Quality Counts

By
Chris Edwards
Head of Quality Müller Yogurts and Desserts
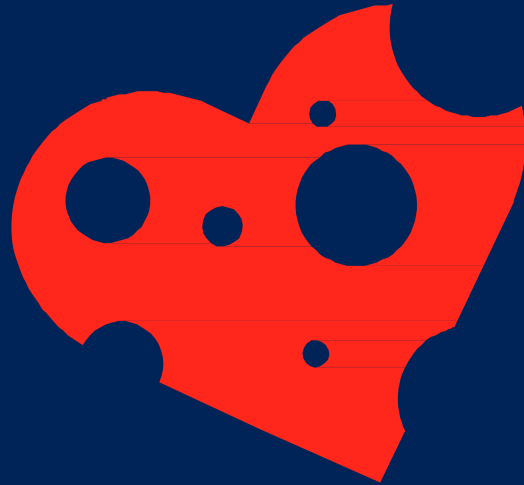
Release to Culina

Traditional testing

Accelerated Shelf Life (ASL) testing – 30°C for 4 days
Other incubation in support
Micro and pH with taste panels etc
Issue: Spoilage issues, caught but supply chain disruption, frustration and additional work

- ✓ **Line improvement activity**
- ✓ **CiP and SiP - alarms**
- ✓ **Fruit vessels**

Advanced testing

- ✓ **Accelerated Shelf Life (ASL) testing – D-Count**
- ✓ ASL (30°C 4 days) incubation in support
- ✓ Micro and pH with taste panels etc
- ✓ Result: Release after 27 hours
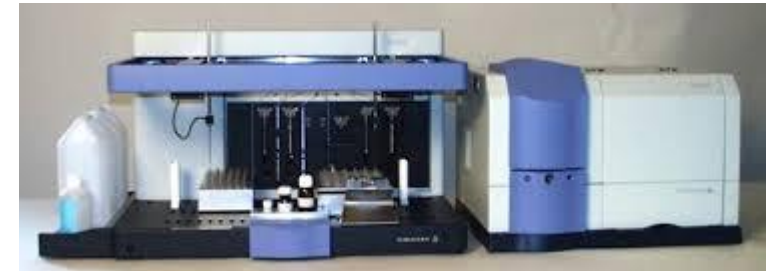
Objective: Release from Line
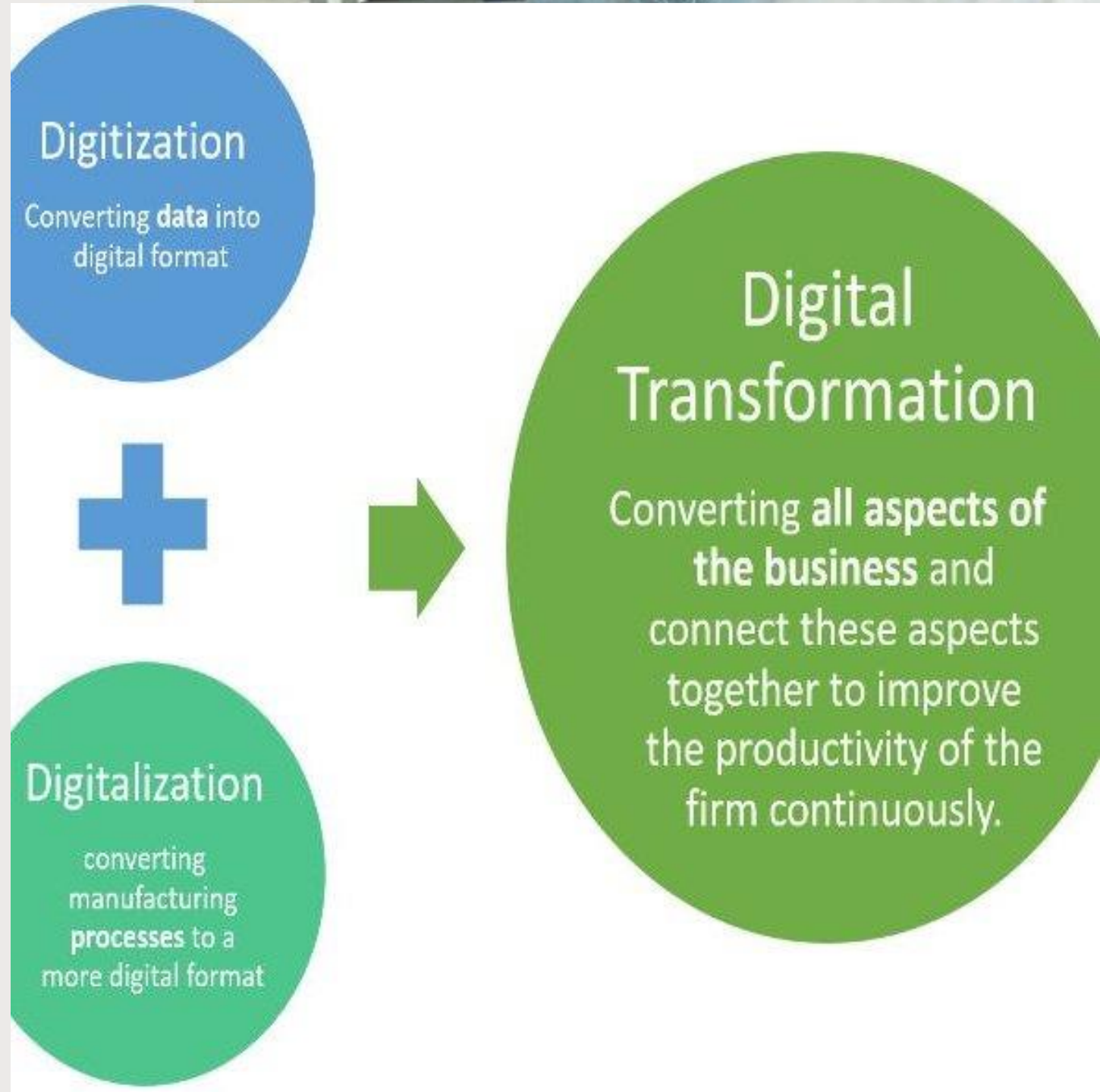
✓ People

