

Turning Visions  
into Business.



TECHNISCHE  
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# Project Management

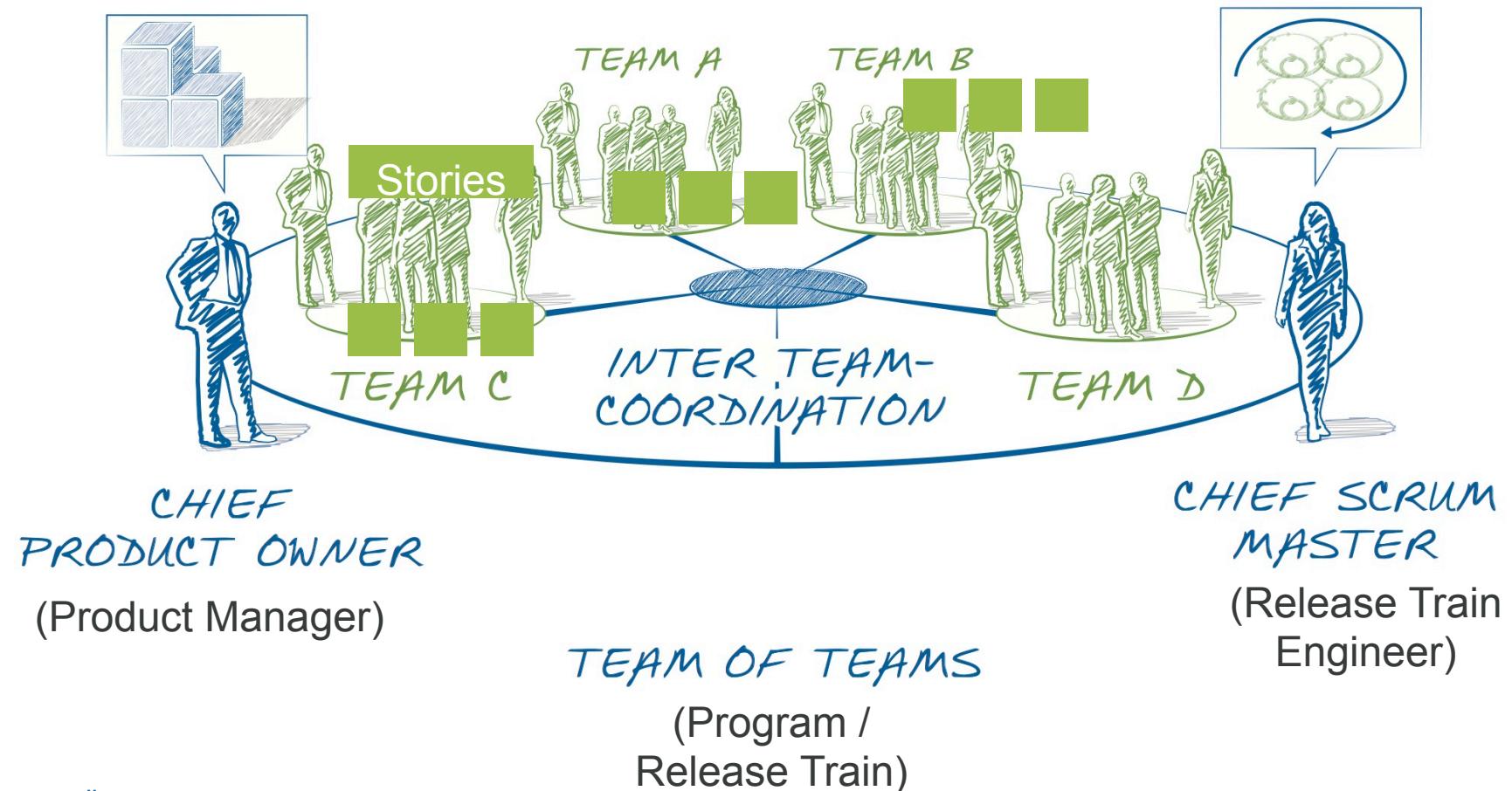
## Scrum of Scrums – Scaling Agile



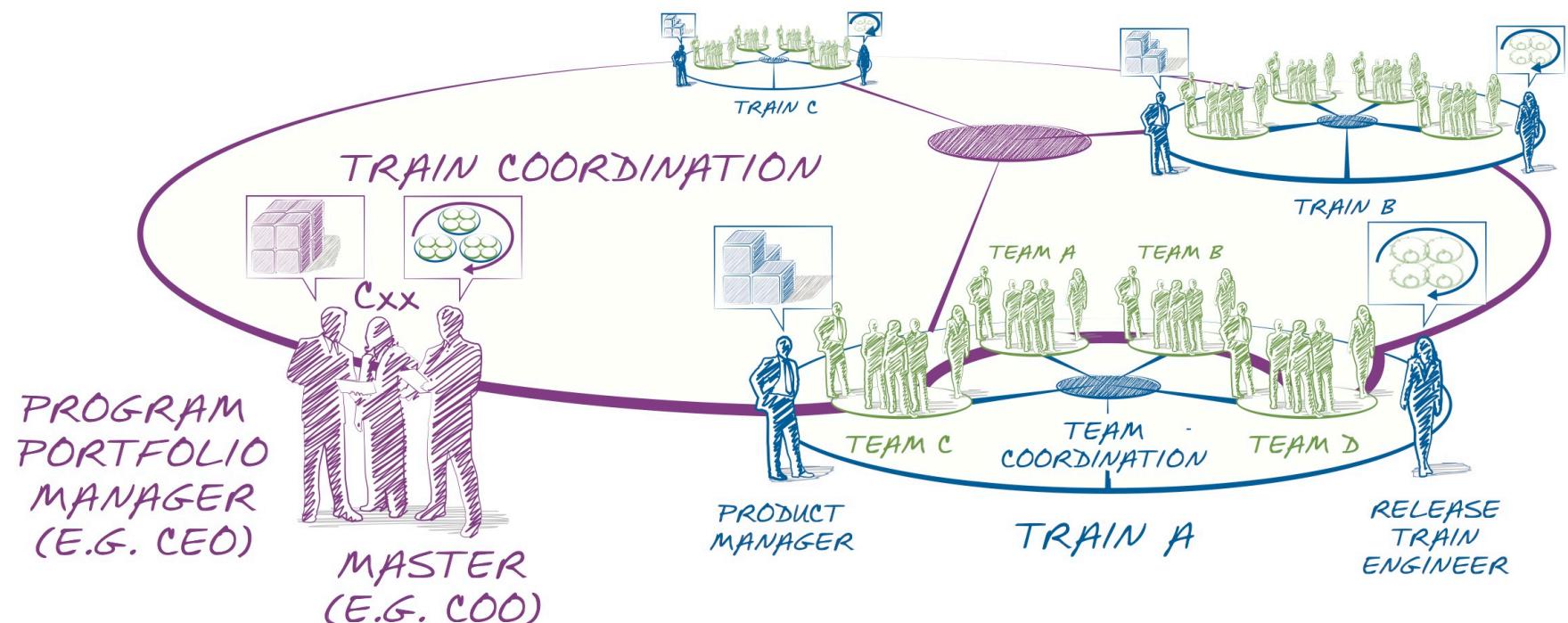
Why Scrum of Scrums?  
Why scaling Agile?

Many projects are larger than 3-9 people.  
In that case we need to organize team of teams.

## ■ 1 Product

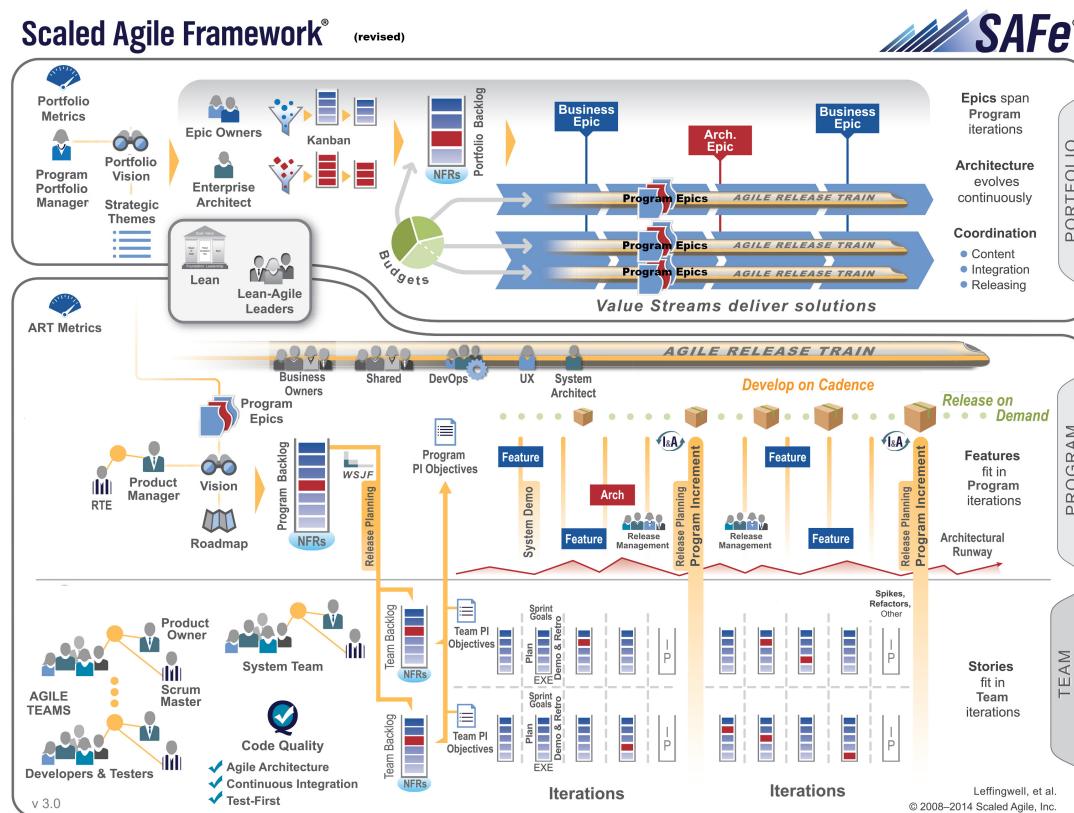


And we might even have several such units (team-of-teams).



