Lesson 7
Building an Agile Portfolio

Day 1

1. Introducing the Scaled Agile Framework
2. Embracing a Lean-Agile Mindset

   Break
3. Understanding SAFe Principles

   Lunch
4. Implementing an Agile Release Train
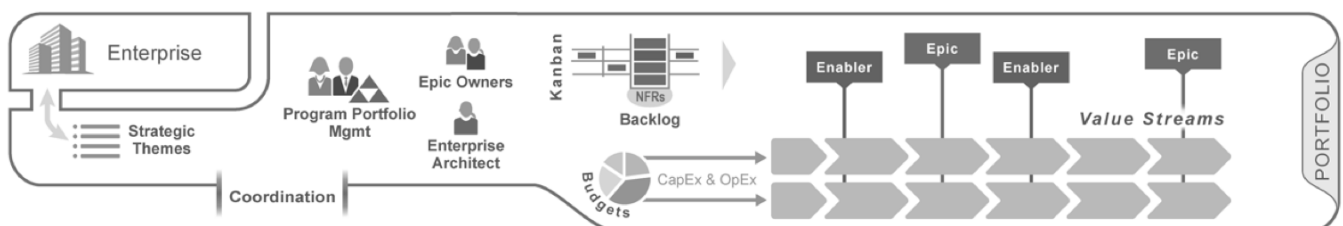
   Break
5. Experiencing PI Planning

Day 2

6. Executing and Releasing Value

   Break

7. Building an Agile Portfolio

   Lunch
8. Building Really Big Systems

   Break
9. Leading the Lean-Agile Enterprise

Learning objectives

7.1 Define Strategic Themes for a portfolio

7.2 Identify Portfolio Value Streams

7.3 Advance Solution behavior with portfolio Epics

7.4 Transition from project cost accounting to Lean-Agile Budgeting

7.5 Forecast Epics on a near term Roadmap

Note: This lesson contains optional material in the Appendix

The aim of the system

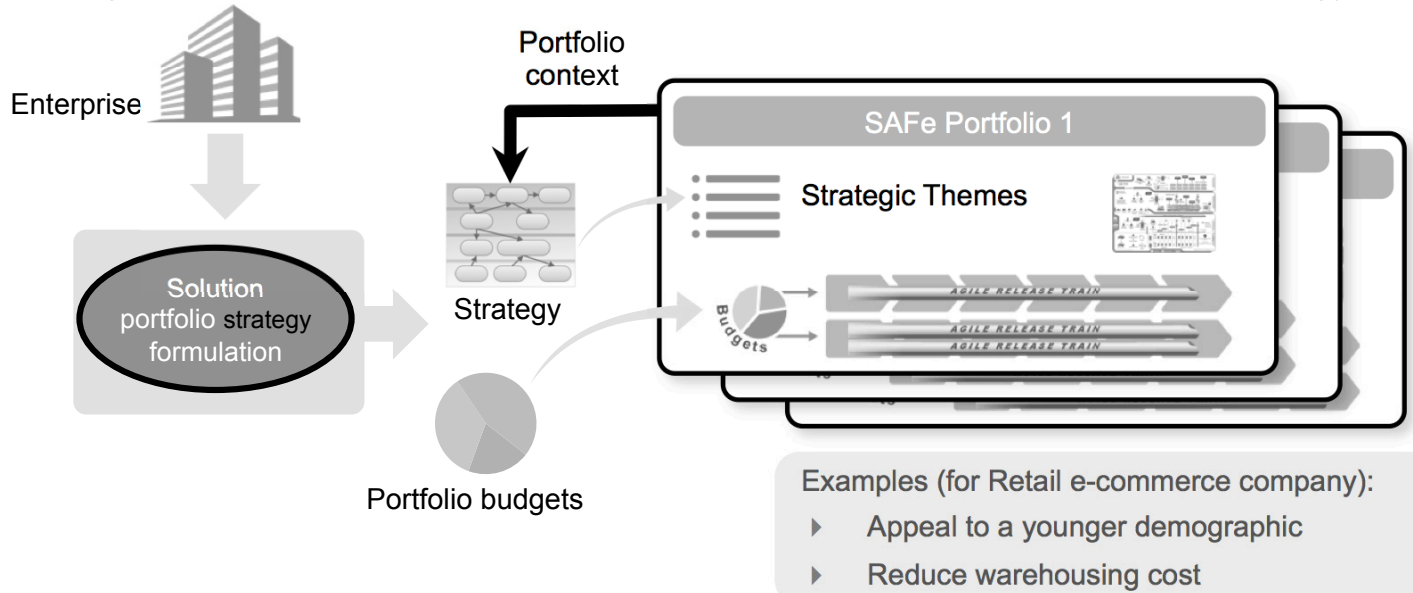*A system is a network of interdependent components that work together to try to accomplish the aim of the system.*

A system must have an aim. Without an aim, there is no system.

—W. Edwards Deming

Photo courtesy of the W. Edwards Deming Institute®

7.1 Define Strategic Themes for a portfolio

Collaborating on Strategic Themes

Strategic Themes connect each SAFe portfolio to the enterprise business strategy.

