

**SPREKER:**

**Jos Van der Aelst**



# IAM FUTURE PROOF

**1 JUNI 2023** · VanBerlo part of Accenture

dsm-firmenich

# Navigating Uncertain Times: Achieving Resilient Asset Care Management for the Future

2023 06 01

Jos Van der Aelst, Competence Lead Asset Management



# Agenda

Intro dsm-firmenich

Asset Care challenges

A Future Proof Asset Care Strategy in a fast rapidly changing world ?

How do we support sites with Future Proof Asset Care?

Technology supports realizing “No Surprises”

Summary



# More than a century of successful transformation

Coal mining

(Petro)chemicals

Nutrition, Health & Sustainable Living

Health, Nutrition, & Bioscience



2022

May 9<sup>th</sup>  
2023

1902



Unlimited. DSM





# dsm-firmenich

## Explore the DSM-Firmenich history

### A brief history of DSM Building on 100+ years of transformation.

DSM has had a long history of reinvention. Set up in 1932 to mine coal reserves in the southern North Rhine, its name originally stood for *Deutsche Steinkohle Werke*. Over the course of the 20<sup>th</sup> century, DSM transformed into a chemical company, beginning as early as 1919 with the opening of a coker. And from the 1950s onward, DSM transformed again into a science-based health, nutrition, and consumer living company. Along the way, it worked with a wide range of partners to deliver innovation solutions that enrich, protect, and improve performance.



### A brief history of Firmenich From a startup to a global house of creators.

Firmenich was founded as a startup in 1856, in Sion, Switzerland. It was originally the business of Philippe Chail, a visionary creator and scientist, and Martin Nest, a skilled businessman. They were quickly joined by entrepreneur Frédéric Firmenich. After Chail and later Nest retired, the Firmenich family became the majority partner. Over the years, the company evolved – creating groundbreaking molecules, developing new flavors and fragrances, driving sustainability, and winning several awards.



Innovators in nutrition, health and beauty



Perfumery & Beauty



Taste, Texture & Health



Health, Nutrition & Care



Animal Nutrition & Health

## A global group with European roots

88

Manufacturing sites

78

Application labs

40

Creation centers

70

Premix sites

**~30,000**

passionate, talented,  
and diverse people in  
our global team

**150+ years**

of combined scientific  
discovery and  
innovation heritage

**€12+ bn**

combined revenue



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# A highly volatile, uncertain, complex and ambiguous world impacting Asset Management



- ✓ Scarcity workforce
  - ✓ Technology potential
  - ✓ Sustainability challenge
  - ✓ Energy transition
  - ✓ Data security
  - ✓ High Energy prices
  - ✓ Inflation
  - ✓ Supply Chain disruptions
  - ✓ High customer expectations
  - ✓ ...
- 
- ✓ (unpredictable) Fast-Fluctuating demand





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# (traditional) Asset Care Strategy approach

