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Supply Chain
Management Cloud

Oracle Future-Ready Predictive Maintenance

Moving your Business from Reactive to Predictive with Oracle Maintenance Cloud and IoT Cloud.

“82% of companies have had unplanned downtime in the past 3 years costing as much as $260,000 per hour with outages lasting an average of 4 hours” Aberdeen 2018.

Poor maintenance strategies can substantially affect operational efficiencies and profitability. To be competitive, companies in asset-intensive industries need to minimize unplanned downtime and optimize maintenance costs. Industry 4.0 capabilities enable companies to monitor their assets in real time, integrate data from many different sources, analyze and translate that data into meaningful insights and automatically turn those insights into prescriptive actions to optimize maintenance. **Oracle’s Future-Ready Predictive Maintenance** harnesses Industry 4.0 capabilities, the power of the Internet of Things, big data and machine learning to increase equipment reliability and uptime while reducing overall maintenance costs. The solution uses predictive analytics to predict asset failure and reliable lifespan and generates actionable insights in real-time. These actionable insights trigger prescriptive workflows to take pre-emptive action and optimize maintenance.

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FROM PREDICTIVE TO PRESCRIPTIVE MAINTENANCE

The Oracle IoT Cloud provides predictive maintenance algorithms that apply data mining and machine learning to data streams from connected assets and historical asset and maintenance data from the Oracle Maintenance Cloud. IoT Cloud uses this data to detect anomalies, predict failures and optimize maintenance intervals. These predictive insights trigger workflows with prescriptive actions in the Oracle Maintenance Cloud; automatically creating a work order for an asset about to fail or sending a recommendation to a maintenance planner to shorten the replacement interval for an unreliable part. These prescribed actions ensure that data-driven insights don't go unnoticed or ignored, that decisions and actions align with the organization's goals, and the right people know what to do and why based on the data. Prescriptive analytics partners the greatest strengths of both machines and human experts: machine learning excels at discovering insights in data, while humans are vastly superior at understanding context, ambiguity and making judgment calls. Getting the best from both is what Future-Ready Predictive Maintenance is all about.

Moving from a reactive to a predictive and prescriptive model can significantly:

Optimize business operations by reducing unplanned downtime, improving efficiency, productivity and speed and getting the right part to the right place at the right time.

Drive profitability by reducing maintenance, labor and material cost and optimizing asset lifecycle cost.

Exceed customer expectations by ensuring better product quality, anticipate failures, introducing new business models and increasing revenue.

COLLECT DATA AND MONITOR ASSETS

Oracle's Future-Ready Predictive Maintenance solution enables enterprises to monitor assets remotely in real time and collect information from the physical world to create a digital record of the operation and supply network. The solution seamlessly transforms assets into digital twins, and intelligently monitors the assets' health, location, and utilization with IoT Asset Monitoring Cloud.

ANALYZE AND PREDICT

The IoT Cloud data lake combines connected asset data streams together with ERP data, weather data, log files and more. Analytics tools deliver rich visualizations of real-time data, advanced analytics and machine learning algorithms to predict failures before they happen and optimize maintenance planning. IoT Cloud provides machine specific KPIs and algorithms for connected assets and the smart factory. Oracle's Future-Ready Predictive Maintenance solution enables enterprises to analyze and use information to draw meaningful insights.

EXECUTE OPTIMAL MAINTENANCE

After insights are extracted from the data, applied artificial intelligence automatically turns those insights into prescriptive actions. Maintenance work orders can be automated, technicians automatically assigned to inspect potential problems, and maintenance schedules can be optimized. Optimal maintenance comes from using data to make intelligent decisions in real time and realize Industry 4.0 value.

Key Benefits

The benefits of predictive maintenance are dependent on the industry or even the specific processes that it is applied to. However,

predictive maintenance on average:

- increases equipment uptime by **20%**
- increases productivity by **25%**
- reduces breakdowns by **70%**
- lowers maintenance costs by **25%**

Source: Deloitte *"Predictive Maintenance Taking pro-active measures based on advanced data analytics to predict and avoid machine failure" 2017*

Integrated Cloud Applications & Platform Services

Oracle is committed to developing practices and products that help protect the environment

INNOVATE AND OPTIMIZE

Companies in asset intensive industries continue to refine maintenance prescriptions with predictive data and optimize processes, drive productivity, unleash innovation, and ultimately gain an edge in our increasingly competitive global economy. Oracle's modern cloud platform provides ever improving and richer data to mine through out-of-box integrations to ERP, Costing, Planning, Inventory and Procurement data.

CONNECTED MAINTENANCE WITH IOT

Connected assets allow companies to better anticipate ongoing downtime and maintenance needs and improve the operational efficiency of physical assets, uptime and productivity. They can efficiently plan and execute work with an integrated solution that connects your organization's maintenance, supply chain, and financial applications.

SMART DECISIONS WITH AI AND ML

Maintenance organizations can be transformed from fragmented and reactive to demand-driven and predictive. Automatically, they can generate recommendations on optimal maintenance schedules that maximize machine uptime using adaptive intelligence and machine learning.

OPTIMIZED OPERATIONS WITH REAL-TIME ACTIONABLE INSIGHTS

Real time data-driven decision making can optimize business process, reduce operations costs and risks and ensure workers safety. With a complete view of all types of assets and equipment, enterprises know where a particular asset is in its lifecycle and whether it is providing value to the business. Companies can empower workers with actionable data and ensure their safety with real-time insights.

SEAMLESS INTEGRATION WITH THE DIGITAL ENTERPRISE

A modern cloud platform enables out-of-box integrations to ERP, Costing, Planning, Inventory and Procurement. This digital thread in your enterprise facilitates better information exchange and automation of tasks that respond to the physical events of operations. End-to-end visibility enables improved productivity with real-time analytics.

ORACLE CLOUD SOLUTIONS

Oracle's Future-Ready Predictive Maintenance solution is part of Oracle Cloud applications, with Supply Chain and Manufacturing seamlessly integrated with ERP, EPM and CX applications to provide customers with the widest selection of choices to meet their evolving business, IT infrastructure, and development needs. To learn more visit www.oracle.com/scm.

Key Features

- Quickly establish process standards and execution requirements
- Simplify shop floor experience and enforce execution compliance
- Track any asset, anywhere, anytime, indoor or outdoor, and achieve fast ROI
- Optimize parts logistics and proper maintenance planning
- Efficiently analyze work order changes and maintenance costs that identify exceptions and root causes
- Automatically generate and execute work orders
- Real time information and advanced analytics about work orders
- Optimize allocation of jobs to increase workforce productivity and improve customer satisfaction

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