❑ Organisation

❑ Training

✓ Standards

✓ SOPs

✓ Process

✓ Audit

Confidence

Now how is that operationalised?

- **Factors affecting operationalising**
- **Efficient Organisation**
    - Capability and adding value at the line (Quality -QA, QC, QI and QM)
    - The military comparison - capability focused 'At-Line'
- **Well socialised Standards and specifications**
- Implement Robust Standard Operating Procedures (SOPs)
- <mark>Embrace Technological Advancements</mark>
- Staff Training and Skill Development
- Regular Audits and Inspections
- Supplier Collaboration and Ingredient Control
- Continuous Improvement Culture
- Data-Driven Decision Making
    - Digitalisation and
    - Digitisation

Digitization
Converting **data** into digital format

+

Digitalization
converting manufacturing **processes** to a more digital format

Digital Transformation
Converting **all aspects of the business** and connect these aspects together to improve the productivity of the firm continuously.
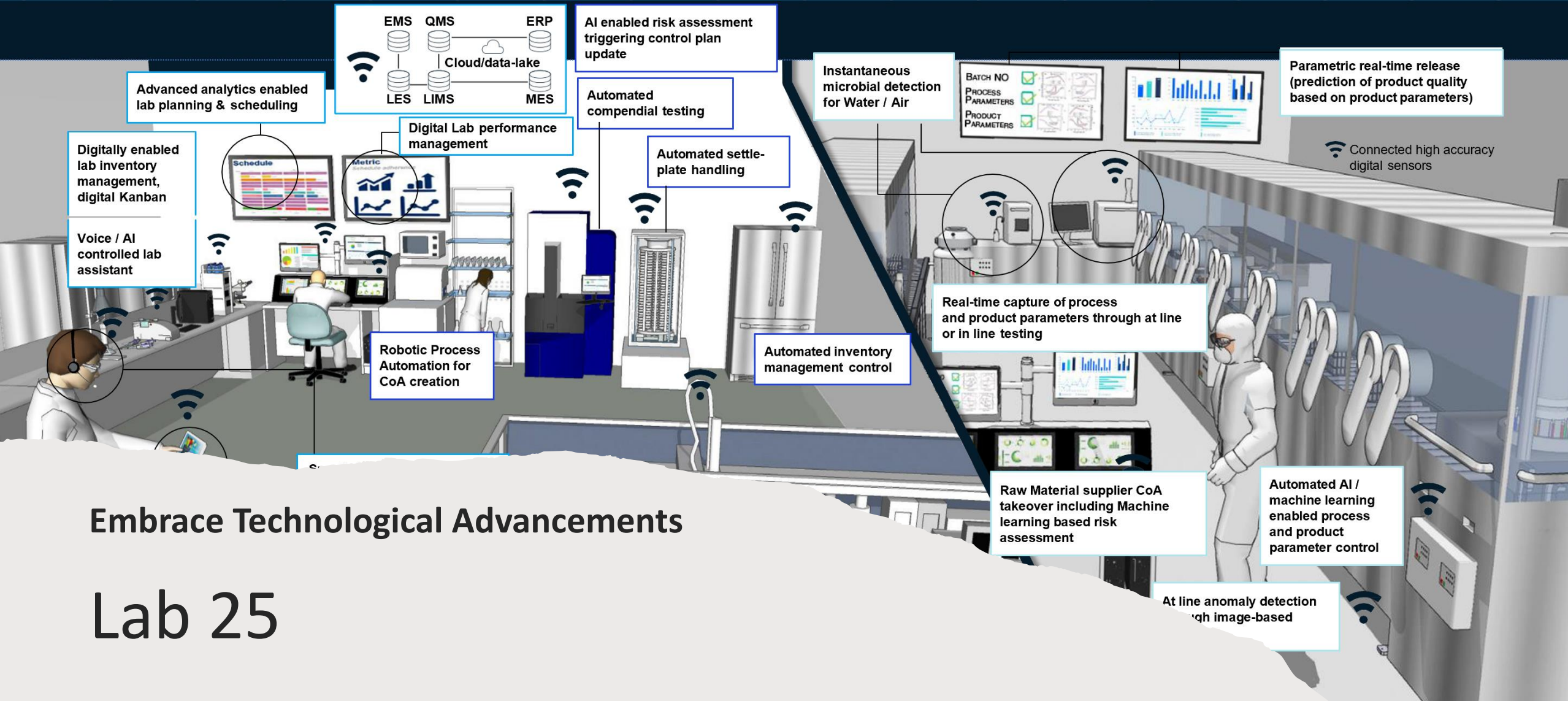
Today's Lab

Digitally enabled
manually connected

Automated
the digital twin

Lab of the Future

Digital Native
fully integrated ecosystem

EMS QMS ERP
Cloud/data-lake
LES LIMS MES

AI enabled risk assessment triggering control plan update

Advanced analytics enabled lab planning & scheduling

Digital Lab performance management

Automated compendial testing

Instantaneous microbial detection for Water / Air

BATCH NO
PROCESS PARAMETERS
PRODUCT PARAMETERS

Parametric real-time release (prediction of product quality based on product parameters)

Digitally enabled lab inventory management, digital Kanban

Automated settle-plate handling

Connected high accuracy digital sensors

Voice / AI controlled lab assistant

Real-time capture of process and product parameters through at line or in line testing

Robotic Process Automation for CoA creation

Automated inventory management control

Raw Material supplier CoA takeover including Machine learning based risk assessment

Automated AI / machine learning enabled process and product parameter control

Embrace Technological Advancements

At line anomaly detection through image-based

Lab 25

Questions and points