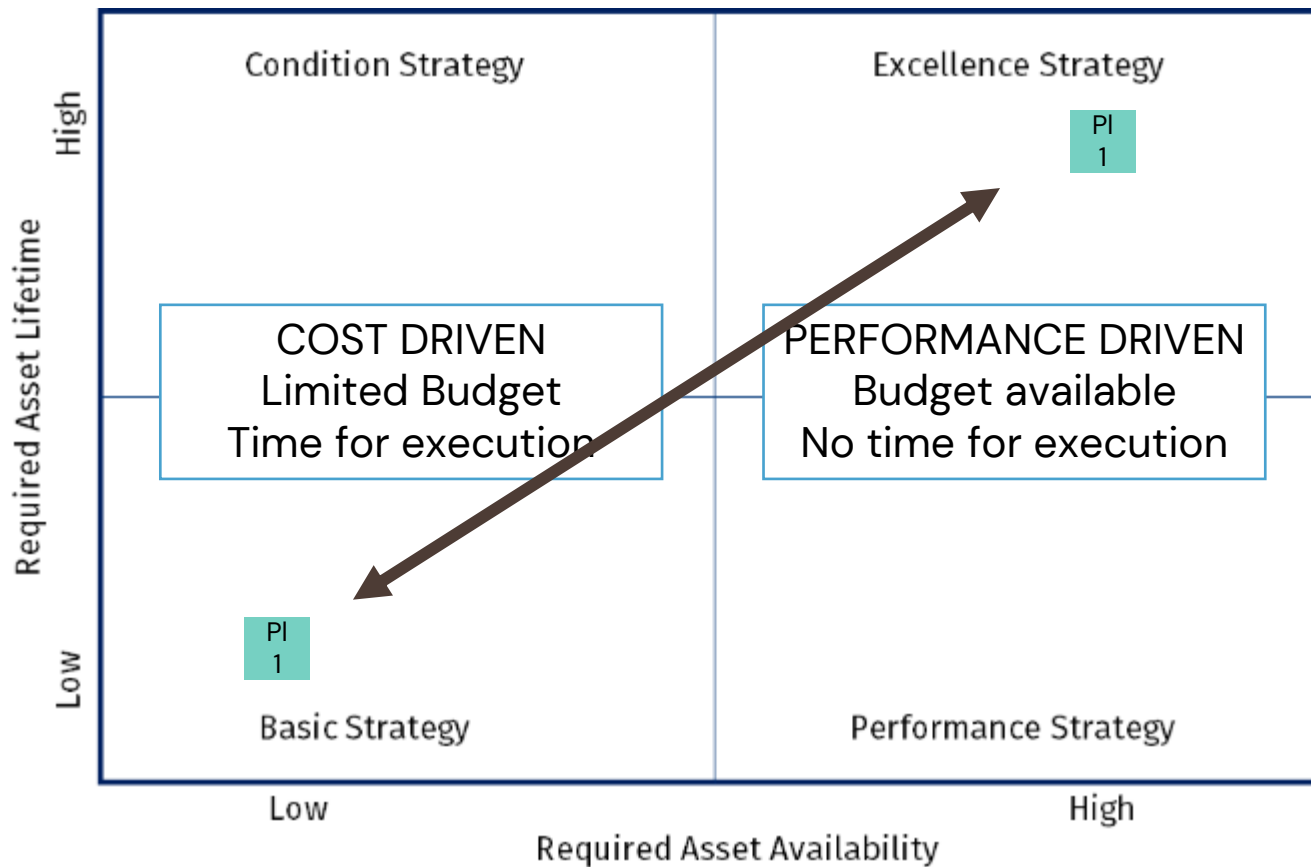


Remark: all measures to meet SHE-Q requirements must be included



# Asset Care Strategy in a fast-fluctuating demand situation

Traditional approach is applicable in a predictable slow-moving situation

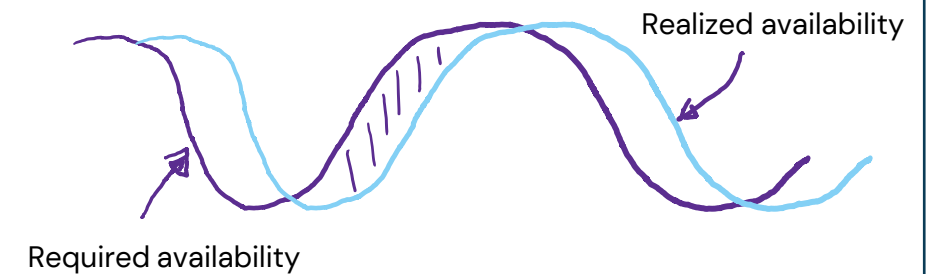


What if

**From High → Low demand = from Performance → Cost driven:** Cost pressure leads to immediate actions: cutting preventive maintenance, reducing work force

But take care with changing the asset strategy !!!  
→ No way back

**From low → high demand = from Cost driven to Performance driven:** Low reliability due to backlog preventive maintenance (delay in results), lack of capabilities & limited (no) time to execute modifications & maintenance

