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Scaled Agile Framework Meets Traditional Management – A Case of a Financial Services Provider

Completed Research Paper

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Abstract

Inspired by the success of agile practices in small teams, organizations seek to achieve agility at scale, leading to large-scale agile transformations. Several frameworks have been developed to guide organizations through this process. While multiple challenges for adopting scaled agile frameworks have already been identified, research on the interplay between traditional management approaches and scaled agile frameworks is scarce. We conduct an in-depth exploratory case study with a German financial services provider to identify tensions that arise when applying a scaled agile framework in a non-agile environment. As a result, we derive 13 tensions along with three areas: goal-setting, planning, and reporting. Thereby, we advance the understanding of tensions within large-scale agile transformations and provide a foundation for future research on scaled agile practices in traditional organizations. Further, we provide insights for managers to ensure the successful application of scaled agile frameworks.

Keywords: Agile Transformation, Scaled Agile Framework, Project Management, Case Study

Introduction

Given today's volatile, uncertain, complex, and ambiguous market conditions, organizations must respond quickly to changing business needs (Brühl 2022). As a result, agile practices, which, among others, focus on delivering working software frequently and facilitate adapting quickly to changing requirements, have become mainstream (Naslund and Kale 2020). Due to the high success rate of agile practices at the team level, practitioners are seeking to introduce agile practices at scale, i.e., apply agile practices to larger

projects with interdependent teams (Carroll et al. 2023), leading to *large-scale agile transformations* (Edison et al. 2022; Fuchs and Hess 2018). However, preserving agile principles while scaling agile practice remains challenging (Dikert et al. 2016). Thus, several frameworks for scaling agile practices beyond the team level have been developed, e.g., the Scaled Agile Framework (SAFe) (Scaled Agile Inc 2023), Large Scale Scrum (LeSS) (Larman and Vodde 2015), the Spotify model (Kniberg and Ivarsson 2012), Disciplined Agile Delivery (DAD) (Ambler and Lines 2019), or Scrum at Scale (Brown and Sutherland 2014). However, introducing such frameworks does not necessarily result in organizations being agile (Carroll et al. 2023). Instead, introducing scaled agile frameworks involves many challenges, such as aligning various teams and units (Conboy and Carroll 2019), creating a shared understanding of the problem (Moe and Mikalsen 2020), or managing the complexity associated with large-scale agile transformations (Dikert et al. 2016).

So far, research has mainly focused on challenges and success factors in the early phase of scaling agile practices (Brühl 2022; Kalenda et al. 2018; Santos and Carvalho 2022). Among other factors, management support, customization of frameworks, and buy-in from relevant business units seem crucial for successful implementation (Brühl 2022; Dikert et al. 2016). However, resistance to change, hierarchical management that contradicts agile practices, and the integration and coordination with non-agile teams remain significant challenges for organizations. Although Dikert et al. (2016) suggest initially maintaining existing management practices to build trust in agile practices, tensions become salient as project resources and stakes increase. Further, while adopting agile practices is on the rise, not every project or organizational dimension suits an agile approach (Gabriel et al. 2021). As a result, many organizations apply agile practices only to specific projects or units, requiring traditional operations alongside agile practices (Kuusinen et al. 2016). While organizations might benefit from the interplay between these approaches (Vinekar et al. 2006), their co-existence creates additional challenges due to conflicting principles (Thesing et al. 2021).

Existing literature outlines that some challenges can be traced back to tensions (Naidoo and Rikhosto 2021), which represent salient, persistent, and contradictory demands (Smith and Lewis 2011). For example, tensions between traditional management approaches and agile approaches arise when management still adheres to linear sequential planning (i.e., the waterfall method) or traditional bureaucracy (Dikert et al. 2016). Although existing frameworks strive to inherit potential solutions, e.g., lean agile portfolio management in SAFe (Scaled Agile Inc 2023), an analysis of existing literature reveals that more research is needed to understand the interplay between traditional management approaches and scaled agile frameworks (Conboy and Carroll 2019). While we increasingly observe such efforts, it remains unclear which tensions practitioners in large, sometimes highly regulated organizations face when navigating the interplay between traditional management approaches and scaled agile frameworks. Therefore, our study aims to identify and analyze these tensions by addressing the following research question:

Which tensions arise when applying a scaled agile framework in a non-agile environment?

To answer our research question, we conducted an in-depth case study at a leading financial services provider based in Germany that implemented SAFe in 2018. We deliberately chose this organization for our work, as one of the researchers was already involved in several projects within the organization, allowing for in-depth insights and practical findings throughout the case study. Following the research methodology of Yin (2018), we conducted 16 interviews with different roles and stakeholders inside and outside the agile release train (ART)¹ to understand the implementation of SAFe within the case company and identify tensions between the ART and its non-agile environment. In addition, one researcher actively participated in the ART for eight months, while another had the opportunity to attend various meetings, resulting in a diverse set of observations. We also had access to all relevant documents relating to the implementation and application of SAFe in the case company. Following the approach of Gioia et al. (2013), we identified 13 tensions (e.g., divergent goals, investment philosophy, and success measures) across the three areas of goal-setting, planning, and reporting. Besides, an in-depth understanding of these tensions, our analysis reveals that these tensions become salient whenever additional processes, divisions, and hierarchical levels are affected by the application of the scaled agile framework and that agile clusters need to focus on adherence to agile principles if they strive to overcome contradictions with traditional management procedures. Overall, our work contributes to the literature on large-scale agile transformation, particularly the interplay between traditional management approaches and scaled agile frameworks. In addition to our

¹ We use the term ART when referring specifically to our case company's agile cluster.

academic contribution, our findings hold relevant implications for practitioners, especially Release Train Engineers, Product Managers, and managers who strive to establish agile clusters within their organization.

Our article is structured as follows: Section 2 outlines current knowledge on challenges in large-scale agile transformation and during the application of scaled agile frameworks and sheds light on details of SAFe. Next, we elaborate on our research methodology (Section 3) before presenting the tensions that arise through applying SAFe in our case company (Section 4). In Section 5, we discuss the contributions of our results, propose the implications for practitioners, provide an impetus for future research efforts, and outline the limitations of our work. Lastly, we summarize our study and offer our concluding thoughts in Section 6.

