
AVEVAWORLD

THINKING OF TOMORROW

From independent reliability management to centralized success

Omya’s Global Predictive Maintenance Evolution with AI and Machine Learning

Jonathan Vincent I April 2025

About Omya

Omya is a leading global producer of essential minerals and a worldwide distributor of specialty materials.

160 plants in
50 countries

9,000
employees

Privately
owned

Headquartered
in Switzerland

CHF **4 billion**
turnover

THINKING OF TOMORROW since 1884

Solving customer challenges today and into the future

Horizon 3 **Future challenges**

Working now to be ready for what tomorrow may bring

Horizon 2 **Development programs**

A global innovation pipeline for market applications

Horizon 1 **Technical support**

Responding to immediate customer needs

325
patent families

3
innovation hubs

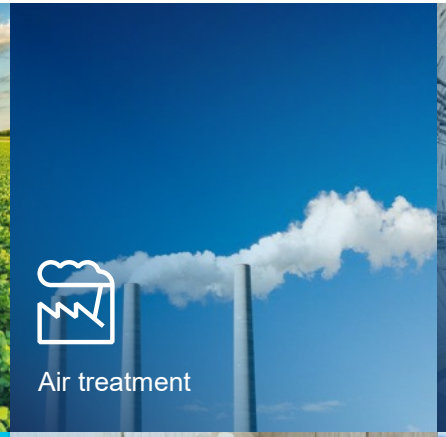
6
pilot plants

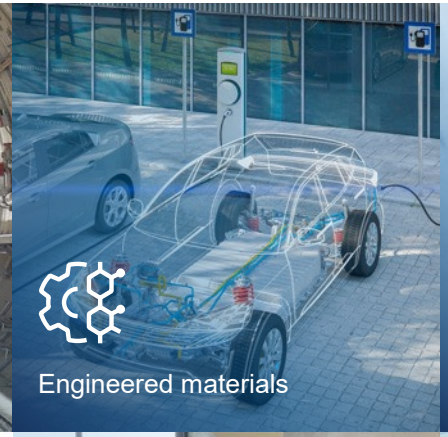
100+
scientists

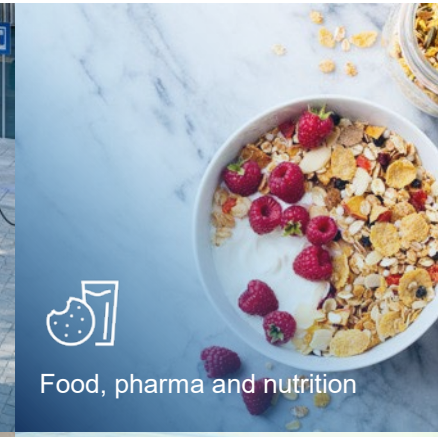
17
dedicated laboratories

Omya solutions