Examples (for Retail e-commerce company):
▸ Appeal to a younger demographic
▸ Reduce warehousing cost

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Formulating Strategic Themes

Strategic Themes are an output of a disciplined strategy formulation process.
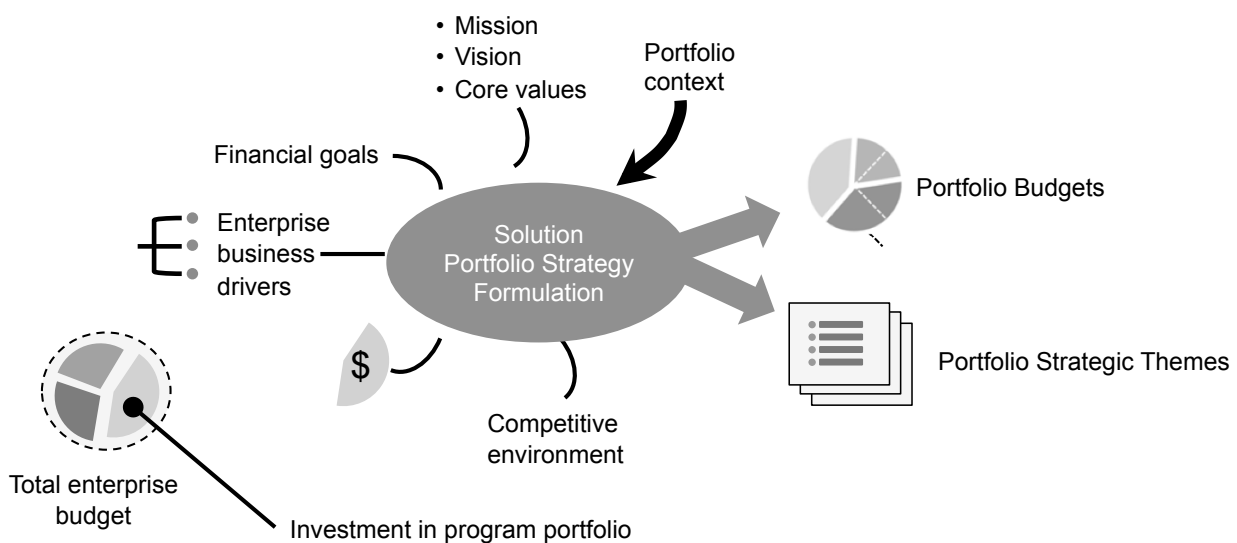
Influence of Strategic Themes

Strategic Themes influence ART funding, Portfolio Backlog, Program Vision and Roadmap.

1. Adjust ART and value stream funding to track to changing strategic priorities

2. Assist with epic evaluation and decision making

3. Influence each Program Vision and Roadmap
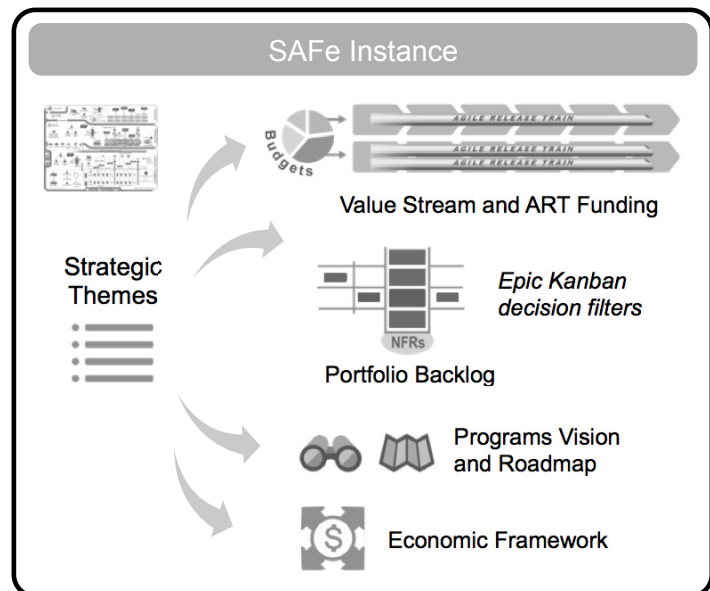
Exercise: Identify Strategic Themes

Identify three Strategic Themes that help define your strategy in the upcoming year.

5 min

7.2 Identify Portfolio Value Streams

Defining development Value Streams
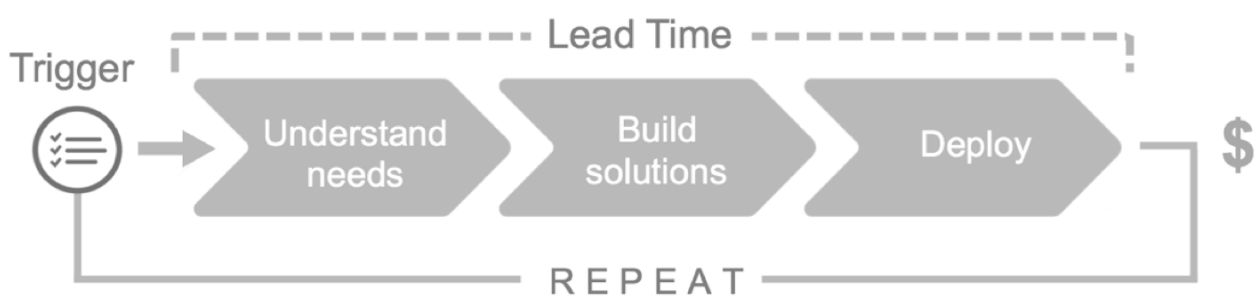
▸ A Value Stream is the sequence of steps used to deliver value to the customer

▸ It includes the whole sequence – concept or customer order – to delivery of value and/or receipt of cash

▸ It contains the people who do the work, the systems, and the flow of information and materials

