



cpmPlus OEE

Uncover the hidden potential of
your factory

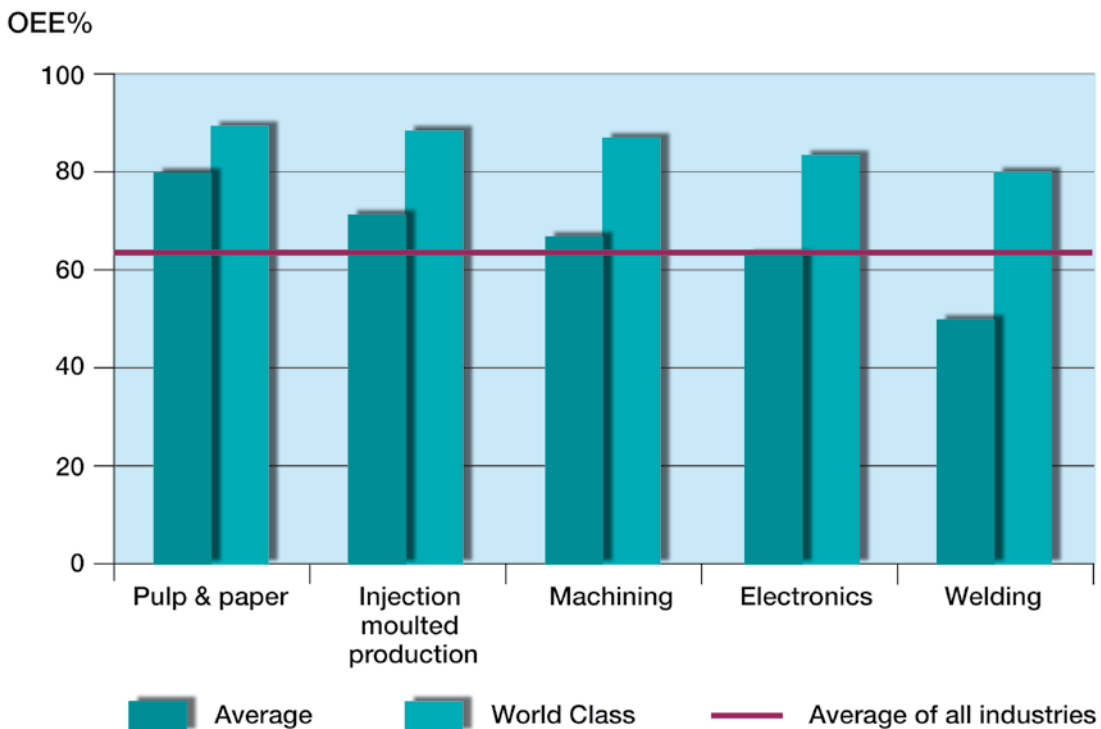
Are you hiding a production line?



cpmPlus OEE measures and helps you analyze your production efficiency, enabling you to take the actions needed to utilize your production capacity to its full potential. This has a direct, positive, impact on your Return on Net Assets (RONA) and other financial metrics. Research shows that, in most production facilities, there is at least a 10% gap between the

existing operational effectiveness (OEE) and that of a world class performer. Implementing cpmPlus OEE provides you the tools to close that gap without making capital improvements. Imagine the impact that this extra capacity can have on your bottom line!

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Decode your production efficiency

cpmPlus OEE provides the tools to help you visualize your production and production efficiency in a standard, easy to understand format for everyone at your plant, from the plant floor to the top management. The visualizations include trends, graphs, diagrams and process displays. The intuitive interface helps you understand the data behind the numbers, to better enable you to interpret the situation in more detail. The Pareto reports show the major causes of production losses. Together, these form useful tools for Root Cause Analyses (RCA), continuous improvement programs, or for improving the coordination of your manufacturing resources.

Overall Equipment Effectiveness (OEE) is an industry standard, versatile measurement for production efficiency. It suits any industry or process. OEE is the result of three factors, Availability, Performance and Quality, which describe the six big losses.

Availability (A) measures the ratio between actual and planned production time. Lost time, which typically falls into the major loss categories of equipment failure and time lost due to setup and adjustments, can be divided into groups and individual causes. Availability is visualized by means of chronograms and Pareto reports, the latter showing the distribution of the causes.

