's problematic that certain functions are being measured or haven't adopted to the agile way of working, too?	
232	SM2	Yes. Definitely. And, and... one aspect of it as well is that if you, if you're working in a traditional organization that's usually, that's usually working within the projects, so following PPS or another waterfally method, what you have to think about when you're introducing SAFe or other agile frameworks is that you have to adapt the organization for it as well. Otherwise you will still have all the mechanisms that consume a lot of lead time. So that is something that wasn't working with us as well. Shortening the lead times and processes.	CHA-SAF-SHO
233	F	Okay. I would also like to ask you about specifically the dispersed members in teams. So are you feeling any communication difficulties when interacting with dispersed members and teams?	
234	SM2	No, I mean, it's really a problem with tools. So...	CHA-VT-COMM CHA-VT-TECH
235	L	It's more the technology you would say?	
236	SM2	Yeah. I mean there are many different tools for handling deep communication and Skype is one of them and video is a better way of communicating than over the phone. I mean... Nothing beats standing in front of one another.	CHA-VT-COMM CHA-VT-TECH
237	F	What about trust, knowledge management, conflict management and for example performance management?	
238	SM2	In the sense of what?	
239	F	Of feeling for example trust to the dispersed members or transferring knowledge to other members or dealing with conflicts about it with dispersed members.	
240	SM2	Yeah, it's definitely much more tricky. Yeah, you can't feel it's much more difficult to build a relationship when you can't see the person or meet the person in person.	
241	F	Are you trying to mitigate… mitigate that somehow? For example having video?	
242	SM2	Videos and when we talk to when we have the Daily Stand-ups, for instance, we we always talk	

		in a way so that we assume since everyone is not here so we're always talking as if someone is not here. So always mentioning what we're pointing to or what we're talking about and what we're looking at constantly so that everyone can follow.	
243	F	What about challenges in terms of culture, language? Are you experiencing any of that?	
244	SM2	Yeah, I mean... Challenges. Yes. I'm, myself is very fascinated by different cultures and I like it a lot so I see opportunities instead of challenges.	CHA-VT-TEAMDIV
245	L	Did it help you in your work that you had to have different cultures?	
246	SM2	Yes, I would definitely say so.	
247	L	Can you give an example for that?	
248	SM2	I mean, there were many different aspects of looking at a problem or looking at how someone will use something that you assume they will use in a different way. So, I feel that it's very important to get many different aspects of the functionality or [inaudible] the product. And in our case we have it in a very early stage because we know people from all around the world have different backgrounds that can give us an input and that will actually be involved in delivering that themselves.	
249	L	And do you feel like there is sometimes problems when people can express themselves when they don't talk in their mother tongue?	
250	SM2	Sometimes yes. But we usually, I think, we get the message across. I mean we.... there's no hurry of getting the message across. So.	CHA-VT-TEAMDIV
251	L	You don't see it as a big big problem for you?	
252	SM2	No, I don't.	
253	F	We spoke to a developer from India earlier and he mentioned for example some cultural differences that people from India don't tend to be punctual while Swedes tend to be very punctual. Have you for example experienced anything like that?	
254	SM2	Of course we have different work ethics and different times of day that we're used to working which is a very interesting thing.	

255	F	And they also mention that there have been cultural training. Would you say that's important in a setting like this?	
256	L	Yeah I mean... It's, it's also about how you, how you choose to look at it. So I think we have cultural trainings with awareness or what would I say... since it's an interest of mine, I usually talk about it with the team. So we discuss things like work ethics, work times, family, values, what's important, how do we see one another and stuff like that. And that's, that's about when the cultural awareness or what you should call it is already fulfilled because that's, that's basically all you need to do or what she what you want is for everyone to understand one another and why they are thinking in a different way. And it's, it's always good, good way to build the team to get them even closer together discussing this topic.	
257	F	And you also mentioned some technological challenges earlier but do you also experience problems with for example lag or that people in a conference call tend to talk at the same time...?	
258	SM2	Yes.	
259	F	... or do we have policy on that how you should behave in a conference call, for example?	
260	SM2	Eh… yeah. In a bigger conference call yes, in a smaller one within the team, no. It depends. And it depends on the number of people and it always also depends on which people that are going to be there. Some people are very fond of talking *a lot*. And if they're on the phone then we have to set some ground rules beforehand.	COND-LEV-PROG COND-LEV-TEAM
261	F	And what kind of shortcomings would you say saved has. You mentioned a lot of layers and structure earlier.	
262	SM2	That I would say is the majority... The major drawbacks.	
263	F	Anything else?	
264	SM2	I don't know is the PI Planning is necessary in all cases. I can definitely see the value of it but I'm not sure that it's actually worth the investment.	CHA-LGSCA