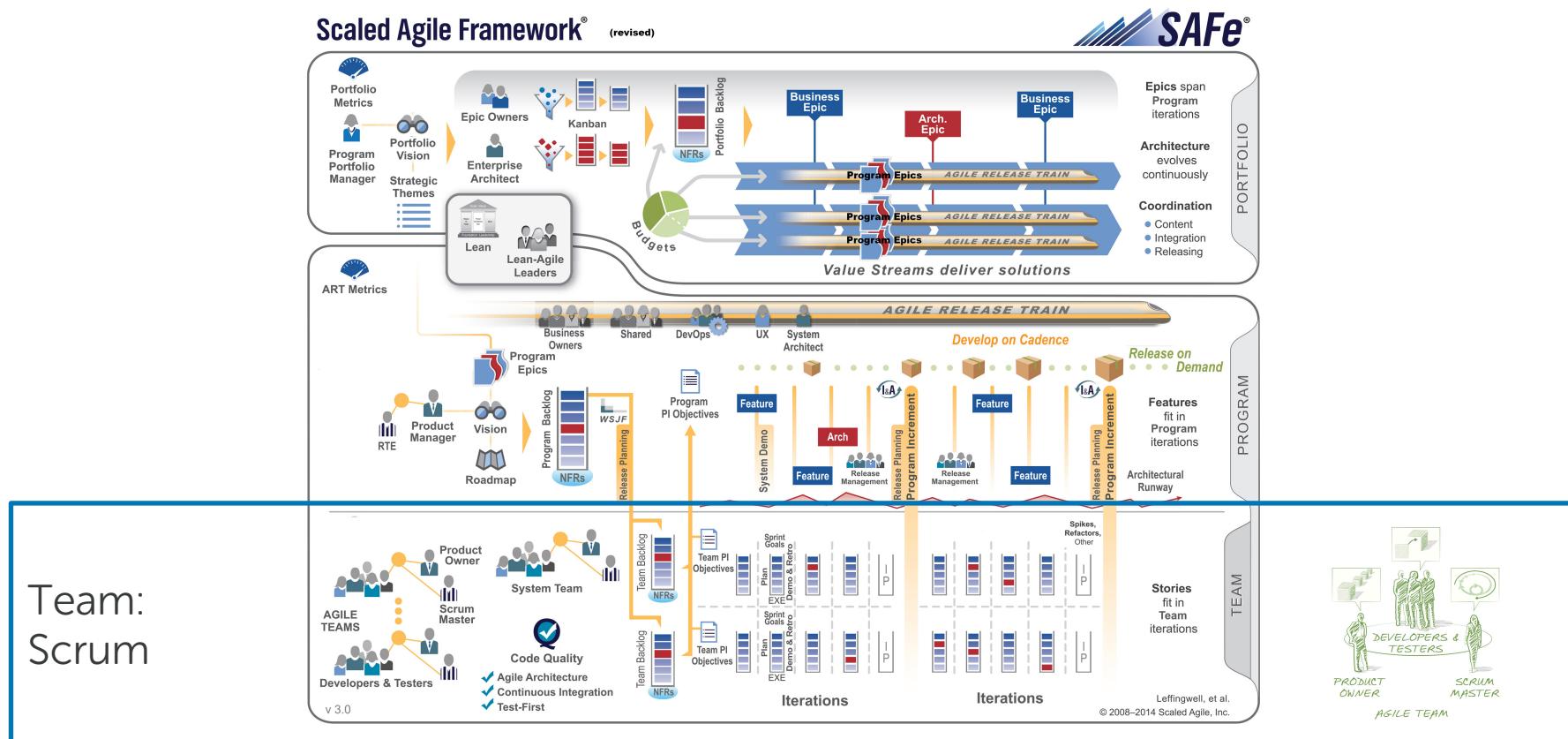
# Scaled Agile Framework Overview

The Scaled Agile Framework provides patterns how to scale agile project management to coordinate several teams.

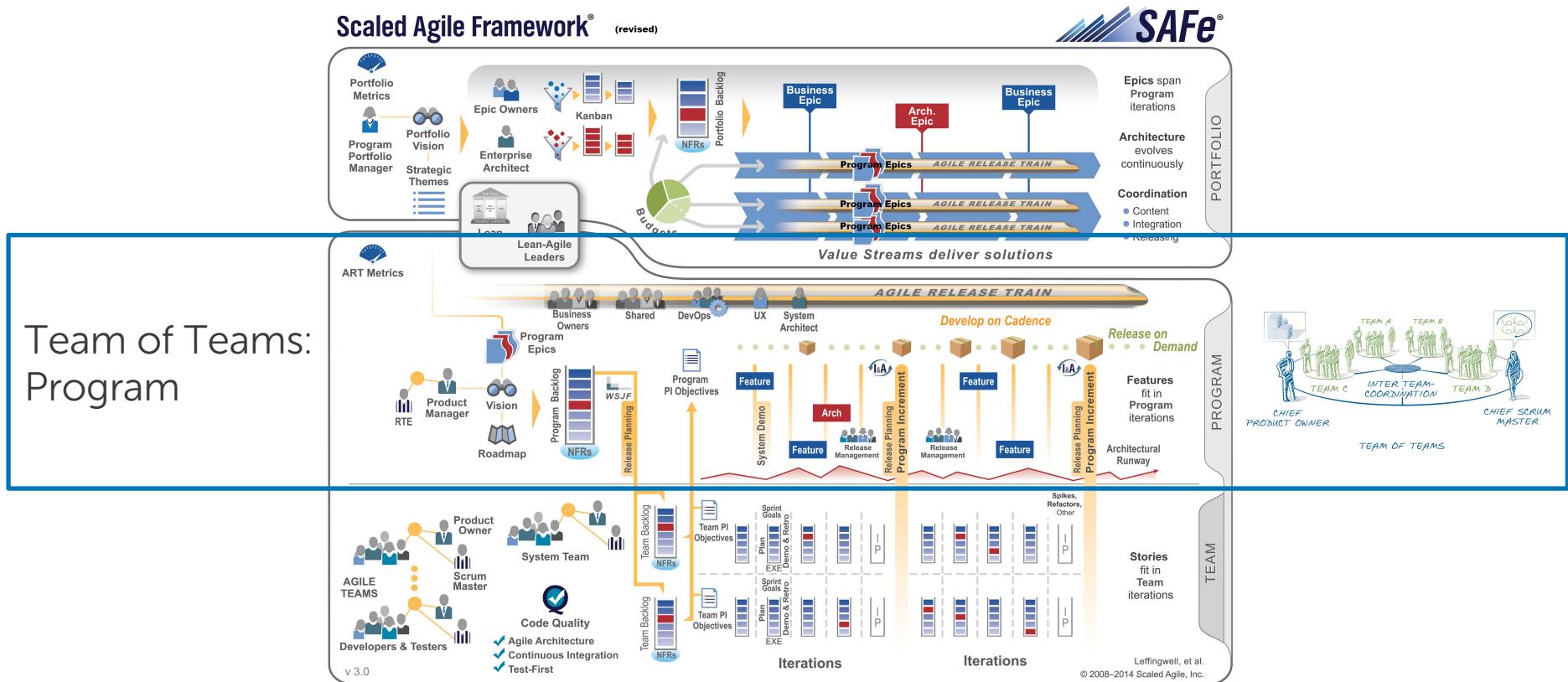


See here: <http://www.scaledagileframework.com>

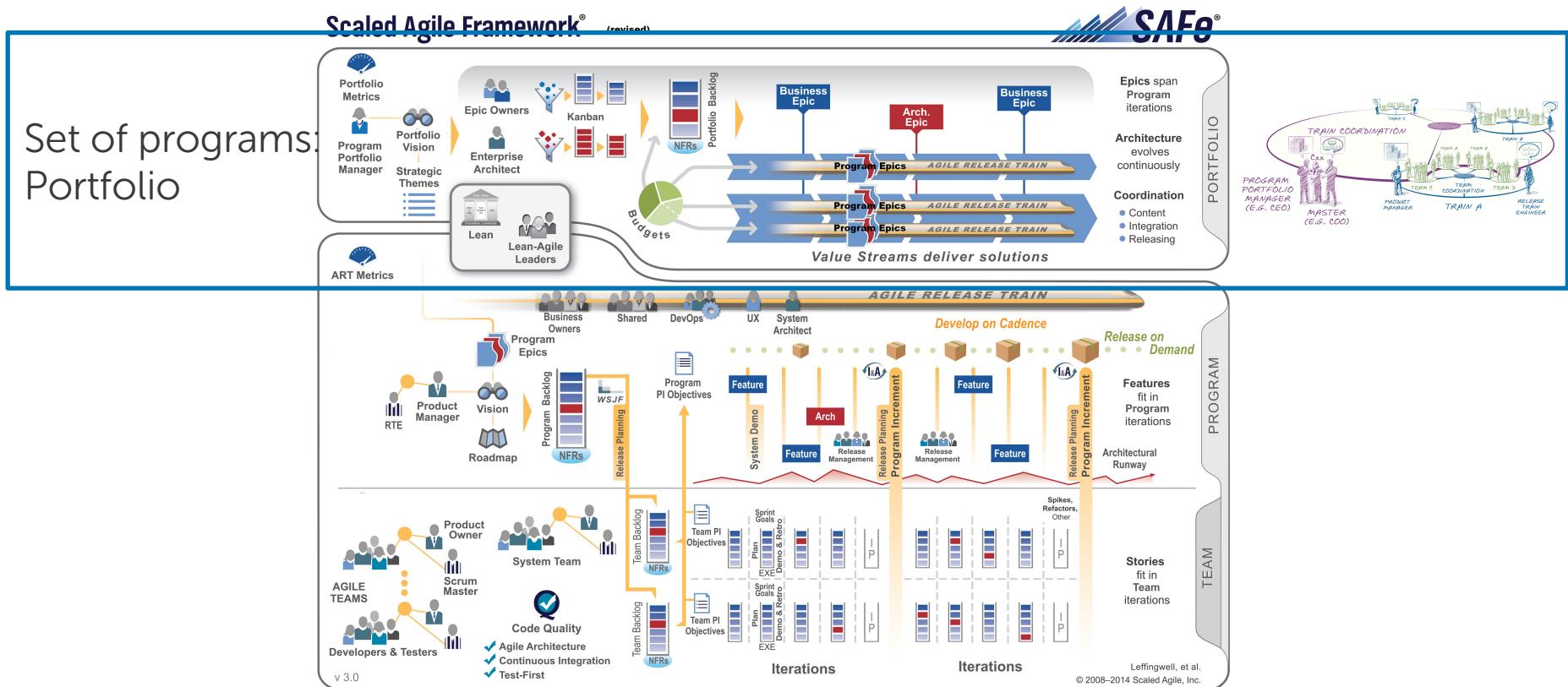
Scale 0:  
The Scaled Agile Framework builds on SCRUM as the project management framework at team level.



Scale 1:  
SAFe calls a team of teams a “program” or a “release train”.



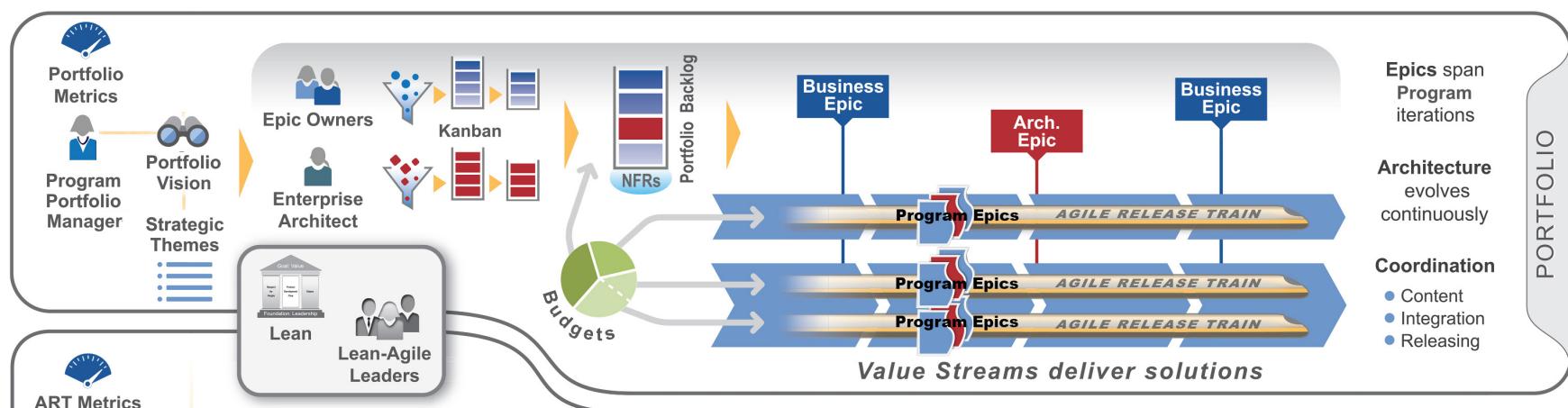
## Scale 2: SAFe coordinates a set of programs with a portfolio.



