American Academic Scientific Research Journal for Engineering, Technology, and Sciences
ISSN (Print) 2313-4410, ISSN (Online) 2313-4402
https://asrjetsjournal.org/index.php/American_Scientific_Journal/index

Analysis of Scaled Agile on Turkcell "Offering Solutions Team" for Faster and More Qualified Production: SAFe & LeSS

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Abstract

Agile methodologies are useful to make organizations adapt to the varying needs and changing market conditions in the world and these methodologies become new generation working methods for organizations. "Offering Solutions Team" is the first team that started to work with agile methodologies in Turkcell and it has been putting different agile methodologies into practice according to the requirements for more than 10 years. On this occasion, it continues to increase its experience day by day. "Offering Solutions Team" works on service, tariff and campaign products of Turkcell and it carries out its operations under the scope of the "Information and Communication Technologies" (ICT) function. Quality of these products, time to market (T2M) and improvements are key process indicators (KPI) for this team. This team having agile maturity has increased its gains by scaling agile and inspired different organizations by sharing its output. SAFe (Scaled Agile Framework) and LeSS (Large Scale Scrum) are the methodologies that "Offering Solutions Team" use for scaling agile. This article describes the reasons for choosing these methodologies related to the requirements at "Offering Solutions Team", their experiences and outcomes.

Keywords: Agile; Scaling Agile; LeSS; SAFe.

Received: *10/3/2025*
Accepted: *12/3/2025*
Published: *12/13/2025*

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1. Introduction

In recent decades, agile methodologies have transformed the technology development by promoting iterative progress, stakeholder collaboration and responsiveness to change. Agile frameworks such as Scrum and Kanban have created substantial benefits in the teams by increasing adaptability, improving product quality and enhancing customer satisfaction.

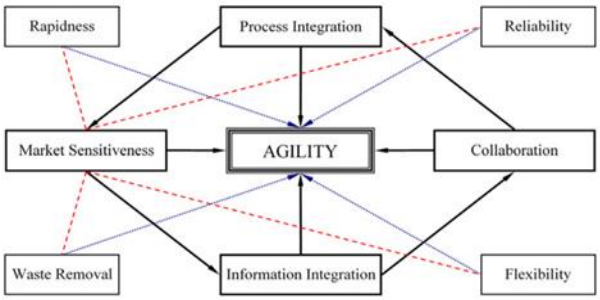

Figure 1: A structure of agile concept [1]

Scrum is a methodology used to create and maintain complex products effectively [2]. Kanban is a structured work method based on Lean and Agile concepts, where teams move tasks, known as Kanban cards, through defined stages to maintain a continuous flow of delivery [3]. As organizations grow and face the complexities of large-scale systems, global markets and multi-team coordination; there is a need to implement scaled versions of traditional agile practices. This has led to the emergence of scaled agile frameworks that aim to extend agile principles beyond the team level and apply them across entire organizations.Scaling means that a system can grow when the number of requests or the amount of data increases, without having any problems. It also means that the system can become smaller when requests or data decrease, again without causing any issues.Scaled agility refers to the adaptation and extension of agile principles across complex and dynamic organizational structures. Scaled frameworks attempt to synchronize the work of multiple teams, align business and ICT goals, and foster responsiveness at a strategic level rather than limiting agility to small, self-contained teams. Just because an organization has agile teams doesn't mean the whole organization 2 is truly agile. Being an agile organization means being flexible and fast when making decisions that affect the whole company, being able to grow or shrink systems when needed without problems, offering quick and effective solutions and always learning and improving.

Table 1: Comparison of SAFe and LeSS

	SAFe	**LeSS**
Approach	Multi-layered framework, rule-based	Minimalistic extension of Scrum, focusing on simplicity
Scaling Method	Agile Release Trains coordinating multiple teams	Multiple Scrum teams working on a single product backlog
Activities	Planning, Inspect & Adapt	Reviews and Sprint Planning
Suitability	Large enterprises with complex needs	Organizations searching agility with minimal bureaucracy
Flexibility	Strict due to rule-based roles and processes	Adaptable and flexible

Scaled Agile Framework (SAFe) and Large-Scale Scrum (LeSS) are the most widely adopted approaches to scale agility. These frameworks offer different strategies to manage organizational complexity, improve cross-team collaboration, and maintain agility while meeting enterprise-level demands. SAFe functions like an operating system and provides organizational agility. SAFe builds on agile by giving clear instructions for using it in big, complex or highly regulated organizations [4]. LeSS focuses on defining sufficient structure to support large-scale operations, without adding unnecessary complexity.

