An International Multidisciplinary Journal
अनन्यशास्त्रम्
(A Unique Treatise of Knowledge)
ISSN:3049-3927 (Online)
Volume: 01 | Issue: 03 | December: 2025
Research Article

ANANYAŚĀSTRAM:
An International Multidisciplinary Journal
(A Unique Treatise of Knowledge)
Peer-Reviewed | Refereed | Open Access Journal
DOI: https://doi.org/10.64328/aimjv01i030031

Scaling Agile for Large Multi-Stakeholder Projects

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Abstract

Agile methods have radically changed the way software processing is done and projects of IT are done by enterprises around the world. Initially intended to work on small/co-located teams, agile practices have been developed to address large, complex projects that include distributed teams with more than one or two functions and geographies. The associated challenges in this expansion consist of management of interdependent teams with coordination, alignment of a variety of strategies, negotiation of conflicting interests of the stakeholders and strict regulatory requirements. To assess the application of major agile scaling models to multifaceted IT organizations with highly complex ecosystems, this paper will result in a qualitative analysis of the main agile scaling frameworks including Scaled Agile Framework (SAFe), Large-Scale Scrum (LeSS), and Disciplined Agile (DA).

The proposed research will employ the use of multi-case study, as it combines the empirical evidence of best IT companies and defense sector projects with high compliance rates. Transformational leadership coupled with executive sponsorship in the development of organizational preparedness and the specific adaptation of frameworks to the specifics of enterprises have been found to represent essential factors of success. On the other hand, barriers like administration issues, architecture, cultural resistance and integration of previous systems are critically discussed.

The article offers a best practice roadmap to project managers and enterprise architects and focuses on key strategies to be used in effecting successful change management, process optimization and technology enablement, in large-scale agile transformations. Framing previously tested paradigms of agile scale to the active contexts of digital change and legislative change, the study contributes to the academic rhetoric in enterprise agility. The contributions can give practitioners and researchers working in the field relevant

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An International Multidisciplinary Journal
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ISSN : 3049-3927(Online)

insights into how to streamline agile scaling, maximize innovation and responsiveness, and value creation in multi-stakeholder settings.

Keywords: transformations, architecture, Disciplined Agile (DA), multi-stakeholder, administration issues.

Introduction

Background and Context:

Over the past two decades, agile methodologies have completely revolutionized software development and IT project management. Stemming from the Agile Manifesto (Beck et al., 2001), these approaches are centered on iterative and incremental development cycles, better collaboration with the customer, and responsiveness to changing requirements. Speaking more specifically: agile's core values and principles question traditional waterfall concepts of linear approach and planning in favor of iterative processes of feedback and empowered cross-functional teams.

Originally introduced by small, co-located software development teams, agile practices have now spread with great accuracy to a broad range of organizational scale and industry. However, the massive rate of increase of digital transformation programmes, together with the growing complexity of IT solutions, have shown the critical need for ramped agile ways of working. Big companies with mega-projects that places several agile teams spread over locations under strict compliance programs and interconnected by various technical and business requirements must orchestrate work without the loss of agility.

Agile Scaling Evolution and Significance:

The need for scaling agile is based on the demands from the enterprise for agility both on a program and portfolio level combining strategic planning with incremental delivery. Unlike the single-team Scrum or Kanban implementations, the synchronization of deliverables, risk mitigation, governance protocols, and stakeholder alignment must be addressed on an expansive scale in the case of scaled agile (Dikert et al. 2016).

This has led to development of specialized scaling frameworks which all suggest various specific mechanisms designed to enable alignment and coordination of many agile teams. These frameworks aim to fill the gap between corporate governance which is the standardization of agility and diverse organizational cultures and regulatory institutions.

Top Agile Scaling Models:

Some of the most outstanding frameworks include:

- Scaled Agile Framework (SAFe): Created as a holistic framework that brings together lean, agile, and product development flow principles, SAFe relies on several layers of configuration – ranging from Essential to Full SAFe – that enables organizations to function with the concept of cohesive Agile Release

ISSN : 3049-3927(Online)

Trains and keeps all aligned through Program Increments (Leffingwell, 2018; Knaster & Leffingwell, 2020).

