

These Aren't the Architects You're Looking For

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What Is Architecture?

“Architecture is the fundamental organization of a system, embodied in its components, their relationships to each other and the environment.”

ANSI/IEEE Standard 1471-2000

“Architecture is about the important stuff...whatever that is.”

Ralph Johnson, IEEE Standards Reviewer, XP Thought Leader

Who Does Architecture?

Common architecture domains

Business Architecture

- ▶ Focuses on how the business must evolve to meet strategic objectives
- ▶ Articulates business vision and impact on value stream & critical processes
- ▶ Identifies business change requirements that inform work in other domains

Information Architecture

- ▶ Focuses on how information stores and flows support business needs
- ▶ Identifies information change requirements and how data is consumed
- ▶ Designs systems that manage data storage, accuracy and flow

Application Architecture

- ▶ Focuses on systems and services used directly by customers / end-users
- ▶ Designs applications that support desired user experiences
- ▶ Manages evolution of application portfolio to balance value and cost

Technical Architecture

- ▶ Focuses on evolving infrastructure in alignment with business needs
- ▶ Designs hardware, networks and other systems in support of apps and data
- ▶ Manages evolution of hosting env's in support of critical SLAs & NFRs

Integration Architecture

- ▶ Focuses on how applications, systems, and services intercommunicate
- ▶ Defines common services, APIs and messaging protocols
- ▶ Defines how messages and payloads are routed and managed

