

# SAFe Highlights

Peter Capell

Software Engineering Institute  
Carnegie Mellon University  
Pittsburgh, PA 15213

# Document Markings

Copyright 2018 Carnegie Mellon University. All Rights Reserved.

This material is based upon work funded and supported by the Department of Defense under Contract No. FA8702-15-D-0002 with Carnegie Mellon University for the operation of the Software Engineering Institute, a federally funded research and development center.

The view, opinions, and/or findings contained in this material are those of the author(s) and should not be construed as an official Government position, policy, or decision, unless designated by other documentation.

References herein to any specific commercial product, process, or service by trade name, trade mark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by Carnegie Mellon University or its Software Engineering Institute.

NO WARRANTY. THIS CARNEGIE MELLON UNIVERSITY AND SOFTWARE ENGINEERING INSTITUTE MATERIAL IS FURNISHED ON AN "AS-IS" BASIS. CARNEGIE MELLON UNIVERSITY MAKES NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, AS TO ANY MATTER INCLUDING, BUT NOT LIMITED TO, WARRANTY OF FITNESS FOR PURPOSE OR MERCHANTABILITY, EXCLUSIVITY, OR RESULTS OBTAINED FROM USE OF THE MATERIAL. CARNEGIE MELLON UNIVERSITY DOES NOT MAKE ANY WARRANTY OF ANY KIND WITH RESPECT TO FREEDOM FROM PATENT, TRADEMARK, OR COPYRIGHT INFRINGEMENT.

[DISTRIBUTION STATEMENT A] This material has been approved for public release and unlimited distribution. Please see Copyright notice for non-US Government use and distribution.

This material may be reproduced in its entirety, without modification, and freely distributed in written or electronic form without requesting formal permission. Permission is required for any other use. Requests for permission should be directed to the Software Engineering Institute at [permission@sei.cmu.edu](mailto:permission@sei.cmu.edu).

Carnegie Mellon® is registered in the U.S. Patent and Trademark Office by Carnegie Mellon University.

DM18-0880

All SAFe-related terminology defined in this deck is courtesy of Scaled Agile and can be found at

<https://www.scaledagile.com>

# Agenda

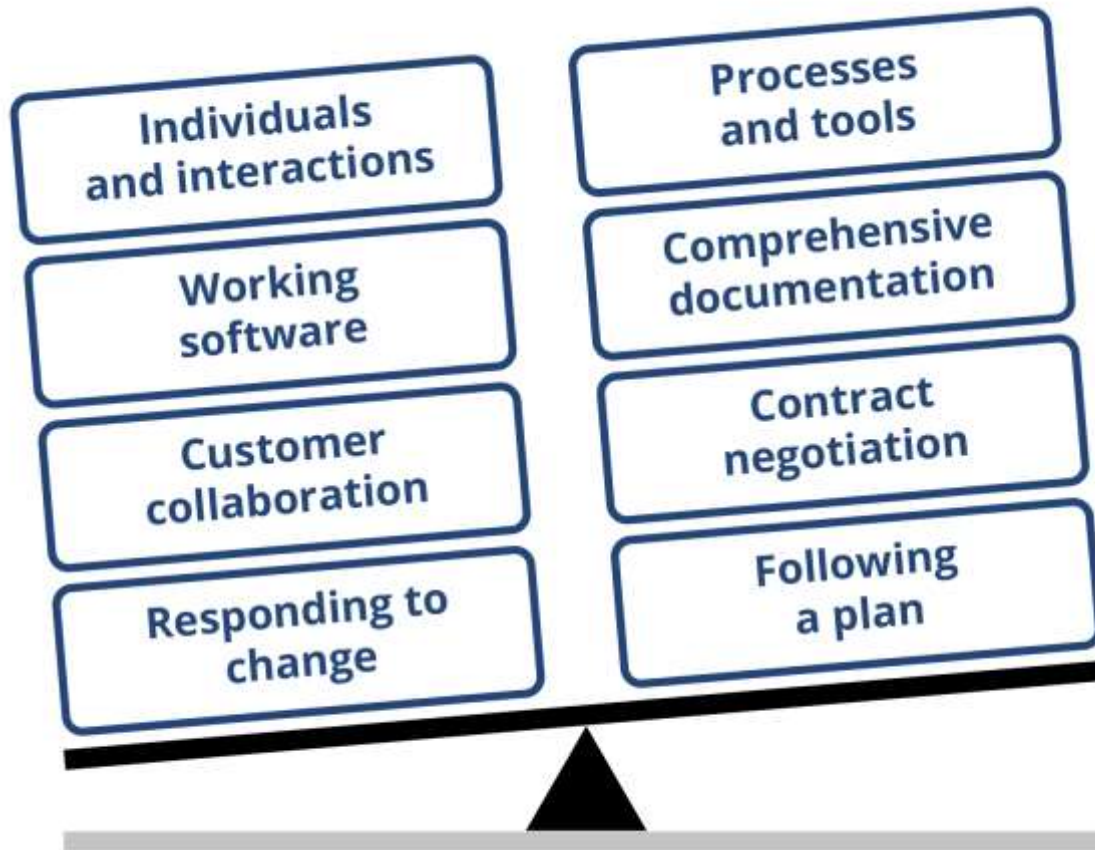
## Topics in adoption of Scaled Agile Framework Enterprise (SAFe)

