Optimize Performance with the Rapid Deployment of Condition-Based Maintenance

The Best-Run Businesses Run SAP™

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Adopt a culture grounded in condition-based maintenance

Arm your maintenance teams with intelligence and tools to increase return on assets, improve performance, and reduce maintenance costs. With the SAP® Condition-Based Maintenance rapid-deployment solution, you get streamlined implementation of a fixed-price, fixed-scope offering so you can quickly begin optimizing your maintenance strategy.

Maintenance strategies that are based on the calendar or counters are missing a dynamic component – real-time equipment health monitoring and tracking – which can lead to higher maintenance costs. But waiting until equipment has broken and experiencing unplanned downtime is worse. Catastrophic failures can have serious environmental, productivity, safety, and cost implications.

Best-in-class maintenance organizations have adopted a culture of reliability and are leveraging investments in advanced asset performance management, including condition-based maintenance. The SAP Condition-Based Maintenance rapid-deployment solution provides the foundation for such a program. It leverages existing investments in SAP software so you can use real-time equipment data to inform and automate your maintenance practices. Any employee can quickly view the current health of equipment and its maintenance history as tracked by the SAP Enterprise Asset Management solution.

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Improve equipment reliability and performance in less time

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Find the right balance to maximize asset utilization

Achieve rapid decision support based on real-time data

The SAP Condition-Based Maintenance rapid-deployment solution leverages equipment data captured by embedded sensors and external tests and collected by the SAP Manufacturing Integration and Intelligence (SAP MII) application and mobile devices running software such as the SAP Rounds Manager mobile app. It maps the data, such as pressure, temperature, and vibration readings, and applies rules to trigger alerts and maintenance notifications in the SAP Enterprise Asset Management solution. This automated process prompts equipment maintenance only when it's necessary.

The solution includes essential software functionality and content that is implemented by the SAP Consulting organization or a trusted third party within a predetermined scope, time, and cost. The content includes dashboards for a visual representation of equipment health and the rules logic.

The deployed solution also aggregates equipment data and stores it in an enterprise asset management data model. This feature supports additional analytics to reveal potential weaknesses in current maintenance programs and drive continuous improvement.

With a rapid-deployment solution, you can speed your time to value and quickly realize the benefits of optimized maintenance practices.

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Find the right balance to maximize asset utilization

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Achieve rapid decision support based on real-time data

Unnecessary repairs or last-minute responses to unexpected failures can lead to high operating costs. Condition-based maintenance helps to avoid situations like this by using information emitted during equipment operation to drive maintenance on an as-needed basis. This approach maximizes asset availability and reliability while minimizing unnecessary maintenance activities.

The SAP Condition-Based Maintenance rapid-deployment solution helps you accomplish these improvements by enabling the right balance between maintenance and performance. It links to SAP MII to automate the gathering of equipment data so you don't miss critical indicators of equipment health. Alternately, you can inspect the equipment in person and enter results manually. The solution can then apply the predefined rules to identify when operating parameters have exceeded defined thresholds and trigger maintenance notification.

These rules are highly customizable and can be set to match your operating conditions. You can also update the rules based on historical trend information to optimize your maintenance plan.

By fine-tuning the solution to your environment, you can more effectively carry out corrective maintenance action and avoid equipment failure.

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Achieve rapid decision support based on real-time data

Improve equipment reliability and performance in less time

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The SAP Condition-Based Maintenance rapid-deployment solution works like this. After installation of the software, SAP Consulting helps you define the assets in SAP MII that you want to monitor. Data is gathered automatically via integration with SAP Plant Connectivity software, or operators can manually enter the data captured via mobile device or by other means.

The deployed solution evaluates the data in real time based on the predefined rules you've established as optimal parameters. When indicators exceed the defined thresholds, the solution prompts maintenance notification in SAP Enterprise Asset Management. The software can be configured to allow for manual triggering of this workflow.

Start and end times for the maintenance notification can be established and recorded for improved accuracy of downtime data calculated by SAP Asset Analytics software or other analytics solutions.

Software dashboards display color-coded symbols to indicate various levels of equipment criticality to aid in operator decision making. In addition, equipment operators can view a multivariable chart to better understand relationships between measurement points at the time of failure, supporting root cause analysis. The solution integrates with SAP Visual Enterprise applications to provide 3-D visualization of an object being monitored.

