

The background is a dark purple gradient. On the left, there are two vertical neon lines, one blue and one purple, with a horizontal blue line intersecting the blue one. On the right, there is a large, glowing purple arc. The text 'AVEVA WORLD' is centered in a white, bold, sans-serif font.

AVEVA WORLD



Amcor: Enterprise Analytics and Visualization of MES/Process Data

April 2025

Presented by:

Carlos Paredes, Automation Manager, Amcor Rigid Packaging

Our operation spans 212 locations and 40 countries



AS OF JUNE 2024

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|--|
| CORPORATE HEADQUARTERS |
| ★ HEAD OFFICE |
| ● CORPORATE OFFICES |
| FLEXIBLES ASIA PACIFIC |
| 35 MANUFACTURING PLANTS |
| 9 COUNTRIES |
| FLEXIBLES EUROPE, MIDDLE EAST & AFRICA (INCLUDING CAPSULES) |
| 51 MANUFACTURING PLANTS |
| 20 COUNTRIES |
| CAPSULES |
| FLEXIBLES LATIN AMERICA |
| 18 MANUFACTURING PLANTS |
| 5 COUNTRIES |
| FLEXIBLES NORTH AMERICA |
| 37 MANUFACTURING PLANTS |
| 2 COUNTRY |
| RIGID PACKAGING |
| 52 MANUFACTURING PLANTS |
| 11 COUNTRIES |
| SPECIALTY CARTONS |
| 15 MANUFACTURING PLANTS |
| 13 COUNTRIES |

Being Amcor | Winning Aspiration

We're committed to winning for all stakeholders – including the world around us



We are a global leader in developing and producing responsible packaging for food, beverage, pharmaceutical, medical, home and personal-care, and other products.

- ~218 sites worldwide
- ~41,000 employees
- 41 countries
- US\$ 14.7 billion sales



Challenges

- Lack of visibility into operational data. How do we monetize it?
- Manual data sharing and reporting processes led to information mislead
- Needed to build standard framework to facilitate data collection, sharing, and analysis



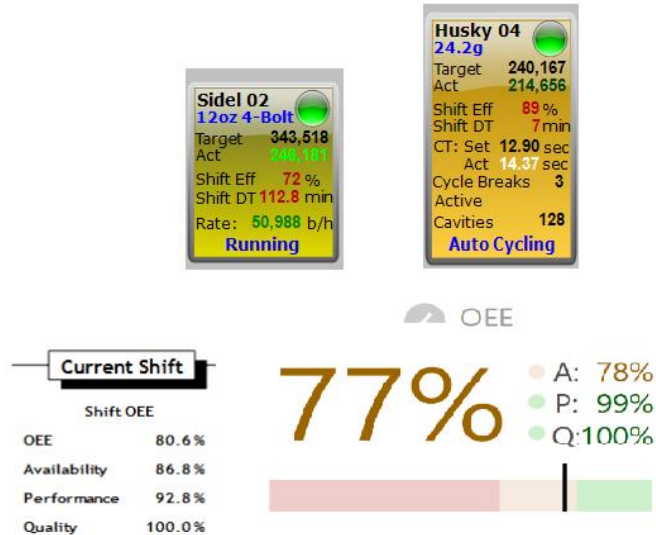
Long-term Business Objectives

Optimize molder effectiveness and reduce downtime using a predictive modeling framework

- Improve availability
- Improve throughput
- Reduce Off Quality, scrap and re-work of any type
- Achieve quality consistency
- Reduce any form of downtime by 2%.
- Improve Machine Efficiency by 5%. This equates to quicker setup time.
- Improve scrap rate by 2%.
- $CPk > 1.33$ for critical SKUs.