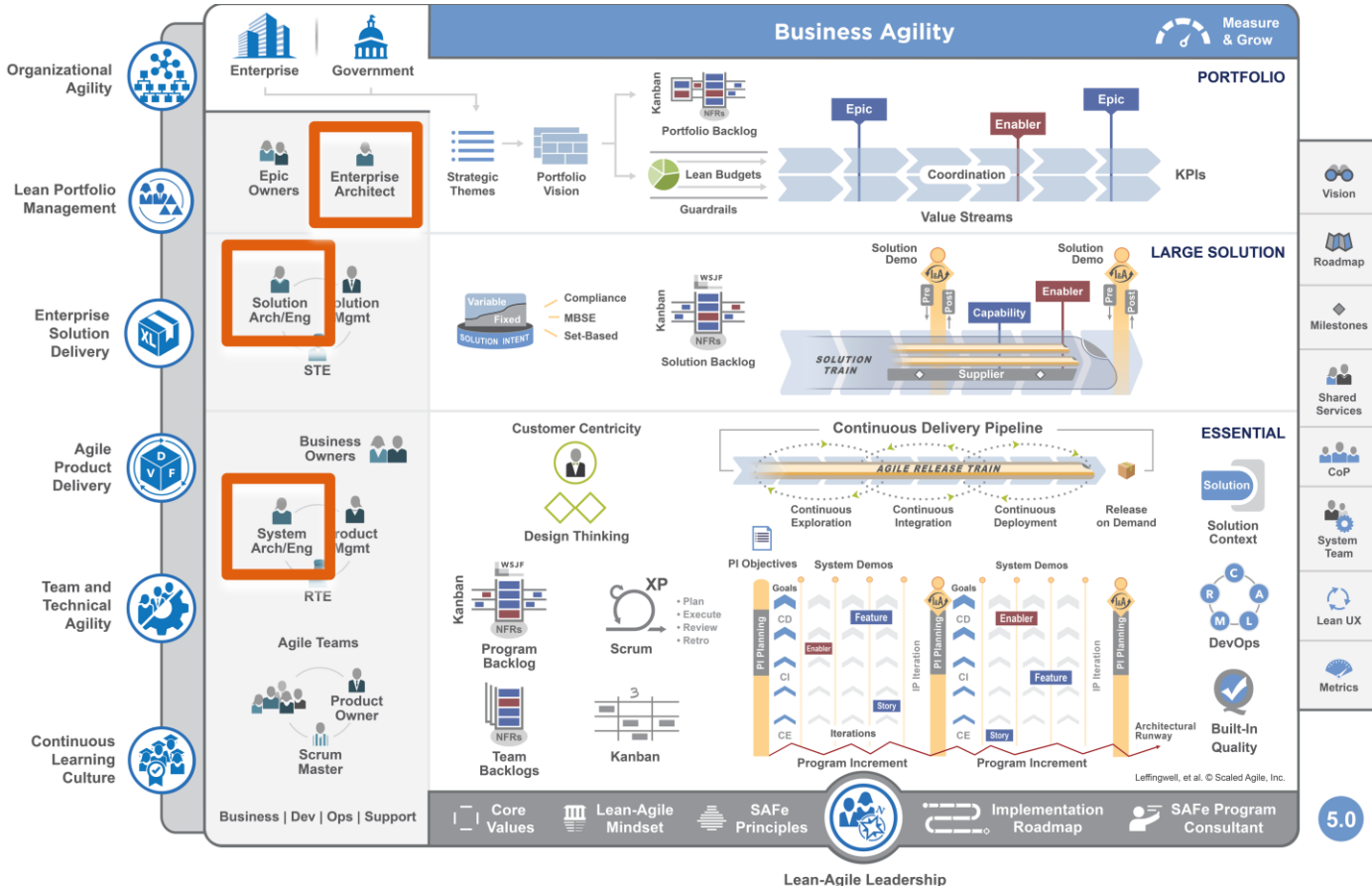
Security Architecture

- ▶ Focuses on protecting access to and use of sensitive information
- ▶ Determines security requirements and design supporting policies & systems
- ▶ Designs procedures for detecting and reacting to security breaches

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Architect roles on the SAFe Big Picture






