



# European Manufacturing Conference

Herman van Niekerk, 11 June 2025

**TOPIC: CONNECTING AND UNIFYING PRODUCTION, QUALITY AND MAINTENANCE.**



# We are McCain.

# LOADING DOCK SAFETY FIRST.

In 2021, 13.65B tons of goods were transported in the 27 EU states. This is around 455 Million truck loads.

In the US, there were 11.46B tons of freight shipped by trucks in 2023.

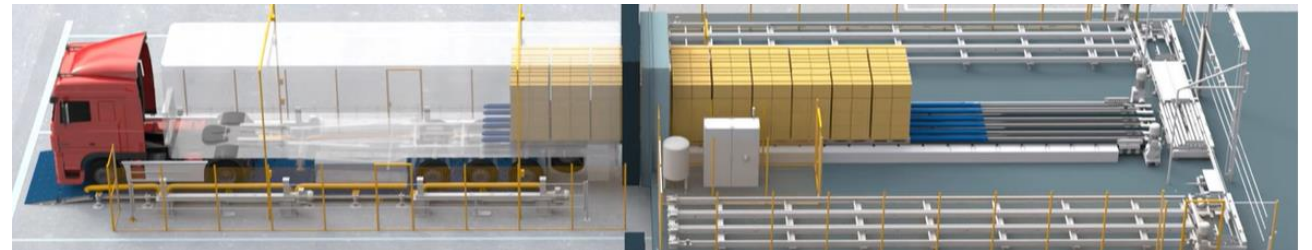
In the EU, 72% of all inland freight is moved by road freight. Loading docks are critical links to deliver supply chain goods safety.



In the US there are ~94 000 reported forklift accidents and around ~49 fatalities annually related to loading docks incidents.



**Design for safety**, ergonomics and the use of **demonstrated technology** is critical to eliminate safety hazards in the loading zones.



# Align Production, Quality and Maintenance for Efficiency.



## Garvin's 8 Dimensions of Quality

### Features

These are additional attributes or characteristics that enhance the product's functionality or appeal.

### Performance

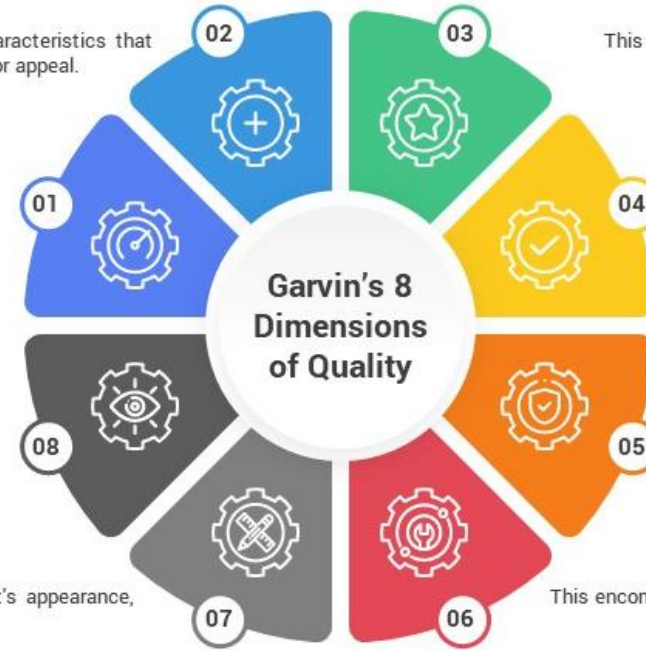
This refers to the product's primary operating characteristics.

### Perceived Quality

This is the customer's subjective perception of the product's quality, often based on factors like brand reputation, price, and packaging.

### Aesthetics

This dimension relates to the product's appearance, feel, and sensory appeal.