Value at scale is distributed

Value often flows across organizational boundaries.
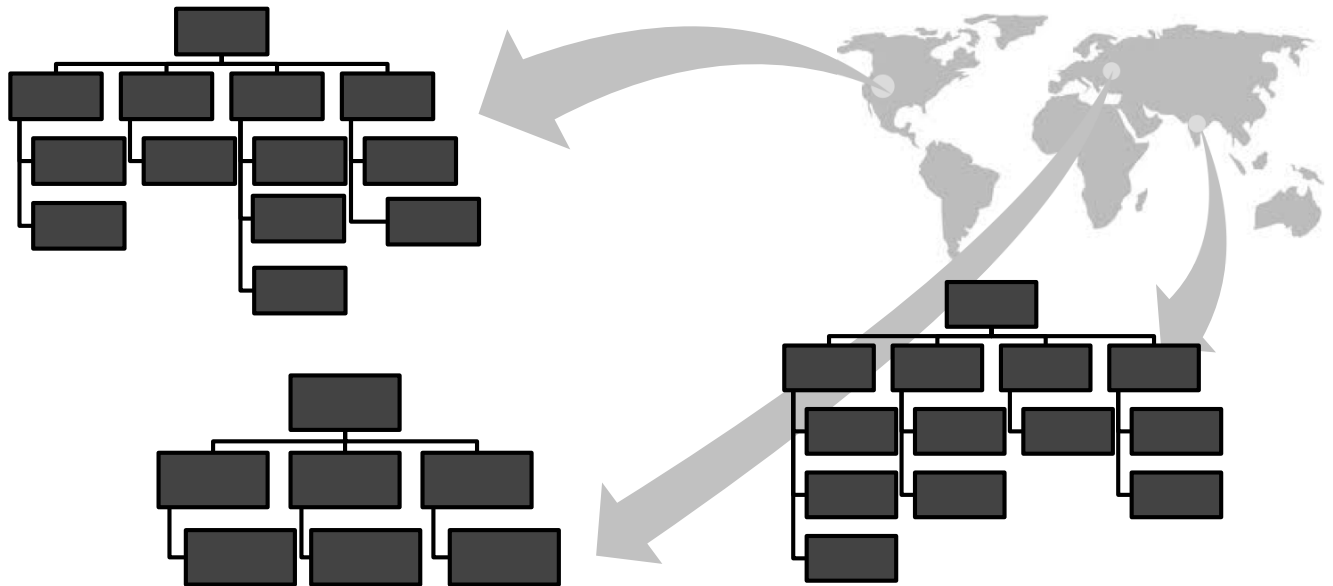
Finding Value Streams in the Portfolio

For each Value Stream, identify how value flows, and the individuals and features that produce the value.

Realize Value Streams via ARTs

ARTs are optimized for 50-125 people.

Multiple, smaller Value Streams can be realized by a single ART

Product 1

Product 2

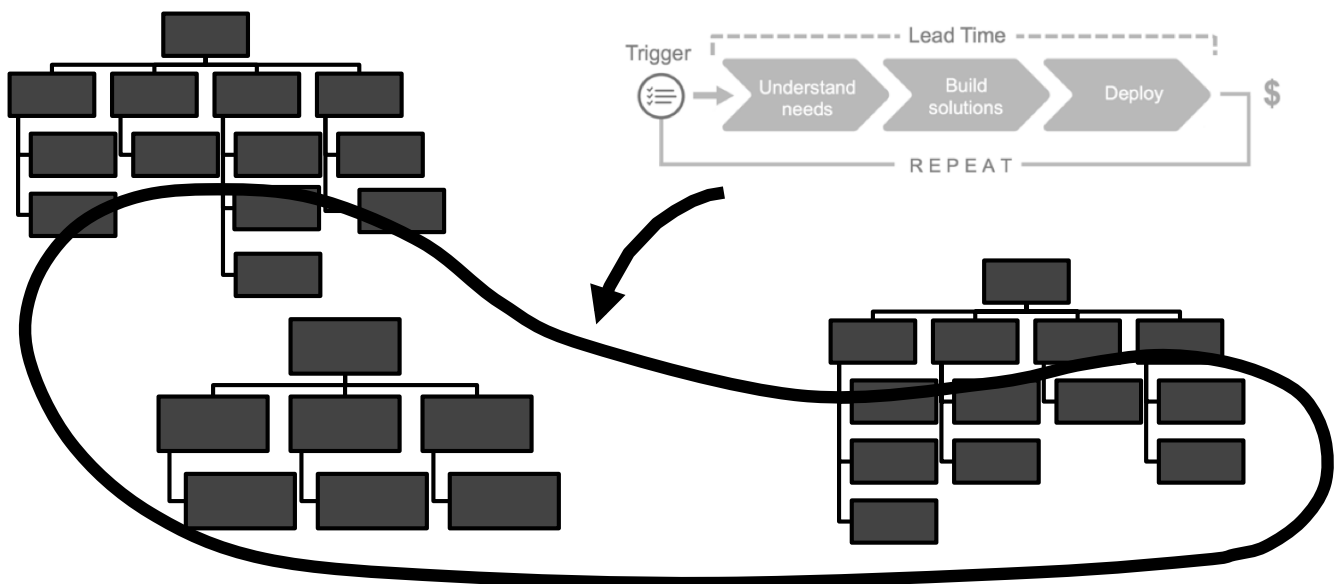*AGILE RELEASE TRAIN*

Some Value Streams fit well within the limit, and can be realized by a single ART

AGILE RELEASE TRAIN

System

Larger Value Streams require multiple ARTs

AGILE RELEASE TRAIN
AGILE RELEASE TRAIN

Large
solution

Split large Value Streams into multiple ARTs

The general case is some combination of:

- By customer or market segment
- By solution capabilities
- By subsystems/applications/components/platform
- By subsets of value: Enabling flows or Value Stream segments
- Other considerations may play a role
    - Source of funding
    - Location/geography

AGILE RELEASE TRAIN
AGILE RELEASE TRAIN

7.3 Advance Solution behavior with portfolio Epics

Epics carry centralized initiatives

Approved Epics form the Portfolio Backlog.