Theoretical Background

Large-Scale Agile Transformations

Awareness of and interest in agile practices is steadily increasing among researchers and practitioners (Carroll et al. 2023). One reason for the growing interest is that established organizations tend to be *“optimized for efficiency rather than strategic agility [...] and the hierarchical structures and organizational processes that we have used for decades to run and improve our enterprises are no longer up to the task of winning in this faster-moving world”* (Kotter 2012, p. 47). The concept of agility, which we define as *“the ability of information systems development and deployment methods to swiftly adapt to the changing business requirements”* (Lee et al. 2006, p. 50) is often proposed as the blanket solution to address the challenges of today’s business environment (Appelbaum et al. 2017). While agile practices have been applied in small, co-located development teams for years (Abrahamsson et al. 2009), organizations are seeking to scale agile practices beyond individual teams and across the organization, resulting in so-called large-scale agile transformations (Edison et al. 2022; Fuchs and Hess 2018).

Large-scale agile transformation projects usually involve *“50 or more people or at least six teams”* (Dikert et al. 2016, p. 88), the application of a scaled agile framework (Carroll et al. 2023), and profound changes in an organization’s culture, structure, and decision-making processes (Carroll et al. 2023). Traditional agile frameworks such as Scrum or eXtreme are helpful for individual development teams but do not offer mechanisms and structures for the necessary alignment, transparency, and integrated coordination of multiple, interdependent teams (Abrahamsson et al. 2009; Ebert and Paasivaara 2017). Thus, organizations require alternative frameworks to help them manage the transformation process (Carroll et al. 2023). Accordingly, various scaled agile frameworks have been introduced, with SAFe being the most widely used framework in practice (Carroll et al. 2023; Sebola and Khoza 2022). Despite the high success rates of agile practices at the team level and the value of scaled agile frameworks (Putta et al. 2018), large-scale agile transformations are fraught with challenges (Carroll et al. 2023). Previous research has taken three perspectives to explore the key challenges that typify large-scale agile transformations beyond the initial deployment phase:

First, some researchers have systematically conducted summaries and overviews of challenges at a high level of abstraction (e.g., Conboy and Carroll 2019; Dikert et al. 2016; Uludağ et al. 2022; Walter 2021). For example, Dikert et al. (2016) conducted a literature review to identify 35 challenges grouped into nine categories. Within the nine categories, Dikert et al. (2016) highlight the mismatch between long-term and short-term planning and point to challenges arising from hierarchical management, organizational boundaries, and the ambiguous role of middle managers. Further, they emphasize managers’ central role for cultivating a shared vision and communicating the purpose and direction of their efforts and the value of starting with a pilot and gradually scaling up to gain employee buy-in in the early stages of the transformation process. However, they also stress that management often adheres to traditional project management approaches, such as the waterfall method, resulting in redundant bureaucracy caused by the co-existence of sometimes conflicting methodologies and approaches.

Second, previous studies have focused on challenges within a particular category, such as people-related issues (e.g., Conboy et al. 2011; Moe and Mikalsen 2020), organization-related issues (e.g., Paasivaara et al. 2012; Scheerer et al. 2014), or method-related issues (e.g., Gabriel et al. 2021; Power 2014; Rolland et al. 2016). The latter, for example, shows that while organizations strive for large-scale agile transformations, it is important to consider that not every project or function in an organization is suitable for an agile

approach (Gabriel et al. 2021; Power 2014). Therefore, large-scale agile transformations should target specific organizational projects or functions (Rolland et al. 2016). Common people- and organization-related issues include the management when applying a scaled agile framework across different units and fragmented teams (e.g., business units and software development units) (Paasivaara et al. 2012), having a shared understanding of the problem, and gaining acceptance and commitment to change across the organization (Moe and Mikalsen 2020). Employees who understand the vision and adopt an agile mindset are significantly more motivated than others. Also, the mindset is relevant to apply agile principles beyond the mere application of scaled agile frameworks and to adapt them to the individual context of the organization (Moe and Mikalsen 2020). However, in many cases, large-scale agile transformations are at odds with an organization's culture, the vision for change is poorly communicated, or organizations revert to old ways of working when the expected benefits are not immediately apparent.

Third, few have conceptualized the overall process of large-scale agile transformation, identifying relevant challenges and associated measures (e.g., Fuchs and Hess 2018; Paasivaara et al. 2018). In doing so, Fuchs and Hess (2018) build on the empirical investigations of, for example, Dikert et al. (2016) and Gregory et al. (2015) but focus on more profound insights into the challenges and their role in shaping the transformation process, as well as the interplay between these challenges and associated actions.

Despite initial empirical foundations for research on the challenges of large-scale agile transformations, further research is needed that focuses on the interplay between traditional management approaches and scaled agile frameworks, thereby investigating the tensions that arise when applying a scaled agile framework in a non-agile environment (Strode et al. 2022).

The Scaled Agile Framework (SAFe)

Dean Leffingwell developed SAFe, aiming to bring agile practices to the needs of large organizations. Since its initial release, SAFe has been continuously updated with new and improved guidance. SAFe builds on agile and lean principles to enable organizations to deliver value more efficiently and effectively. In the following, we summarize the elements and mechanisms of the framework that are relevant for this paper based on the official description (Scaled Agile Inc 2023).

Roles and Processes – SAFe structures organizations into four levels, i.e., team, ART, value stream, and portfolio (Scaled Agile Inc 2023). Each level has specific activities and is linked to the other levels. SAFe instructs all levels to scale agile practices in larger organizations (Scaled Agile Inc 2023). Due to the constitution of our case, we will focus on the team and the ART.

Team: Analog to Scrum, teams include a Product Owner, who is responsible for maximizing the value created by the team; a Scrum Master, who acts as a servant leader that trains the agile team in agile practices and ensures that the agile process is followed; Developers, and Process Experts. The teams aim to define, test, and develop applicable products within iterations based on user stories. These stories are, in turn, based on features. Features embody the solution's functionality and deliver business value while satisfying stakeholder requirements (Scaled Agile Inc 2023).

Agile Release Train: The agile teams build a cross-functional ART that covers specific products or business areas. An ART consists of 50 to 125 individuals and is coordinated by a Release Train Engineer, a coach who moderates ART events and processes and helps the team deliver value. Product Management provides the vision and backlog for the agile teams and helps to develop sustainable solutions throughout the product lifecycle. The agile teams are synchronized within a Program Increment, which acts as a time box for the ART. Typically, a Program Increment is five iterations long. This period is planned within the Program Increment planning. Within the Program Increment planning, features, user stories, and underlying tasks from the backlog are discussed, refined, and prioritized. At the ART level, features are prioritized and sized to be delivered by the ART within a Program Increment. These features are based on epics, representing a significant solution development initiative (Scaled Agile Inc 2023).

