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GLOBAL EA COMMUNITY SUMMIT 2020

For EA Users By EA Users

SAFe Agile Architecture Toolkit for Sparx

Introducing SAFe, a practical approach towards agile architecture, the importance of modeling and tool support, and how Sparx can realize this via an MDG

5 June 2020

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Agenda

1. SAFe
   - Agile Architecture
   - Modeling and Tool Support
2. SAFe Agile Architecture Toolkit for Sparx
   - Overview
   - Aligning architecture with business value
   - Developing Solution Vision, Solution Intent, and Roadmaps
   - Supporting Program Increment (PI) planning and execution
   - Supporting new Strategic Themes and Value Streams
3. Next Steps
   - Toolkit
   - Enterprise Architecture

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SAFe

SAFe Agile Architecture Toolkit for Sparx

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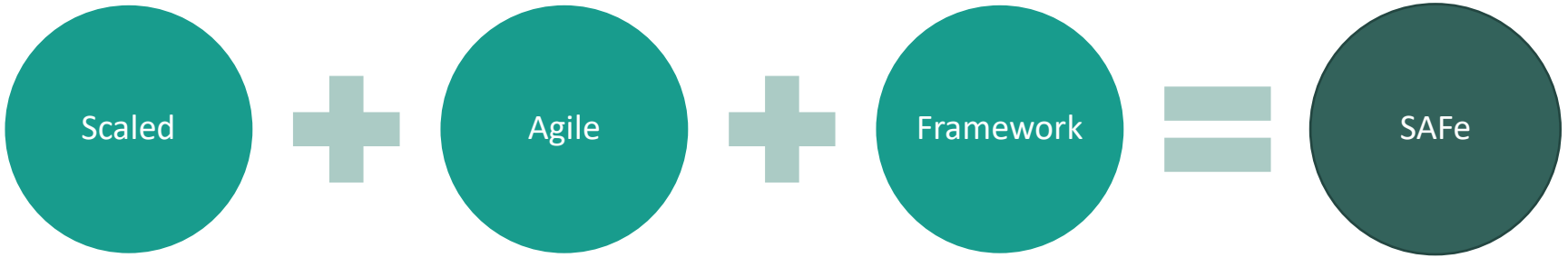
Scaled Agile Framework (SAFe)

"SAFe® for Lean Enterprises is a knowledge base of proven, integrated principles, practices, and competencies for achieving business agility using Lean, Agile, and DevOps"



- Enterprise scope
- Configurations (Essential, Portfolio, Large Solution, Full)

- Lean
- Agile
- DevOps

- v5.0 (January 2020)
- Commercial
- Training
- Certification
- Publications
- Conferences

- Scaled Agile, Inc.
- 350+ Partners
- Contributors
- Community Platform

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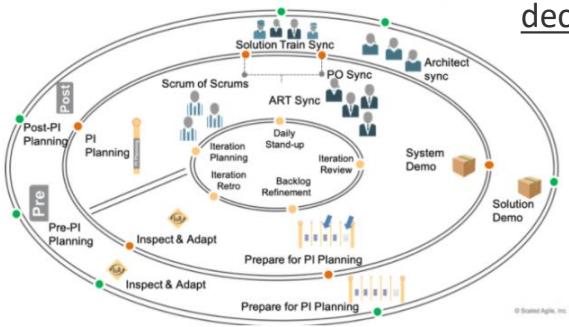
Source: https://www.scaledagileframework.com/
https://www.scaledagileframework.com/safe-for-lean-enterprises/