Turkcell is an integrated provider of telecommunications and technology services, established and based in Türkiye, where the telecommunications industry is highly competitive [5]. “Offering Solutions Team” carries out its activities under the “Information and Communication Technologies” (ICT) function and works on service, tariff and campaign products of Turkcell. These products include packages and campaigns designed to meet customers' communication needs, offering voice benefits for calls, data (GB) for internet usage and SMS for text messaging. While customers have main tariffs and packages for their daily and regular usage, they may occasionally require additional data or voice benefits. These additional needs often emerge during special periods such as national or religious holidays, seasonal patterns, when users increase their voice and data consumption.

On the other hand, extraordinary situations like the global pandemic also triggered increased demand. During a time when face-to-face communication decreased and there was a notable rise in video calls and voice traffic, significantly driving up the demand for enhanced data and voice packages. Remote working became the norm for many businesses, making high-speed and reliable internet access as a necessity.

Moreover; in general, customer needs also vary across different segments. Telecom operators must recognize that usage behaviors and expectations differ across demographic and professional groups. For example; students, young users and employees in both the public and private sectors each present unique communication profiles. To sustain customer satisfaction and competitiveness in a dynamic market, telecom companies must enrich their product catalogs with targeted offers that align with evolving needs, ensuring that they present the right solution, at the right time for every customer segment.

The "Offering Solutions Team" works on all service & tariff & campaign products of Turkcell meet these needs. Quality of these products, time to market (T2M) and improvements are key process indicators (KPI) for this team. In addition to delivering a wide product range, it is essential to ensure the rapid delivery of products, maintain high quality standards, and provide a smooth and effective user experience for customer satisfaction. There are two main roles in this team which are analysts and quality assurance testers.

In this article, the reasons for choosing these scaling methodologies related to the requirements at "Offering Solutions Team" is going to be described and their experiences and outcomes will be explained.

2. Methods

To begin with, the agility roadmap of "Offering Solutions Team" can be used as a starting point. In the first step, in December 2014, they have decided to work with Agile methodology [5]. After that, Agile teams were formed. At the present time, there are five specific teams in "Offering Solutions Team" and they work with agile methodologies. These teams followed all agile rituals and agile roles, which helped them work faster, reduce time to market (T2M) and keep delivering products that meet needs without lowering quality. They still continue these practices today. Each of them has their own specific backlog. As mentioned in the previous section, "Offering Solutions Team" includes two main roles which are "Analyst" and "Quality Assurance (QA) testers" for their work besides agile roles. Team members in "Analyst" roles are responsible for the prioritizing, analysis and system integration of the products that will be added to the product catalog. Team members in "QA" roles are responsible for testing the products being worked on. Analysts are also responsible for the entire process, from the beginning until the product is launched and served to customers.

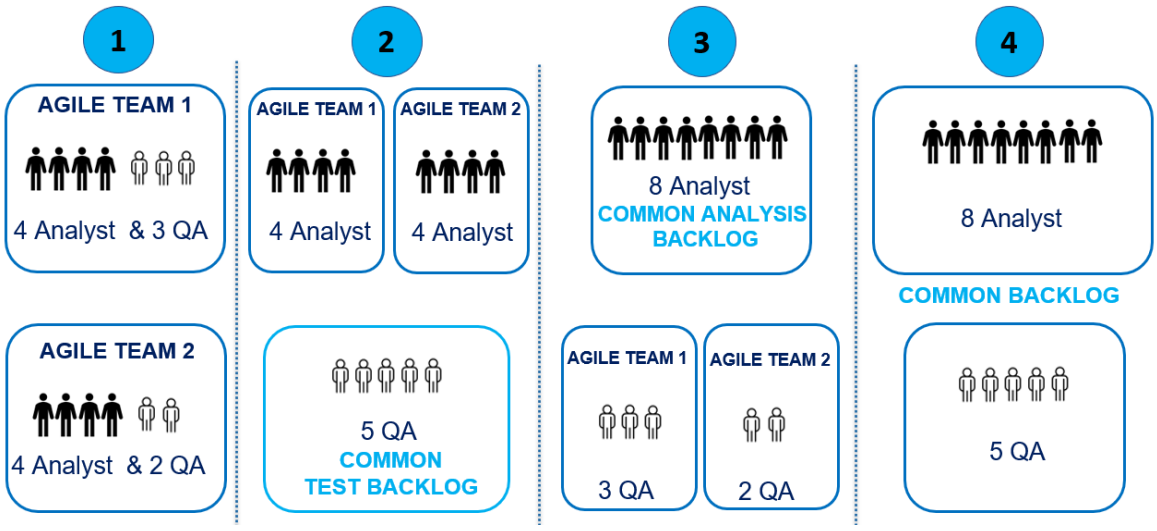

Figure 2: The SAFe example involving two agile teams in "Offering Solutions Team"