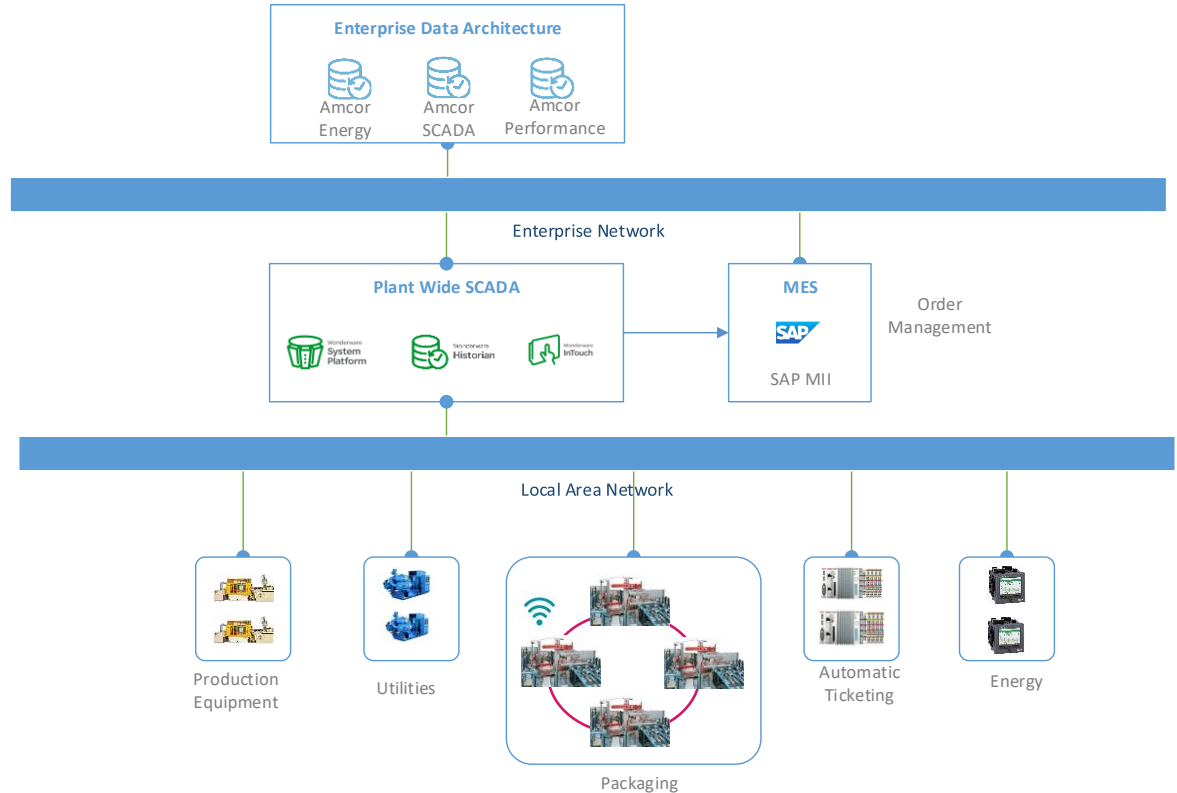
From Traditional HMI to Operations Control