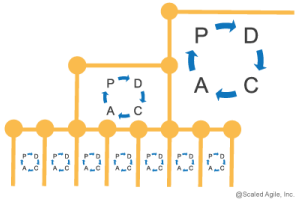
SAFe & Agile Architecture



- Architecture Sync

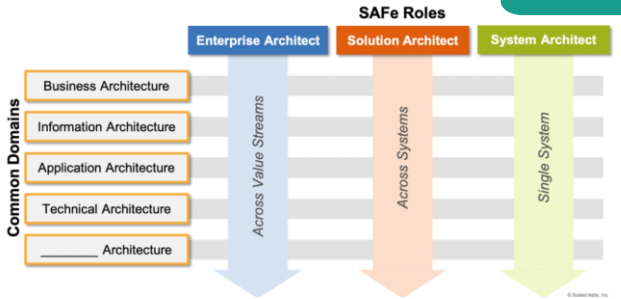
- Decentralize decision-making

- Assume variability; preserve options



- Build incrementally with fast, integrated learning cycles

- SAFe Architecture Roles

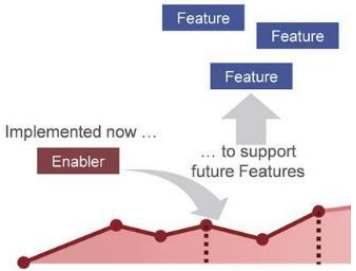


Values

Collaborations

Practices

Safe Agile Architecture



- Architectural Runway

- Balance Intentional Architecture and Emergent Design

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Source: https://www.scaledagileframework.com/agile-architecture/

Modeling and Tool Support

- Solution Intent

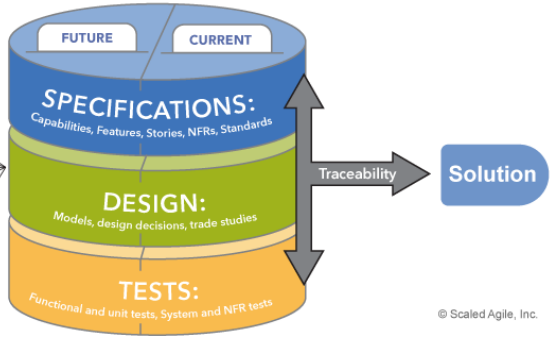
Make solution and its intent dynamic

Keep options open with fixed and variable Solution Intent

Collaboratively develop the Solution Intent

Connect Solution Intents across the supply chain

Create minimal, but sufficient documentation



"Favoring models over documents"

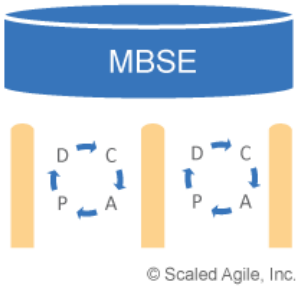
"When in doubt, model it out"

Explore alternatives and learn faster

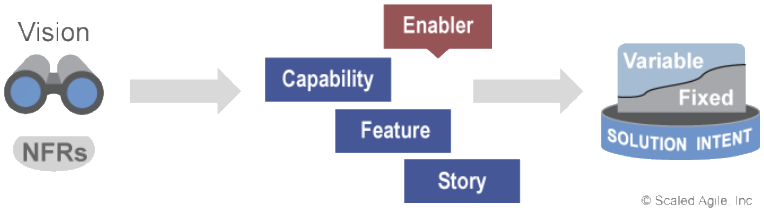
Support compliance and impact analysis

Generate documentation

Build model quality in



- Model-Based Systems Engineering



- Developing Solution Intent

"Solution Intent evolves through collaboration"

"Keep Options Open with Fixed and Variable Solution Intent"

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Source: https://www.scaledagileframework.com/solution-intent/
https://www.scaledagileframework.com/model-based-systems-engineering/

Modeling and Tool Support (2)

Who, What,
When, Why

How,
With what

- Modeling

SAFe Agile Architecture
Toolkit for Sparx MDG

- Collaboration

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SAFe Agile Architecture Toolkit for Sparx