When customer needs and market conditions became more complex, they started scaling agility in 2023 by using the SAFe method. This method allowed these agile teams to pull the tasks from each other's backlog when it is needed [6-7]. People in different roles, such as analysts and QAs from different teams, were brought together in the right combinations needed for specific tasks in the backlog. In this way, new groups were formed

to work on those tasks. There are four different combinations shown in the Figure 2 as an example involving two agile teams in “Offering Solutions Team”.

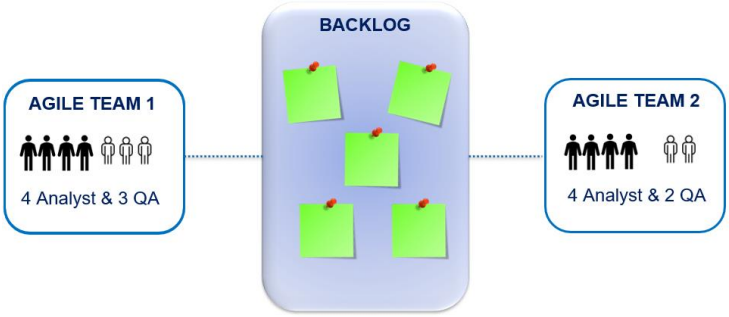

Figure 3: The LeSS example involving two agile teams in “Offering Solutions Team”

In 2024 they started using the LeSS method which focuses on simplicity since scaling agility helped get more tasks done faster and with more customer satisfaction. “More with LeSS” became their motto during this period Reference [8]. In LeSS, multiple teams work on a single product backlog. A planning session is held to decide which items from the backlog will be handled by which team. The teams, selected for each task, take full ownership of this task end-to-end. This means that all activities related to this task, including analysis and testing, are carried out within the same team, and the work is completed until it is ready for launch. During the time LeSS is applied in the team, following the motto "More with LeSS"; unnecessary roles, processes and structures within and between teams are minimized. If responsibilities are divided into extra roles, individual accountability to the team decreases. To prevent this, simplicity is emphasized in this method. Figure 3 shows the LeSS example involving two agile teams in “Offering Solutions Team”. Figure 4 shows the Agile Roadmap of “Offering Solutions Team” from 2014 to 2024.

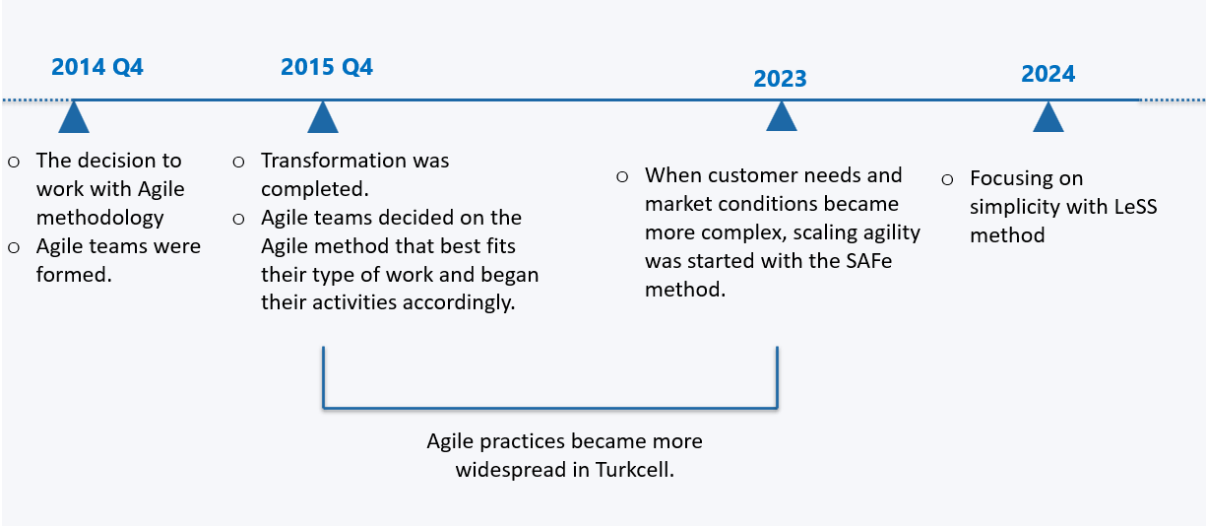

Figure 4: The Agility Roadmap of “Offering Solutions Team”