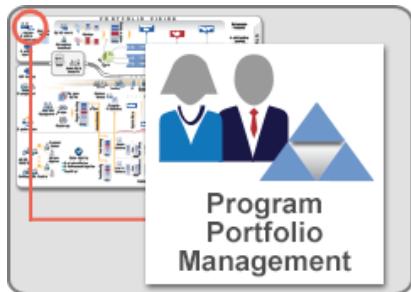
# Portfolio

Portfolio has a centralized strategy and a decentralized execution.

- Lean approaches to Strategy and Investment Funding, Program Management, and Governance
- Objective metrics support governance and kaizen



Program Portfolio Manager has the highest ROI decision-making responsibility in the framework.



**Could be:**

- ▶ CEO
- ▶ Line-of-Business owner
- ▶ Product/Program Director

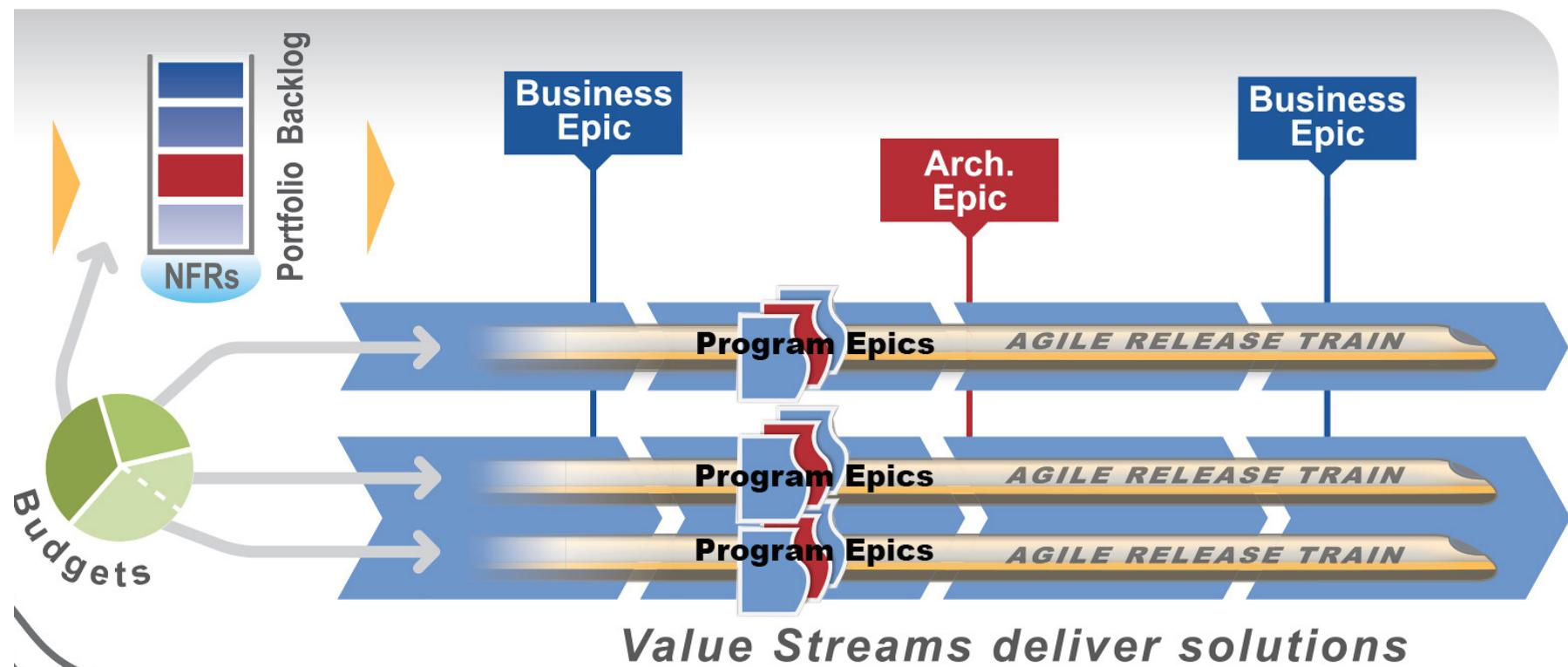
- ▶ Executive with market knowledge, technology awareness, and understanding of financial constraints and market conditions
- ▶ Steward of Portfolio Vision
- ▶ Drive product and solution strategy; manage investment
- ▶ Has operational assistance

The Program Portfolio Manager defines the Portfolio Vision (=Strategic Vision) and the Strategic Themes.

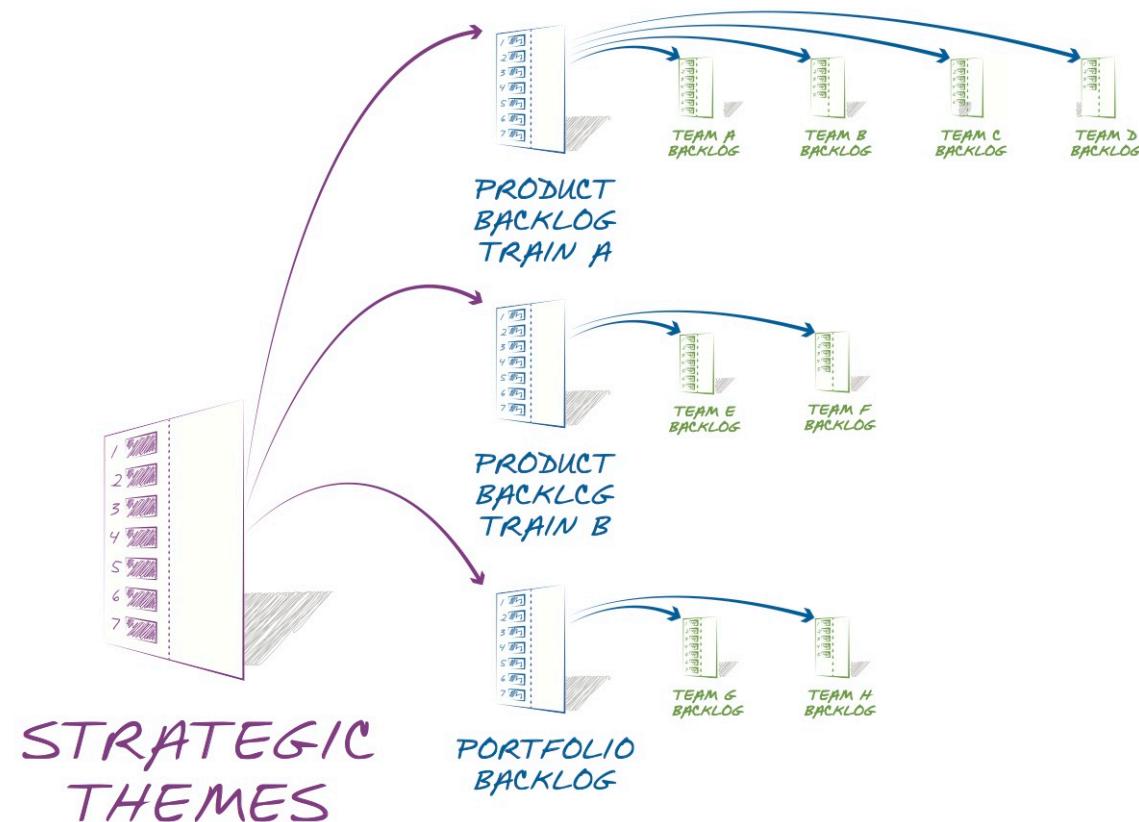
- Portfolio Vision gives all programs an aim
- Strategic Themes define the strategic goals



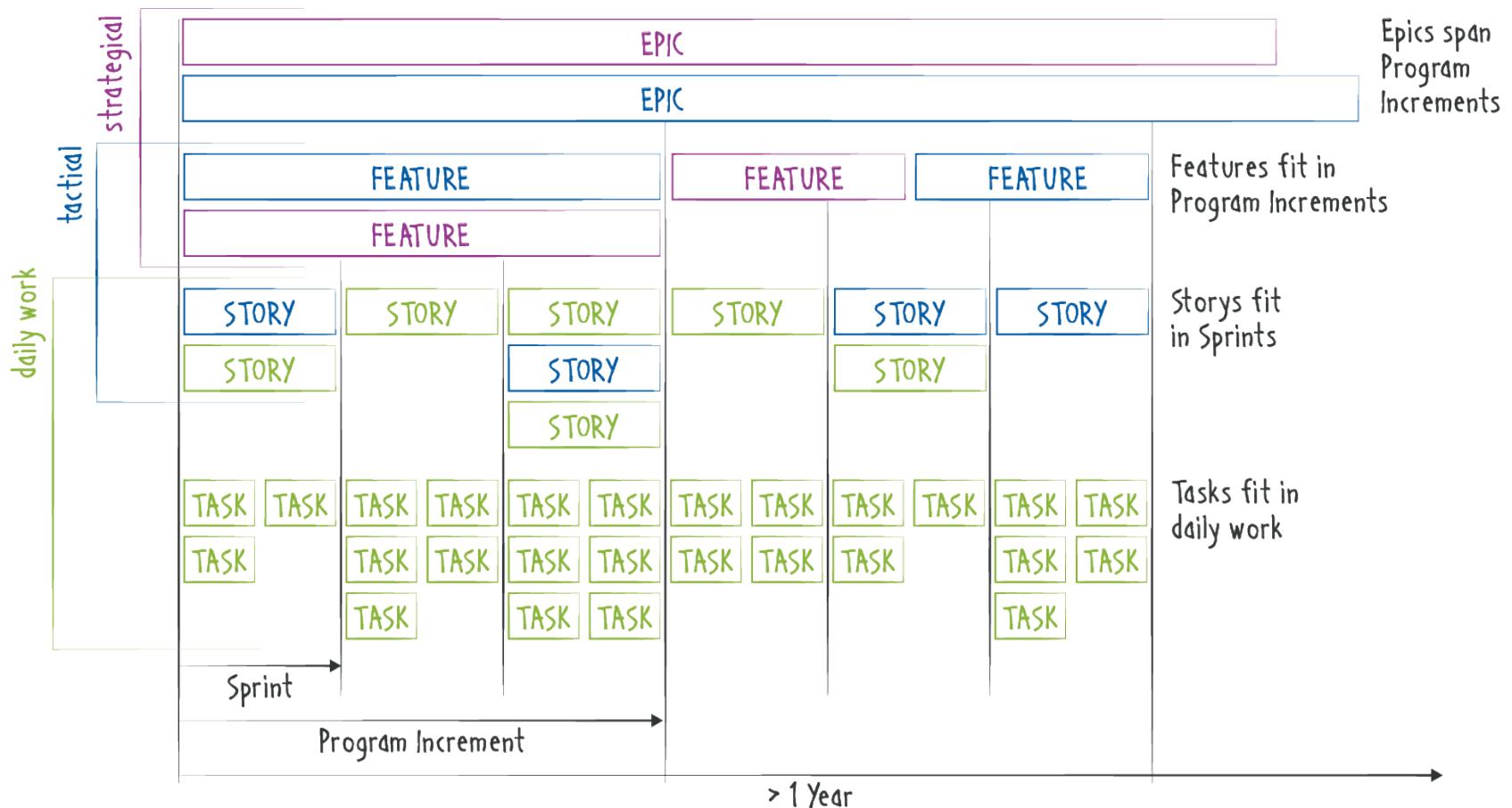
Strategic Themes are broken down into Program Epics, Architectural Epics and Business Epics.