Industries we serve

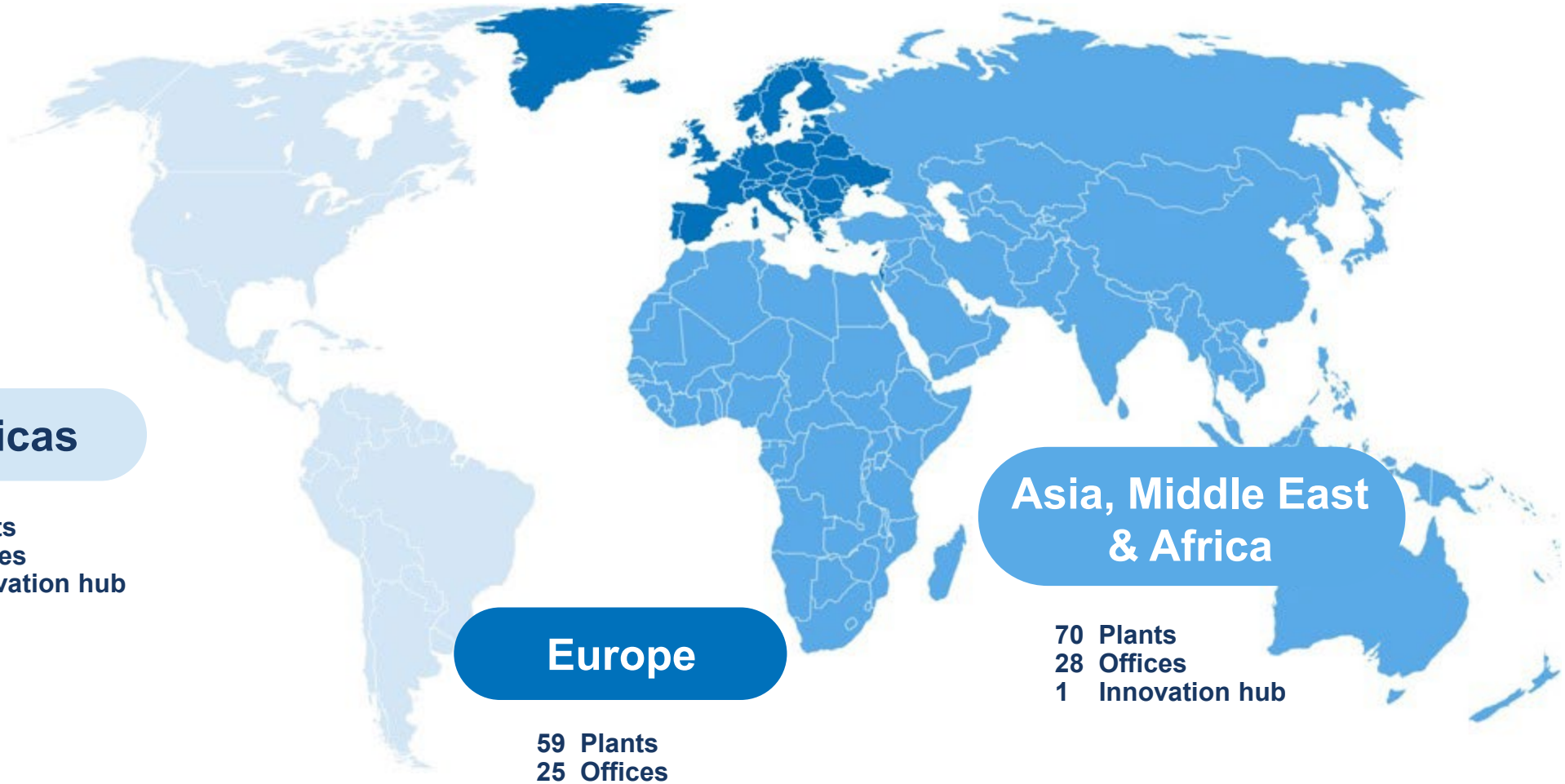






Working with Omya

Worldwide sales and support



Americas

27 Plants
17 Offices
1 Innovation hub

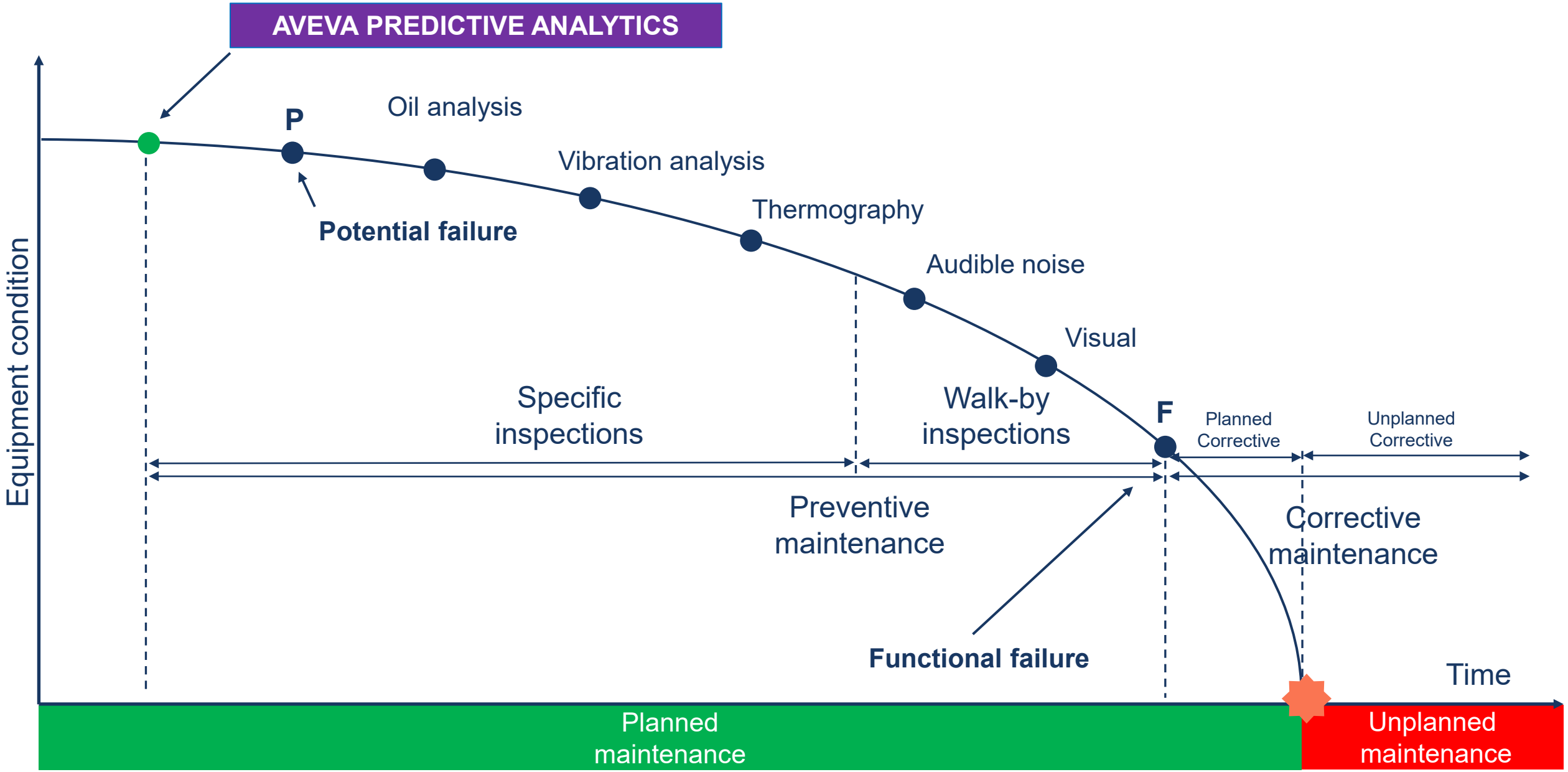
Europe

59 Plants
25 Offices
1 Innovation hub

Asia, Middle East & Africa

70 Plants
28 Offices
1 Innovation hub

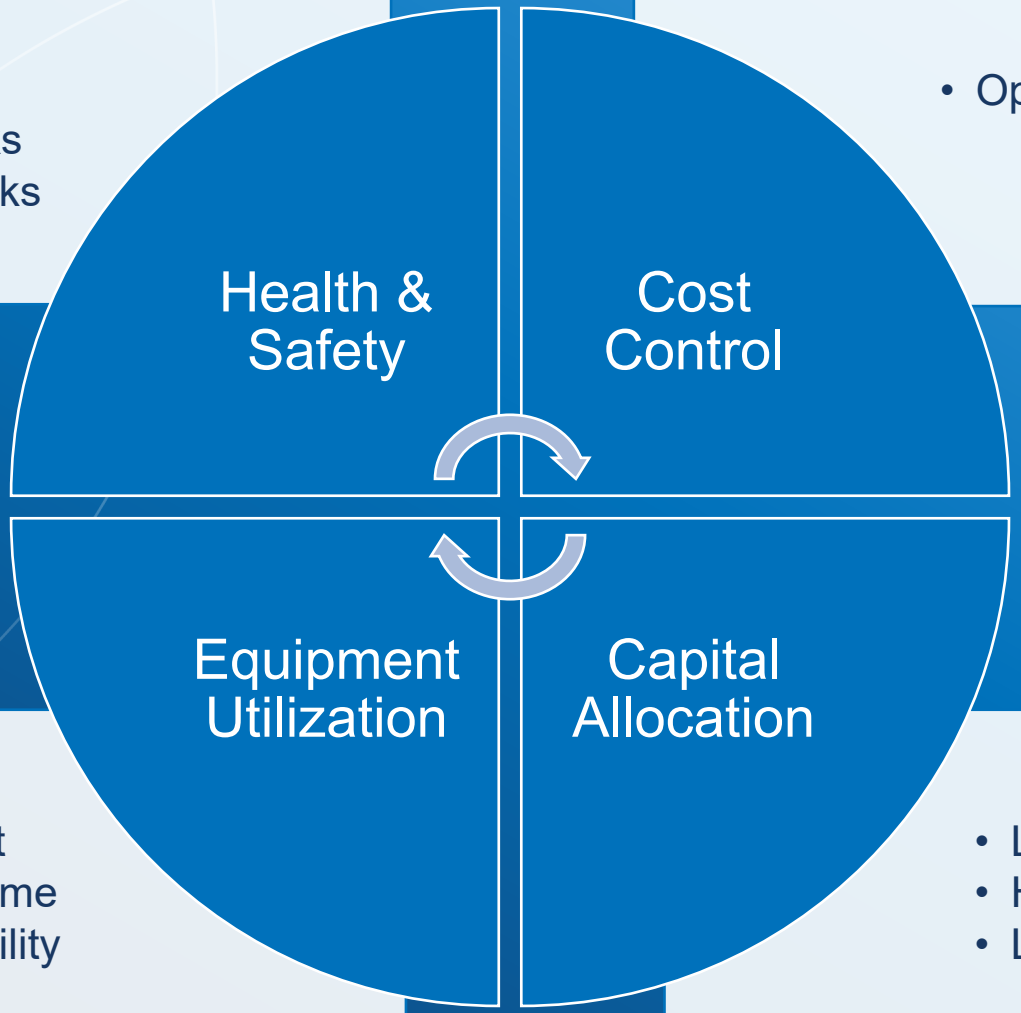
*European Standard **EN13306***



Values

- Lower Safety Risks
- Lower Health Risks
- Lower Environmental Risks
- Lower Product Quality Risks

