



AGILE CHEETAH



# Scaling Agile within the Federal Government



This talk is centered around the application of Agile and the Scaled Agile Framework (SAFe) to the development of **large-scale, complex** software-intensive systems funded by the Federal Government

## What do we mean by Agile?





Agility = Speed + Flexibility + Control

- ❑ The Federal Government is embracing Agile software development
- ❑ The problems with Agile adoption in the Federal Government are systemic
- ❑ We need a systemic approach to Agile scaling
- ❑ Scaled Agile Framework (SAFe) for Lean Enterprises can serve as the foundation for such an approach

- Brief Agile overview
- Agile Adoption within Federal software development programs
- Failure to achieve expected ROI through Federal Agile initiatives
- Systemic issues impeding Agile adoption in the Federal Government 
- Introduction to the Scaled Agile Framework (SAFe)
- Roles PMs can play within the framework



# What is Agile?



Agile is a software development approach in which software development teams self-organize to deliver production-ready increments of software functionality/capability within short iteration time frames (one to four weeks) guided by direct stakeholder/end-user feedback.

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

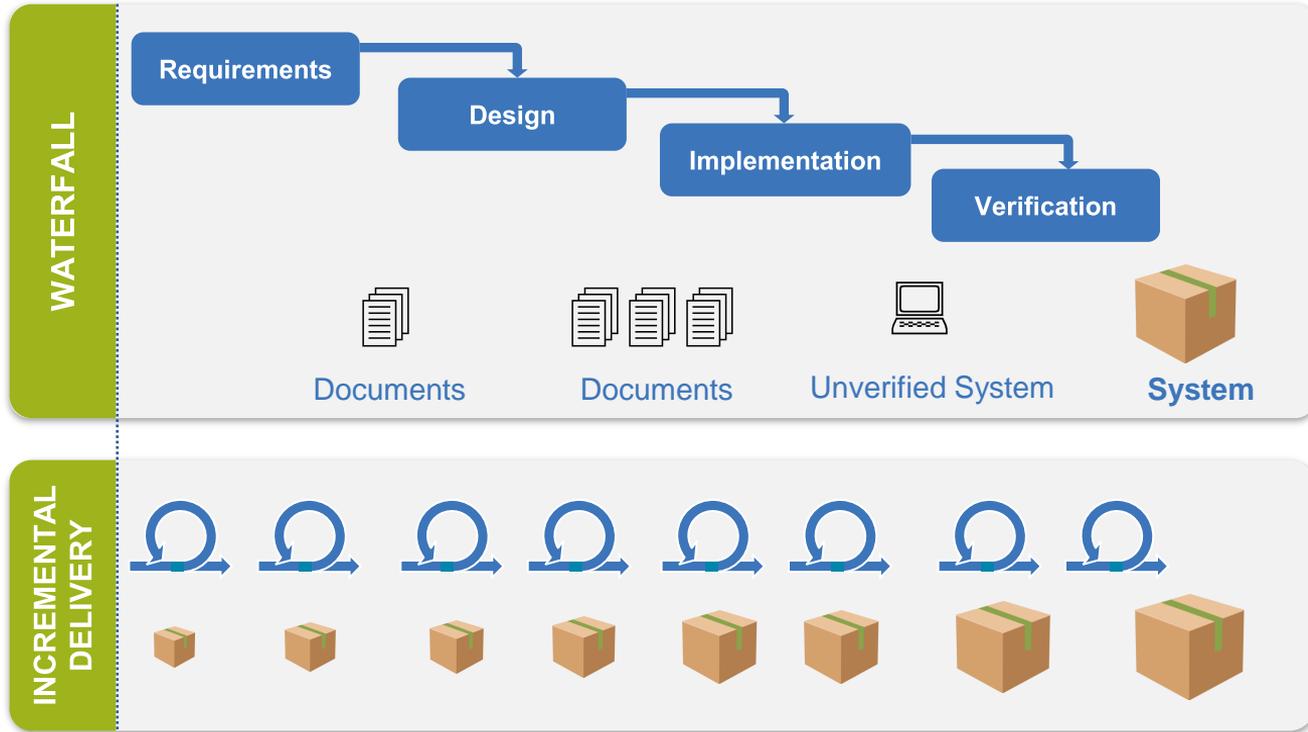
**Emphasis on concepts on the left does not negate those on the right!!!!**

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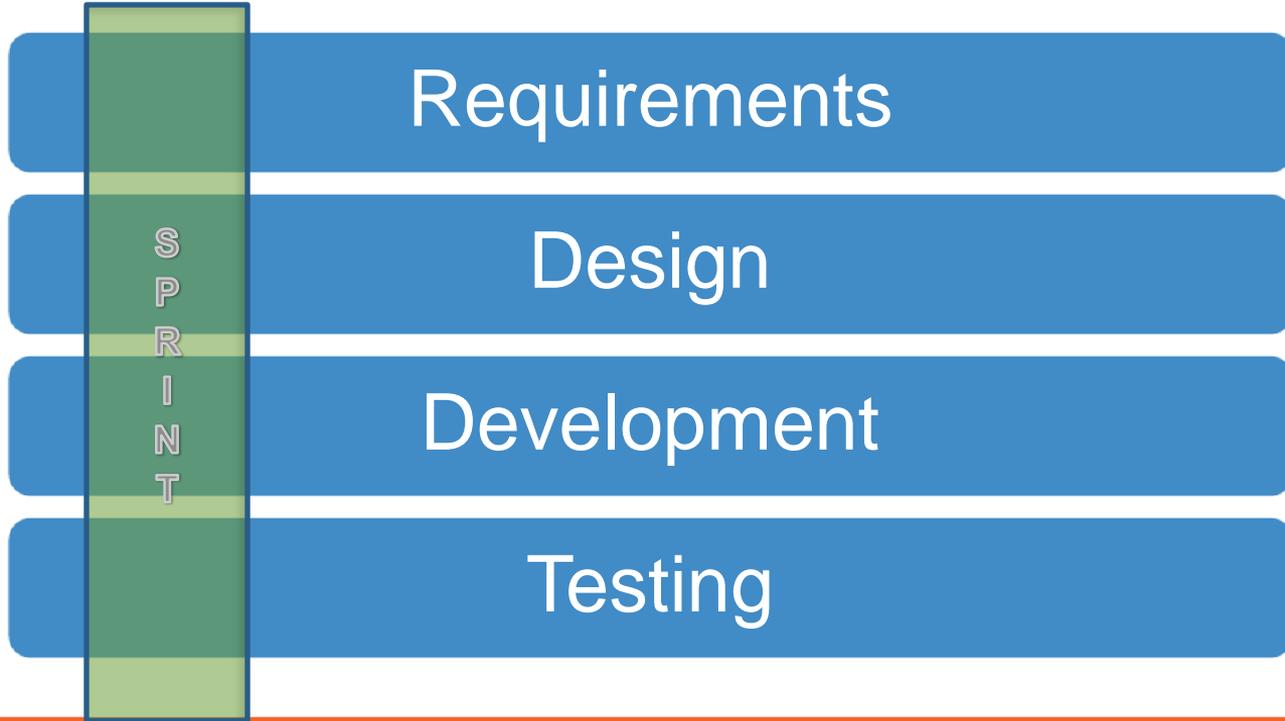
These concepts are supported by 12 Principles

# Waterfall vs. Agile Delivery





## Agile Wedding Cake





# Reasons for Agile Adoption in Federal Software Development Efforts

1. Growing disillusionment with "Big Bang" projects
  - ❑ Cost and schedule overruns and program cancellations
  - ❑ Lack of predictability
  - ❑ Time to market/long acquisition cycles
  - ❑ Late realization of value and obsolescence upon fielding
  - ❑ Lack of alignment between user needs and system capabilities
  - ❑ Difficulty reacting to change
  - ❑ Low quality

GAO-16-469: Information Technology Reform: **Agencies Need to Increase their Use of Incremental Development Practices**, August 2016

<b>DoD's Expeditionary Combat Support System</b>	Canceled in December 2012, after spending more than a <b>billion dollars</b> and failing to deploy within 5 years of initial funding
<b>VA's Financial and Logistics Integrated Technology Enterprise Program</b>	Scheduled to be delivered by 2014 at a total estimated cost of <b>\$609 million</b> , terminated in October 2011 due to program management challenges
<b>OPM's Retirement Systems Modernization program</b>	Canceled in February 2011, after spending approximately \$231 million on the agency's <b>third attempt</b> to automate the processing of federal employee retirement claims

2. **Potential of iterative and incremental** software development practices (e.g., Agile) to lower cost, shrink timelines, provide flexibility, and increase quality

Agile Characteristics	Cost Savings	Shorter Timelines	Flexibility	Increased Quality
Avoid "Big Planning Up Front"	X	X	X	X
Stop when "Good Enough"	X	X	X	X
Timeboxing & Synchronization	X	X	X	X
Focus on Deployable Code	X	X	X	X



# Recent Federal Agile Adoption Initiatives

## Recent Federal Agile Adoption Initiatives

18F	<ul style="list-style-type: none"><li>● A digital services agency under GSA</li><li>● Helps agencies build, buy, and share digital services</li><li>● Develops applications using Lean Agile, open source code, and modern programming languages</li><li>● Assists agencies in IT systems and services procurement: RFP Ghostwriting Service, Agile Blanket Purchase Agreement (BPA), micro-purchase platform (source code for purchase)</li><li>● Offers hosting and API management on government-built platforms: cloud.gov, Federalist</li><li>● Offers embedded services to help agencies shift to 18F's digital services acquisitions model</li></ul>
U.S. Digital Service	<ul style="list-style-type: none"><li>● Part of the Executive Office of the President</li><li>● Provides IT consultation services to federal agencies: Short-term and targeted</li><li>● The U.S. Digital Service Playbook: 13 key “plays” drawn from successful private sector and government practices</li></ul>

## Recent Federal Agile Adoption Initiatives

TechFAR	<ul style="list-style-type: none"><li>• Provides guidance on implementing FAR rules that support the "plays" described in the Digital Services Playbook</li><li>• Discusses requirements for development and acquisition planning, contract vehicles and use of existing contracts, pricing, competition, and contract administration</li></ul>
Defense, Air Force, and Army Digital Services	DoD, Air Force, and Army versions of the U.S. Digital Service

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# Federal Government's Failure to Achieve Expected ROI from Agile

Evidence of Failure to Achieve  
ROI in Federal Software  
Projects

All Federal departments and agencies are required to provide information on major IT investments for the **IT Dashboard**, including:

- ❑ CIO investment risk level assessment
- ❑ Number of projects within an investment
- ❑ Project status
- ❑ Amount of current FY funding for development, modernization, and enhancement or operations and maintenance activities
- ❑ Whether projects produce usable functionality
- ❑ Whether projects delivered releases every 6 months or provide a rationale if not



### Please note

Note: FY 2018 submissions to the IT Dashboard have ended. IT Investment data on this site was last updated August 31, 2017. FY 2019 submissions will begin being published in the near future.