SAFe Agile Architecture Toolkit for Sparx

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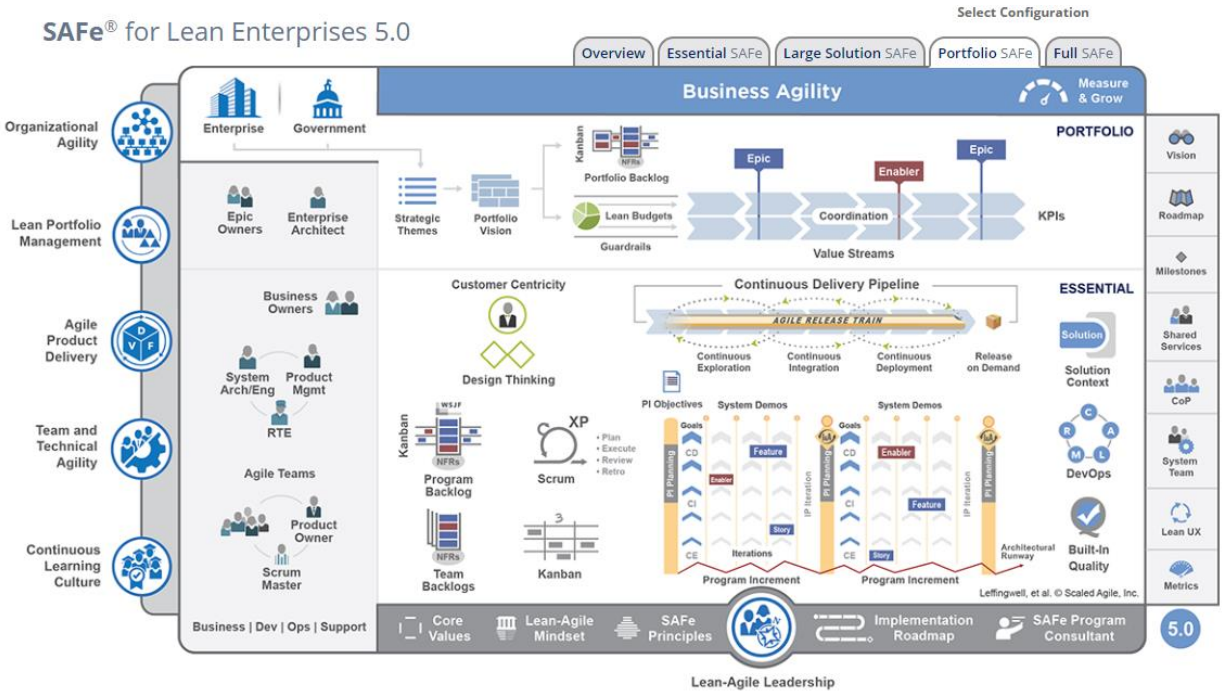
Overview



- SAFe Portfolio
  - Development Value Stream
  - Epic
  - Epic Enabler
  - Operational Value Stream
  - Operational Value Stream - End
  - Operational Value Stream - Trigger
  - Portfolio Vision
  - Strategic Theme
- SAFe Large Solution
  - Capability
  - Capability Enabler
  - Solution
  - Solution Context
  - Solution Roadmap
  - Solution Train
  - Solution Vision
- SAFe Essential
  - Agile Release Train (ART)
  - Feature
  - Feature Enabler
  - Impediment
  - Maintenance
  - Milestone / Event
  - NFR
  - PI
  - PI Objective
  - PI Roadmap
  - Program Vision
  - Release / Increment
  - Risk
  - Significant Depenency
  - Stretch Objective
  - Supplier
  - Team / Shared Service
  - User Story
  - User Story Enabler
- SAFe Relationships
  - Dependency
  - Owns
  - Red Wire

- SAFe Portfolio Canvas
  - Budget
  - Channel
  - Cost Structure
  - Customer Relationship
  - Customer Segment
  - Key Activity
  - Key Partner
  - Key Resource
  - KPI / Revenue
  - Revenue Stream
- SAFe Portfolio
- SAFe Large Solution
- SAFe Relationships
- Common
- Common Relationships
- Artifacts

