



# Organize around value

## with the Scaled Agile Framework SAFe®

A proven way to focus and accelerate the development value stream



## Building Products

# BP

As a pioneer in the global building industry, we change how people live and work in buildings by connecting the digital grid and the physical world

**LOCATIONS** Manufacturing and R&D in 10 countries

**EMPLOYEES** > 5200

**CUSTOMERS** > 22000

## > 1500

> 1500 People develop together products and solutions in “Agile Release Trains”

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## 10 Sites

Our development teams are distributed globally to build our product and solution.

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## 40 Train

Our development value streams are organized in 40 “Agile Release Trains”

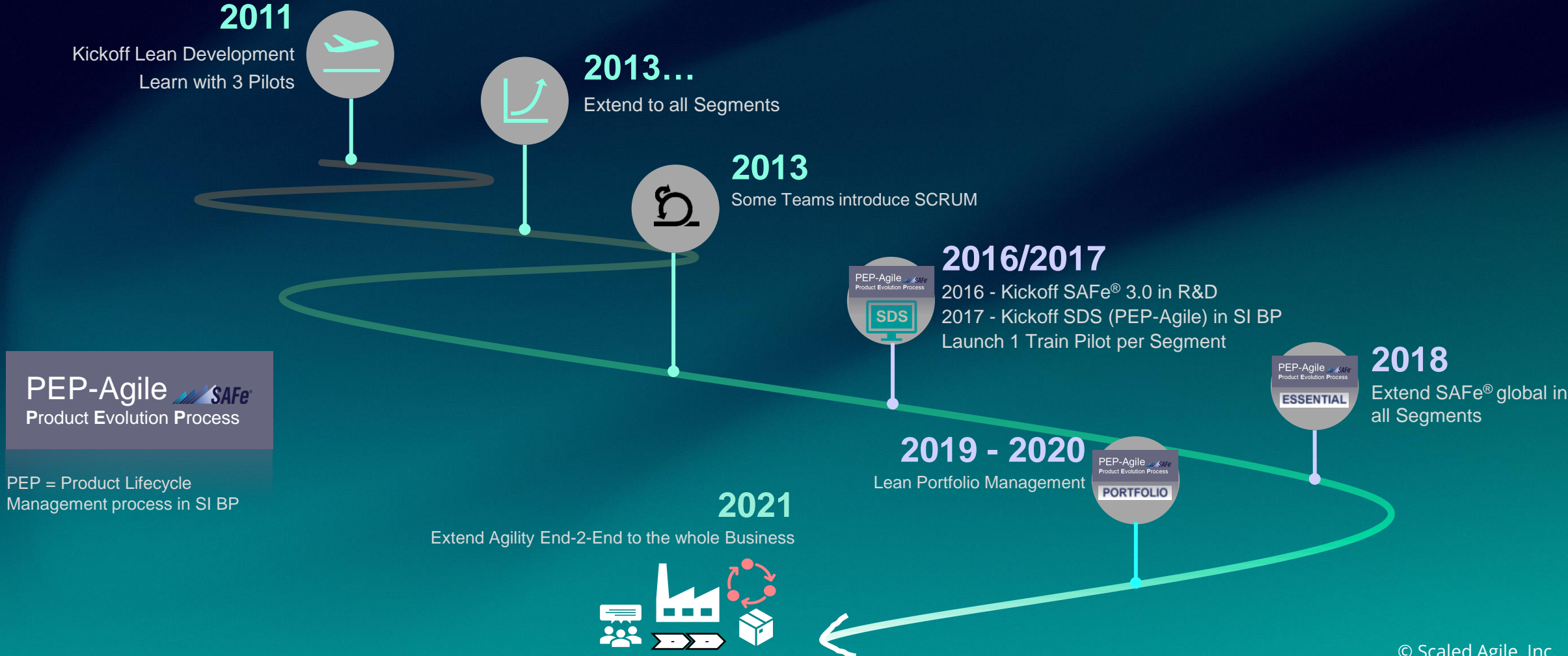
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## Full Scale

