IBM Maximo APM – Predictive Maintenance Insights

Identify and manage asset reliability risks that could adversely affect plant or business operations

Highlights

- Reduces unplanned equipment downtime
- Reduces maintenance costs
- Improves asset utilization
- Extends asset life
- Increases production output

The world is more connected than ever before. Using Internet of Things (IoT) sensors and other technologies, operators in asset intensive industries are collecting large amounts of data from their equipment. Yet many operators struggle to draw insights from this data. They struggle to understand data patterns and the causal relationships that can help them minimize unplanned downtime, maximize equipment lifespan, and optimize employee productivity. It's as if their equipment is speaking on mute. Their equipment has so much to say but they simply can't hear it.

Based on manufacturer guidance you may have a rough estimate about how long your assets and equipment will last. How confident are you in this estimate? You know there are many factors that contribute to your equipment condition from age, to operating environment, to past maintenance schedules, and even quality of repair. The problem? The lifecycle of your equipment can vary dramatically based on these factors yet you won't know how much until it's too late, and the equipment is down and impacting key performance indicators (see Figure 1).

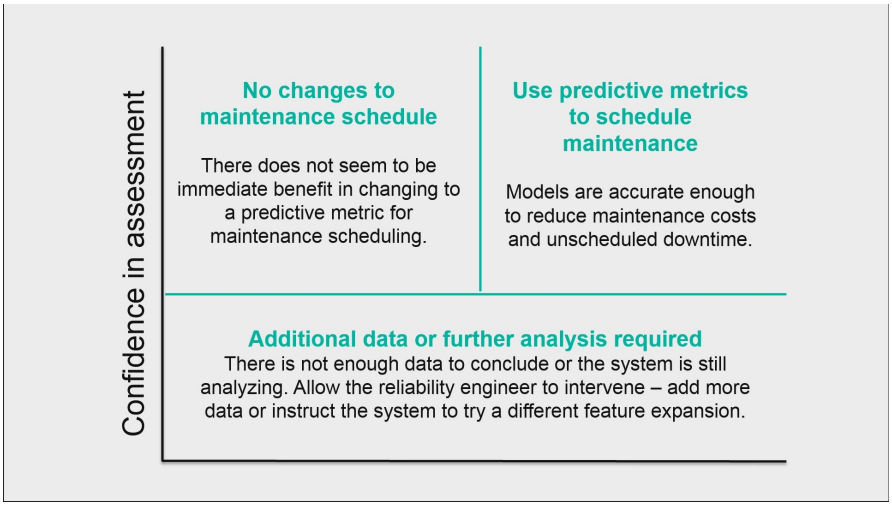

Figure 1: Machine learning analyzes operational data to determine confidence in assessment

IBM Maximo APM - Predictive Maintenance Insights is part of IBM's Asset Performance Management (APM) portfolio. The solution focuses on the needs of maintenance managers and reliability engineers to identify risks and optimize asset reliability. It looks for patterns in asset data, how the asset is being used, and the environment in which it is operating.

Make data-driven decisions
Pulls data from varied sources such as IoT sensors, operational technology (OT) systems, and enterprise asset management (EAM) and/or enterprise resource planning (ERP) systems. Data analyzed to produce insights that help evaluate risk over time and prioritize work orders.

Predictive Maintenance Insights correlates this information with any known failures in the equipment by leveraging Watson Machine Learning to make industrial manufacturing, production processes, and products more efficient and dependable. It helps to prescribe actions based on predictive scoring, identifies factors that positively and negatively influence asset health, and delivers a detailed comparison of historical factors affecting the asset performance.

Seamless integration with Maximo APM suite
Take advantage of other Maximo APM modules such as Asset Health Insights for insights and actions. Improve condition monitoring by incorporating predictive maintenance outputs.

This solution enables reliability, operations, production, and maintenance personnel in asset-intensive industries to:

- Meet key performance objectives by using advanced analytics to move from calendar-based to predictive maintenance
- Identify which factors and practices are most influential in affecting asset performance

Develop custom models and simulations
Customers can use IBM Watson Studio or open source tools to develop new statistical models or simulations. Customized models can be easily integrated back into the solution where they can be scored and used within the Maximo APM suite of offerings for insights and actions.

- Optimize maintenance schedules by quickly utilizing asset performance data to better plan and prioritize
- Reduce capital expenditures, and extend asset life, by balancing maintenance practices to avoid over- or under-maintained assets
- Get started quickly with pre-built templates

Save time with pre-built templates
Save months of development work with out-of-the-box templates and associated visualizations. Model templates include days to failure, predicted failure probability, factors that contribute to a predicted failure, anomaly detection, and a failure probability curve.

Why IBM?

Current IBM Maximo users can gain additional value from their investment with this solution. The addition of Maximo data can help to develop more accurate models of asset performance. This solution also aggregates data around maintenance activities to evaluate current strategies. Unlike other predictive maintenance products that simply provide an alert, IBM's solution offers recommendations to improve for individual assets or asset classes.

To accommodate the widest variety of data sources, IBM Maximo APM – Predictive Maintenance Insights also provides a data ingestion API for connecting to external data sources, thereby enabling access to relevant data contained in a wide range of systems of record.

Finally, IBM's Design Thinking has been applied to provide a user experience that incorporates the concept of "cards", which represent individual assets. This innovative approach to reporting allows reliability engineers to easily access information relevant to their specific responsibilities and utilize these insights to help continually improve maintenance schedules.

Next steps

→ IBM and Kone: Watson IoT gives life to innovation in smart buildings

→ Visit the IBM Marketplace

→ Take the APM readiness assessment

For more information

To learn more about IBM Maximo APM – Predictive Maintenance Insights, please contact your IBM representative or IBM Business Partner, or visit the following website(s): ibm.co/predictivemaintenance