- Large-Scale Scrum (LeSS): With a focus on simplicity and minimalism, LeSS is an extension of Scrum for multiple teams that share the same product backlog and have cross-team collaboration meetings such as Overall Sprint Planning and Retrospective (Larman & Vodde, 2010).
- Disciplined Agile (DA): DA is a context-sensitive approach that gives organizations the decision making tools to adapt and integrate agile, lean, and traditional methods, and it is well suited for compliance intensive sectors such as finance, healthcare, and defense (PMI, 2016; Smith, 2020).

Challenges to Scaling Agile to Large and Multi-Stakeholder Environments:

In spite of the maturity of the framework used, the scaling process is full of agglomeration. The barriers that tend to be faced by enterprises include;

- Organizational Culture and Change Changing, transforming, hierarchical organizations (command and control structure) to servant leadership (servant leader) and teams (servant leader) requires strategic change management, leadership development, and cultural sensitivity (Rigby et al., 2016).
- Coordination and Communication: Depending on all the multisite, multidisciplinary teams, there is certain logistical complexity and there needs to be good tooling, good communication channels, and good planning artifacts (Bosch Annual Report, 2023).
- Governance vs. Agility: Trying to balance between ensuring compliance – regulatory audits, security protocols – to ensuring adaptive, iterative delivery models creates compromises and is often leading to hybrid process models (Smith 2020).
- In addition to the restrictive and sometimes prohibitive nature of existing IT plans to modernize core systems, legacy systems integration materials including models, legacy operating systems, and legacy BIM processes impede automation and continuous integration, rendering successful transformation an incremental roll-out, sometimes with traditional project management in a mash-up fashion.
- Multi-Stakeholder Alignment – The presence of multiple stakeholder groups with cross-perspective representatives from product owners to enterprise architects, compliance officers and business executives requires nuanced stakeholder management frameworks and custom communication approaches.

Research Gap and Study Objectives

The overall examination of academic and industrial literature demonstrates a lack of any empirical research studies that would critically examine the implementation and adaptation of the leading agile scaling models in complex IT that modernization, cybersecurity, and defense IT projects. Additionally, most of the research on the topic currently pays a limited attention to the development of software products since the analysis ignores the operational and regulatory complexity involved in other IT fields.

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This study will address these gaps by emphasizing a qualitative multi-case format to analyze the transformation of large scale agile changes in IT based organizations but with defense and operational backgrounds where-in compliance and security factors are of paramount consideration. These are the main aims of:

Difference analysis of framework adoption patterns and differentiative mode combination in accordance with organizational background.

Identify the barriers and enablers for scaling success

Transactional suggestions and a viable enterprise scaling assertion.

Contribute empirical knowledge from bridging between the academic theory and the practical enterprise realities to the agile scaling discourse.

Literature Review

Introduction to Agile Scaling Frameworks:

Scaled Agile Framework (SAFe)

The Scaled Agile Framework (SAFe) has become the de facto framework for an enterprise that helps complex organizations effectively scale the practice of agile software development. SAFe combines lean thinking, agile development and, product development flow elements into a stack of architecture that consists of the following levels: Team, Program, Large Solution, and Portfolio (Leffingwell, 2018). Core constructs include Agile Release Trains (ARTs), Program Increments (PIs), and Lean Portfolio Management which coordinates multiple teams through common business objectives.

SAFe's prescriptive approach offers specific guidance on roles – including Release Train Engineer, Product Owner, System Architect – events, artifacts and metrics that promote alignment and governance. The extensive industrialization portends positive gains like better delivery predictability, reduction of risk and improved quality (Knaster and Leffingwell, 2020).

However, critiques concede that SAFe is complex, possible sources of bureaucratic overhead, and difficulty in preserving team autonomy and agility with set processes (Dikert et al., 2016; VersionOne, 2022). Organizations often invest a lot of effort in training and cultural change in order to achieve the benefits envisioned in SAFe.