From team agility over large program up to portfolio agility

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# The SI BP Transformation Journey toward the Agile Development Value Stream



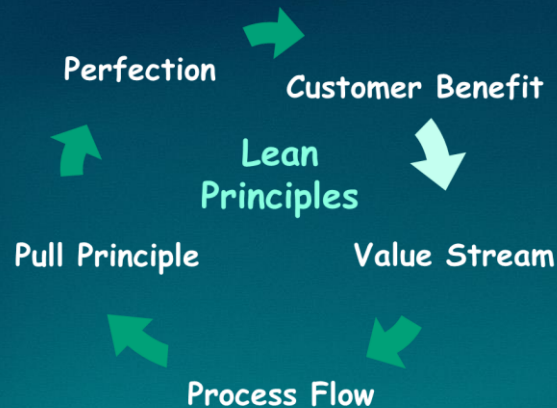
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**SIEMENS**



# The SI BP Transformation Journey toward the Agile Development Value Stream

## Lean Development



## Scale Agility

PEP-Agile   
Product Evolution Process

Scaled Agile Framework SAFe® for Lean Enterprises is a knowledge base of proven, integrated principles, practices, and competencies for Lean, Agile, and DevOps

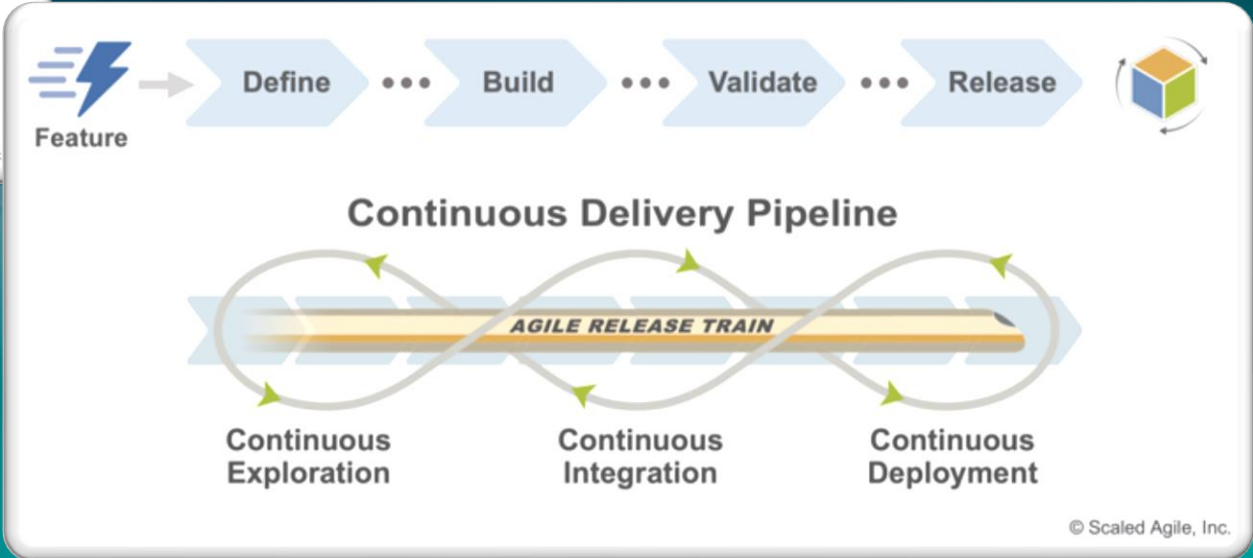
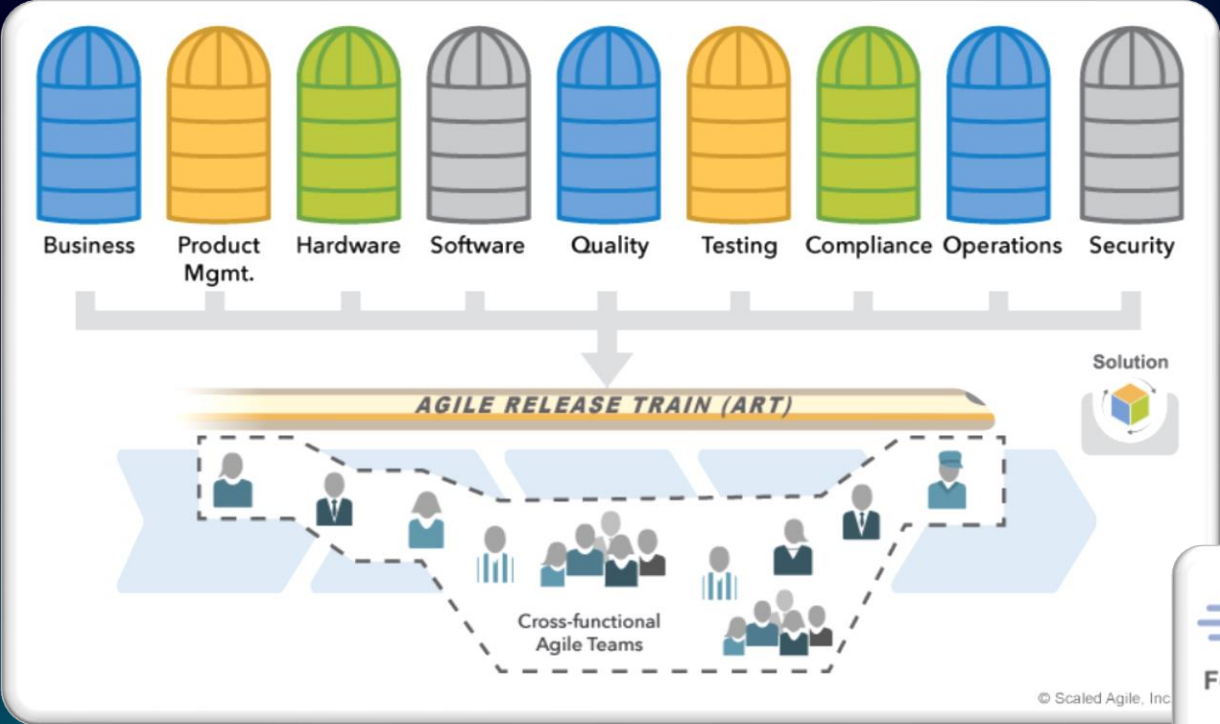
- **Scaling Agility** for large initiatives
- Foster the **organization around the value** creation
- Organizing **all** required **people in one** cross-functional **“Agile Release Train”**