[See FY 2017 page »](#)

## Our information technology investments at work

On this site, you can access the same tools and analysis that the government uses to oversee the performance of Federal IT investments.



[Read more](#)

## DIVE IN

### 1. Learn

Familiarize yourself with the IT Dashboard to better understand what is being presented.

[The Basic Statistics](#)

[What's this site and data about?](#)

### 2. Explore

Dive into agency IT investment data and look at some investment numbers.

[Browse by agency](#)

[2018 Report](#)

### 3. Analyze

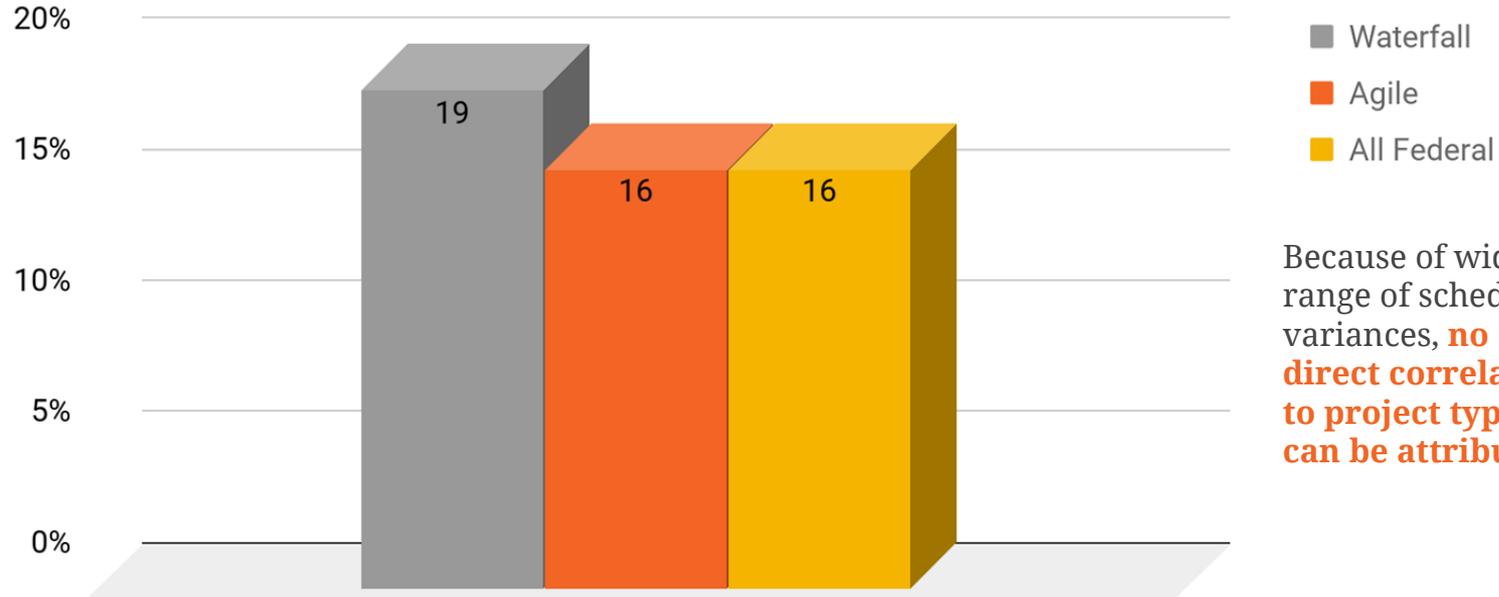
Follow trends in the data over time using the same tools that the government uses.

[Data Feeds](#)

[What is PortfolioStat?](#)

- ❑ Vergys LLC, posted an analysis on Feb 2017 of IT Dashboard data comparing how Agile software projects performed versus other incremental methodologies and Waterfall (<http://vergys.com/agile-isnt-100-better-for-federal-software-projects/>)
- ❑ The analysis shows that Federal Agile efforts appear to perform **only marginally** better than Waterfall
- ❑ Caveat: Discrepancies in the data have been observed due to lack of clear OMB guidance concerning reporting (GAO-16-469)

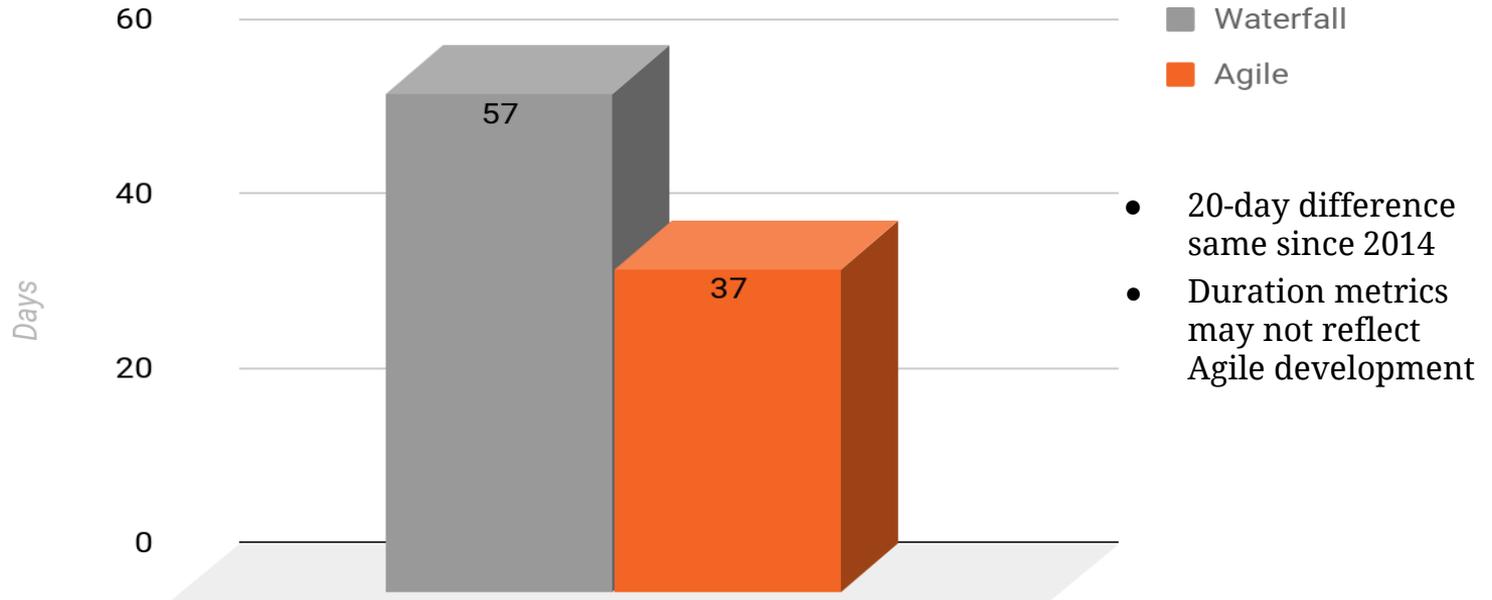
## Federal IT Systems Development: Average Percentage by which Projects are Behind Schedule



Because of wide range of schedule variances, **no direct correlation to project types can be attributed**

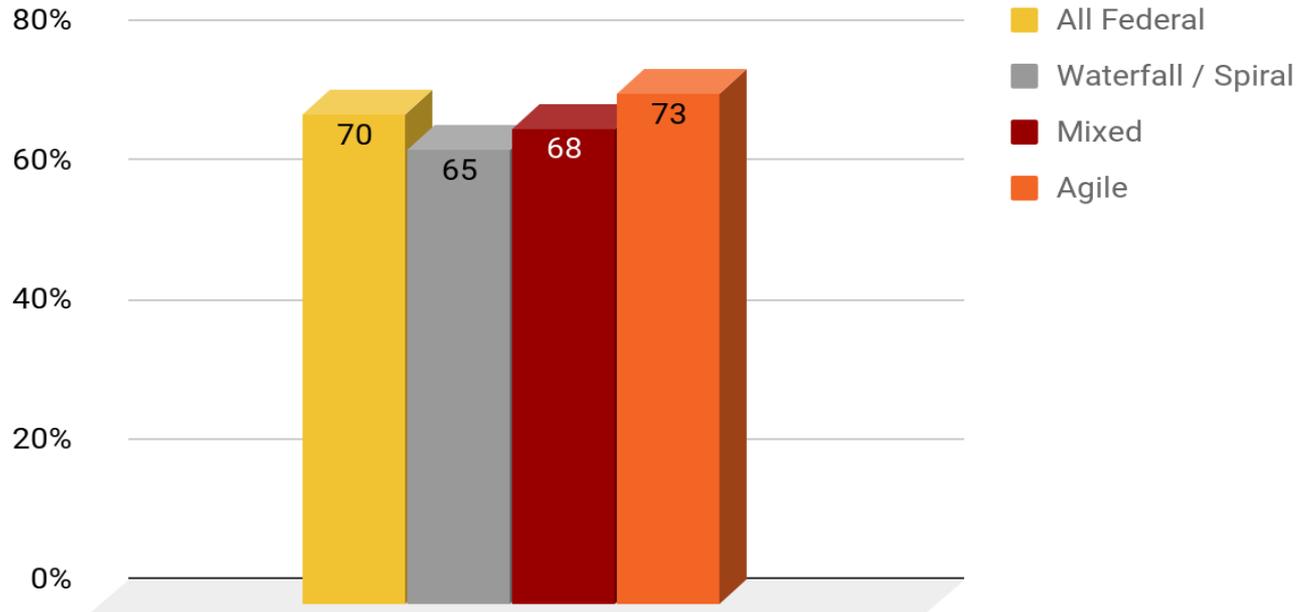
Source: <http://vergys.com/agile-isnt-100-better-for-federal-software-projects/>

