



How Tetra Pak drives Lean activities through WCM with a customer-oriented focus, while adapting to the new normal

Lean Café  
Dec'20

# Who we are?



**Emma Årman**  
*WCM Champion*

15 years of experience working with continuous improvement (Lean, Six Sigma and TPM)



**Christian Tage**  
*WCM Champion*

15 years of experience in TPM and Lean within Tetra Pak.



**Dirk Desiron**  
*System Architect*

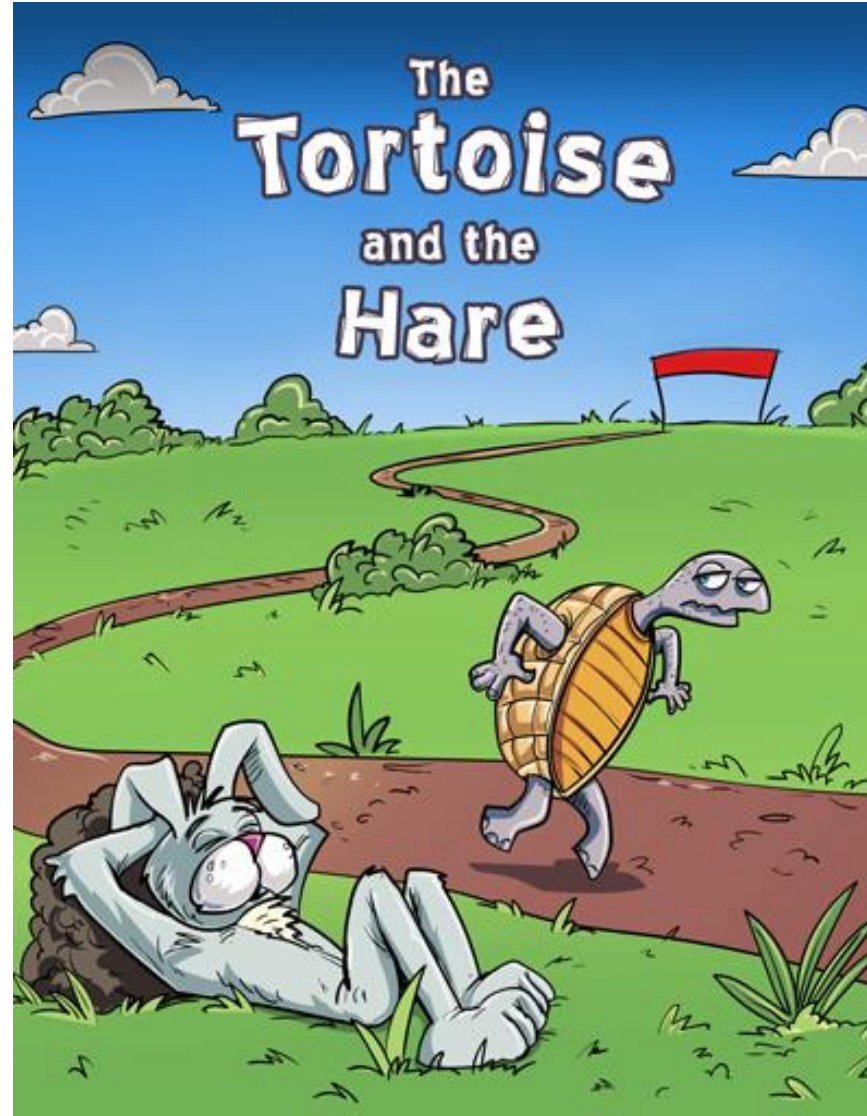
Global Automation and digitalization expert



**Carlos Ortiz**  
*OpEx & WCM director*

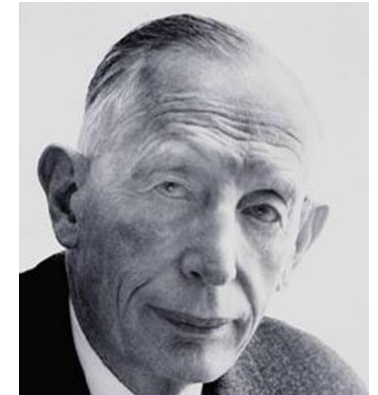
10-15 years experience in Continuous Improvement (TPM) Combined with Production, Maintenance, Project Management roles among others

# Remember the story?





# Tetra Laval group



Ruben Rausing



Gustaf de Laval



# End to end solutions

From farmer to consumer





# OUR VISION

We commit to making food safe and available, everywhere





# Social Responsibility

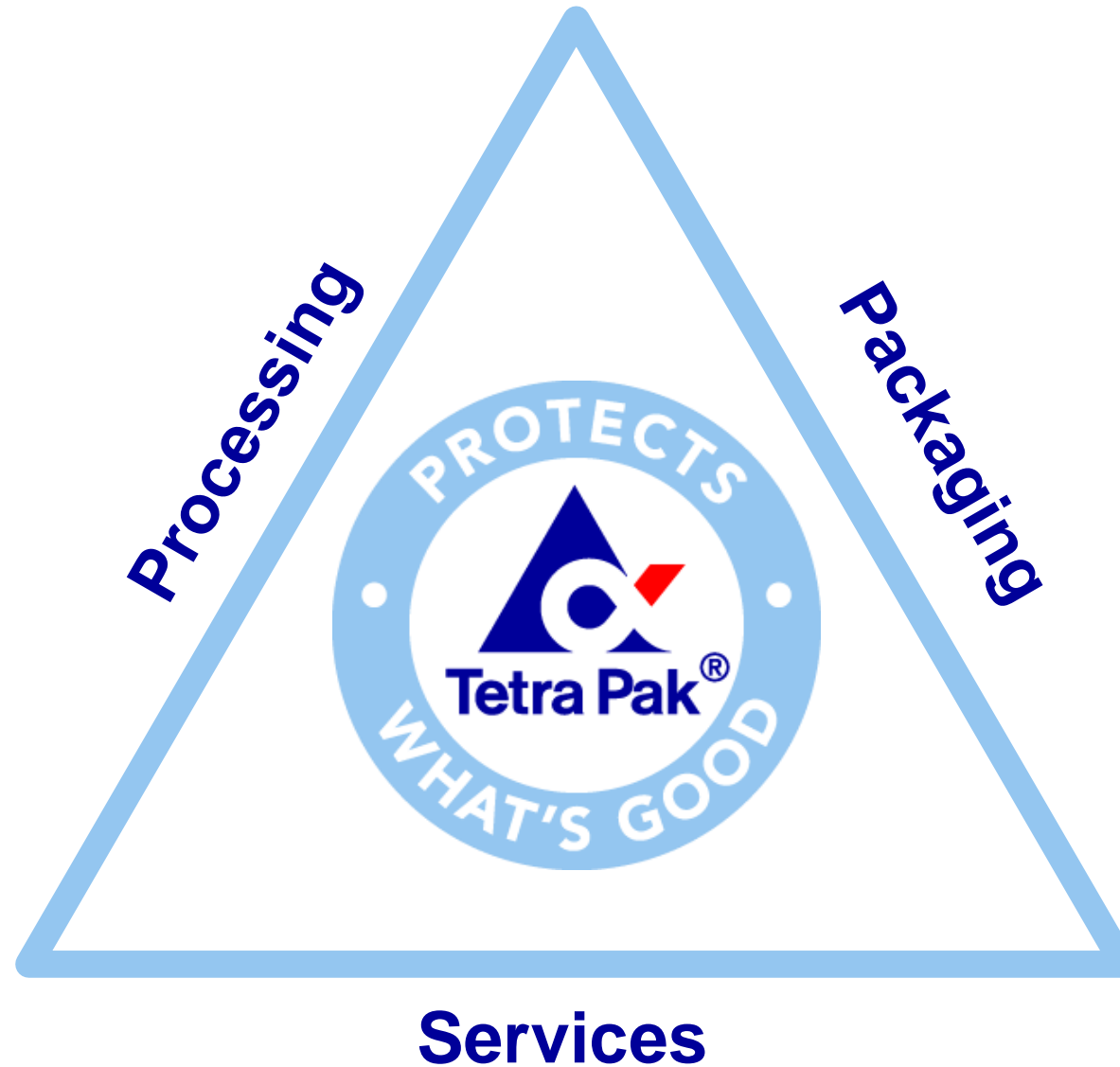
We are committed to **social responsibility** including **responsible sourcing**, for ourselves and our suppliers.

