41 Things You Need to Know about the Scaled Agile Framework® (SAFe)

Posted by [Rob Pinna](https://www.rallydev.com/blog/authors/rob-pinna) in [Agile](https://www.rallydev.com/blog/agile)

1. The Scaled Agile Framework®, or SAFe®, provides a recipe for adopting Agile at enterprise scale.  It is illustrated in the [big picture](http://scaledagileframework.com/).

*As Scrum is to the Agile team, SAFe is to the Agile enterprise.*

1. SAFe tackles the tough issues – architecture, integration, funding, governance and roles at scale.  It is field-tested and enterprise-friendly.
2. SAFe is the brainchild of [Dean Leffingwell](http://deanleffingwell.com/).

*As Ken Schwaber and Jeff Sutherland are to Scrum,  
Dean Leffingwell is to SAFe.*

1. SAFe is based on Lean and Agile principles.
2. There are three levels in SAFe:  
   \* Team  
   \* Program  
   \* Portfolio

At the Team Level:

1. Scrum with XP engineering practices are used.
2. Define/Build/Test (DBT) teams deliver working, fully tested software every two weeks.  There are five to nine members of each team.
3. Rally’s weekly [TeamStart webinar series](http://rallydev.com/teamstart" \t "_blank) covers the basic practices at the team level.

At the Program Level:

1. SAFe defines an Agile Release Train (ART).  As iteration is to team, train is to program.
2. The ART (or train) is the primary vehicle for value delivery at the program level.  It delivers a value stream for the organization.
3. SAFe is three letter acronym (TLA) heaven – DBT, ART, RTE, PSI, NFR, RMT and I&A!
4. Between 5 and 10 teams work together on a train.  They synchronize their release boundaries and their iteration boundaries.
5. Every 10 weeks (5 iterations) a train delivers a Potentially Shippable Increment (PSI).  A demo and inspect and adapt sessions are held.  Planning begins for the next PSI.
6. PSIs provide a steady cadence for the development cycle.  They are separate from the concept of market releases, which can happen more or less frequently and on a different schedule.
7. New program level roles are defined  
   \* System Team  
   \* Product Manager  
   \* System Architect  
   \* Release Train Engineer (RTE)  
   \* UX and Shared Resources (e.g., security, DBA)  
   \* Release Management Team
8. In IT/PMI environments the Program Manager or Senior Project Manager might fill one of two roles.  If they have deep domain expertise, they are likely to fill the Product Manager role.  If they have strong people management skills and understand the logistics of release they often become the Release Train Engineer.
9. SAFe defines a Scaled Agilist (SA) certification program for executives, managers, architects and change agents responsible for leading SAFe implementations.  Rally provides regular [public and private Leading SAFe certification classes](http://www.rallydev.com/events/leading-scaled-agile-framework-safe).
10. SAFe makes a distinction between content (what the system does) and design (how the system does it).  There is separate “authority” for content and design.
11. The Product Manager (Program Manager) has content authority at the program level.  She defines and prioritizes the program backlog.
12. SAFe defines an artifact hierarchy of Epics – Features – User Stories.  The program backlog is a prioritized list of features.  Features can originate at the Program level, or they can derive from Epics defined at the Portfolio level.  Features decompose to User Stories which flow to Team-level backlogs.
13. Features are prioritized based on Don Reinersten’s [Weighted Shortest Job First](http://agile102.blogspot.com/2013/01/weighted-shortest-job-first-bit-of-safe.html) (WSJF) economic decision framework.
14. The System Architect has design authority at the program level.  He collaborates day to day with the teams, ensuring that non-functional requirements (NFRs) are met.  He works with the enterprise architect at the portfolio level to ensure that there is sufficient architectural runway to support upcoming user and business needs.
15. The UX Designer(s) provides UI design, UX guidelines and design elements for the teams.  In a similar manner, shared specialists provide services such as security, performance and database administration across the teams.
16. The Release Train Engineer (RTE) is the Uber-ScrumMaster.
17. The Release Management Team is a cross-functional team - with representation from marketing, dev, quality, ops and deployment – that approves frequent releases of quality solutions to customers.
18. Rally’s monthly [program webinar series](http://www.rallydev.com/agile-webinars) provides an overview of scaling Agile programs with SAFe.

At the Portfolio Level:

1. PPM has a central role in Strategy, Investment Funding, Program Management and Governance.
2. Investment Themes drive budget allocations.
3. Themes are done as part of the budgeting process with a lifespan of 6-12 months.
4. Portfolio philosophy is centralized strategy with local execution.
5. Epics define large development initiatives that encapsulate the new development necessary to realize the benefits of investment themes.
6. There are business epics (customer-facing) and architectural epics (technology solutions).
7. Business and architectural epics are managed in parallel Kanban systems.
8. Objective metrics support IT governance and continuous improvement.
9. Enterprise architecture is a first class citizen.  The concept of Intentional Architecture provides a set of planned initiatives to enhance solution design, performance, security and usability.
10. SAFe patterns provide a transformation roadmap.

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|  | **Legacy Approach** | **Lean-Agile Pattern** |
| #1 | Centralized control | Decentralized decision-making |
| #2 | Project overload | Continuous value flow |
| #3 | Detailed project plans | Lightweight business cases |
| #4 | Centralized annual planning | Decentralized, rolling wave planning |
| #5 | Work breakdown structures | Agile estimating and planning |
| #6 | Project-based funding | Agile Release Trains |
| #7 | Projects and PMBOK | Self-managing teams and programs |
| #8 | Waterfall milestones | Objective, fact-based measures and milestones. |

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1. Rally’s monthly [Portfolio webinar series](http://www.rallydev.com/agile-webinars) provides guidance on Lean | Agile approaches to PPM.

Adoption

1. Adoption focuses on identifying a value stream.  A value stream is a sequence of activities intended to produce a consistent set of deliverables of value to customers.  Value streams are realized via an Agile Release Train (ART).
2. SAFe poses questions to help identify value streams (ARTs):  
   \* What program might adopt the new process the fastest?  
   \* Which executives are ready for a transition?  
   \* What are the geographical locations and how are the team members distributed?  
   \* What programs are the most challenged, or represent the biggest opportunities?
3. When you identify a value stream, you go “All In” and “All at Once” for that train.
4. Rally is an SAI Gold Partner.  Rally’s cloud-based solutions for managing the Agile development lifecycle directly support SAFe.  [Read two independent analyst reports](http://www.rallydev.com/ppm-alm-leader) that show why “Rally Software continues its leadership in Agile/Lean.[[1]](https://www.rallydev.com/blog/agile/41-things-you-need-know-about-scaled-agile-framework-safe" \l "ftnt1" \t "_blank)”