## End-to-End Business Agility



MVP = Minimal Valuable Product

# The Agile Release Train and the Development Value Stream



# Organize Around Value with PEP-Agile (SAFe®)

THE WHY – THE WHAT – THE HOW



# THE WHY



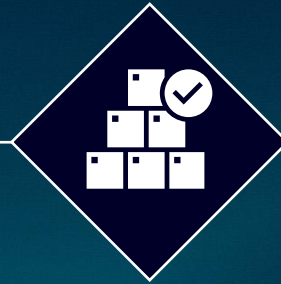
**Ambition:** Deliver on time and budget, co-creation with our customers, react fast to changing markets.

## Complexity



- Difficulty to scale agility into classic System Engineering for large initiatives
- Development of large initiatives took too long
- Continuous overload situation
- To many initiatives in parallel

## Quality & Improvement



- Difficult to improve systematically and difficult to go for operational excellence.
- Late feedback loop in system test
- Huge test effort to increase quality before M300
- Late deliveries

## People



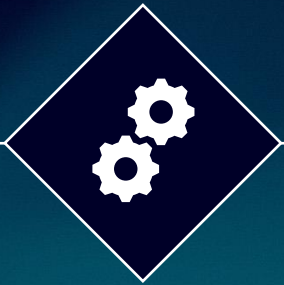
- Improve collaboration between Product Management and R&D
- Improve collaboration between development teams
- Overload and frustration
- Missing clear ownership
- Huge effort to plan resources

# THE WHAT



**Unleash Potential of your people:** Foster the self-organization and self-responsibility, build safe environments and create trust