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Reduce downtime and improve asset reliability

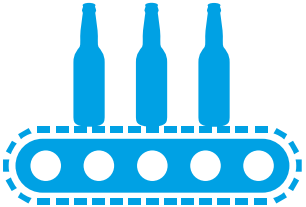
Reduce downtime and improve asset reliability

Condition-based maintenance can help you improve asset reliability, which has become an imperative in organizations across asset-intensive industries. With the SAP Condition-Based Maintenance rapid-deployment solution, you have the means to quickly improve equipment reliability and performance, rather than merely predict component failure.

The deployed solution enables you to identify the assets that are critical to operations and which parameters or boundary conditions represent optimal asset performance. This way, you can determine the health of critical equipment in real time to trigger maintenance notification only when it is necessary.

This approach helps minimize and optimize spare-parts management and reduce overall maintenance cost as a percentage of revenue. It helps optimize the schedule for routine preventive maintenance tasks so you perform maintenance and repair operatives on your own terms or during the least disruptive times. It also minimizes the number and cost of unscheduled outages to maximize asset availability and the overall performance of your operations.

By monitoring condition and operating efficiency, you can minimize mean time to repair and maximize mean time between failures.



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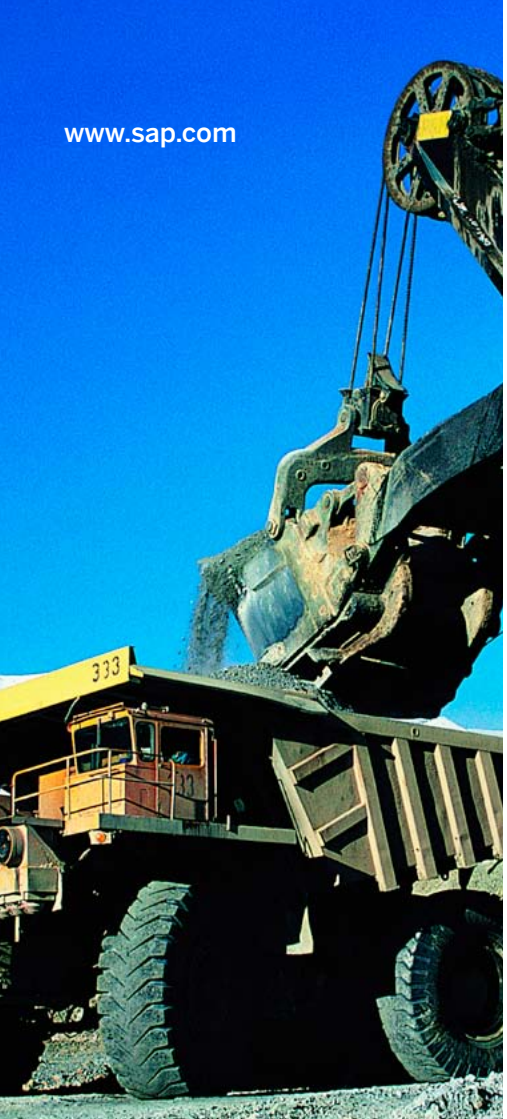

Summary

The SAP® Condition-Based Maintenance rapid-deployment solution helps you quickly realize the benefits of a condition-based maintenance strategy with essential software and content deployed by SAP Consulting within a predetermined scope, time, and cost. The solution leverages your existing investment in SAP software so you can make better use of real-time condition monitoring data to prompt maintenance activity only when needed.

Objectives

- Increase return on assets
- Maximize asset utilization
- Improve overall equipment effectiveness
- Reduce operational risk in asset management
- Reduce maintenance cost as a percentage of revenue

Solution

- Native integration between existing SAP software to monitor real-time equipment data
- Evaluation of equipment data against preconfigured rules
- Automatic triggering of maintenance workflow when in-bound data violates rules
- Data aggregation, contextualization, and storage in an enterprise asset management data model

Benefits

- Minimized risk and improved compliance by alerting you to imminent catastrophic failure
- Reduced operational cost by reducing unnecessary maintenance
- Lower total cost of ownership with a packaged solution that leverages existing software investment

Learn more

To find out more, call your SAP representative or visit visit www.sap.com/solutions/rapid-deployment/index.epx.

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