SAFE JOURNEY

Better Safe Than Sorry

- Testing Challenges Using SAFe®

by

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SQA Days #23

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Renaissance Minsk Hotel, Minsk, Belarus

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Yet Another Method ?!?

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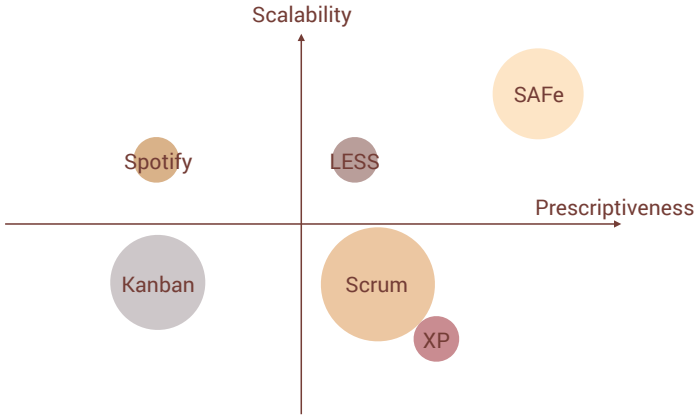
Where Does SAFe Fit In?



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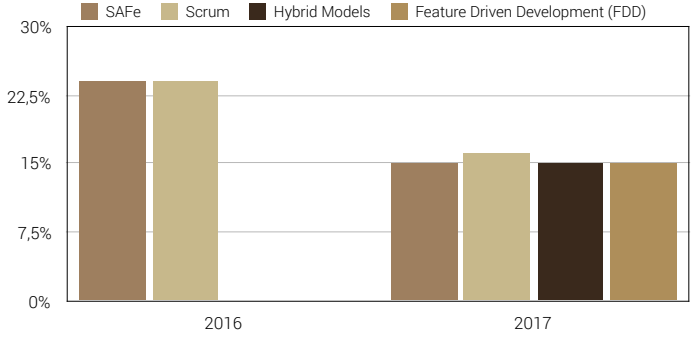
Popularity of Agile Methods in General

According to World Quality Report 2017-18, most organisations have adopted an Agile methodology for at least some of their projects



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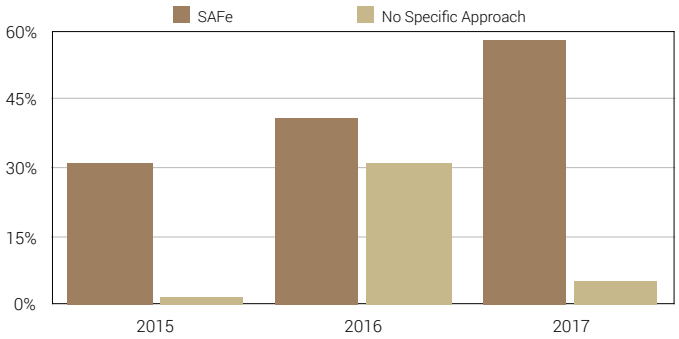
Growing Popularity of SAFe

According to World Quality Report 2017-18, SAFe has grown in popularity as an approach to testing in Agile



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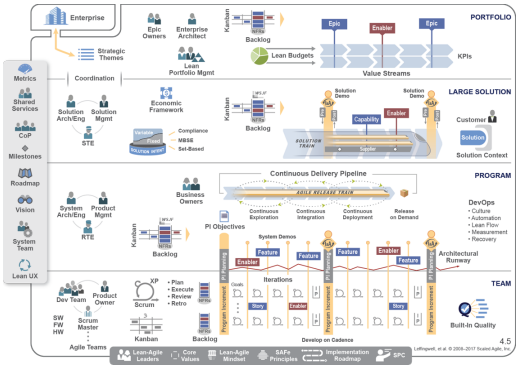
What Is Scaled Agile Framework

SAFe® is a freely revealed knowledge base of integrated, proven patterns for enterprise Lean-Agile development



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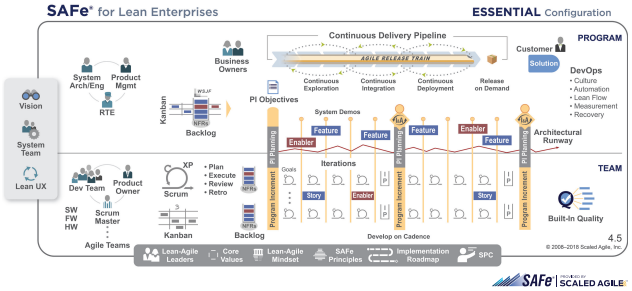
Today's Focus Is the Essential Configuration