Requirements are broken down: from Strategic Themes to Epics to Features to Stories.



Strategic Themes and Epics span a year.  
 Features can be delivered in a program increment.  
 Stories can be delivered in a Sprint.



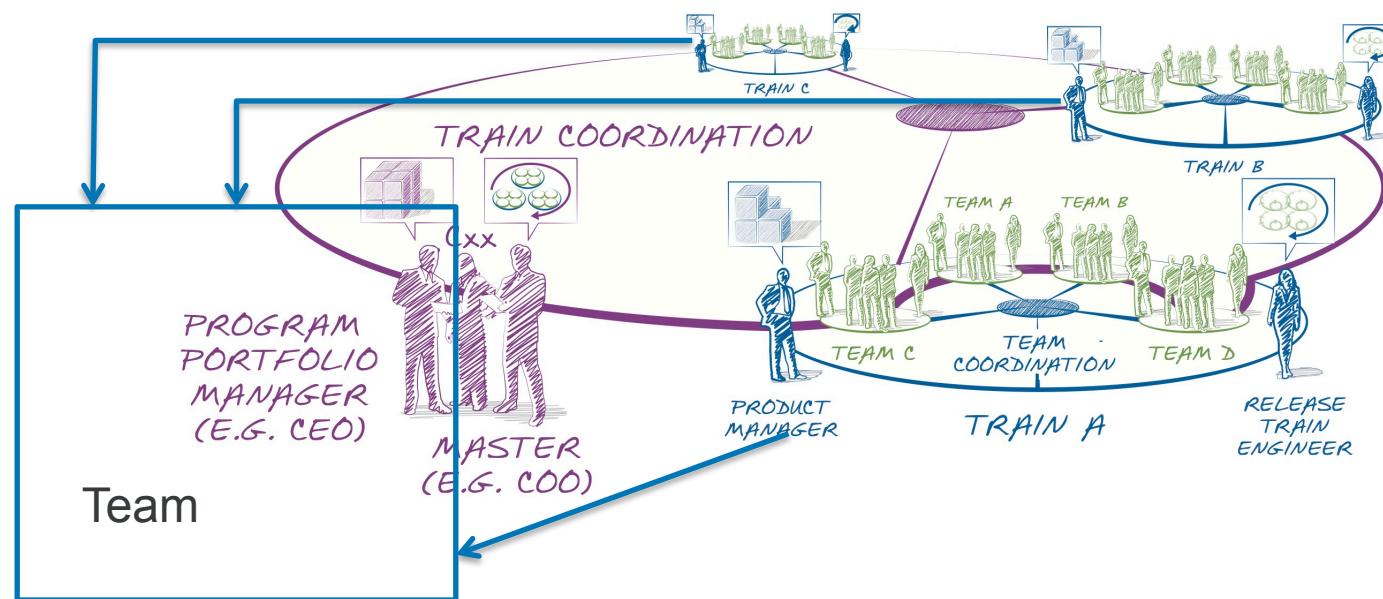
## Lego City Simulation #2: Epics

1. I want houses for all generations so that children can play their lives and visiting friends.
2. I want business buildings, so that children can play their parents' jobs.
3. I want sport facilities so that children can play sport events.
4. I want transport facilities, so that children can play people moving around in the city.
5. I want infrastructure such as hospital, fire station and police so that children can play emergencies.
6. I want recreational facilities so that children can play having fun.

Same "User Story" Format

- As a <user>
- I want <feature>
- so that <benefit>

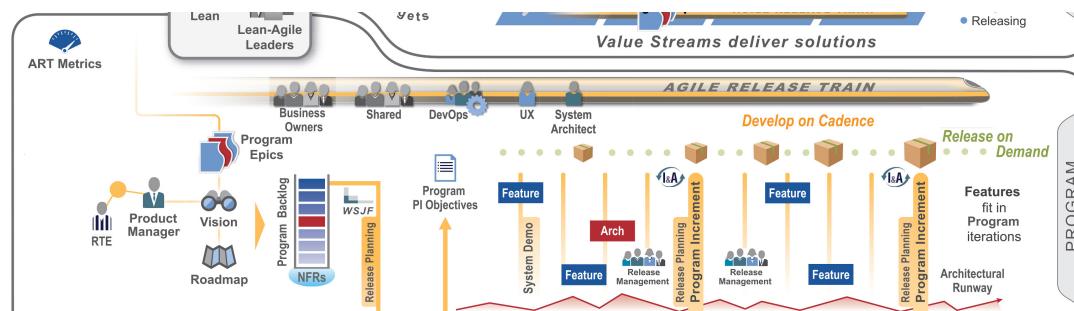
Each program has a Product Manager = Chief Product Owner.  
They support the Program Portfolio Manager (=Super Product Owner).



# Program

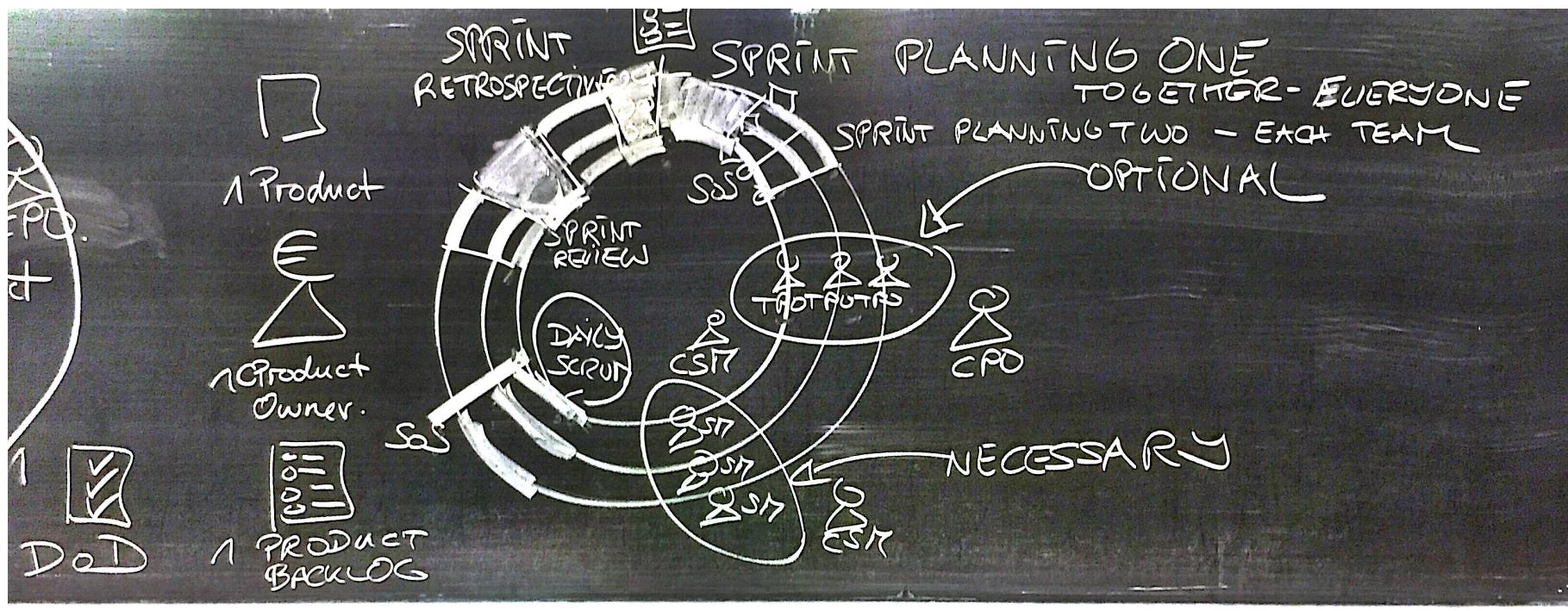
## A program (or a train) ...

- is aligned to a common product vision and delivers a common product
- has a common Program Backlog with high level requirements ("features")
- Has a common Definition of Done
- Has one Chief Product Owner
- Teams have common sprint lengths (cadence)

