AGILE GURGAON 2016

27-28 May 2016
The Leela Ambience Hotel,
Gurgaon
www.agilegurgaon.com

Scaling Agile to Enterprises Experience Report

Uday Atla

Senior Technical Program Manager, VMware

Agenda

- Overview - Goals and Challenges
- Introduction & Transformation Roadmap
- Revisit SAFe framework
- Highlights of the Portfolio Level
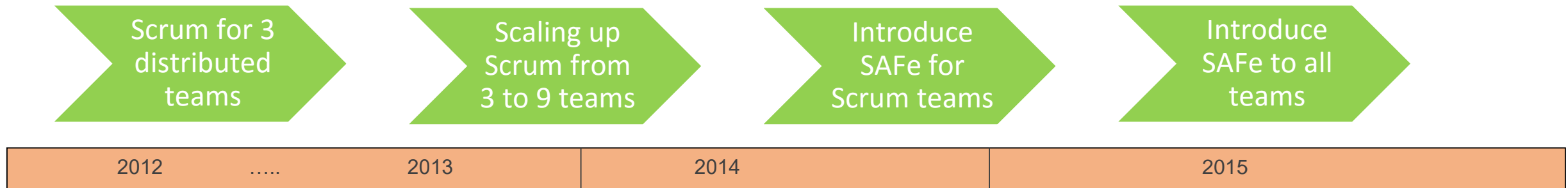- Program Level
- Team Level
- Key takeaways

Goals Overview

1. Migrate Global Y! Homepages to a new publishing platform
2. Provide unified customer experience across Y! Media properties
3. Build a common platform for self-service provisioning and lifecycle management of virtual, cloud and physical machines

Challenges Overview

1. Gap between Organizational Goal and Individual product goals
2. Major integration dependencies across products (experience teams) and platforms (foundation teams)
3. Continuous integration for a 1000+ developers effort
4. Challenges with dashboards and reporting at portfolio level
5. Team challenges in having a common understanding of Agile at Scale

Historical overview of our Agile Transformation

Scrum for 3 distributed teams	Scaling up Scrum from 3 to 9 teams	Introduce SAFe for Scrum teams	Introduce SAFe to all teams

2012	2013	2014	2015

+ Increased our throughput

+ Deliverables at every sprint

+ Escalated any issues much sooner

+ Allowed agility during development (features)