Agile Release Train (ART)

Typically 50-125 people

Cross-functional



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Similar Roles

Agile Team		Agile Release Train	
			
Product Owner	Team Backlog of user stories	Product Mgmt	ART Backlog of Features
			
Scrum Master	Team Ways of Working	Release Train Engineer	ART Ways of Working
			
Dev Team	Define, build, test and implement solutions	System Architect	Architectural runway and technical excellence

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Similar Work Methods

	Agile Team	Agile Release Train
	Iteration Planning 2-4 weeks	Program Increment Planning 8-12 weeks
	Standup Daily	Scrum of Scrums & ART Sync Weekly
	Review User stories - end of sprint	System Demo Features - end of program increment
	Retro More tactical	Inspect & Adapt More strategic

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Preconditions for Agile Testing in SAFe

Agile testing in agile teams including good practices such as:

Test-First Approach
Testable acceptance criteria on user stories
Review and early feedback on everything

Automated delivery and deployment
Decent coverage by automated tests on all levels, not just unit/component

Testing in the same iteration
Exploratory testing

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Similar Testing Challenges

- Test planning
- Test preparation
- Test execution
- Coordination of dependencies

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Program Increment Planning

All people on the ART and relevant stakeholders meet face-to-face for 2 days to plan the next Program Increment (PI)

Face-to-face event

PRODUCT OWNER | SCRUM MASTER | DEV TEAM

PRODUCT MGMT. | RELEASE TRAIN ENGINEER | SYSTEM ARCHITECT

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Program Board in PI Planning

The plan is documented in the Program Board

	Sprint 1 PI 1	Sprint 2 PI 1	Sprint 3 PI 1	Sprint 4 IP PI 1	PI 2 >>
Milestones/Events					
Team 1					
Team 2	The Program Board shows:				
Team 3	• Dependencies				
Team 4	• Feature Delivery				
Team 5	• Milestones				
Team 6					
Deliveries to or from others (e.g.,suppliers, other ARTs)					

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Change to the Program Board

Dedicated swim lane for larger or more complex testing activities, e.g., Release Testing

		Sprint 1 PI 1	Sprint 2 PI 1	Sprint 3 PI 1	Sprint 4 IP PI 1	PI 2 >>
Business Releases/ Milestones	Segment 1					
	Segment 2					
Technical Releases						
Release Testing						
Team 1						
Team 2						
Team 3						
Team 4						
Team 5						
Team 6						
Deliveries to or from others (e.g.,suppliers, other ARTs)						

= Feature = Business Release = Release Testing
= Dependency = Technical Release

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Release Testing Swim Lane Scenario 1

One feature completed by one team

		Sprint 1 PI 1	Sprint 2 PI 1	Sprint 3 PI 1	Sprint 4 IP PI 1	PI 2 >>
Business Releases/ Milestones	Segment 1					
	Segment 2					
Technical Releases						
Release Testing						
Team 1						
Team 2						
Team 3						
Team 4						
Team 5						
Team 6						
Deliveries to or from others (e.g.,suppliers, other ARTs)						

= Feature = Business Release = Release Testing
= Dependency = Technical Release

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Release Testing Swim Lane Scenario 2

Feature completed by three teams
Two teams complete their part in the first iteration
Third team complete their part in the second iteration

		Sprint 1 PI 1	Sprint 2 PI 1	Sprint 3 PI 1	Sprint 4 IP PI 1	PI 2 >>
Business Releases/ Milestones	Segment 1					
	Segment 2					
Technical Releases						
Release Testing						
Team 1						
Team 2						
Team 3						
Team 4						
Team 5						
Team 6						
Deliveries to or from others (e.g.,suppliers, other ARTs)						