Epics are enterprise initiatives sufficiently substantial in scope so as to warrant analysis, understanding ROI, a lightweight business case, and approval

▸ Portfolio Epics cut across trains

▸ Program Epics can be implemented in a single train

▸ Business Epics are customer-facing

▸ Enabler Epics enable solutions to address business needs

▸ Developed and analyzed in the Portfolio Kanban System
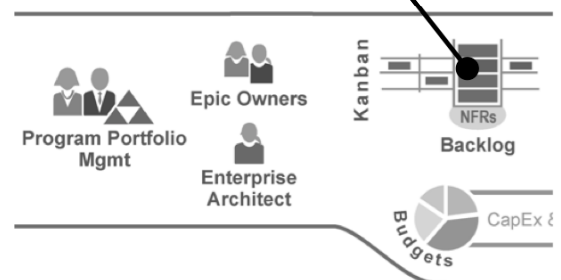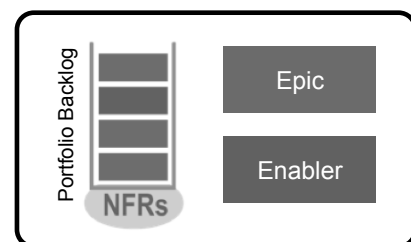
Epic Value Statement template

Forward-looking position statement	
For	\<customers\>
who	\<do something\>
the	\<solution\>
is a	\<something – the "how"\>
that	\<provides this value\>
Unlike	\<competitor, current solution, or non-existing solution\>
our solution	\<does something better – the "why"\>
Scope	
Success criteria:	• •
In scope:	• •
Out of scope:	• •
NFRs:	• •

Exercise: Epic writing

Using the prior slide as a guide, express one Epic in value statement form.
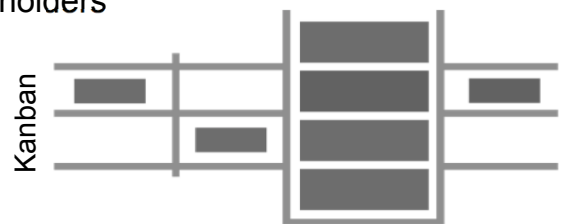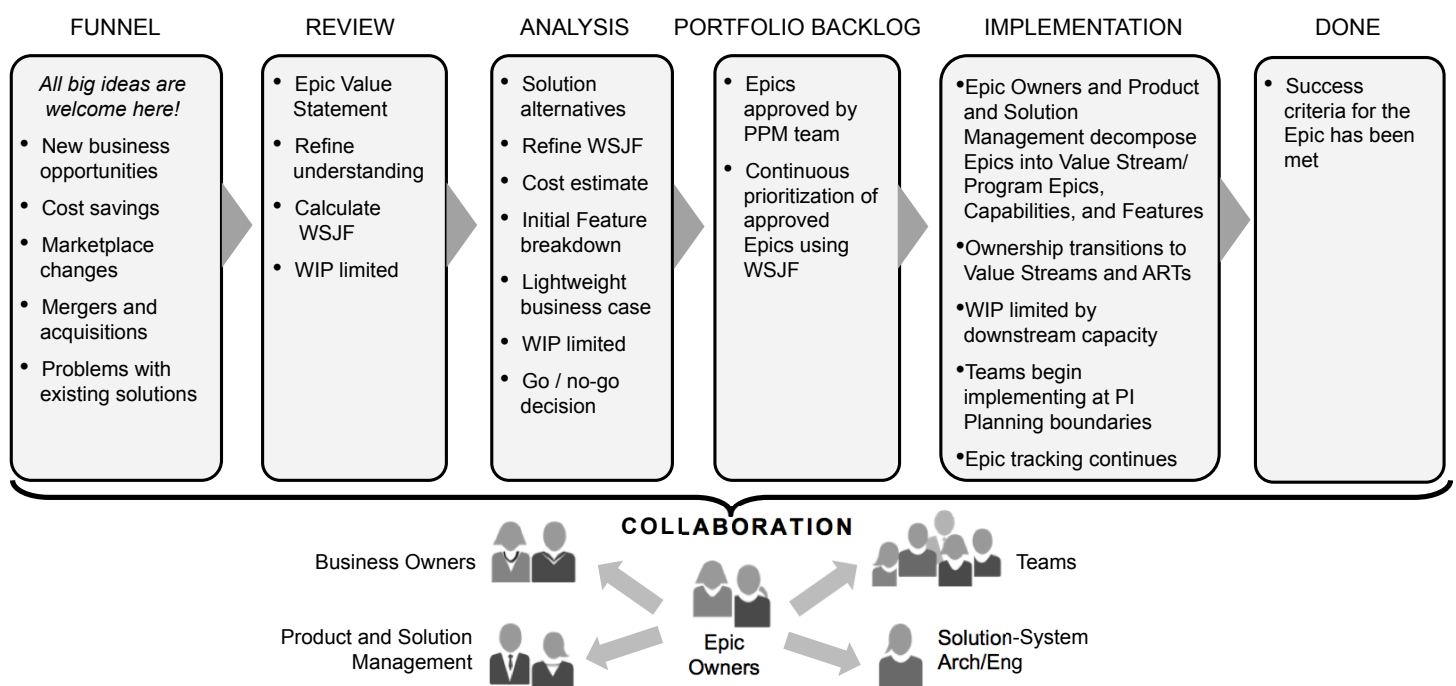
10 min

The Portfolio Kanban system

The Portfolio Kanban system manages the flow of Epics.