## Product Development



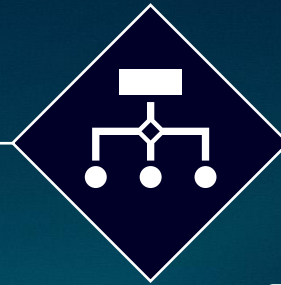
*Waterfall*



*Agile*

- > 85% of all development in Agile mode
- Jointly ranked backlogs with clear focus and ranking
- In time boxed development, time and cost are fix and we negotiate the content

## Organization



*Hierarchical*



*Flat*

- From traditional Project organization toward - long lived - fully dedicated - cross-functional teams in Agile Release Trains
- >80% work in 40 self organized Agile Release Trains

## People



*Command & Control*



*Ownership, Trust & Empowerment*

- >1200 people in R&D using pull principle
- Empowered self-organized cross-functional teams



# THE HOW



Forget about perfection, focus on progression and compound the improvements (Sir. D. Brailsford)

## Process



Flow Charts I/O & Best Practices

- We started in 2017 with PEP Agile - Essential SAFe®
- Extended in 2019 to PEP Agile- Portfolio SAFe®
- Strengthen the innovation with Design Thinking

## Learning



External Internal

- >1500 people trained in agile methods
- Role based trainings
- Continuous learning and innovation practices
- Dedicated team to strengthen UX mindset in the Organization

## Improvement



Top Down Bottom Up

- 70% defect resolution lead time reduction
- Number of field issues as lead time reduced
- Lead time in HW prototyping reduced
- Lead time for test feedback loops reduced

# Key learnings and take away

WHAT DID WE WELL – WHAT NEEDS TO BE IMPROVED



# Achievement



**DONE**

Reduce time to market by 50% within 5 years



**On track**

Double revenue from new offerings within 5 years

Breakthrough Targets: Developed by Working Group and agreed with Dr. Roland Busch on 2018, July 18; released in Sept. 2018




**Strive for reliability  
and excellence**

89% Predictability of all Programs in R&D in BY21

# Why could we improve - Teams Feedback


 High Transparency

Empowering **self standing Teams** 


 **Reduced implementation lead time on key initiatives**

High **focus** on main topics 



 **Fast Decision** – planning problem solving

**Increased motivation** in the teams 

 **Connect people** from top Management to development teams

**Improved collaboration** between Product Management and R&D



 **Better alignment to common Vision and Strategy**



# | THE ROLE OF QM

WHAT WAS THE CONTRIBUTION OF QM IN THE TRANSFORMATION?

# What was the Role of the QM in the transformation



- Supported the Organization in the Zero-Defect Culture to increase quality our development and production processes
- They where part of the transformation teas as “Agile Coach” supporting the development Teams in the daily work
  - Scrum Meeting
  - Retrospectives
  - In Qualitative and Quantitative Self-Assessments
- They helped to elaborate the new PEP-Agile Process and ensured we didn’t miss any important quality assurance aspects
  - ISO Standards
  - Exports Controls
  - External Approvals like VDS (Vereinigte Deutsche Studentenschaften) etc.
- They elaborate DOR (Definition of Ready) and DOD (Definition of Done) in the new PEP-Agile Process ensure still the operational QA
- They Adapted former checklist to the new iterative approach