Challenge: Data silos and lack of visualization standards



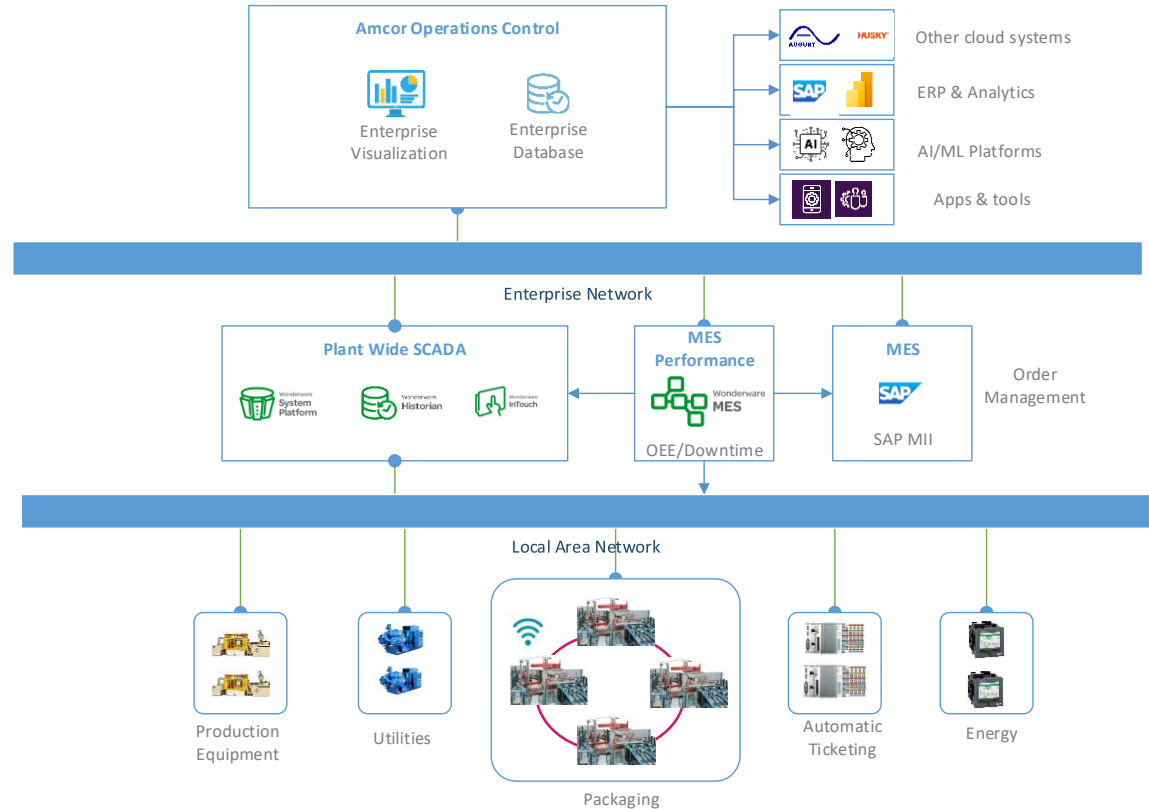
Amcor in 2021: Legacy HMI / SCADA

- Traditional SCADA system
- Non-standard graphics
- Data inconsistencies

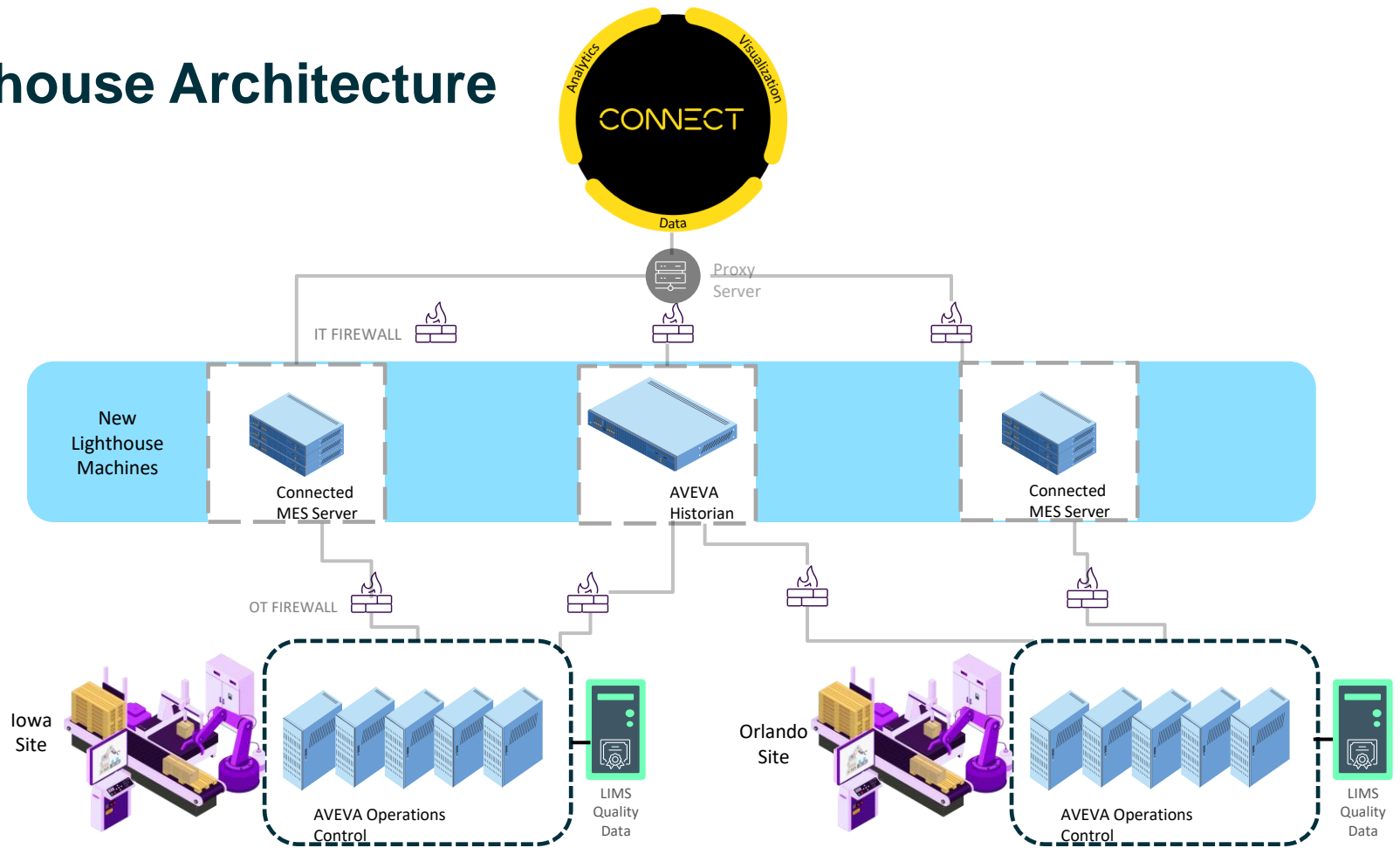


Amcor in 2023: Unified Operations

- Incorporation of AVEVA MES
- Standardization of Graphics and Reports
- Enterprise Integration
- Merging energy and production databases to track energy performance: kWh/kg