 **Enterprise Architect**

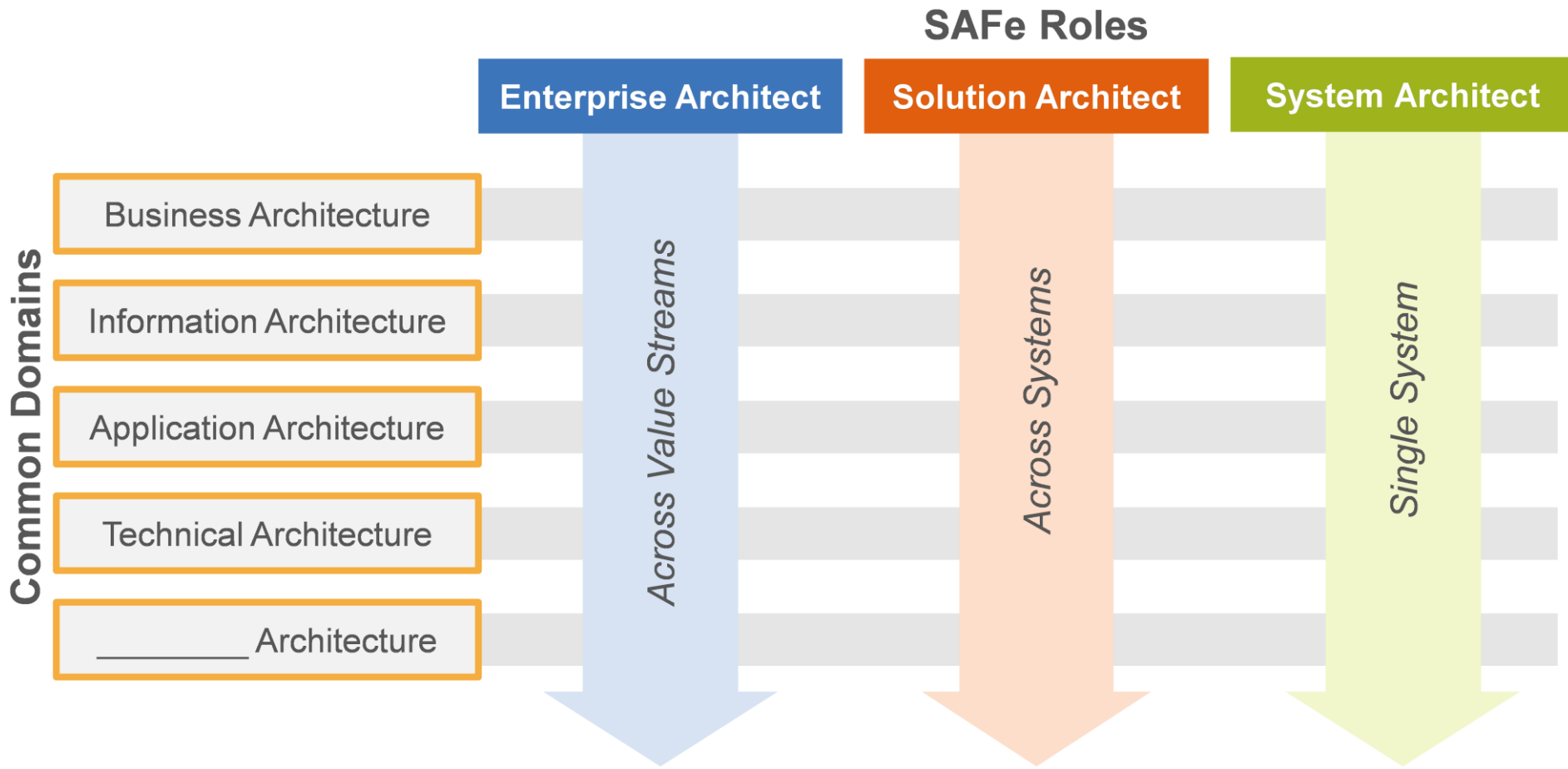
 **Solution Architect**

 **System Architect**

Architect roles and responsibilities in SAFe

Enterprise Architect Across Value Streams	Solution Architect Across Systems	System Architect Single System
		
<ul style="list-style-type: none">▶ Aligns architecture with business strategy▶ Provides strategic technical direction across ARTs & teams▶ Collaborates with Lean Portfolio Management▶ Guides and supports Architectural Runway strategy▶ Promotes modern technical and DevOps practices▶ Synchronizes architecture functions across ARTs & teams	<ul style="list-style-type: none">▶ Plans the Architectural Runway for a full Solution▶ Actively supports design and steering of Continuous Delivery pipeline▶ Establishes and supports definition of Non-functional Requirements▶ Partners with System Architects to elaborate Capabilities and Features▶ Fosters Built-in Quality for the entire Solution	<ul style="list-style-type: none">▶ Plans the Architectural Runway▶ Actively supports design and steering of CI/CD pipeline▶ Establishes and supports definition of Non-functional Requirements▶ Partners with Solution and Enterprise Architects to elaborate Epics, Capabilities, and Business Capabilities▶ Fosters Built-in Quality for the ART's systems