Planning – Each level focuses on a respective time horizon regarding the planning. The goal is to break down large tasks into smaller parts that can be completed within a sprint. At the team level, the planning horizon focuses on a 1-day (daily) plan to a 2-week (iteration) plan. At the higher levels of SAFe, the focus is on the output of the Program Increment planning, which addresses the time horizon of an 8–12-week (Program Increment) plan. Additionally, there are several roadmaps, with a time horizon from 2–3 Program Increments up to a 1–3-year forecast. A roadmap schedules milestones and events and communicates and

forecasts planned solution deliverables over a specific time horizon. Roadmaps link strategy and operations, providing the opportunity to create, progress, and modify planned initiatives. They also give stakeholders a perspective on immediate, short-term, and long-term deliverables and priorities. The roadmaps are less defined than in previous waterfall projects, as they allow adaptation in case of contextual changes (Scaled Agile Inc 2023). Different metrics are used within the planning horizons. The main reasons for using metrics are to plan iterations and Program Increments appropriately and to track progress. Therefore, team velocity and story points are key. A story point is a relative number that represents the combination of complexity, knowledge, volume, and uncertainty of a user story. Velocity tries to estimate a reasonable amount of work that can be done by a team on average. It is not meant to be an exact statement of how much a team will get done in an iteration but rather a guide for iteration planning.

Methodology

We conduct a single-case study to identify and analyze tensions between an agile cluster and its non-agile environment (Yin 2018). Case studies have proven valuable for our research objective, as the aim is to “investigate [...] a contemporary phenomenon [...] in depth and within its real-world context” (Yin 2018, p. 50). Therefore, the approach allows us to capture the complexity of our qualitative research question and is well suited to contribute to managerial knowledge. The fact that one of the researchers was already involved in projects within the case company at the given time made it possible to recognize the underlying study’s urgency and to gain deep insights that are usually inaccessible. After one researcher identified several weaknesses within the ART during his project work, we compared the findings from literature and practice. We found that more research is needed, particularly on the tensions within established, scaled agile frameworks that increasingly need to interact with their non-agile environments. Furthermore, we observed similar tensions in conversations with other practitioners, underscoring that our case might be representative across contexts. In what follows, we describe the case study approach in detail, structured along the iterative steps (i.e., plan, design, collect, analyze) of Yin’s (2018) well-known and established approach.

Plan – We followed a clear methodological path by observing the interaction of an agile cluster with its non-agile environment within a German financial services provider. We reviewed previous research on agile transformations and the application of scaled agile frameworks and developed our exploratory research question based on the observed phenomenon within the case company.

Design – Yin (2018) suggests that a holistic single-case study design is appropriate to capture the circumstances and conditions of a single unit of analysis. Although we focus on the dynamics within a single organization, the phenomenon is representative because it speaks to the interplay between agile clusters and non-agile organizational entities that also affect other organizations (Kuusinen et al. 2016; Thesing et al. 2021). Ongoing dialogue with stakeholders in the case company and within the research team allowed us to understand the issue under investigation and adjust data collection procedures according to complexity (Yin 2018).

Collect – Data collection took place from the beginning of November 2022 to the end of April 2023. We collected data from multiple stakeholders and sources (i.e., primary and secondary data). To ensure triangulation, we combined expert interviews, observations, and internal documents from the case company. We aimed to interview various individuals within the organization, including those with different backgrounds and organizational levels, to understand the situation comprehensively. We conducted 16 semi-structured interviews with 18 interviewees to gain a deeper understanding of the topic under study. We included different agile roles, such as the Release Train Engineer, Product Managers, Product Owners, and Scrum Masters, as well as roles outside the ART, such as Team Managers, Department Managers, Division Managers, and other stakeholders from different divisions (i.e., marketing, sales, IT, and process management) and underlying departments to get an inside and an outside perspective on the ART and the interplay with its non-agile environment. We informed the interviewees about the purpose of the study, how the collected data is used, and that their statements will be anonymized. All interviewees participated voluntarily in our interviews and were highly interested in our analysis to improve their practices. All interviews were recorded and transcribed in person or via video call (with the interviewees’ consent). The interviews typically lasted one hour. Table 1 provides an overview of the interviewees, highlighting their roles inside and outside the ART, as most interviewees are not committed full-time to the ART.

#	Role Inside ART	Role Outside ART
01	Product Manager	Department Manager (Marketing)
02	Architect	Team Manager (Marketing)
03	Product Owner (Team 1) & Architect	Team Member (Process Management)
04	Scrum Master (Team 1)	Team Manager (IT)
05	Lean Agile Leader	Department Manager (IT)
06	Business Owner	Division Manager (Marketing)
07	Business Owner	Division Manager (IT)
08	Product Manager	Department Manager (Process Management)
09	Release Train Engineer	Senior Manager (IT)
10	Product Owner (Team 2)	Manager (Sales)
11	Scrum Master (Team 2)	Researcher
12	Product Owner (Team 3)	Manager (Marketing)
13	Scrum Master (Team 4) & Agile Coach	Manager (IT)
14	Team Member (Team 3)	Team Manager (Sales)
15	Business Owner	Department Manager (Sales)
16	Business Owner	Manager (Sales) & Architect
17	Product Manager & Enterprise-Architect	Team Member (IT)
18	Product Manager	Department Manager (Marketing)
Table 1. Overview of the Interview Partners		

We used a semi-structured interview guide with pre-defined topics (Myers and Newman 2007). Each interview focused on the interplay between the ART and its non-agile environment and stakeholders. We adapted the questions based on the interviewee's position and knowledge of agile terms and understanding. However, we firmly focused on the potential challenges our interviewees were able to mark down. In line with the iterative nature of our approach (Yin 2018), we adjusted the contextual focus within the interviews and challenged initial theories in later stages of the data collection. Besides, as one of our researchers worked as a consultant for the case company and took on the role of a Scrum Master in a team during the research process, we had the opportunity to become deeply involved in the operations of the ART, e.g., through regular participation in Scrum Master meetings or discussions with different roles about the challenges of the ART. Further, this researcher was involved in several meetings to prioritize epics (inside the ART) and strategic initiatives (outside the ART) based on management requirements and to introduce new teams to the ART.

Another researcher had weekly meetings with the Release Train Engineer from February to April 2023 to validate our understanding (including the integration of the ART into the organizational structure, which can be seen in Figure 1) and challenge hypotheses about the processes inside and outside the ART. In addition, the second researcher had the opportunity to participate in a Program Increment planning, which included onboarding three new teams to the ART. As secondary data, we obtained documents from our interviewees to support their statements. We gained access to the company's intranet and the application systems used for organizational communication and data storage.