- 258 MES entities deployed through the sites



Lighthouse Architecture



Pre and Post Lighthouse Scenarios

Pre-Lighthouse architecture

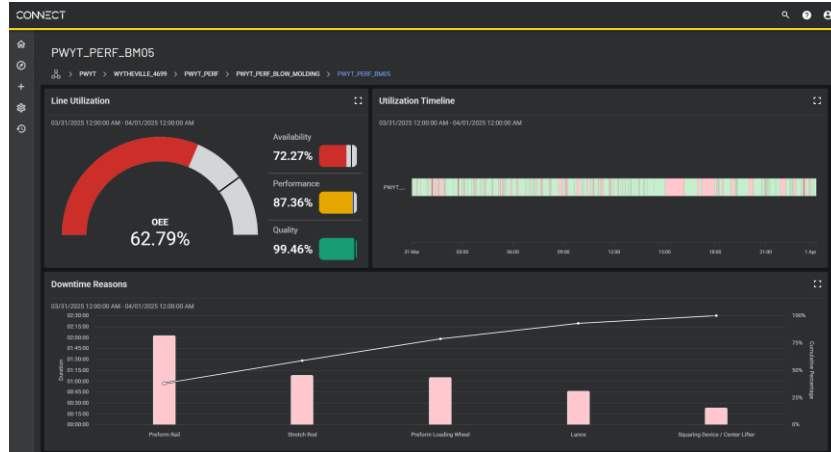
- No central cloud environment – Analysis of data requires access to local MES and SP Historian environments.
- Custom SSRS Reports used locally. Not dynamic, requiring IT support to make changes.
- Lack of analytics tools connected to the process and plant operations staff.