## Federal IT Systems Development: Average Number of Days Behind Schedule



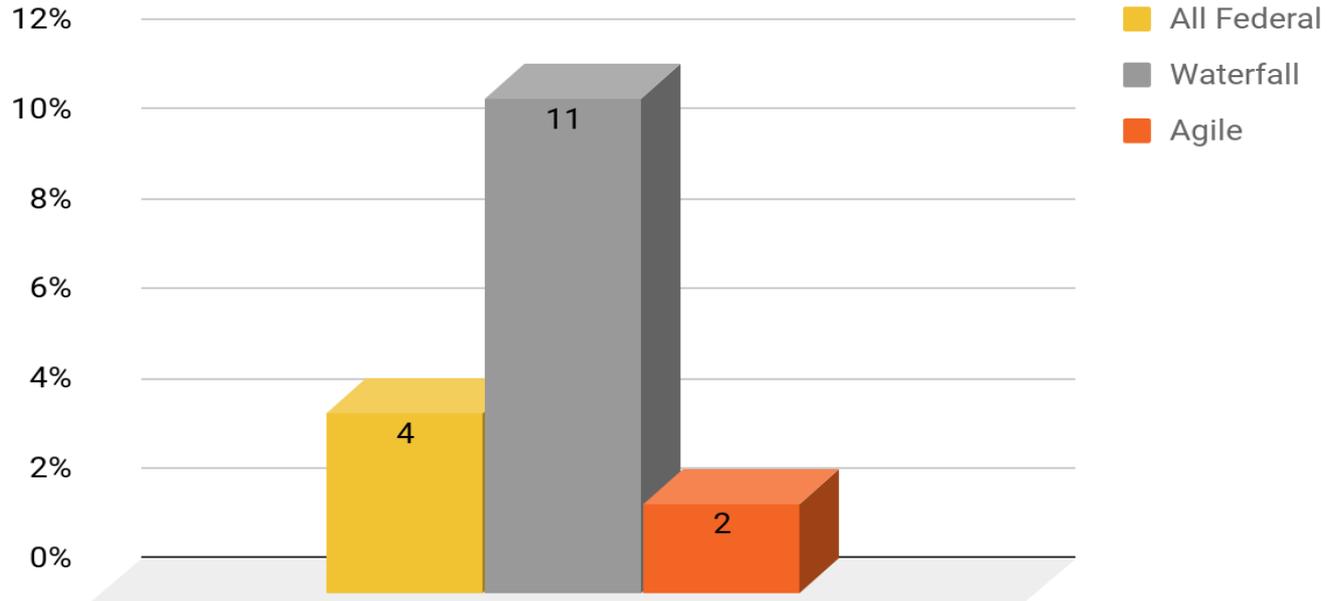
Source: <http://vergys.com/agile-isnt-100-better-for-federal-software-projects/>

## Federal IT Systems Development: Percentage of Projects On or Ahead of Schedule



Source: <http://vergys.com/agile-isnt-100-better-for-federal-software-projects/>

## Federal IT Systems Development: Percentage Over Budget



Source: <http://vergys.com/agile-isnt-100-better-for-federal-software-projects/>



# Systemic Issues Impeding Agile Adoption



The causes for the failure to demonstrate significant cost and schedule savings through Agile adoption are **systemic**. They spring from a **lack of alignment** between the work performed by Agile teams and the Waterfall-based acquisitions, contracting, program management, and IT governance practices and culture of the Federal Government.

## Systemic Impediments to Agile Adoption

Acquisitions	<ul style="list-style-type: none"><li>● Waterfall-based acquisitions life cycle</li><li>● Boiling the requirements ocean</li><li>● Heavyweight documentation and reporting requirements</li></ul>
Contracting / Procurement	<ul style="list-style-type: none"><li>● Overly restrictive interpretations of the FAR</li><li>● Preference for FFP Contracts with EVM Requirements</li><li>● Preference for PWS over SOO</li><li>● Constraining approaches via contracting language</li><li>● Stifling teamwork between contracting firms through contract terms</li></ul>

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## Systemic Impediments to Agile Adoption

Program Management	<ul style="list-style-type: none"><li>● Adherence to the “Iron Triangle”</li><li>● “ScrumFall” Implementations: Agile-Scrum Sprints sandwiched within a Waterfall SDLC</li><li>● Failing to build cross-functional development teams</li><li>● “Single wringable neck” accountability</li><li>● “Plug-and-play” approach to staffing teams</li><li>● Expecting to use the same reporting mechanisms as Waterfall projects</li></ul>
IT Governance	<ul style="list-style-type: none"><li>● Over-centralization of decision authority</li><li>● Heavyweight documentation and reporting requirements</li><li>● Top-down only implementation</li></ul>





# Introduction to SAFe

*Knowledge for people building the world's most important systems*

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

 [scaledagileframework.com](https://scaledagileframework.com)

Financial Services / Electronics / Software / Telecom / Retail & Distribution / Government / Healthcare / Insurance / Medical Technology / Pharmaceutical / Media / Manufacturing / COTS Software / Customer Care & Billing / Outsourcing



**Northwestern Mutual**

Life Insurance giant saves \$12 million and stays 18 months ahead of schedule with SAFe



**Sony Interactive Entertainment**

\$30 million in savings and initial planning time cut by 28% with SAFe



**CISCO**

SAFe improves quality and drives continuous delivery of new features for the largest networking company in the world



**Hewlett Packard Enterprise**

SAFe helps HPE improve quality by 20% while delivering faster



**pôle emploi**

SAFe® Helps French National Employment Agency Deliver Strategic Program



**TOMTOM**

SAFe helps the world's leading navigation technology company fail fast, adapt to change, and release faster and more often



**accenture technology**

Improved Demand management & traceability from Portfolio through to Agile delivery teams



**NHS**

Save a life Give blood

SAFe enables transition from Waterfall to Agile in a highly regulated environment



**AstraZeneca**

SAFe delivered millions in benefits in first year and significantly faster time-to-value



**LEGO Digital Solutions**

unleashes their "systematic creativity" in adapting SAFe to their context

See [ScaledAgileFramework.com/case-studies](https://ScaledAgileFramework.com/case-studies)

## Where is SAFe being Implemented in the Federal Government?

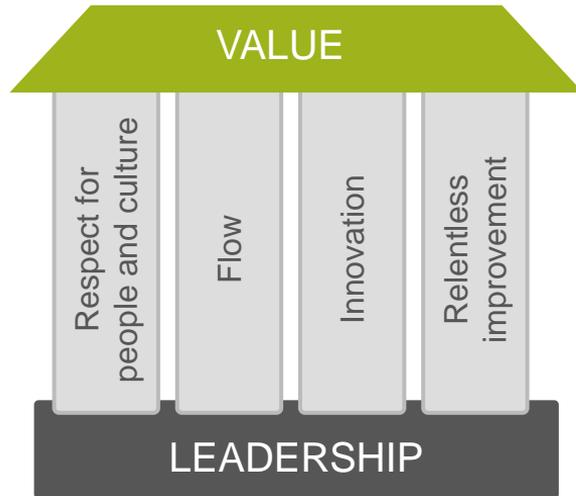


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# Embrace Lean-Agile values

## House of Lean



Value in the shortest sustainable lead time

## Agile Manifesto

*We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:*

**Individuals and interactions** over processes and tools

**Working software** over comprehensive documentation

**Customer collaboration** over contract negotiation

**Responding to change** over following a plan

*That is, while there is value in the items on the right, we value the items on the left more.*

# SAFe Lean-Agile principles

#1 - Take an economic view

#2 - Apply systems thinking

#3 - Assume variability; preserve options

#4 - Build incrementally with fast, integrated learning cycles

#5 - **Base milestones on objective evaluation of working systems**

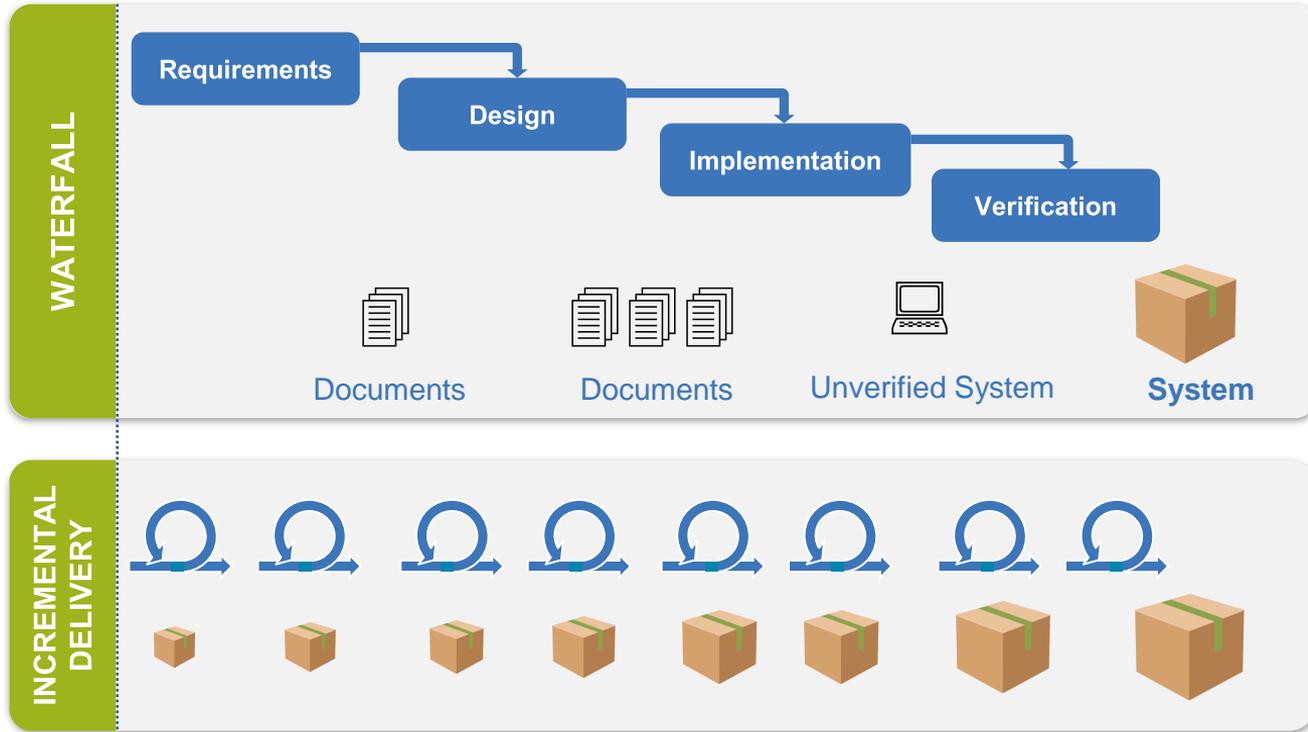
#6 - Visualize and limit WIP, reduce batch sizes, and manage queue lengths