- Corporate Governance Assurance system
- Code of business conduct
- Supplier audit programme
- Membership of the Supplier Ethical Data Exchange (SEDEX)





# One company, three business



# Packaging portfolio



# Processing categories



DAIRY



ICE CREAM



BEVERAGE



CHEESE



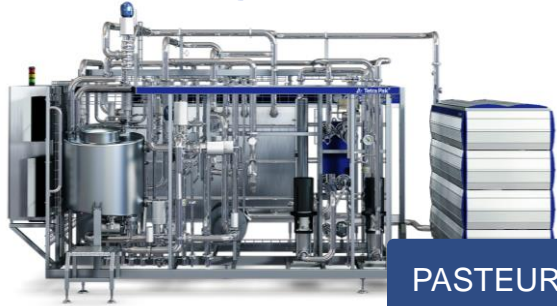
PREPARED FOOD



POWDER

# Processing portfolio

## Core technologies



PASTEURIZATION • UHT TREATMENT



SEPARATION • STANDARDIZATION • HOMOGENIZATION



CURD MAKING • CURD HANDLING • FILTRATION



FREEZING • MOULDING • EXTRUSION



BLENDING • MIXING • DOSING



SUGAR DISSOLVING • CARBONIZATION



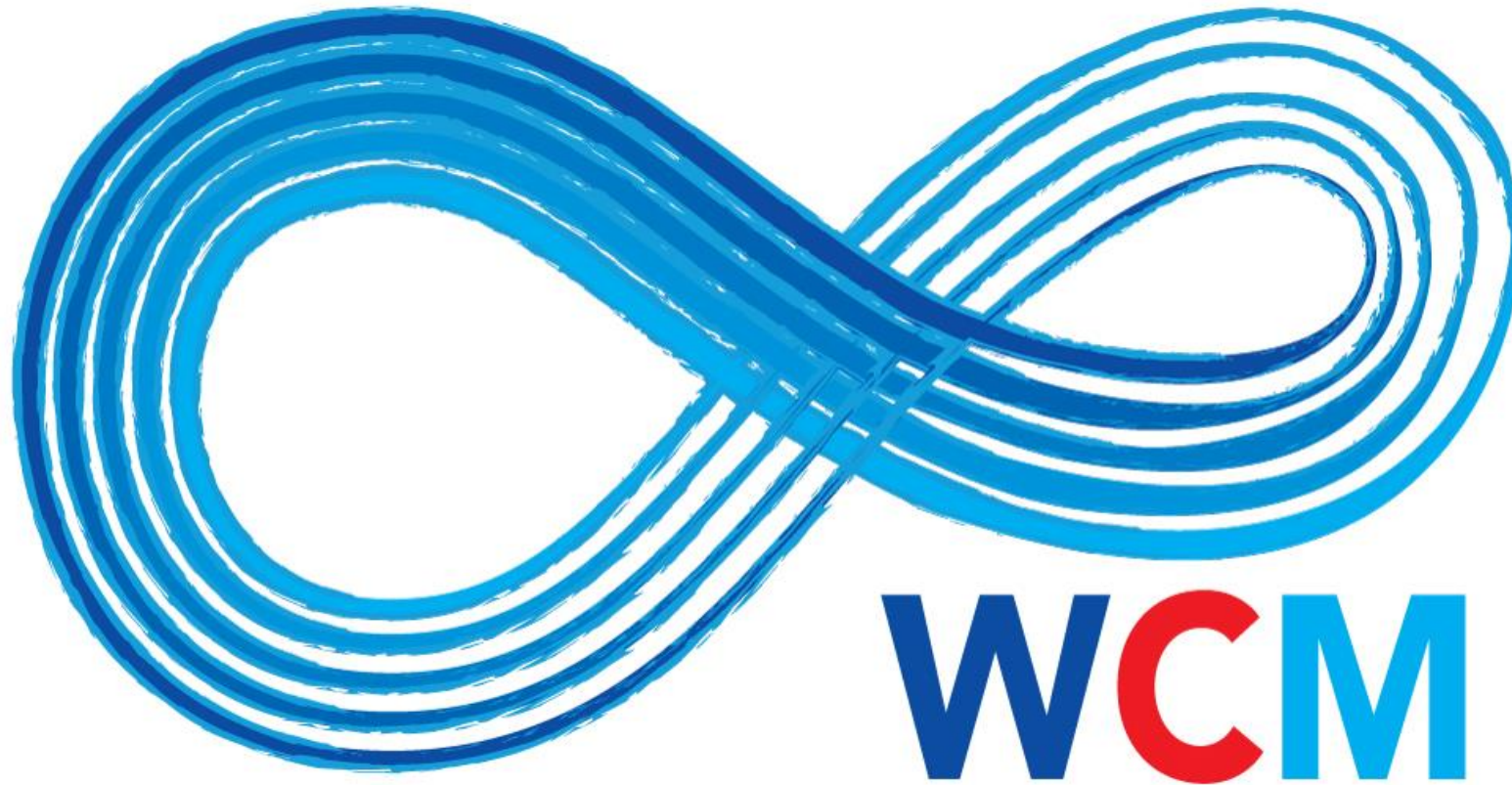
CLEANING-IN-PLACE • ASEPTIC BUFFERING



EVAPORATION • DRYING • POWDER HANDLING



# Our continuous improvement program





# What is World Class Management (WCM) ?

WCM is a culture, our way of working

World Class Management is the continuous improvement methodology used in Tetra Pak to deliver world class solutions in a structured, fact-based and consistent way

The philosophy around WCM is based on the principle...

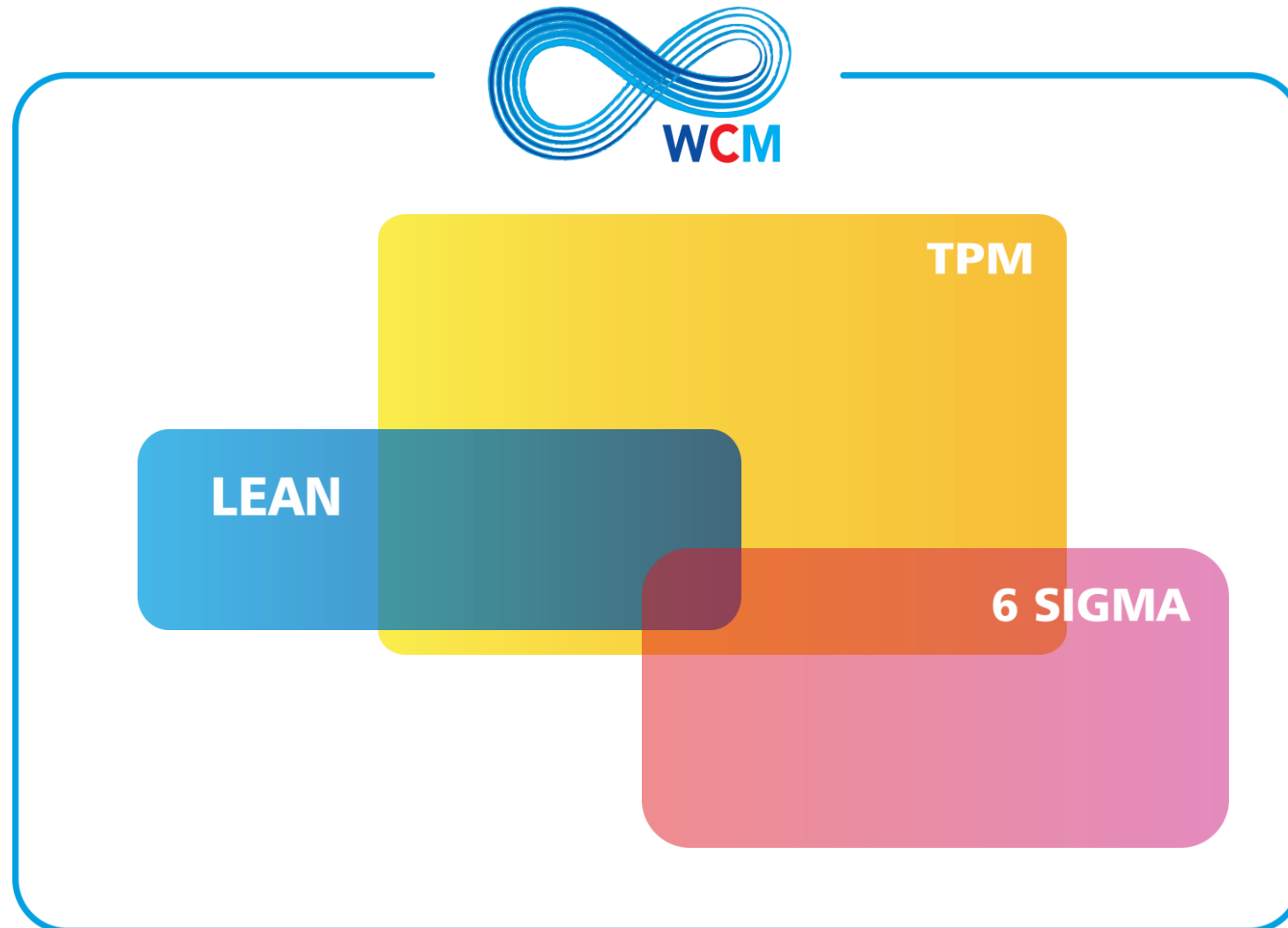
**“Energy comes from the whole organization”**