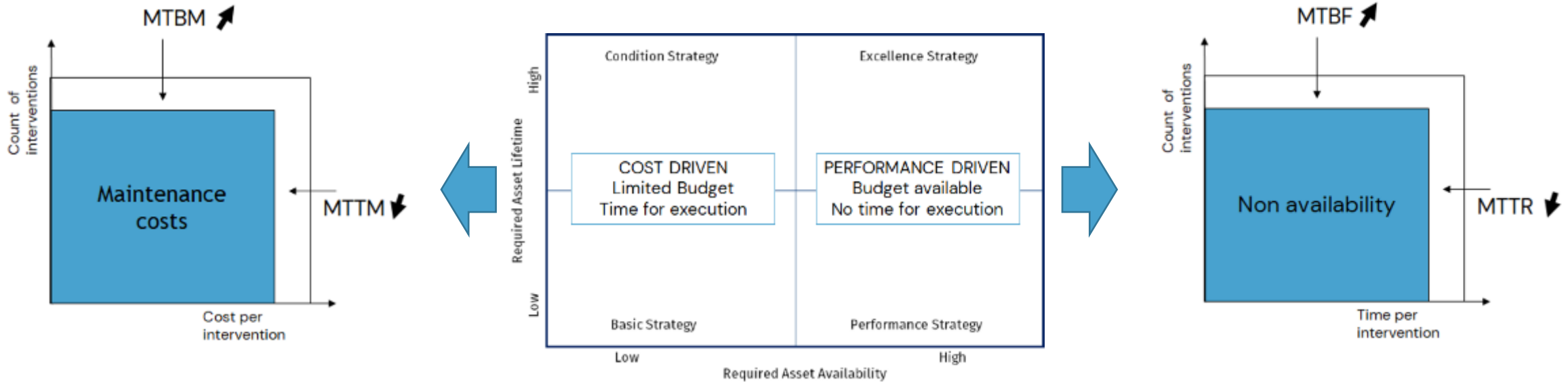


**What is an appropriate strategy in a (fast) fluctuating demand situation?**



# A future proof Asset Care Strategy in a fast-fluctuating demand situation


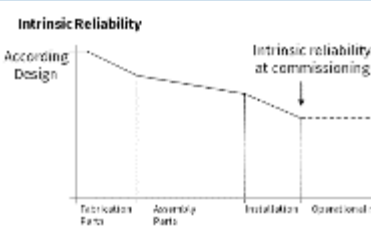
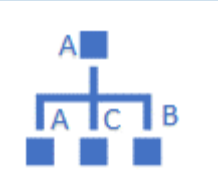

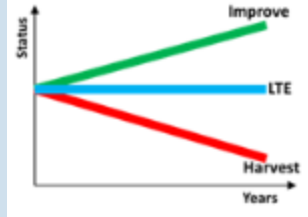
- Asset Strategy → **Reliability** → Asset Performance Management
  - No matter if the focus is availability or cost → Reliability serves both

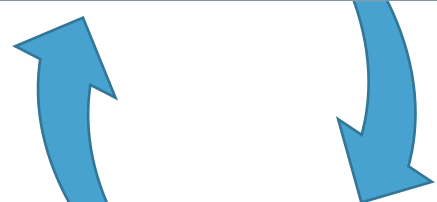


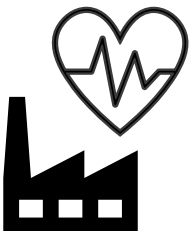
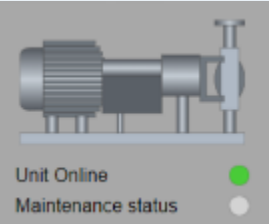

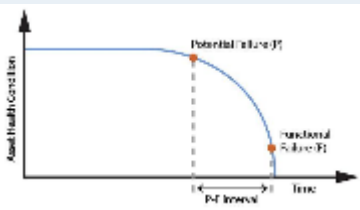
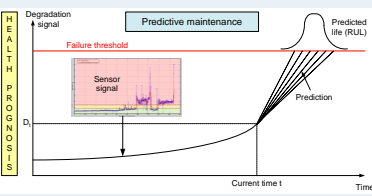
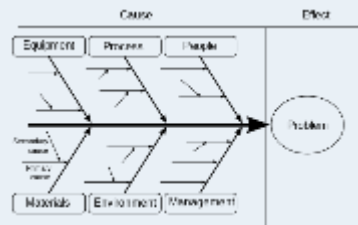
- Organizational Strategy → **Quality** → Manufacturing Excellence
  - No matter if the focus is availability or cost → Quality serves both



# Asset Performance Management: Reliability Today & Tomorrow

<h2>Asset Strategy</h2> 	<h3>Intrinsic Reliability (TOTEX)</h3>	<h3>Asset Criticality</h3>	<h3>Preventive/Predictive Maintenance Program (PPM)</h3>	<h3>Life Time Extension programs (LTE)</h3>	<h3>Asset Improvement Plans</h3>
					<p style="text-align: center; border: 1px solid black; padding: 5px;">LTE+</p>



<h2>Asset Health</h2> 	Asset Insights				Analysis
	Run Status	Performance Status	Condition Status	Diagnostics (anomaly & prediction)	Root Cause Analysis
					

# Manufacturing Excellence: Quality Today & Tomorrow

- Competences
- Values
- Leadership

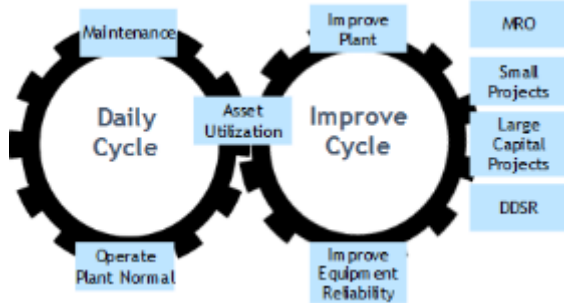
<p><b>Shape the future</b></p> <p>Our mission is to create a sustainable future for our customers and the world. We are committed to innovation, quality, and environmental responsibility.</p>	<p><b>Be a force for good</b></p> <p>We strive to be a positive force in our communities. We support social and environmental initiatives that improve the lives of others.</p>	<p><b>Own the outcome</b></p> <p>We take ownership of our results and strive for excellence. We are committed to continuous improvement and delivering the best possible outcomes for our customers.</p>
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... Together, with our customers

People



- Manufex processes
- DSM Integrated Continuous Improvement



Process



- Tools
- Digital Applications

Global Dashboards & Monitoring		
Asset Performance Mngt		
Mobile Applications		
Smart Assets & Sensors Robot & Drones		