#7 - Apply cadence, synchronize with cross-domain planning

#8 - **Unlock the intrinsic motivation of knowledge workers**

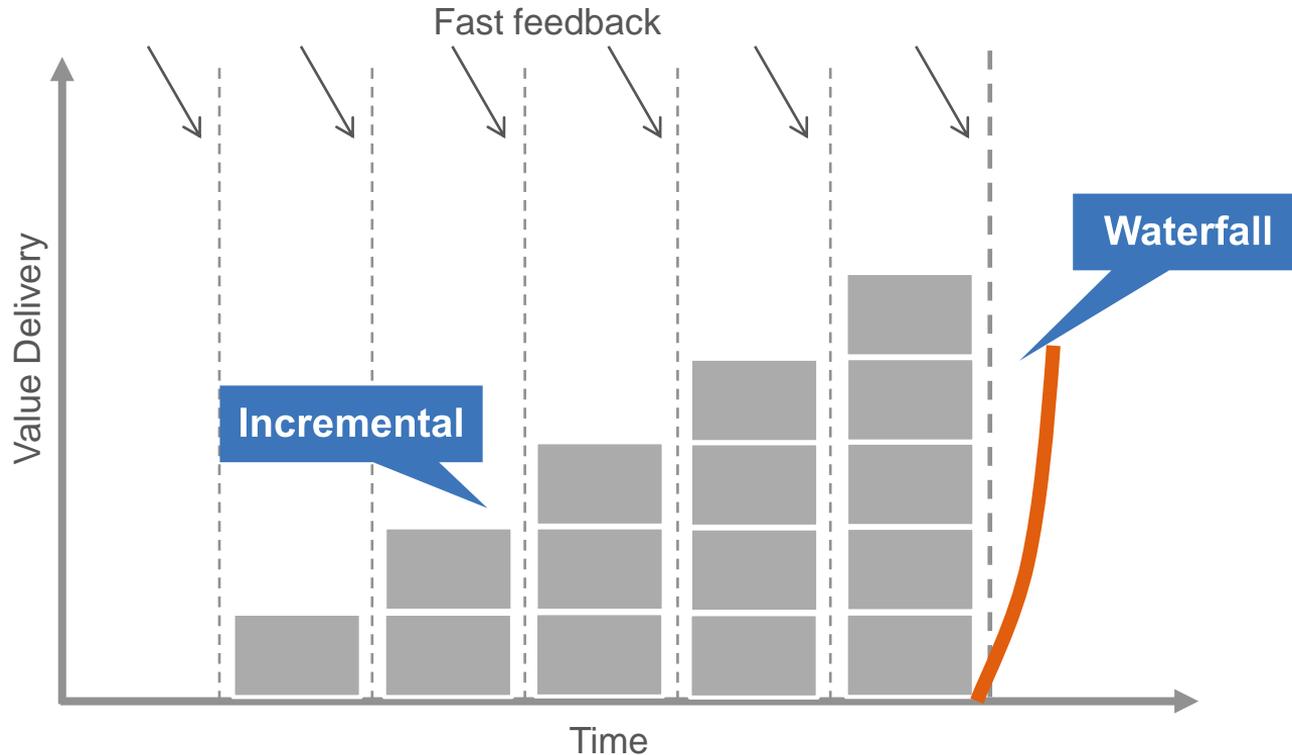
#9 - **Decentralize decision-making**

# Building incrementally accelerates value delivery



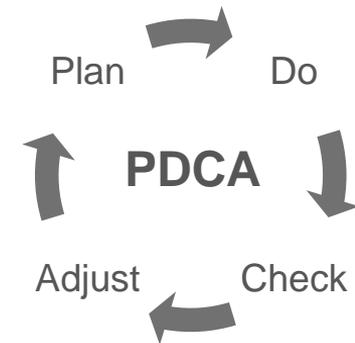
# And delivers better economics

Early delivery provides fast value with fast feedback



# Nothing beats an Agile Team

- ▶ Cross-functional, self-organizing entities that can **define**, **build** and **test** a thing of value
- ▶ Applies basic scientific practice: Plan—Do—Check—Adjust
- ▶ Delivers value every two weeks

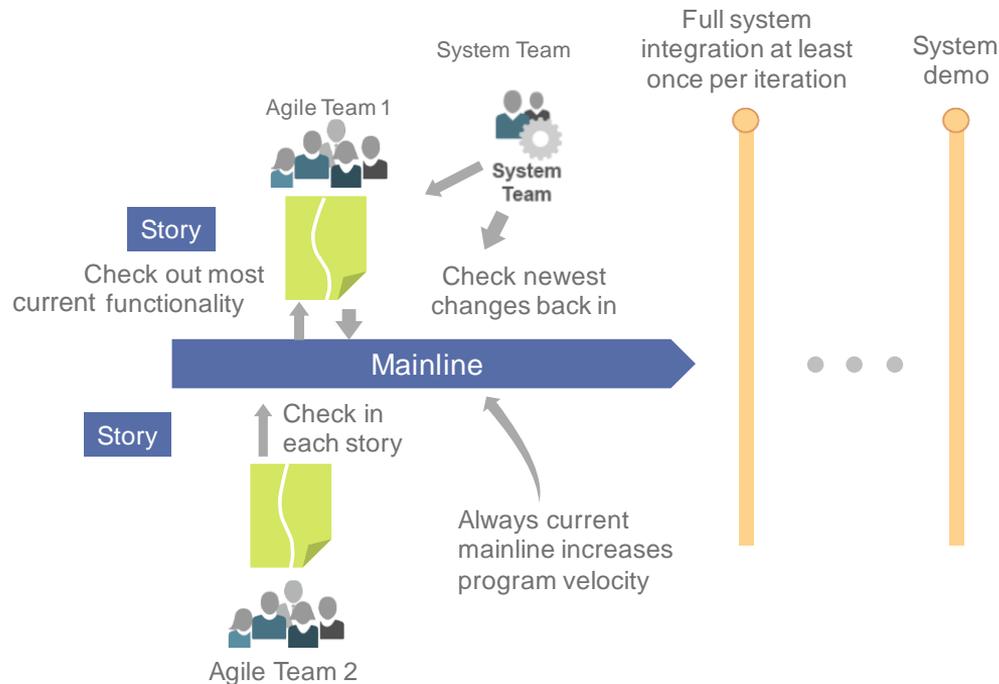


# That integrates frequently

*Integration points control product development.*

*— Dantar Oosterwal, The Lean Machine*

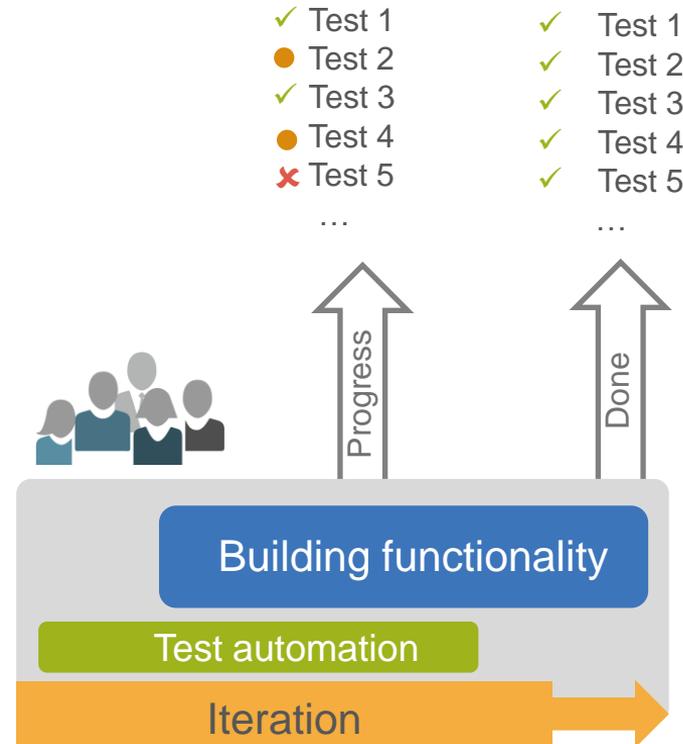
- ▶ Avoid physical branching for software
- ▶ Frequently integrate hardware branches
- ▶ Use development by intention in for inter-team dependencies



# Applies test automation

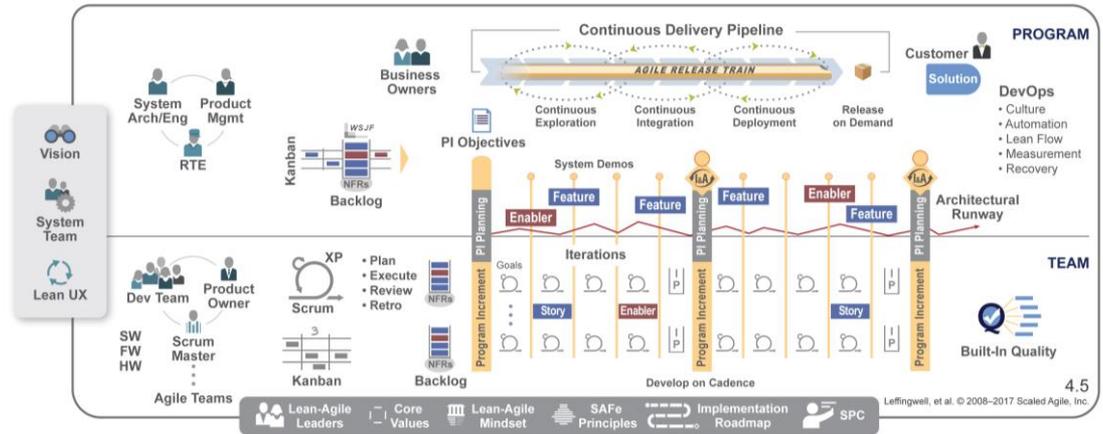
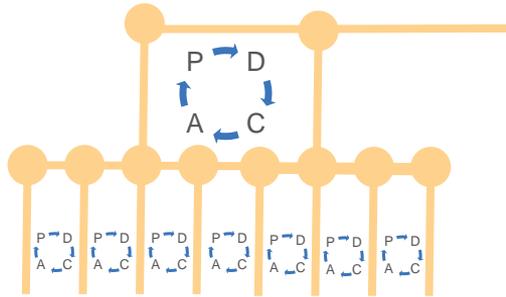
## Test automation supports rapid regression testing

- ▶ Implemented in the same iteration
- ▶ Maintained under version control
- ▶ **Passing vs. not-yet-passing** and **broken automated tests** are the *real* iteration progress indicator