# Interactions in the Iterative Process

## AGILE RELEASE TRAIN

SUPPLIER

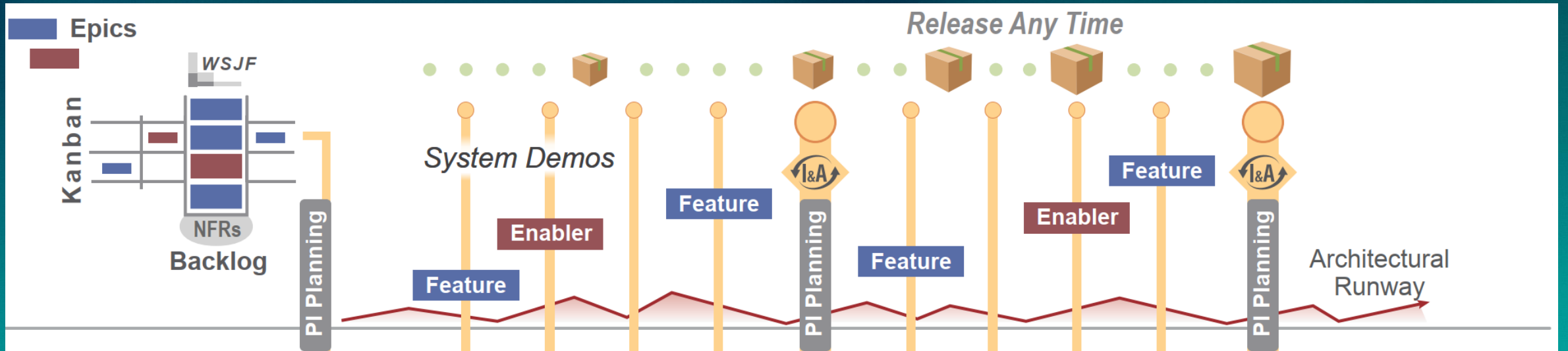
SUPPLIER

PQM (Program Quality Management)