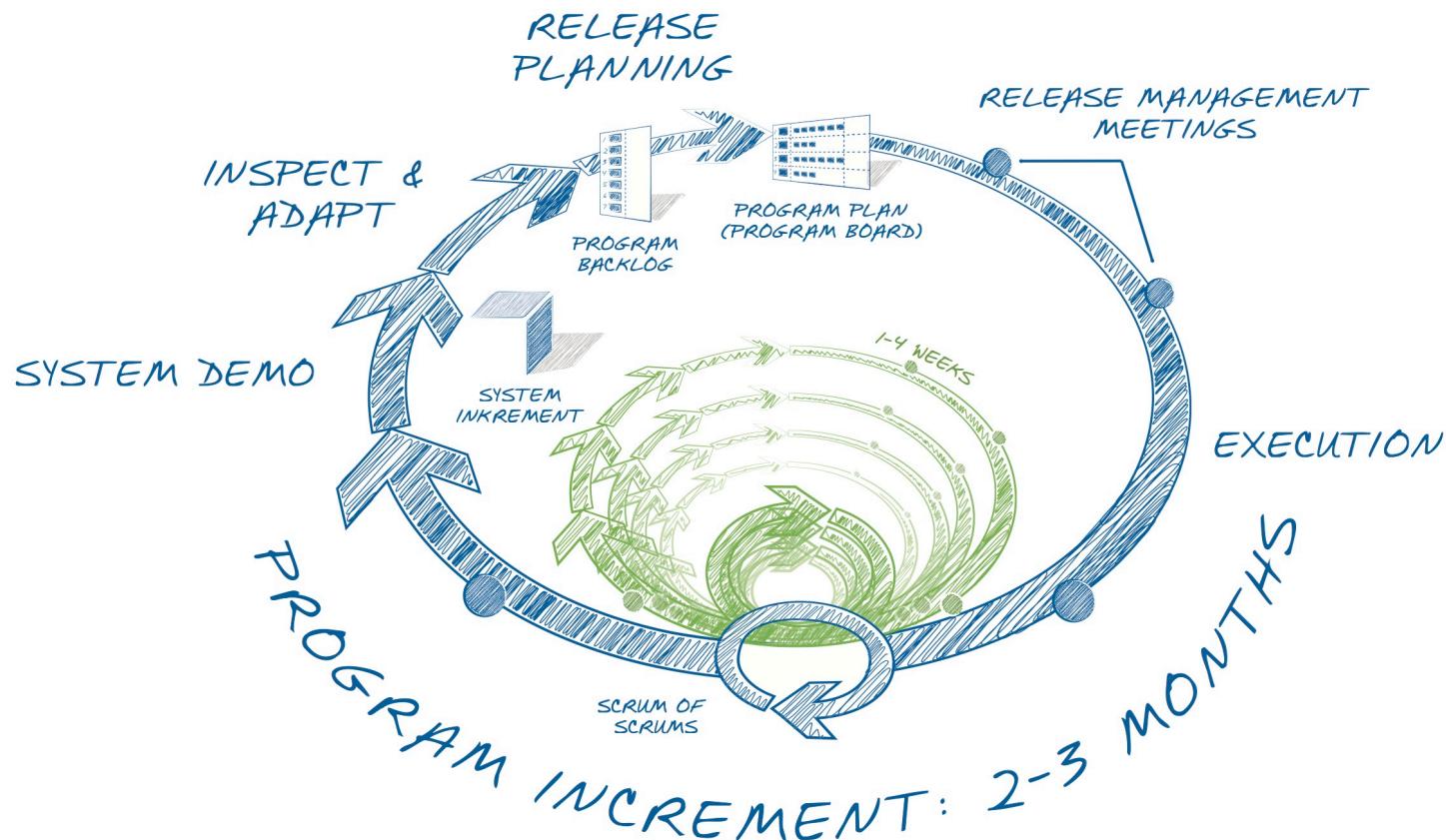


# Cadence

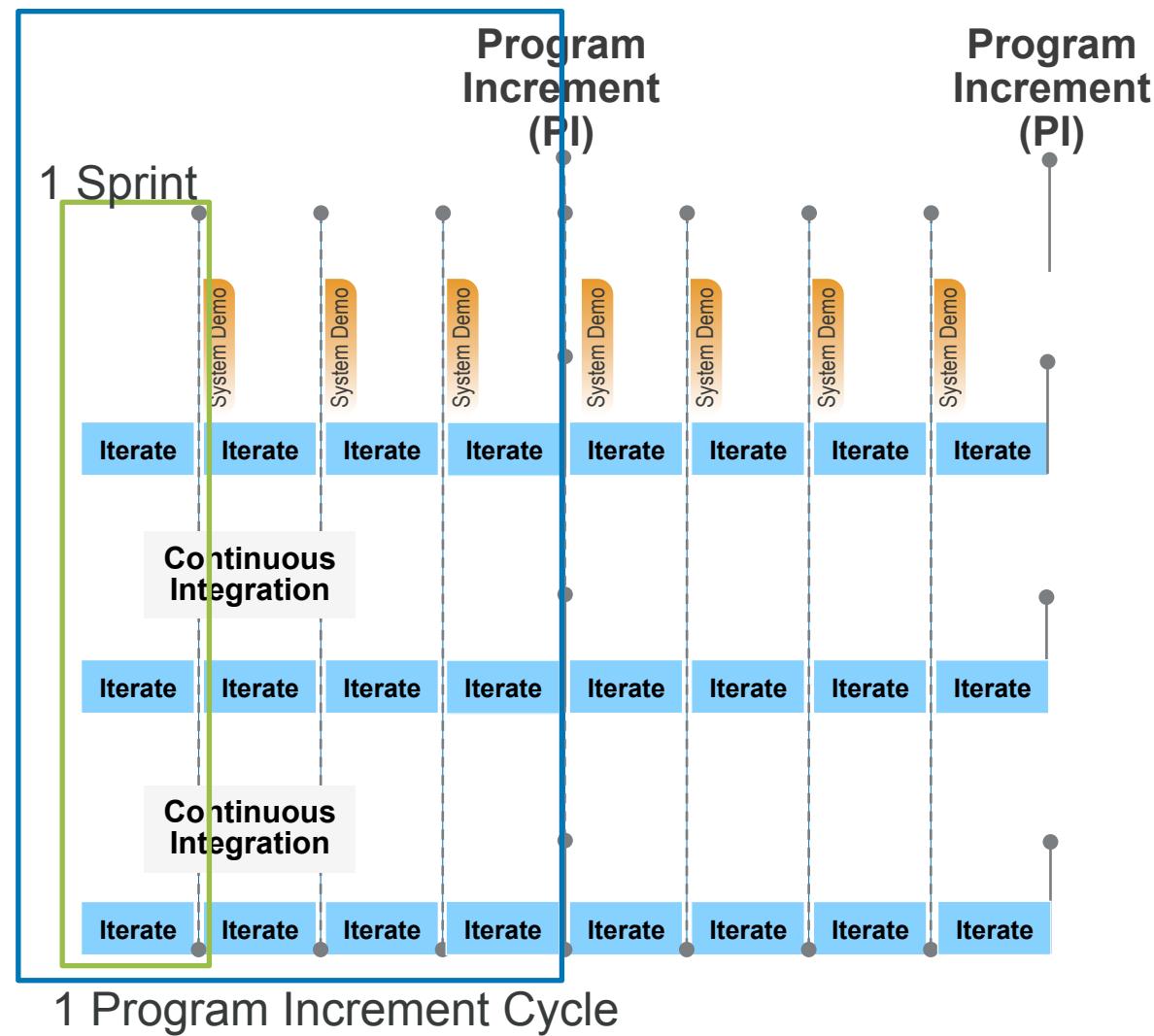
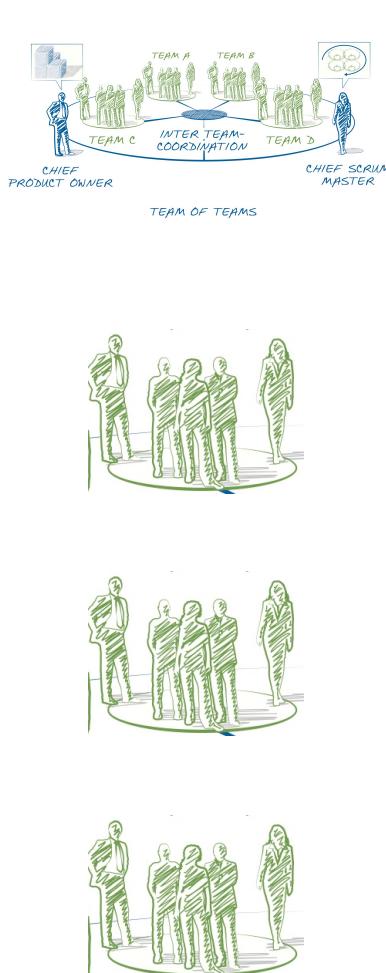
Teams have one synchronized Sprint.



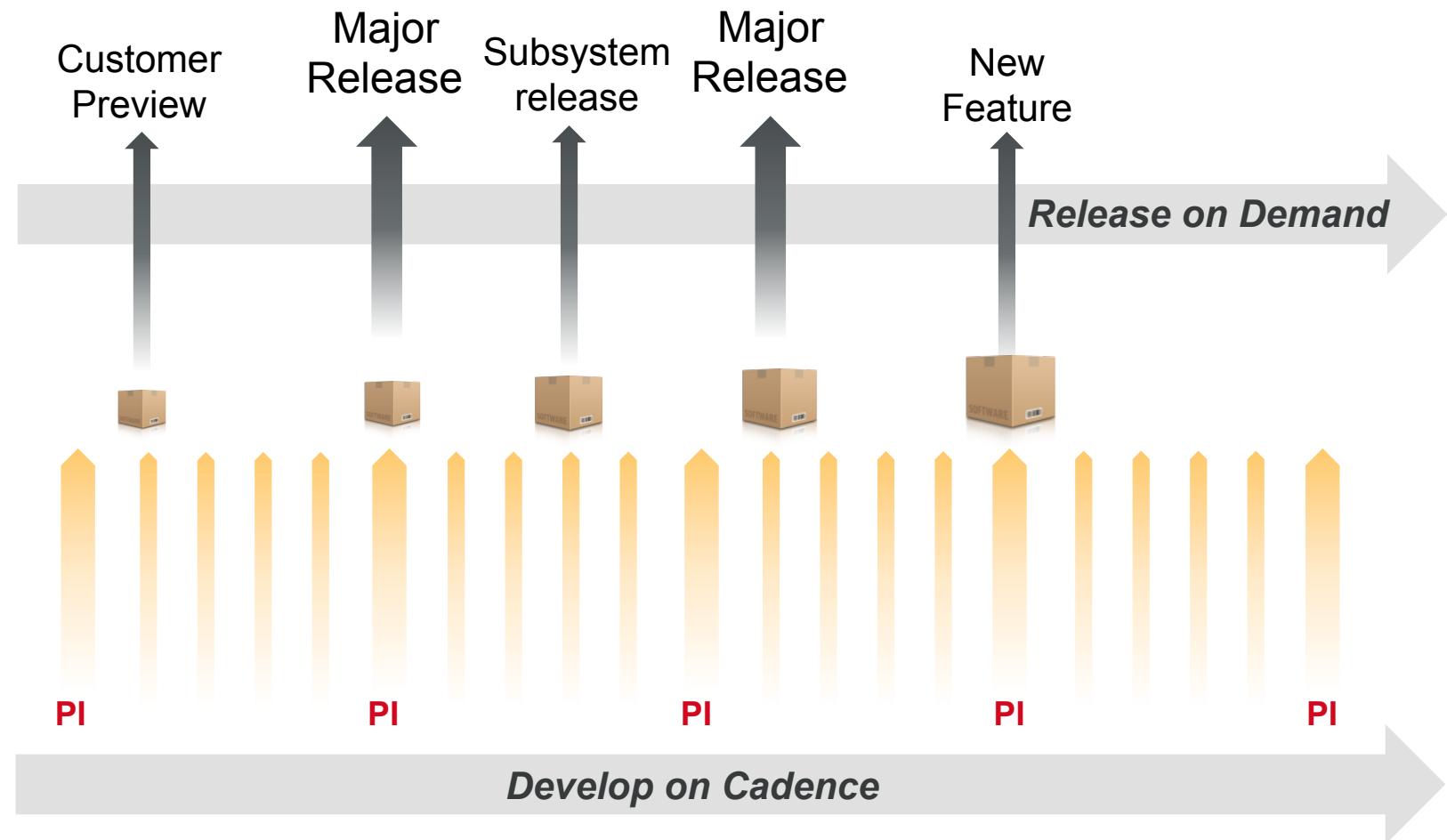
A program has a Program Increment Cycle. This is a cadence that wraps around the Sprints. The Program Increment cycle is a regular interval of 1-3 months.



All teams have synchronous Sprints and Program Increment cycles ("develop on cadence").  
 All cycles deliver potentially shippable product increments.

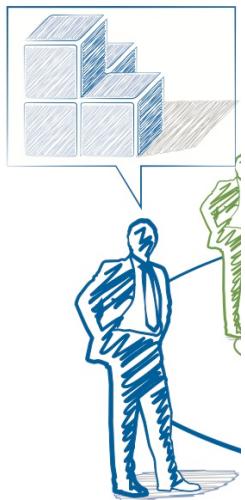


Potentially shippable increments are released (shipped) on demand.

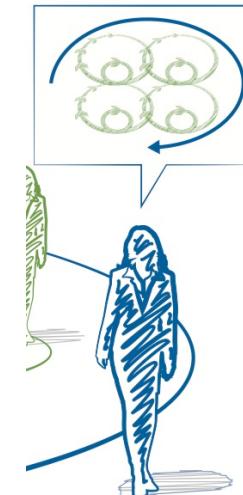


# Program Roles

There are two roles on the program level.