# Bottom Line

Scaled Agile is a well-supported Agile Framework that can be used to optimize the performance of multiple Agile teams

Without going “All In” on the part of senior leaders, it is unlikely that the benefits of SAFe will be fully realized

# Agile Manifesto



**Common myth:**  
**The manifesto is often misinterpreted to mean:**  
**no documentation, no process, and no plan!**

<http://www.agilemanifesto.org/>

**Discussion: As Operators, which side do you prefer to see being dominant?**

# Agile Principles-1

(the principles the AF DCGS development/SPO teams are trying to live by)

1. Highest priority is satisfy the customer through early and continuous delivery of software.
2. Welcome changing requirements, even late in development...
3. Deliver working software frequently, from a couple of weeks to a couple of months...
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Provide environment and support they need...
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.

# Agile Principles-2

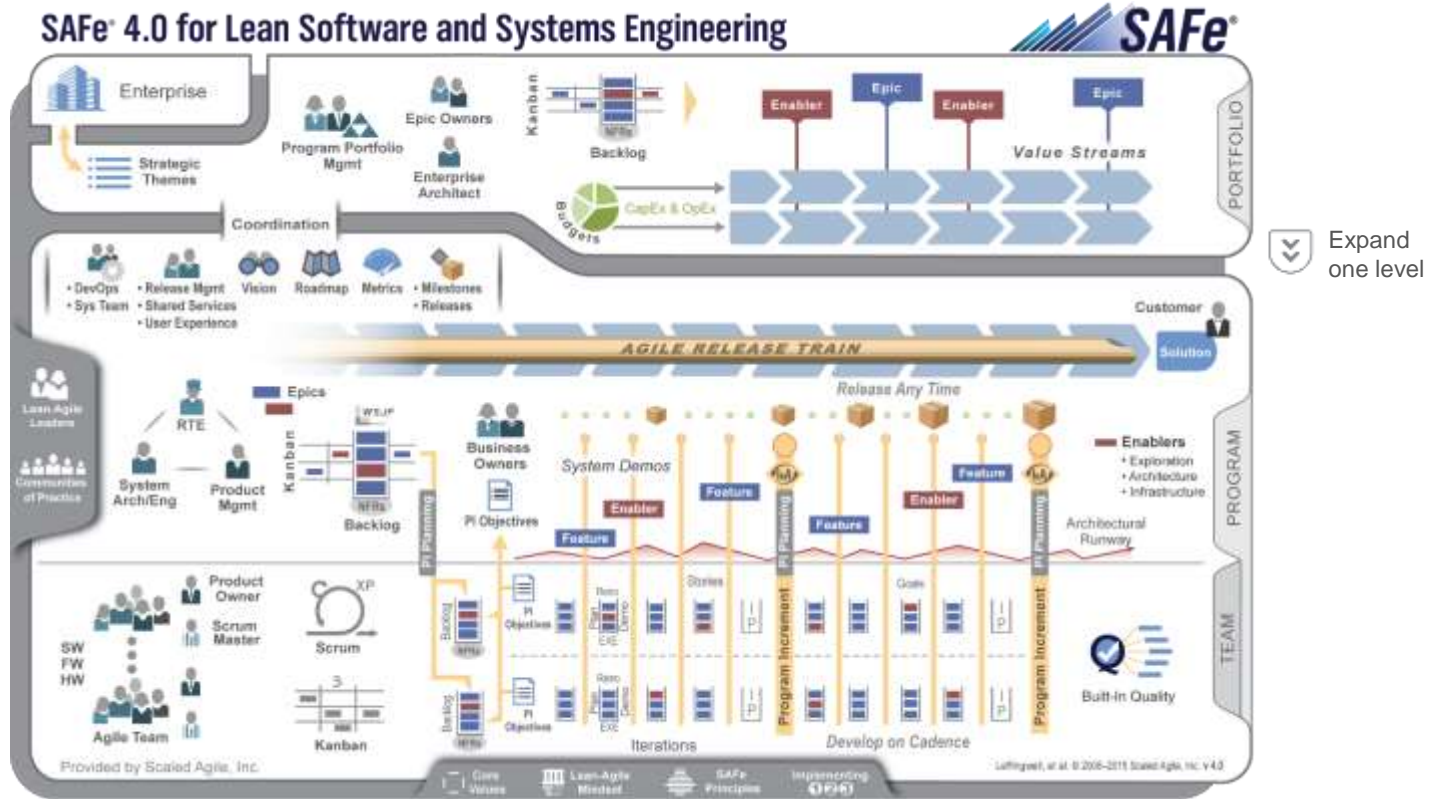
(the principles the AF DCGS development/SPO teams are trying to live by)

