Asset performance management (APM)

Roadmap & vision

Ryan Bradley
Topics

• Introduction to AVEVA APM portfolio
• CY23/24 release planning
• Market trends & challenges
• APM cloud platform vision
## APM portfolio summary

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Analytics</th>
<th>Execution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asset strategy optimization</strong></td>
<td><strong>Guided analytics</strong>&lt;br&gt;(partnership)</td>
<td><strong>Mobile operator</strong>&lt;br&gt;Enables manufacturers and processors to achieve reliable, safe and profitable operations through consistent execution of best practices by the field workforce</td>
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<tr>
<td>Enables a comprehensive view into current asset performance to identify improvement opportunities and perform analyses and simulation to determine the best maintenance strategies and visualize deployment effects</td>
<td>Provides a simple introduction to model-based insights on asset performance issues. Designed to require little configuration or modeling knowledge to use it. It is ideal for customers looking to gain an understanding of predictive operations.</td>
<td></td>
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<tr>
<td><strong>Asset library</strong></td>
<td><strong>Advanced analytics</strong>&lt;br&gt;Enable our industrial data platform customers to increase the value of storing and using their data on AVEVA’s platform. Advanced models can provide multiple feedback properties to support more sophisticated actions</td>
<td><strong>Operational safety management</strong>&lt;br&gt;Enables asset operators to mitigate operational risk with increased productivity and exceptional visibility of tasks</td>
</tr>
<tr>
<td>Allows customers to curate, standardize, and utilize asset content for rapid implementation of consuming applications, with management of change version control, content analytics, and content customization</td>
<td><strong>Predictive analytics</strong>&lt;br&gt;Enables industrial companies to avoid costly unplanned downtime through AI-based predictive analytics at scale. Helps industrial users identify asset anomalies—weeks or months before failure</td>
<td><strong>Limble CMMS</strong>&lt;br&gt;(partnership)&lt;br&gt;Computerized maintenance manager software designed by maintenance workers for maintenance workers. Provides critical task and asset information to the right worker at the right time</td>
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<td></td>
<td><strong>BI Gateway</strong>&lt;br&gt;Synthesizes data from across the plant, revealing relationships that would be all but invisible otherwise. It models big data into manageable chunks, so that industrial teams can track performance against the metrics that matter most—in time to make a difference</td>
<td><strong>Ultimo EAM</strong>&lt;br&gt;(partnership)&lt;br&gt;Enterprise asset management software for medium-sized to enterprise organizations. Gain better control over your assets, realize higher uptime, control costs and create a safe and healthy working environment</td>
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**CY23/24 release planning**

### CY23 H2

**Strategy**
- Asset Strategy Optimization 9.2
  - Architecture & sustainability

**Analytics**
- BI Gateway NextGen (microservices)

**Execution**
- EAM 6.4.1
  - Technical Updates for OS, SQL, .NET Framework
- Operational Safety Management 11.3
  - Customer enhancements

### CY24 H1 releases

**Strategy**
- AVEVA Asset Library

**Analytics**
- AVEVA™ Predictive Analytics 2023
  - Replacing eDNA with PI for APA Archive
- AVEVA™ BI Gateway (continuous releases)
  - REST API adapter & control flow enhancements

**Execution**
- AVEVA™ Operational Safety Management Mobile 2.1
  - Mobile enhancement & device management deployments

### CY24 H2 releases

**Strategy**
- AVEVA Asset Library

**Analytics**
- AVEVA BI Gateway (continuous releases)
  - NextGen (UI/UX)
  - AVEVA™ Data Hub adapter

**Execution**
- AVEVA Mobile Operator 2024
- AVEVA Cloud Mobile Operator (Internal)
  - Simple procedure designer / cloud sync service
Optimize your assets / meet your objectives

A journey in operational reliability

Failure patterns

- Age-related failure
- Random failure

82% Predictive technology for early warnings
18% Reactive and preventive programs

It’s a journey

- Reactive Maintenance
- Preventive Maintenance
- Condition-Based Maintenance
- Predictive + Prescriptive Maintenance
- Risk-Based Maintenance
- Strategic, Proactive, Optimized

AVEVA™ Asset Strategy Optimization + AVEVA™ Mobile Operator
AVEVA™ Predictive Analytics
AVEVA™ PI System™
EAM/CMMS
Run to failure

