# SAFe® 4.6 Introduction

## Overview of the Scaled Agile Framework® for Lean Enterprises

A Scaled Agile, Inc. White Paper
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# Foreword

We live in an age of digital disruption where the success of every enterprise depends on its ability to create new digital applications, products, and services. Even organizations that historically haven't considered themselves to be technology companies—banking, manufacturing, shipbuilding, transportation, health care, and more—now rely heavily on their ability to produce innovations.

Mastering the imperatives of digital disruption requires organizations to become Lean Enterprises, that achieve the shortest sustainable lead time with best quality and value. They do this by combining Agile—an approach that unleashes the creativity, knowledge, and productivity of individual teams—with Lean, which focuses on leadership, a sustainable flow of value, and eliminating waste and delays.

Based on research from hundreds of implementations, customer and community feedback, and advances in Lean and Agile thinking, the Scaled Agile Framework® (SAFe®), enables enterprises to thrive amidst digital disruption.

SAFe 4.6 introduces the Five Core Competencies of the Lean Enterprise, comprising Lean-Agile Leadership, Team and Technical Agility, DevOps and Release on Demand, Business Solutions and Lean Systems Engineering, and Lean Portfolio Management. Mastering each competency is critical to achieving and sustaining a competitive advantage in today's marketplace. In addition to the core competencies, this new version includes new government guidance, which describes a set of success patterns that help public sector organizations implement Lean-Agile practices.

This white paper provides an overview of SAFe, the Big Picture graphic, the core competencies, and the values, mindset, principles, and practices that guide teams to more effectively build solutions in a far leaner—and more Agile—fashion.

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# Introduction

SAFe® for Lean Enterprises is a knowledge base of proven, integrated principles, practices, and competencies for Lean, Agile, and DevOps. More than the sum of its parts, SAFe is a scalable and configurable framework that helps organizations deliver new products, services, and solutions in the shortest sustainable lead time. It's a system that guides the roles, responsibilities, and activities necessary to achieve a sustained, competitive technological advantage.

Combining the power of Agile with Lean product development, DevOps, and systems thinking, SAFe synchronizes alignment, collaboration, and delivery for multiple Agile teams. SAFe dramatically improves business agility by accelerating productivity, time-to-market, quality, employee engagement, and more. The results can be dramatic, as the benefits from documented case studies summarized in Figure 1 demonstrate.


*Figure 1. The benefits of SAFe*

Presented to the user in the form of a website—scaledagileframework.com—SAFe features an interactive 'Big Picture' graphic (Figure 2), which provides a visual overview of the Framework along with organized and directed access to its extensive library of content. Each icon on this graphic is clickable and links to a supporting article and related resources. The website also includes a variety of additional advanced topic articles, downloads, presentations, videos, and a glossary that is translated in 10 languages.

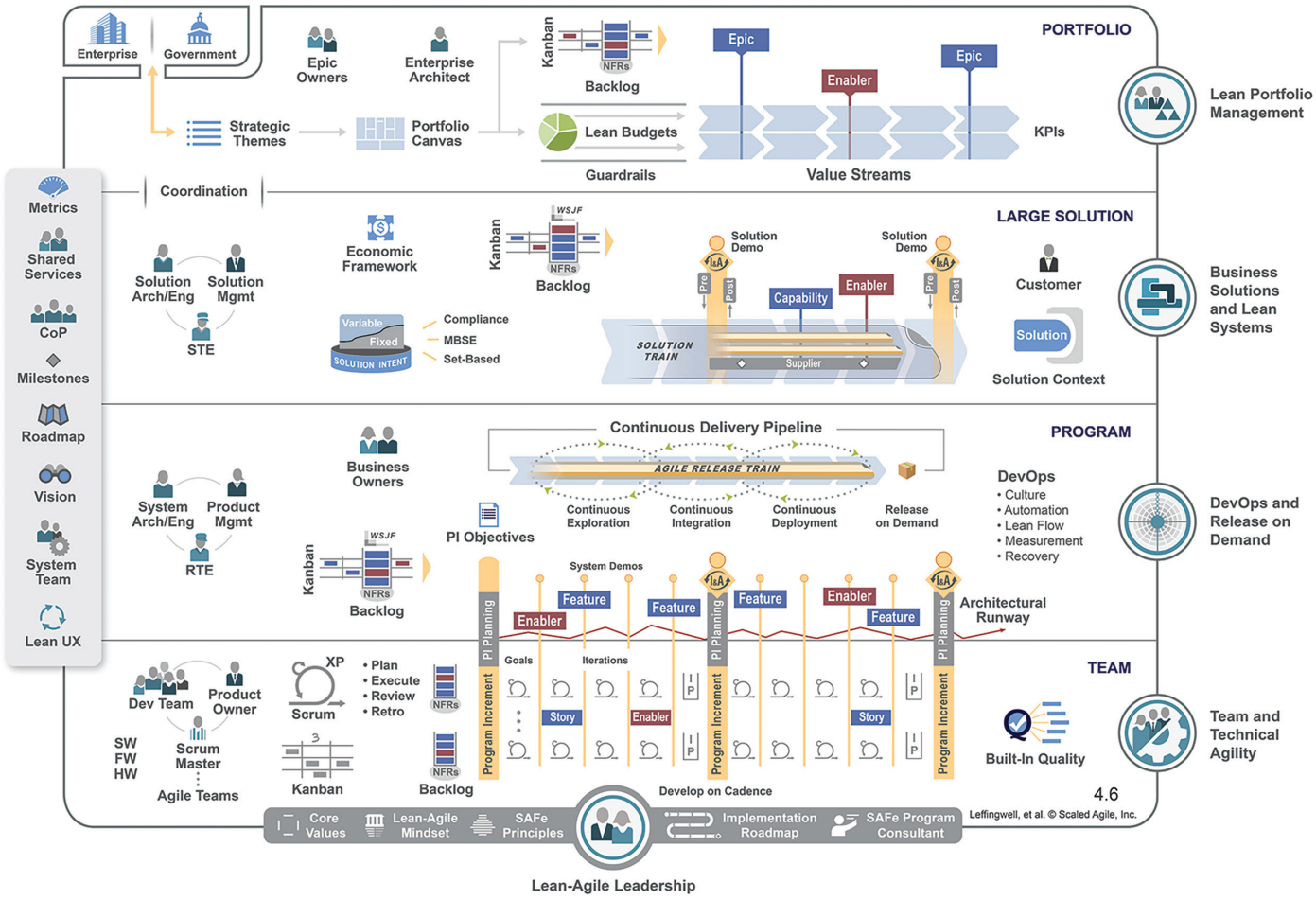


*Figure 2. The Five Core Competencies of the Lean Enterprise, shown with the Full SAFe configuration*

SAFe 4.6 introduces the Five Core Competencies of the Lean Enterprise—Lean-Agile Leadership, Team and Technical Agility, DevOps and Release on Demand, Business Solutions and Lean Systems Engineering, and Lean Portfolio Management. Each competency is a set of related knowledge, skills, and behaviors that enable enterprises to achieve the best quality and value in the shortest sustainable lead time. Mastering the core competencies enables enterprises to successfully respond to volatile market conditions, changing customer needs, and emerging technologies.