7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development...a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity—the art of maximizing the amount of work not done—is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

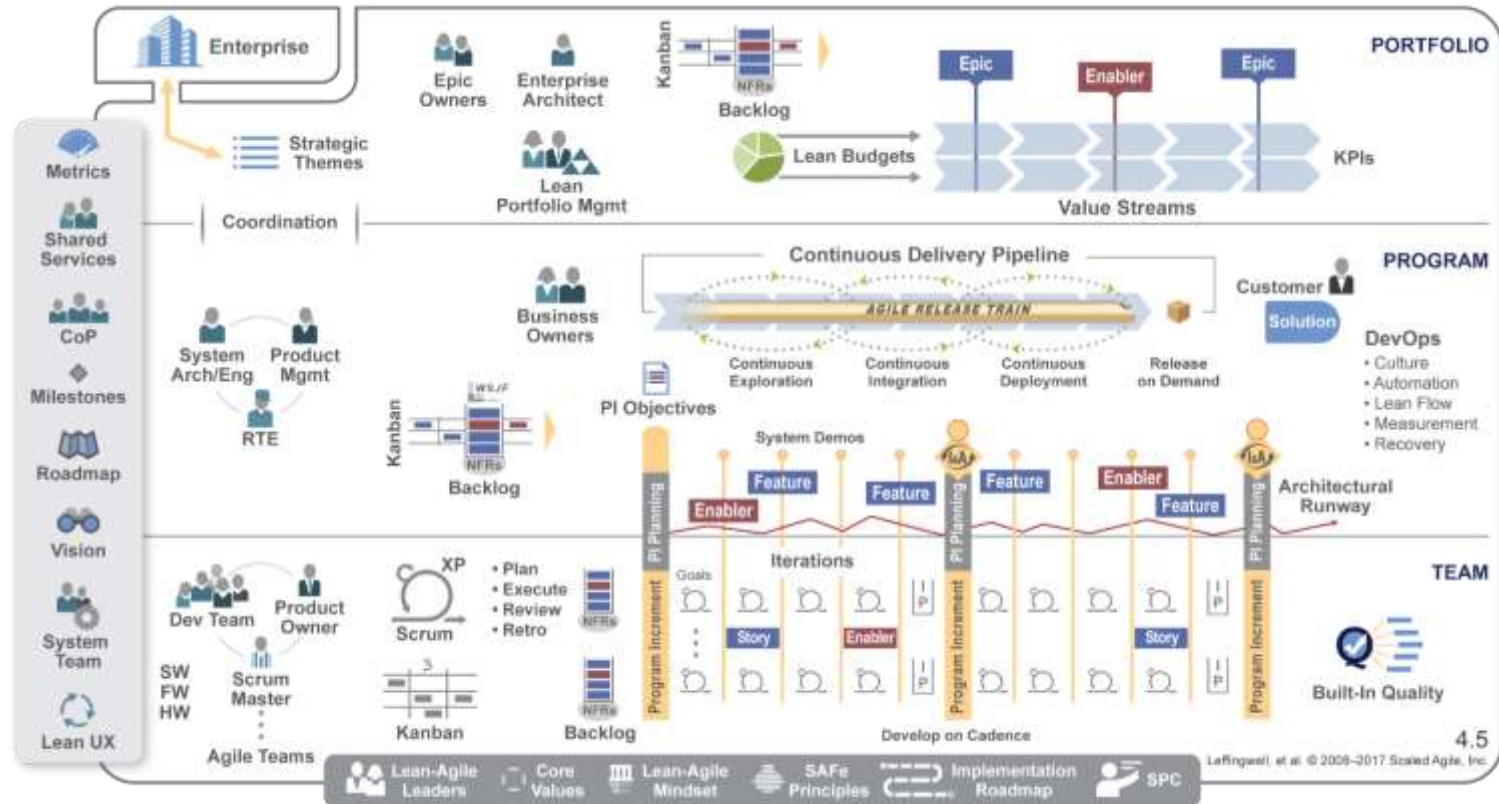
Adapted from <http://agilemanifesto.org/principles.html>