**Reliability**  
This measures the product's consistency and dependability over time.

**Conformance**  
This dimension assesses how well the product meets specified standards or requirements.

**Durability**  
This refers to the product's lifespan or how long it can last before needing replacement or repair.

**Serviceability**  
This encompasses the ease of maintenance, repair, and upgrade of the product.



**Design for Process, Quality and Maintainability**



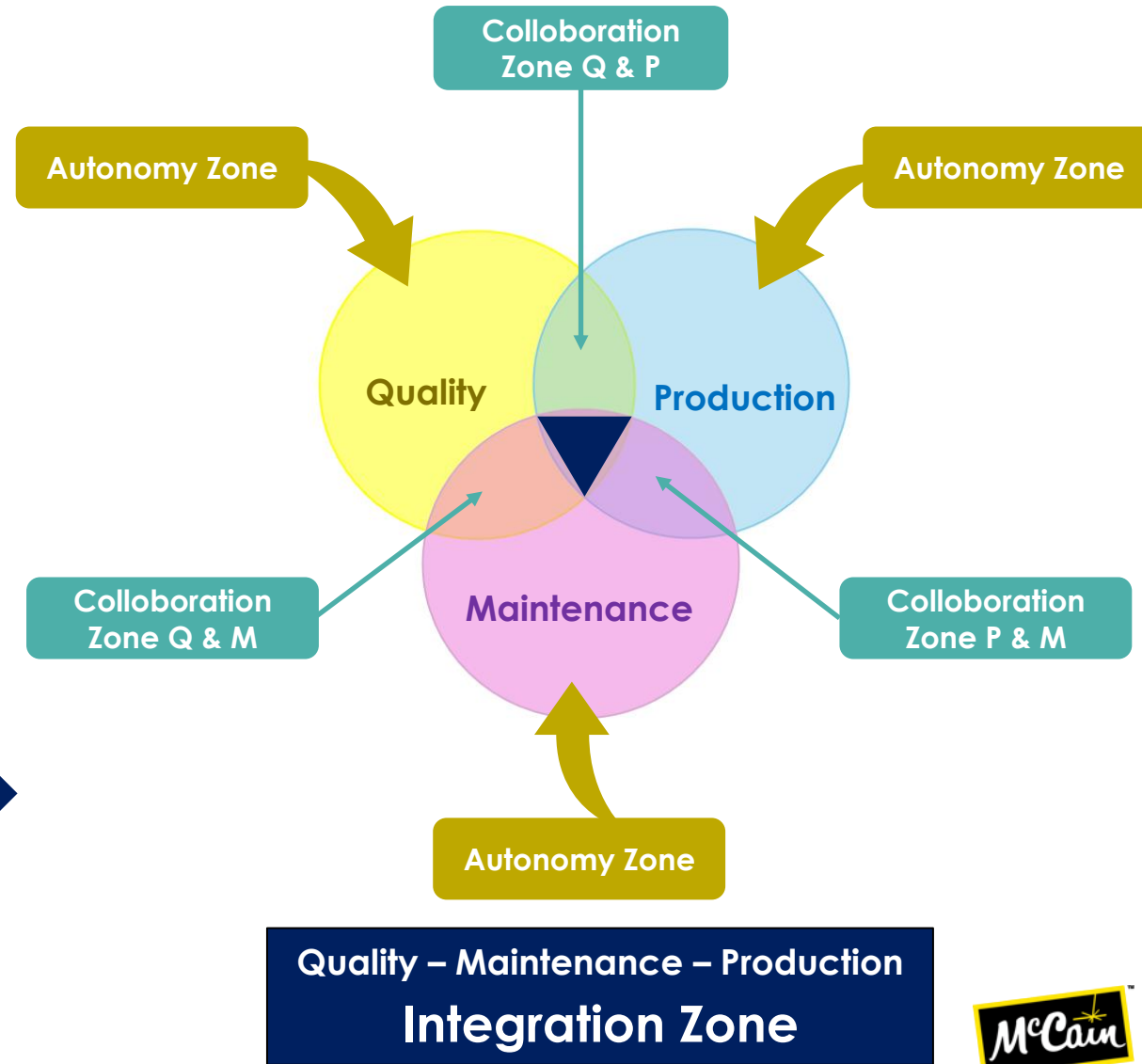
# Align Production, Quality and Maintenance for Efficiency.