SAFe Architect roles span domains

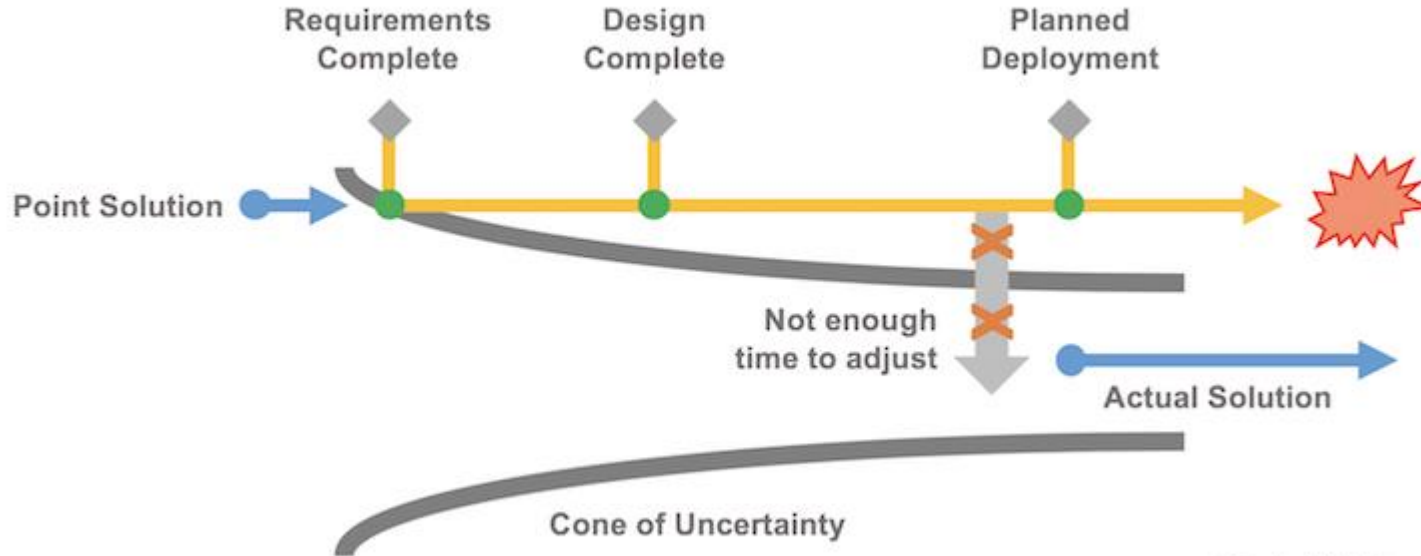


Agile Architecture in SAFe

Agile architecture in SAFe allows systems to evolve continuously over time, while simultaneously supporting the needs of current users.

scaledagileframework.com/agile-architecture/

Respect the Cone of Uncertainty

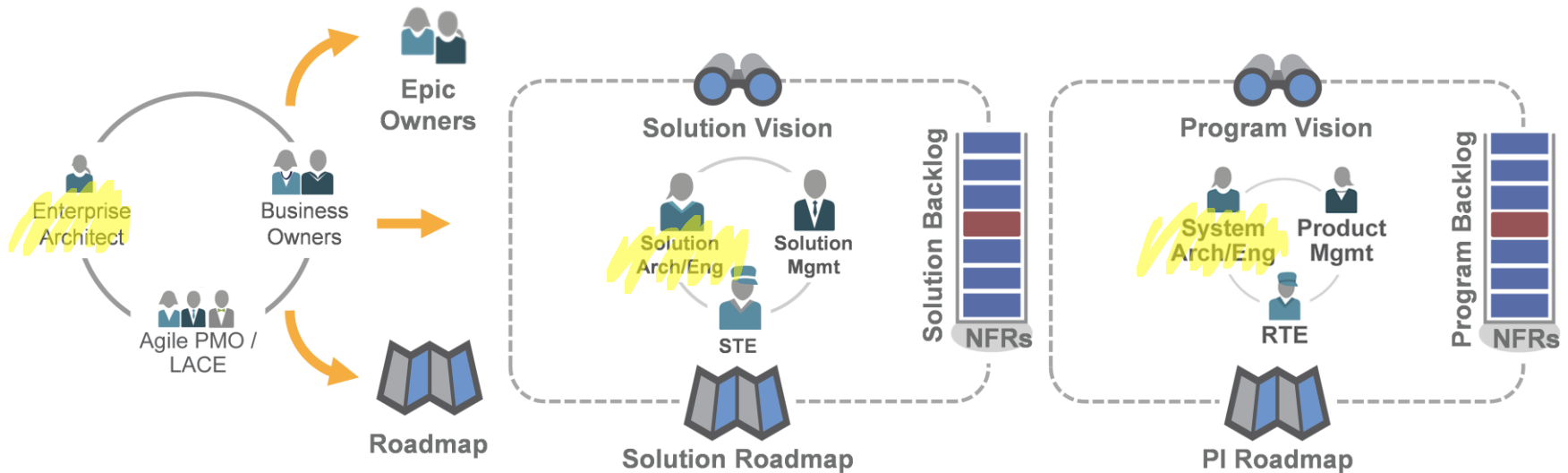


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Assume variability, preserve options. The architecture WILL change.