Lighthouse architecture

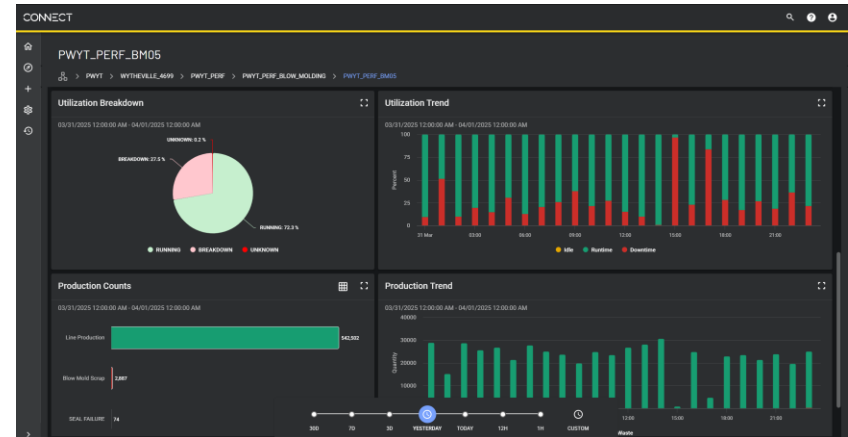
- Central SaaS cloud environment using CONNECT for storage, visualization, and analytics of process and MES event data.
- Users able to access and modify visualizations without the need for IT help.
- AVEVA Advanced Analytics tools are used for calculations, notifications, and the application of AI/ML models.