...meaning our results come from all employees



# What do we mean with WCM?

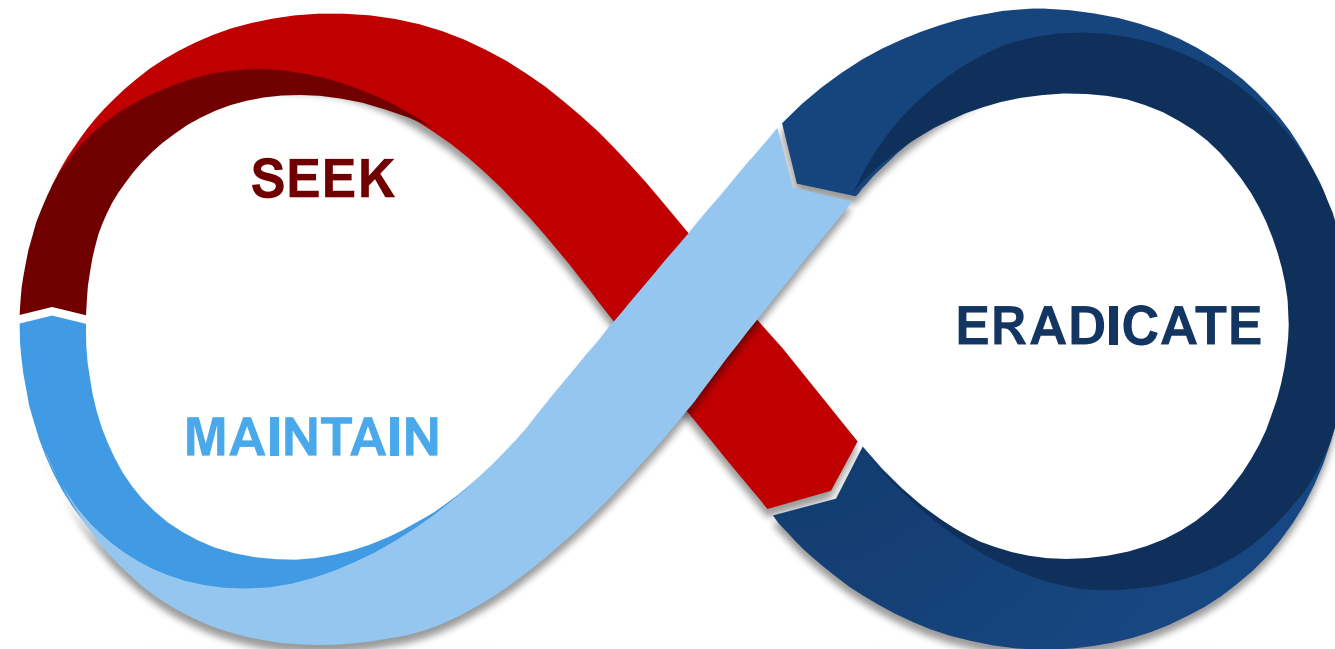
WCM embraces elements from other methodologies