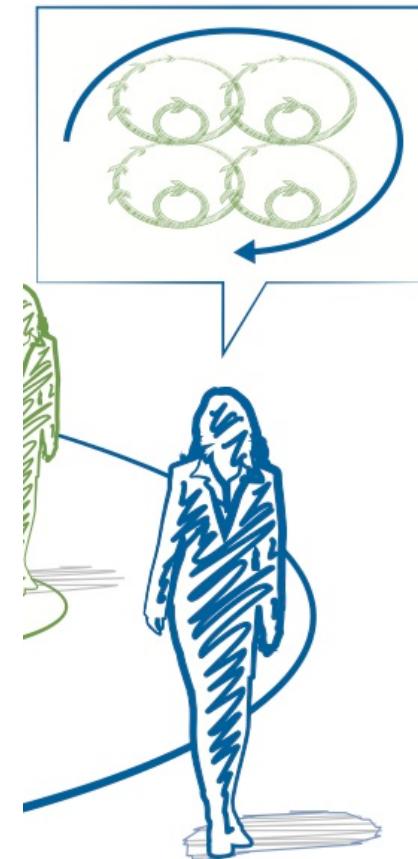
Chief Product Owner ("Product Manager") owns, defines, and prioritizes the Program Backlog.



Chief Scrum Master ("Release Train Engineer") owns and facilitates the overall process.

Chief Scrum Master ("Release Train Engineer") owns and facilitates the overall process.

- Facilitates all events on the program level (Release Planning, Scrum of Scrums, Release Management events, System Demo, Inspect and Adapt)
- Ensures collaboration within and across programs
- Escalates impediments and helps manage risk
- Helps drive program-level continuous improvement



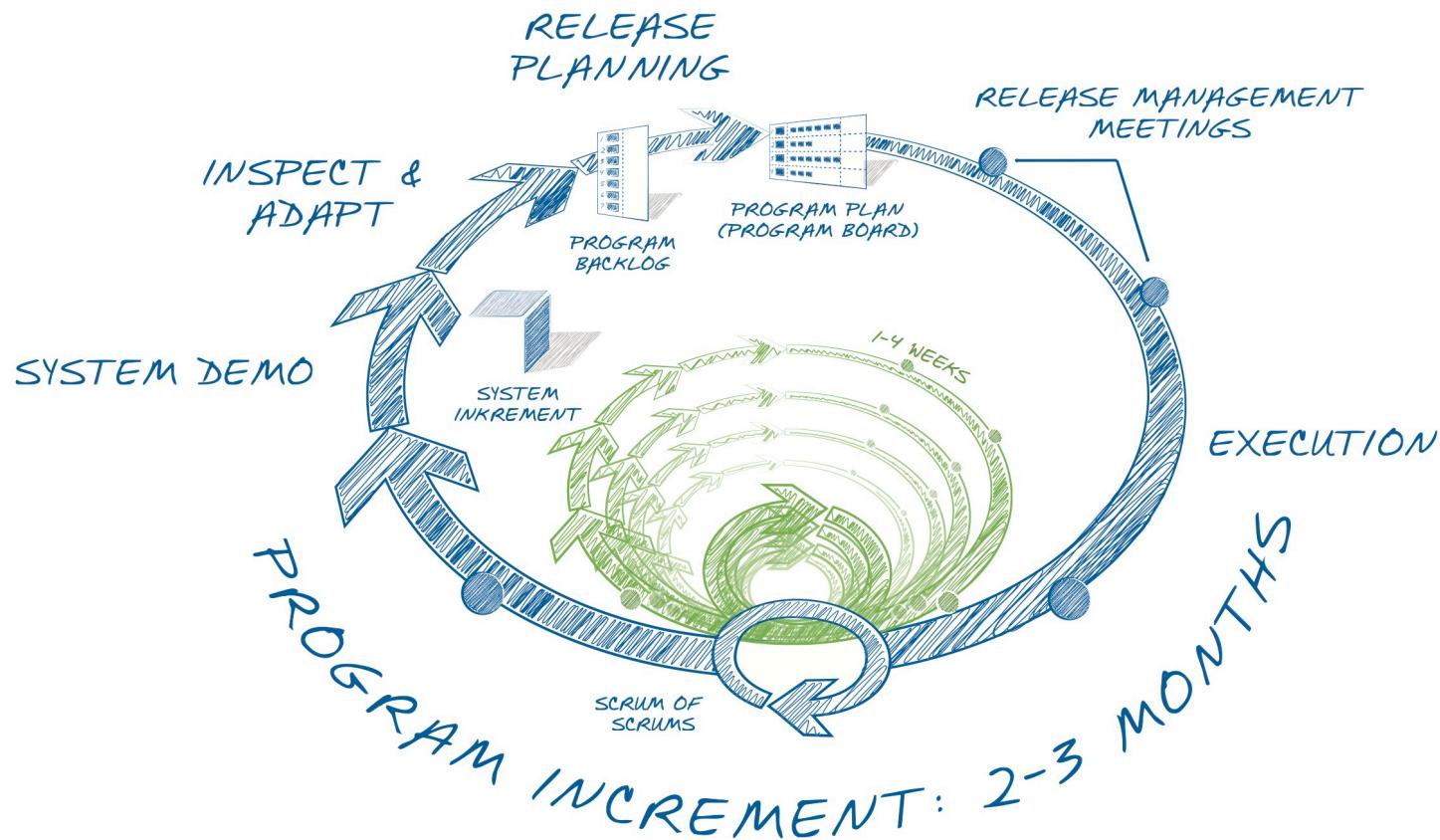
Chief Product Owner ("Product Manager") owns, defines, and prioritizes the Program Backlog.

- works with stakeholders to understand and prioritize business objectives.
- works with technical stakeholders like system architects to understand and prioritize architectural features.
- provides, orders and manages the requirements in the Program Backlog (including business and architectural features)
- ensures the teams work on the "right things" from a business perspective
- works with the Product Owners to help them break down the features from the Program Backlog to stories in the Product Backlog.
- works with the teams to answer questions about the features of the Program.
- builds an effective Product Owner Team.
- identifies what has been done and what has not been done in a Program Increment.

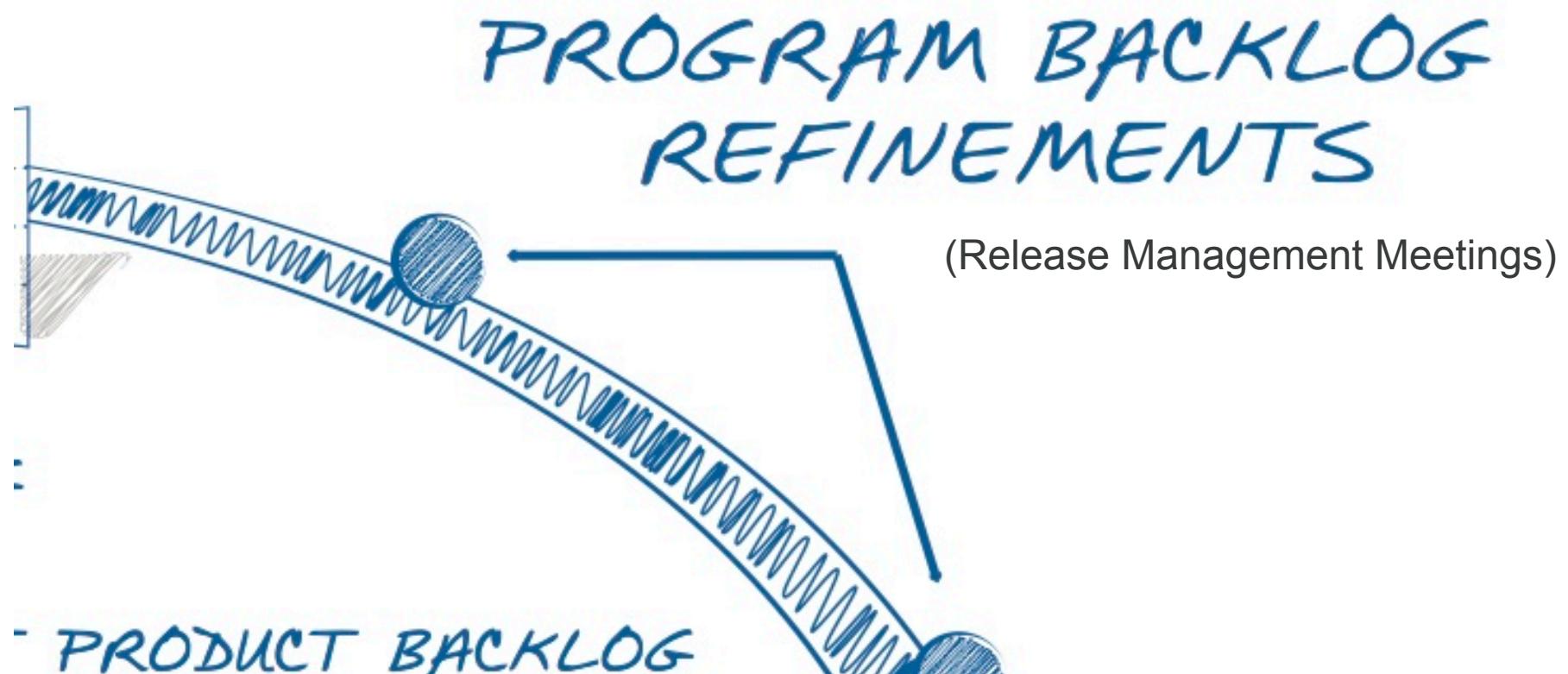


# Program Increment Cycle

A program has a Program Increment Cycle. This is a cadence that wraps around the Sprints. The Program Increment cycle is a regular interval of 1-3 months.