Viewing SAFe through the lens of these competencies helps organizations understand how to approach SAFe adoption in a way that achieves the best possible business outcomes. Each competency is described in the following sections.

# Lean-Agile Leadership

The Lean-Agile Leadership competency describes how Lean-Agile leaders drive and sustain organizational change and operational excellence by empowering individuals and teams to reach their greatest potential. They do this by learning, exhibiting, teaching, and coaching SAFe's Lean-Agile Mindset, values, principles, and practices.

Among the five core competencies, Lean-Agile Leadership is foundational. Only an enterprise's managers, leaders, and executives can change and continuously improve the systems that govern how work is performed. Only its leaders can create the environment that encourages high-performing Agile teams to flourish and produce value. Figure 3 illustrates two primary aspects of Lean-Agile Leadership: Lean-thinking manager-teachers and leading the transformation.


*Figure 3. Lean-Agile Leadership is the foundation of SAFe*

## Lean-Thinking Manager-Teachers

The journey to becoming a Lean enterprise is not simple or easy. Leaders must learn how to teach and coach, instead of direct and manage. Toyota calls this model of leadership Lean-thinking manager-teachers—people who understand Lean at a deep level and teach it as part of their daily activities.[1] Moreover, as leaders become Lean-thinking manager-teachers, they exemplify the core values, embrace a Lean-Agile mindset, apply SAFe principles, and lead the transformation.

### Exemplify the Core Values

SAFe's four core values guide the transformation and operation of the Lean enterprise. Every leader's behavior plays a critical role in communicating, exhibiting, and emphasizing these values.

- **Alignment** - Communicate the mission by establishing and expressing the strategy and vision. Provide relevant briefings and participate in Program Increment (PI) planning and backlog review and preparation.

- **Built-in Quality** - Demonstrate commitment to quality by refusing to accept or ship low-quality work. Support investments in capacity planning to maintain and reduce technical debt.
- **Transparency** - Visualize all relevant work. Take ownership and responsibility for errors and mistakes. Admit missteps and support others who acknowledge and learn from theirs. Never punish the messenger; instead, celebrate learning.
- **Program Execution** - Many leaders participate specifically as Business Owners in prioritization, PI execution, and reflection. All leaders help adjust scope to assure demand matches capacity. They aggressively remove impediments and demotivators.

## Embrace a Lean-Agile Mindset

The SAFe Lean-Agile mindset (Figure 4) is the combination of beliefs, assumptions, and actions of leaders and practitioners who embrace the concepts in the Agile Manifesto and the SAFe House of Lean.

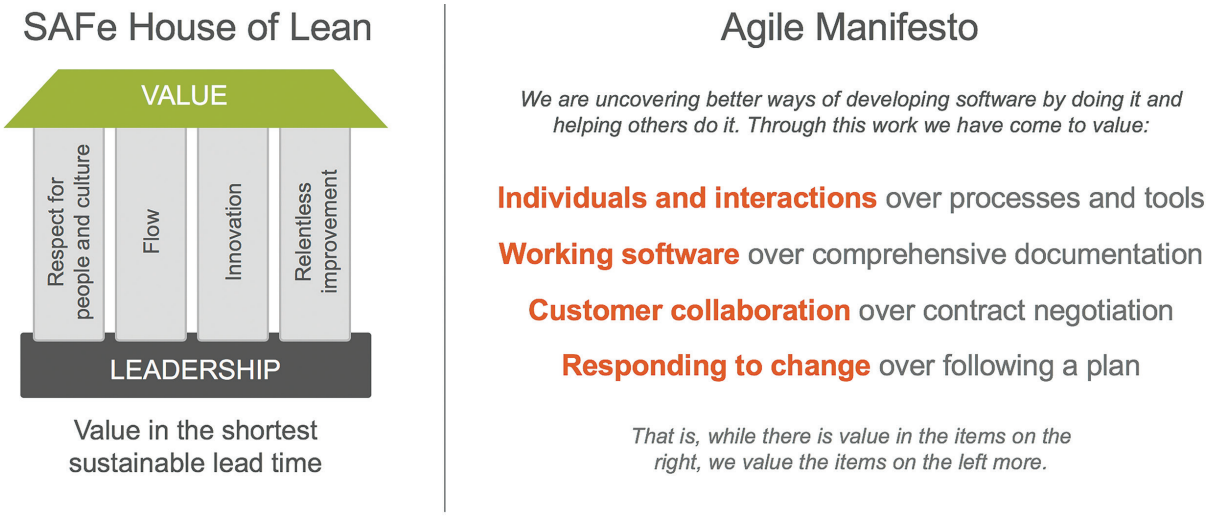


*Figure 4. The SAFe House of Lean and the Agile Manifesto*

- **Thinking Lean** - The SAFe House of Lean illustrates the various aspects of Lean thinking. The roof represents the goal of delivering value, while the pillars embody respect for people and culture, flow, innovation, and relentless improvement to support the goal. Lean-Agile leaders provide the foundation on which everything else stands.
- **Embracing Agility** - The Agile Manifesto provides a value system and set of 12 principles essential to successful Agile development. SAFe is built on the Agile values, principles, and methods as embodied by cross-functional Agile teams. Every leader must fully support and reinforce their intent and application.

## Apply the SAFe Lean-Agile Principles

In addition to the Lean-Agile mindset, SAFe is based on nine immutable, underlying Lean-Agile principles. These tenets and economic concepts inspire and inform the roles and practices of SAFe, influencing leadership behaviors and decision-making.

1. **Take an economic view** - An understanding of economics drives decisions. Economic variables such as development cost, production cost, delivery lead time, and value directly inform decision-making.
2. **Apply systems thinking** - Everyone understands and commits to the common goals of the larger system. The whole is optimized, instead of the parts.
3. **Assume variability; preserve options** - Decisions are delayed until the last responsible moment; alternatives are constantly and aggressively explored.
4. **Build incrementally with fast, integrated learning cycles** - Cadence-based learning cycles are used to gain knowledge, evaluate alternatives and inform decision-making.
5. **Base milestones on objective evaluation of working systems** - Progress is measured by objectives measures, rather than traditional phase-gates.
6. **Visualize and limit WIP, reduce batch sizes, and manage queue length** - Small batches of work, controlled Work in Progress (WIP), and small queues ensures fast flow of value and learning.
7. **Apply cadence; synchronize with cross-domain planning** - Regular synchronization continually aligns all system builders and ensure all perspectives are understood and resolved.
8. **Unlock the intrinsic motivation of knowledge workers** - Knowledge workers exhibit curiosity and have fundamentally different motivations. Leaders are responsible for creating an environment in which these workers can thrive.
9. **Decentralize decision-making** - Autonomy empowers individuals and enhances motivation. Leaders support decentralized decision-making by equipping teams and individuals with the knowledge and judgement needed to make good decisions.