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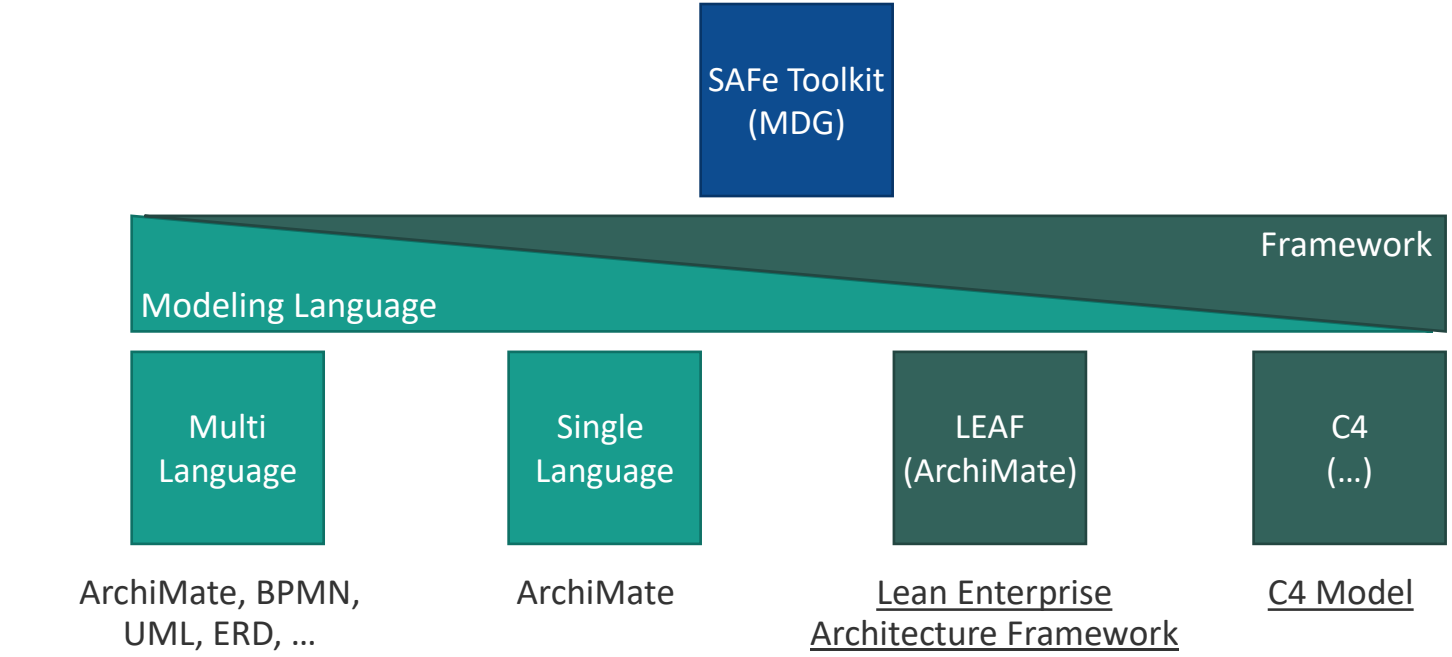
Source: https://www.scaledagileframework.com

Overview (2)