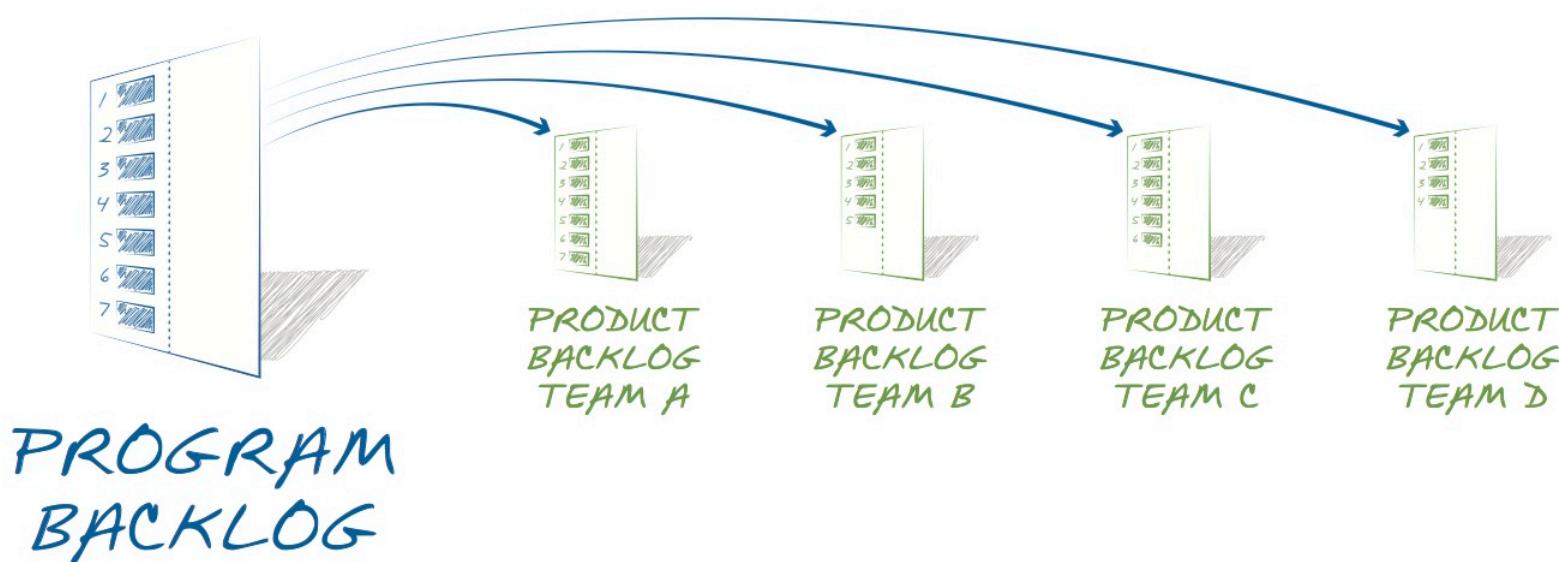
The Product Owner teams of the Programs meet regularly to refine the Program Backlog (also called "Release Management Meeting").



The Program Backlog is the single, definitive repository for all the upcoming work anticipated to advance the Program.

### The Program Backlog

- consists primarily of Program features intended to address user needs and deliver business benefits
- also includes new architectural features required to build the architectural runway necessary to support the upcoming program features in the Program Backlog.

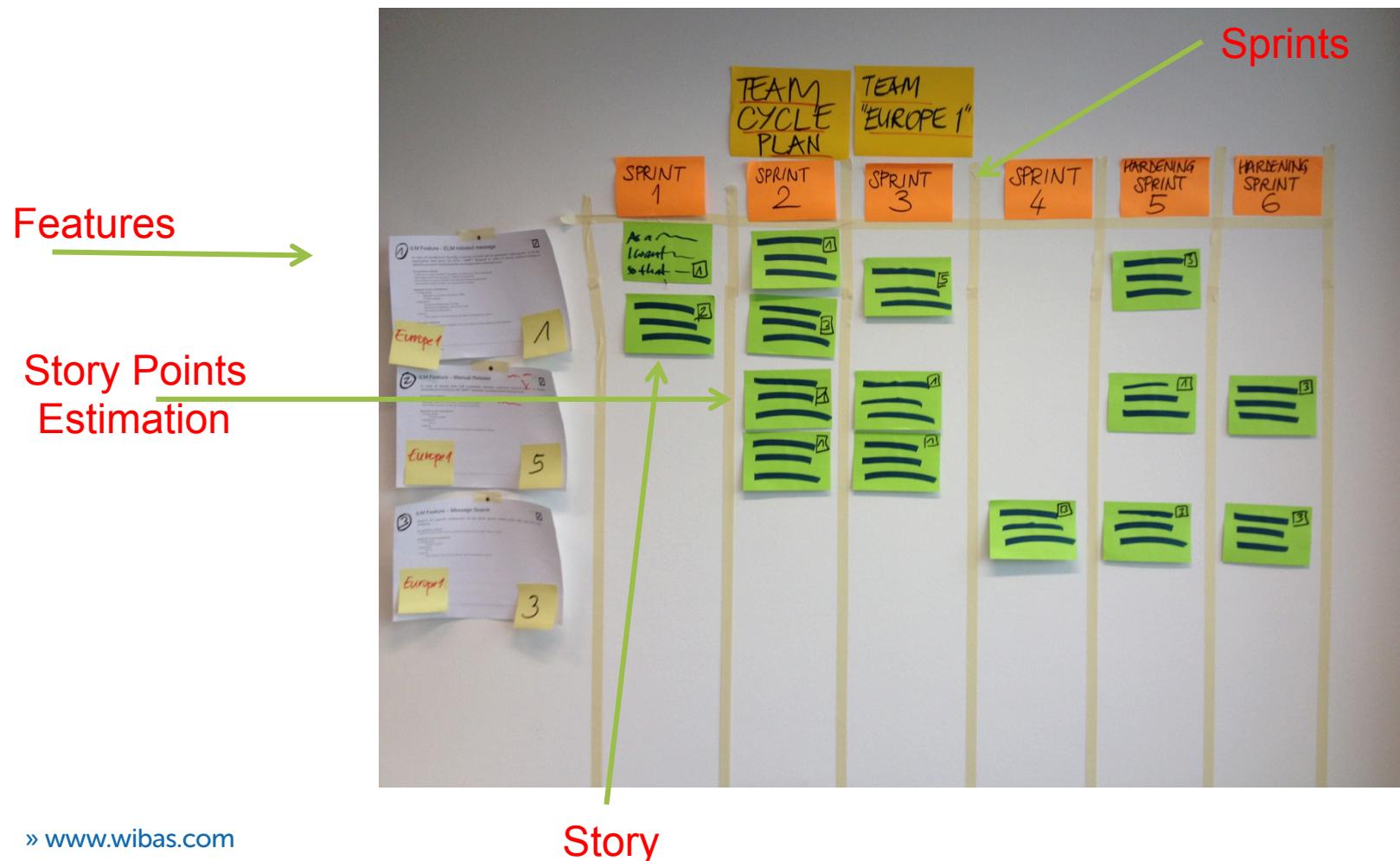


Each Program Increment begins with Release Planning. In this meeting all teams collaborate to understand, select and plan the work to be done in the Program Increment (= next Sprints).

- Two days every 8–12 weeks
- Everyone attends in person if at all possible
- Chief Product Owner (“Product Manager”) explains Program Backlog items and priorities
- Development teams estimate features that fit into next Program Increment, breaks down Program Backlog items (story-planning), plans which story is done in which Sprint
- **Result:** A committed set of Program Backlog items for the next Program Increment and a high level plan how to deliver the items.



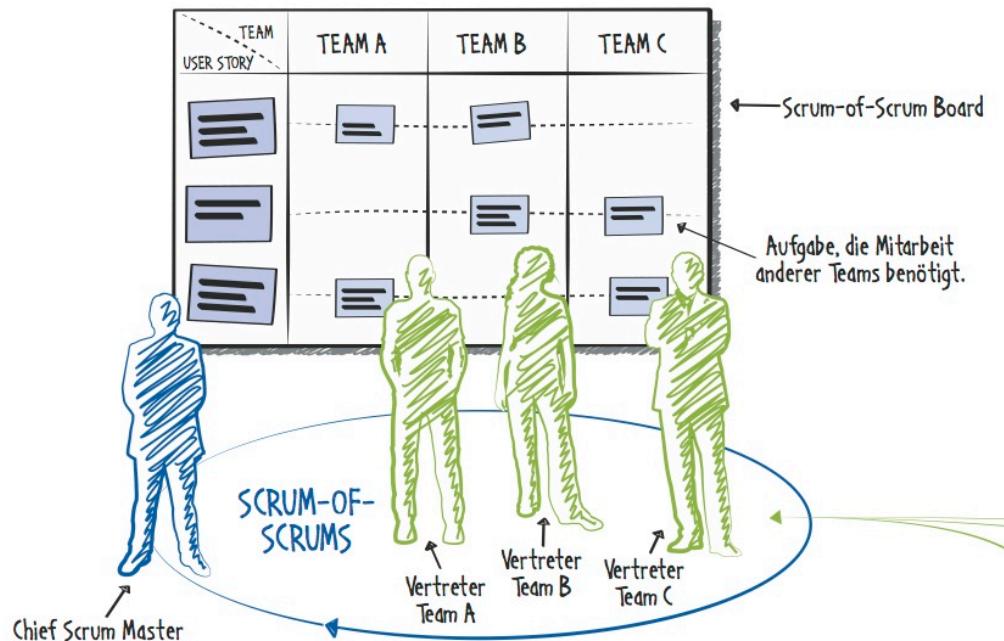
In Release Planning teams selects the features it will implement in the next Program Increment – and break it down into stories.



## Example with two Sprints.

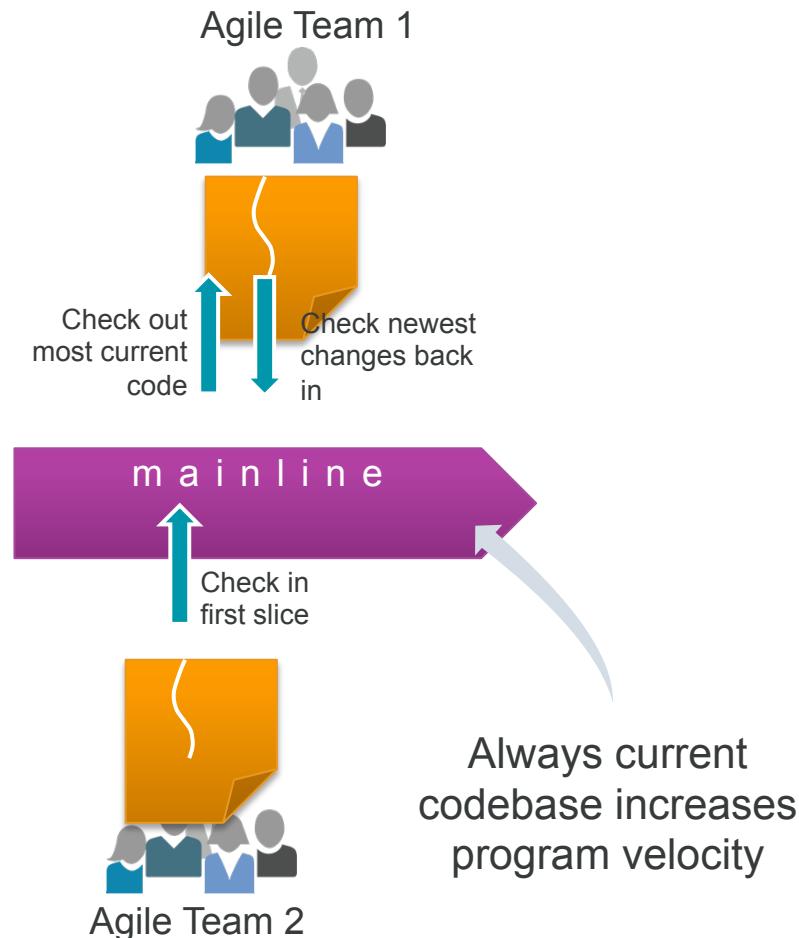


During the Program Increment cycle teams coordinate dependencies through a daily Scrum of Scrums (SoS) event.



- Team members meet daily; Chief Scrum Master moderates
- Scrum Masters meet weekly to gain visibility into progress and impediments

## Teams do Continuous System Integration.



(That will be hard to do with our Lego simulation.  
So we will not do this in the simulation.)

At the end of the Program Increment, teams demonstrate in a System Demo the current state of the solution to stakeholders.

Often led by product management and team representatives.

Attended by business owners, program stakeholders, product management, release train engineer, Scrum Masters, and teams.