- Optimized Maintenance Costs

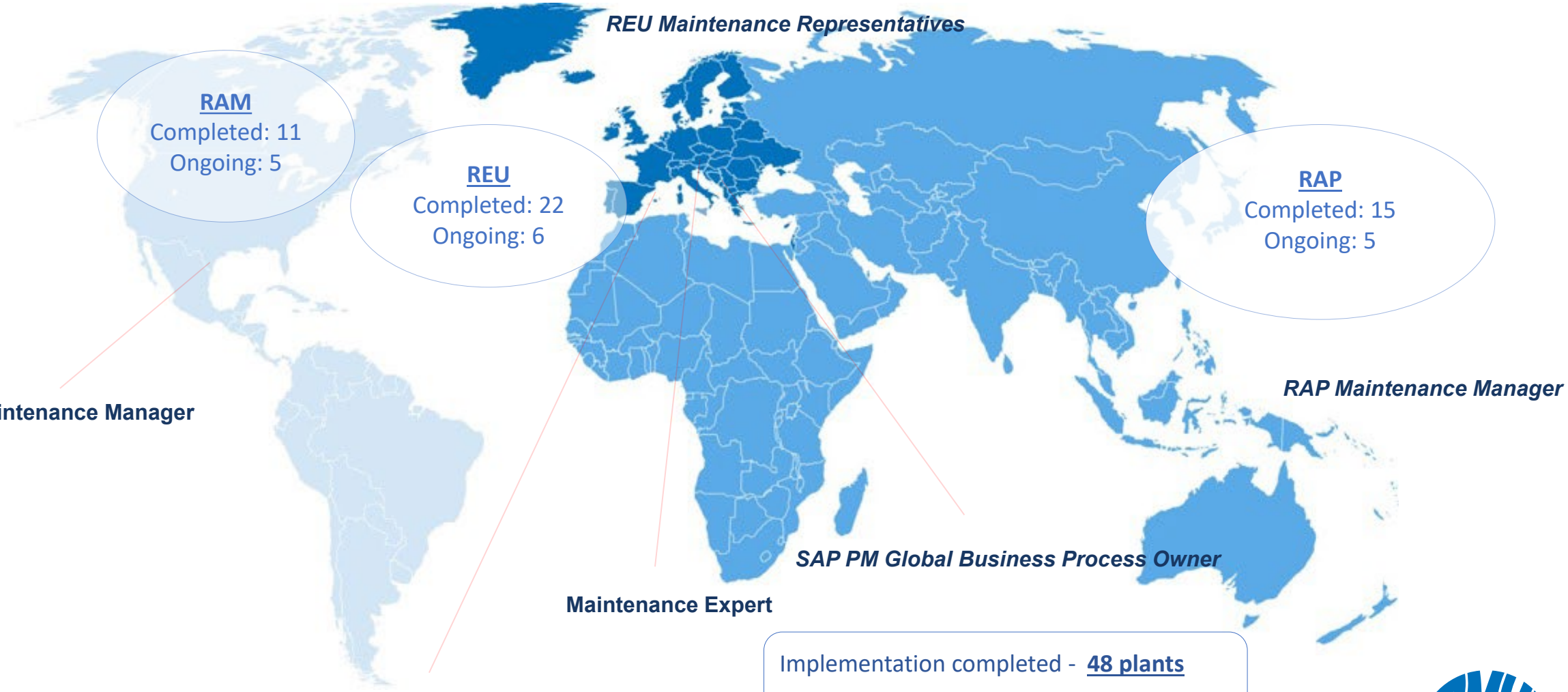


- Higher Production Output
- Lower Equipment Downtime
- Higher Equipment Reliability

- Lower Capital Expenditures
- High Equipment Lifespan
- Lower Spare Parts Inventory