Analyze – Our analysis focused on the interplay between the ART and its non-agile environment. As for an appropriate analytical technique (Yin 2018), we followed Gioia et al.'s (2013) systematic, inductive three-step approach. Throughout the analysis, we used the MAXQDA software to identify conceptual patterns in the primary and secondary data. The first analysis step aims to stay close to the data and identify as many categories as possible to capture the richness of data (Gioia et al. 2013). This step follows the open coding approach proposed by Strauss and Corbin (2003). We came up with first-order concepts that represent agile or non-agile practices. A third researcher was involved in the data analysis to challenge assumptions

about tensions from an external perspective. After breaking down and organizing the data into smaller fragments, we employed data reduction techniques to group the data into broader categories. We identified second-order themes that highlight the tensions between the ART and its non-agile environment, as each second-order theme combines an agile and a non-agile practice (Miles and Huberman 1994). This process of organizing codes by grouping them and iteratively refining the derived categories is consistent with axial coding (Gioia et al. 2013). Throughout the second analysis step, we sifted through related research to cross-check our findings (Alvesson and Kärreman 2007). Moving back and forth between our first-order concepts, second-order themes, and related research, we ended up with 13 second-order themes. In the final coding step, we explored whether we could further distill the emergent second-order themes into aggregate dimensions (Gioia et al. 2013). This step resulted in three aggregate dimensions: goal-setting, planning, and reporting.

Results

Case Description

The case company (FinCorp) is a German financial services provider with over 5 million customers specializing in financing loans. FinCorp distinguishes between four distribution channels: 1) affiliated banks, 2) its independent sales force, 3) its digital start-up, and 4) free agents and digital platforms. In 2016, FinCorp implemented agile practices to quickly adapt to constantly changing market demands. Starting with Scrum for a small, autonomous, and independent innovation project, FinCorp adopted SAFe in 2018 to meet the needs of larger projects with interdependent teams and interrelations with existing systems and processes. This study focuses on an ART that aims to deliver an engaging customer journey by connecting sales, marketing, and back-office activities through a customer relationship management system. The ART is structured according to SAFe and covers all relevant roles and procedures. It comprises 12 teams and 150 employees from IT, marketing, sales, and process management. Together with non-agile projects (see Figure 1: Cluster₂, Cluster_n), the ART is part of the IT project portfolio containing all IT projects. The IT project portfolio management is part of the IT division and ensures that the IT project portfolio reflects the business objectives and priorities of the corporate strategy. Figure 1 shows how the ART is integrated into the organizational structure.

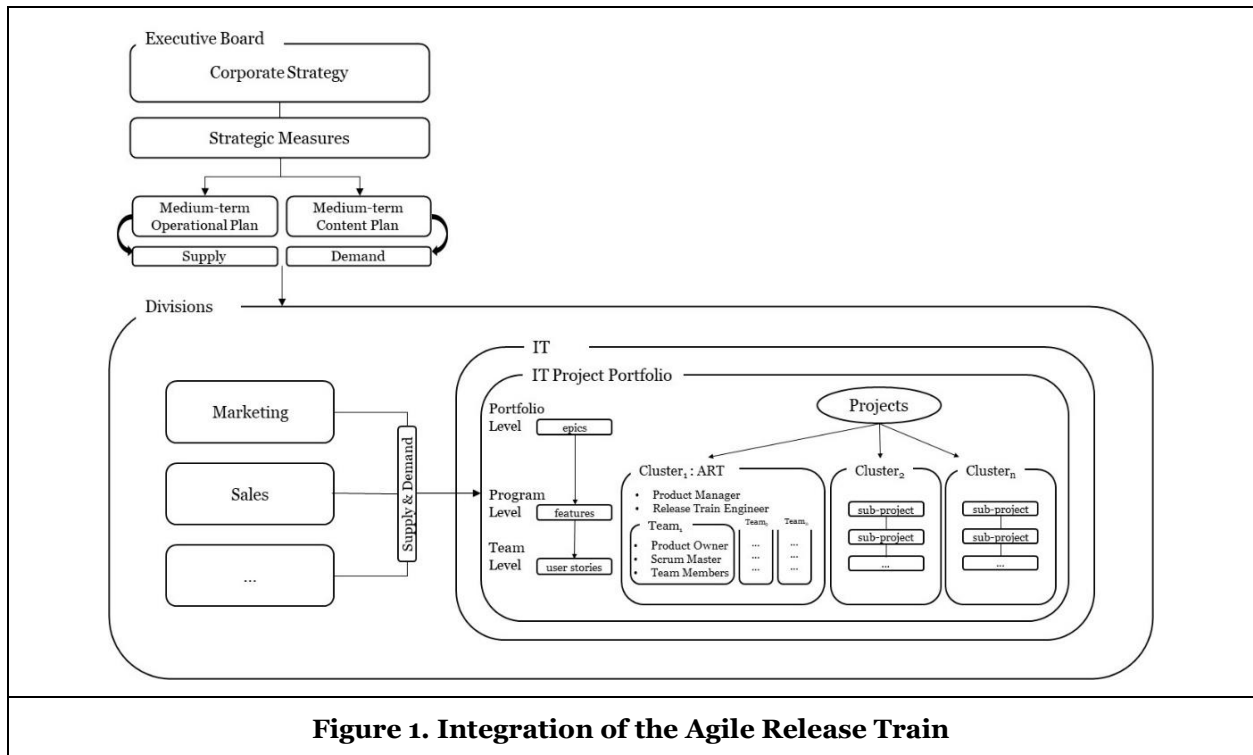


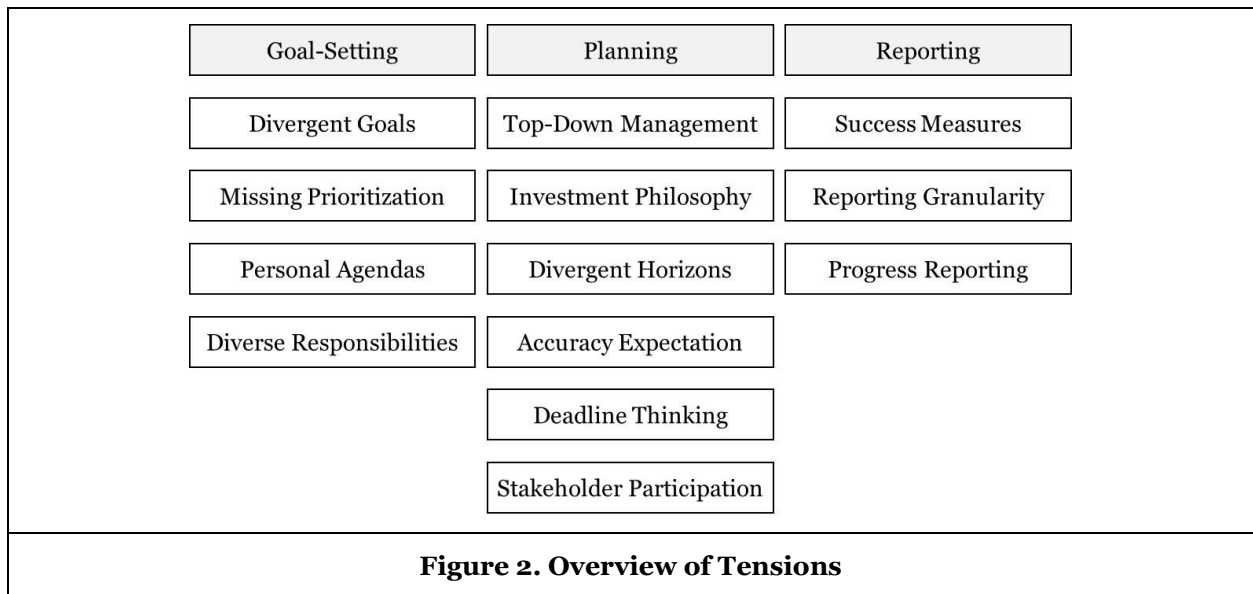
Figure 1. Integration of the Agile Release Train