## One Team

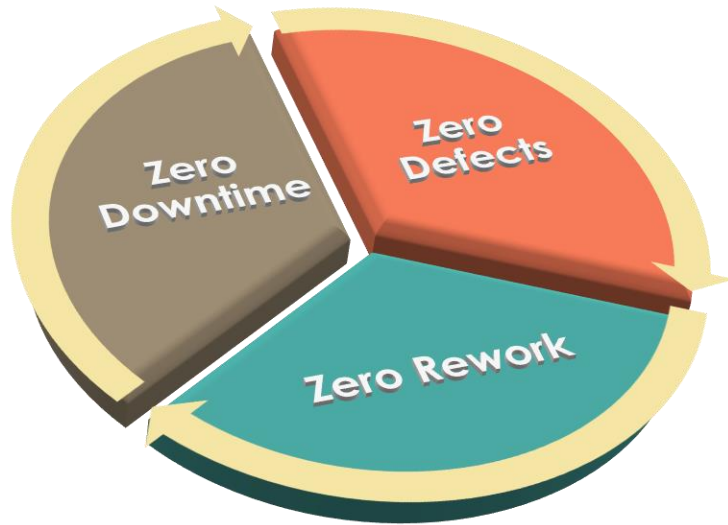


“  
 A TEAM IS NOT A GROUP OF PEOPLE WHO WORK TOGETHER. A TEAM IS A GROUP OF PEOPLE WHO TRUST EACH OTHER.  
 ”

SIMON SINEK



# Align Production, Quality and Maintenance for Efficiency.



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**Efficiency & Cost Mastery**



Source: <https://www.industries.veeva.com>



# Digital Tools for Collaboration and Decision Making.



## Understand the Opportunity

- Understand your own organization.
- Listen attentively to all you engage with.
- **What are the problems to be solved?**
- How will the tool/s contribute towards real-time collaboration and decision making across departments.
- **McKinsey estimates digital collaboration can unlock \$100B in value globally.**



## Exceptional Collaboration in Maintenance Processes

- **McKinsey** estimates that OEE can be improved by 2-3%.
- Reduce maintenance costs by 5-10% of asset replacement value.
- Wrench time improvement of 5-10%.
- It is estimated that 1% of revenue can be unlocked as maintenance savings.