+ Team could focus on one project

+ Overall happy teams

– Insufficient work on design and architecture

– Silos between scrum teams

– Dependency and integration issues

– Unclear overall objectives & plan

– Lack of visibility of the big picture

– Scrum of scrum not being effective

Scale Agile Framework Plan

2013 Starting Up

- Holistic view from the start and buy in from upper management

- Brought in consultants

- Started an agile release train for teams with Scrum experience

- SAFe training for ALL in the new train

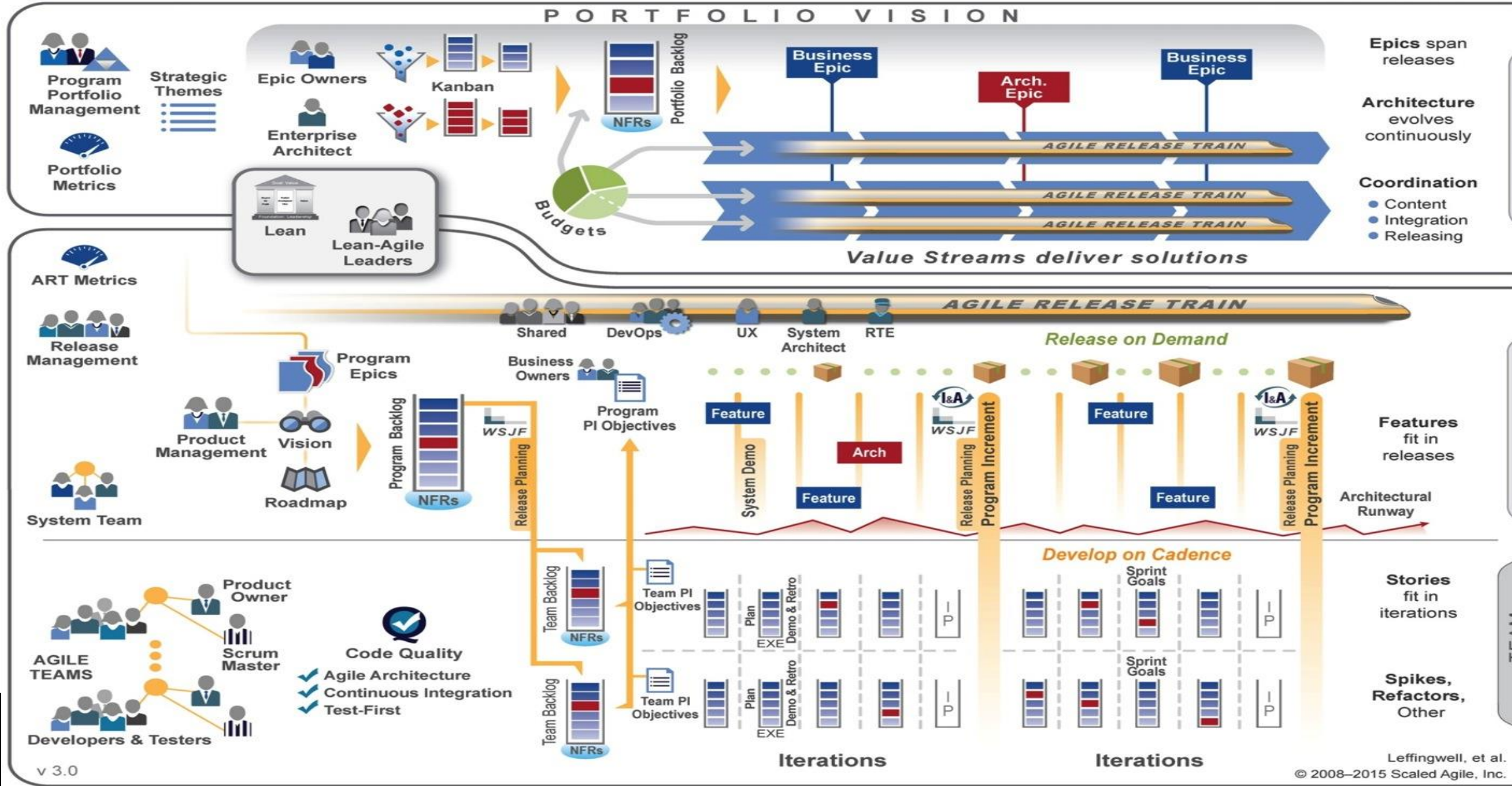- Lean & Agile training for teams without Scrum experience

2014 Get it running

- Obtain a functioning program level

- Introduced SAFe for all teams

- Started a number of community of practices with focus on practices and quality
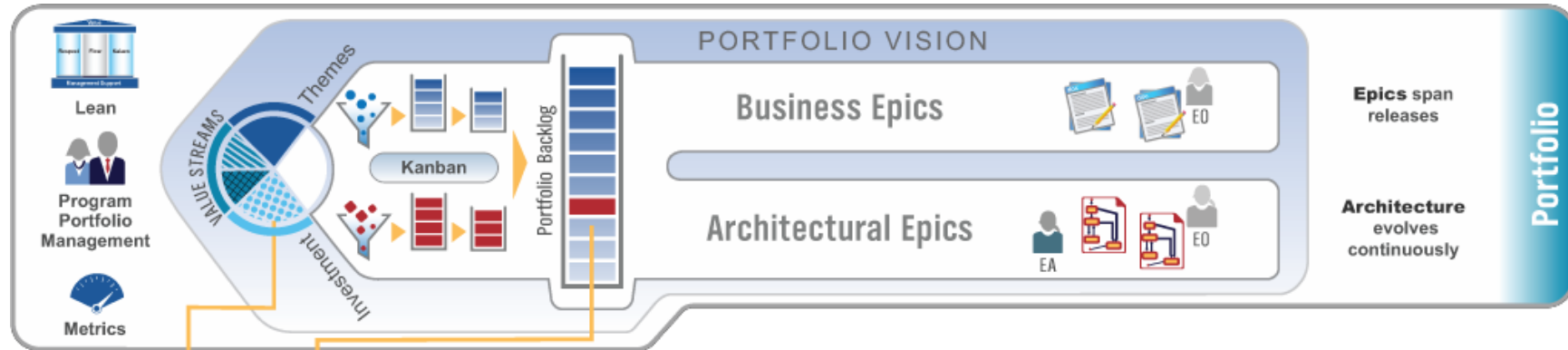
2015 Accelerate