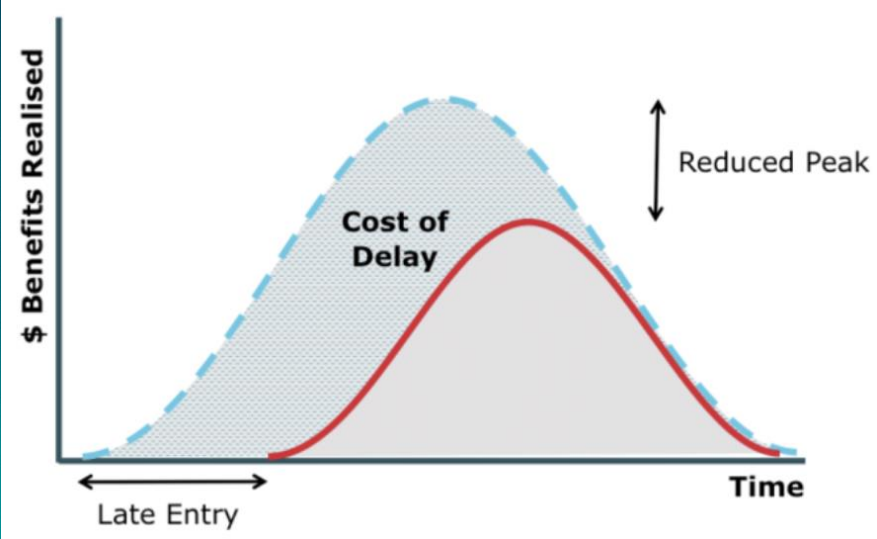
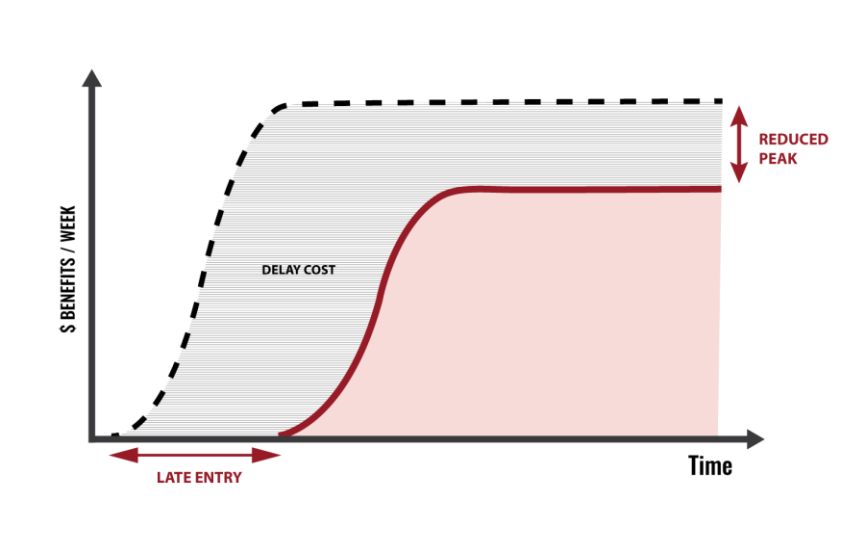
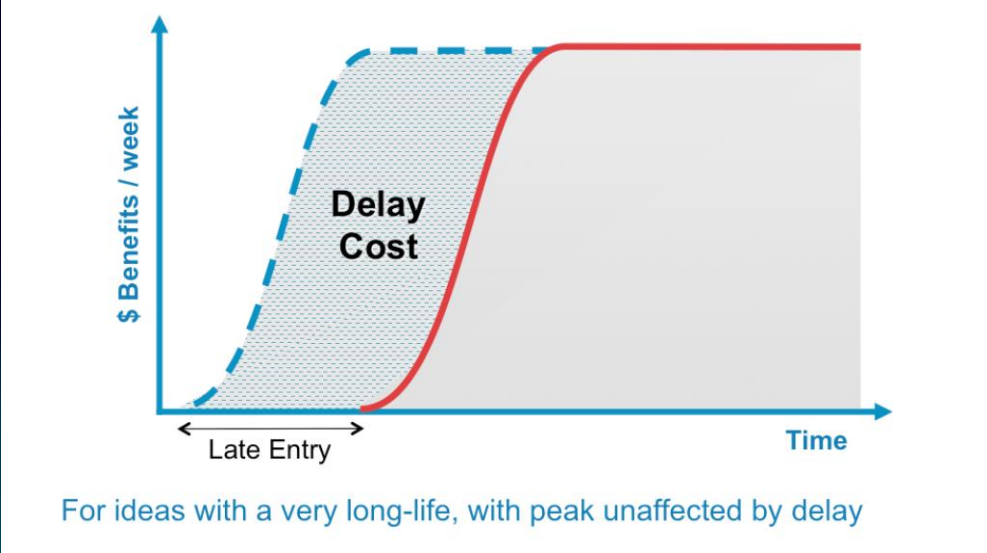
SQE (Supplier Quality Engineer) as sparing partner for R&D

