Using the comprehensive Asset Performance Management (APM) portfolio offered by AVEVA, organisations can monitor their assets to identify, diagnose and prioritise impending equipment problems — continuously and in real time. This enables companies to reduce unscheduled downtime, prevent equipment failures, reduce maintenance costs, increase asset utilisation, extend equipment life and identify underperforming assets.
Overview

Changing market conditions and shifting technology landscapes puts pressure on industrial businesses. Technology triggers like the Industrial Internet of Things, big data analytics, mobility and workforce collaboration represent new opportunities for significant reliability, efficiency and safety improvements. In addition, an aging infrastructure and workforce is driving the need for asset renewal prioritisation and knowledge capture.

To remain competitive in today’s industrial markets, businesses are seeking an operations-centric view where proactive and predictive maintenance opportunities empower front-line personnel to act before costly failures occur. With Asset Performance Management (APM) solutions, personnel can exceed safety, reliability, and performance goals through data collection and analysis coupled with actions and optimisation for proactive and optimised maintenance execution. As a result, plant personnel are empowered to act before equipment failure occurs, maintenance and operations costs are reduced, and the overall maintenance and operations strategy supports key business objectives.

Maintenance Practices

APM solutions integrate all the various elements of a comprehensive maintenance program, making valuable information accessible and delivering context for smarter decisions. It requires a broad solution portfolio to develop a strategy that supports business objectives, collects, analyses and contextualises data across asset and operations lifecycles, and provides the framework and toolsets for optimised maintenance execution. All to support the continuous improvement processes as outlined in the Maintenance Maturity Pyramid.

The higher you move up the Maintenance Maturity Pyramid, the more proactive the strategy becomes, requiring more advanced warning of equipment problems. This enables maintenance teams to better plan resources, order materials, and minimise unplanned downtime.
Maximising Economic Return on all Assets

Shifting from reactive maintenance to proactive and predictive maintenance delivers the greatest economic return for all asset types. This is made possible by integrating various technologies and devices, and applying advanced analytics to determine where improvements should be made.

Benefits span all functional areas from strategic, to operational, to financial and safety. Operational benefits can be achieved through the early identification of equipment problems to reduce unplanned downtime. Engineers can spend less time sifting through raw data and spend more time improving the reliability and performance of assets. There are financial and safety benefits to be achieved through increased asset utilisation and reduced downtime, as well as the opportunity to identify equipment problems before a major failure causes significant or catastrophic damage.

In addition to improving reliability and availability, companies can leverage asset performance management solutions to reduce purchasing costs, improve maintenance scheduling and defer capital expenditures. Resources and planning can be optimised by improving communication across disciplines. And workforce enablement, in particular mobile workforce enablement, allows workers in the field to collect data remotely and implement condition based maintenance tactics.

Actual Savings Achieved with APM

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Savings / Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% Improved labor utilisation</td>
<td>$500K</td>
</tr>
<tr>
<td>$50K Savings from early warning of motor coupling failure</td>
<td></td>
</tr>
<tr>
<td>$4M+ Savings due to early warning of turbine blade failure</td>
<td></td>
</tr>
<tr>
<td>20% Increase in asset availability</td>
<td></td>
</tr>
<tr>
<td>25% Increase in planned work</td>
<td>$50K</td>
</tr>
<tr>
<td>30% Improvement in asset utilisation</td>
<td></td>
</tr>
<tr>
<td>30% Reduction in maintenance costs</td>
<td></td>
</tr>
<tr>
<td>30%+ Improvement in regulatory compliance</td>
<td></td>
</tr>
<tr>
<td>25% Reduction in unplanned downtime</td>
<td></td>
</tr>
</tbody>
</table>

30% Reduction in unplanned downtime

Savings due to early warning of turbine blade failure

Increase in asset availability

Savings from early warning of motor coupling failure

Savings from early warning of performance issues

Increase in planned work

25% Improvement in asset utilisation

25% Increase in planned work

30% Reduction in maintenance costs

30%+ Improvement in regulatory compliance

25% Reduction in unplanned downtime

$500K

$4M+
AVEVA APM Portfolio

AVEVA offers an end-to-end solution that manages the collection of data from any number of sources, incorporates advanced analytics technology that combines machine learning with analytic rules and provides a complete asset management platform to manage asset lifecycle and maintenance processes. It also includes a variety of interactive visualisation capabilities for presenting this information in intuitive ways on mobile devices and platforms.

No matter what level of maturity your organisation has achieved on the Maintenance Maturity Pyramid, AVEVA products can move you one step closer to asset performance excellence. The comprehensive offering is equipment and vendor agnostic for seamless integration with existing equipment and technologies, enabling you to maximise the value of previous investments through proactive asset health and performance monitoring.

**AVEVA Advantages**

- We offer the only comprehensive APM solution – from data sources, to advanced analytics, to work management, to the boardroom
- Implementation methodology is proven to reduce customer risk and improve satisfaction
- Predictive asset analytics provides early warning of impending equipment failures
- Unparalleled ease of use and access to contextual information for decision support on any device

**Asset Performance Management**

<table>
<thead>
<tr>
<th>Strategise</th>
<th>Analyse</th>
<th>Maintain</th>
</tr>
</thead>
<tbody>
<tr>
<td>APM Assessment</td>
<td>Business Intelligence</td>
<td>Operator Rounds/ Digitised Work</td>
</tr>
<tr>
<td>Risk-based Maintenance</td>
<td>Predictive/Prescriptive</td>
<td>Industrial Workflow</td>
</tr>
<tr>
<td>Reliability Centered Maintenance (RCM)</td>
<td>Optimisation</td>
<td>Enterprise Asset Management</td>
</tr>
<tr>
<td><strong>Asset Information Management</strong></td>
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</table>

**Asset Performance Strategy**

Developing an APM strategy enables companies to balance asset utilisation, cost control, and regulatory compliance, and shows how people, processes, and technology can drive optimal performance. We offer comprehensive APM Assessments, Consulting Services and Risk-based Maintenance to help our customers optimise their APM strategies.
PORTFOLIO OVERVIEW

ASSET PERFORMANCE MANAGEMENT

Asset Information Management

Bridge the IT/OT information gap, improve data access throughout the enterprise, and enable actionable insights with enterprise data management and reporting solutions available on premise or in the cloud.

Asset Analysis

Maximising return on capital investments, including ensuring assets are running as safely and reliably as possible, is key to improving profitability. Proactive and predictive maintenance empowers personnel to act before costly failures or downtime occurs. Our comprehensive analytics solutions enable customers to proactively plan maintenance and reduce costs.

Asset Maintenance

World class Asset Management is the foundation of an APM strategy. We offer advanced solutions leveraging cloud, mobility, and augmented reality to transform and empower the mobile workforce, increase collaboration, provide comprehensive asset and materials management, and efficient maintenance execution to optimise the availability of all assets.

Further Information

For more information about AVEVA’s APM portfolio, please visit: aveva.com/asset-performance