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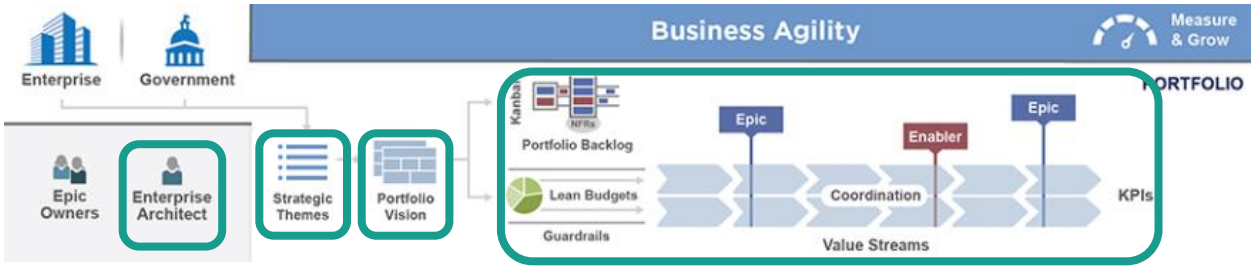
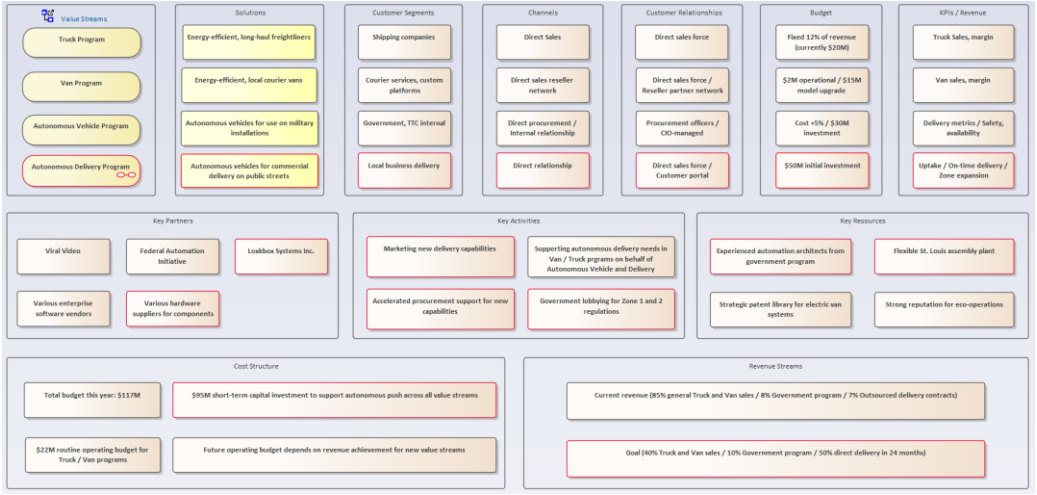
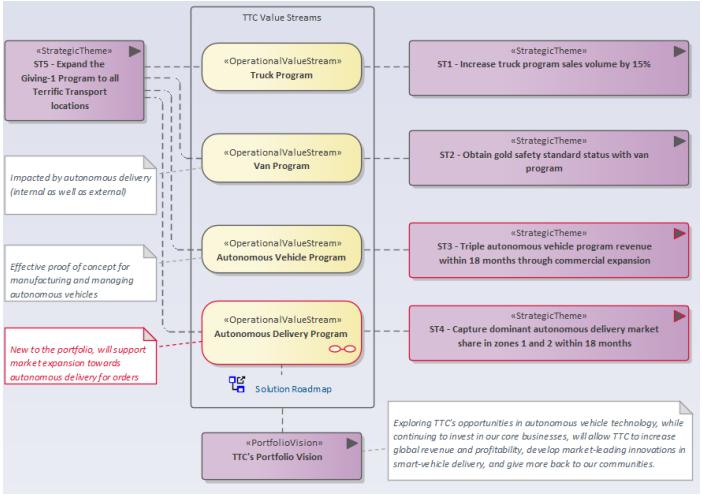
Aligning architecture with business value