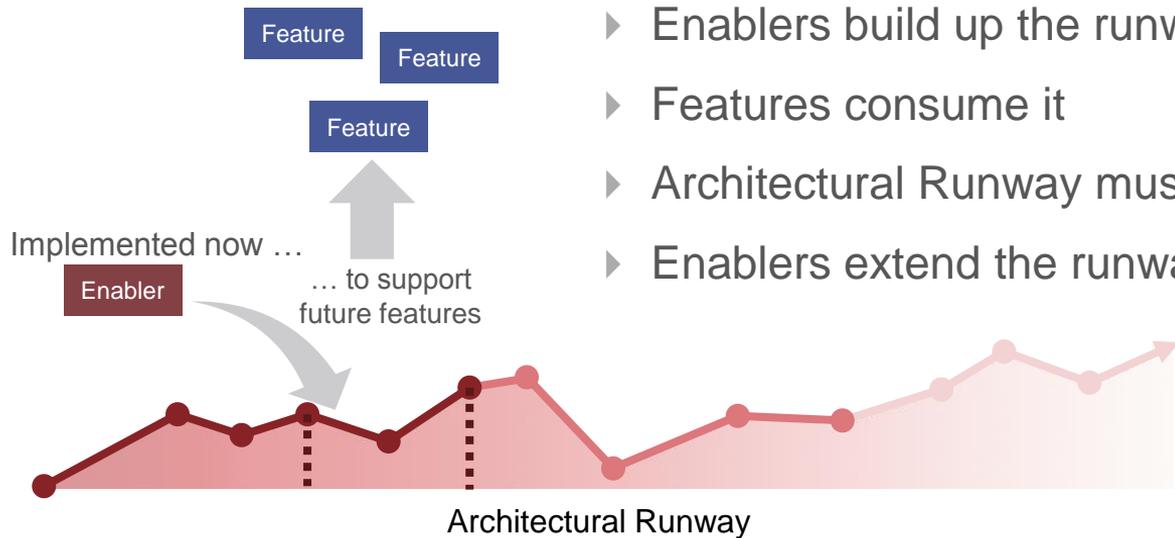
# Except a team of Agile Teams

- ▶ Align 50-125 practitioners to a common mission
- ▶ Apply cadence and synchronization, Program Increments every 6-12 weeks
- ▶ Provide Vision, Roadmap, architectural guidance



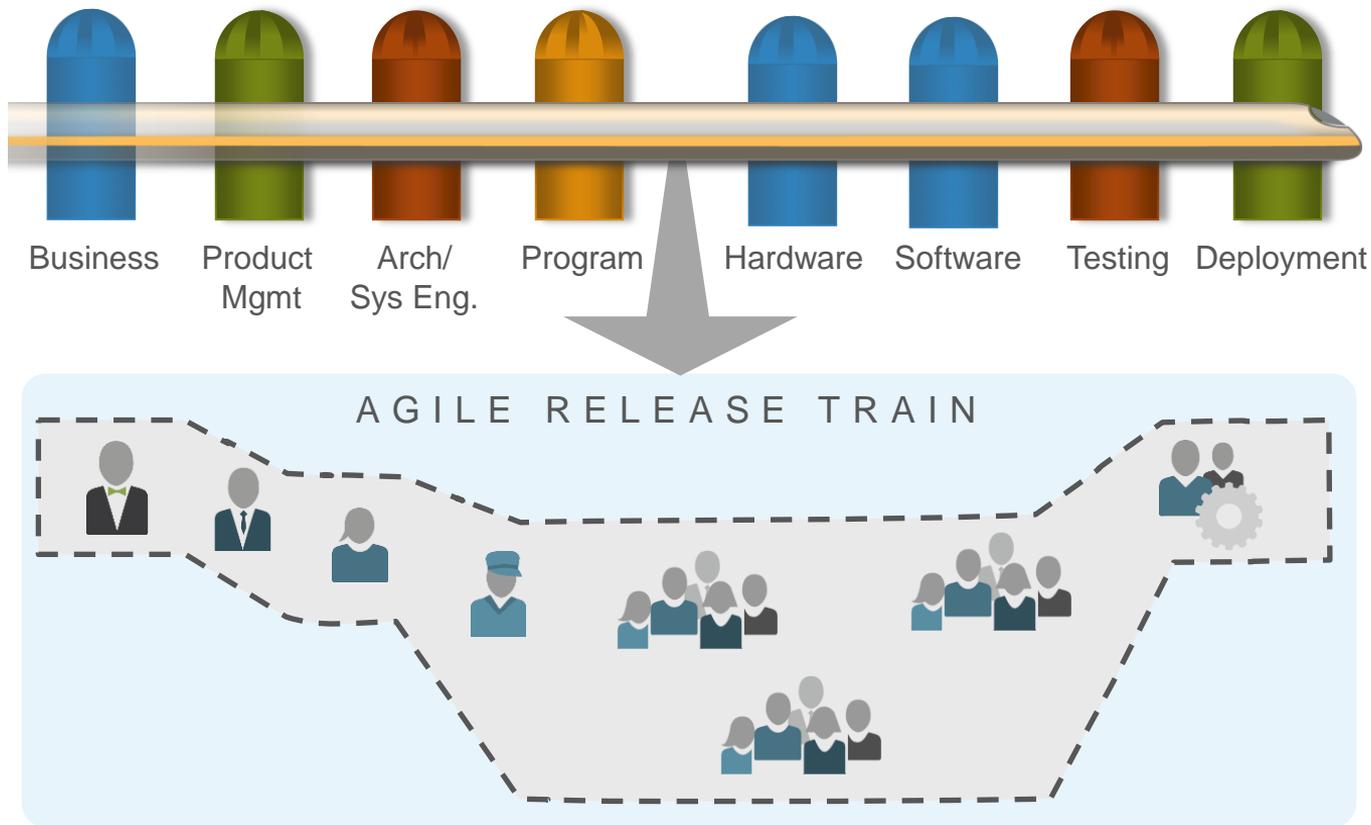
# With some Architectural Runway

Architectural Runway—existing code, hardware components, etc. that technically enable near-term business features



- ▶ Enablers build up the runway
- ▶ Features consume it
- ▶ Architectural Runway must be continuously maintained
- ▶ Enablers extend the runway

# Bringing together the necessary people



# Synchronizes with PI Planning

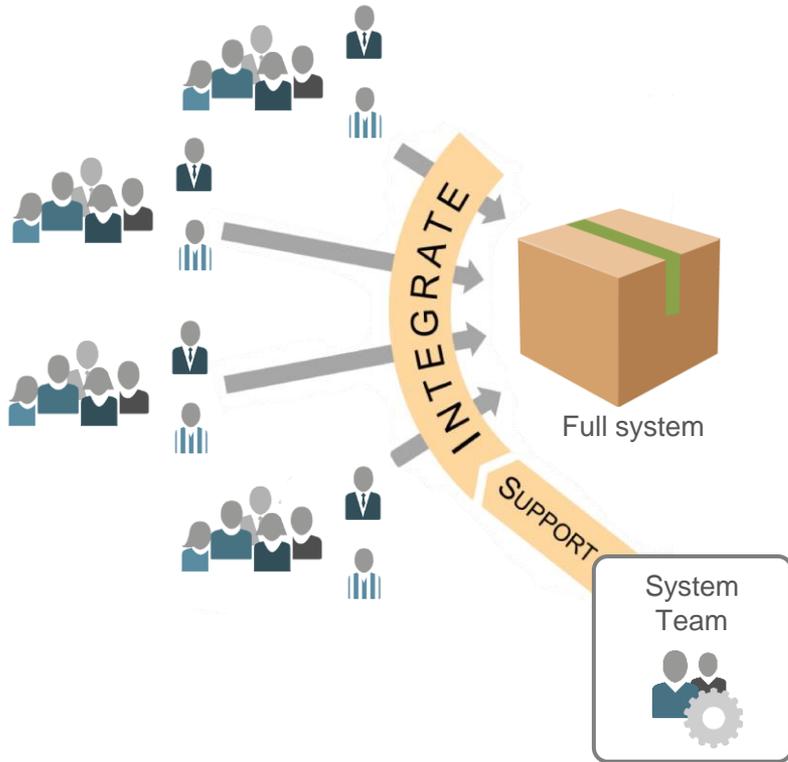
*Future product development tasks can't be pre-determined. Distribute planning and control to those who can understand and react to the end results. — Michael Kennedy, Product Development for the Lean Enterprise*

- ▶ All stakeholders face-to-face (but typically multiple locations)
- ▶ Management sets the mission, with minimum possible constraints
- ▶ Requirements and design emerge
- ▶ Important stakeholder decisions are accelerated
- ▶ Teams create—and take responsibility for—plans



For a short video PI planning example, see: <https://youtu.be/ZZAtI7nAB1M>

# Demonstrates the full system every two weeks



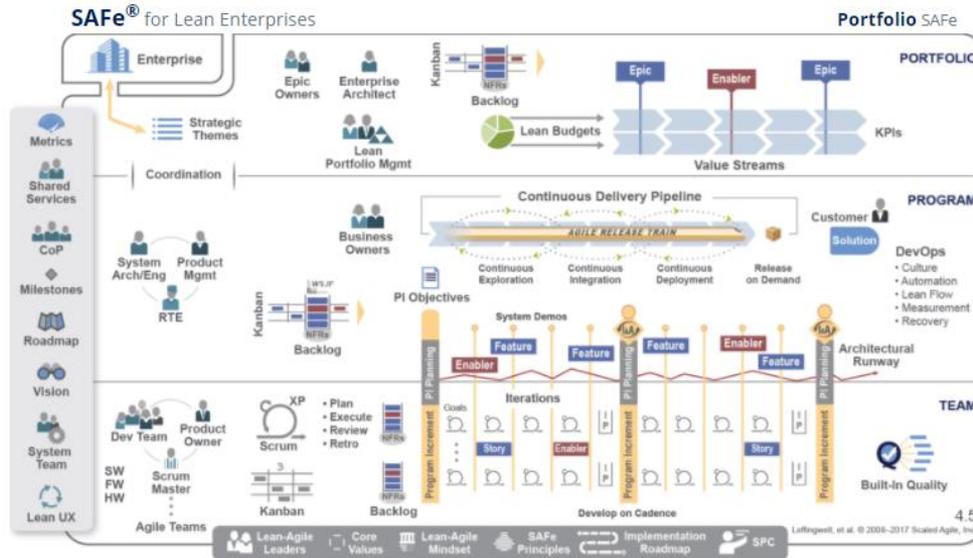
- ▶ An integrated solution demo
- ▶ Objective milestone
- ▶ Demo from the staging environment, or the nearest proxy