- ▸ Makes largest business initiatives visible

- ▸ Brings structure to analysis and decision making

- ▸ Provides WIP limits to ensure the teams analyze responsibly

- ▸ Helps prevent unrealistic expectations

- ▸ Helps drive collaboration amongst the key stakeholders

- ▸ Provides a transparent and quantitative basis for economic decision-making

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Prototypical Portfolio Kanban system

FUNNEL	REVIEW	ANALYSIS	PORTFOLIO BACKLOG	IMPLEMENTATION	DONE
All big ideas are welcome here! • New business opportunities • Cost savings • Marketplace changes • Mergers and acquisitions • Problems with existing solutions	• Epic Value Statement • Refine understanding • Calculate WSJF • WIP limited	• Solution alternatives • Refine WSJF • Cost estimate • Initial Feature breakdown • Lightweight business case • WIP limited • Go / no-go decision	• Epics approved by PPM team • Continuous prioritization of approved Epics using WSJF	• Epic Owners and Product and Solution Management decompose Epics into Value Stream/ Program Epics, Capabilities, and Features • Ownership transitions to Value Streams and ARTs • WIP limited by downstream capacity • Teams begin implementing at PI Planning boundaries • Epic tracking continues	• Success criteria for the Epic has been met

COLLABORATION

Business Owners

Product and Solution Management

Epic Owners

Teams

Solution-System Arch/Eng

Epics deserve a Lightweight Business Case

Investment in Epics is a serious matter; analyses and informed decision-making are crucial.

‣ Just the right amount of analysis

‣ Avoid over-specificity

‣ Understand ROI

‣ Understand implementation impact

‣ Develop incremental implementation strategy

‣ Gain approval

Epic Lightweight Business Case Template

Online template download in SAFe at www.scaledagileframework.com/epic

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Portfolio Backlog

Portfolio Backlog holds Epics approved for implementation.

‣ These epics have made it through the portfolio Kanban with go approval

‣ Low-cost holding pattern for upcoming implementation work

‣ Sizing estimates are in story points

‣ Avoid excess WIP, await implementation capacity

Portfolio Backlog

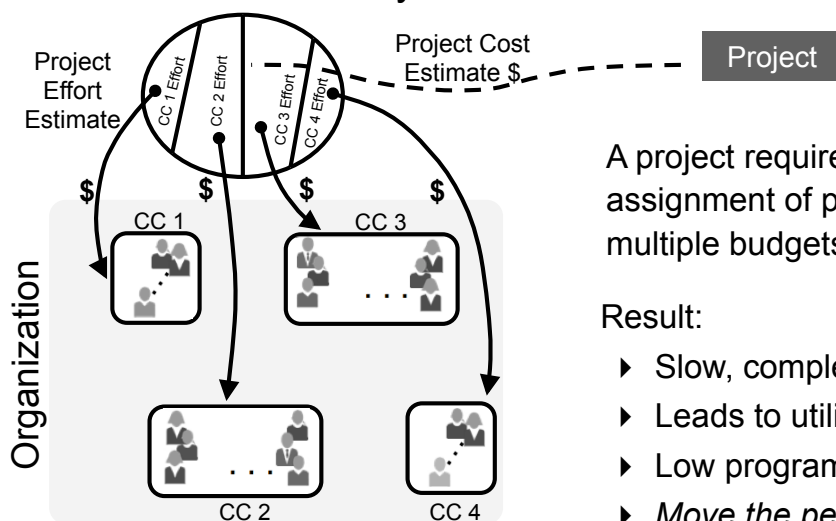| 3000 Business Epic |
| 2300 Business Epic |
| 5000 Enabler Epic |
| 4000 Business Epic |
| 1100 Enabler Epic |
| 3000 Business Epic |

7.4 Transition from project cost accounting to Lean-Agile Budgeting

Agile software development and traditional cost accounting don't match.
—Rami Sirkia and Maarit Laanti

Problem: Cost Center Budgeting

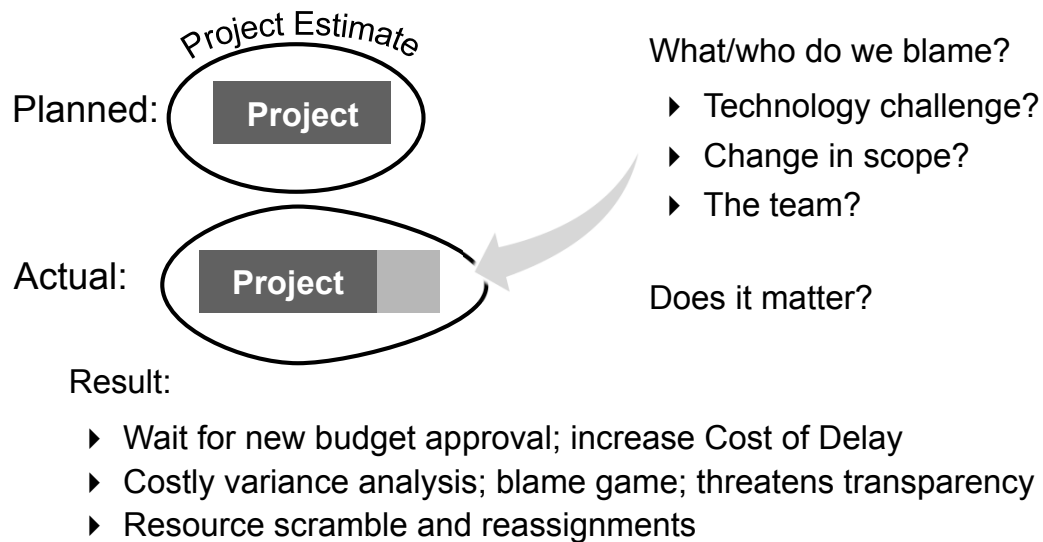Traditional project-based, cost center budgeting creates overhead and friction, lowers velocity.