265	F	So these layers you feel like they're too much time consuming, too costly or... ?	
266	SM2	But what my major concerns are with that...	
267		*(problem with the internet connection)*	
268	F	Good example of technological problems.	
269		*(after a while: problem solved)*	
270	F	Hello.	
271	SM2	Hi. I tried calling with the phone. It works better.	
272	F	Good example of the technological issues going on.	
273	SM2	It's exactly what happens.	
274	F	Yeah. So you were talking something about short-comings with the layers and your main concern.	
275	SM2	Yeah. It's mainly around... How can you put it? You create a lot of hierarchy. I mean you have the Epic Owner, you have the Product Manager and [inaudible] the Product Owners. So if you take that chain of decision-making, for instance, whereas you should, if you ask me, you should always try to push the decisions as far down as possible because if we're going to believe something, if we're going to develop a feature, for instance, my expectations are on the Product Owner to have that knowledge and the mandate to say, yep, this is exactly what I want. Let's move on. Let's get it out. And SAFe adds a lot of other [inaudible] that are more coordinating and controlling rather than... Might be supporting as far. But I'm afraid that it ends up being controlling rather than supporting.	COND-PRI-9 CHA-SAF-SHO
276	F	I would also like to ask you this question. Let's say you were to give advice to someone who is about to use SAFe with dispersed members and dispersed teams, what kind of advice would you give that person?	
277	SM2	Using SAFe or using just for distributed teams?	

278	F	We could say in general with distributed teams and members.	
279	SM2	Try getting everyone on site. *(laugh)* This is my advice. But frankly... I have chosen to put it like... We really value a value the work that everyone does. But we want people sitting together and working with us together in one team in one place. And if they want to be on board on that journey. I'm all for it. I'm really happy. But if not, we will have to find someone that can be on site instead. If you don't have any choice to get a [inaudible] team that looks as it is and you can't change it, then you have to make the best of it and use the tools that you... that you have to [inaudible] but it is also, and that you feel like necessary, for instance Trello is a very good tool to help facilitate and improve team communication. Yeah the constant constantly making sure that everyone can follow what's going on. So, you have a board or if you are have discussions be sure to be *over, over, overly* clear on what you're discussing. But it's many other people that are off site before and came here, they said that they express that in the exact same way when I was working at [name of a company]. It was like being behind a wall. You don't. It's hard to follow and it's hard to... It's hard to keep up with what's happening. So, the feeling, the feeling of being included in the team. It's much less than when you're sitting in the same place.	
280	F	And the next best thing to having everyone co-located is to at least bring some of the team members on site like Scrum Masters for example?	
281	SM2	Yes. Definetely. There is nothing more, there's nothing more valuable that you can do than to have everyone sitting together. And I mean if it's... As long as you're aware of the cost and that you're okay with the cost. So if you say that, okay, we're okay with having a dispersed team but we're only we can only have about 60 percent of the output that's done if we want to sit together. Because as long as you're aware of that cost, then it's okay but if you want to have everyone co-located because you really want to get the team together and get them productive and start delivering value in a much higher pace, it doesn't matter if they are cheaper offsite. It usually ends up being a lot more	

		expensive than that you would have expected with consultant on site.	
282	L	I think we got a clear image and we highly appreciate the time you took for us.	
283	F	Thank you.	
284	L	Do you have any questions you would like to ask or any comments you would like to add?	