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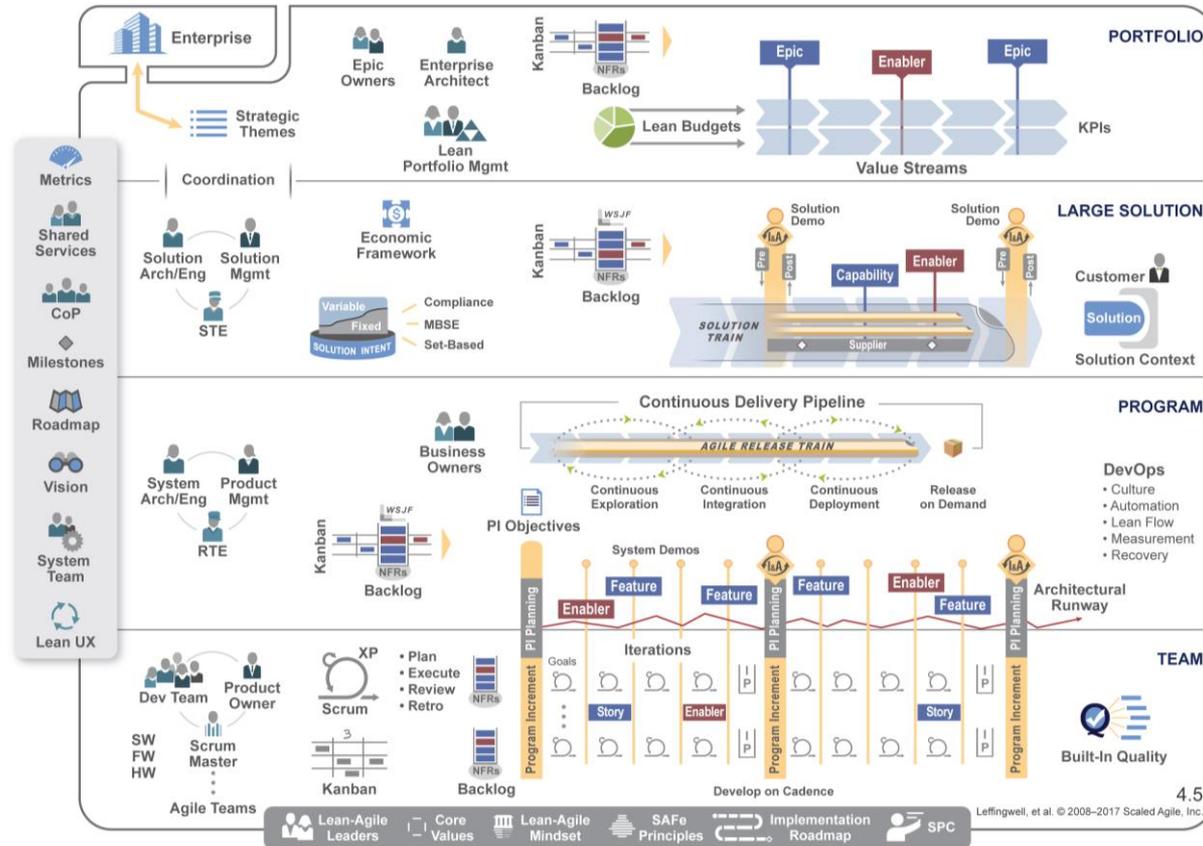
**SELECT CONFIGURATION:**

- FULL SAFE
- LARGE SOLUTION SAFE
- PORTFOLIO SAFE**
- ESSENTIAL SAFE

This Configuration: **Portfolio SAFE** provides portfolio strategy and investment funding, Agile program guidance and Lean governance. [Learn more.](#)

SAFE® PROVIDED BY **SCALED AGILE**

# Full SAFe for large enterprises



- Visit <https://agilecheetah.com>
- Visit <https://scaledagileframework.com>
- Take classes through **Agile Cheetah**
- Sources for this presentation available in backup slides section

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Questions?



Backup slides

## Presentation Sources

- <https://explore.versionone.com/state-of-agile/versionone-11th-annual-state-of-agile-report-2>
- <https://www.scrumalliance.org/why-scrum/state-of-scrum-report/2017-state-of-scrum>
- GAO-16-49: Information Technology Reform: Agencies Need to Increase their Use of Incremental Development Practices, August 2016
- <https://itdashboard.com>
- <http://vergys.com/agile-isnt-100-better-for-federal-software-projects/>
- <https://scaledagileframework.com>
- [https://www.esc.gov/monroneynews/archive/2016/CB/09\\_2.asp](https://www.esc.gov/monroneynews/archive/2016/CB/09_2.asp)
- <https://www.slideshare.net/lschwartz925/lean-solutions-agile-transformation-at-the-united-states-postal-service>
- <https://www.gsa.gov/portal/getMediaData?mediaId=249679>
- <https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/20150020951.pdf>

- Cross-functional
- In Agile Scrum and XP, Product Owner represents the user community and project stakeholders - Primarily focused on what should be built, when, and why
- In Agile Scrum, the Scrum Master is the "Servant Leader" responsible for enforcing Agile practices and helping the organization eliminate obstacles to team success and productivity
- The Team - Primary value providers. They determine what work can be accomplished during iteration timeboxes
- Self-organizing

- Half of respondents from outside North America
- 25% worked IT Companies
- 26% worked for really large companies (Over 20,000 people)
- Locations
  - North America: 50%
  - Europe: 28%
  - Asia: 10%
  - South America: 5%
  - Africa: 2%
  - Oceania: 4%



## RESPONDENT DEMOGRAPHICS

For the first time, half of the respondents were from outside North America. While the largest number of respondents (23%) worked for software/ITV companies, that number declined from 26% last year. Respondents from very large organizations, employing more than 20,000 people, increased from 24% last year to 26% this year.

### Size of Organization

Respondents who worked for organizations with:



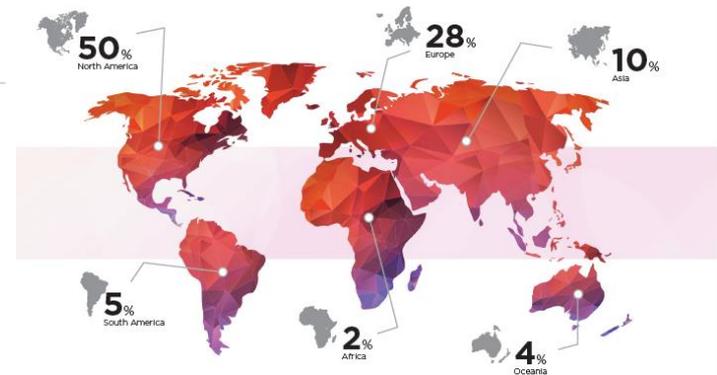
### Size of Software Organization

Respondents who worked for organizations with software groups with:



### Location of Organization

Respondents were from:



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- 98% of respondents claimed organizational success from Agile adoption
- Top two challenges
  - Organizational Culture at odds with Agile: 63%
  - Lack of skills or experience in Agile: 47%

## AGILE SUCCESS AND METRICS



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### Challenges Experienced Adopting & Scaling Agile

While the vast majority of respondents and their organizations have realized success from adopting agile practices, they recognize that there are challenges to scaling agile. The top two challenges cited were organizational culture at odds with agile values (63%), and lack of skills or experience with agile methods (47%).



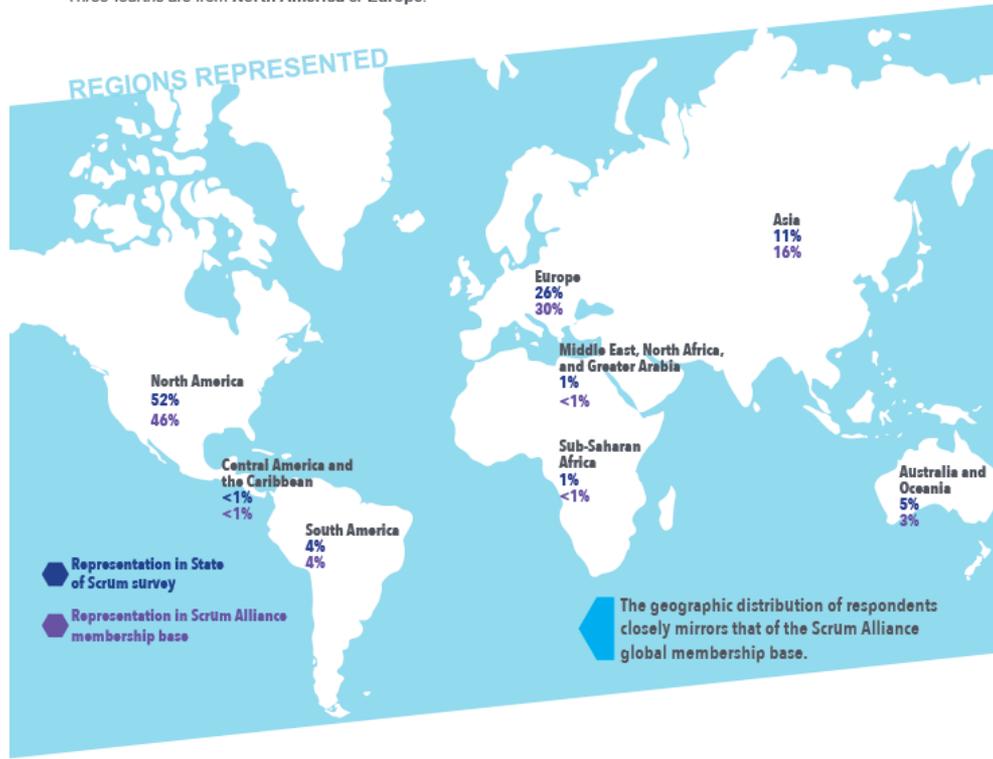
\*Respondents were able to make multiple selections.

# 2016 State of Scrum Survey

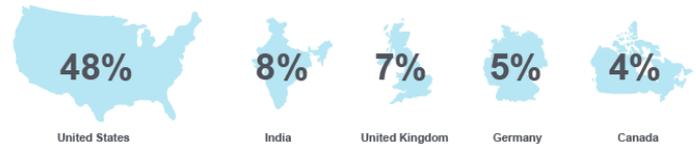
## SECTION I: SURVEY RESPONDENT PROFILE

### 1. In which country are you located?

A total of 2,113 people across 76 countries responded to the survey. Three-fourths are from North America or Europe.



### Top 5 Countries



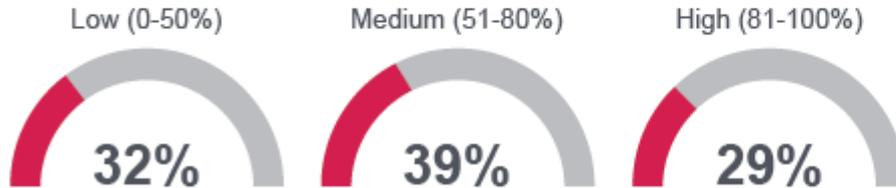
Respondent pool very similar to Version One's

T A H

### 15. For all the projects in your organization that were managed using Scrum, what range would you estimate were successfully delivered using Scrum?