SQM (Supplier Quality Management) responsible for complete live cycle management with supplier

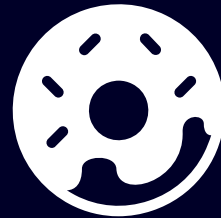
Field and & Customer Support



# Cost of Delay



# | Break – 15:40

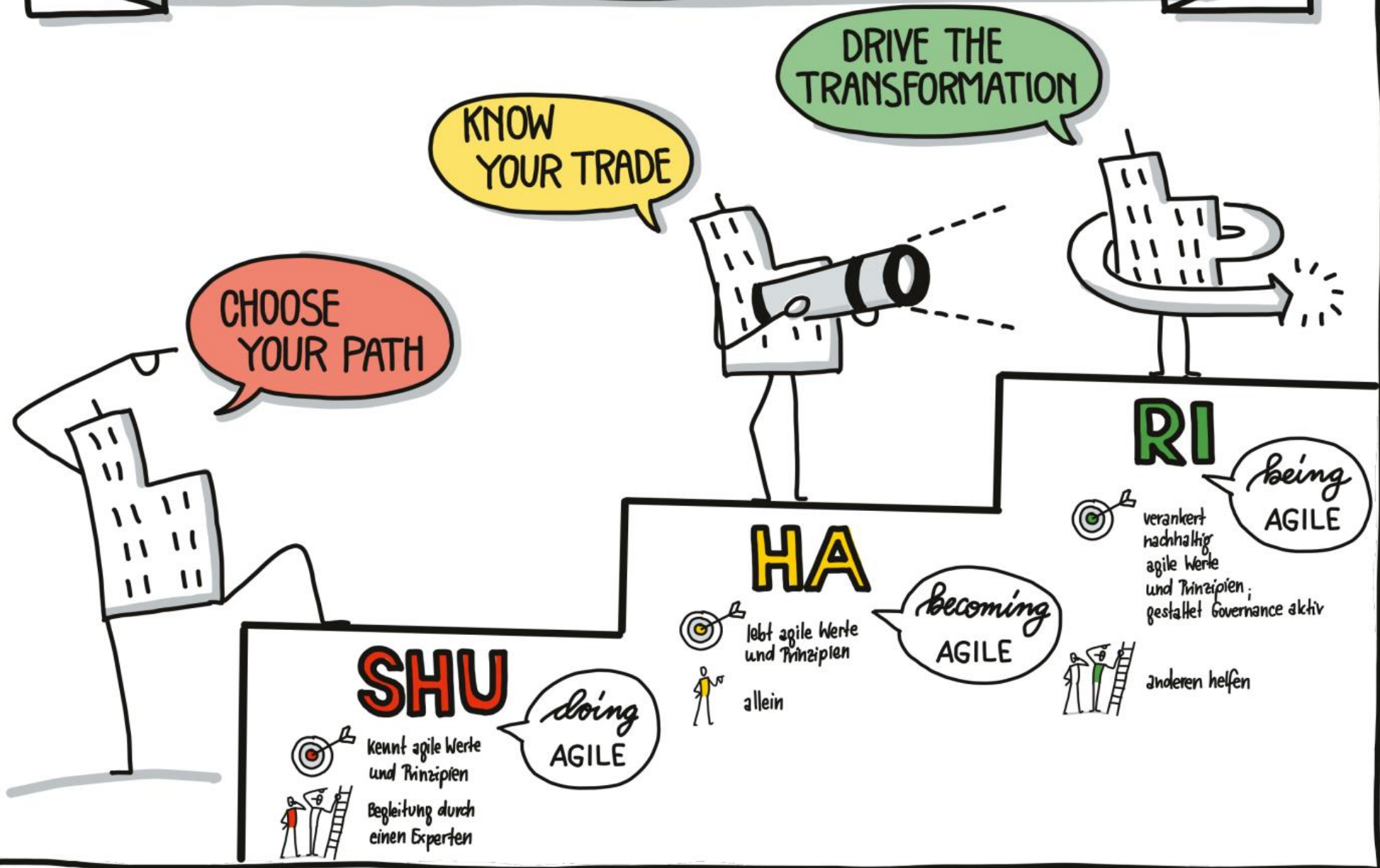




# | WHAT NEXT?

CHALLENGE IN THE DIGITALIZATION – WHAT NEEDS TO BE IMPROVED

# DIMENSION DER LEARNING OBJECTIVES JE ROLLE

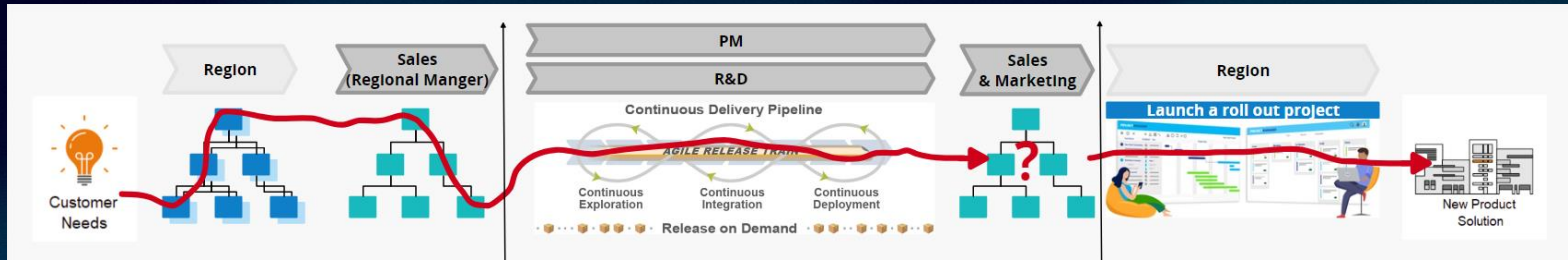


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# Extending to End-to-End Agility - Business Agility