- Obtain a functioning portfolio level

- Defined intake processes

- Road-mapping through agile estimates and planning

Scaled Agile Framework®

SAFe

PORTFOLIO VISION

Program Portfolio Management

Strategic Themes

Portfolio Metrics

Epic Owners

Enterprise Architect

Kanban

NFRs

Portfolio Backlog

Business Epic

Arch. Epic

Business Epic

Epics span releases

Architecture evolves continuously

Lean

Lean-Agile Leaders

Budgets

AGILE RELEASE TRAIN

AGILE RELEASE TRAIN

AGILE RELEASE TRAIN

Coordination
- Content
- Integration
- Releasing

Value Streams deliver solutions

ART Metrics

Release Management

Program Epics

Business Owners

AGILE RELEASE TRAIN

Shared   DevOps   UX   System Architect   RTE

Release on Demand

Product Management

Vision

Roadmap

System Team

Program Backlog

NFRs

WSJF

Release Planning

Program PI Objectives

Feature

System Demo

Arch

Feature

I&A

WSJF

Release Planning

Program Increment

Feature

I&A

WSJF

Release Planning

Program Increment

Features fit in releases

Architectural Runway

Develop on Cadence

AGILE TEAMS

Product Owner

Scrum Master

Developers & Testers

Code Quality
- ✓ Agile Architecture
- ✓ Continuous Integration
- ✓ Test-First

Team Backlog

NFRs

Team PI Objectives

Plan   EXE   Demo & Retro   IP

Sprint Goals

Plan   EXE   Demo & Retro   IP

Stories fit in iterations

Team Backlog

NFRs

Team PI Objectives

Plan   EXE   Demo & Retro   IP

Sprint Goals

IP

Spikes, Refactors, Other

**Iterations**   **Iterations**

PORTFOLIO

PROGRAM

TEAM

Scale to the Portfolio

- ▶ Portfolio Vision gives the system an Aim
- ▶ Centralized strategy, decentralized execution
- ▶ Investment themes provide operating budgets for trains
- ▶ Kanban systems provide portfolio visibility and WIP limits
- ▶ Objective metrics support governance and kaizen
- ▶ Value description via **Business** and **Architectural Epics**

Scale to the Program Level

- ▶ Self-organizing, self-managing team-of-agile-teams
- ▶ Continuous value delivery
- ▶ Aligned to a common mission via a single backlog
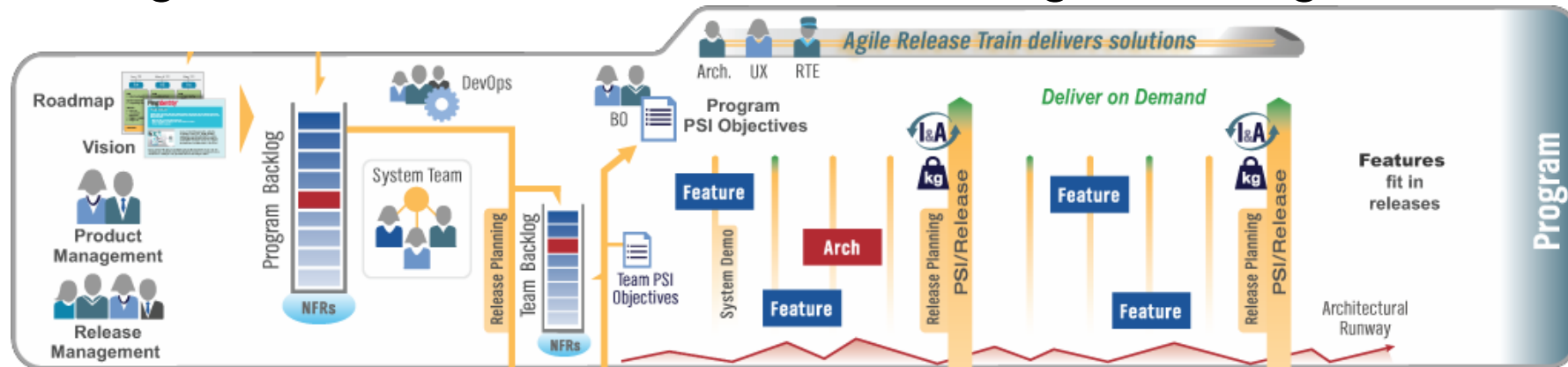
- ▶ Common sprint lengths and estimating
- ▶ Face-to-face planning cadence for collaboration, alignment, synchronization, and assessment
- ▶ Value description via **Features** and **Benefits**