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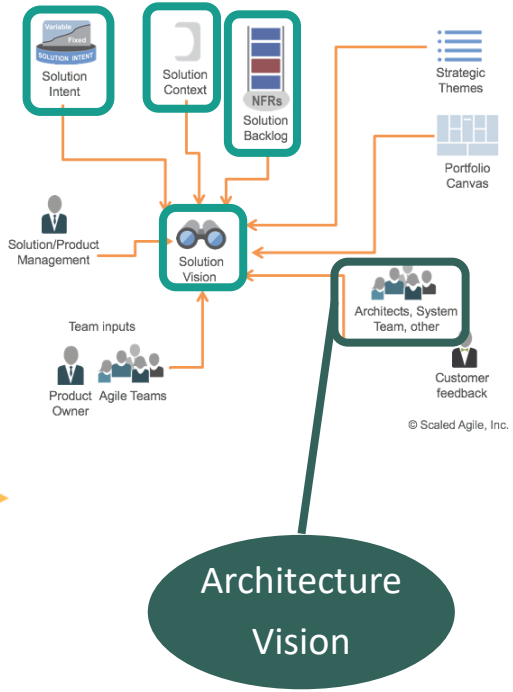
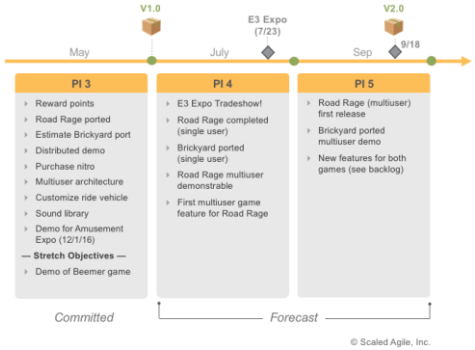
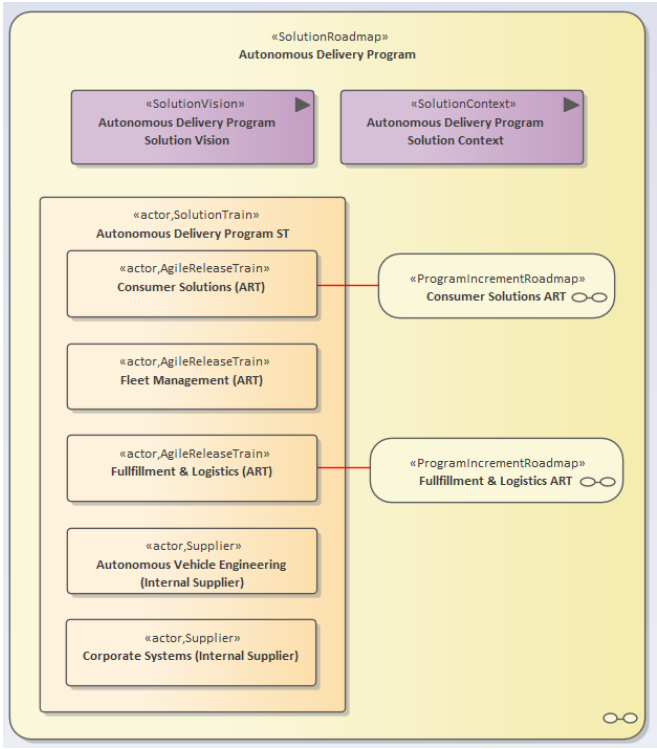
Developing Solution Vision, Solution Intent, and Roadmaps







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https://www.scaledagileframework.com/nonfunctional-requirements/

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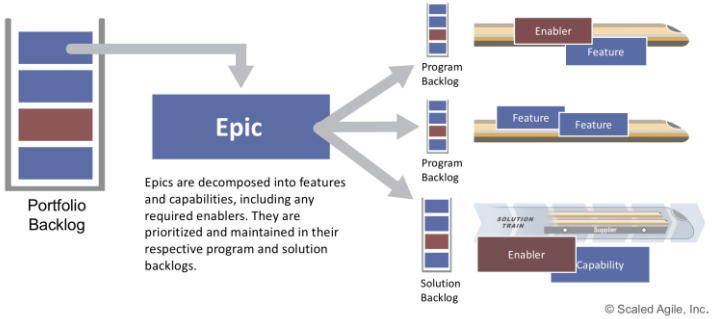
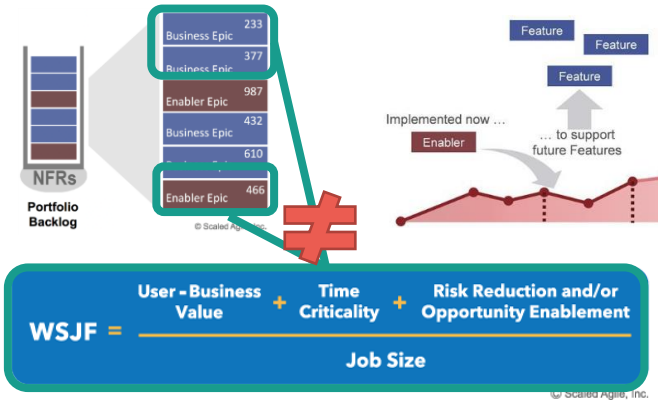
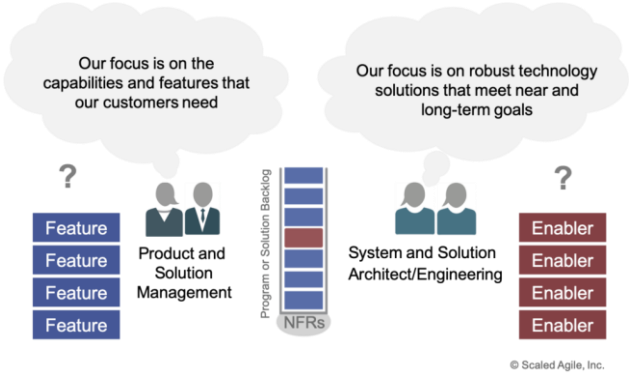
Supporting Program Increment (PI) planning and execution