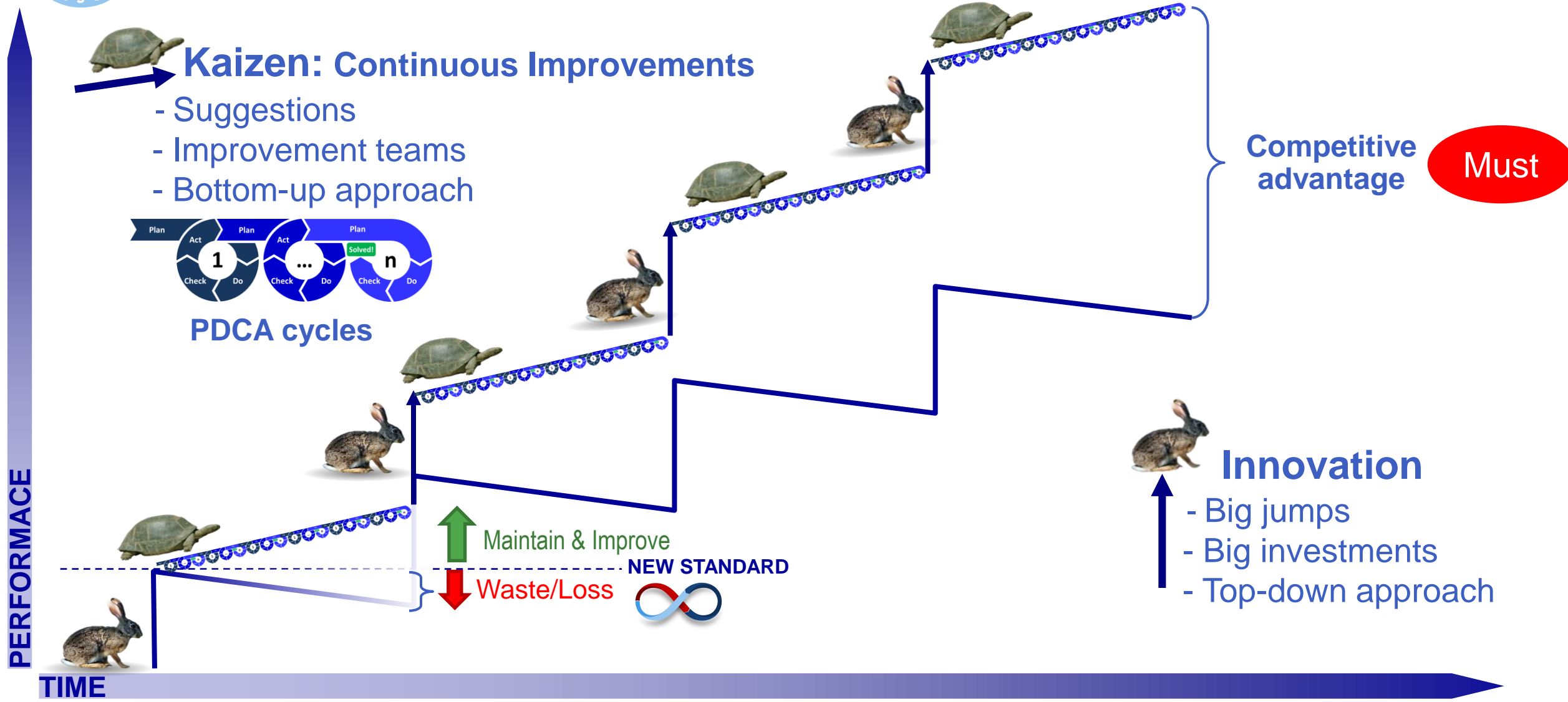


# How do we apply our WCM methodology

Infinite loop

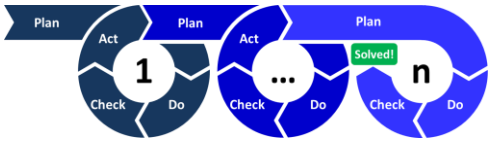


# In WCM we combine two approaches



## Kaizen: Continuous Improvements

- Suggestions
- Improvement teams
- Bottom-up approach



PDCA cycles

Competitive advantage

**Must**

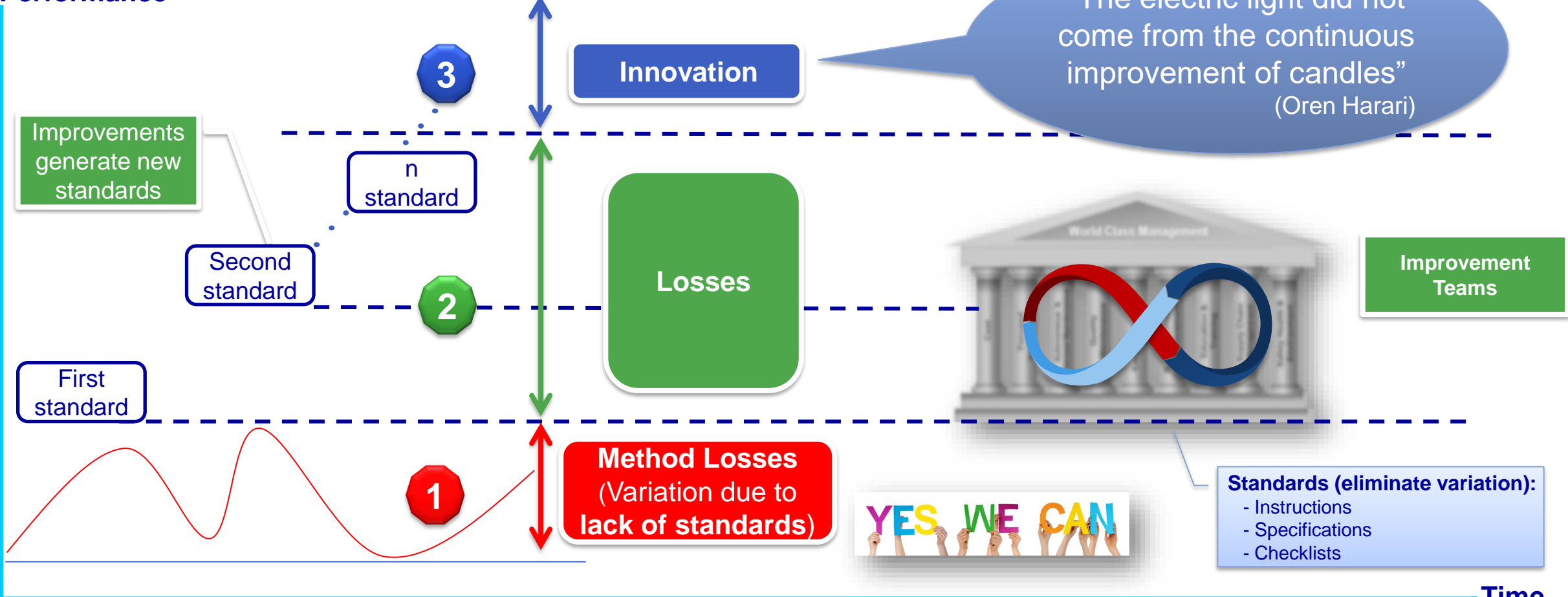
## Innovation

- Big jumps
- Big investments
- Top-down approach

# How is our Continuous Improvement Approach

Standardization is key

Performance

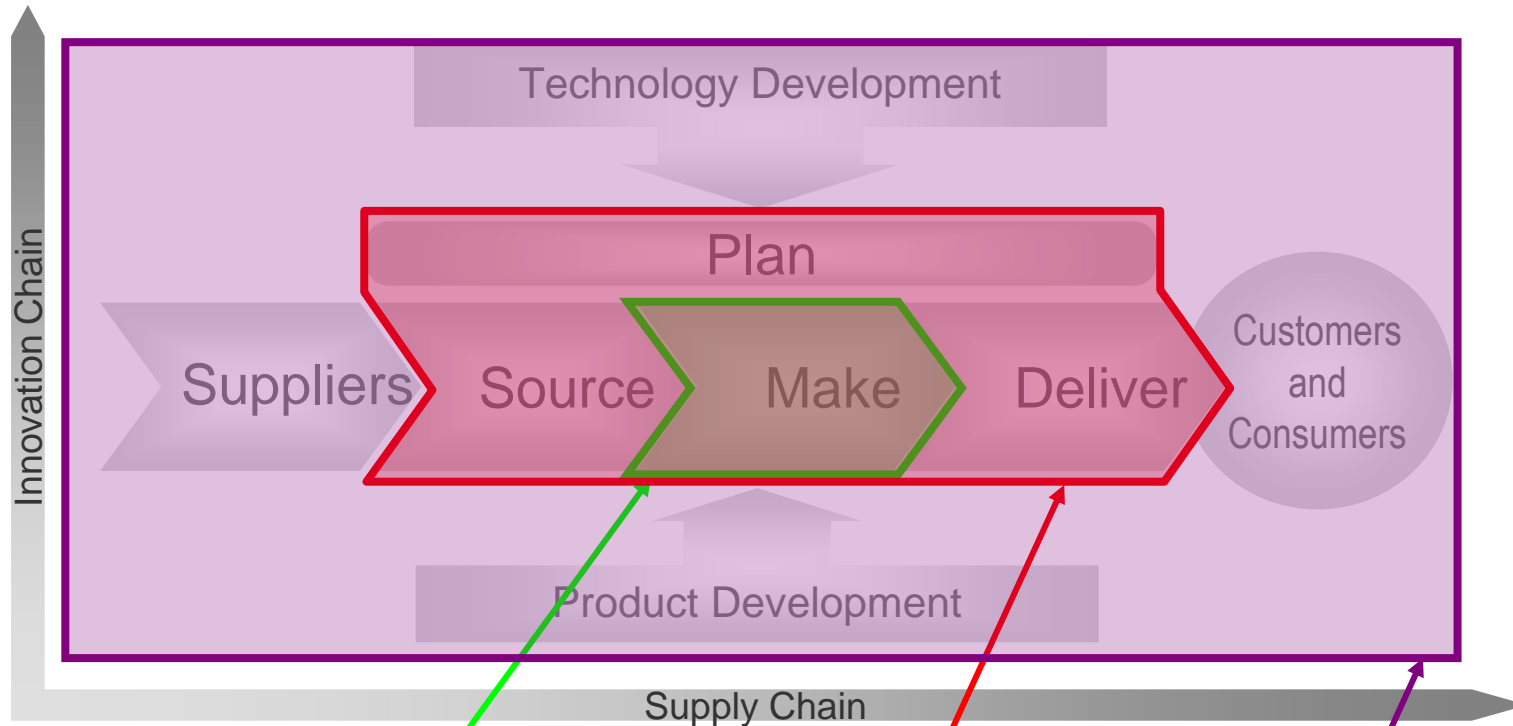


Time



# Our journey from WCM to WCM

## From Manufacturing to full Business



Experience in driving WCM in production, now going into new areas

**WCM Level 1**  
Factory Operational Excellence

**WCM Level 2**  
Integrated Supply Chain

**WCM Level 3**  
Extended Supply Chain

**World Class Manufacturing**



**World Class Management**



# WCM history...



WCM Starts in Tetra Pak **1999**



WCM in Capital Equipment **2007**



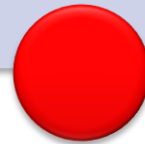
First ever "Global Leaders" award from JIPM **2016**



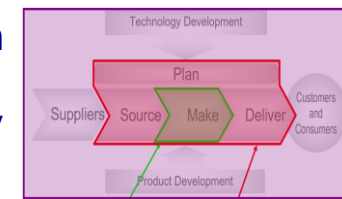
**2001-2003**  
Expansion to all Packaging material factories



**2014**  
WCM in Processing Solutions



**2018**  
Expansion to cover full Supply chain





**Tetra Pak<sup>®</sup>**  
PROTECTS WHAT'S GOOD



 **Tetra Pak**<sup>®</sup>  
PROTECTS WHAT'S GOOD

## Customer oriented focus, while adapting to the new normal

- Lead time reduction initiative



- Remote Factory Acceptance Test (FAT)