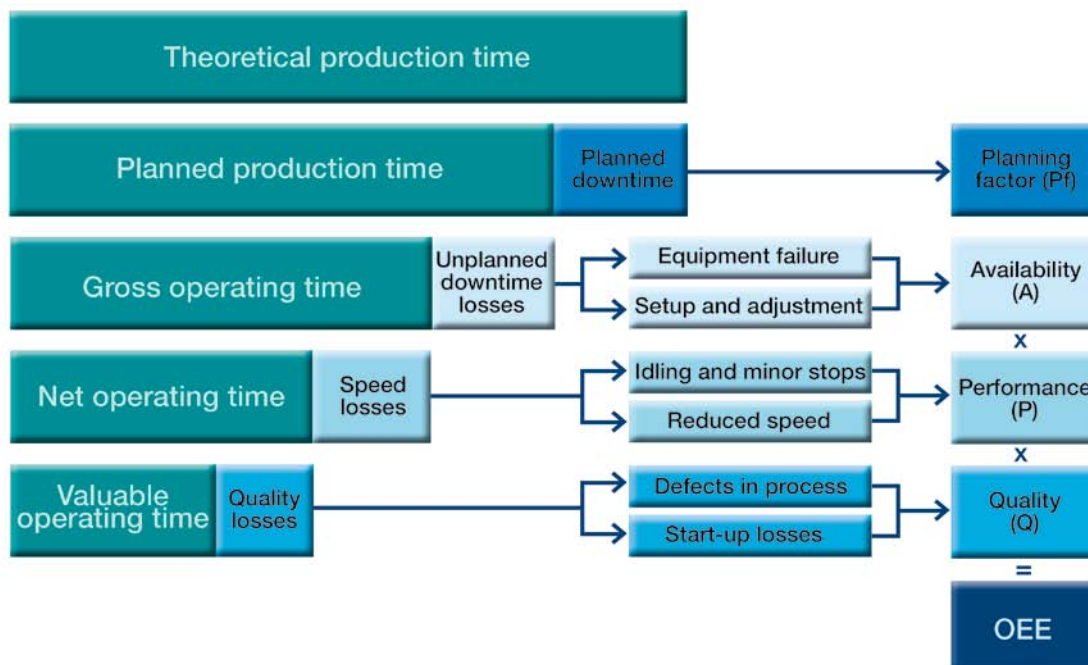
Performance (P) identifies any gaps between the theoretical production of a machine, line or facility and what is actually being achieved. These typically fall into the categories of running at less than designed speed and minor stops. Evaluating these allow you to identify hidden capacity by examining the ratio between the actual and the “as designed” production speed for your plant.

The final factor, Quality (Q), shows the quality yield of your production as the quota of prime saleable production and gross production. Losses in this area are typically grouped into the major categories of production defects and start-up losses.

Together these factors form $OEE = A \times P \times Q$

The typical manufacturing losses are described by the three key components of OEE. Research has shown that improving any of these factors will provide a major improvement in production efficiency.

Availability is reduced by equipment failure, setup and adjustment. Performance is reduced by idling, minor stops, and reduced speed. Quality is reduced by process defects and startup losses. cpmPlus OEE helps you understand the impact of these losses on your OEE and even more importantly, the improvement potential available.





Improve your OEE while reducing your overall cost of ownership

The underlying technology that cpmPlus OEE is based on is designed to lower your overall cost of ownership. Because it utilizes our state of the art thin client technology, you never have to worry about having to deploy the application to individual desktops, or if everyone is using the same version of the software. With our role based security, users see the information that you want them to see, and it is accessible from anywhere that you have a network connection into your facility. That means that the right person will see the right data when they need to see it, no matter where they are.

We use industry-standard interfaces, including OPC, SQL and web services, to make sure that you don't get tied into proprietary data collection, but that you can still get all the data you need to make the right business decisions. When integrated with other ABB products, such as System 800xA, the open architecture ensures that there is no need to duplicate data

definitions during configuration, which improves engineering efficiency and avoids costly errors if any definitions change in the future. The appearance of the user interface, including graphics, trends, and other display elements, is fully configurable for each defined role, ensuring a high degree of user effectiveness by providing the most relevant information to each user.