ARC STUDIES SHOW ONLY 18% OF ASSET FAILURE IS AGE-RELATED. BASED ON THESE DATA, PREVENTIVE MAINTENANCE PROVIDES A BENEFIT FOR JUST 18 PERCENT OF ASSETS, AND MONITORING FOR PREDICTIVE MAINTENANCE IS A RECOMMENDED OPTION FOR THE REST. WWW.ARCWEB.COM/LISTS/POSTS/POST.ASPX?ID=260
The **challenges** we work to solve

<table>
<thead>
<tr>
<th>Business trends</th>
<th>New imperatives</th>
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<tbody>
<tr>
<td>Supply chain and service disruptions</td>
<td>Capital projects and supply-chain carbon efficiency and resilience</td>
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<tr>
<td>Commodity price fluctuations</td>
<td>Operational efficiency, optimized energy use and emissions minimization</td>
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<tr>
<td>Labor shortages and remote work</td>
<td>More efficient autonomous operations; connected and empowered workforce</td>
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<tr>
<td>Consumer desire for green alternatives</td>
<td>New materials, processes and facilities for circular economy</td>
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<tr>
<td>ESG regulations</td>
<td>Improve sustainability, reduce carbon intensity and emissions</td>
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Transition to cloud

AVEVA™ Connect cloud platform

- Future state
- Native application
- Shared user experience / component with AVEVA Connect platform
- Under consideration

Guided Analytics
Advanced Analytics
BI Gateway
Asset Library
Asset Strategy Optimization
Operational Safety Management
Predictive Analytics
Mobile Operator
Enterprise Asset Management

Complimentary Mobile Applications
Product Retirement

Open & agnostic: 3rd party applications (ex: CMMS / EAM / EHS)

AVEVA™ Connect cloud platform
AVEVA Connect cloud platform

- Data sources
- Data aggregation / modeling
- Enrichment services
- Visualization & user engagement
Transform the way your teams work

From siloed functional islands

Engineering
Operations
Maintenance
C-Suite
Transform the way your teams work

To enterprise cloud collaboration

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APM vision & roadmap

Summary / takeaways

• Investing over the next 3+ years to transition the APM suite of solutions to a modern, hybrid and/or native cloud architecture
• Maintain value for current customer base as solutions evolve from on-prem to cloud
• Publish APM data into the AVEVA industrial cloud platform
• Apply central, templatized deployment for APM solutions through asset libraries
• Provide robust, configurable reporting and intelligence capabilities based on AVEVA visualization services
• Expand the context of APM data combined with process data, asset information and engineering data
<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Track</th>
<th>Presenter</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>3:50PM</td>
<td>Ecosystem</td>
<td>AVEVA</td>
<td>Get more out of your data with Advanced Analytics</td>
</tr>
<tr>
<td>2</td>
<td>8:00AM</td>
<td>AdvApps</td>
<td>Petronas</td>
<td>Predictive Rotating Equipment Analytics (PROTEAN) X AVEVA Predictive Analytics</td>
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<tr>
<td>2</td>
<td>8:00AM</td>
<td>Process</td>
<td>International Paper</td>
<td>Our equipment health journey - connecting the PI System to AVEVA Predictive Analytics</td>
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<td>2</td>
<td>8:40AM</td>
<td>AdvApps</td>
<td>HF Sinclair</td>
<td>Simplifying safety equipment inspection and maintenance with AVEVA Mobile Operator</td>
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<tr>
<td>2</td>
<td>11:40AM</td>
<td>AdvApps</td>
<td>Total Energies</td>
<td>Predictive Analytics from O&amp;G to Renewables</td>
</tr>
<tr>
<td>2</td>
<td>2:10PM</td>
<td>Power</td>
<td>AVEVA</td>
<td>AVEVA Mobile Operator for Power Utilities and PI Manual Logger Users</td>
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<td>2</td>
<td>4:30PM</td>
<td>AI</td>
<td>Asarco</td>
<td>Leveraging AVEVA PI Server data for Predictive Analytics</td>
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<tr>
<td>3</td>
<td>2:50PM</td>
<td>AI</td>
<td>Suez</td>
<td>AVEVA Predictive Analytics in the Energy from Waste Industry</td>
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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!
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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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