Large-Scale Scrum (LeSS):

Contrasting to SAFe, Large-Scale Scrum (LeSS) focuses on maintaining the simplicity of Scrum and empirical control of the process on scale while minimizing the addition of new roles and artifacts beyond the Scrum framework (Larman & Vodde, 2010). LeSS promotes a single product backlog with multiple teams, coordinated through common events (Overall Sprint Planning and Reviews).

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LeSS focuses on organizational learning, as well as communication between teams and product focus to maintain agility and lean delivery. Its low-prescriptivity is a good match for enterprises that value flexibility and decentralized decision making, but this approach can be difficult for organizations with more demands for governance or low maturity in agile (Rigby et al., 2016).

Disciplined Agile (DA):

Disciplined Agile (DA) is unique in its ability to provide context-specific framework for tailoring processes, collaborating different methods like agile, lean and waterfall based on company culture, domain, and regulated requirements (PMI, 2016). DA's process decision framework and lifecycle options enable organizations to make strategic choices and develop practices.

DA has been shown to be effective in controlled environments such as finance, healthcare, defense IT, etc. by building governance into an agile delivery lifecycle while also cultivating continuous improvement (Smith, 2020). However, maturity and discipline in the leadership process are essential elements of DA implementation, where complexity is caused by configurability.

Challenges in Scaling Agile

Barriers at the Organization and Cultural Level:

Culture has been the most frequently cited obstacle in scaling agile in research. The change in management with subordinates should rest on modified mindset on behalf of executives, middle managers, and teams in the context of transformation to servant leadership (Rigby et al., 2016). Psychological safety, trust, and open communication are essential facilitators while legacy management practices are often impediments to agile scaling (Dikert et al., 2016).

Coordination Complexity:

Complexity from cross-team dependencies & (distributed) teams and integration with heterogeneous technology stacks. Thus, synchronizing backlogs, resolving inter-team dependencies and transparent visibility demand specialized tooling and disciplined cadence management (Bosch Annual Report, 2023).

Control, Compliance and Risk Management:

Companies operating within controlled fields struggle to integrate audit, reporting and control components as part of fluid work processes. The necessity to balance regulation and responsiveness through a hybrid framework introduces and integrates compliance experts as stakeholders (Smith, 2020).

Legacy Systems & Tooling Limitation:

Legacy IT infrastructures are barriers for automation and continuous integration pipelines and go against the total adoption of agility. The blend process selected through integration with traditional Change Management and configuration Management processes can cause friction in the hybrid blends presented (PMI, 2018).

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Hybrid Agile Approaches:

New literature expresses new reality of dominant customs of hybrid agile model, a crossbreed of agile and waterfall methodologies, to harness echelons of legacy, compliance, and corporate preparation conducts. Such hybrids are commonplace in operational technology and defence modernisation projects, as a pragmatic balance, but will in sometimes dilute agility (Smith, 2020).

Empirical Research Gaps:

However, as much as there is literature available on agile concepts, little literature has been conducted on framework implementation in the various functions of IT beyond software development: including infrastructure, cybersecurity, and operational digitization. Defense and other regulated environments also suffer from a lack of empirical research on the adoption and efficacy of scaled agile.

It is this gap that inspired this multi-case qualitative research to conduct an analysis of multi-industry IT projects with specific intent to study scaling frameworks, adaptation, and sustainable transformation.

Research Methodology

Research Design:

The paper presents the approach of qualitative multi- case design, a nature befitting investigation of an intricate organizational phenomenon within organizations in real world contexts (Yin, 2018). It is with the qualitative method that one will be able to explore how large IT organizations are best integrating and aligning the agile scaling models in practice to achieve and reveal the details that the quantitative data will fail to disclose. In such a way the research should explore lived experiences as well as challenges and strategic adjustments related to scaling of agile in a multi-stakeholder setting.

Case Selection:

Using purposive sampling, four organizations were chosen that represent a diversity of sectors, organizational sizes and agile frameworks to allow for a broad perspective to scale practices:

A global IT software company using the Scaled Agile Framework (SAFe) for grand collaboration of multiple teams far-reaching across continents.

The financial IT department with the use of Large-Scale Scrum (ALSS) and a high level of regulation.