# Lead the Transformation

Lean-Agile leaders guide their organizations through the SAFe transformation, making it clear at each step where they are, where they need to go next, and why it is important to keep going. The SAFe Implementation Roadmap (Figure 5) is an essential part of the change vision. Leaders strategize about how to move along this roadmap, calling on the advice of Certified SAFe® Program Consultants (SPCs). SPCs are change agents who combine their training and technical knowledge of SAFe with the motivation to improve the company's software and systems development processes.

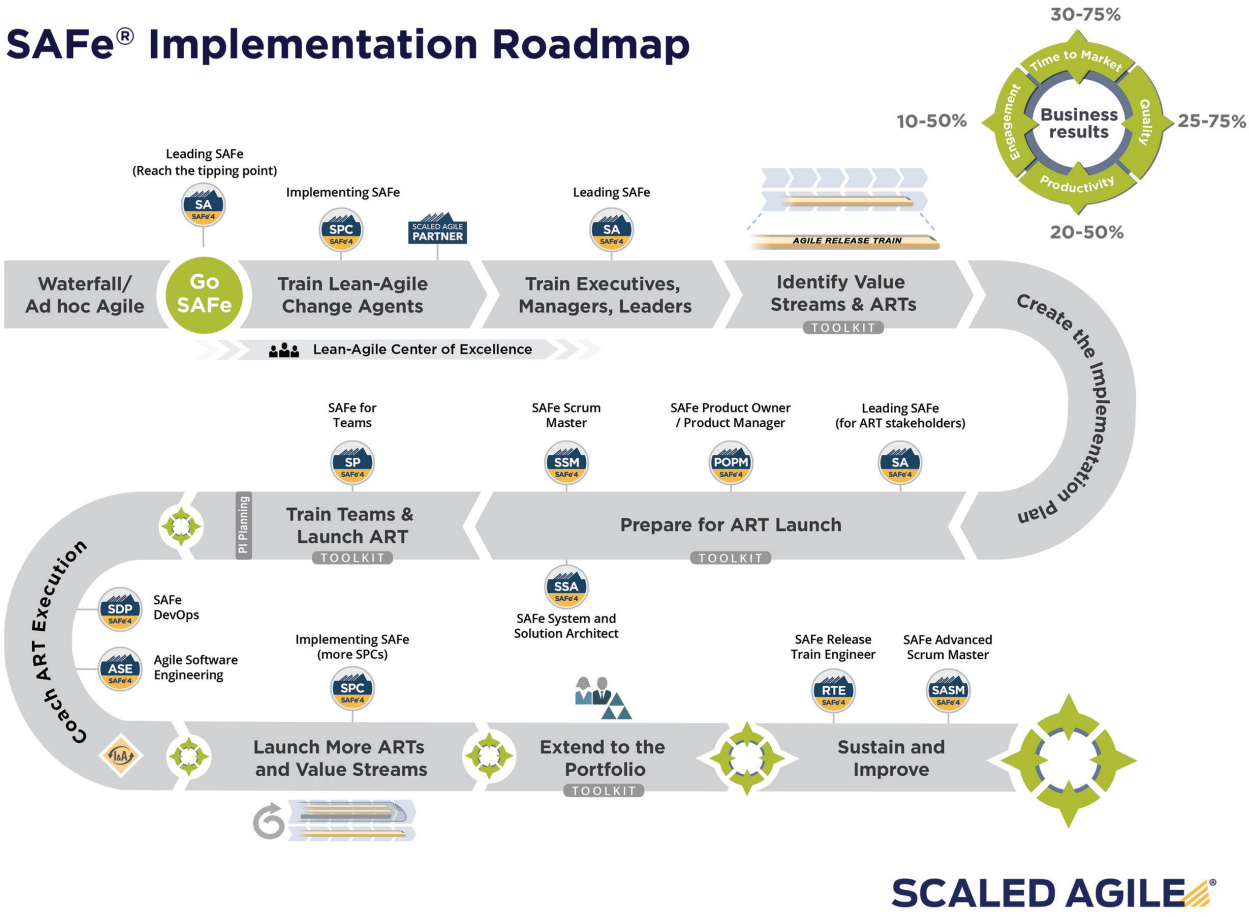


*Figure 5. The SAFe Implementation Roadmap*

## Configuring SAFe

SAFe is scalable and configurable (Figure 6), which allows each organization to adapt the Framework to its own business needs. With four out-the-box configurations, SAFe supports solutions requiring a small number of practitioners, as well as complex systems that require hundreds—and even thousands—of people to build and deliver.

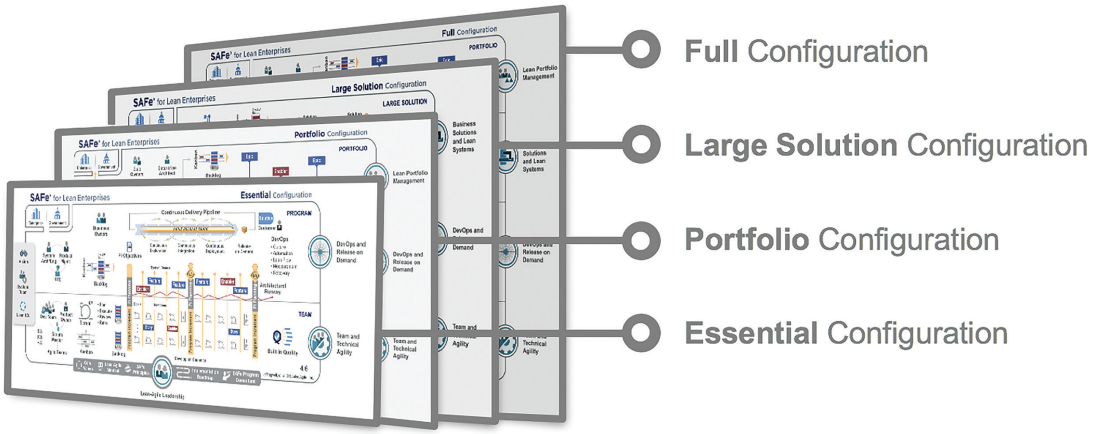


*Figure 6. The SAFe configurations*

- **Essential SAFe** is the basic building block for all other SAFe configurations and is the simplest starting point for implementation. It brings the core competencies of Lean-Agile Leadership, Team and Technical Agility, and DevOps and Release on Demand to the enterprise.
- **Large Solution SAFe** brings the Business Solutions and Lean Systems Engineering competency to those building the largest and most complex solutions. This configuration supports multiple Agile Release Trains (ARTs) and suppliers.
- **Portfolio SAFe** applies the Lean Portfolio Management competency to align portfolio execution to the enterprise strategy, and organizes development around the flow of value through one or more value streams.
- **Full SAFe** is the most comprehensive version that integrates all five core competencies to support enterprises that build and maintain a portfolio of large, integrated solutions.