Managing uncertainty requires collaboration

Architects collaborate with many other roles in SAFe to align Vision, Roadmaps, and backlogs.

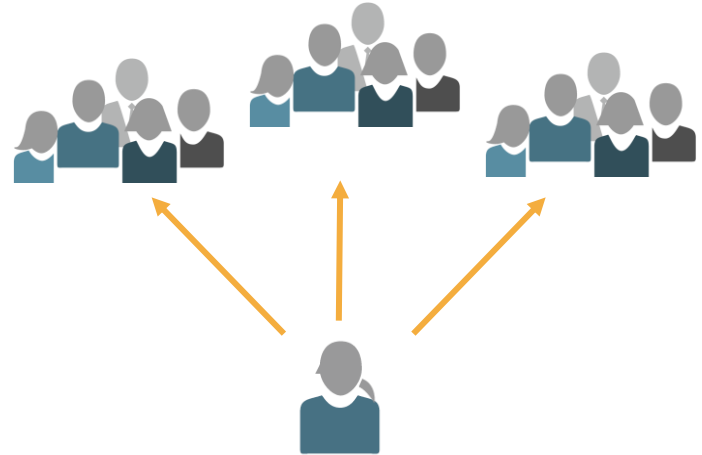


Emergent design and intentional architecture

Every team deserves to see the bigger picture. Every team is empowered to design their part.

Emergent design – teams grow the system design as User Stories require

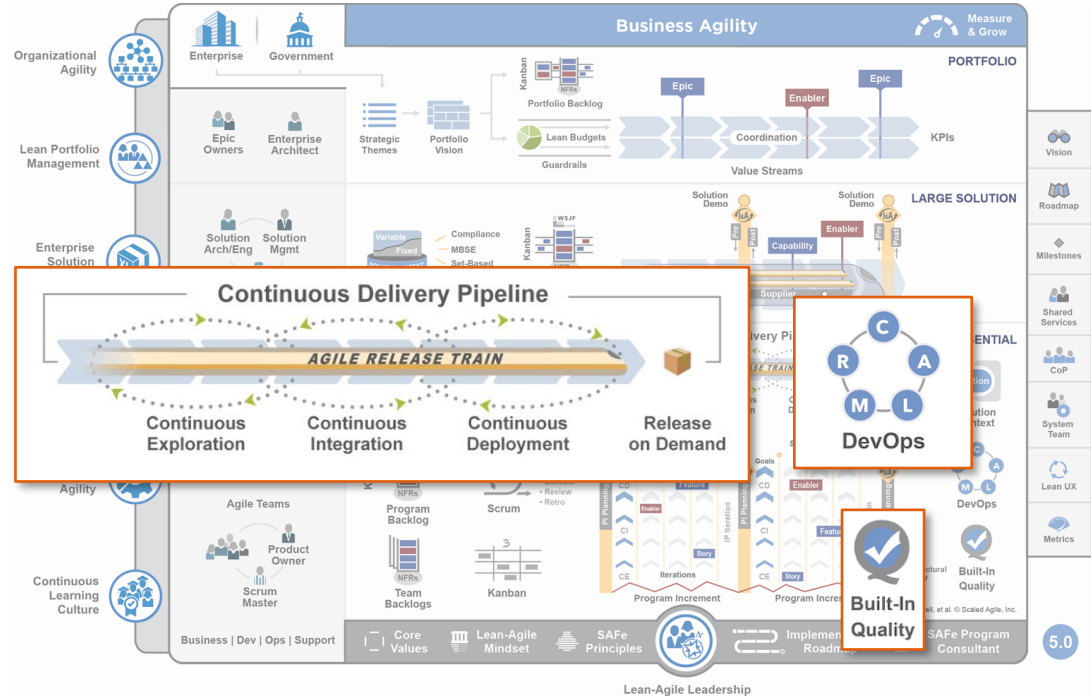
Intentional architecture – fosters team alignment and defines Architectural Runway