An omninational logistics developer that offers a digital transformation via an appellation of agile and conventional waterfall process operation, with scale methodology reflecting hybrid intensification tendencies. Defence contractor pursuing Disciplined Agile (DA) as means of balancing their regulatory requirements with agile delivery. Such a strategic choice guarantees the coverage of various challenges of operation and organizational cultures (Patton, 2015).

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Data Collection

Semi-structured interviews with agile practitioners (coaches, project managers, product owners and senior leaders involved in the transformation initiatives directly) provided access to primary data. Semi-structured interviews are flexible and give respondents ample opportunity to give detailed information and direct or focus discussions on research goals (Kallio et al., 2016).In addition to interviews, organizational documents (e.g., transformation roadmaps, guidance documents) as well as retrospective reports from the organizational archive were used for triangulation of results and contextualization. The primary data was secondly supplemented with secondary data consisting of publicly available white papers and case studies.

Enhanced informed consent was obtained by all the participants and interviews were done under confidentiality to avoid leaving anything out.

Data Analysis:

The qualitative data in question were analysed through thematic analysis based on the six-step methodology proposed by Braun and Clarke (2006) to extract patterns/themes. This entailed the acquaintance with the information, coding of key aspects, theme building of the information, consistency reviewing themes, defining and labelling the various themes and building of a logical story that answers the research questions.

NVivo software promoted serviced control of the data and strengthened the theme development process. An independent researcher transcribed a subset of transcripts using pro forms and, thereby, established intercoder reliability with a Cohen Kappa value of 0.87 suggesting high levels of agreement (Landis and Koch, 1977).

Assuring the Research Trustworthiness:

The strategies used in order to increase the credibility and the trust are numerous. Triangulation in the data (interview, documents, and secondary data) enhanced validity (Denzin, 1978). Members checking: In this process, initial findings were discussed with the participants, to ascertain accuracy and pertinence of coping (Lincoln and Guba, 1985). An audit trail was kept, which presents detailed documentation of decisions throughout the data collection and analysis process to support transparency and replicability.

Ethical Considerations:

The study was conducted in compliance to research ethics. The anonymous and confidentiality of the participants and organizations were ensured. The review board of the spouse institute provided ethical clearance and all the activities done in the research performed in agreement with established principles of conducting research on human subjects (Beauchamp and Childress, 2013).

Limitations:

This study recognizes weaknesses of qualitative case studies. The possible sources of undue bias are the self-reporting bias among the participants and limited extrapolation to other organizations. The detailed investigations however, provide deep insights that can be applied to other large scale IT settings.

Results / Findings

Results / Case Study Analysis

Case 1: Adopting SAFe in a Global Tech Company

A growing multinational technology firm employing more than 500 developers in different locations around the world used SAFe to enhance coordination and provision of value. They instigated Agile Release Trains (ARTs) and invented new leadership positions like Release Train Engineers and shifted to a servant-leadership

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constituted a model to minimize top-down management. Therefore, they were able to reduce their time-to-market by 20 percent, enhance product quality, and promote visibility of stakeholders through dashboards and reporting systems. Innovative resistance of teams was overcome effectively through relentless team coaching.

Key Actions Taken	**Measurable Outcomes**
Built Agile Release Trains (ARTs)	20% reduction in time-to-market
Introduced Release Train Engineers	Improved product quality, reduced defects
Shifted to servant-leadership management style	Enhanced stakeholder visibility
Persistent coaching overcame team resistance	

Tab 1: SAFe Adoption Critical Actions and Results.

Case 2: Powering Innovation with LeSS in Banking.

One bank that had to cope with evolving rules in finance applied Large-Scale Scrum (LeSS) to change product teams. Their backlog was prioritized by the value to the customers and followed by high compliance standards, fostered cooperation between teams in the planning of sprints and included compliance inspections in each sprint review. The results were a higher level of regulatory responsiveness, the ability to be more innovative because empowered, and less last-minute audit pressures. The presence of the regulators as stakeholders played a critical role in creating trust and transparency but it had to be thoughtful when cultural change was being instituted.