# Three-level SAFe 4.0



# Portfolio SAFe aligns strategy and execution



# Terminology

**Agile Release Train (ART):** The primary organizational construct for delivering value defined as a long-lived team of teams

**RTE:** Release Train Engineer – similar to the VSE but operating at the program level

**Customer:** Those using the system, expecting it to work and making requests for new features

**Product Management:** Primary content authority for the program level

**Product Owner:** Primary content authority for each team

**Scrum Master:** Facilitates the work of the teams; helping team members communicate and coordinate and removes or escalates impediments

**Agile Team:** cross-functional group of 5-9 people responsible for performing the development

**Scrum:** The most popular Agile development technique based on small teams doing work in fixed periods of time

**Kanban:** Another popular development technique based on the flow of work through defined stages

**Epic:** The name given to a piece of work too large to fit into any one time period. Epics may be portfolio epics, capability epics, feature epics or story epics

**Backlog:** Exists at every level, for every value stream, ART, and team. Backlogs are ordered lists of work to be done

# Terminology

**PI Planning:** Crucial face-to-face meeting where detailed planning for the next program increment takes place. Features are selected and user stories clarified by all taking place

**Solution Demo:** The event where all new/updated capabilities are demonstrated for all stakeholders including opportunities for feedback

**System Demo:** Opportunity to *test* and evaluate the integration of all the work produced within an ART occurring at each iteration. Note that this should not be a substitute for formal test procedures

**Team Demo:** Sometimes also called the Sprint Review is where the work of the team is demonstrated; this occurs every iteration

**I&A:** Inspect & Adapt Workshop occurs at the end of every PI and comprises a system demo for the whole increment, quantitative measurement (e.g., did the increment produce the expected value), and a problem solving workshop to determine what could be done better next increment

**Iteration/Sprint:** A 2-4 Week Development Sprint focused on achieving specific User Stories define development

**Increment:** A defined series of Iterations (generally 4-6 (2-3 months total)) focused on the accomplishment of one or more complete specified features.