Omya

Plants with AVEVA Predictive Analytics

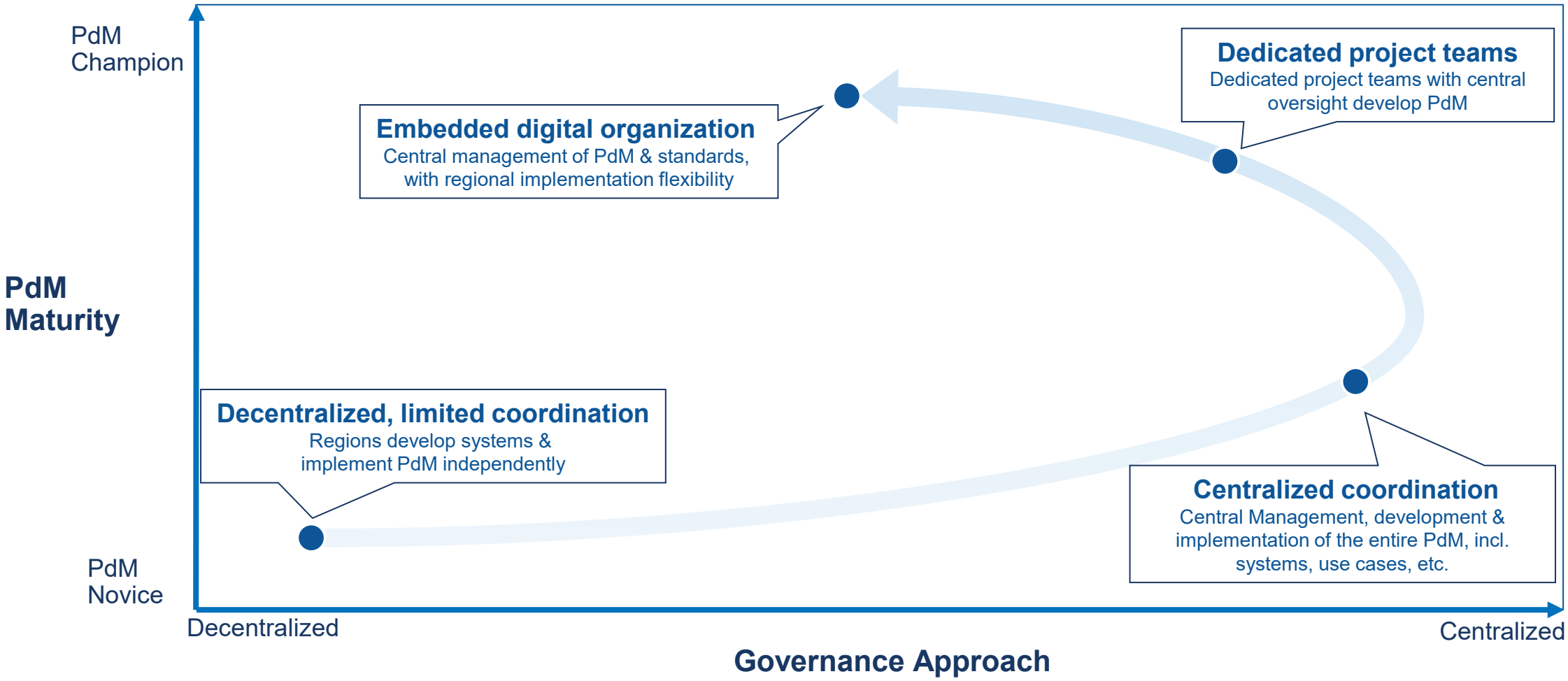


Implementation completed - **48 plants**

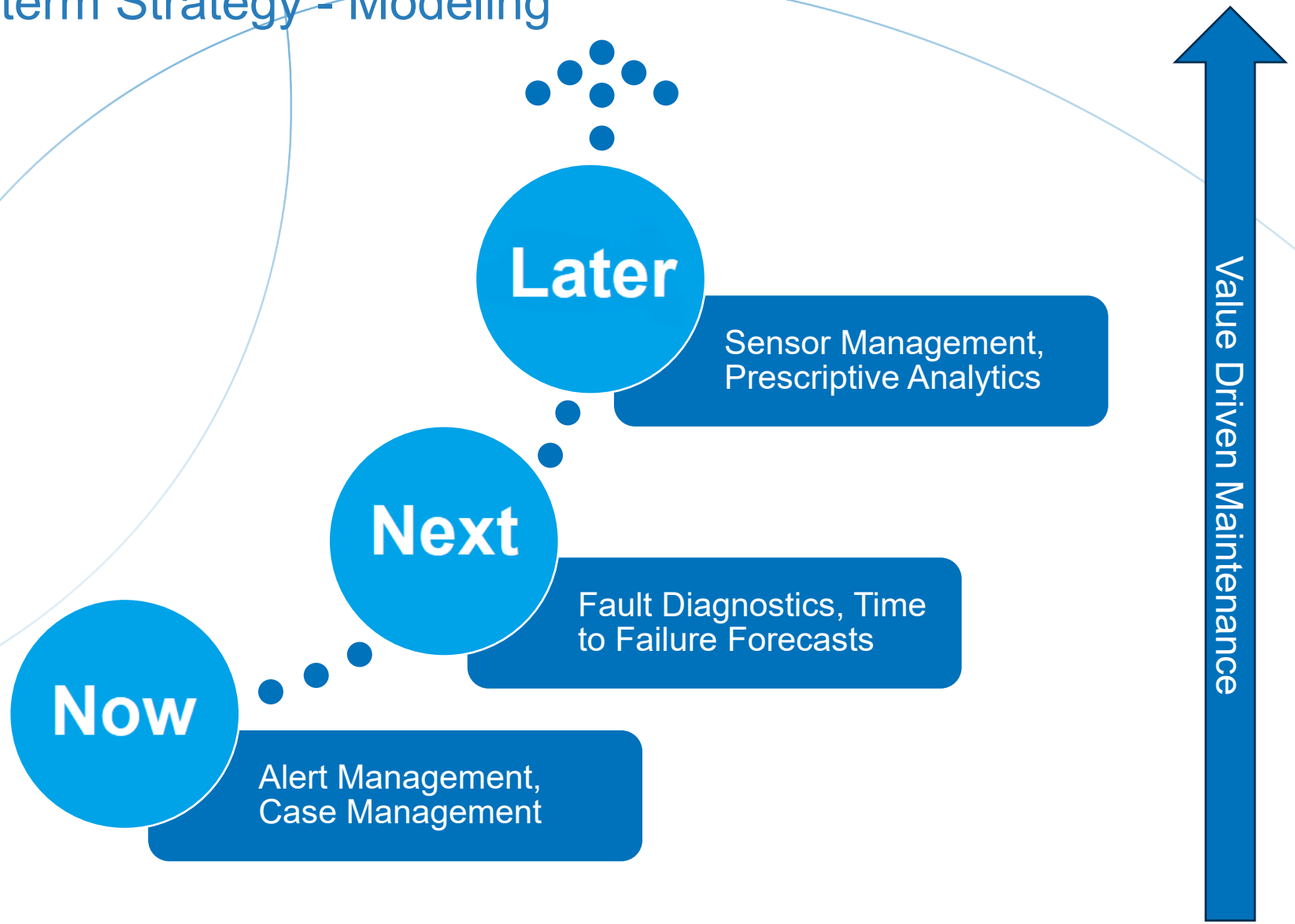
Implementation ongoing - **16 plants**

PREDICTIVE MAINTENANCE (PDM) STRATEGY

Visual Long-term Strategy - Personnel