In the following, we describe how FinCorp derives its IT project portfolio for the coming fiscal year. The description builds the foundation to understand the evolving tensions regarding goal-setting, planning, and reporting between the ART and its non-agile environment, i.e., the management board and the management of the divisions that invest in the ART.

First, the executive board breaks down the corporate strategy into strategic measures, which (after further refinement steps) result in a medium-term content plan (demand) and a medium-term operational plan (supply) with a time horizon of up to five years. While the medium-term content plan is completely derived based on the strategic measures, the medium-term operational plan is also influenced by macroeconomic factors such as inflation or national income. The medium-term operational plan contains all investments, foremost human resources and materials budgets. The medium-term content plan, in turn, includes the business objectives of the division. The respective divisions (e.g., marketing and sales) specify the supply based on the medium-term operational plan and inform the IT project portfolio management about the budget and resources available for the IT project portfolio. In the next step, representatives of the division derive projects. If the demand for the coming year exceeds the supply, the IT project portfolio management prioritizes the projects with the executive board's and the divisions' approval. Once the IT project portfolio has been approved, the projects are refined and assigned to the clusters. In this step, the Product Managers receive the relevant projects for the upcoming year and translate them into epics. While the Product Managers have operational control over the "how", the IT project portfolio management controls the projects regarding content, budget, and deadlines. From then on, the ART acts according to the SAFe logic, e.g., Product Managers and Product Owners break down epics into features. Additional features may come from business owners and other clusters. The Product Managers, consulted by Business Owners, e.g., department and division managers, prioritize the features. The prioritized features are then assigned to agile teams, where they are refined and broken down into user stories.

Tensions Between the Agile Release Train and its Environment

Our analysis shows that FinCorp is on a journey towards increasing agility. FinCorp (foremost the Release Train Engineer of the ART) has taken several steps to improve adherence to the agile logic within the ART. Following agile principles, they have adapted their approach whenever necessary so that the ART follows agile practices according to SAFe. Nevertheless, we note that the journey towards scaled agility is not complete, and the ART does not fully adhere to agile principles (which we will outline in the following). In this paper, we emphasize the importance of understanding the tensions that arise between the ART and its non-agile environment that limit the agility of the ART. We structure these tensions along three aggregate dimensions that are tension areas, i.e., goal-setting, planning, and reporting. Below, we describe our findings based on our three aggregate dimensions and their respective second-order themes (Figure 2).



Goal-Setting

Divergent Goals – While the overarching mission is to develop a customer relationship management system, a challenge arises from the divergent goals of the Product Managers and their divisions and departments. While the ART's collective effort is to deliver a seamless customer experience, the Product Managers represent division- and department-specific objectives that sometimes conflict. For example, maximizing the website's uptime clashes with the imperative need to take the website offline to release new features. The tension lies in the lack of commitment between the Product Managers and Division Managers to harmonize their goals and prioritize epics and features. This misalignment can create confusion, distraction, and inefficiency in the refinement, prioritization, and implementation of features. Stakeholders' underlying interpretation of roles in terms of function and hierarchy, whether by design or unconscious influence, fuels this tension. *"The hierarchy consciously or unconsciously influences the prioritization and where the most pressure comes from"* (Division Manager).

Missing Prioritization – SAFe requires prioritization and focus, meaning the Product Managers must decide which topics to prioritize in the following Program Increment. This modus operandi requires the Product Managers to decide on the most critical features and neglect others for the next Program Increment. However, Product Managers struggle to prioritize epics and features and instead strive to ensure harmony between stakeholders by addressing all stakeholder concerns. As a result, the ART is working on too many epics and features in parallel, which limits the focus and progress within the epics, resulting in extended time before the ART delivers epics and features. In sum, we observe a tension between the agile principles of focus (in close linkage with continuous delivery of value to customers) and the multitude of (divergent) goals due to missing prioritization. *"We prefer to get a little bit of everything done"* (Division Manager).

Personal Agendas – This tension arises from the prevalence of personal agendas within the ART. One concern is the seemingly unquestioned assignment of ART roles to team managers. Our analysis reveals a sentiment in which managers claim dual roles inside and outside the ART. The problem is not the number of roles but the fact that individuals have multiple roles, making it difficult to fulfill their responsibilities. Because of their numerous responsibilities, coordination and decision-making are slow, and agile principles such as transparency and alignment fall short. While this behavior ensures the relevance of managers, it leads to a deviation from agile principles as roles become burdened with personal interests that challenge the seamless execution of agile processes. *"We're still very much thinking off (the) line organization [...] it's like; okay, who are the product managers from this topic? Then every head of department writes himself in as a Product Manager, because he has to participate and help shape it"* (Division Manager).

Diverse Responsibilities – The multi-dimensional roles of many ART members, which extend beyond the boundaries of the ART, create a complex interplay between role focus and the imperative of fulfilling multiple responsibilities. The scenario of a Product Owner who invests 50% of his time in non-ART responsibilities illustrates this struggle. The fusion of multiple roles develops into conflict as individuals juggle multiple responsibilities, leading to fragmented ownership and diluted accountability. Balancing these roles becomes problematic and causes strain as people switch between tasks, making it harder to keep up with agile team events and reducing time for project work. This dynamic is particularly pronounced in divisions and departments less familiar with agile principles, where such role dispersion is common. To mitigate this tension, entire functional teams have been integrated into the ART. While this approach attempts to reduce tensions at the individual and team level, it can lead to a paradoxical dichotomy, as agile methods are not suitable for every task. Although well-intentioned, this inclusion introduces a new strand of tension. Accordingly, the ART must balance individual ease with the core principles that drive its agile journey. *"Low capacity within the team can be a pain point because it can make working in the agile team more difficult for the individual [...] In terms of commitment, 'a lot depends on people's attitudes [...] and which team they feel they mainly belong to'"* (Product Owner).