Technology





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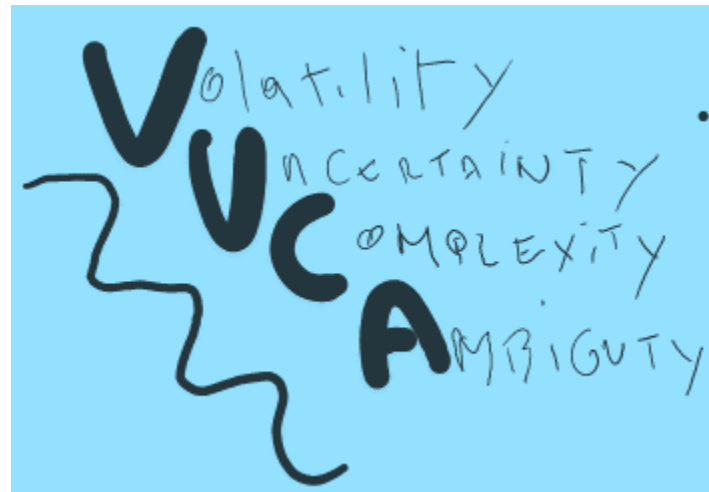
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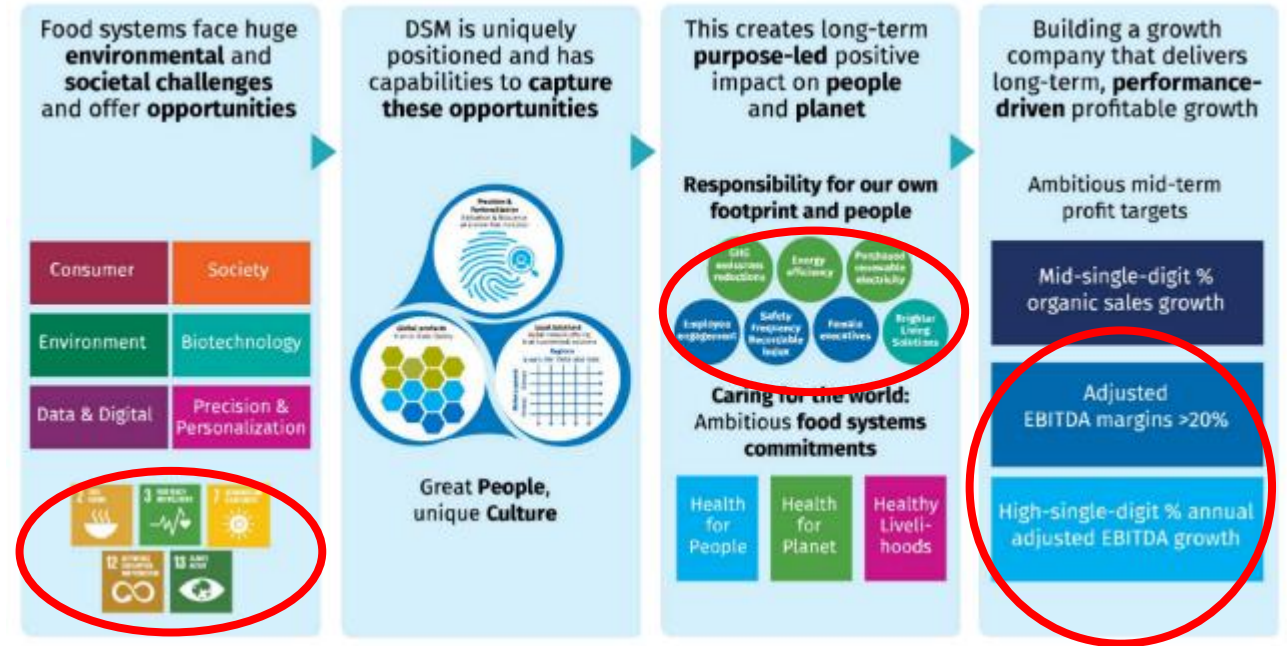