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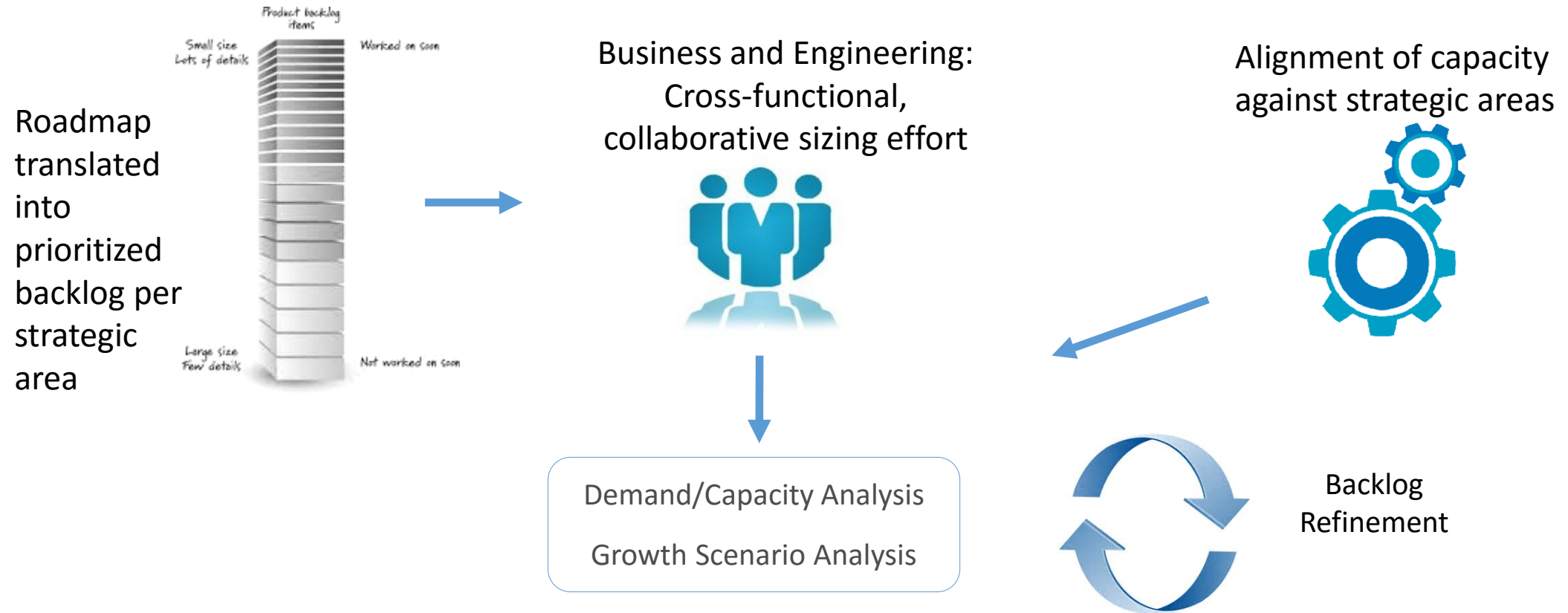
Agile Teams

▸ Empowered, self-organizing, self-managing cross- functional teams

▸ Valuable, fully-tested software increments every two weeks

▸ Scrum project management practices and XP-inspired technical practices

▸ Teams operate under program vision, system, architecture and user experience guidance

▸ Value description via *User Stories*
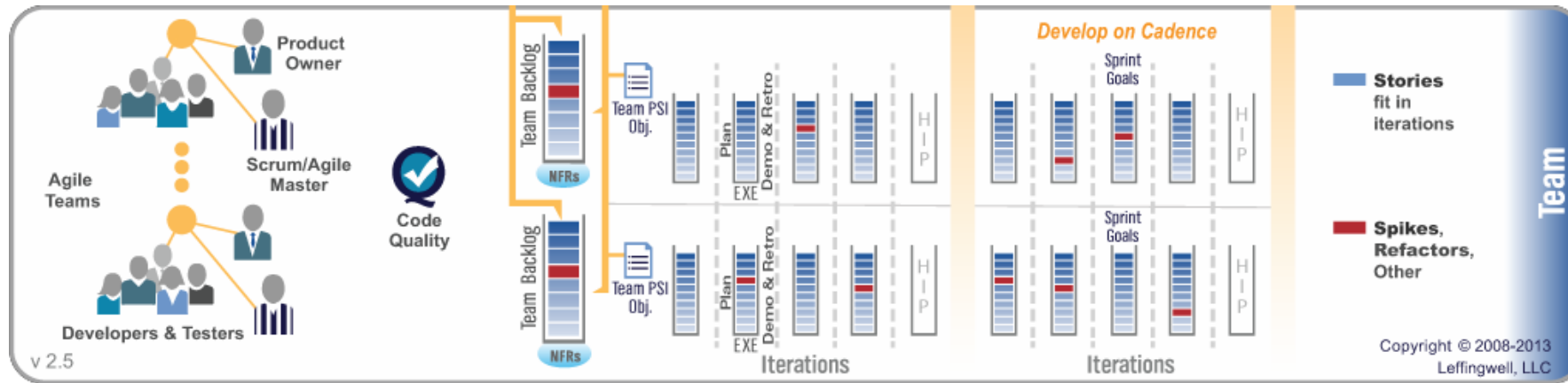
What we have changed through the introduction of SAFe

