Digital transformation – a business imperative

**The challenges**

<table>
<thead>
<tr>
<th>Improving agility and consistency in manufacturing</th>
<th>Safeguarding product quality, safety and compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimizing waste and losses</td>
<td>Improving productivity and efficiency</td>
</tr>
</tbody>
</table>

**The initiatives**

<table>
<thead>
<tr>
<th>Transform the way you execute work across a team</th>
<th>Enable natural collaboration between roles</th>
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<tbody>
<tr>
<td>Safety/regulation compliance</td>
<td>End-to-end traceability</td>
</tr>
<tr>
<td>Measure and improve operations performance</td>
<td>Continuously improve efficiency and sustainability</td>
</tr>
<tr>
<td>Demand-driven</td>
<td>Resilient</td>
</tr>
</tbody>
</table>

AVEVA Operations and Execution portfolio – empowering customers to digitally transform their manufacturing operations to become more agile, optimized, sustainable and customer-focused.
Review of the Manufacturing Execution System (MES) Portfolio

<table>
<thead>
<tr>
<th>Batch/recipe mgt. apps</th>
<th>MES/MOM apps</th>
<th>“Companion” apps</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVEVA Recipe Management</td>
<td>AVEVA MES</td>
<td>AVEVA Work Tasks</td>
</tr>
<tr>
<td>AVEVA Batch Management</td>
<td>AVEVA Production Management</td>
<td>AVEVA Enterprise Integration</td>
</tr>
<tr>
<td></td>
<td>AVEVA Insight</td>
<td>planet together Planning and Scheduling</td>
</tr>
</tbody>
</table>
Review of the MES Portfolio

**AVEVA Batch and Recipe Management (On-Premise)**
Effectively manages flexible batch processes in process and hybrid industries.

**AVEVA MES (On-Premise)**
- **Operations mgt.** - Improves production execution consistency, visibility and agility in hybrid industries.
- **Performance mgt.** - Increases plant asset utilization and performance by providing accurate information on equipment downtime and efficiency.
- **Quality mgt.** - Improves product quality and consistency through real-time statistical process control and analysis.

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Jeff Barkehanai
Dirk Kozian
Review of the MES Portfolio

**AVEVA Insight - Equipment Efficiency (Cloud/SaaS Offering)**
Increases plant asset utilization and operational performance by providing accurate information on equipment downtime and efficiency.

**AVEVA Model-Driven MES Application Content**
Pre-assembled, extensible MES application content (business rules and UIs) that accelerates time to value for MES deployments.

**AVEVA Production Management (On-Premise)**
Optimizes the mining supply chain, maximizes the utilization of all operating assets.
Review of the MES Portfolio

**AVEVA Work Tasks (On-Premise & Cloud/SaaS)**
Orchestrates plant-level business processes across disparate domains (people, processes and systems).

**AVEVA Enterprise Integration (On-Premise)**
Facilitates integration of plant floor applications to enterprise solutions.

**Production Planning and Scheduling (On-Premise)**
Improves production schedule performance, manages critical constraints, and eliminates uncertainties to reduce risk.
Portfolio strategy and timelines
Aligning with the broader AVEVA strategy

AVEVA Operations and Execution Portfolio aligns with the broader AVEVA strategy of providing a single “industrial information management” and “visualization” service that spans from engineering to operations.
Evolving to a hybrid cloud architecture

Native cloud capabilities
Light-weight MES/MOM capabilities, fast time to value

Value-add cloud apps and services
These cloud-based apps and services extend our on-premise (edge) and cloud-based capabilities with:
- **Data hub** - enterprise data historization and sharing
- **Visualization service** - enterprise visualization and dashboarding
- **Advanced analytics/AI** - predictive and prescriptive analytics

“Connected” applications
- Consume value-add cloud services from AVEVA™ Connect
- Content and config managed centrally from AVEVA Connect
Evolving to a hybrid cloud architecture

Enterprise data management

AVEVA™ Data Hub provides a cloud-based industrial information management service that spans engineering and operations domains to deliver advanced data collection, aggregation, storage, contextualization and data sharing capabilities.
Evolving to a hybrid cloud architecture

Enterprise visualization

AVEVA Enterprise Visualization provides a cloud-based visualization service that spans engineering and operations domains to deliver advanced visualization and analysis/analytics capabilities.
Evolving to a hybrid cloud architecture

Predictive and prescriptive analytics

AVEVA Advanced Analytics enables continuous production optimization through advanced analytics and machine learning (ML) capabilities.

Out-of-the-box anomaly models for hybrid manufacturing processes - batch, continuous and discrete.
Evolving to a hybrid cloud architecture

Native MES/MOM capabilities

Provide multi-tenant native cloud capabilities in support of production operations, inventory operations and quality operations for continuous and hybrid production environments.
# CY24 - Native cloud & “connected” MES releases

<table>
<thead>
<tr>
<th>Cloud Capability</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
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</thead>
<tbody>
<tr>
<td>Enterprise data mgt. and visualization capabilities</td>
<td>MES 2020 – cloud integration</td>
<td>MES 2023 – cloud integration</td>
<td>MES 2023 R2</td>
<td>Production mgt. 2024</td>
</tr>
<tr>
<td>Predictive and prescriptive analytic capabilities</td>
<td></td>
<td></td>
<td>Will deliver out-of-the-box analytic models for these commercial MES releases</td>
<td>MES 2020, MES 2023, MES 2023 R2</td>
</tr>
<tr>
<td>Native cloud MES/MOM capabilities</td>
<td>Enhanced existing native MES/MOM capabilities (OEE) [incremental]</td>
<td>NEW Native MES/MOM capabilities [incremental]</td>
<td></td>
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</tr>
</tbody>
</table>

- "Connected" MES add-ons
- "Connected" MES releases
- Native cloud releases

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## CY24 - On-premise MES app and content releases

<table>
<thead>
<tr>
<th>Application</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
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</thead>
<tbody>
<tr>
<td>Model-driven MES</td>
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<td>7.0</td>
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<tr>
<td>Work tasks</td>
<td></td>
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<td>2023 R2</td>
<td></td>
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<tr>
<td>Batch mgt.</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Recipe mgt.</td>
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<tr>
<td>Enterprise integration</td>
<td></td>
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<td></td>
<td>2023 R2</td>
</tr>
</tbody>
</table>

*On-premise commercial releases*
Key takeaways

• Delivering **new and improved MES/MOM capabilities** that help our customers **accelerate their digital transformation initiatives**

• Improving **time to value** and **lowering total cost of ownership (TCO)** through our **hybrid cloud approach**

• Enabling customers to **obtain more advanced insights** from their industrial data - **optimized with AI** to drive sustainable growth
Tom Troy

Leader, Operations and Execution Portfolio

• AVEVA
• tom.troy@aveva.com
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State your name and company.

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

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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.

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