# Our business model



## Capital Equipment Sales



## Service Sales

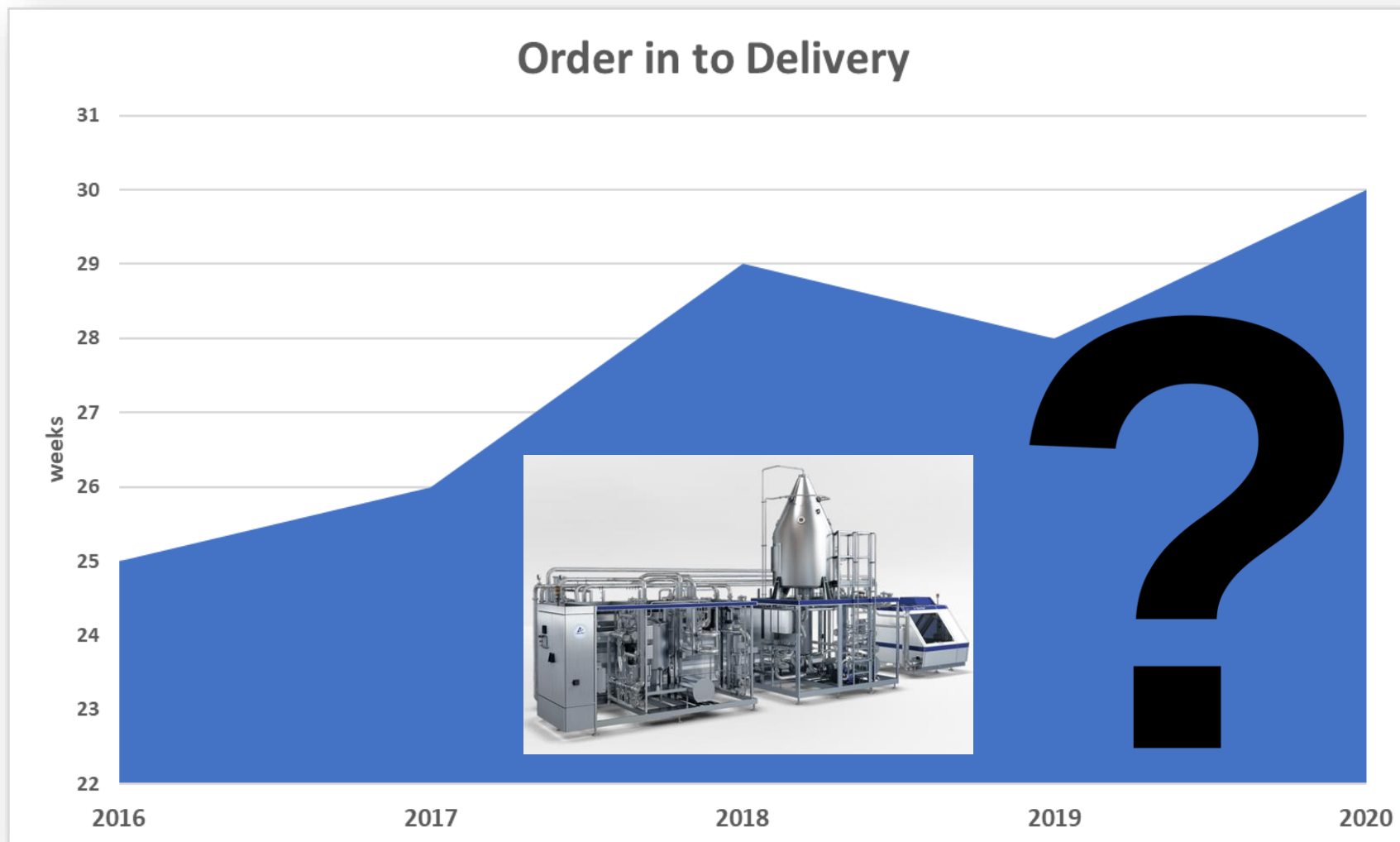


## Packaging Material Sales



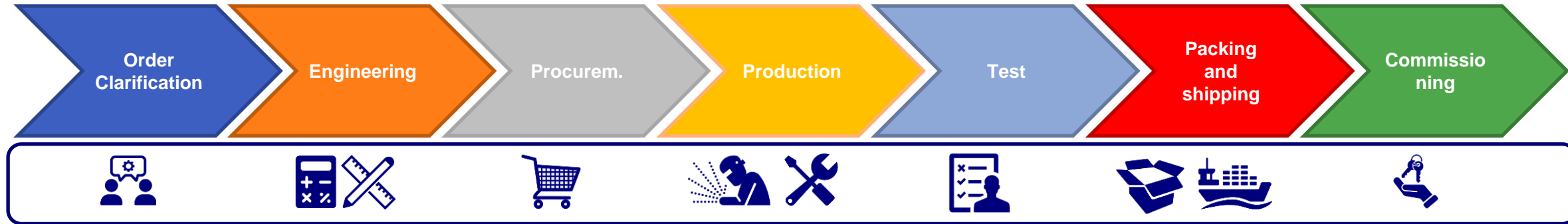
# The Problem...

Lead time +20%  
Volume +25%  
Customization +20%



\*Illustrative figures

# The process



- ▶ Engineered to order
- ▶ 80% are customized solutions
- ▶ Mix of outsourced and internally produced parts

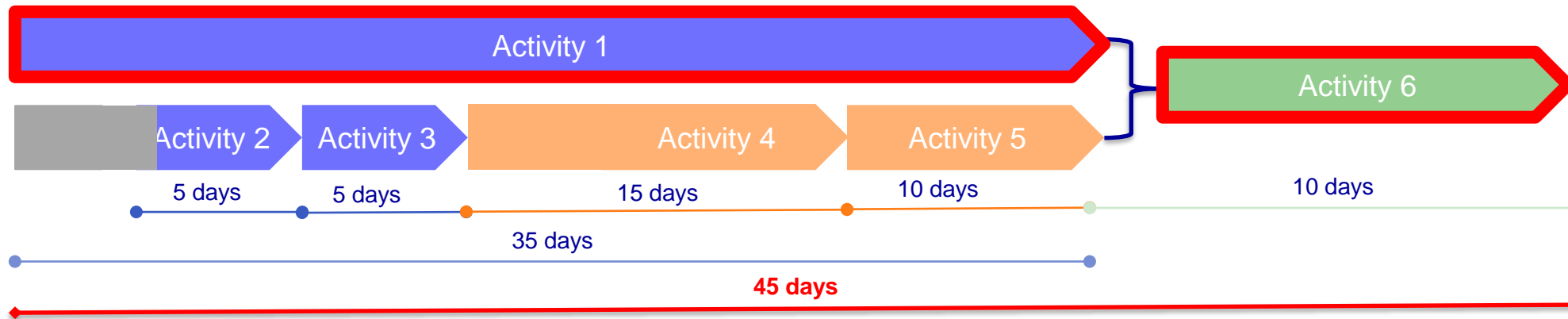
# Identify the critical path...

Organization A

Organization B

Organization C

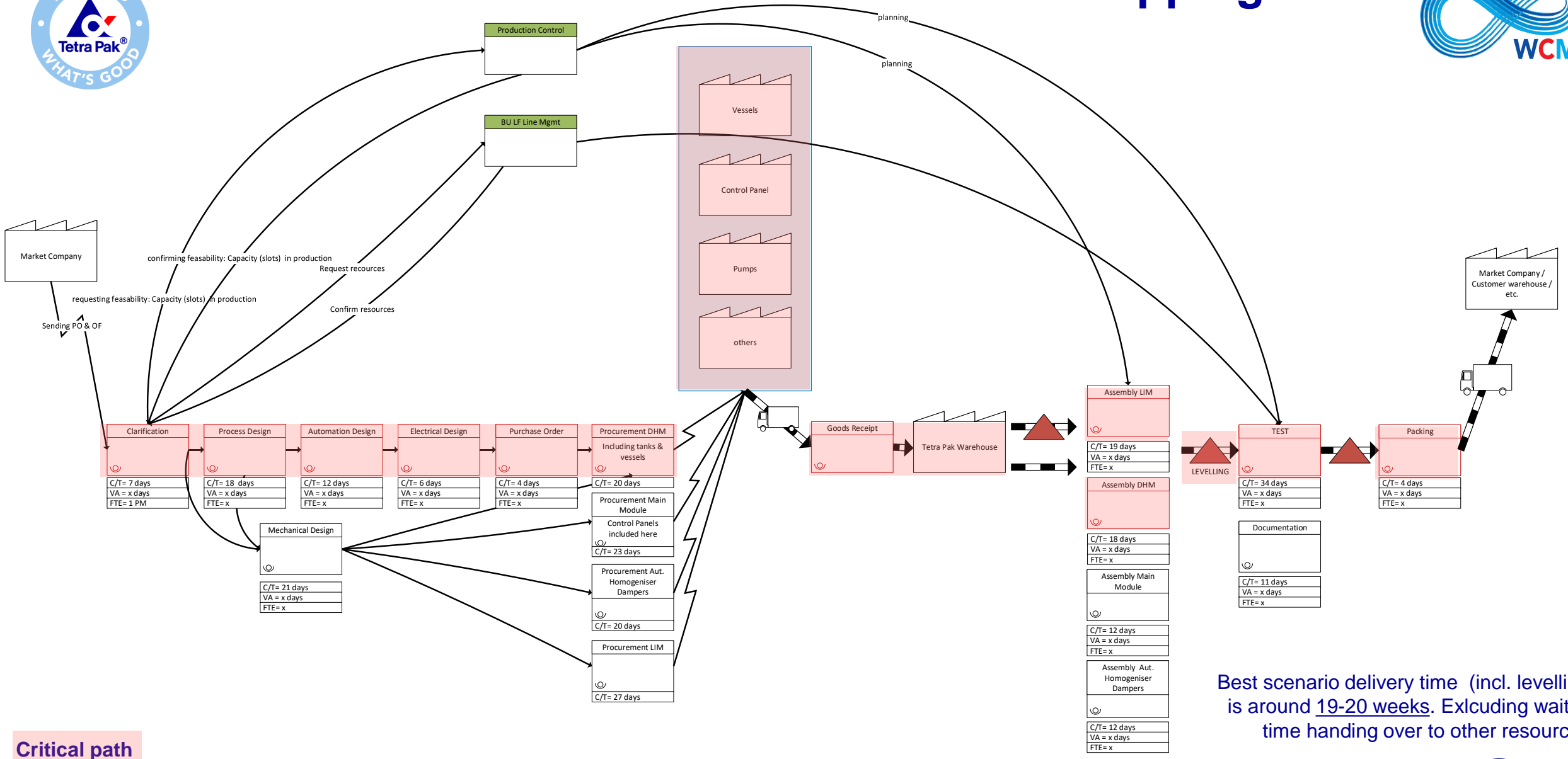
**Critical Path**



- ▶ Drive improvements on the critical path
- ▶ Understand Slack

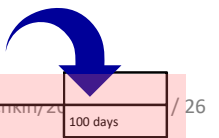
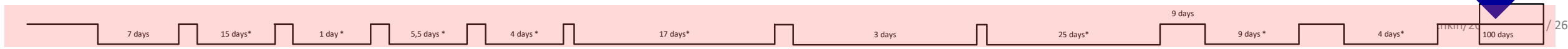