- Introduced Rally for Agile project management
- Adopted organization and roles for SAFe (RTE, PM/PO, UX, EA, agile coaches)
- Streamlined development tooling and processes
- Updated the Quality System for Agile development
- Structured quarterly and monthly check-points
- Simplified dashboards and reporting

Agile Portfolio Estimation & Planning

Roadmap translated into prioritized backlog per strategic area

Business and Engineering: Cross-functional, collaborative sizing effort

Alignment of capacity against strategic areas

Demand/Capacity Analysis

Growth Scenario Analysis

Backlog Refinement

Planned: Quarterly assessment, adjustment and continuous improvement of the process

Accuracy in Estimation

Epic Level Estimation

- High Level T-Shirt Sizing
- High level projection: # of sprints for ideally staffed team to accomplish 1 epic
- Cross-functional team: Business SMEs, architects, system owners & engineers
- NOT a commitment & will get refined

Feature Level Estimation

- Well-groomed features
- High level projection: # of sprints to accomplish the feature
- Provided by program level: Product owner, system architects & scrum team
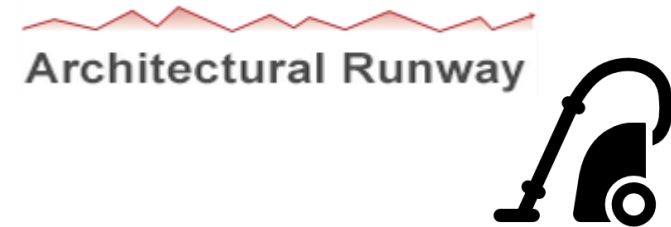- Tentatively slot features into PIs for release planning

Accuracy in Estimation

Story Level Estimation

- Scrum teams break down features into user stories
- Estimate at a more granular level in a unit of story points
- Use historical velocity data to commit to work pulled into a sprint