Planning

Top-Down Management – Another tension arises from the limited involvement of the ART in shaping the medium-term operational plan. This plan results from the division's interpretation of the corporate strategy, including the capacity allocations determined by the IT project portfolio management on a one-year horizon. Product Managers struggle to align the ART's strategy with the medium-term operational

plan. The root cause of this disconnect may be that the ART remains excluded from the development process of the medium-term operational plan. Therefore, the ART's insights and perspectives are not used to shape a more resilient and comprehensive medium-term outlook. This tension highlights the need for synchronicity between overarching organizational strategies and the agile principles of transparency and collaboration.

Investment Philosophy – There is a tension between the contrasting investment philosophies of agile and traditional management approaches. Agile methods advocate a pragmatic pursuit of the most impactful endeavors, guided by flexible customer feedback and adaptable budget utilization. In contrast, the IT project portfolio management adheres to a strict demand for up-front, accurate cost estimates and comprehensive project details. This leads to a conflict rooted in different perspectives: the ART votes for a trust-based allocation of resources, allowing them to determine the best course based on customer insights and feedback loops. On the other hand, the IT project portfolio management tends to take a control-oriented perspective, requiring a thorough understanding of project specifics before releasing funds. This juxtaposition creates a push-and-pull scenario, with the tension between delegating budgeting decisions to the ART and imposing strict approval criteria. *“In general, people are always complaining about a loss of control; but now the responsibility would fall on the person who says, “Ok, I’m a manager here, I’ll invest [...] in this cluster and let them get on with it.” [...] That is exactly the point of friction [...]”* (Scrum Master).

Divergent Horizons – Traditional IT project portfolio management adheres to a fixed annual budget allocation and assumes a clear understanding of the projects to be delivered over the next year. In contrast, the ART operates on a more dynamic schedule, reassessing feature priorities at each Program Increment. This dichotomy creates a conflict where priorities set at the beginning of the year may shift as the ART responds to changing market demands. The ART's agile approach of responding quickly to the most relevant needs clashes with the rigid annual project commitment. This inflexibility can limit the ART's responsiveness, as it requires approval for topics not approved during the annual allocation process. Moreover, there are challenges associated with allocating resources for a fixed period. If features are reprioritized beyond the committed timeframe, essential resources are unavailable when needed, resulting in additional overhead costs. *“It can happen that certain skills, certain key resources are not available at the time they are ideally needed”* (Product Owner). While the IT project portfolio management determines project feasibility and affordability within the planning period, the agile viewpoint emphasizes delivering customer value regardless of imposed planning intervals. This dichotomy highlights a struggle between adhering to established financial parameters and embracing customer centricity. *“One often does [...] (projects) because they are affordable”* (Scrum Master).

Accuracy Expectation – Another tension arises from the different expectations of planning accuracy between traditional management practices and the ART. At the beginning of the planning period, the IT project portfolio management allocates budgets and defines projects for the ART. This method assumes fixed execution points, although only a broad goal is set, with no specific insight into the effort required. However, achieving this goal depends on multiple features, and rolling prioritization makes it challenging to provide up-front capacity-based budget estimates. While the fixed timeframe fits the prevailing tracking needs of IT project portfolio management, such estimates are at odds with agile principles that favor flexible resource reallocation. *“It is assumed that we know how long the task will take, how much effort it will cost, and what the content is”* (Product Owner). *“The classic project mindset is still strongly prevalent”* (Product Owner). There is also a discrepancy in the estimation of user stories. Although agile teams have historically used story points — a relative measure based on task complexity — the reintroduction of the “person days” paradigm highlights the demand for more precise cost and benefit visibility by non-agile stakeholders. This reintroduction disregards agile estimation techniques and draws criticism from Scrum Masters, who emphasize the incompatibility of different estimation methods based on different assumptions. *“Story points are a team metric that is already not comparable between teams [and] certainly not transferable to a higher level”* (Scrum Master). *“The non-agile world, however, wants to maintain exactly this false accuracy”* (Product Owner).

Deadline Thinking – Another tension arises between the traditional focus on deadlines and the agile approach, which emphasizes the rhythm of Program Increments and the commitment of teams to deliver value to customers within that timeframe. Historically, FinCorp was driven by achieving key milestones to communicate with stakeholders and their salesforce in advance to ensure they are aware of upcoming changes. While the agile team initially worked according to agile principles, the Product Managers set a

specific date to release the first version of the customer relationship management solution. Accordingly, the team worked under pressure to deliver the features promised to the salesforce. While the deadline helped to focus on what mattered to the salesforce, it also caused frustration because the promised content was unrealistic within the given timeframe. Our analysis showed that the team lost focus due to many requirements, documentation was neglected in favor of development, and the quality of the features suffered. Accordingly, this approach does not align with agile principles, which aim for high quality, fully accomplished features, and team commitment to the objectives within the Program Increment. The tension arises because FinCorp focuses more on mid-term goals than the next Program Increment. By providing clear guidance on the focus topics for the next Program Increment and holding the team accountable to their committed goals, FinCorp would continuously deliver value to its customers, and the discussion about deadlines might be less critical. This tension also relates to other conflicts around prioritization, as a lack of short-term focus and clear objectives can reduce the value delivered. *“We are very milestone driven. There was this announcement to the salesforce several months in advance, and then we had to do the rollout regardless of the progress in the meantime”* (Product Owner).

Stakeholder Participation – Stakeholder participation in planning processes is subject to a tension characterized by a balance between time commitment and potential waste. This tension is pronounced in two key areas: feature prioritization and feature refinement. Although an integral part of the process, division representatives often perceive prioritizing every eleven weeks as a significant burden. However, in line with agile principles, this iterative prioritization is vital to ensuring that the ART delivers features critical to customer and organizational success. This tension is further exacerbated by the fact that feature owners, as the initiators of requirements, often see themselves solely as “idea contributors”. In contrast, representatives of the ART envision a more interactive involvement of these feature owners to foster a more informed and collaborative environment. Touchpoints woven into the rhythm of Program Increments would provide a channel for feature owners to monitor progress and adjust requirements as needed. However, practical application deviates from this ideal scenario because stakeholders, including division representatives and feature owners, are unwilling to invest the time required. This reluctance increases the risk that agile teams will invest their efforts in less important features or, worse, deliver features that do not meet the needs of the business owners, resulting in waste. This tension highlights the complex interplay regarding stakeholder engagement. The quest for optimal time allocation needs to balance the need to deliver value-based outcomes with the aim of efficiency. The underlying challenge of managing this tension underscores the role of collaboration and mutual understanding in achieving a balance that favors effectiveness over efficiency and avoids waste. *“Sometimes there is a lack of knowledge, sometimes there is a lack of desire to introduce task requirements through the system”* (Division Manager).