A project requires collaboration of cost centers, assignment of people, budget, and schedule. It takes multiple budgets to build a single project budget.

Result:

▸ Slow, complex budgeting process
▸ Leads to utilization-based planning and execution
▸ Low program throughput
▸ *Move the people to the work*

Problem: "Projects" increase Cost of Delay

When overruns happen, project accounting and re-budgeting increases Cost of Delay and impacts culture.

Project Estimate

Planned: **Project**

Actual: **Project**

What/who do we blame?

‣ Technology challenge?
‣ Change in scope?
‣ The team?

Does it matter?

Result:

‣ Wait for new budget approval; increase Cost of Delay
‣ Costly variance analysis; blame game; threatens transparency
‣ Resource scramble and reassignments

# Solution: Lean-Agile Budgeting

Fund Value Streams, not projects

Funding Value Streams provides for full control of spend, with:

‣ No costly and delay-inducing project cost variance analyses
‣ No resource reassignments
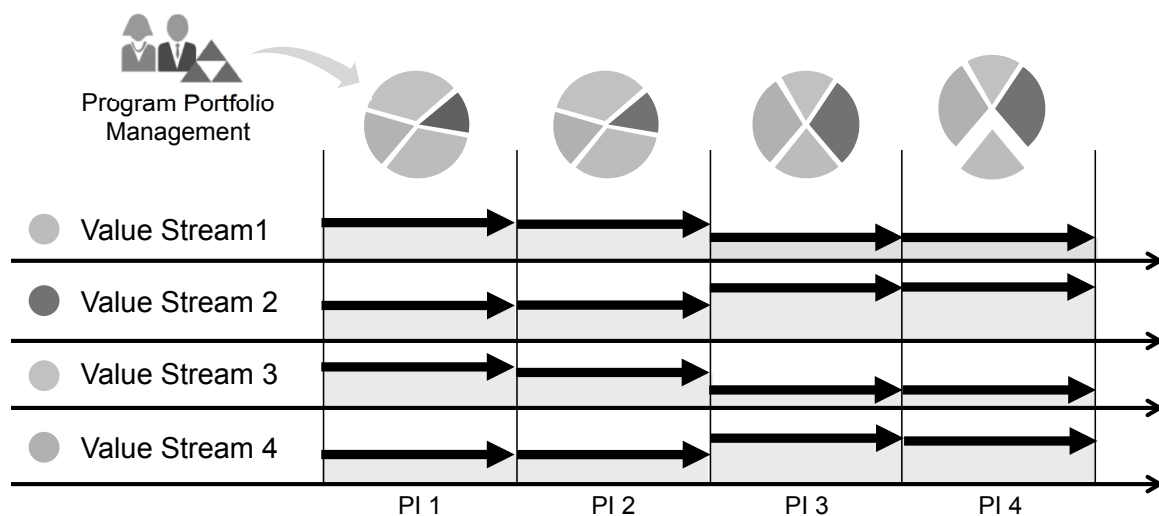‣ No blame game for project overruns

Value Streams
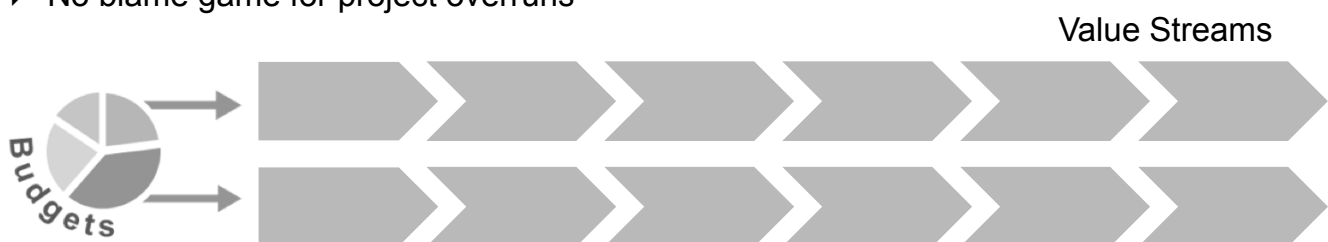
Budgets

Control costs with increased flexibility

ART Budgets and resources are unaffected by Feature cost overruns or changing priorities.
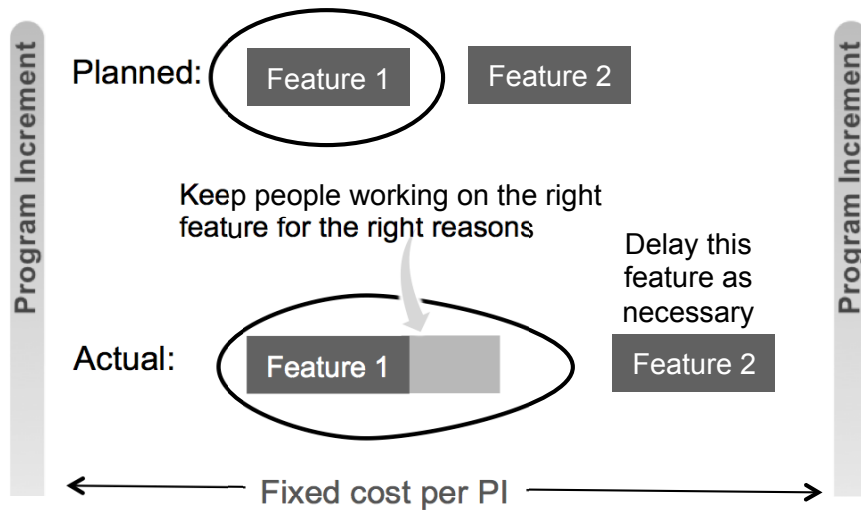
Governance *and* agility with dynamic budgeting

Financial governance is still in place. Adjust budgets dynamically to meet changing business needs.