The spanning palette, seen on the left side of each configuration in the Big Picture graphic, contains the roles and artifacts that apply to any SAFe configuration.

# Team and Technical Agility

*"Continuous attention to technical excellence and good design enhances agility."*

–Agile Manifesto

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The Team and Technical Agility core competency describes the critical skills and Lean-Agile principles and practices Agile teams need to be high-performing and create high-quality, well-designed technical solutions that support current and future business needs.

## Team Agility

Cross-functional, accountable, and committed to common goals, Agile teams have all the skills necessary to define, build, test, and deploy value in short iterations. They succeed and fail together.

SAFe Agile teams typically:

- Use a blend of Agile methods, including Scrum and Kanban
- Base their work on short iterations, apply small user stories, plan work for the upcoming iteration, and meet daily to coordinate their work toward iteration goals
- Demo the working system at the end of the iteration and retrospect on how to improve the process
- Visualize and manage their flow of work in a Kanban system that helps identify bottlenecks and controls work-in-process (WIP)

Agile teams work together in an organizational construct called the Agile Release Train (ART). These trains bring together all the people needed to define, build, test, and deploy (and often operate) a solution. All teams on an ART plan, integrate, demo, deploy, release, and learn together. Each team understands and commits to achieving not only their objectives but the larger ART objectives as well.

# Technical Agility

Technical Agility defines the Agile software engineering principles and practices teams use to deliver solutions quickly and reliably. This includes the Lean-Agile values and principles, eXtreme Programming (XP) practices, Behavior-Driven Development (BDD), Agile modeling, built-in quality, proven approaches and patterns for object-oriented software design, and more.

Teams share an understanding of an acceptable level of code quality, defect elimination, and other important aspects of readiness and maintainability. They increase flow through the adoption of Agile engineering techniques, and work to remove architectural and other impediments to flow.

Because fast flow depends on building quality into the system, Agile teams and ARTs apply a 'test first' mindset (Figure 7). Tests for features, stories, and code are often generated before the item is created. BDD[2] creates a framework for collaboration in which Product Owners, developers, and testers jointly perform multiple levels of testing.

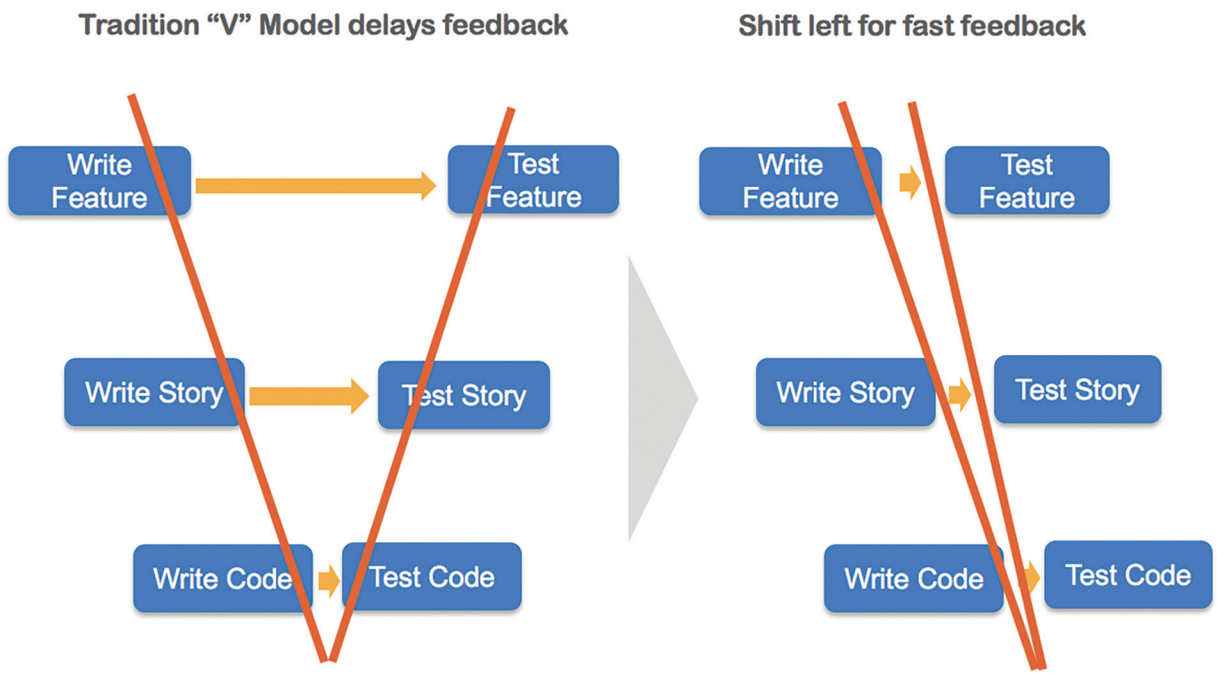


*Figure 7. BDD and TDD shift testing left*

In addition, teams apply the five dimensions of built-in quality illustrated in Figure 8. The first, flow, speaks to the fact that built-in quality is mandatory to achieve continuous value delivery. The other four describe quality as it applies to the system itself.

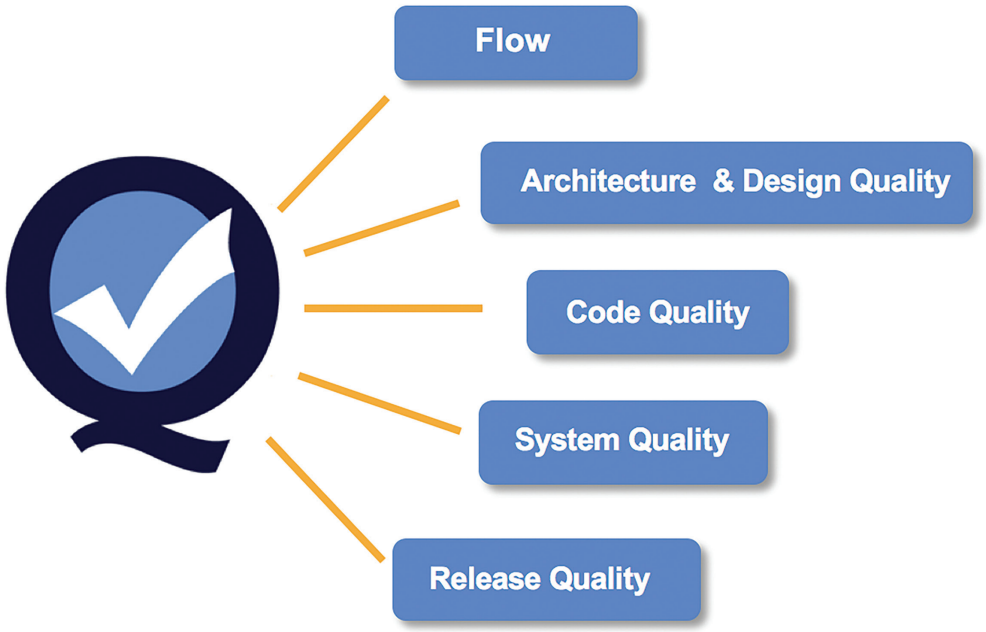


*Figure 8. Five dimensions of built-in quality*

# DevOps and Release on Demand

*"Work is not done when Development completes the implementation of a feature—rather, it is only done when our application is running successfully in production, delivering value to the customer."*

—DevOps Handbook

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The DevOps and Release on Demand competency describes how the principles and practices of DevOps provide the enterprise with the capability to release value, in whole or in part, at any time necessary to meet market and customer demand. Rapid and frequent delivery is also critical to learn and adjust quickly.