Appendix G: Visualizations at IKEA

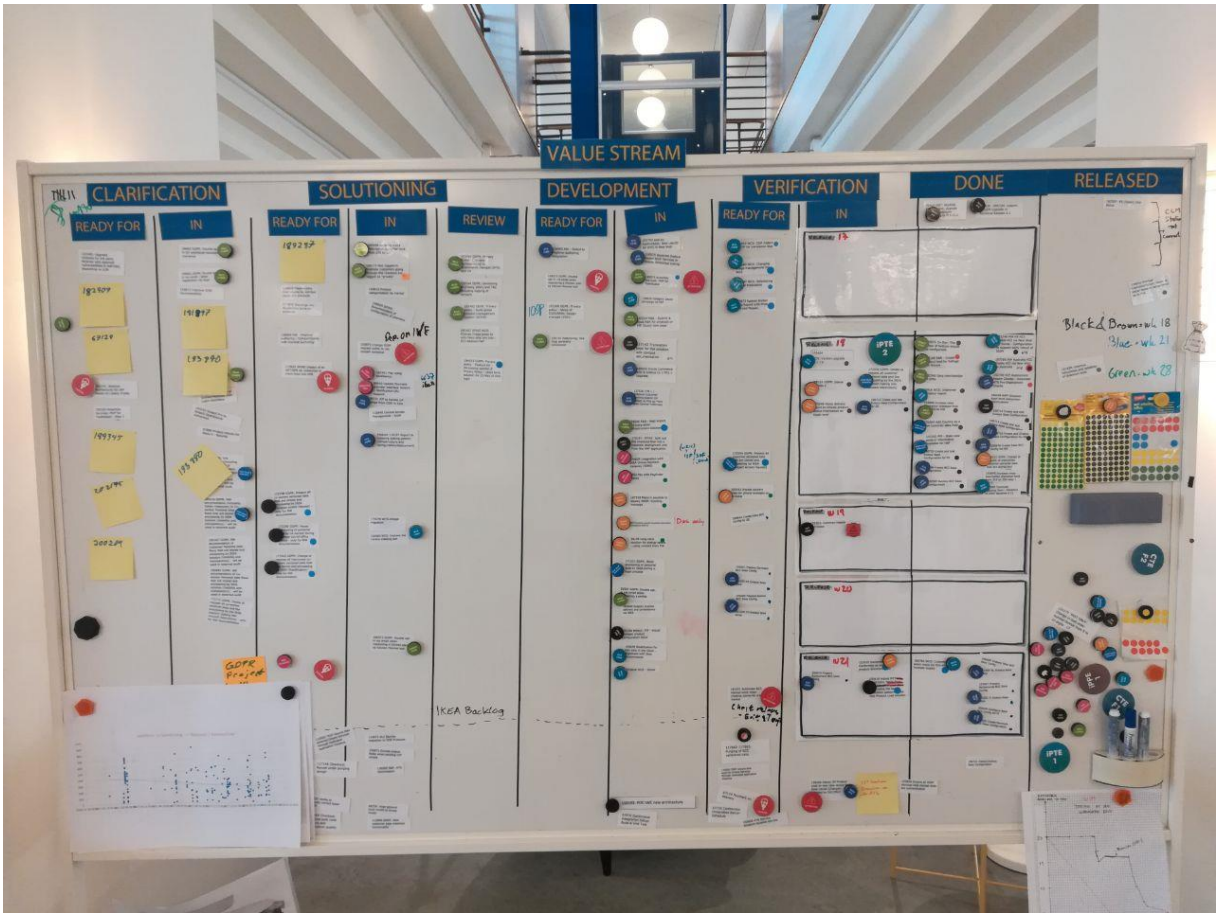

Figure G.6.1: The Value Stream Board used by the ART

Figure G.6.2: The Program Board – an outcome of the PI Planning

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