Key Actions Taken	**Measurable Outcomes**
Maintained single product backlog with compliance	Increased regulatory response speed
Enabled collaborative sprint planning	Boosted team innovation and empowerment
Embedded compliance checks in sprint reviews	Reduced last-minute audit pressure
Involved regulators as active participants	Built trust and transparency

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Table 2: Major action and outcomes in the implementation of LeSS.

Case 3: Sailing between Hybrid Marine Logistics

One example is a global logistical partner that has transformed its supply chain to agile software and hardware development projects through waterfall. They combined inter-team planning meetings and regular demos and reporting to share health and status. This combined solution cut deployment by almost a quarter, enhanced visibility and continuous delivery of value and flexibility to unexpected failures. The multiple-methodologies complexity was handled by the implementation of a decisive planning and the strong communication.

Key Actions Taken	**Measurable Outcomes**
Applied agile sprints for software, waterfall for hardware	Reduced deployment time by ~25%
Held integrated planning meetings	Enhanced transparency and incremental delivery
Conducted frequent demos and reporting	Improved adaptability to setbacks
Employed clear planning and communication	Managed complexity and risks

Table 3: The action and outcomes of Hybrid Approach.

Case 4: Defending Security vs. Agility:

One of the defense contractors who has succeeded in securing tight requirements by using Disciplined Agile (DA) to upgrade the existing systems. They mapped stages of the DA lifecycle to security and compliance milestones, established cross-functional teams with compliance specialists since the beginning of the project, and provided high executive buy-in by teaching the stakeholders throughout. This led to the agile delivery with a high level of security, enhanced co-operation among teams to solve problems quickly, and a high degree of transparency which led to interdepartmental trust. There were cultural and security issues which required sustained leadership.

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Key Actions Taken	Measurable Outcomes
Customized DA lifecycle for security compliance	Agile delivery with stringent security
Formed cross-functional teams with compliance experts	Enhanced teamwork and rapid issue resolution
Secured strong executive buy-in	Increased transparency and interdepartmental trust
Provided continuous stakeholder education	Managed cultural and security challenges

Table 4: DA Adoption Essential Items and Results.

Discussion

The qualitative multi-case study of agile scaling system in complex IT organizations offers significant discoveries and limitations as found in the rest of the academic literature. The case studies shedding light on the intricacy of the implementation of agile systems such as SAFe, LeSS, Disciplined Agile, and hybrid systems in large multi-stakeholder organizations support the findings of previous researchers asserting that cultural change, leadership, and moulding frameworks should receive priority rather than dedication to rigid adoption (Dikert et al., 2016; Rigby et al., 2016). The findings are overall consistent with the literature that lists agile scaling as not a standardized solution but needs to be adapted to fit the context, addressing the organizational culture, regulatory restrictions, and technological infrastructures.

The implementation of SAFe at the international technology corporation that saw a twenty percent decrease in the time-to-market and the quality of the delivered products, stresses the reasons why a structured approach of SAFe enables coordination on a large scale and marks the known obstacles such as the resistance to reduced autonomy among team members (Knaster and Leffingwell, 2020; Dikert et al., 2016). This is in line with the reported trade-off between conformity and possible bureaucratic overheads in the documented SAFe and contributes to the importance of servant leadership and incessant coachwork in breaking the cultural barriers.

The apprehension of LeSS in the banking industry saw a higher level of regulatory sensitivity and novelty reflected by a unified, prioritized product media and incorporated regulatory inspection. This finding validates both the literature that proposes the low-prescriptive, flexible methods of regulated settings and at the same time, supports the need of stakeholder involvement in such methods such as regulators, to promote trust and transparency (Larman and Vodde, 2010; Rigby et al., 2016). The given case is consistent with the results

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claiming that decentralization of decision-making and organizational learning encourages agility, yet they should be carefully integrated with compliance processes.

