Amcor: A strategic journey to increasing line performance

Carlos Paredes - Automation Manager, Amcor
Carlos Paredes

Automation Manager
Amcor Rigid Packaging
Carlos.paredes@amcor.com

• MSc Electrical & Electronic Engineer and 15+ years of experience in driving Digital Transformation for various manufacturing sectors.
• Adept in driving Operational Excellence using Automation and digital technologies
• Before joining Amcor in 2016, specialized in Industrial Automation systems, gaining extensive experience in SCADA/MES and PLC programming on different platforms.
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
From traditional HMI to Operations Control

Challenge: DATA SILOS AND LACK OF VISUALIZATION STANDARDS

- **OEE**: 77%
  - A: 78%
  - P: 99%
  - Q: 100%

- **Husky 04**
  - 24.2g
  - Target: 240,167
  - Act: 214,655
  - Shift Eff: 89%
  - Shift DT: 7min
  - CT: Set 12.90 sec
  - Act 14.57 sec
  - Cycle Breaks: 3
  - Active: 128
  - Cavity: 128
  - Auto Cycling

- **Sidel 02**
  - 12oz 4-Bolt
  - Target: 343,618
  - Act: 266,658
  - Shift Eff: 72%
  - Shift DT: 112.8 mm
  - Rate: 60,968 b/h
  - Running
AMCOR IN 2021

LEGACY HMI/SCADA

• TRADITIONAL SCADA SYSTEM
• NON-STANDARD GRAPHICS
• DATA INCONSISTENCIES
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
# How did we get there?

## Journey to a successful execution

<table>
<thead>
<tr>
<th>Identifying</th>
<th>Identifying the most critical assets where value can be captured</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Injection Molding – Cycle time loss</td>
</tr>
<tr>
<td></td>
<td>• Blow Molding – Micro stops &lt; 3minutes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partnering</th>
<th>Partnering with Q-mation and AVEVA with:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Creating standard MES objects and graphics</td>
</tr>
<tr>
<td></td>
<td>• Licensing agreement</td>
</tr>
<tr>
<td></td>
<td>• MES and System Platform Training</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Building</th>
<th>Building a training program for Automation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Identifying talent on each facility</td>
</tr>
<tr>
<td></td>
<td>• Leveraging training and support agreements</td>
</tr>
</tbody>
</table>
Smart Manufacturing is about “Real-Time OEE”

Benefits

• Real-time visibility of equipment utilization, performance and quality.

• Downtime Management
  • Unified Interface to manage scheduled and unscheduled downtime
  • Capturing every stop from the machine

• Order Management
  • Fully integrated with ERP
  • Accurate nameplate and production Information

• Automatic Reporting
  • Top 5 downtime in pareto charts
Amcor Digital Journey

Built a sustainable program for local support and growth, leveraging vendors and partners

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
A guide to a successful project

Conclusion

• Business value must lead what technology you apply
• Build a talent foundation around your program
• New business models do not happen in the ERP layer first
• Standardize before you digitize
• Leverage your vendors and partners
• IT is your “best” friend
“Digital Transformation is not a destination, but a journey”

Sachin Lulla
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!
This presentation may include predictions, estimates, intentions, beliefs and other statements that are or may be construed as being forward-looking. While these forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could result in actual outcomes differing materially from those projected in these statements. No statement contained herein constitutes a commitment by AVEVA to perform any particular action or to deliver any particular product or product features. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect our opinions only as of the date of this presentation.

The Company shall not be obliged to disclose any revision to these forward-looking statements to reflect events or circumstances occurring after the date on which they are made or to reflect the occurrence of future events.
ABOUT AVEVA

AVEVA is a world leader in industrial software, providing engineering and operational solutions across multiple industries, including oil and gas, chemical, pharmaceutical, power and utilities, marine, renewables, and food and beverage. Our agnostic and open architecture helps organizations design, build, operate, maintain and optimize the complete lifecycle of complex industrial assets, from production plants and offshore platforms to manufactured consumer goods.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life’s essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world’s most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. The company is headquartered in Cambridge, UK.

Learn more at www.aveva.com

© 2023 AVEVA Group plc and its subsidiaries. All rights reserved.