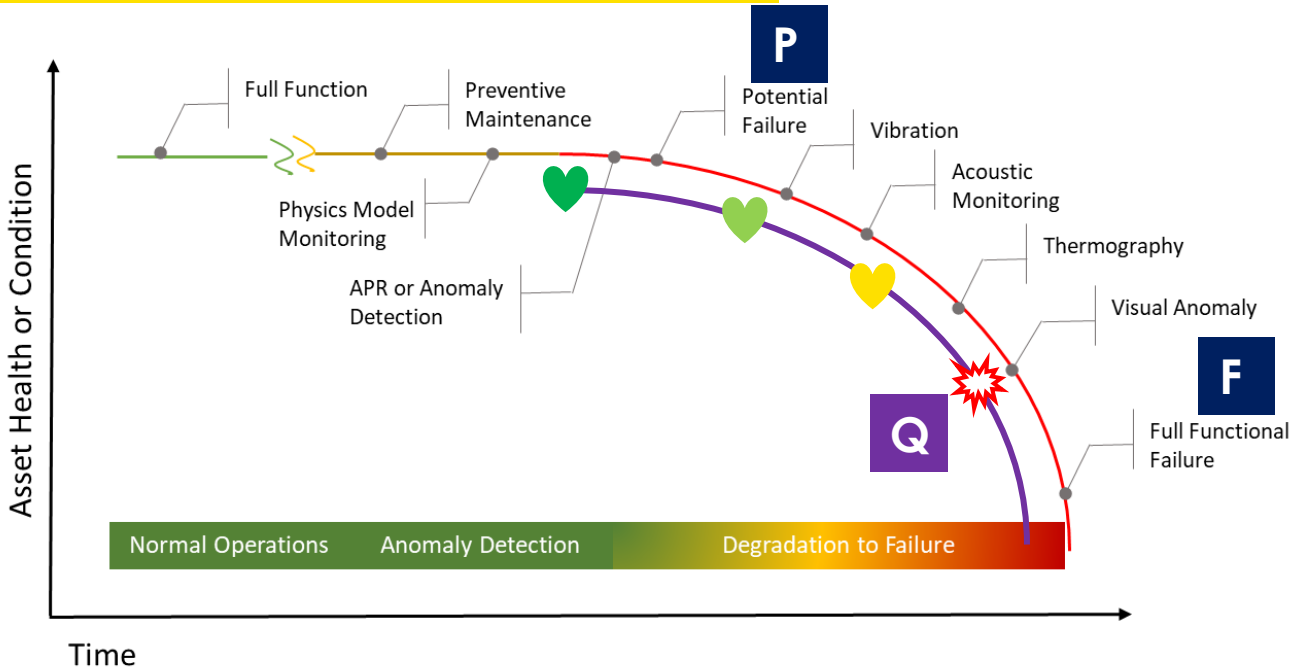


## Strategize for Collaboration

- **Map processes/tools with collaboration and decision-making potential.**
- Embed collaboration into overall digital transformation strategy and plans.
- What are the processes/tools required in 3-5 years to remain effective and competitive.
- Drive user adoption and install a digitally focused culture.



# Predictive Maintenance (PdM) for Quality Consistency.

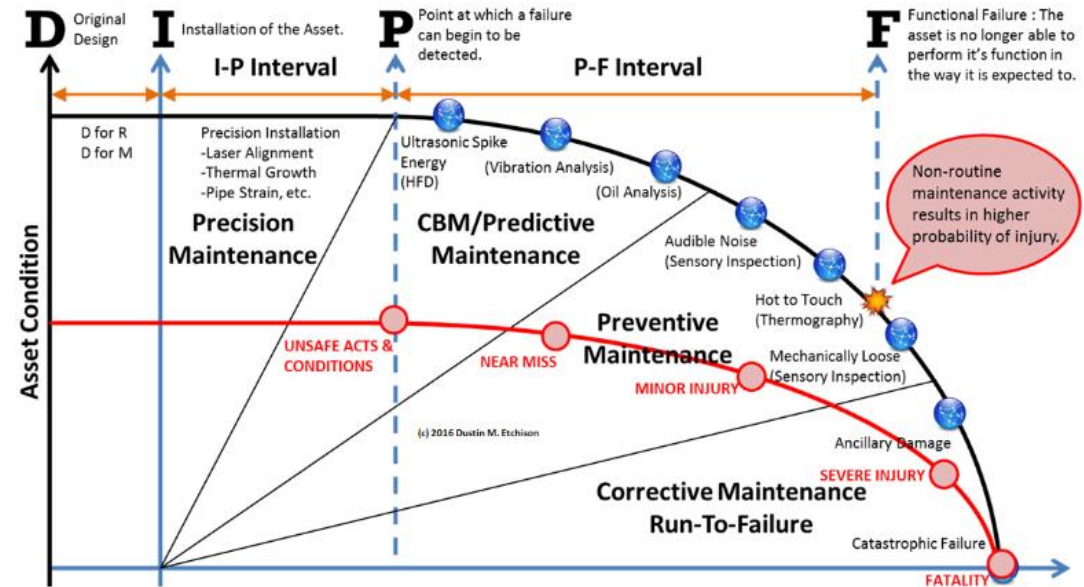


## Demonstrated Technology Delivering Value

- Reduced unexpected technical downtime and process disruption.
- Lower maintenance repair costs.
- **The ability to plan and schedule the maintenance event at the optimal time without sacrificing safety and quality.**
- Improved product quality consistency.
- Improved worker safety.
- Extended asset lifespan resulting in lower capital expenditure.
- Reduced total cost of ownership.
- Key for engagement and attracting new talent.