*Picture by Rally Software*

After the System Demo, the program does a retrospective ("Inspect & Adapt").



# Simulation

## Lego City Large Scale Scrum Simulation: 2 programs with 5-10 teams.

The simulation will consist of:

- Two PROGRAMS with 5-10 teams each.

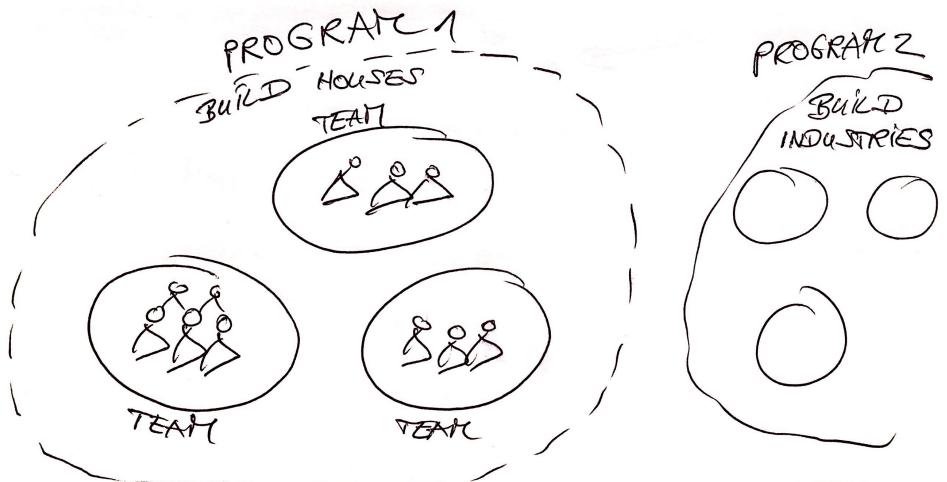
In the simulation we will

- Define the requirements for the city, the programs and the teams
- Build an iteration of the Lego city play set

Simulation length:

- One program increment cycle with two Sprints, each 30 min

This allows you to experience SCRUM and



## Lego City Large Scale Scrum Simulation: Portfolio Vision

- For children
- with the need to play their life
- we develop LEGO cities
- that provides houses, recreation facilities, transport, and emergency infrastructure.
  
- In contrast to other Lego sets,
- our Lego cities are an integrated set with many city elements.

Same format as product vision:

- For <customers>
- with <needs>
- we develop the <product name>
- that provides <key features>.
  
- Unlike <competitors>
- our product <uniqueness>.

## Lego City Large Scale Scrum Simulation: Chief Product Owner & Chief Scrum Master (5 min)

Altogether:

1. Teams form two programs
2. Each program elects a  
Chief Scrum Master  
Chief Product Owner

Output:

- Chief Scrum Master and  
Chief Product Owner  
for each program

## Lego City Large Scale Scrum Simulation: Program Backlog (10 min)

Go into the programs and teams

1. Brainstorm the FEATURES of a Lego city set. Each team to come back with 5-6 features
  - a. Program one: a city in Germany
  - b. Program two: a city in Asia

Output:

- FEATURES from each team

# Lego City Large Scale Scrum Simulation: The Chief Product Owners meet with their Team Product Owners to refine the Program Backlog and do the Definition of Done (20 min).



## Output 1: Program Backlog

- Features that fit into one Program Increment Cycle
- Our Program Increment consists of two Sprints with 30 min each.

## Output 2: Definition of Done

## Output 3: Moderation of Release Planning

- Chief Scrum Master and Scrum Masters prepare the Release Planning meeting

## Input:

- Assorted features created by the teams of both programs

## Output:

- Product Owner team: Two prioritized program backlogs with features
- Product Owner team: Definition of Done
- Scrum Master team: plan how you support the Release Planning meeting

## Lego City Large Scale Scrum Simulation: Release Planning (20 min).

Program Increment Length:

- 2 Sprints, each 30 min

Do a Release Planning (20 min):

- Break into teams
- Pick from the Program Backlog the features you want to do
- Put the Program backlog FEATURE into your Release Plan and break it down into stories
- Discuss the stories with the Chief Product Owner and maybe change/ drop/amend them
- Estimate the story points

Input:

- Two Program Backlogs (one for each Program) with features

Output:

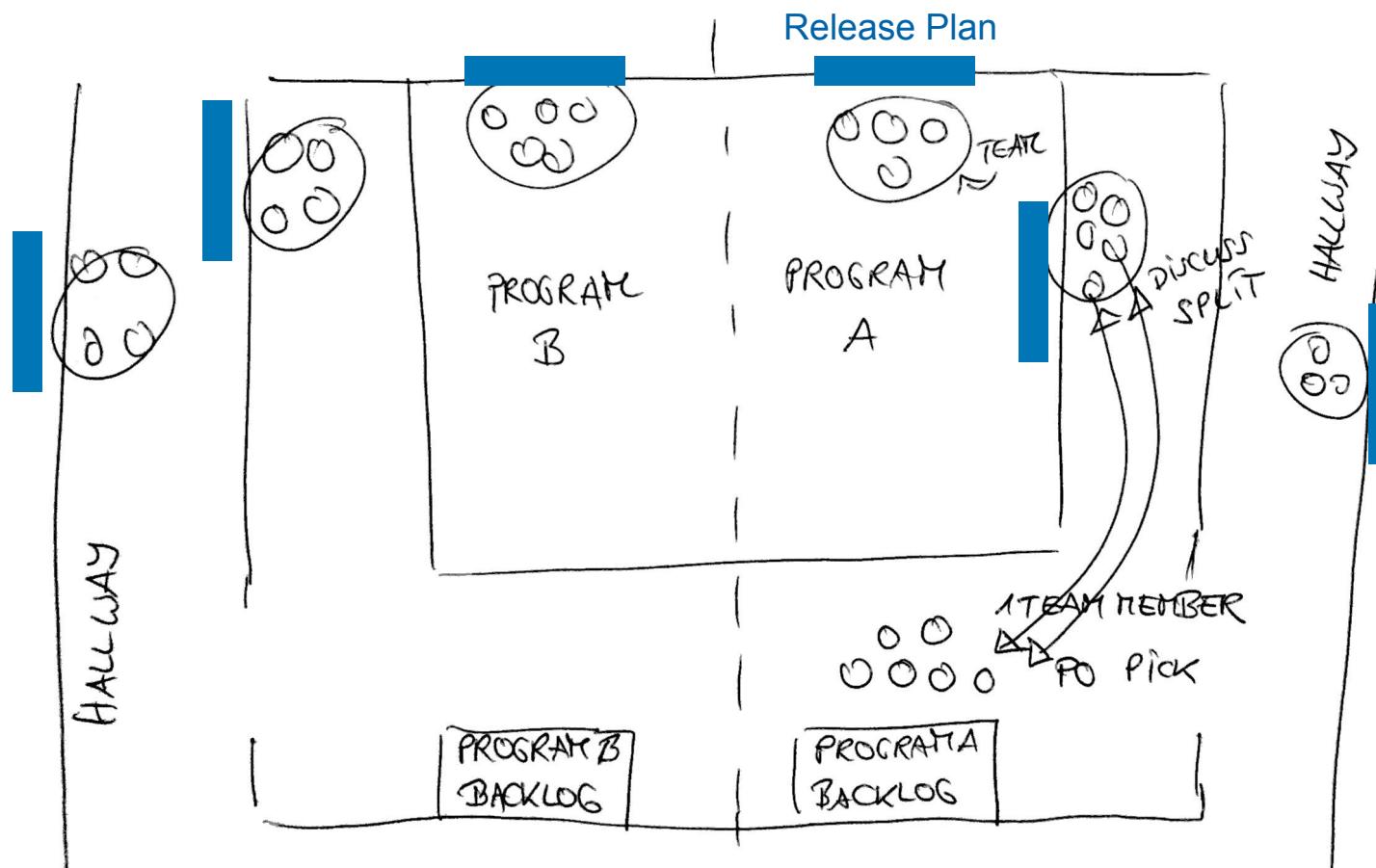
- A release plan for each team

Moderator:

- For each program, the Chief Scrum Master moderates the meeting

Reference story for your estimation:  
As a child I want a bus station with some waiting people so I can play that people are getting on and off a bus.

## Lego City Large Scale Scrum Simulation: Release Planning One (20 min) - Layout



## Lego City Large Scale Scrum Simulation: Do Sprint One (50 min).

### Do Sprint One:

- 5 min Sprint Planning 1: teams of a program discuss which team is doing which story
- 5 min Sprint Planning 2: each team plans its tasks
- 3x 10 min
  - » a work day, starts with Daily Scrum
  - » After the Daily Scrum, one team member comes to the Scrum of Scrum meeting for coordination issues
- 5 min: System Demo (in this room)
- 5 min: Sprint Retrospective

### Input:

- Your Release Plan

### Output:

- Integrated city (by development team)
- Release Burndown (by team product owner)

# Lego City Large Scale Scrum Simulation: Do Sprint Two.

## Do Sprint One:

- 5 min Sprint Planning 1: teams of a program discuss which team is doing which story and change/adapt stories based on results of last Sprint
- 5 min Sprint Planning 2: each team plans its tasks
- 3x 10 min
  - » a work day, starts with Daily Scrum
  - » After the Daily Scrum, one team member comes to the Scrum of Scrum meeting for coordination issues
- 5 min: System Demo (in this room)
- 5 min: Sprint Retrospective

## Input:

- Your Release Plan

## Output:

- Integrated city (by development team)
- Release Burndown (by team product owner)

# Lego City Large Scale Scrum Simulation: Inspect & Adapt / Program Increment Cycle Retrospective

## In a fishbowl

- Each team brings one item from their retrospective to the front; focus on stuff that concerns the work of the program (not just of the team)

### Input:

- Teams' retrospective results

### Output:

- Program's retrospective results

# Lego City Large Scale Scrum Simulation: Overall schedule of simulation

Before the Program Increment Cycle:

- 10 min: Program Backlog Refinement (in Teams)
- 20 min: Program Backlog Refinement (by PO team) and Scrum Master preparation (by SM team)

Do Program Increment Cycle:

- 20 min; Release Planning
- 50 min Sprint One:
  - » 5 min Sprint Planning 1: teams of a program discuss which team is doing which story
  - » 5 min Sprint Planning 2: each team plans its tasks
  - » 3x 10 min
    - » a work day, starts with Daily Scrum
    - » After the Daily Scrum, one team member comes to the Scrum of Scrum meeting for coordination issues
  - » 5 min: System Demo (in this room)
  - » 5 min: Sprint Retrospective
- 50 min Sprint Two:
  - » 5 min Sprint Planning 1: teams of a program discuss which team is doing which story
  - » 5 min Sprint Planning 2: each team plans its tasks
  - » 3x 10 min
    - » a work day, starts with Daily Scrum
    - » After the Daily Scrum, one team member comes to the Scrum of Scrum meeting for coordination issues
  - » 5 min: System Demo (in this room)
  - » 5 min: Sprint Retrospective
- 10 min Inspect & Adapt / Program Increment Cycle Retrospective

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## Revision History

Rev. #	Status	Date	Description	Responsible
1.0	Finished	04.02.2015	Initial version	Malte Foegen
1.1	Finished	20.02.2016	Updated version 2016	Malte Foegen