DevOps works to align development, operations, the business, information security, and other areas to work together better by sharing responsibility for improving business results.[3] Organizations with mature DevOps capabilities substantially outperform others at both technical and business outcomes.[4]

## Organizing Around Value

All the people needed to release value on demand, work together continuously to optimize the full flow of value. As Figure 9 illustrates, the SAFe ART is a team of Agile teams along with critical program roles including Product Management, System Architect/Engineering, and a Release Train Engineer (RTE).

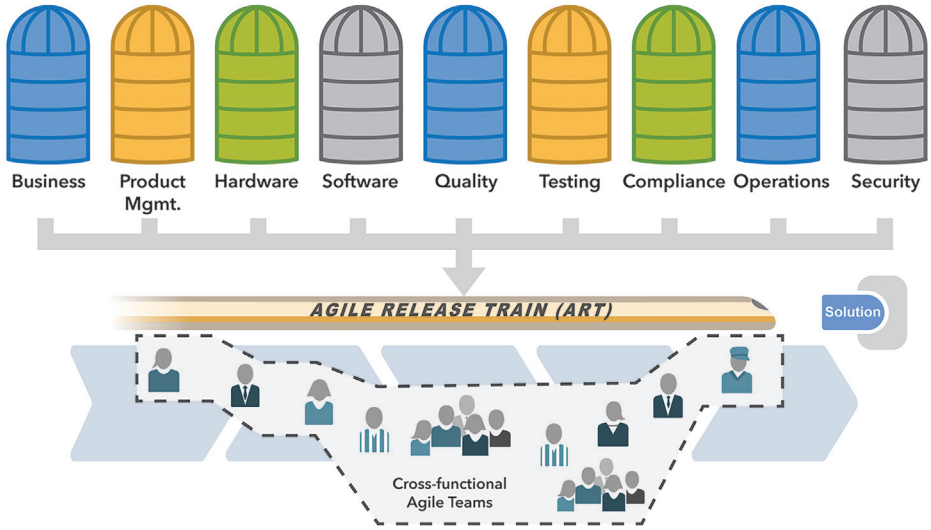


*Figure 9. An ART includes multiple teams with all the skills needed to deliver value*

# Building the Continuous Delivery Pipeline

Each ART establishes a Continuous Delivery Pipeline (Figure 10) to improve the flow of value and enable Release on Demand. Value flows through four dimensions of the Continuous Delivery Pipeline: Continuous Exploration, Continuous Integration, Continuous Deployment and Release on Demand. This flow represents a feedback loop, with value flowing to customers, while feedback and learning flow back to development to inform decisions around what to build next. Each dimension is described next:

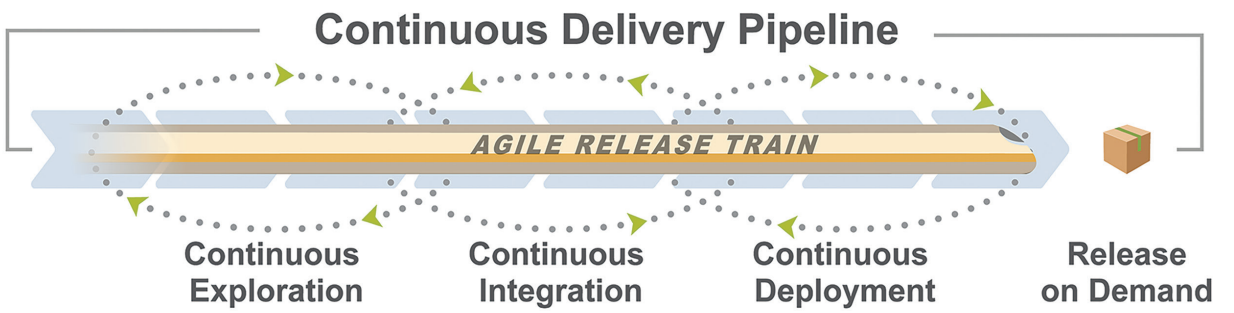


*Figure 10. The Continuous Delivery Pipeline*

- **Continuous Exploration** fosters innovation and creates alignment on what should be built by continually exploring market and customer needs, and defining a vision, roadmap, and set of features for a solution that addresses those needs.
- **Continuous Integration** improves quality, reduces risk, and establishes a fast, reliable, and sustainable development pace. As teams work on backlog items, they implement rapid cycles of developing, building, testing end-to-end, and staging, which remove waste and delays from the continuous delivery pipeline.
- **Continuous Deployment** moves changes from staging into production where they're readied for release.
- **Release on Demand** gives the business control over when the new software value becomes available and to how many customers—value delivery becomes a routine, not an extraordinary event.

This delivery approach makes it possible for teams to work on all of the dimensions of the continuous delivery pipeline in parallel. ARTs and Solution Trains can continuously explore user value, integrate and demo value, deploy to production, and release value whenever the business needs it. Participants gain the mindset, skills, and confidence to handle other important considerations, such as security and governance, in the same way they deal with quality: early, quickly, and seriously–so they don't interrupt flow.

## DevOps Enables Continuous Delivery and Release on Demand

SAFe's 'CALMR' (Culture, Automation, Lean flow, Measurement and Recovery) approach to DevOps is grounded in five concepts:

- **Culture** represents the philosophy of shared responsibility for fast value delivery across the entire value stream, including product management, development, testing, security, compliance, and operations.
- **Automation** represents the work and assets needed to remove human intervention from as much of the pipeline as possible. This shortens time-to-market and improves quality.
- **Lean flow** covers the concepts of limiting WIP, reducing batch size, and managing queue lengths to enable faster flow through the pipeline.
- **Measurement** is about understanding and measuring the flow of value through the pipeline, thereby fostering learning and continuous improvement.
- **Recovery** focuses on building systems that allow fast fixes of production issues through automatic rollback and 'fix forward' capabilities.


*Figure 11. The SAFe CALMR concepts*

# Measure and Improve DevOps and Release on Demand

As a core competency of the Lean enterprise, it's essential to assess the organization's ability to release on demand based on DevOps. Self-assessing allows ARTs to understand their strength and weaknesses and identifies the dimension which requires attention and improvement.