Thought exercise: Agile budgeting

▸ What challenges do you see with this approach?

▸ When is the time to have this discussion in your enterprise?

5 min

7.5 Forecast Epics on a near term Roadmap

The business needs to forecast

▸ SAFe enhances enterprise adaptability, providing faster response to changing market opportunities

▸ Yet, the enterprise, its partners, and customers need to plan some sense of the future

▸ The ability to do effective, Agile forecasting is a key economic driver for the enterprise

▸ Solution Visions both define, and track to enterprise strategy

▸ Roadmaps capture strategic intent in forecasted deliverables

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Roadmap forecasting requires estimating

▸ Estimating must:

 – Be fast, efficient and as reasonably accurate, as possible

 – Support "what if " analysis of various implementation scenarios

▸ Traditional Work Breakdown Structure to task-level estimating binds the teams to waterfall practices
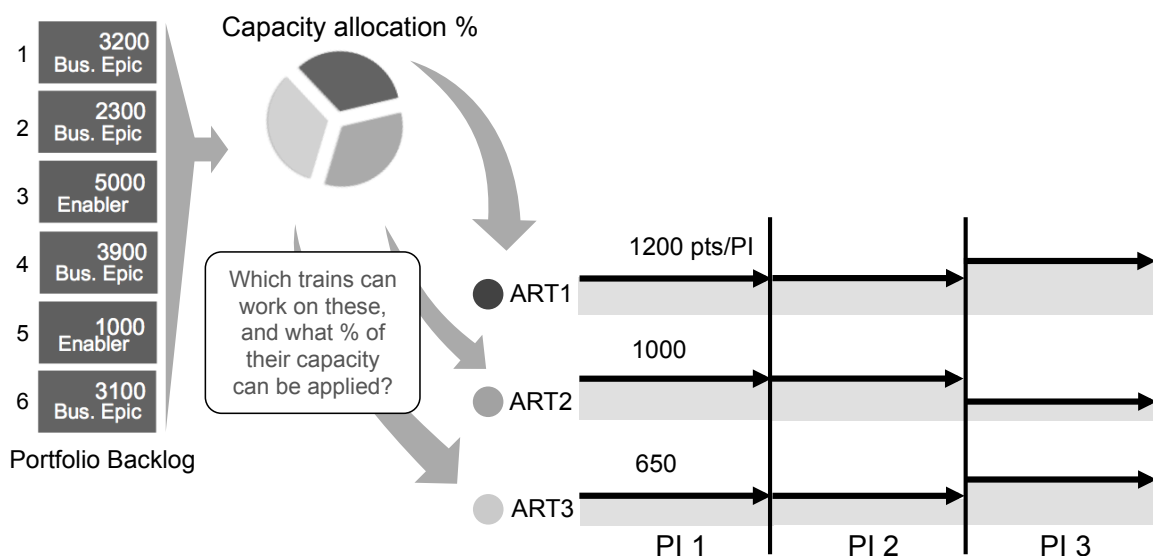
▸ A different approach is required

Estimating Epics in SAFe

1. Epics are broken down into potential features during the Portfolio Kanban analysis stage

2. Potential features are estimated in story points

   – Typically performed at the PM-System Architect level, based on history and relative size

   – Individual teams are engaged as necessary

3. Feature estimates are aggregated back into the Epic estimate as part of the lightweight business case

Epic 460

Feature 90
Feature 120
Feature 110
Enabler 140
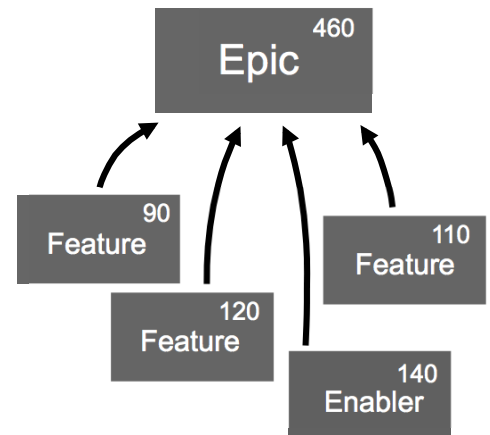
Forecasting from the Portfolio Backlog

Given knowledge of Epic sizes and ART velocities, applying "what if" capacity allocations informs decisions and forecasting.

1 3200 Bus. Epic
2 2300 Bus. Epic
3 5000 Enabler
4 3900 Bus. Epic
5 1000 Enabler
6 3100 Bus. Epic

Portfolio Backlog

Capacity allocation %

Which trains can work on these, and what % of their capacity can be applied?

ART1 1200 pts/PI

ART2 1000

ART3 650

PI 1   PI 2   PI 3

Exercise: Forecasting

If ART 2 is capable of doing Epic 5 by
themselves, but they can only dedicate half
of their capacity to that initiative, how long
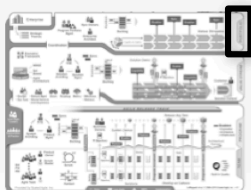might it take?