As it is described that the challenge about software development while system grows and evolves, “Offering Solutions Team” also had some similar challenges [9]. These scaling methods helped it overcome these challenges.

To increase the value delivered to customers with a more efficient agile organizational structure, two different scaling models have been used in “Offering Solutions Team” over the past three years. Each model was analyzed based on time to market (T2M) and production figures. The corresponding results are discussed in the following section.

3. Measures

The periods when the methods (SAFe and LeSS) were applied, metrics related to Time to Market (T2M) and production volume were collected and analyzed. The results were evaluated to understand performance improvements.

Let’s share the measurement results through two agile teams within the "Offering Solutions Team". At a time when “Agile Team 1” has 54 units of work in its backlog, “Agile Team 2” has 10 units of work in its backlog. During the processing of the 54 units of work, the analysis effort can be handled both by manual effort of analysts and automation process. However, a bottleneck occurs for the testing phase, which must be handled by those in QA roles.

The workflow and the measurement results during the period when SAFe was implemented is given below. In this case, the second scenario shown in Figure 2 was applied to resolve the bottleneck. Eight analysts handled the total 64 units of work in the backlogs of both teams while the testing phase was managed as a shared backlog, and five QA acted as a single team to complete the testing processes. As a result, the 54 units of work, which were originally expected to be completed in approximately 40 days, were completed in 24 days. The observed efficiency gain in this case is around 40%.

The workflow and the measurement results during the period when LeSS was implemented is given below. It will be expressive to understand the benefits through the following example. At a time when “Agile Team 1” had 28 high-priority backlog items, “Agile Team 2” had 4 items in its backlog that were not urgent in terms of launch date. In this situation, both teams come together as a full team, as illustrated in Figure 3, and treat the backlog of “Agile Team 1” as a shared backlog. They then collaborate to reduce the items in this shared backlog. The benefit in this case can be described as following: while it would have taken “Agile Team 1” around 20 days to complete the 28 backlog items on their own, both teams working together and completed them in just 13 days. The efficiency gain in this case is around 46.4%.

In both methods, when the total amount of work in the backlog is completed in a shorter time, the backlog is reduced more quickly without accumulation, and more work is completed in a shorter period. Each method is chosen based on the conditions and needs at the time and proves to be beneficial in those specific situations.

Table 2: Efficiency Percentage of SAFe and LeSS

	SAFe	**LeSS**
Efficiency	40%	46.4%

4. Conclusion

Both SAFe and LeSS present effective frameworks for scaling agile within the telecommunications industry. However, their distinct methodologies serve different organizational structures. SAFe is highly effective in environments that require high levels of coordination, structure and alignment with strategic objectives. It is effective especially in managing complex product and services. In contrast, LeSS supports greater agility and adaptability, making it suitable for contexts where speed and customercentricity are prioritized. The choice between these frameworks should be guided by organizational needs, culture and agile maturity. For organizations operating in highly regulated or structured environments, SAFe may provide the clarity and control needed for large-scale initiatives. In contrast, companies that prioritize adaptability, team autonomy and lean practices may find LeSS more aligned with their agility goals.

Integrating the structured approach of SAFe to long-term planning with the simplicity of LeSS in execution may help the organizations in telecommunication companies effectively balance agility and complexity.

In the information and communication technology companies, the knowledge about agile approaches is much greater than the companies related with other sectors [10].

At different periods, the “Offering Solutions Team” has implemented both of these scaling models, SAFe and LeSS, depending on specific needs, and has benefited from each accordingly. As a result, production capacity increased and time to market was shortened, while maintaining high standards of quality. Based on this experience, this team continues to apply the methodology that best fits the current context and requirements, thereby enhancing its overall efficiency and performance.

Modern businesses need to prioritize value and apply manufacturing strategies to maximize customer value. Creating value for customers ultimately leads to stronger company performance [11].

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