Figure 12 shows the SAFe DevOps and Release on Demand Health Radar, which helps ARTs and Solution Trains assess their maturity in the 16 sub-dimensions of the continuous delivery pipeline. The maturity in each sub-dimension can be scored as 'sit, crawl, walk, run, or fly.'

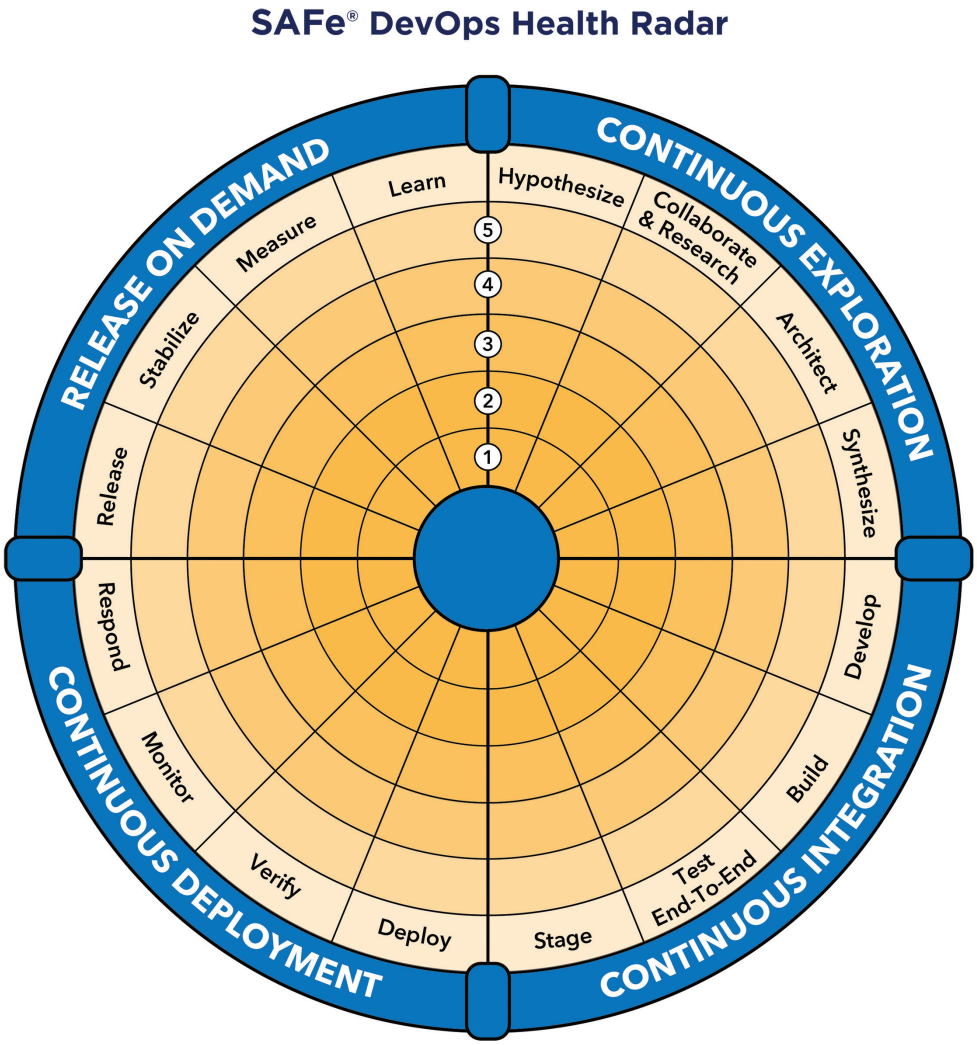


*Figure 12. The SAFe DevOps and Release on Demand Health Radar*

After the ART or Solution Train identifies its problem areas based on the health radar, it can improve performance by addressing the largest opportunities for improvement. Since SAFe enterprises take a systems view, it's better to move from a crawl across the radar to a walk than to improve in only sub-dimension, leaving the rest behind.

# Business Solutions and Lean Software Engineering

*"I am an Engineer. I serve mankind, by making dreams come true."*

—Anonymous

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SAFe is designed to help people build the world's most important systems—solutions that often require the collaboration of hundreds or thousands of participants. These solutions typically involve considerable contributions from external suppliers, have significant compliance concerns, and demand extensive and broad multidisciplinary skills.

SAFe provides more than just a modular way to scale the reliable flow of software value. The Framework includes components that address the specific needs of these very large and complex cyber-physical systems, such as requirements analysis, business capability definition, functional analysis and allocation, design synthesis, verification and validation (V&V), design alternatives, trade studies, modeling, and simulation.

In place of phase-gates, SAFe replaces the traditional approach to building these systems with a flow-based process, and uses roadmaps that allow for continuous development. Instead of big, up-front requirements and architecture, SAFe allows for continuous learning, frequent adjustment, and emergent design, while keeping the development effort on track to meet its economic, functional, quality, and other goals. Frequent integrations shorten the time to discovery of issues and eventual delivery.

# Eight Practices for Building Large Solutions with SAFe

The Business Systems and Lean Systems Engineering competency provides a further set of practices that inform solutions builders.

- **Build solutions components with high-functioning ARTs** - Capabilities and components of the system are built by ARTs, which operate in a regular PI cadence for planning, demonstrating, improving, and learning.
- **Build and integrate with a Solution Train** - Solution Trains (Figure 13) integrate the work of the ARTs and implement the flow of value needed to deliver the full system.

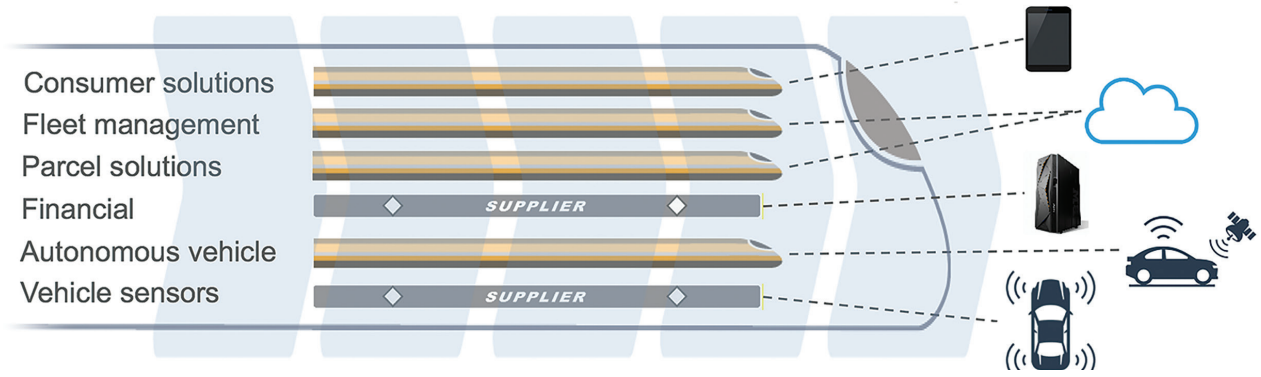


*Figure 13. Solution Trains coordinate large solution delivery*

- **Capture and refine systems specifications in Solution Intent** - The solution intent repository manages and provides detailed information about the intent of the solution—non-functional requirements (NFRs), interface definitions, system decompositions, assignments of requirements to different ARTs, architectural guidelines, and anything else needed to keep teams aligned with the vision. SAFe also provides the flexibility to 'assume variability and preserve options,' allowing some requirements to be fixed, while others remain open and variable.