CONNECT visualization services

MES data – Asset efficiency



Advanced Analytics – Anomaly Score with Utilization

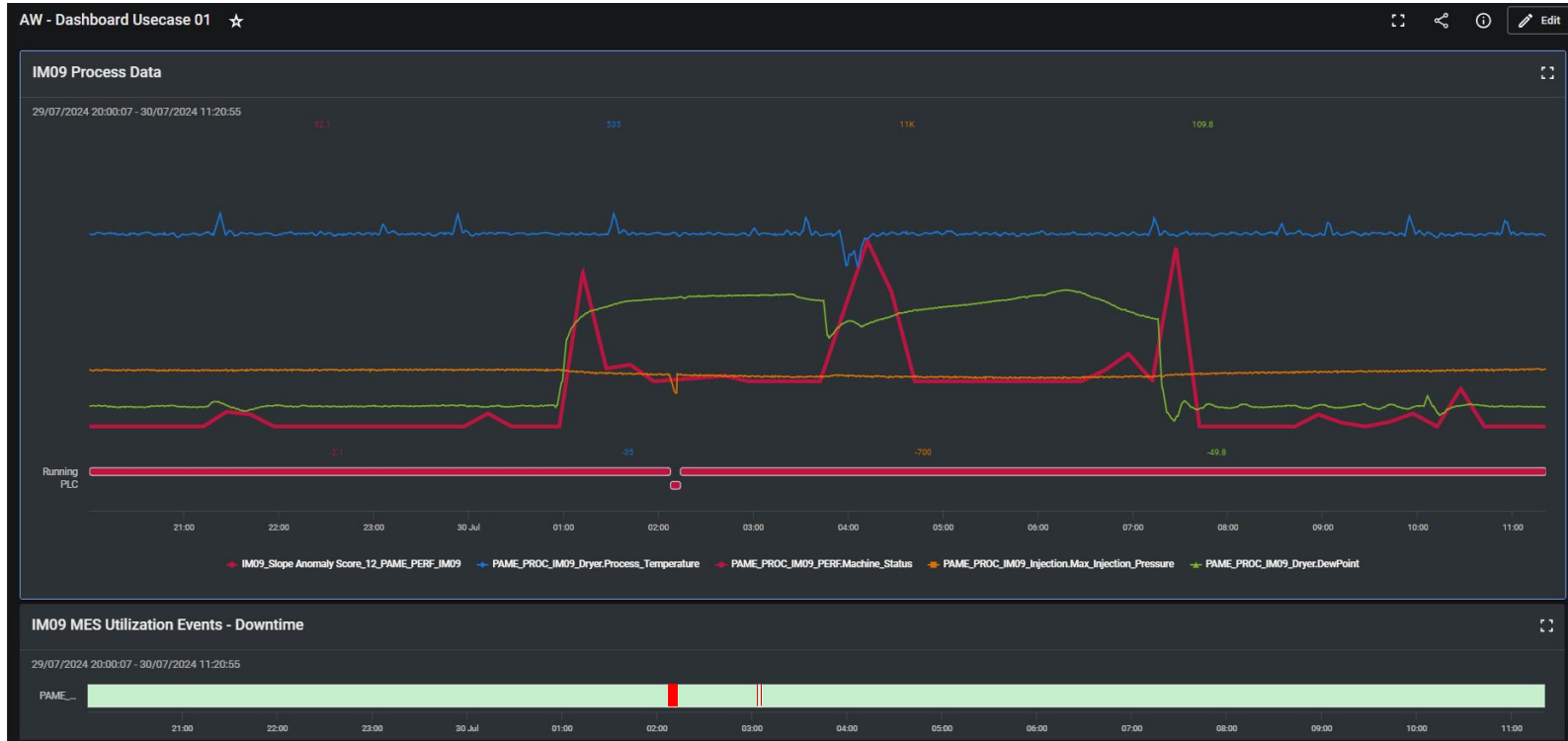


Dynamic reporting to identify biggest CI opportunities

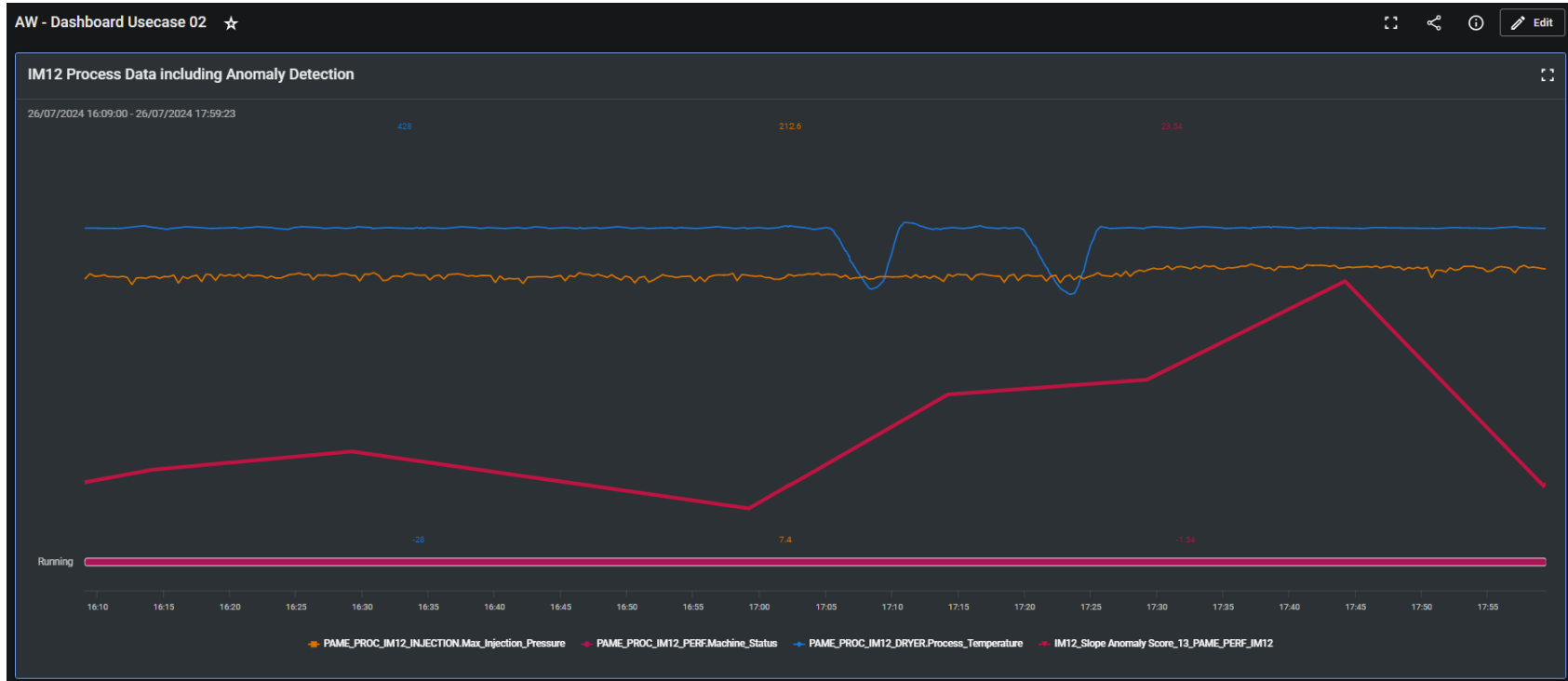
Advanced Analytics Use Cases Enabled by CONNECT