= Feature = Business Release = Release Testing
= Dependency = Technical Release

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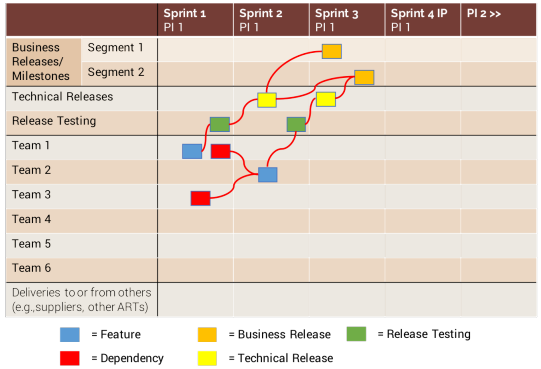
Release Testing Swim Lane Scenario 3

Features are tested and deployed in first and second iteration and then made available to end-users in the third iteration



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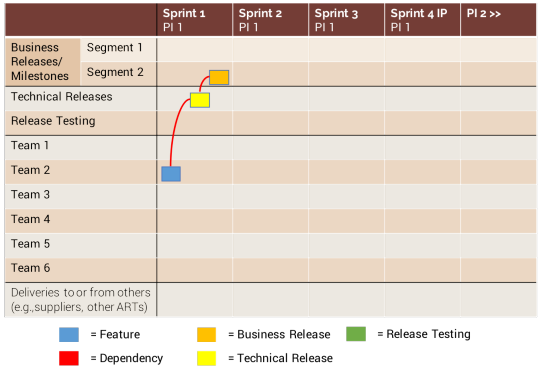
Release Testing Swim Lane Scenario 4

Not all features have to be released tested
A team can define, build, test & implement a feature in one iteration



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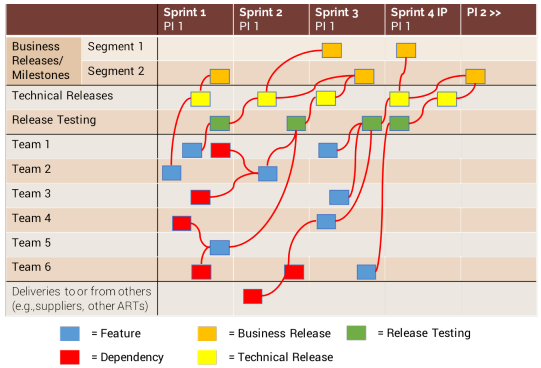
Release Testing Swim Lane Normal Scenario

Example of how a Program Board could look
Check if dependencies are ok



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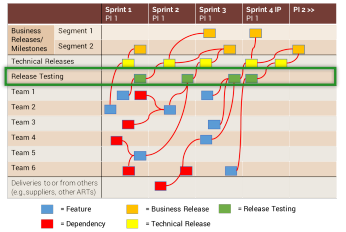
Benefits of a Dedicated Swim Lane for Testing

- Everyone becomes aware of the needed testing activities
- Easy to check if features can be included in certain milestones
- Discussion around how to change the plan to meet business milestones with all teams
- Useful when discussing changes during PI execution



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Team Test Preparation and Execution in SAFe

- Weekly Community of Practice (CoP) meeting
- Sort out testing-related dependencies
- Request help from or offer help to other teams
- Align testing practices

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Benefits of QA & Testing CoP

- Test preparation and execution on cadence
- Dedicated time for QA & Testing topic (supplementing Scrum of Scrums and ART Sync)
- Continuous QA & Testing improvements

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ART Test Preparation and Execution in SAFe

- Bug Hunting, an exploratory testing session, in the last execution iteration of the PI
- All teams prepare test charters
- All roles invited (PO, SM, Dev., Test., System Architect, etc.)
- Team up with people from other teams
- Run other teams' test charter

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Benefits of ART Bug Hunting

- System testing and system integration testing
- Shared equipment, e.g., physical device testing
- Knowledge sharing across roles and agile teams
- Increased system and business understanding

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Summary

- SAFe® is used in more and more companies in many countries
- Good agile testing practices on team level is a pre-condition for successful scaling
- Three concrete tips to handle testing challenges in SAFe®:
  - Dedicated swim lane on Program Board
  - CoP facilitating team test preparation and execution on cadence
  - Bug Hunting each PI for everyone on the ART

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Want to Know More?

eBook published by EuroSTAR in April 2018:
Testing and Quality in Scaled Agile Framework for Lean Enterprises

https://.safejourney.dk/2018/04/27/ebook-testing-and-quality-in-the-scaled-agile-framework-safe/

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