# Understand the Process – Value Stream Mapping

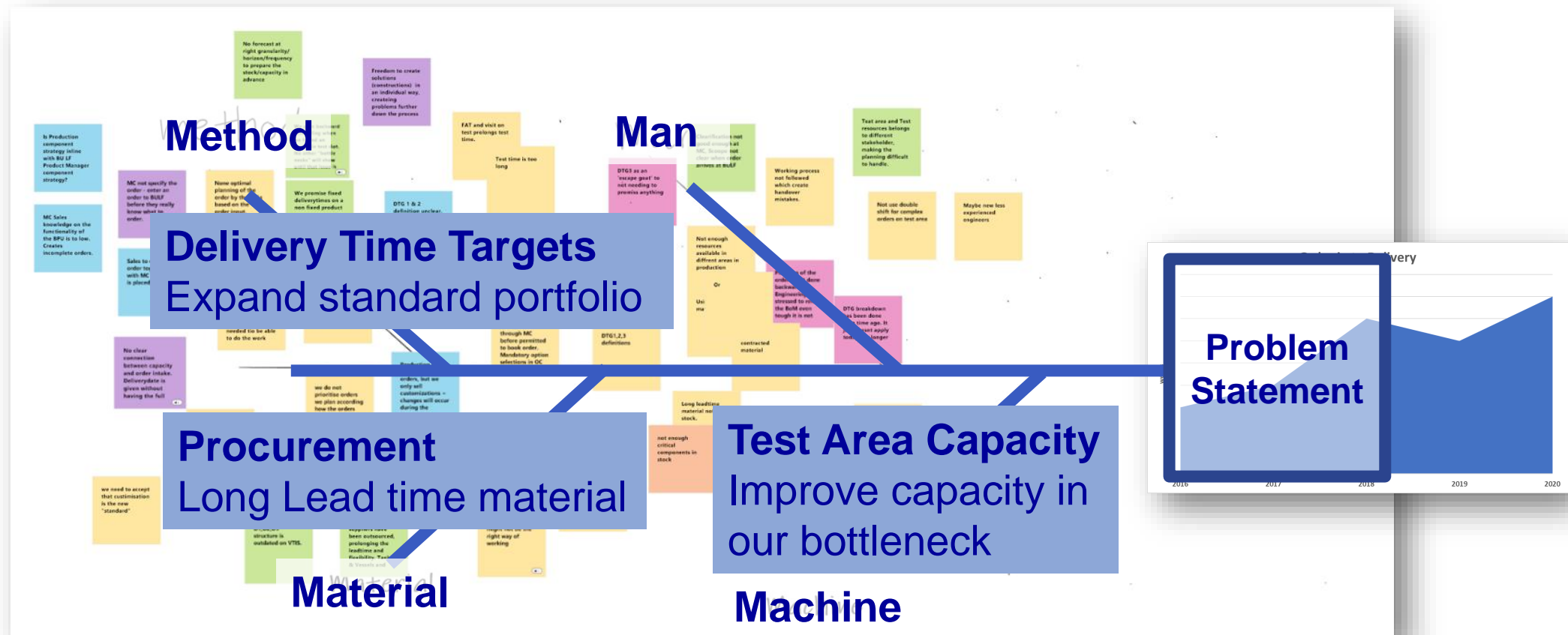


Best scenario delivery time (incl. levelling) is around 19-20 weeks. Excluding waiting time handing over to other resources.

**Critical path**



# 4M – Fishbone analysis





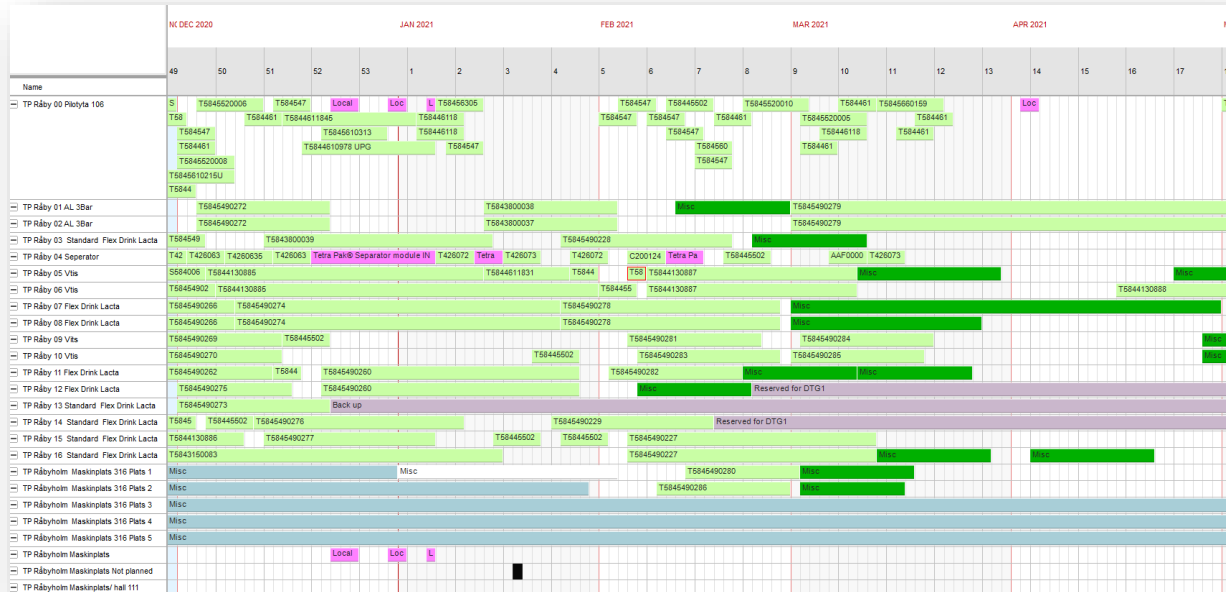
# Test Area Capacity



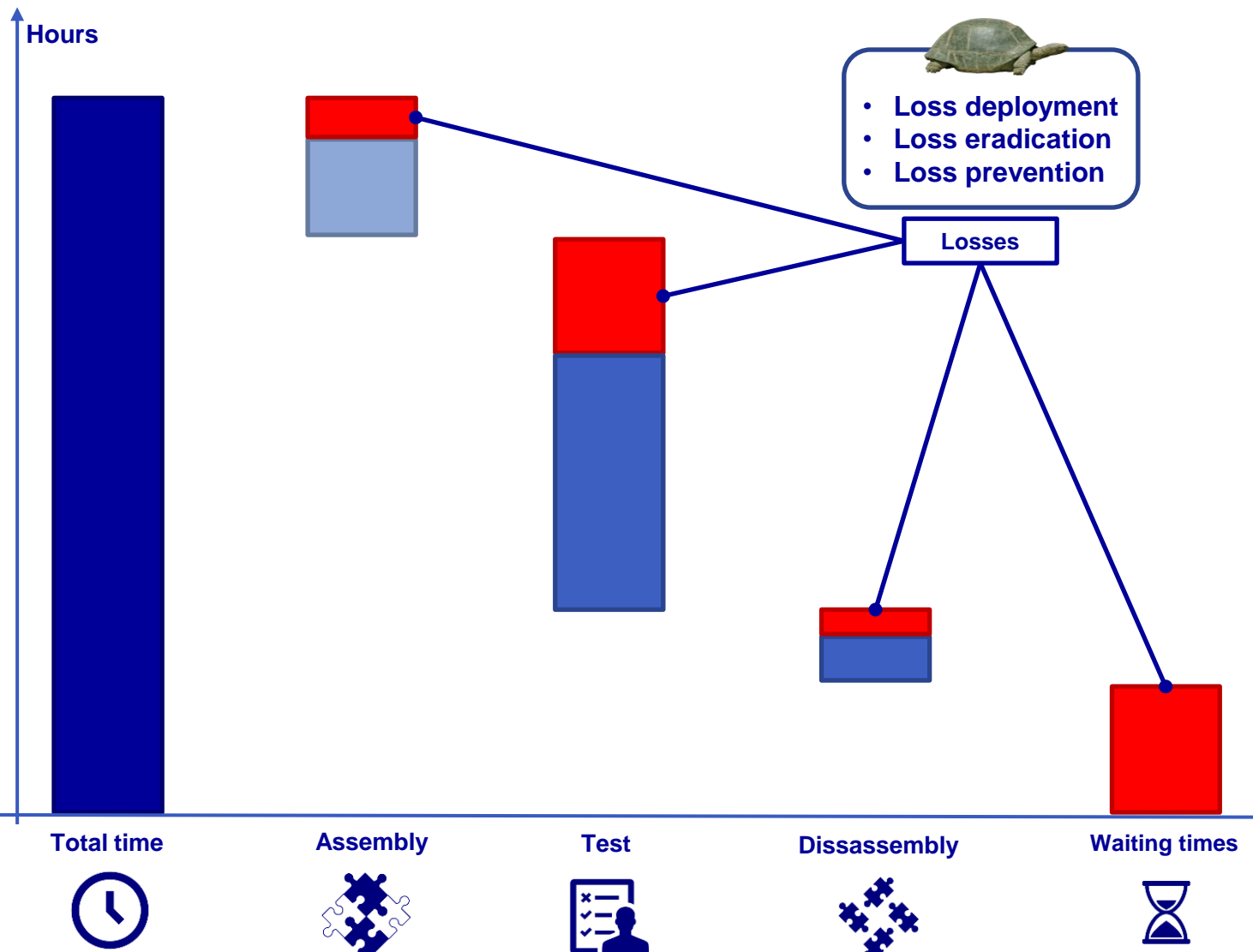
- ▶ Our bottleneck process, with long que of orders.



