

# Watson IoT™

IBM® Maximo® APM - Asset Health Insights

## A true view of asset health, powered by cognitive analytics and IoT data

Understand the status of critical business assets, eliminate downtime and reduce maintenance cost with the power of Maximo and the Watson IoT Platform.

Most of the time, assets fail randomly. Very few failures follow an age-degradation pattern and many are not prevented with traditional time-based preventive maintenance strategies. The best way to maintain assets is based on their relative health. Usage data or gauge values can provide part of the picture, but insight on past maintenance occurrences, weather incidents, the age of the asset and historical investment enhance the “sensed conditions” with real insight.

### Solution

Watson IoT helps businesses make smarter decisions about asset management by augmenting IoT data with powerful cognitive insights. Existing IBM® Maximo® customers can now use IBM Maximo APM - Asset Health Insights to join condition assessment readings from assets to historic information from work and equipment records and other influences such as weather incidents. The resulting dashboard display of health scoring provides evidence on which to base operational decisions. New customers join a peer group of innovative businesses leveraging industry-leading asset management software combined with powerful this capability analytics.

This offering represents a new way of maintaining equipment—one based not only on current condition-based readings coming from the equipment, but also informed by other influences like age, maintenance history, weather incidents and subcomponents with their own historical context. These data sources are analyzed by the Watson IoT Platform which feeds results back to Maximo this offering, providing users an overall assessment and score of asset health.

### Benefits



#### Get Full Visibility into Asset Status

Real-time sensor data, alerts from SCADA systems, historical trends, maintenance and failure history combine with environmental data to give you a complete picture of asset health, so you can make smarter decisions about repairing and replacing assets.



#### Reduce Maintenance Costs

Monitoring and analyzing asset health data—both historical and real time—can help you reduce maintenance cost by up to 25%.<sup>4</sup> This lets businesses plan asset maintenance based on actual condition rather than manufacturer recommendations, reducing the waste and the costs associated with ineffective maintenance practices.



#### Avoid Unplanned Downtime

Prevent problems before they occur by alerting when conditions degrade and initiating appropriate responses to avoid failure. Instead of simply reacting to catastrophic failure, this lets businesses schedule more of their maintenance activities, reducing overtime costs and the need for expensive spare parts on short notice.



#### Optimize Maintenance Schedules

Performing maintenance while the asset is working can reduce disruptions to operations. Optimizing your preventive maintenance workload can reduce total preventive maintenance hours by 50% to 70%.<sup>5</sup>