Use Case 1: Process Data



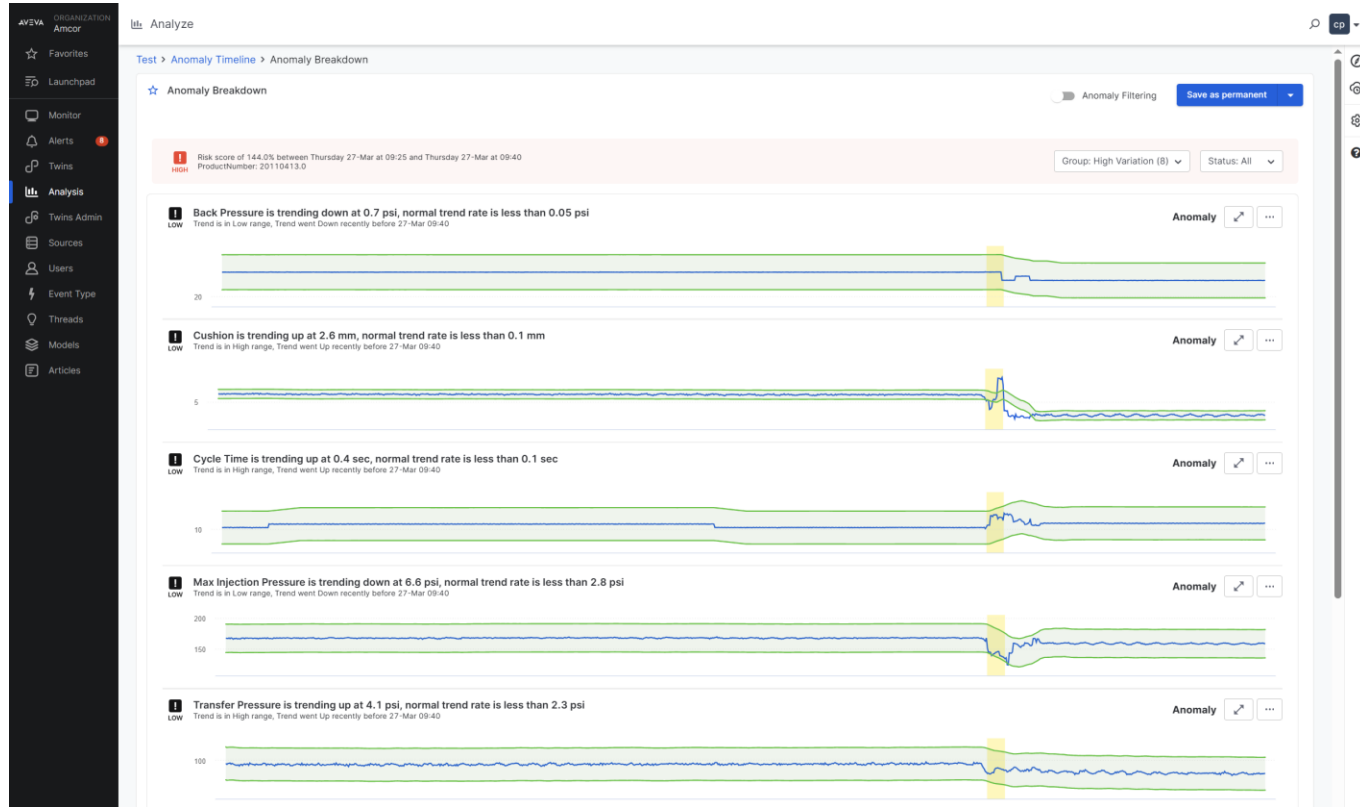
Use Case 2: Process Data Including Anomaly Detection