- ▶ First available slot determine our delivery date...



# Test area capacity...



## Assembly



SMED – Attacking activities on the critical path. What can be performed before entering the test area?



## Test



Machine Footprint – 23% of total capacity is lost because of machines requiring double testbays.



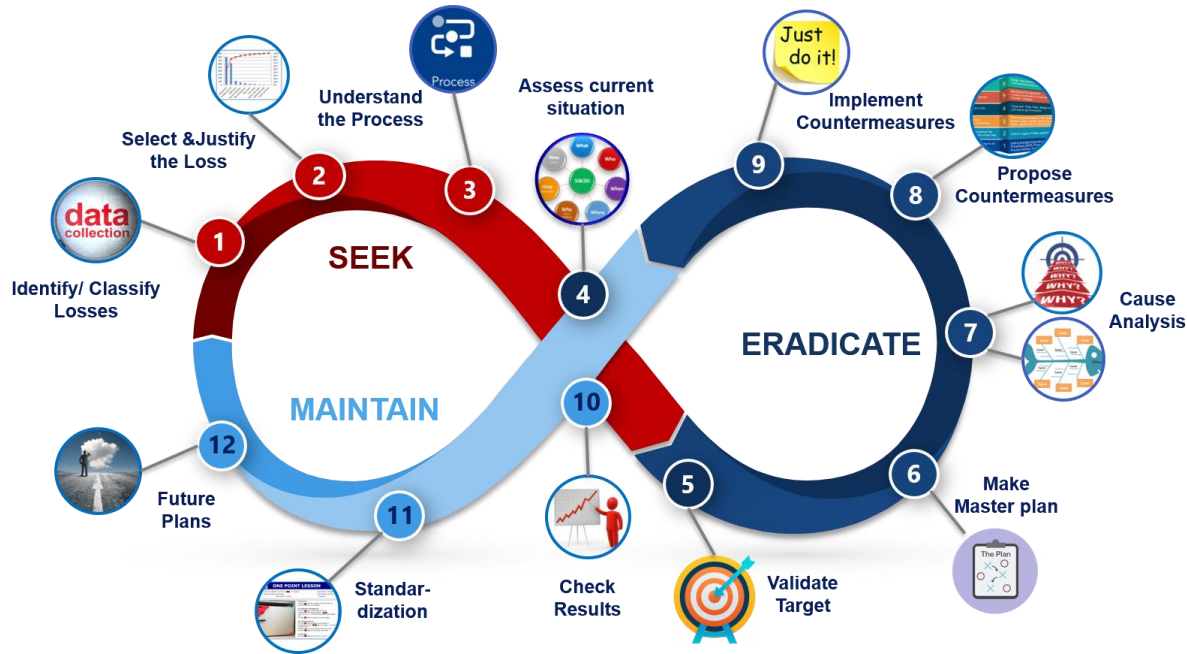
## Dissassembly



Machine disassembly – Move entire activity to 2:nd shift.



# Procurement Long leadtime material

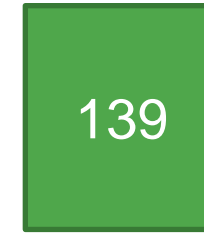


**Seek** – Understanding of losses, current process and requirements

## Number of Materials



L/T > 15 days



Stock



Critical

## Eradicate

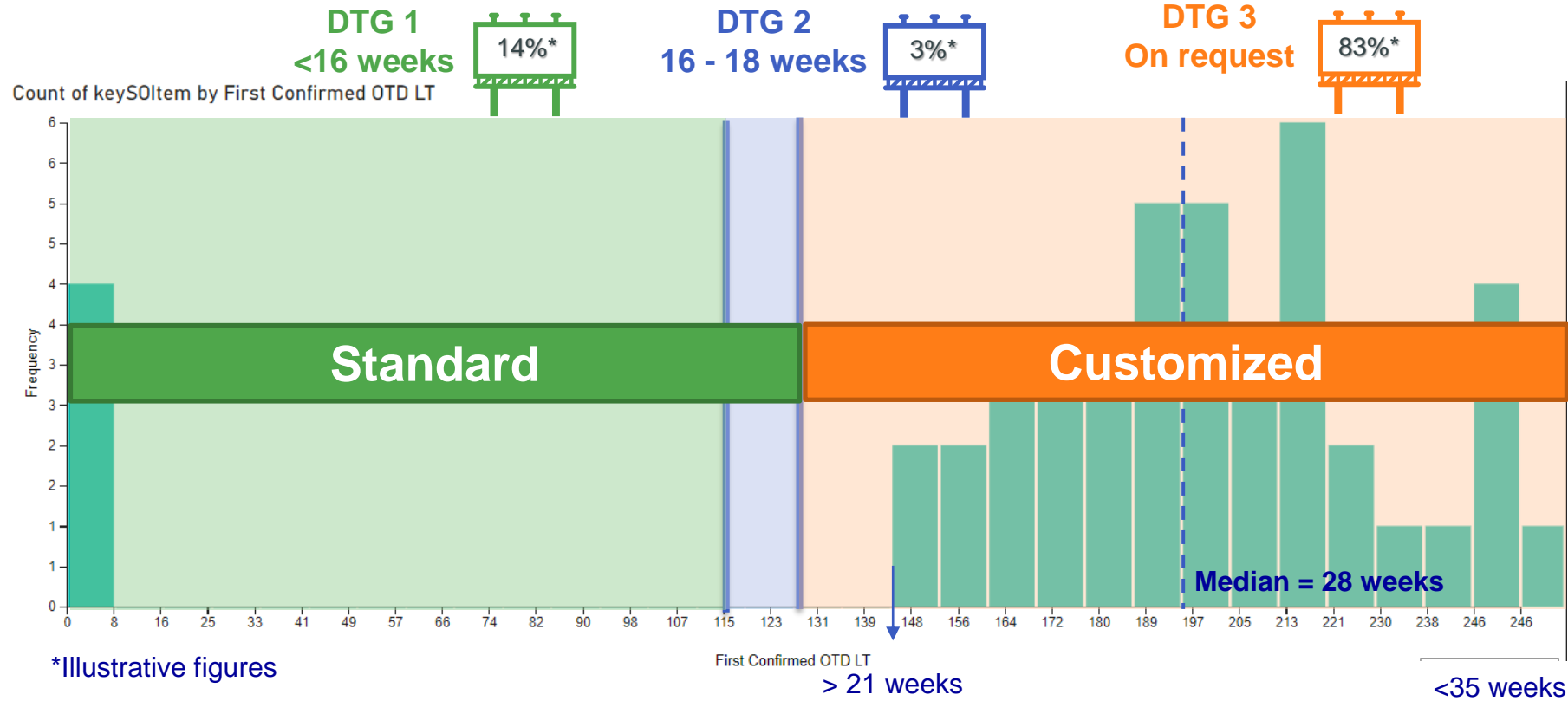
Prio 1: Improve lead time

Prio 2: Put in stock

## Maintain

Establish forum between specification owners, Supplier Management and Production to align leadtime requirements.