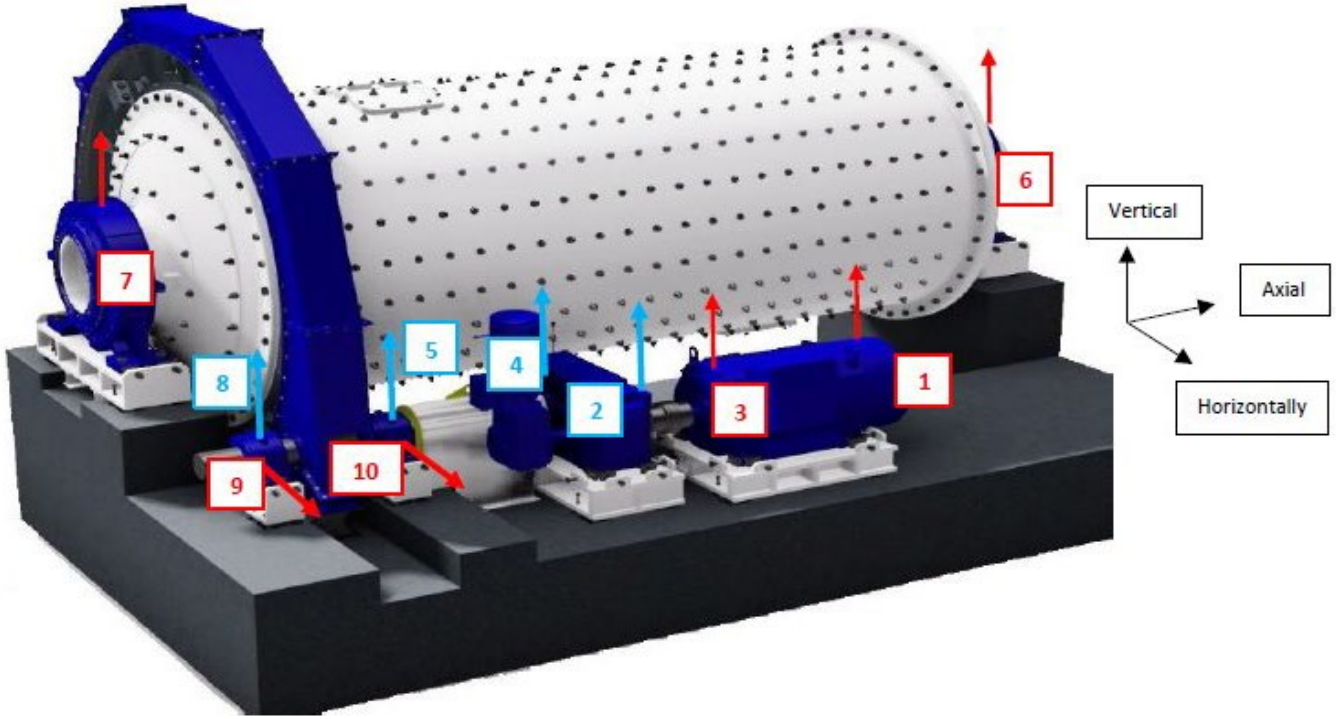


Visual Long-term Strategy - Modeling

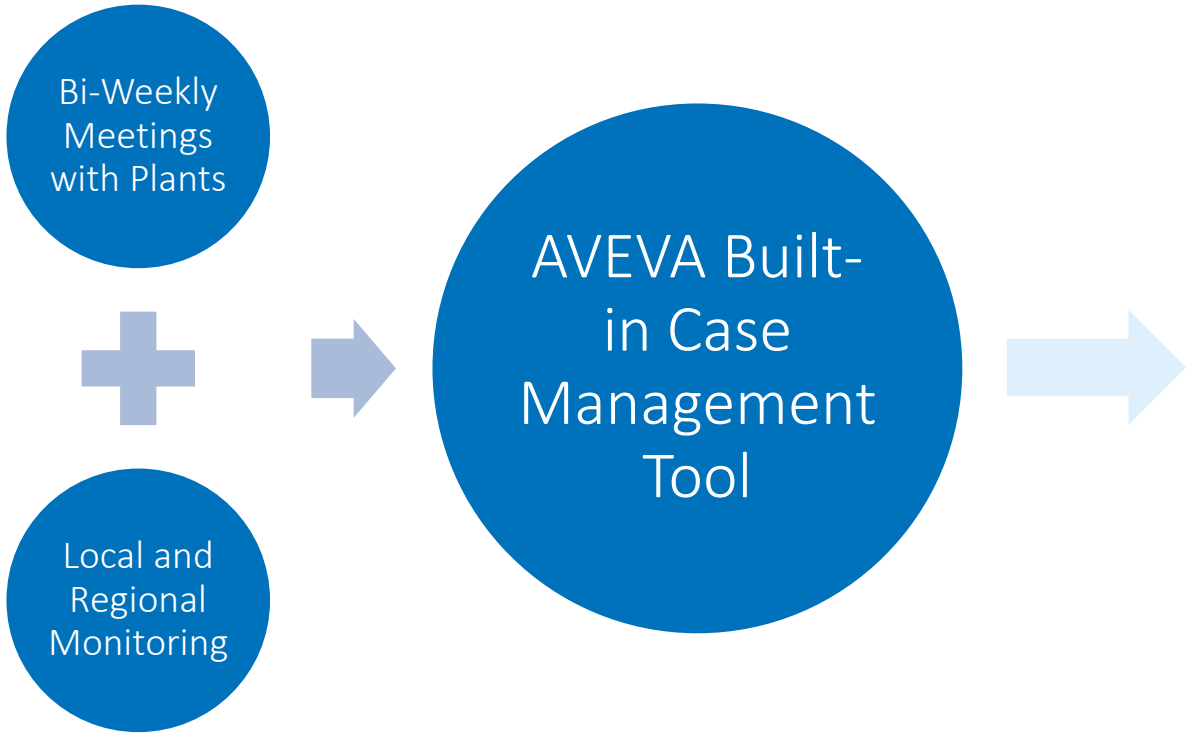


Model Structure

- Defined by Equipment
- Models encompass temperature, vibration, power, etc.
- Provides a holistic view of the equipment and rapid analysis