A balance between emergent design and intentional architecture is required for speed of development and maintainability.

Establishing DevOps and Release on Demand

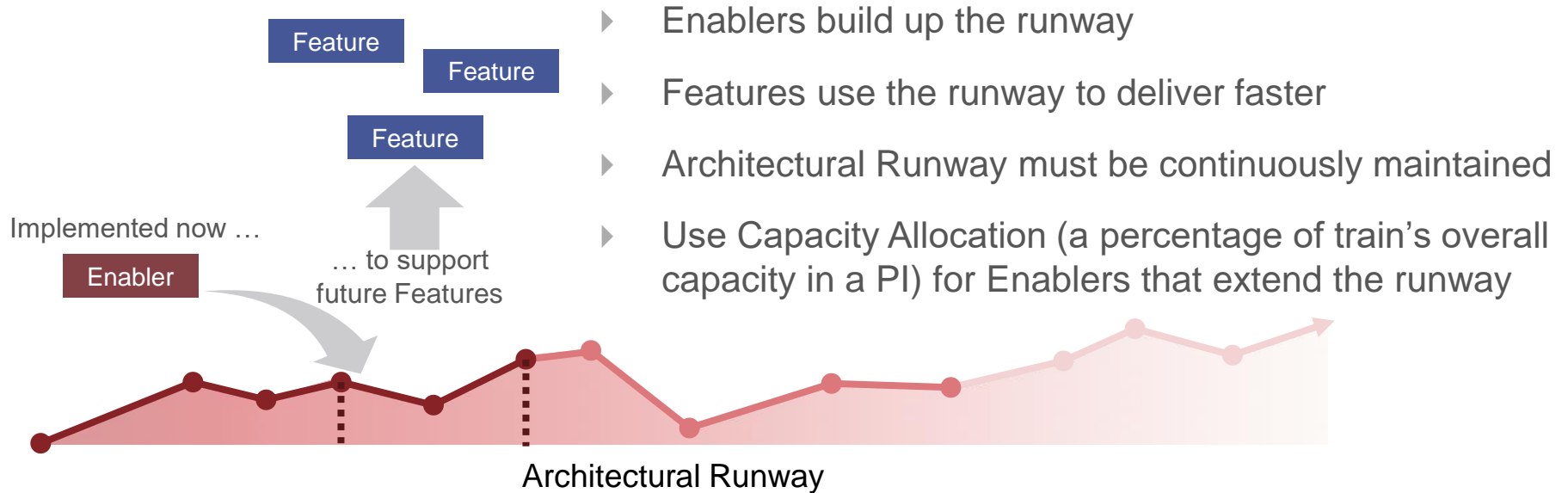
- ▶ Champion effective quality practices
- ▶ Instill a DevOps culture
- ▶ Build a Continuous Delivery Pipeline



Architectural Runway

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

Example: A new distributed execution platform enables faster, more effective player matching across all our multiplayer games



Final Thought: *architecture-as-code*

Everything is an experiment until it's in the hands of customers. Expect most experiments to fail.

So:

- Know the customer (Dev and Ops are among them)
- Architect in small batches
- Enable fast delivery
- Continuously evolve the architecture based on production feedback

Do not commit yourself, your ART, or your customers to architecture that has not been proven.

Cheers!

What questions do you have?