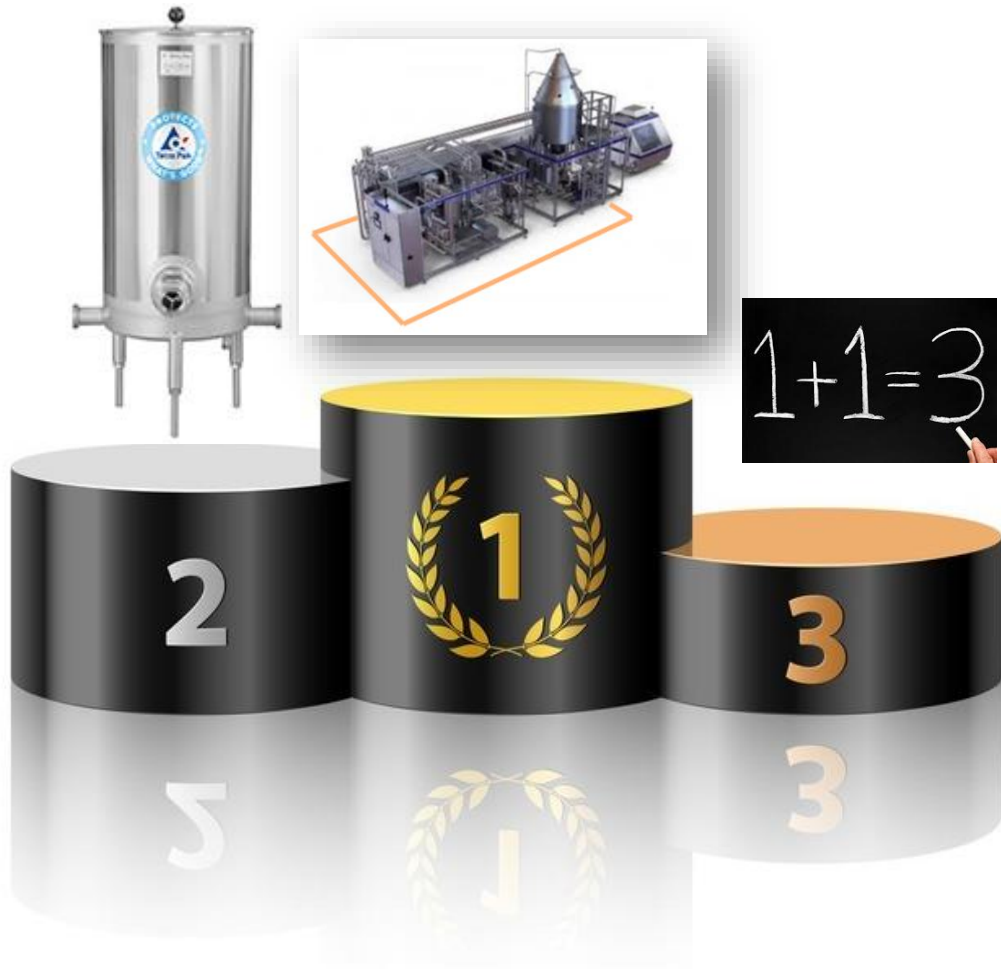
# Delivery Time Targets -Expand std portfolio



# Delivery Time Targets

## -Expand the standard portfolio

What are the most common reasons why we can't offer a standard leadtime?



- 1. Non standard layout
- ✓ Pressure vessel other than PED
- ✓ Multimode machine

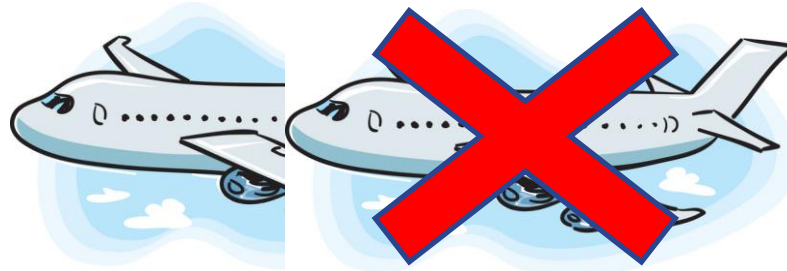


# Factory Acceptance Test (FAT) with customer

**Tetra Pak Lund or Modena**

**Travel**

**Customers**



# FAT with remote setup

## PC PE Lund & Modena



## Technical solution/setup

Machines HMI video stream



Test engineers video stream



iPhone 11  
equipped with a gimbal

Optional video stream



iPhone  
or  
Computer

MS Teams

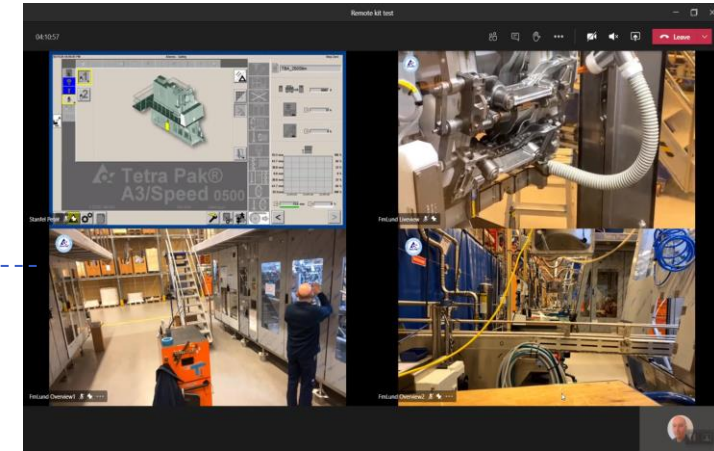
MS Teams

MS Teams



Internet

## Customer



Displayed at customer site  
by using PC, Mac and with  
MS Teams desktop app



# FAT with remote setup



*Live demo*

# FAT with remote setup

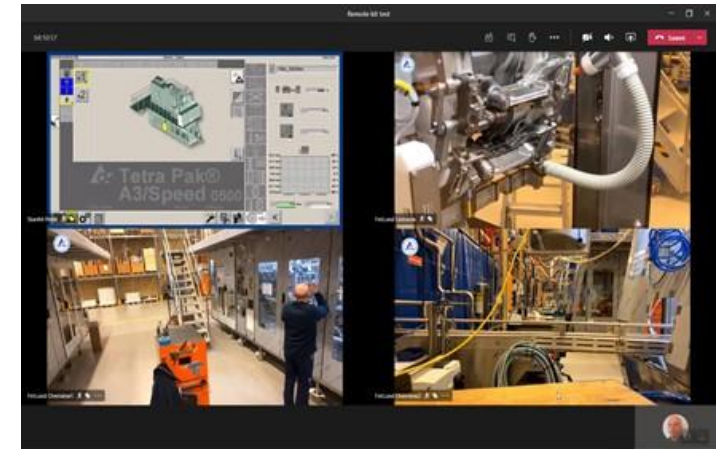
Global Standard



Satisfied customer

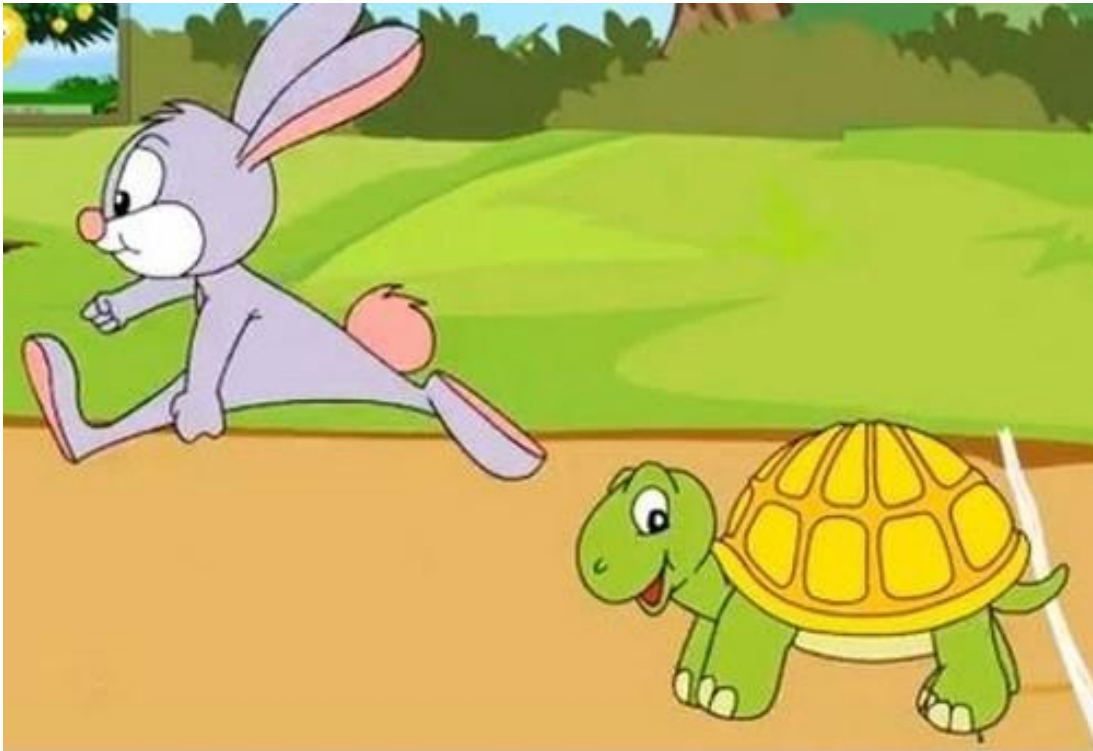


Continuous improvements



Standard service offering

# Who is better?



## Both!

- Hare:
  - Muscle, big change!
- Tortoise:
  - Consistency, compliance!