The agile integration of software and traditional hardware processes always in the logistics company greatly emphasizes the strategic flexibility that has to be found in the complex environment that the old systems and the multifaceted development of the product lines usually require. It proves previous studies that hybrid models commonly constitute the viable compromise between agility and governance in the industries where different aspects of operations could be present (Smith, 2020; PMI, 2018). They created complexity but proved to be the important enabling factor of effective communication, combined planning, and hence validated coordination issues that had been mentioned in the agile scaling literature (Bosch, 2023).

Lastly, the experience with the Disciplined Agile that the defense contractor implemented demonstrated that the customization of agile lifecycles to high-security and compliance milestones can provide agile and strong governance. The introduction of cross-functional units that include the specialists in compliance also echoes the existing literature to focus on the context flexibility and maturity of the leadership as the key to a successful implementation of agile practices in highly-regulated industries (PMI, 2016; Smith, 2020). The leadership issues listed above are common problems of changing traditionally hierarchical defense organizations, the cultural and security criteria.

Though these findings confirm much of the existing literature, they also underscore the persistent nature of the major issues in scaling agile such as leadership, culture, stakeholder alignment, and technological support that are important dimensions of any large-scale change endeavor. The interrelations among adaptive leadership, specific structures, and tools make the concept of enterprise agility multidimensional, and making it clear that the effective scalability is not a purely procedural achievement but a socio-technical one.

Limitations

The given research has recognized certain limitations inherent to the qualitative case research. The questioning of self-reported information by the members of the organization introduces the possibility of bias and the results might not be generalizable in other situations other than the ones under scrutiny. There is also the tendency of the changes in agile taking dynamic shapes and this implies that results might be different as organizations grow in their agile practices. However, the richness of the triangulation and the secondary data analysis adds to the reliability of the results and the depth of the case analysis. This study can be expanded in future research by use of longitudinal designs and quantification to enhance the changes and the value of agility, at a later age.

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Conclusion

It's not a matter of copy, paste, and scaling agile practices to large and multi-stakeholder IT projects. Now through the lenses of various life examples in the real world, this study demonstrates that it has a lot more to do with people and culture than with the tools and limitations you employ.

What is obvious is that, no single framework, be it SAFe, LeSS, or Disciplined Agile, is going to fit into all situations with perfect performances. Each organization has its history, its issues, and its way of functioning. The most important thing is the capacity to listen, understand and be open-minded. To one, it is conforming the framework to regulations or old systems; to another, it is reconfiguring that old rigid, top-down culture into a framework that let the team work and make their own decisions.

This change largely depends on leadership. This is not merely for a certain purpose of adhering to a new approach, but it is a place where change can be embraced, where one can relax and be open and learning is being incorporated in the work. This concept has long been part of organizational psychology, culture tends to create greater influence over strategy than one might first assume.

Naturally, there is no ideal.We have observed that combining agile with conventional approaches, such as the waterfall process, may in many cases provide a best-of-both-worlds approach, particularly in those segments that require adherence to rules and risk management. Such blended practices do not undermine agility - they can assist in steering organizations through challenging transitions.

Technology is a both a challenge and benefactor.Tracking tools, dependency management tools, and communication tools are lively required to address complexity in distributed teams. Nonetheless, no technology alone can help build agility, they must be combined with a solid leadership team as well as brilliant work organization.

Our research helps us to remember that scaling agility is a long-term undertaking rather than a short-term one. The process is continuous--laden with trial, error and education. Understanding, persistence, and patience are essential to managers and leaders. Things do not always go smoothly or easily, yet with the proper emphasis on context, culture, and the need to work together, it all pays off.

More reflection of the interaction between culture, technology and rules and quantifying the actual value of agile changes of scale ought to be pursued in future work.

However, most importantly, we should carry on listening to those who are on the ground and they would deal with these problems day to day.

After all, agile at scale isn't merely the application of an approach, but it is a culture.It is a continual struggle to maintain, adjust and provide reality value within the changing and intricate environment of large organizations.

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Reference

Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual Review of Psychology, 60*, 421–449. https://doi.org/10.1146/annurev.psych.60.110707.163621

Bass, B. M., & Avolio, B. J. (1994). Transformational leadership and organizational culture. *Public Administration Quarterly, 17*(1), 112–121.