Case Management Structure



Case ID	Title	Case Status
1135	Cascade mill motor mechanical-model issue	
1134	Cascade mill gearbox motor model issue	
1566	Cascade mill motor-sensor has bottomed out	
1416	PX 9000 #56- 722 Trial	
1395	PIN MILL 1- Ethernet Issue	
1393	PX9000 #56- Lube Oil Pressure	
1244	111- Cascade Mill Gearbox Vibration	
1100	PX7000 #53 High vibration on input shaft	
1392	USSY-PX 9000 #154 Mill Model Retrain	
1375	USSY-PX 900 #55 CENTRIFUGE Model Retrain	
1316	USSY PX 1500- #50 Centrifuge	

Flash Dryer Catch

Suspicious speed drop identified; case opened

Case Opened

7 point being modeled:

- 3 power
- Feed Rate
- Speed
- Temperature
- Vibration

Suspicious speed drop identified

Vibration and motor power were consistent with modeling

Production confirmed speed control issues

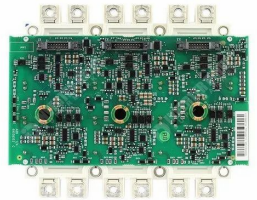
Process change was suspected

Drive issue identified

Components inspected

Confirmed issue with IGBT card

Issue previously occurred in 2017 and incurred downtime



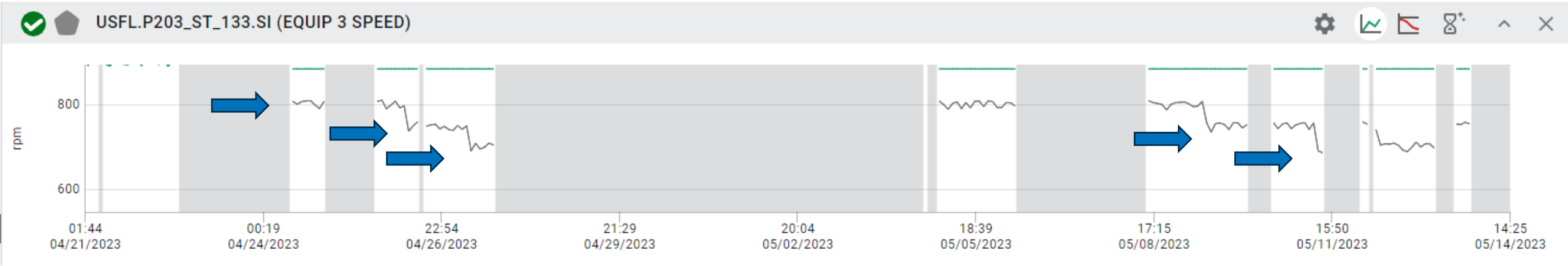
Drive manufacturer contacted

Actions logged in Aveva Predictive Analytics

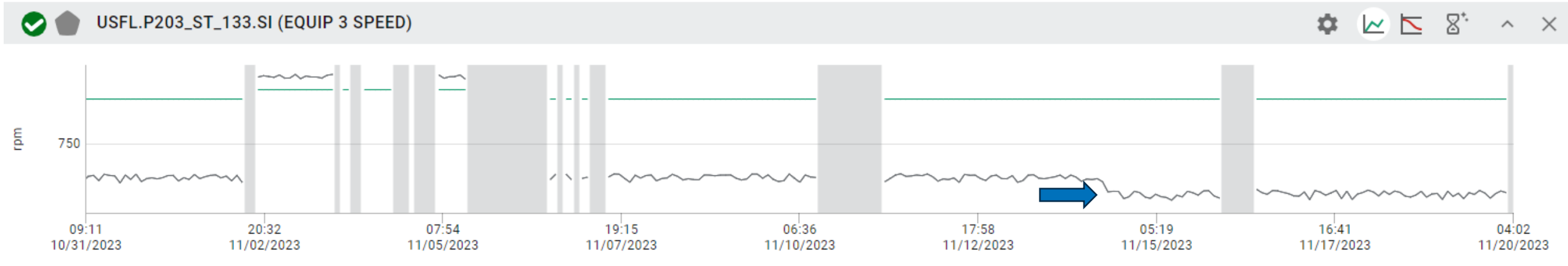
VSD Replaced

Flash Dryer Catch

Irregular Speed drops



Normal speed adjustment (Barely noticeable)



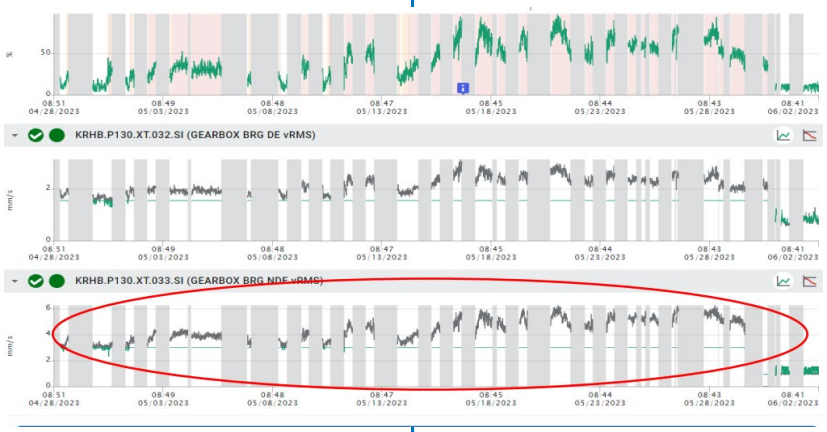
Roller Mill Catch

Gearbox NDE bearing

Increased observed on 4/29/2023

Vibration appeared stable for first week but fluctuated 0.5-1 mm/s above prediction