- **Apply multiple planning horizons** - ARTs and teams use backlogs and roadmaps to manage work and forecast the schedule. Applying the principle, 'plan to what you know,' teams develop detailed plans for the near term and less detailed plans for the long term (Figure 14).

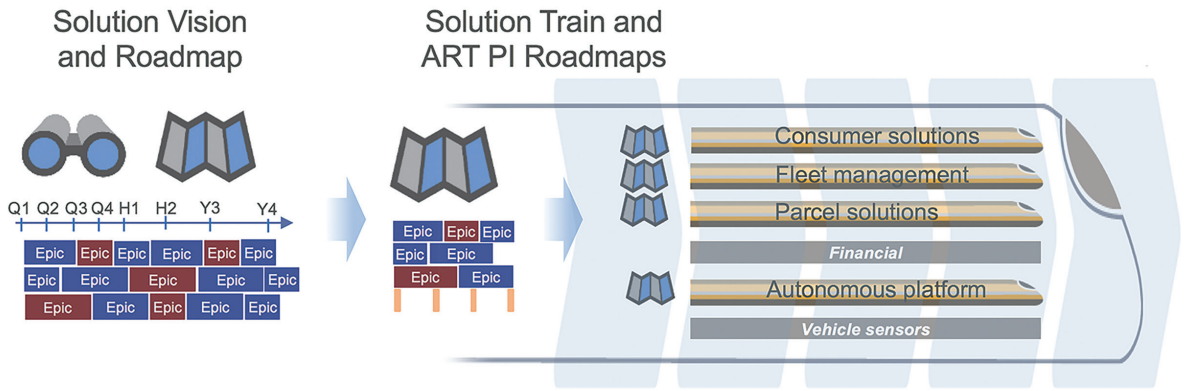


*Figure 14. Multiple planning horizons facilitate realistic and largely localized planning*

- **Architect for scale, modularity, reusability, and serviceability** - SAFe uses principles like intentional architecture, emergent design, modularity, and service-based design to provide for an evolving and flexible architecture. This approach avoids constraining innovation by defining too many details up front.
- **Manage the supply chain with 'systems of systems' thinking** - Suppliers of strategic components become part of a virtual ART, participating in planning, demonstration, integration, and continuous improvement activities.
- **Apply 'continuish integration'** - SAFe strikes a balance between the desire to integrate as frequently as possible with the cost of integrating the entire system. This decision is an economic trade-off between the cost and value of integrating frequently—including the insights that it generates.
- **Continually address compliance concerns** - Large solutions are often subject to strict compliance requirements. ARTs and teams include compliance testing, documentation, and other mandated requirements into their backlogs, and continuously apply Definitions of Done, test automation, and other activities.[5]

# Lean Portfolio Management

*"Most strategy dialogues end up with executives talking at cross-purposes because … nobody knows exactly what is meant by vision and strategy, and no two people ever quite agree on which topics belong where. That is why, when you ask members of an executive team to describe and explain the corporate strategy, you frequently get wildly different answers. We just don't have a good business discipline for converging on issues this abstract."*

–Geoffrey Moore, Escape Velocity

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Each SAFe portfolio manages a set of value streams for a specific area of the business. The Lean Portfolio Management (LPM) competency describes how an enterprise can implement Lean approaches to strategy and investment funding, Agile portfolio operations, and Lean governance for a SAFe portfolio (Figure 15). Each value stream delivers a set of software and system solutions that help the enterprise meet its business strategy, either by providing value directly to the customer or in support of internal business processes.

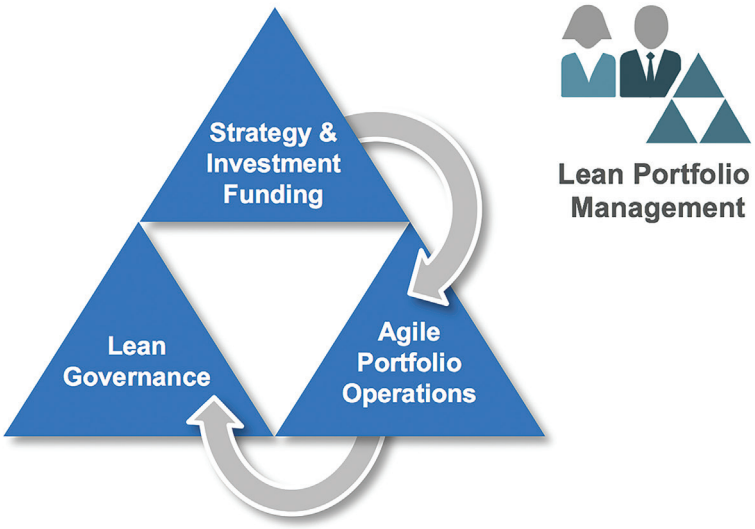


***Figure 15. Three Lean Portfolio Management collaborations***

Mastering this competency requires abandoning many traditional practices, such as rigid and fixed annual planning and budgeting, overload of demand over capacity, and centralizing requirements in the hands of people who will not be doing the actual work. As experience shows, the payoff for embracing these changes can be enormous—the difference between riding the waves of digital disruption and drowning under them.

The LPM function carries out its work through a series of three collaborations—strategy and investment funding, Agile portfolio operations, and Lean governance—giving the enterprise the ability to execute existing commitments reliably and enable innovation by building on the foundation of the four other core competencies.

## Strategy and Investment Funding

Only by allocating the right investments to build the right things can an organization accomplish its ultimate business objectives. Through an ongoing conversation among executives, Business Owners, portfolio stakeholders, technologists, and Enterprise Architects, LPM connects the portfolio to enterprise strategy, maintains the portfolio vision, funds value streams, and establishes the flow of value within the portfolio.

- **Connect the portfolio strategy to the enterprise strategy** - The portfolio is connected to the business strategy by strategic themes and Lean budgets. These themes provide the differentiation needed to achieve the desired future state and help align and communicate the strategy.
- **Maintain a portfolio vision** - The Portfolio Canvas is used to define and elaborate a SAFe portfolio. The portfolio strategy and vision provide critical inputs to the portfolio backlog and Lean budgets.
- **Fund value streams** - Lean budgets provide funding for the value streams, which are aligned with the business strategy and current strategic themes. These budgets are supported by a set of guardrails that outline spending policies, guidelines, and governance for a specific portfolio.
- **Establish portfolio flow** - A portfolio Kanban system is used to visualize and limit WIP, reduce batch sizes of work, and control queue length of the largest initiatives.