Beauchamp, T. L., & Childress, J. F. (2013). *Principles of biomedical ethics* (7th ed.). Oxford University Press.

Beck, K., Beedle, M., van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., Highsmith, J., Hunt, A., Jeffries, R., Kern, J., Marick, B., Martin, R. C., Mellor, S., Schwaber, K., Sutherland, J., & Thomas, D. (2001). Manifesto for agile software development. Agile Alliance. http://agilemanifesto.org/

Bosch Group. (2023). *Digital transformation and agile practice integration: Annual report*.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Conforto, E. C., & Amaral, D. C. (2016). Agile project management and agility in Brazilian companies—A survey. *International Journal of Project Management, 34*(2), 147–161. https://doi.org/10.1016/j.ijproman.2015.09.006

Conforto, E. C., Salum, F., Amaral, D. C., da Silva, S. L., & de Almeida, L. F. M. (2016). Can agile project management be adopted by industries other than software development? *Project Management Journal, 47*(3), 21–34.

Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods* (2nd ed.). McGraw-Hill.

Dikert, K., Paasivaara, M., & Lassenius, C. (2016). Challenges and success factors for large-scale agile transformations: A systematic literature review. *Journal of Systems and Software, 119*, 87–108. https://doi.org/10.1016/j.jss.2016.06.013

Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing, 72*(12), 2954-2965. https://doi.org/10.1111/jan.13031

Knaster, R., & Leffingwell, D. (2020). *SAFe® 5.0 distilled: Achieving business agility with the scaled agile framework*. Addison-Wesley.

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics, 33*(1), 159–174. https://doi.org/10.2307/2529310

Larman, C., & Vodde, B. (2010). *Practices for scaling lean & agile development: Large, multisite, and offshore product development with large-scale scrum*. Addison-Wesley.

Camara, R., & Marinho, M. (2024). Agile tailoring in distributed large-scale environments using agile frameworks: A systematic literature review. *CLEI Electronic Journal, 27*(1). https://doi.org/10.19153/cleiej.27.1.8

Dong, H. (2024). What is agile project management? Developing a new model for contemporary practice. *Project Management Journal, 54*(4). https://doi.org/10.1177/87569728241254095

Koudriachov, C. (2025). Success with agile project management: Looking back and ahead. *Journal of Systems and Software, 238*. https://doi.org/10.1016/j.jss.2025.111278

Rialti, R., et al. (2024). Leaders, let's get agile! Observing agile leadership in digital transformation. *Business Horizons, 67*(2), 195–206. https://doi.org/10.1016/j.bushor.2023.11.002

Suvarri, S. K. (2024). The role of leadership in agile transformation: A case study. *Journal of Advanced Management Studies, 18*(2), 114–132.

Uwasomba, C. (2025). Data-driven agility: Assessing agile culture transformation over time within technology organizations. *Information & Management, 62*(4), Article 100812. https://doi.org/10.1016/j.im.2025.100812

International Journal of Scientific Research and Modern Technology. (2024). Evaluating the impact of agile scaling frameworks on productivity and quality in large-scale fintech software development. *IJSRMT, 3*(6), 57–69. https://doi.org/10.38124/ijsrmt.v3i6.449

Boston Consulting Group (BCG). (2024). Why companies get agile right—and wrong. *BCG Publications*. https://www.bcg.com/publications/2024/why-companies-get-agile-right-wrong

Aprika. (2025). Navigating the future: Project management trends of 2024. *Aprika Blog*. https://aprika.com/blog/navigating-the-future-project-management-trends-of-2024/

Haiilo. (2023). 12 steps to a successful enterprise agile transformation. *Haiilo Agile Transformation Blog*. https://blog.haiilo.com/blog/12-steps-to-a-successful-enterprise-agile-transformation/

Brainhub. (2024). 5 steps to identify and manage key agile stakeholders. *Brainhub Library*. https://brainhub.eu/library/agile-stakeholders-management

Agilemania. (2023). Why scaled agile framework (SAFe) is so popular in 2025? *Agilemania Blog*. https://agilemania.com/why-safe-is-popular-among-the-scaling-framework