# The Challenges



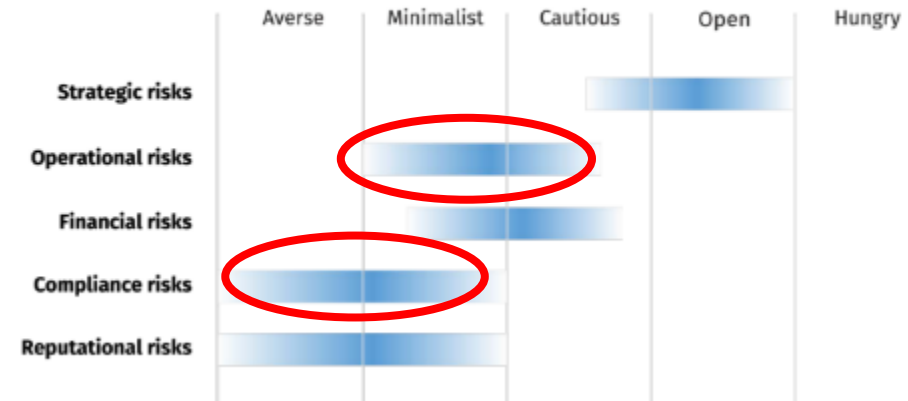
# The outcome

Strategy



Risk Appetite

DSM's risk appetite





How do we support our sites in Asset Care? → Where the rubber meets the road





# Asset Management organized in DSM

## DSM level

- Operational Excellence: Secure and develop the DSM core competences: Maintenance & Equipment Reliability (= Asset Care), Operate Plant Normal , ...
- Digital Squads supporting the competences
- Central engineering department

## Business Units

- BU strategy and objectives (Growth, hold, harvest, disinvest). Asset Management strategy for the complete BU asset portfolio

## Site

- Site, Plant Asset Care and Operations strategy and objectives

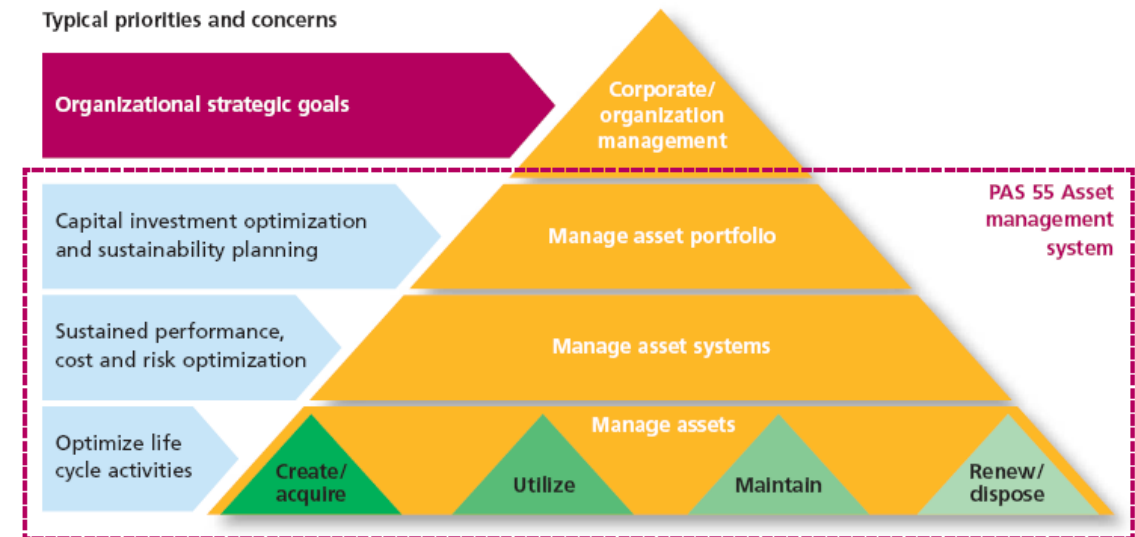


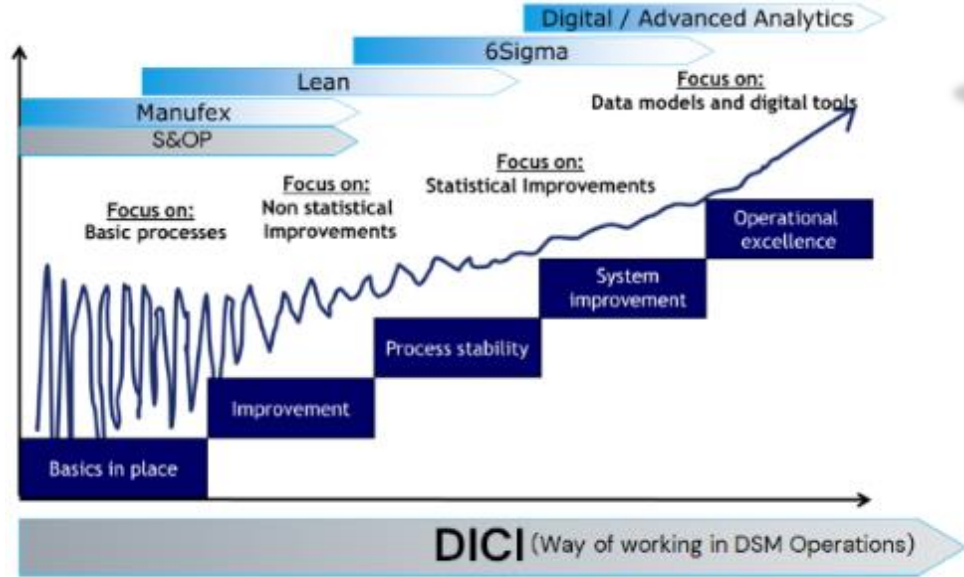
Figure out of PAS55 – 2, 2008 (BSI)