Process Anomaly Alerting



Analysis: Anomaly Breakdown





Amcor's Success Metrics Quantified

Amcor Digital Journey – Phase 1

Challenge

- Lack of visibility into operational data. How do we monetize it?
- Manual data sharing and reporting processes led to information mislead
- Needed to build standard framework to facilitate data collection, sharing, and analysis

Solution

- Deployed AVEVA™ Manufacturing Execution Systems™ and AVEVA System Platform to improve real-time visibility, standardize data structure, and reporting KPIs.
- Defined an architecture for enterprise reporting and analytics.

Results

- Improve OEE by 2% YoY in Blow Molding, by capturing the micro stops
- 3% improvement in production cycle time
- Increase visibility of PM and changeover effectiveness
- Reduce operator manual entry and improve downtime reporting
- Full visibility of asset utilization and Energy performance
- Standard data structure to support analytics and AI
- Automated and continuous commissioning of new assets



Amcor increases equipment effectiveness and reduces downtime by 1-2%, (Lighthouse metrics)

Challenge

- Certain types of molding equipment have a high number of recurring faults with costly repair and maintenance. There are more than 160 such assets.
- Upstream processes affect molding lines, and downtime shuts down the entire plant.
- Amcor needed timely information from analytics to avoid such faults.

Solution

- CONNECT data services assembles events and process data from multiple plants.
- CONNECT visualization services informs operations and analysts about performance.
- AVEVA Advanced Analytics predicts and notifies about failures and quality anomalies.

Results

- **Deployed CONNECT cloud-based system using the Lighthouse program to coordinate and analyze operational data, helping to decrease downtime by 1-2%.**
- **AVEVA AI Assistant provides otherwise unseen insights to data scientists.**
- **Successful Lighthouse engagement covered four assets over two plants. At enterprise scale, the savings would be “astronomical” – tens of \$MM USD annually.**



How did we get there?

Journey to a successful execution

Identifying

Identifying the most critical assets where value can be captured

- Injection Molding – Cycle time loss
- Blow Molding – Micro stops < 3minutes

Partnering

Partnering with Q-mation and AVEVA with:

- Creating standard MES objects and graphics
- Licensing agreement
- MES and System Platform Training

Building

Building a training program for Automation

- Identifying talent on each facility
- Leveraging training and support agreements

Questions?



Please wait for the microphone.

State your name and company.

Please remember to...

Navigate to this session in the
mobile app to complete the survey.

Thank you!