# SAFe Basic Event Series

Program Increment Planning

Feature Backlog Reviews/Refinement Workshops

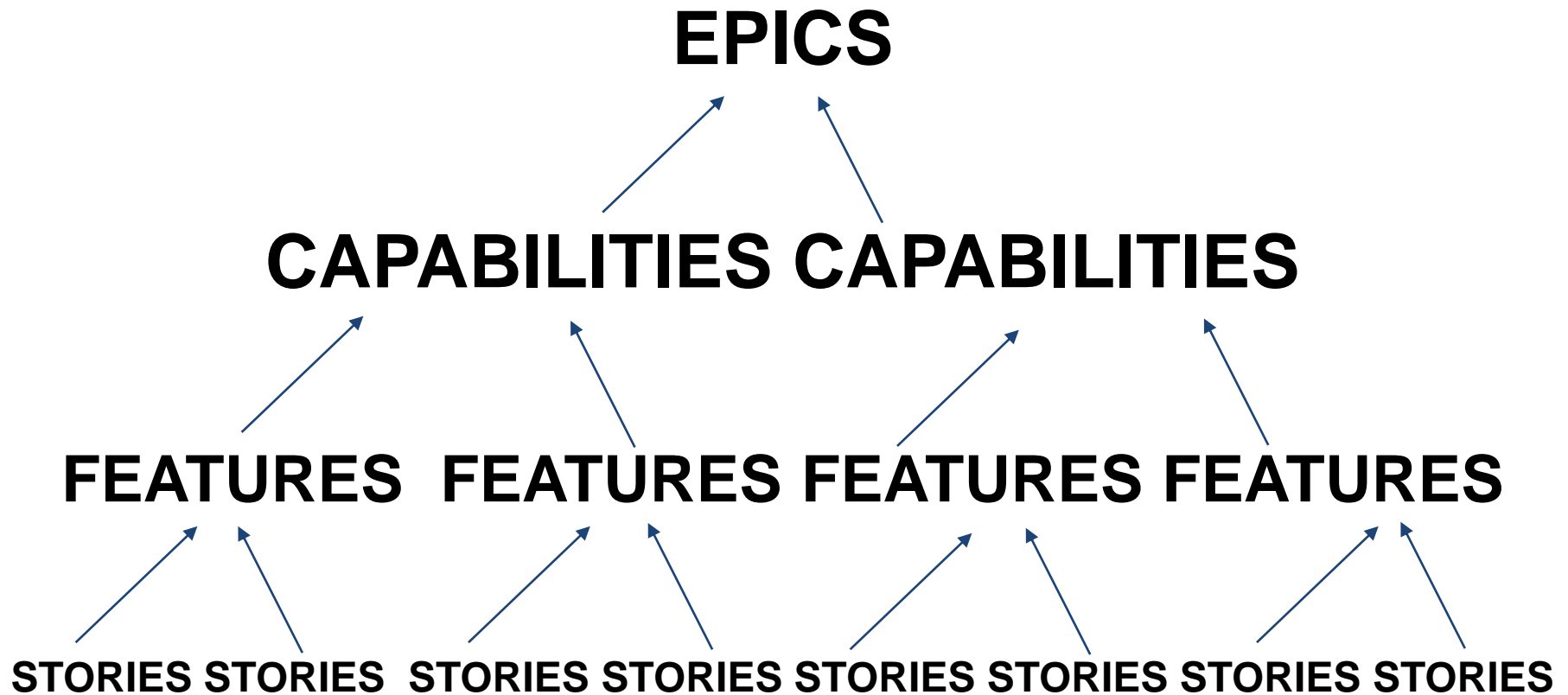
System Demo

Solution Demo

Sprint Review

Inspect & Adapt Workshops

# Requirements-Engineering in SAFe



# Benefits of Agile and SAFe

Providing Timely, Relevant Feedback is a Key Opportunity in an Agile Setting

The benefit participating in the SAFe / Agile setting is that you see product results faster than with traditional development approaches

# Unanticipated Aspects of SAFe

Huge Leadership Commitment: It is expected that senior leaders attend PI events and participate

Events outside of the operational cadence are challenging to schedule and respond to

- Development events should be known long in advance
- Ideally same people attend on a regular basis for consistency
- Team members represent the whole community, not just themselves

The Roles defined in SAFe are not related to traditional program roles, e.g., Program Manager does not equal “Product Manager.” (These differences are often subtle and require training and understanding in order to make them work)



# Bottom Line

Scaled Agile is a well-supported Agile Framework that can be used to optimize the performance of multiple Agile teams

Without going “All In” on the part of senior leaders, it is unlikely that the benefits of SAFe will be fully realized

Presentation Title

**Section Title**

# Backup