How we perceive it today



What we are looking for





# Key success factors to accelerate End-to-End

## X-Functional Teams:

1. Full cross-functional teams (including Business, Sales, Marketing and R&D functions)
2. Self-Sufficient and empowered End-to-End
3. Problem focused (solves business or user problems)

## Create an Agile Architecture:

Build a modular Architecture based on small and loosely coupled Core Assets with stable interfaces



## Lean Startup:

Accelerate the exploration of new business opportunities using the MVP cycle (= Lean Startup Cycle)



Accelerate Clock-Speed

## UX Experience – Customer Centric:

Co-create new product, applications and solution together with real customer to gain better knowledge and having faster feedback.



## Build on UX Design and Design Thinking

to allow us to create more effective innovative and valuable products for our customers



## DevOps:

Accelerate the Continuous Integration/ Continuous Deployment/ Continuous Release pipeline where teams can continuously release based on “automated collected Quality, Test and Security information”.

<b>Business Problem</b> What problem does the business have that you are trying to solve? <i>(Hint: Consider your current offerings and how they deliver value, changes in the market, delivery channels, competitive threats and customer behavior.)</i>  <h1>1</h1>	<b>Solutions</b> What can we make that will solve our business problem and meet the needs of our customers at the same time? List product, feature, or enhancement ideas here.  <h1>5</h1>	<b>Business Outcomes</b> How will you know you solved the business problem? What will you measure? <i>(Hint: What will people/users be doing differently if your solutions work? Consider metrics that indicate customer success like average order value, time on site, and retention rate.)</i>  <h1>2</h1>
<b>Users</b> What types (i.e., personas) of users and customers should you focus on first? <i>(Hint: Who buys your product or service? Who uses it? Who configures it? Etc)</i>  <h1>3</h1>		<b>User Outcomes &amp; Benefits</b> Why would your users seek out your product or service? What benefit would they gain from using it? What behavior change can we observe that tells us they've achieved their goal? <i>(Hint: Save money, get a promotion, spend more time with family)</i>  <h1>4</h1>
<b>Hypotheses</b> Combine the assumptions from 2, 3, 4 & 5 into the following hypothesis statement: <i>"We believe that [business outcome] will be achieved if [user] attains [benefit] with [feature]."</i> <i>(Hint: Each hypothesis should focus on one feature only.)</i>  <h1>6</h1>	<b>What's the most important thing we need to learn first?</b> For each hypothesis from Box 6, identify its riskiest assumptions. Then determine the riskiest one right now. This is the assumption that will cause the entire idea to fail if it's wrong.  <i>(Hint: In the early stages of a hypothesis focus on risks to value rather than feasibility.)</i>  <h1>7</h1>	<b>What's the least amount of work we need to do to learn the next most important thing?</b> Design experiments to learn as fast as you can whether your riskiest assumption is true or false.  <h1>8</h1>

# | AGILITY & QM

What are the new challenges of the QM Role



# 6 Hypothesis how the QM role changes in the digitalization



From controlling to support and coach



From manual effort to automated value creation



From a linear to an iterative process



From manual and paper process to an automated and digitalized artifacts driven system



From Gate approval to continuous Quality Assurance

Built-in Quality



From validating every piece of work to validate the whole system



The requirements for the QM role are becoming more complex.

It is the balancing act between traditional QM values and the flexibility and speed for an unpredictable world.

THANK YOU!



# I Agility and QM

The continuous increase in complexity, as well as the need to accelerate the development time of our large initiatives, led SI BP to introduce SAFe® (Scaled Agile Framework) in R&D in 2016 to spread good agile practices across large teams. The presentation will dive into the concept of “organize around value” and try to spot what role the QM can play in the transformation.

## **Sergio Saccardo**

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Sergio is a BU Agile Transformation Coach, SAFe® Program Consultant and SDS Manager at SI BP.

In his 22+ years of experience in various R&D positions, he has developed a deep passion for teaching, supporting and encouraging teams to grow every day.