# (Corporate) Asset Care Instruments to "make it happen"

Strategic Competence plan M&ER

Our ambition & direction

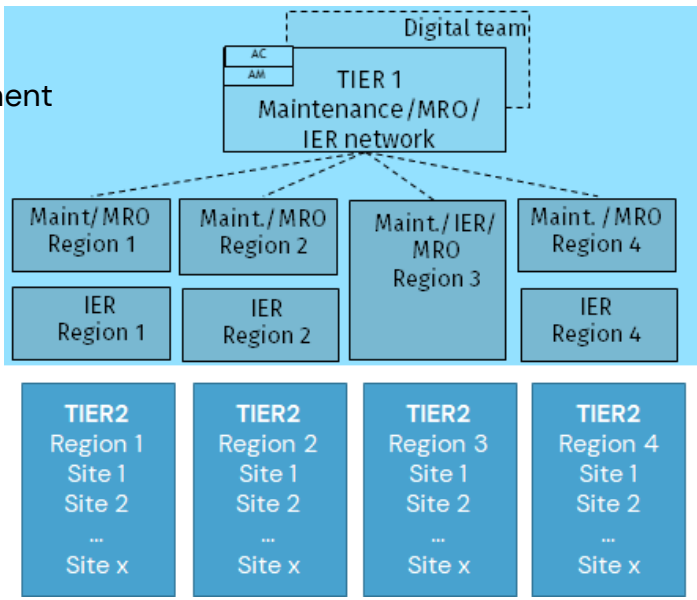
iability / Materials & Corrosion



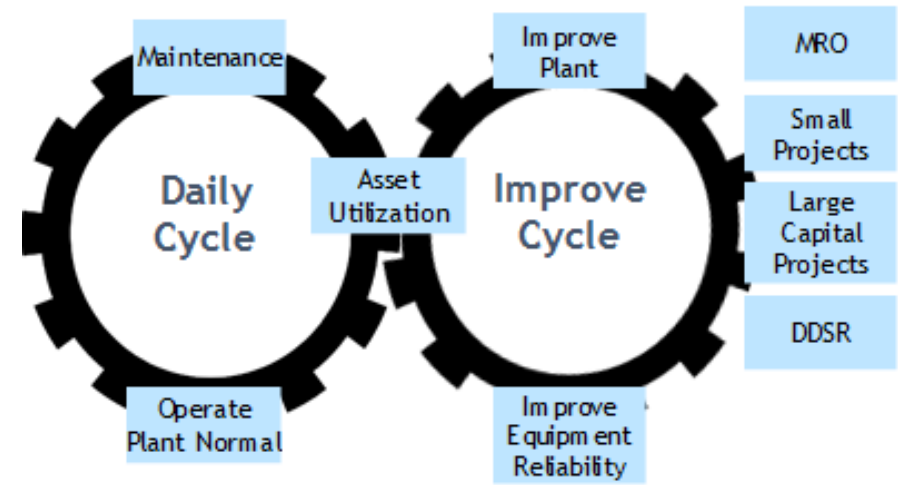
DICI & DIGI Best Practice Mngt

Embedding & Delivery mechanism

BG commitment & involvement  
Amplifying & leverage mechanism



Networks (TIER1 & 2)



The standard Compliance

Manufex processes

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# Technology enables Reliability and Quality to reach "No Surprises"