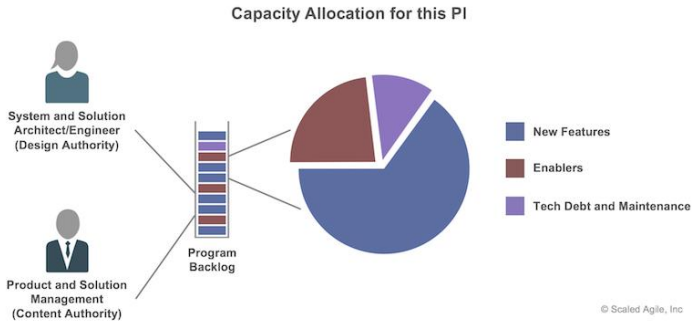




Agile Architecture

- ROAM
  - **R**esolved
  - **O**wned
  - **A**ccepted
  - **M**itigated





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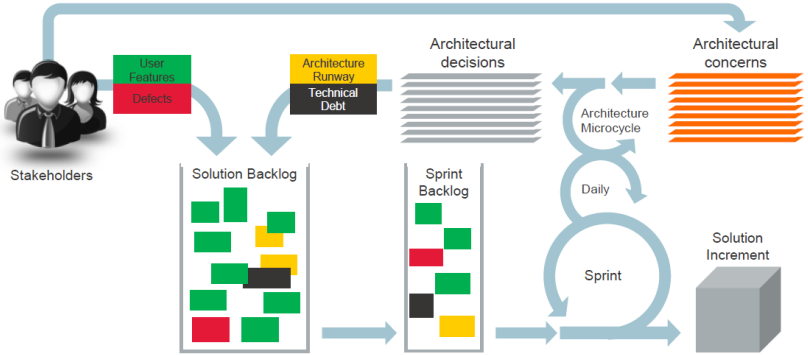
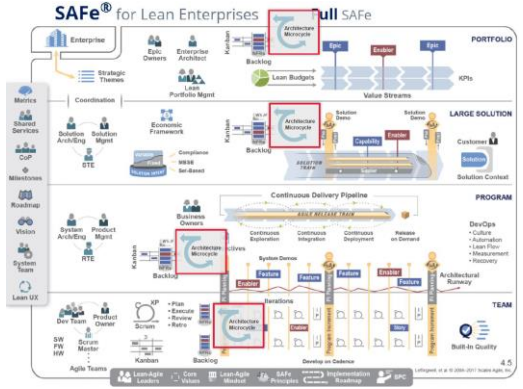
Source: https://www.scaledagileframework.com/portfolio-backlog/ https://www.scaledagileframework.com/program-and-solution-backlogs/ https://www.scaledagileframework.com/pi-planning/