# Agile Portfolio Operations

SAFe's Lean-Agile mindset fosters the decentralization of strategy execution to empowered trains. Even then, however, systems thinking must be applied to ensure that they are aligned and operate within the broader enterprise context. Typically, some form of Agile portfolio operations is required to accomplish these goals in larger enterprises. This function:

- **Coordinates value streams** - Although many value streams operate independently, cooperation among a set of solutions can provide portfolio-level capabilities and benefits that competitors can't match.
- **Supports program execution** - The LPM function—working in collaboration with the Agile Program Management Office (APMO) and Lean Agile Center of Excellence (LACE)—helps develop, harvest, and apply successful program execution patterns across the portfolio.
- **Drives operation excellence** - LPM—or, by proxy, the APMO—has a leadership role in helping the organization relentlessly improve and achieve its business goals. This leadership is often supported by a persistent LACE, which can be a part of the APMO. The APMO may also sponsor and support Communities of Practice (CoPs) for RTEs and Solution Train Engineers (STEs), as well as Scrum Masters.

# Lean Governance

In the third portfolio collaboration, Lean governance influences spending, future expense forecasts and milestones, and other development effort governance:

- **Forecast and budget dynamically** - SAFe provides a Lean approach to budgeting that replaces the traditional planning process that included long-range budget cycles, financial commitments, and fixed-scope expectations. SAFe also includes Agile approaches to estimating, forecasting, and near and longer-term roadmapping.
- **Measure Lean portfolio performance** - Each portfolio must also establish the minimum metrics needed to assure the implementation of the strategy, that spending aligns with the agreed-upon boundaries, and that results are continually improving.
- **Coordinate continuous compliance** - Most large solutions are subject to internal or external financial auditing constraints and industry legal or regulatory guidelines. These obligations impose significant limits on solution development and operations. SAFe recommends and provides a more continuous approach, using automation and cadence to provide coordinating ongoing compliance with relevant standards.

In addition to the core competencies, the SAFe 4.6 release includes new government guidance. After all, how can businesses be Agile and win large-scale government programs if the government isn't Agile?

# SAFe for Government

*"If there's one thing government needs desperately, it's the ability to quickly try something, pivot when necessary, and build complex systems by starting with simple systems that work and evolve from there, not the other way around."*

—Jennifer Pahlka, Founder, Code for America, Former U.S. Deputy CTO 2012

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While government organizations will certainly benefit from mastering the Five Core Competencies of the Lean Enterprise, their journey to achieving equivalent results will vary somewhat from commercial companies.

The organizational context, culture, and governance authorities in the public-sector environment are truly unique. For example, government acquisition processes and laws are intended to create a fair playing field among potential providers, but they can also create bureaucracy and delays unlike anything the private sector experiences.

In addition, government agencies do not have the competitive market dynamic and profit motive that drives rapid change and innovation in a commercial environment. Instead, legislative bodies typically provide funding in an annual appropriations process that moves slowly. Even the concept of value in a government technology program is often difficult to conceptualize and measure.

## How SAFe Enables Lean-Agile and DevOps in Government

SAFe for Government is a set of success patterns that help public sector organizations implement Lean-Agile practices in a government context. The urgency for creating this value comes from many of the same forces driving private-sector innovation, such as digital transformation, security threats, social media, IT modernization, and increased user expectations.

Each area of guidance addresses the most common challenges encountered when adopting SAFe in government programs, and the best practices that support transitioning to a Lean-Agile model:

- **Build on a solid foundation of Lean-Agile values, principles, and practices** - Leaders in the government contracting organization, along with their counterparts in supplier organizations, must understand, embrace, communicate, support, and demonstrate Lean-Agile knowledge and behaviors.
- **Create high-performing teams of government and contractor personnel** - All members of a team must treat each other alike, regardless of their employment status.
- **Align technology investments with agency strategy** - When defining value streams, ARTs, portfolio items, and other elements of SAFe, current agency strategy is usually a better guide than past initiatives.
- **Transition from projects to a Lean flow of epics** - Instead of planning for short-term projects with temporary teams, create a flow of work to long-standing teams who deliver epics (containers that capture and manage the most significant initiatives that occur within a portfolio) addressing specific agency priorities.
- **Adopt Lean budgeting aligned to value streams** - Once you create these flows, budget to sustain the work streams addressing each agency priority, instead of granular projects.
- **Apply Lean estimating and forecasting in cadence** - Avoid defining highly specific plans up front and then converting them into equally specific contractual terms for vendors.
- **Modify acquisition practices to enable Lean-Agile development and operations** - Develop new acquisition guidelines that avoid waterfall-based practices and the problems they create.
- **Build in quality and compliance** - Break down the work into smaller batches, each of which meets quality and compliance requirements for that piece of work.
- **Adapt government practices to support agility and Lean flow of value** - Change governance practices to provide enough oversight to ensure the delivery of mission-enabling capabilities within a reasonable time and cost, but as a part of a continuous flow of value, instead of as waterfall-based stage-gates.

# Next Steps

This white paper provided an overview of the Scaled Agile Framework (SAFe version 4.6), the Five Core Competencies of the Lean Enterprise, and the values, mindset, principles, and practices that guide teams to more effectively build solutions. The core competencies are essential to succeed with SAFe and serve as the primary lens for understanding what the Framework is designed to accomplish and how to approach SAFe adoption. The SAFe website at scaledagileframework.com provides additional information on all the topics covered here, and more, to address important questions such as the following:

- How have other organizations like ours succeeded with SAFe?
- How do we get started with SAFe?
- Which SAFe configuration would work best for our organization?
- What help exists in the form of SAFe experts and CoPs?
- How do we know that our SAFe transformation is helping us achieve our goals?
- What specific practices, principles, or other SAFe components would be most helpful for achieving these goals?

## To extend your knowledge of SAFe beyond this white paper, we suggest taking these steps:

- Read about real-world implementations at **scaledagile.com/case-studies**
- Browse the Framework at **scaledagileframework.com**
- Find role-based SAFe training and certification at **scaledagile.com/learning**
- Read SAFe Distilled 4.5: Applying the Scaled Agile Framework for Lean Enterprises **bit.ly/Distilled45**
- Watch LiveLessons: Leading the Lean Enterprise with the Scaled Agile Framework **bit.ly/leading45**
- View SAFe presentations and videos at **scaledagileframework.com/videos-and-presentations**
- Explore the SAFe implementation roadmap at **scaledagileframework.com/implementation-roadmap**

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## About Scaled Agile, Inc.

Scaled Agile, Inc., is the provider of SAFe®, the world's leading framework for enterprise agility. Through learning and certification, a global partner network, and a growing community of over 300,000 trained professionals, Scaled Agile helps enterprises build better systems, increase employee engagement, and improve business outcomes. Scaled Agile is a contributing member of the Pledge 1% corporate philanthropy and community service movement. Learn about Scaled Agile and SAFe at scaledagile.com and scaledagileframework.com.

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