Create Value:  
Performance  
Management



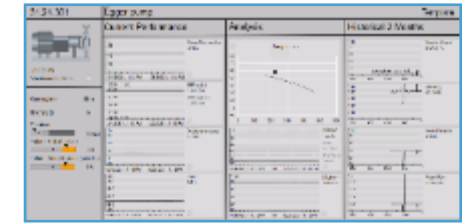
Global Dashboards  
&  
Monitoring



Effectiveness:  
Do the Right Thing



Asset Performance Mngt



Efficiency:  
Do the Things Right



Mobile Applications



Execute:  
Digi In the Field



Smart Assets &  
Sensors  
Robot & Drones

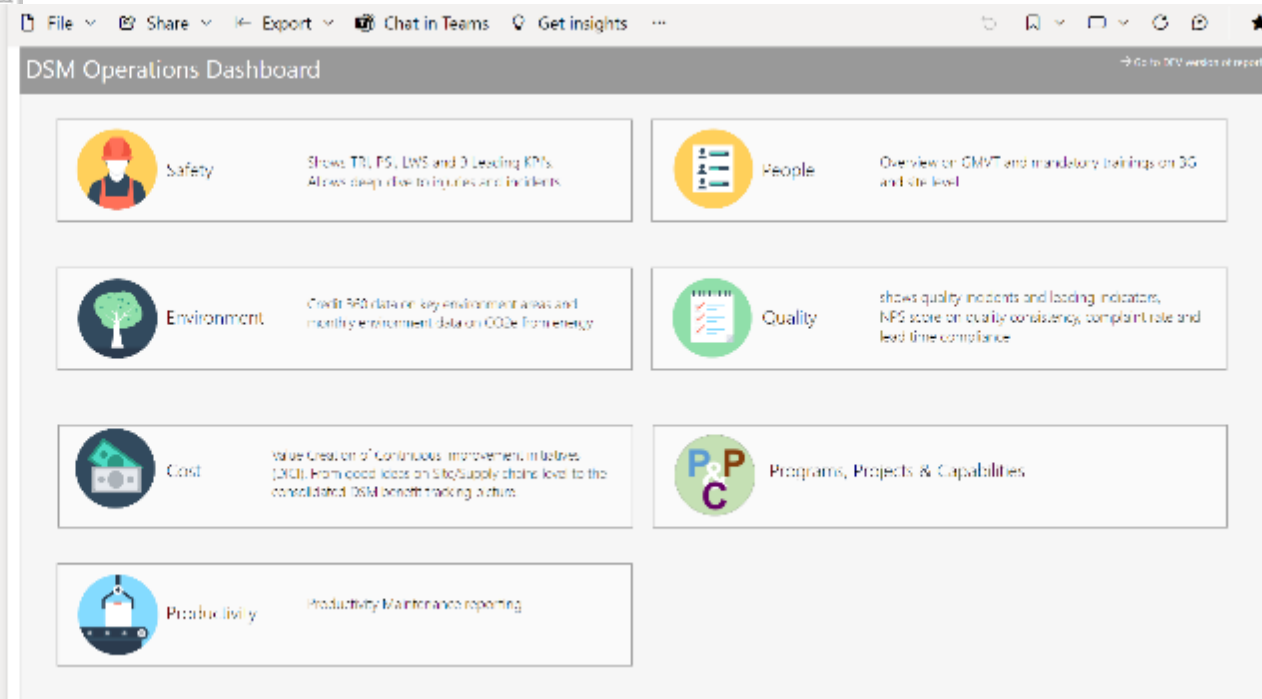


# Global Dashboards

Create Value:  
Performance  
Management



- DSM Operations Dashboard
- KPI Operations
- KOMS
- Documentation
- Request Access