Reporting

Success Measure – Another tension arises from how success is measured: while the IT project portfolio management assesses success through an output-centric lens, based on adherence to pre-determined timelines and budgets, the ART focuses on the creation of tangible business value and customer benefit, measured through the “cost of delay” and working software. The tension is that traditional success metrics, often focused on quantitative outputs, are at odds with value-driven outcomes and continuous customer satisfaction. This conflict manifests in the challenges Product Managers face in communicating project status, as traditional metrics emphasize resource utilization and schedule adherence, which differs significantly from the agile metric of value creation and meaningful impact. Striking a balance between these opposing paradigms is central to successfully navigating this tension, facilitating an alignment between measurement practices and delivering value to customers. *“The first question in such an appointment is how many full-time equivalents have you already used”* (Product Manager).

Reporting Granularity –The inherent fluidity of the ART, characterized by continuous adaptation and reprioritization, creates tension with the traditional reporting paradigm, where any adaptation triggers resource-intensive budget reallocations. *“The medium-term operational plan lacks the agile idea”* (Product Manager). Moreover, this tension surfaces in the ART’s preference for a single, aggregated account, which differs from the existing reporting structure that requires tracking individual tasks within projects. The quest for a consolidated approach stems from the ART’s desire for a budget mechanism that circumvents the granular distribution of funds. Rather than getting lost in micro-level tracking and reporting, the ART strives for flexible allocation based on overarching priorities. *“We - from an agile cluster perspective - do not want to report back and control so finely granularly at the resource level”* (Release Train Engineer).

This tension highlights the conflict between agile practices' adaptive, holistic nature and the fragmented reporting structure that depends on task-level tracking. Balancing these competing needs is a critical challenge that requires re-evaluating reporting mechanisms to accommodate the dynamic nature of agile practices while ensuring alignment with traditional reporting requirements.

Progress Reporting – Another tension arises in progress reporting, underlined by the contradiction between traditional linear planning and the complex dynamics of agile practices. Traditional planning assumes an even distribution of required capacity over a fixed period, typically a year. Agile practices, on the other hand, favor adaptability and value-based prioritization, which can disrupt the assumed uniformity of workload distribution. The non-linear dynamics lead to a scenario in which the resource utilization does not allow conclusions to be drawn about the project's progress. This approach, which focuses on resource consumption relative to time, fails to recognize the dynamic interplay between conceptual groundwork and development efforts that often characterize agile practices. This tension highlights the limitations of current reporting frameworks in capturing the nuances of agile project management. The result is a potential misinterpretation of the project status, as deviations from expected linear resource consumption could be misinterpreted as suboptimal performance. This tension highlights the dichotomy between traditional resource-focused measurements and value-based, adaptive measurements of agile project management. In this area of tension, integrating agile principles into reporting mechanisms is essential to ensure a comprehensive and accurate assessment of project progress. *"They just look at the used capacities of the developers relative to the time of the year. They do not care if the work so far has been conceptual and the development is condensed at the end of the year"* (Scrum Master).

Discussion

Theoretical Contribution

The ongoing discourse on large-scale agile transformations highlights challenges in establishing organizational agility (Carroll et al. 2023). While most research on large-scale agile transformation focuses on the initial adoption of scaled agile frameworks (e.g., Carroll et al. 2023; Dikert et al. 2016), our work investigates salient tensions between an agile cluster applying SAFe and its non-agile environment within a German financial services provider five years after initial adoption of the framework. We discuss our findings' theoretical contribution and associated implications in the following.

While Dikert et al. (2016) emphasize that it may be helpful to adhere to traditional management procedures in the beginning, our results emphasize tensions that arise from the interplay between agile practices and traditional management procedures. Based on existing literature (e.g., Doležal 2018), we conclude that the identified tensions (second-order themes) are only a surface expression of the underlying management logic regarding goal-setting, planning, and reporting. Accordingly, our results imply that by applying scaled agile frameworks, organizations need to decide whether to commit to the underlying principles of these frameworks. If they do not, they risk confusion, employee demotivation, and inefficiency. Given that they are committed to applying scaled agile frameworks, they must deeply understand their underlying principles and develop ways to revise their current practices or integrate them into their traditional management procedures. Thus, we suggest that organizations seeking to scale agile practices through scaled agile frameworks must examine the underlying principles of practices whenever tensions arise during the agile transformation process. Overall, we extend existing works regarding tensions and challenges in research on large-scale agile transformation in general, in highly regulated institutions (Baxter et al. 2023), and the financial services sector (Sebola and Khoza 2022) by offering a lens along with the relevant project management procedures of goal-setting, planning, and reporting. While we do not provide insight on how to resolve particular tensions, we highlight salient tension that organizations might address by leveraging existing work on the management of tensions (e.g., Hargrave and van de Ven 2017).

Contrary to the prevalent focus on challenges during the adoption phase of agile methodologies (e.g., Dikert et al. 2016), our research reveals that new challenges continuously emerge as agile projects mature and expand. FinCorp initially adopted agile methods for a specific innovation project. In 2018, they decided to implement SAFe as a grassroots movement for managing larger projects with interdependent teams and interrelations with existing systems and processes to ensure that traditional project management procedures do not crush agile teams and principles. Implementing SAFe at the ART level has taken some time, and adjustments are constantly required to maintain agile practices. Our findings underscore the need

to view large-scale agile transformations as ongoing endeavors beyond the initial adoption phase (Carroll et al. 2023). For example, as new divisions become integrated into the ART, it requires resolving tensions regarding goal-setting, planning, and reporting. Thus, our results complement the conceptualization of Cram and Newell (2016), who argue that there are either crusader (who fully adhere to an agile method), tailors (who adapt methods to their needs), and dabblers (who introduce methods only superficially). Based on our findings, we would argue that we find different patterns across time and organizational levels. At the ART level, the Release Train Engineer and other stakeholders adapt the method to their needs and the current level of agile maturity within the ART. However, beyond the ART level, practices of the framework are only used superficially, e.g., stakeholders do not take the necessary time to re-prioritize their requirements per Program Increment. Accordingly, our results indicate not a one-time process of normalizing (Carroll et al. 2023) and tailoring (Cram and Newell 2016) but an ongoing process that becomes necessary whenever additional processes or stakeholders of additional divisions or hierarchical levels become involved. Thus, despite the adaptation of the framework, it does not prevent organizations from implementing the framework itself, which is consistent with the traditional effects of adopting novel management fashions (Cram and Newell 2016). Accordingly, due to the stepwise transformation and scaling approach, there is a need to resolve tensions in a mindful way in an ongoing manner.