Scrum was successfully used more than half the time, according to 68% of the respondents.

#### Scrum Success



#### Successful Delivery of Scrum Projects

0%	2%
1%–10%	7%
11%–20%	5%
21%–30%	6%
31%–40%	4%
41%–50%	7%
51%–60%	8%
61%–70%	11%
71%–80%	20%
81%–90%	17%
91%–100%	12%

### 18. How likely is it that your organization will continue to use Scrum?

The outlook for Scrum clearly remains favorable. Virtually all (98%) consider it likely that their organization will use Scrum in the future.

#### Will Continue to Use Scrum



## Supporting Federal Legislation and Policy

OMB Circular A-130	<ul style="list-style-type: none"><li>• First released in 2000</li><li>• Directed agencies to incorporate an incremental development approach into their policies and ensure that investments implement them</li><li>• Led to OMB requiring functionality delivery <b>at least every 6 months</b> since 2012</li></ul>
Section 804 of the National Defense Authorization Act, FY 2010	Included four directives on evolving software information systems design approach: <ul style="list-style-type: none"><li>• Early and continual involvement of the user</li><li>• Multiple rapidly executed increments or releases of capability</li><li>• Early, successive prototyping to support an evolutionary approach</li><li>• Modular open-systems approach</li></ul>
May 2014, OMB FY 2016 Capital Planning Guidance	Starting in FY 2016, established release status tracking every six months for major IT investment projects to determine whether usable functionality was produced
Federal Information Technology Acquisition Reform Act (FITARA)	<ul style="list-style-type: none"><li>• Enacted December 2014</li><li>• As required by OMB's annual capital planning guidance, covered agency CIOs must certify that IT initiatives adequately implement OMB's incremental development guidance</li></ul>

## 12 Principles Behind the Agile Manifesto

1. *Our* highest priority is to satisfy the customer through early and continuous delivery of valuable software
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale
4. Business people and developers must work together daily throughout the project

## 12 Principles Behind the Agile Manifesto

5. **Build projects around motivated individuals:** Give them the environment and support they need and trust them to get the job done
6. **The most efficient and effective method of conveying information to and within a development team is face-to-face conversation**
7. **Working software is the primary measure of progress**
8. **Agile processes promote sustainable development:** The sponsors, developers, and users should be able to maintain a constant pace indefinitely
9. **Continuous attention to technical excellence and good design enhances agility**

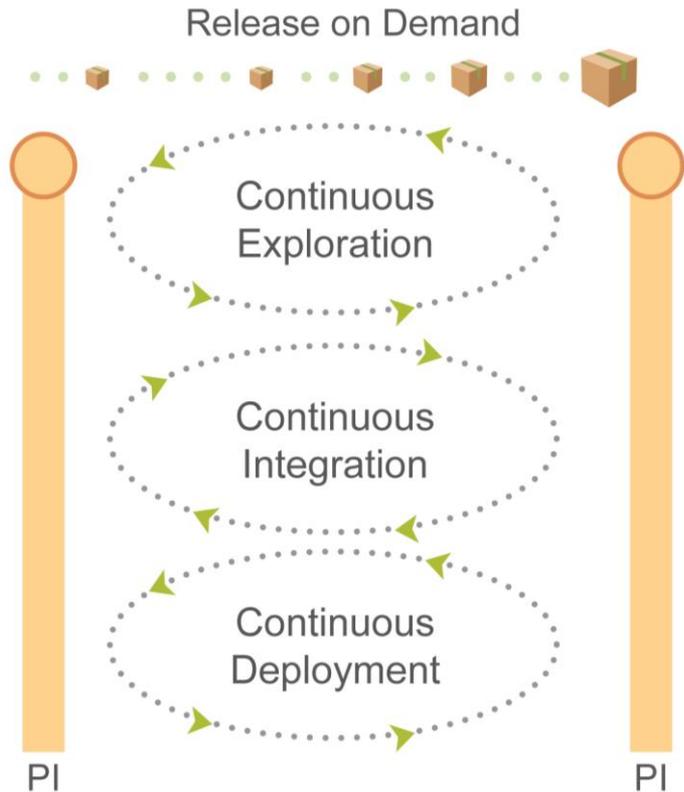
## 12 Principles Behind the Agile Manifesto

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

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# Continuously delivers value to customers with DevOps



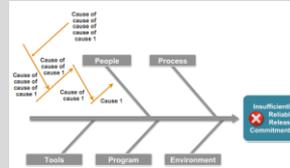
# Inspects and Adapts every PI

Every PI, teams systematically address the larger impediments that are limiting velocity.

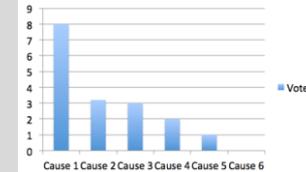
Agree on the problem to solve

Insufficiently reliable release commitments?

Apply root cause analysis (+ five whys)