# Asset Performance Management

Effectiveness:  
Do the Right Thing

PLAN

DO

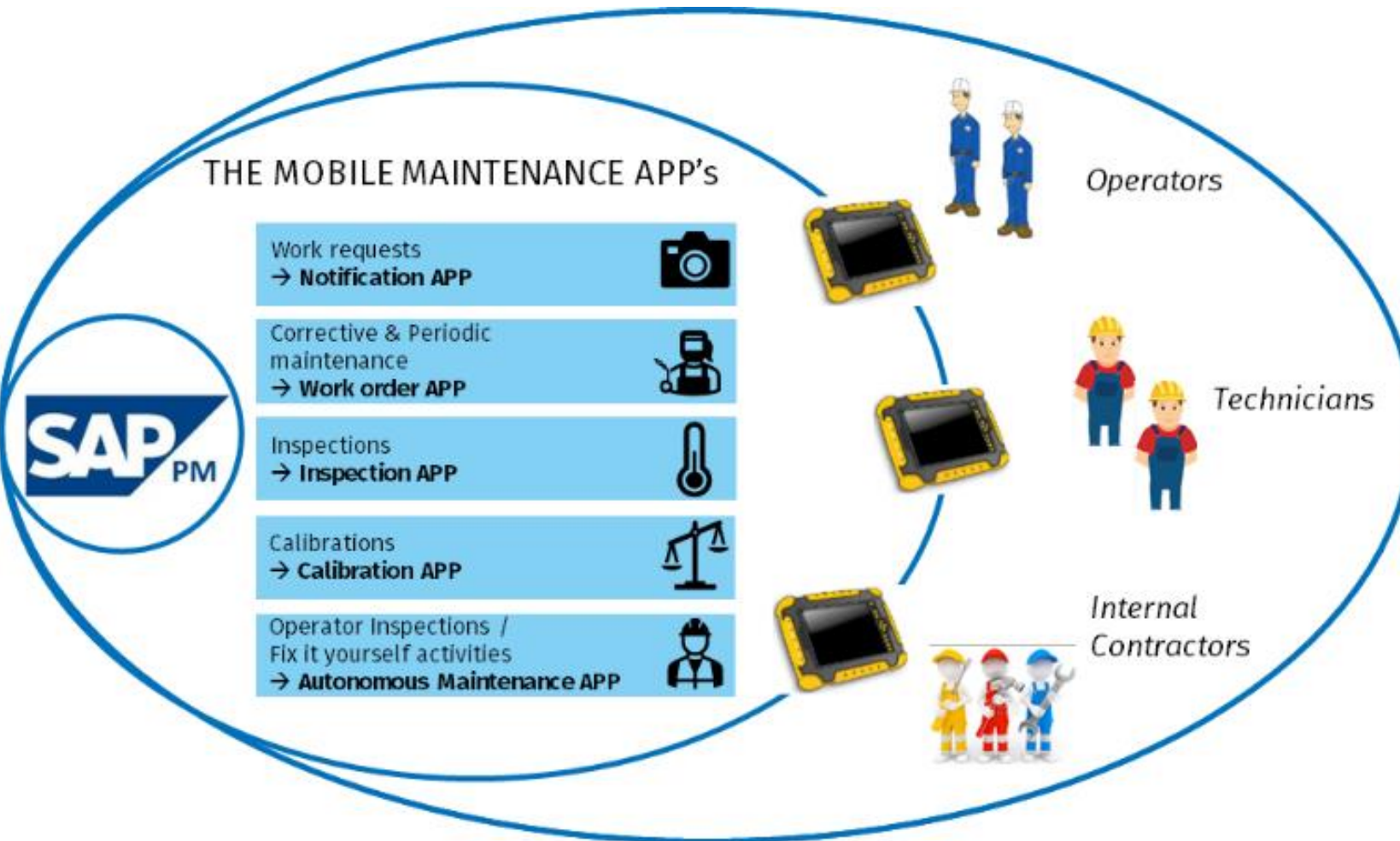
ACT

CHECK



# Mobile Maintenance Applications (Mendix)

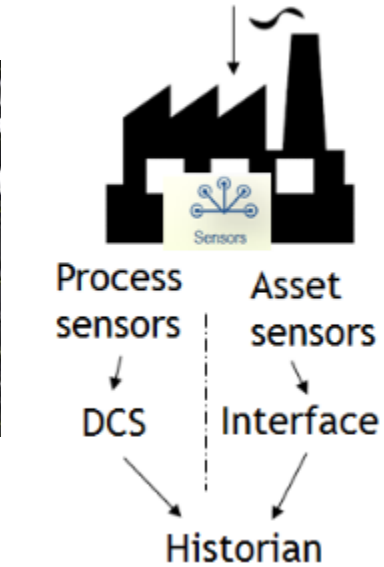
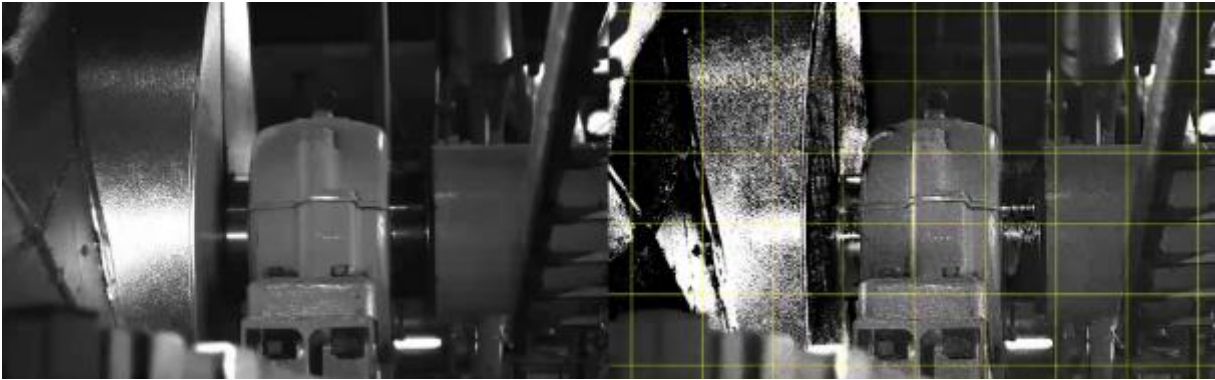
Efficiency:  
Do the Things Right



- ✓ No matter what the maintenance activity is: Corrective, preventive, inspection, calibration or autonomous maintenance and no matter who execute the work: Technicians, operations or internal contractors, ALL maintenance work and results are managed via and documented in “**ONE Source of Truth for Maintenance Activities**” → SAP PM.
- ✓ To make this possible in a user-friendly and efficient way, the Mobile Maintenance APP's are developed as the interface with maintenance work requesters and executors

# Asset Sensors – Condition Monitoring

Execute:  
Digi In the Field





# Inspections

Inspections supported

- By robots
- By drones

Execute:  
Digi In the Field





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# Navigating Uncertain Times: Achieving Resilient Asset Care Management for the Future

## Summary:

- A future proof Asset Care Strategy in a fast-fluctuating demand situation → Reliability & Quality
- Supporting site Asset Care → Strategic actions, Manufex processes, Networks & Best Practices
- Technology is the catalyst to unleash the potential of our people, process and assets

**Up to “No Surprises” and a future proof Asset Management**

**We bring progress to life™**