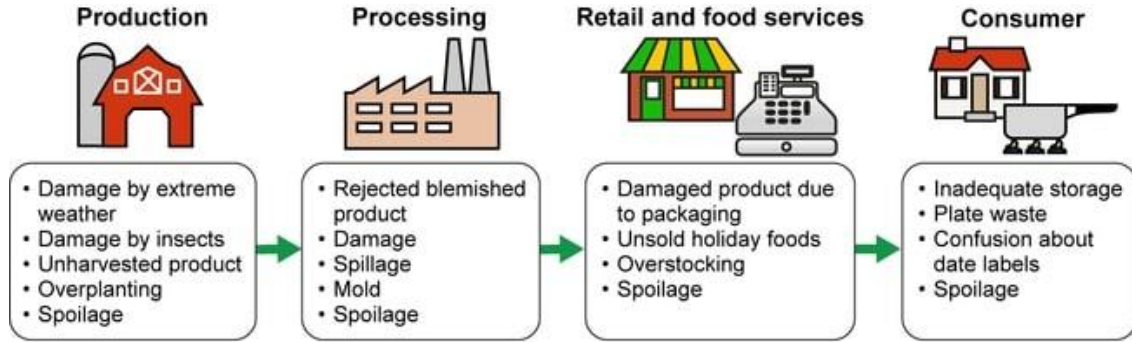
## Building Blocks of Predictive Maintenances

- Prerequisite: Best in class lubrication techniques and systems.
- **Condition Monitoring** (vibration analysis, oil analysis, infrared thermography, temperature monitoring, quality deviations through SPC, ultrasonic testing, current and signal analysis, etc.)
- **Data analytics and machine learning uses algorithms to identify patterns that precede failures** (what is normal, abnormality detection, predict remaining life, prescribe actionable insights and recommend optimal maintenance timing).
- Use FMEA (Failure Mode and Effect Analysis) or RCM (Reliability Centered Maintenance) to drive reliability improvement initiatives and to prioritize risks.
- **The bridge to Prescriptive Maintenance.**