Finally, there are different underlying tensions between agile and traditional (project) management principles, e.g., autonomy and control (Naidoo and Rikhosto 2021). We observe that in their pursuit of autonomy and against (granular) measurements (i.e., control), agile teams neglect the responsibility to deliver working software at the end of a sprint or a Program Increment. In doing so, agile teams might hurt even those measures and elements of predictability inherent to agile principles that form the basis for providing autonomy. Accordingly, we learn that there might be an ongoing back-and-forth between scaling agile practices and more rigorous, traditional management practices, requiring an ongoing process of tension management until the relevant stakeholders have developed a shared understanding and synthesis of principles regarding their organizational approach to goal-setting, planning, and reporting, and hold onto it with their actions. While control and predictability will remain valid in regulated contexts (Baxter et al. 2023), scaled agile frameworks might deliver predictability via their strict methodological guidance. However, our observation highlights the need for agile clusters to deliver on agile principles as a foundation to please management requirements.

To conclude, our work suggests that organizations must approach agile transformation holistically, as it impacts their goal-setting, planning, and reporting procedures. Especially when the transformation is bottom-up, organizations must prepare for an ongoing process with rising tensions whenever additional processes and organizational functions and levels become involved. Further, while agile principles promote autonomy, agile clusters should always focus on adherence to agile principles, e.g., delivering value to customers as committed, as a foundation to get more autonomy.

Practical Implications

We propose 13 tensions anchored in specific focus areas that Product Managers and Release Train Engineers should proactively consider to ensure the success of their ART. By identifying and elucidating these tensions, our work encourages Release Train Engineers tasked with scaling agile practices and managers striving to develop an agile organization to manage the complexities of integrating agile clusters with their non-agile environments. While these tensions might not be critical initially, their importance grows as projects mature and delivery expectations increase. Recognizing that challenges emerge during the initial adoption phase of scaled agile frameworks and continue to shift over time, these roles must remain vigilant. To ensure the success of scaled agile practices, Release Train Engineers must champion agile principles and act as mediators to continuously manage these tensions. Some tensions may require translation between divergent perspectives, and others can be addressed through mindset shifts or collaborative solutions facilitated by Release Train Engineers and Product Managers. Furthermore, it is up to Product Managers and Release Train Engineers to highlight the non-adherence to agile practices in their environment. Demonstrating the costs of deviant behavior and its negative impact on expected outcomes, such as misaligned priorities, can foster understanding and alignment.

For managers operating outside agile clusters, our work advocates moving beyond simply supporting the initiation of scaled agile frameworks. These managers must understand that a genuine belief in scaled agile practices requires a balance between traditional management approaches, which remain relevant in certain

realms, and agile projects. This balance involves setting guardrails that satisfy regulatory requirements while preserving the breadth that enables agility. Moreover, managers leading cross-functional agile clusters must cultivate a shared vision and incentive system that encourages rather than discourages collaboration among relevant stakeholders. Aligning vision and rewards will be critical to creating an environment conducive to sustainable collaboration and agile success.

Future Research

Given the existing problems in understanding the dynamics of established scaled agile frameworks, future research in this area is promising. While the literature acknowledges challenges and success factors in the early adoption phase of scaled agile frameworks, exploring the tensions and obstacles that arise when these frameworks are deeply embedded in organizations remains imperative.

While we identify 13 tensions, our results do not deliver insights into the effects of the different tensions. Future research should explore the impact of identified tensions on project outcomes and the overall agility of organizations and investigate how these tensions affect project success rates, quality, and the overall progress of the agile transformation journey (tension effects). Further, looking at organizations that have effectively managed tensions within established scaled agile frameworks may be interesting. Case studies can provide valuable insights into strategies that successfully addressed various tensions, revealing which approaches were effective, which were challenging, and how these were ultimately resolved. By understanding how organizations have successfully managed tensions, researchers can guide how to mitigate obstacles effectively (resolution strategies). Finally, future research should undertake studies of different scaled agile frameworks to analyze how each approach handles the complex interplay between agile clusters and their non-agile environment. This exploration could uncover the suitability of certain frameworks for specific contexts. By examining the fit between scaled agile frameworks and organizational characteristics, future research could provide insights into which frameworks suit particular situations and guide practitioners in selecting the most appropriate framework for their unique needs (framework-context fit analysis).

In sum, future research in this area has the potential to illuminate the complex interplay of tensions within established scaled agile frameworks. Researchers can enhance the success of large-scale agile transformations by uncovering effective strategies and insights into tension management.

Limitations

Besides its merits, our study is beset with limitations. Foremost, we acknowledge potential limitations according to the general validity of the qualitative study (Guba 1981). First, even though we employed data triangulation and challenged our conclusions, among others, with the Release Train Engineer, there might be different perspectives and interpretations on the phenomenon under investigation that limit the credibility of our results. Second, even though we recognized similar tensions in discussions with members of different organizations and debating preliminary findings with practitioners and researchers stroke a chord, our results depend on one case, which might limit the transferability of our findings. Third, although we employed several tactics to ensure the dependability and confirmability of our results, e.g., triangulation across data sources or researchers with different degrees of involvement, which challenged the assumptions and results of our data analysis, other researchers with another research background might have come to other conclusions.

Conclusion

In sum, applying scaled agile frameworks and large-scale agile transformations have become focal points in both practical contexts and academic discourse. While literature predominantly addresses the challenges and success factors associated with the initial adoption phase of scaled agile frameworks, the subsequent phases of the transformation journey remain relatively underexplored (Carroll et al. 2023). Our work, set in the context of a financial services provider, sheds light on an agile cluster that has successfully operated according to agile principles and consistently delivered functional software over an extended period. Nevertheless, we also see the emergence of tensions between traditional management approaches and the application of the scaled agile framework. The main contribution of our work lies in challenging the prevailing emphasis on early-stage agile transformations and enriching our understanding of the tensions

that arise when agile clusters become more relevant to the overall organization. By highlighting the evolution and continuity of tensions, our study underscores the critical need for an adaptive and sustainable approach to managing the agile transformation process. We add to the existing body of knowledge by identifying 13 tensions grouped into three key areas. Furthermore, our findings have implications for managers seeking to facilitate scaled agility within their organizations.

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