The closer we get to executing on the work, the more we break it down, and the more accurate our estimates become.
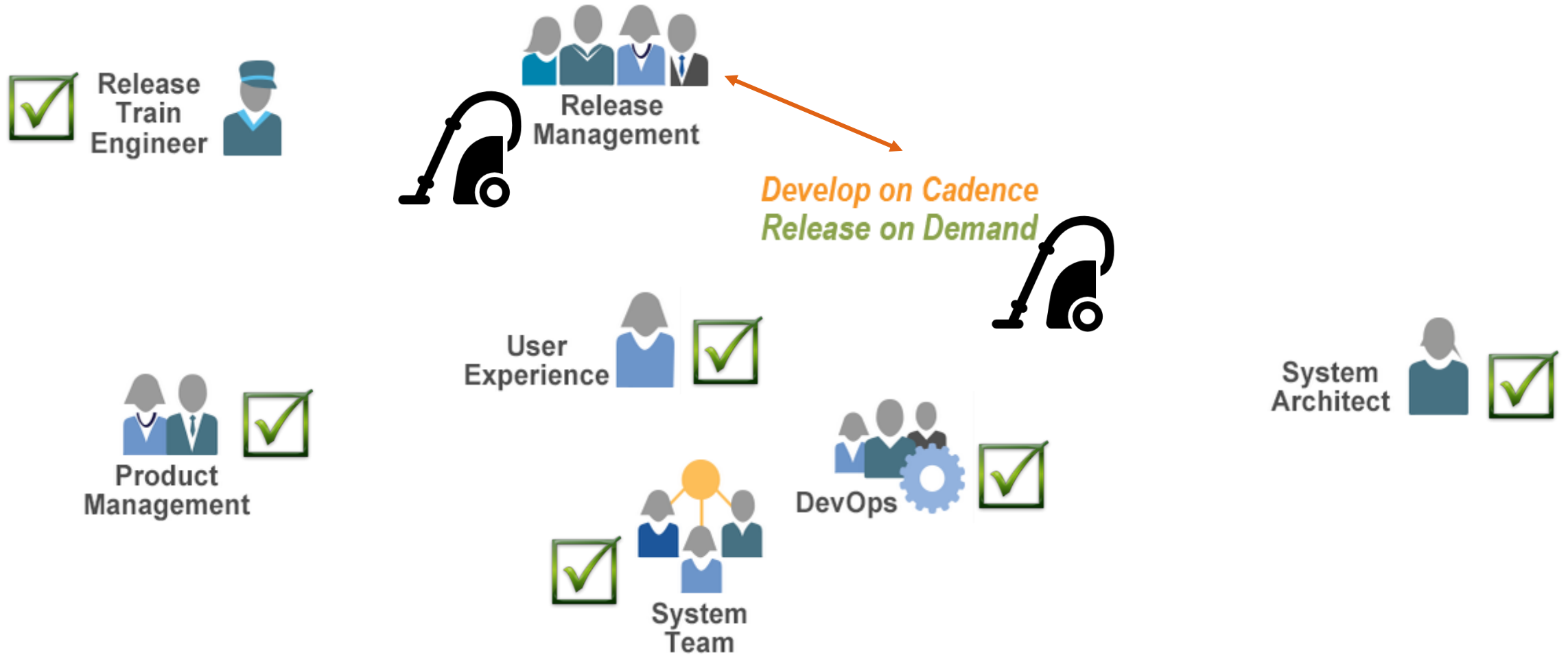
We are in the process of establishing a quarterly feedback loop to assess how accurate our higher level estimates are and refine the process and the plan.

Program Level

Agile Release Trains

Architectural Runway

Business Owners

Vision

Program Backlog
NFRs

Lean-Agile Leaders

Roadmap

Program Epics

Program Level

Release Train Engineer

Release Management

Develop on Cadence
Release on Demand

User Experience

Product Management

System Team

DevOps

System Architect

Program Level

Challenges:
Prioritized backlog, time zones, travel, language, communication

Preferred solution:
Gather everybody involved in the agile release train for a joint PI planning meeting in one location.

Program Level

PI planning conclusion:

- Joint PI planning with all involved individuals in one place is the preferred and most collaborative solution to get to jointly develop PI objectives.

However:

- Downscaled co-located planning meetings might be an alternative if e.g. budget do not allow for meeting face-to-face. Well functioning conferencing equipment (video conferencing, remote presentation etc.) along with electronic tools to reflect different artifacts of the planning (e.g. planning board, risk board, scrum of scrums etc.) are mandatory prerequisites for such meting. The time difference is managed through recorded presentations, and spreading the planning out on more days.

When do we have a functioning team?

- Guided by the vision/big picture

- Understands the domain

- Self organized

- Empowered

- Drive continuous improvements

- Collaborate and communicate cross teams

- Build team of teams

Key takeaways from Scaling Agile

- Having a good understanding of the biz unit's goals is important to everyone in the group. Getting into the details is even more important. This was addressed via multiple channels - Monthly planning and review with key stakeholders, Weekly All hands with the entire group, Office hours, individual team level forums

- Product level Planning was happening in silos, often identifying cross product, functional and platform dependencies much later leading to difficulty in managing compelling priorities with exec intervention. This was addressed with quarterly and monthly planning with weekly exec check-ins, better handshake among multiple release trains. RTE played a key role in managing dependencies well.

- Alignment of team's capacity to strategic goals were more realistic

- Engineering tech debts were often downplayed with product/biz feature lists. This was streamlined with a unified backlog at portfolio level with a $ value attached to each of those line items

Key takeaways from Scaling Agile

- Continuous integration with builds every 7 hours with entire pipeline (effort involved for over 1000 engineers) with notification, escalations. process loop-ins

- Improved quality with CI, interoperability, platform level release criteria

- Consistent use of Rally is important and not trivial. L2 goals were captured in Rally all the way from Themes - initiatives - features - user stories - tasks. Provided right level of visibility from executive management to managers to engineers.

- Product launches went through more rigor with product release goals, tech council reviews, legal as individual product goals are linked to the overall objectives

- Having a common understanding of agile practices and guidelines is key for a successful scaling. Exec buy-in, team's empowerment are key to success