Instructions

▸ Use chart on previous slide

2
min

Lesson summary

In this lesson, you learned how to:

▸ Define Strategic Themes for a portfolio
▸ Identify the Portfolio Value Streams
▸ Advance Solution behavior with portfolio Epics
▸ Start the transition from project cost accounting to Lean-Agile Budgeting
▸ Forecast Epics on a near term Roadmap

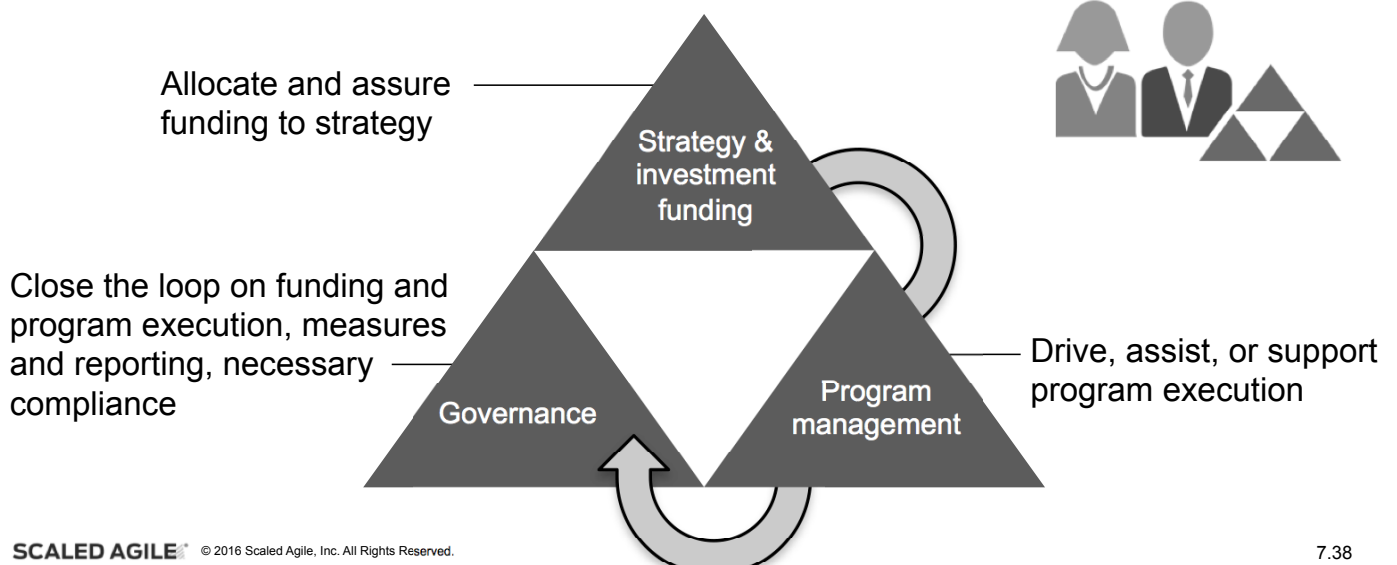*Suggested Scaled Agile Framework reading:*
"Portfolio Level" article

Appendix: Introducing the Agile PPM

PPM responsibilities

Central role in strategy and investment funding, program management and governance

Allocate and assure funding to strategy

Close the loop on funding and program execution, measures and reporting, necessary compliance

Strategy & investment funding

Governance

Program management

Drive, assist, or support program execution

Traditional mindsets handicap agility

Historically, PMO practices were based on centralization of decision-making and waterfall development.

Traditional mindsets:

- ▸ Centralized planning and control
- ▸ Plan out a full year of projects
- ▸ Maximize utilization
- ▸ Widget engineering

- ▸ Just "*Get it done!*"
- ▸ Development in order-taker mentality
- ▸ Control through data and milestones

Thomas and Baker, *Establishing an Agile Portfolio to Align IT Investments with Business Needs*, DTE Energy

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Moving to Agile PPM

SAFe provides transformational patterns to move from traditional mindsets to Lean-Agile PPM.

	From traditional approach		To Lean-Agile approach
#1	Centralized control	➡	Decentralized decision-making
#2	Project overload	➡	Demand management; continuous value flow
#3	Detailed project plans	➡	Lightweight, epic-only business cases
#4	Centralized annual planning	➡	Decentralized, rolling-wave planning
#5	Work breakdown structure	➡	Agile estimating and planning
#6	Project-based funding and control	➡	Lean-Agile budgeting and self-managing Agile Release Trains
#7	Waterfall milestones	➡	Objective, fact-based measures and milestones

Measuring success

Lean Program Portfolio Metrics example

Benefit	Expected result	Metric used
Employee engagement	Improved employee satisfaction; lower turnover	Employee survey; HR statistics
Customer satisfaction	Improved Net Promoter Score	Net Promoter Score survey
Productivity	Reduced average feature cycle time	Feature cycle time
Agility	Continuous improvement in team and program measures	Team, program, and portfolio self-assessments; predictability measure
Time to market	More frequent releases	Number of releases per year
Quality	Reduced defect counts and support call volume	Defect data and support call volume
Partner health	Improving ecosystem relationships	Partner and vendor surveys

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The Agile PMO

It's better to lead than to follow.

▸ Leads the Lean-Agile transformation

▸ Applies objective Milestones

▸ Leads the move to Lean-Agile Budgeting

▸ Coaches ARTs in effective practices

▸ Fosters Agile contracts

▸ Develops Lean models for Supplier and Customer partnerships

Strategy & investment funding

Program management

Governance