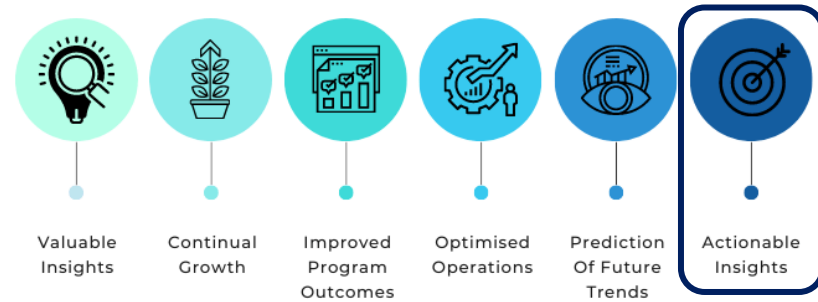
Source: <https://www.aladon.com>

## Food Waste

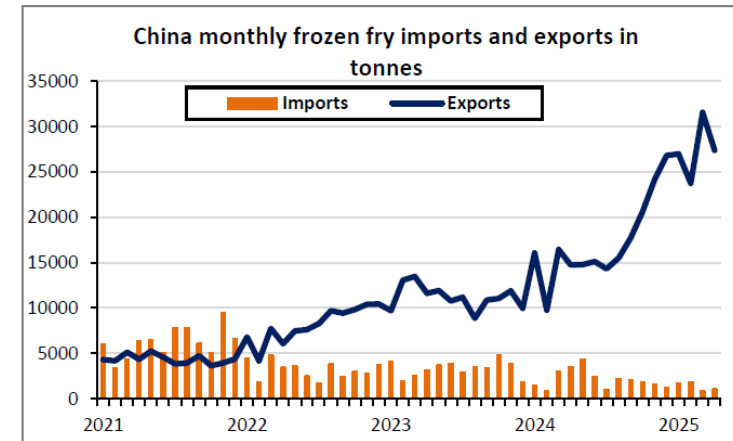
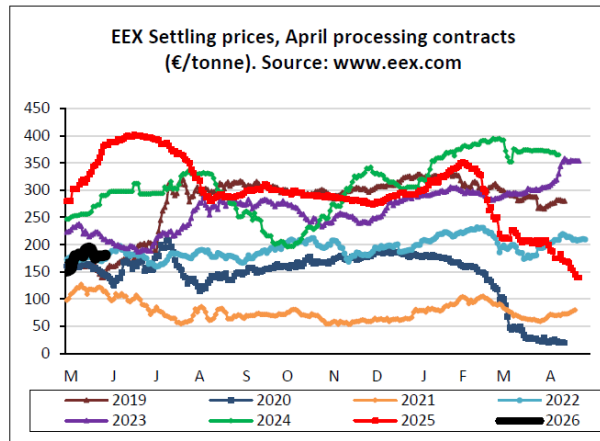
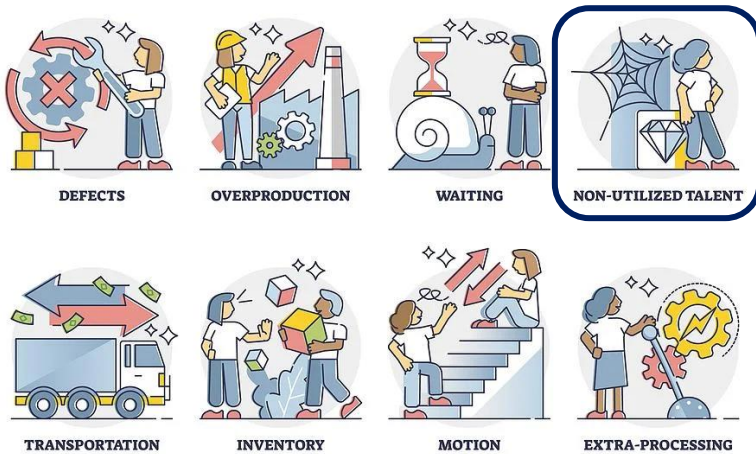


Source: GAO analysis of U.S. Department of Agriculture Economic Research Service data. | GAO-19-391

## BENEFITS OF DATA-DRIVEN DECISION MAKING



## 8 WASTES OF LEAN MANUFACTURING



Source: World Potato Markets

# Building Operational Resilience.



## Operational Mastery

- Employ for resilience and agility
- Develop current and future capability per position and incorporate into a training matrix.
- Developed a culture that fosters and recognizes continuous learning.
- **Training for adoption, understanding defects and deficiency handling.**
- Train for breakthrough in operational efficiency



## Understand the Risk Profile

- **Proactively analyze and monitor new and emerging risks in the business environment.**
- Ensure delivery of products and services during potential disruptions.
- **Demonstrated business continuity plans.**
- Understand supply chain vulnerability and implement sourcing strategies.
- IT, OT and Cyber Security requires special attention (i.e. Technical University Eindhoven)



## Agility, Flexibility and Direction

- **Definition:** 1) To be quick and nimble 2) The ability to move quickly and easily 3) A state of constant flux, innovation, improvement and re-invention: The capability to swiftly address challenges, to explore and change direction, **to take advantage of the unforeseen.**
- Change the Way of Working
- Simplify the Way of Working
- **Record successes and recognize**





**Simplicity is the Ultimate Sophistication.**

Leonardo da Vinci