Vibration continued to increase to 2 mm/s above prediction



Roller mill was taken down 1 month after the initial increase was observed

Bearing was replaced and equipment was brought back to normal operation

Vibration increased on the NDE Bearing of the gearbox

Trend was closely monitored

Case opened

Bearing replaced

Case Management as a Driver for Change Management

- Creates accountability
- Ensures all stakeholders understand remediation actions to date
- Creates historical log for future events
- Road to prescriptive analytics

Next Steps: Fault Diagnostics and Prescriptive Analytics

Historical Data

- Analyze cases
- Record significant events

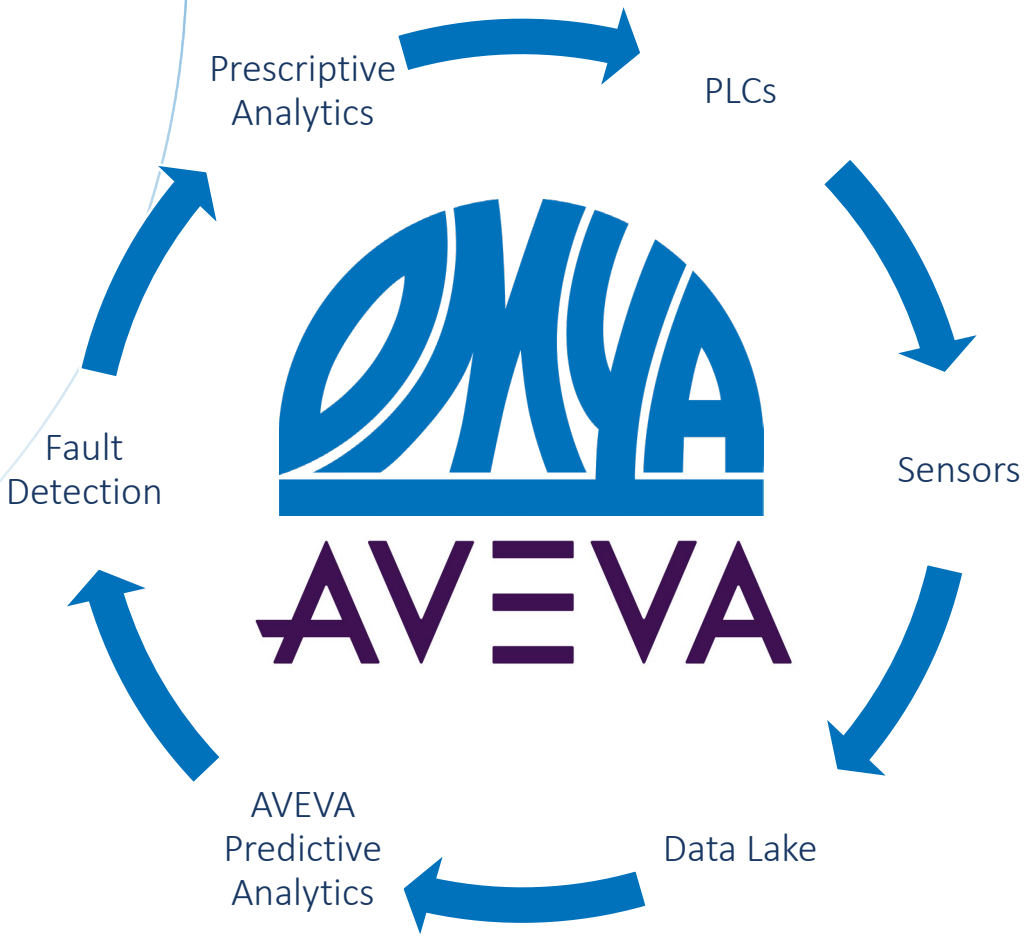
Fault Diagnostics

- Ensure template cohesion
- Identify standard significant events
- Input into AVEVA Predictive Analytics
- Analyze Sensors via Sensor Management Tool
- Optimize Modeling

Prescriptive Analytics

- Follow fault detection, review extensively with local team
- Prescribe standardized mitigation actions through AVEVA Predictive Analytics

AVEVA Predictive Analytics as a Driver for Reliability



Omya & AVEVA

Key Takeaways

- 48 of 160 plants have AVEVA Predictive Analytics
- Future Roll-out Plan: All plants integrated with AVEVA
- Enhanced Efficiency & Effectiveness
- Increased Collaboration
- AVEVA Predictive Analytics (APA) as a First Line of Defense
- Network Effect Created

MINING AND SPECIALTY MINERAS | SWITZERLAND

Omya detects equipment issues up to 3 months ahead of time

Challenge

- Need to modernize maintenance practices, embrace new technologies
- Lack of Early detection of equipment issues
- Decentralized systems for equipment reliability management

Solution

- Deployed AVEVA Predictive Analytics for continuous equipment monitoring and centralized reliability management

Results

- **Early detection of equipment issues up to 3 months ahead of time**
- **Empowered plants to have better ownership of equipment**
- **Centralized the management and tracking of equipment issues**
- **Avoided approximately 15,000 hours of downtime in first 2 years**
- **Single catch pays for the software for an entire year**