A practical approach towards Agile Architecture – RCDA





SAFe: Lean Agile principles & RCDA

1. Take an economic view — Risk- and Cost-Driven Architecture
2. Apply systems thinking — The Solution is a System
3. Assume variability; preserve options — Minimal Architecture
4. Build incrementally; fast, integrated learning cycles — Architecture Microcycle
5. Base milestones on objective evaluation of working — Architectural Prototyping
6. Limit WIP, reduce batches, manage queue length — Just Enough Anticipation
7. Apply cadence, sync with cross-domain planning — Architecture Roadmapping
8. Unlock the intrinsic motivation of knowledge workers — Architecture is Team Work
9. Decentralize decision-making

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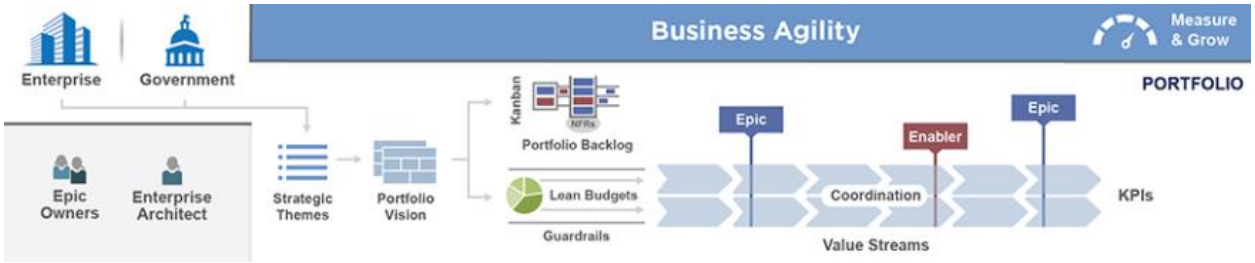
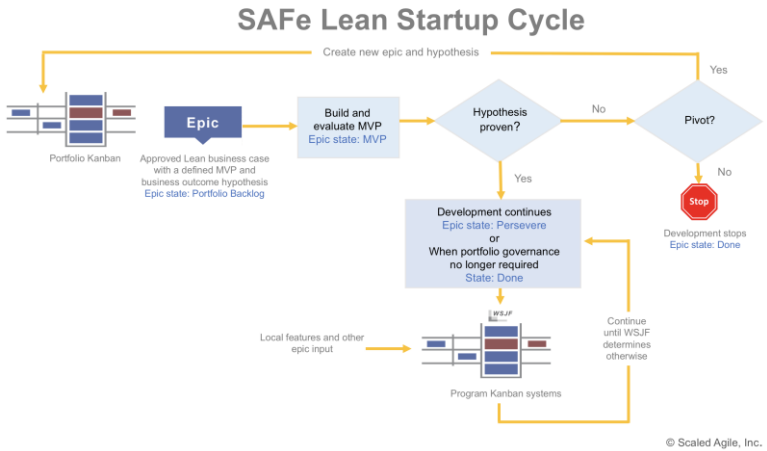
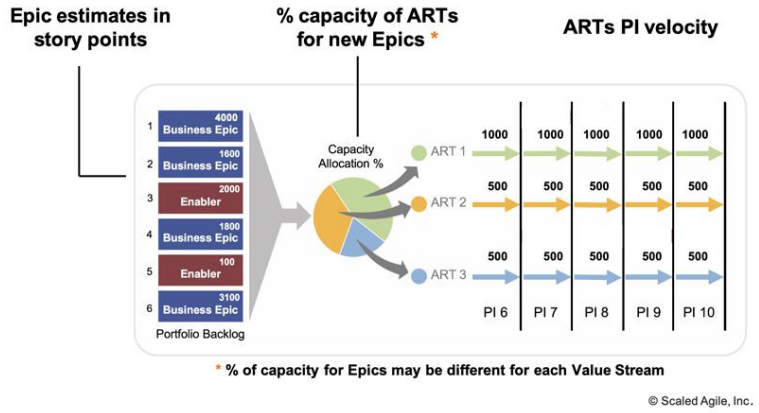
Source: https://resources.sei.cmu.edu/library/asset-view.cfm?assetid=454165

Carnegie Mellon University
Software Engineering Institute

Supporting new Strategic Themes and Value Streams







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Next Steps

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Next Steps

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