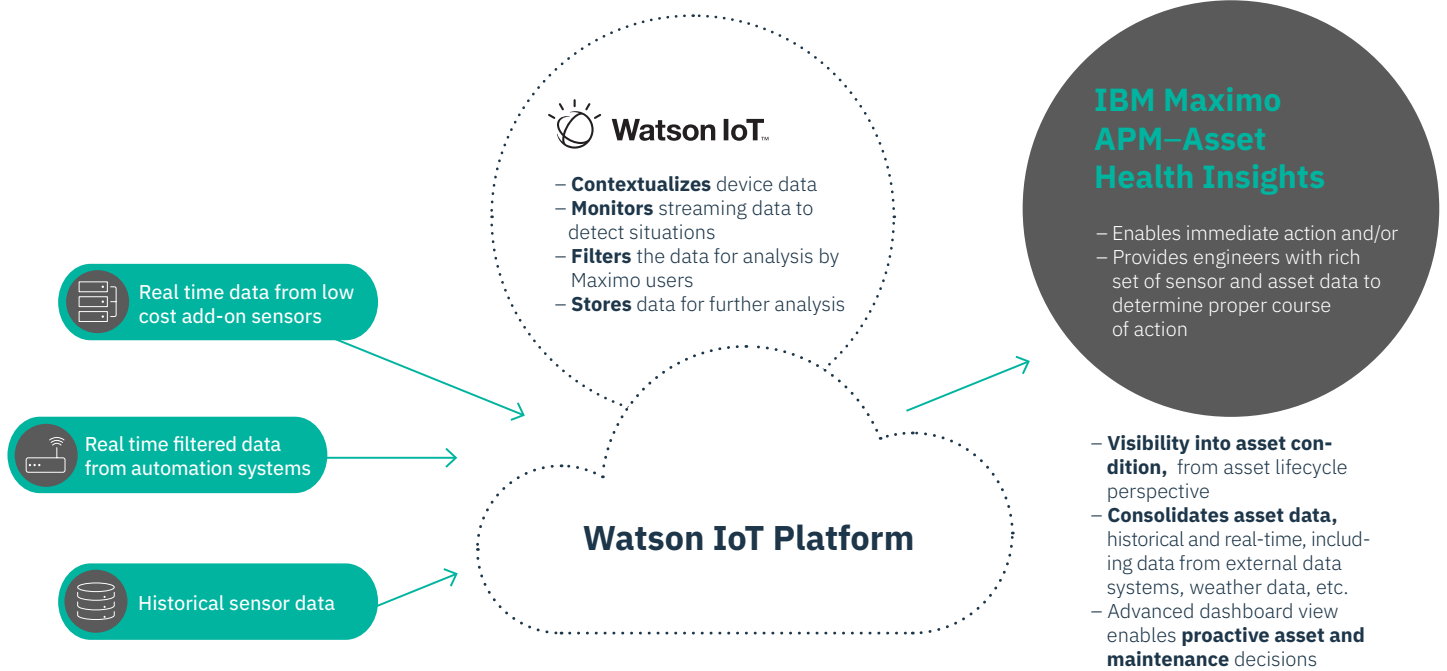


### Challenges

Today, as much as half of your preventive maintenance investments have zero effect on uptime.<sup>1</sup> Studies indicate that time-based preventive maintenance practices do little to prevent failures:

- **30%** of preventive maintenance activities are carried out too frequently<sup>2</sup>
- **40%** of preventive maintenance costs are spent on assets with negligible effect on uptime<sup>3</sup>
- **45%** of all maintenance efforts are ineffective<sup>3</sup>

# Maximo and the Watson IoT Platform delivering value together



As an extension to Maximo and with integration to the Watson IoT Platform, IBM Maximo APM - Asset Health Insights lets businesses capture knowledge about how asset health is assessed and then use these insights to perform maintenance only when needed.

## How it Works

Streaming data from sensors is collected and sorted by its value to the operation. High-value data is sent to the platform making it possible for the operating algorithms to consume the new value and recalculate the dynamic meters representing how the machine is working. These meters are continually compared—in real time—to the optimal performance meters defined by your organization based on historical readings.

The dynamic, streaming data and the performance signatures derived from it are combined with static information coming from Maximo about each of your assets including age, preventive maintenance history, weather events and more. Once Watson IoT Platform has analyzed these myriad data sources, you'll see an overall assessment and score of asset health in your work center—letting you take context-based actions to optimize preventive maintenance.

## Learn more about the APM product suite

Watch videos, read case studies, explore demos and more at our website: [ibm.co/apm](http://ibm.co/apm)

<sup>1</sup> Maintenance & Reliability Best Practices Second Edition, published by Industrial Press, NY, page 162  
<sup>2</sup> T.A. Cook, Maintenance Efficiency Report 2013, August 2013. [http://uk.tacook.com/fileadmin/files/3\\_Studies/Studies/2013/T.A.\\_Cook\\_Maintenance\\_Efficiency\\_Report\\_2013\\_En.pdf?tracked=1](http://uk.tacook.com/fileadmin/files/3_Studies/Studies/2013/T.A._Cook_Maintenance_Efficiency_Report_2013_En.pdf?tracked=1)  
<sup>3</sup> Oniqua Enterprise Analytics, Reducing the Cost of Preventive Maintenance, <http://www.plant-maintenance.com/articles/PMCostReduction.pdf>  
<sup>4</sup> Source: Fortune <http://fortune.com/2015/07/22/mckinsey-internet-of-things/>  
<sup>5</sup> IDCON Inc., Optimize your Preventive Maintenance, <http://www.idcon.com/resource-library/articles/preventive-maintenance/528-optimize-preventive-maintenance.html>