Identify the biggest root cause using Pareto Analysis



Restate the new problem for the biggest root cause

Insufficient architectural runway

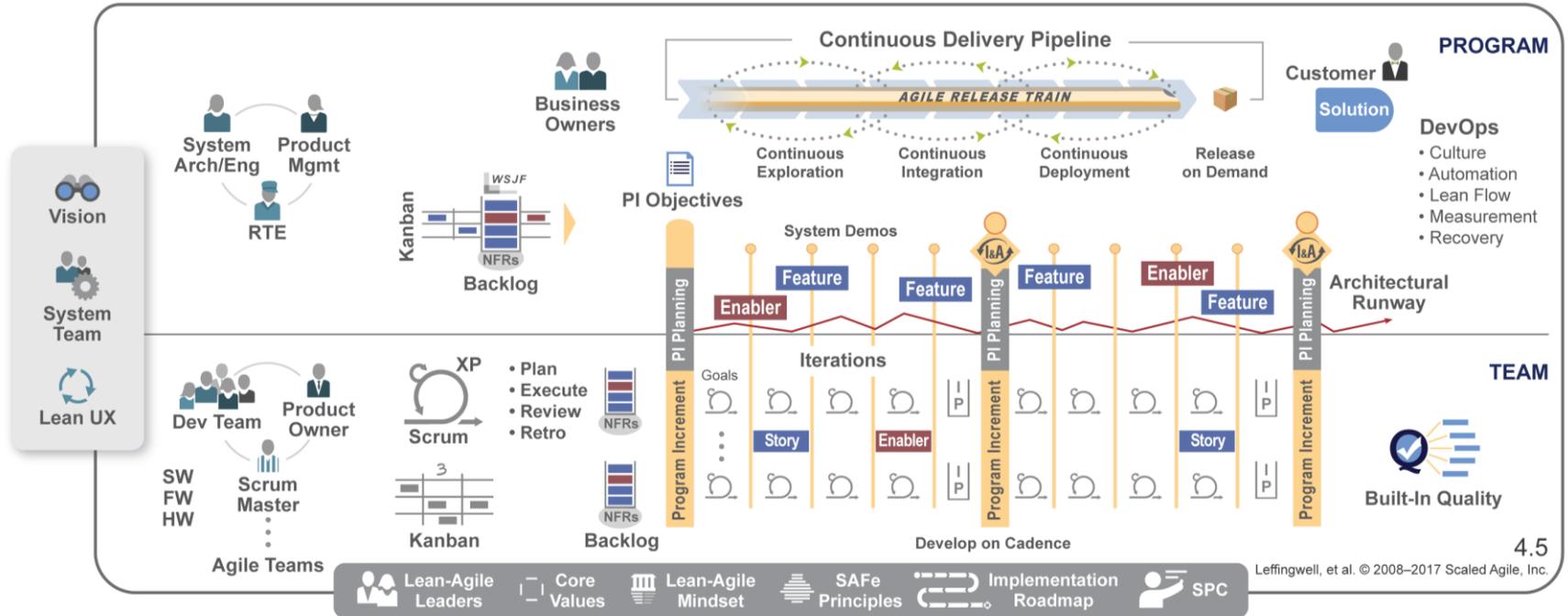
Brainstorm solutions



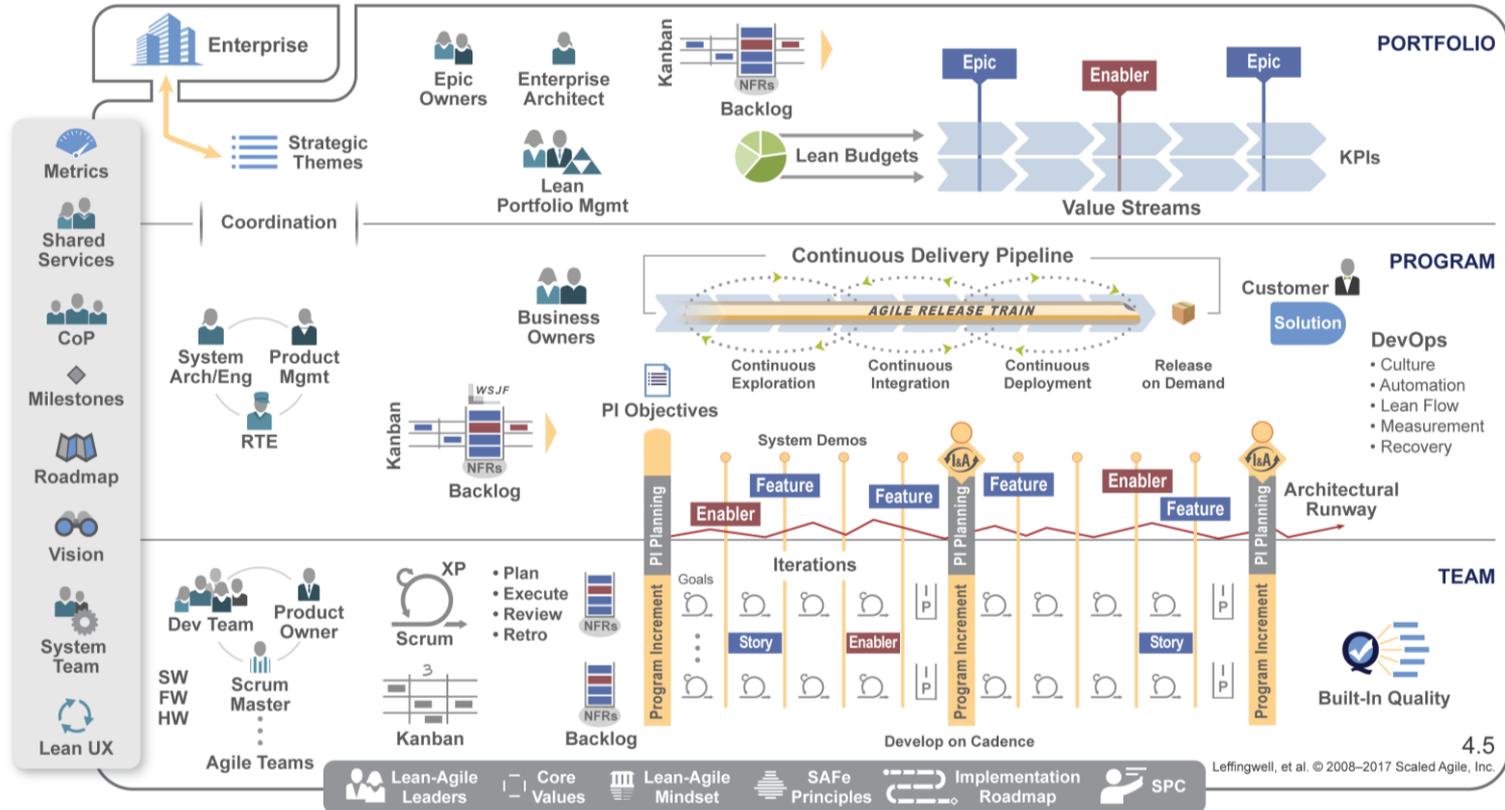
Identify improvement Backlog items



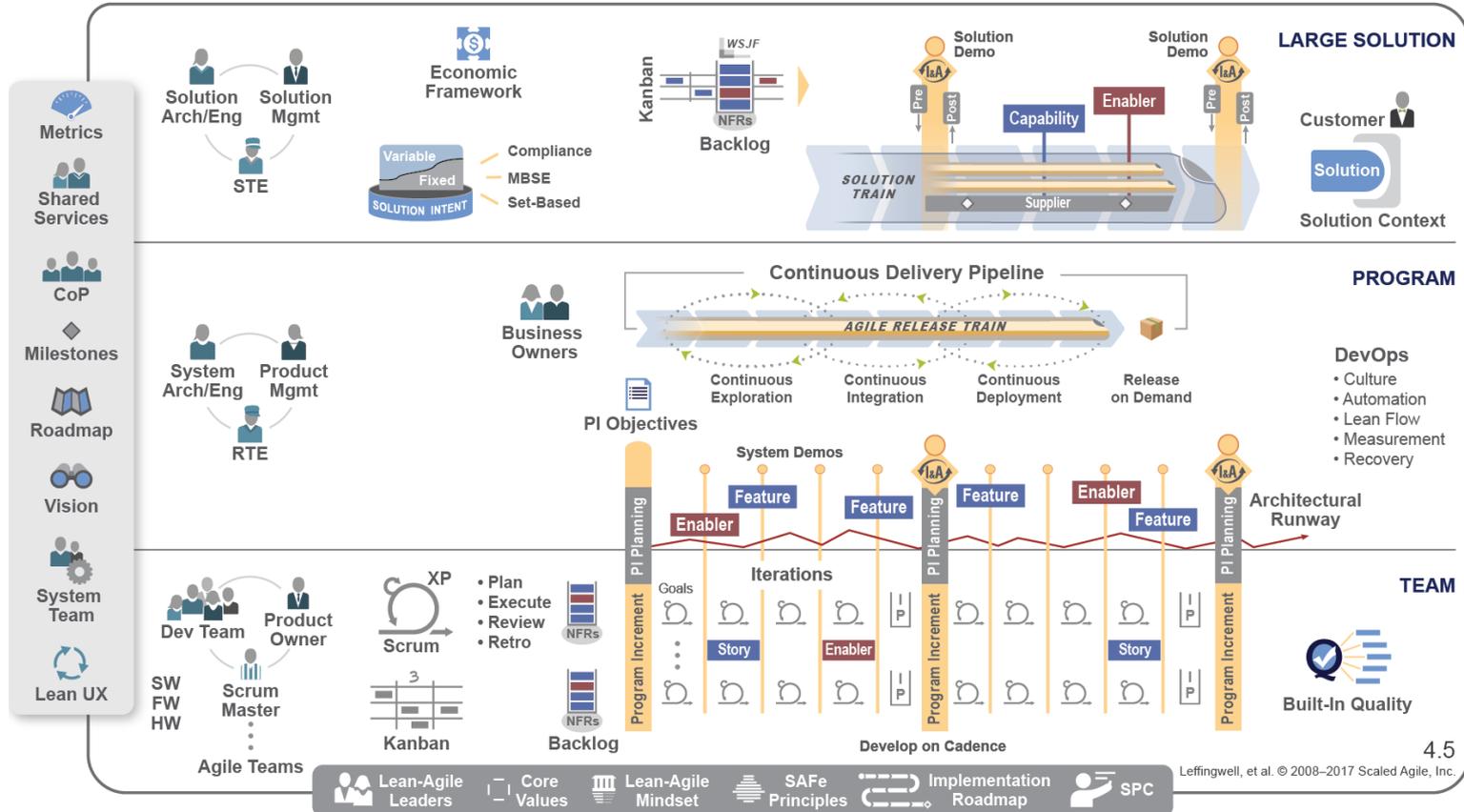
# Essential SAFe provides the basis for success



# Portfolio SAFe aligns strategy and execution



# Large Solution SAFe coordinates ARTs with a Solution Train



# SAFe Roles for PMs: Portfolio Level



SAFe Role	Description	PM Core Competency Areas
Portfolio	<ul style="list-style-type: none"> <li>• Participates in the highest level of decision-making and financial accountability for products and solutions in the SAFe portfolio</li> <li>• Function performed by business managers and executives ultimately responsible for portfolio strategy, operations, and execution</li> </ul>	<p><b>General Management skills</b></p> <ul style="list-style-type: none"> <li>• Leadership</li> <li>• Negotiation</li> <li>• Communication</li> <li>• Team building</li> </ul> <p><b>Project Management skills</b></p> <ul style="list-style-type: none"> <li>• Organizational savvy</li> </ul> <p><b>Industry skills</b></p> <ul style="list-style-type: none"> <li>• Breadth in specific application / industry knowledge</li> <li>• Life cycle management</li> </ul> <p><b>Strategic in approach:</b> understands and addresses inter-dependencies and real issues</p>
	<ul style="list-style-type: none"> <li>• Responsible for coordination of portfolio epics</li> <li>• Defines Epics, Minimum Viable Product and lean business case</li> <li>• Facilitates implementation of approved Epics</li> <li>• Works directly with Solution Train and Agile Release Train (ART) stakeholders to define Capabilities and Features</li> </ul>	

# SAFe Roles for PMs: Large Solution Level



	SAFe Role	Description	PM Core Competency Areas
Large Solution	Solution Manager	<ul style="list-style-type: none"> <li>• Content authority for the Solution Backlog</li> <li>• Works with customers to understand their needs</li> <li>• Creates Solution Vision and Roadmap</li> <li>• Defines requirements</li> <li>• Coordinates work</li> </ul>	<p><b>General Management skills</b></p> <ul style="list-style-type: none"> <li>• Leadership</li> <li>• Negotiation</li> <li>• Communication</li> <li>• Team building</li> </ul>
	Solution Train Engineer	<ul style="list-style-type: none"> <li>• Servant Leader and coach for the Solution Train</li> <li>• Facilitates and guides work of all ARTs and suppliers in the Value Stream</li> <li>• Facilitates major events and processes</li> <li>• Assists teams</li> <li>• Communicates with stakeholders</li> <li>• Escalates impediments</li> <li>• Helps manage risk</li> <li>• Drives relentless improvement</li> </ul>	<p><b>Project Management skills</b></p> <ul style="list-style-type: none"> <li>• Organizational savvy</li> </ul> <p><b>Industry skills</b></p> <ul style="list-style-type: none"> <li>• Breadth in specific application / industry knowledge</li> <li>• Life cycle management</li> </ul> <p><b>Experience</b></p> <ul style="list-style-type: none"> <li>• Clear definition of requirements and timetables</li> <li>• Experience managing to deliverables and milestones</li> <li>• Ability to manage troubled teams / projects</li> </ul>

# SAFe Roles for PMs: Program



SAFe Role	Description	PM Core Competency Areas
Program	<ul style="list-style-type: none"> <li>• Content authority for the Program Backlog</li> <li>• Responsible for identifying customer needs</li> <li>• Prioritizes features</li> <li>• Develops the program Vision and Roadmap</li> </ul>	<p><b>General Management skills</b></p> <ul style="list-style-type: none"> <li>• Leadership</li> <li>• Negotiation</li> <li>• Communication</li> <li>• Team building</li> </ul> <p><b>Project Management skills</b></p> <ul style="list-style-type: none"> <li>• Organizational savvy</li> </ul> <p><b>Industry skills</b></p> <ul style="list-style-type: none"> <li>• Breadth in specific application / industry knowledge</li> <li>• Life cycle management</li> </ul> <p><b>Experience</b></p> <ul style="list-style-type: none"> <li>• Clear definition of requirements and timetables</li> <li>• Experience managing to deliverables and milestones</li> <li>• Ability to manage troubled teams / projects</li> </ul>
	<ul style="list-style-type: none"> <li>• Servant leader and coach for the ART</li> <li>• Facilitates major events and processes</li> <li>• Assists teams</li> <li>• Communicate with stakeholders</li> <li>• Escalate impediments</li> <li>• Help manage risk</li> <li>• Drive relentless improvement</li> </ul>	

## SAFe Roles for PMs: Team Level



	SAFe Role	Description	PM Core Competency Areas
Team	Product Owner	<ul style="list-style-type: none"> <li>• Content authority for the team level</li> <li>• Responsible for the team backlog</li> <li>• Prioritizes and accepts user stories</li> <li>• Represents the customer to the Agile team</li> </ul>	<p><b>General Management skills</b></p> <ul style="list-style-type: none"> <li>• Leadership</li> <li>• Negotiation</li> <li>• Communication</li> <li>• Team building</li> </ul> <p><b>Project Management skills</b></p> <ul style="list-style-type: none"> <li>• Organizational savvy</li> </ul> <p><b>Industry skills</b></p> <ul style="list-style-type: none"> <li>• Breadth in specific application / industry knowledge</li> <li>• Life cycle management</li> </ul> <p><b>Experience</b></p> <ul style="list-style-type: none"> <li>• Clear definition of requirements and timetables</li> <li>• Experience managing to deliverables and milestones</li> <li>• Ability to manage troubled teams / projects</li> </ul>
	Scrum Master	<ul style="list-style-type: none"> <li>• Servant Leaders and coaches for an Agile team</li> <li>• Help enforce Agile practices</li> <li>• Help remove impediments</li> <li>• Foster an environment for high-performing team dynamics, continuous flow, and relentless improvement</li> </ul>	