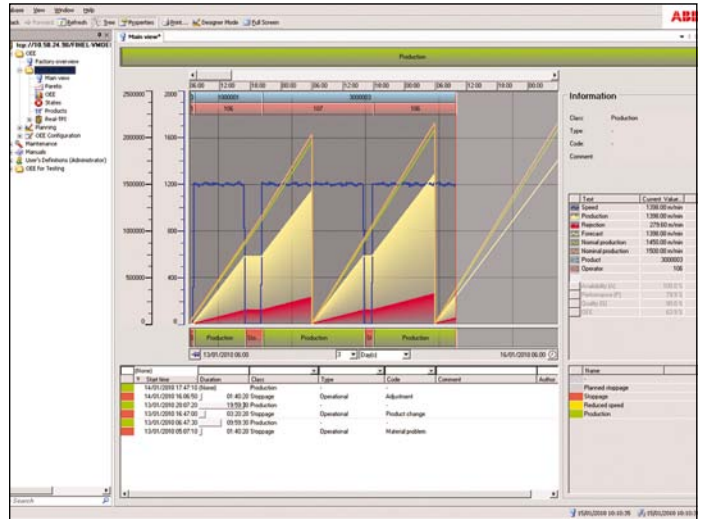
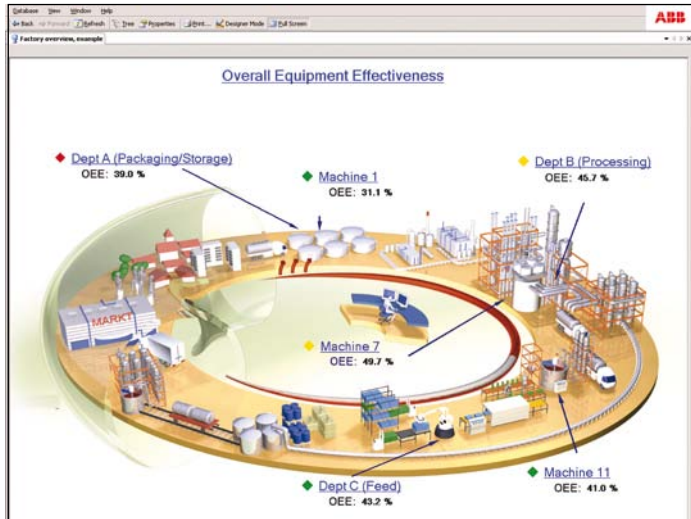
A modular product

The cpmPlus platform is modular. It allows organizations to focus on what is important today, and allow the applications suite to grow over time to cover other areas, such as Energy Management and Emission Reporting.

The cpmPlus OEE system can be delivered quickly, easily configured to collect process measurements, and utilized to monitor, analyze and report production efficiency.



Main features



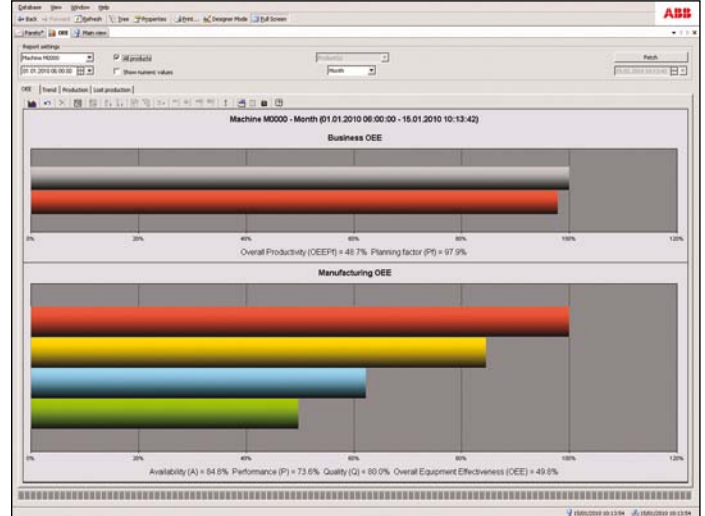
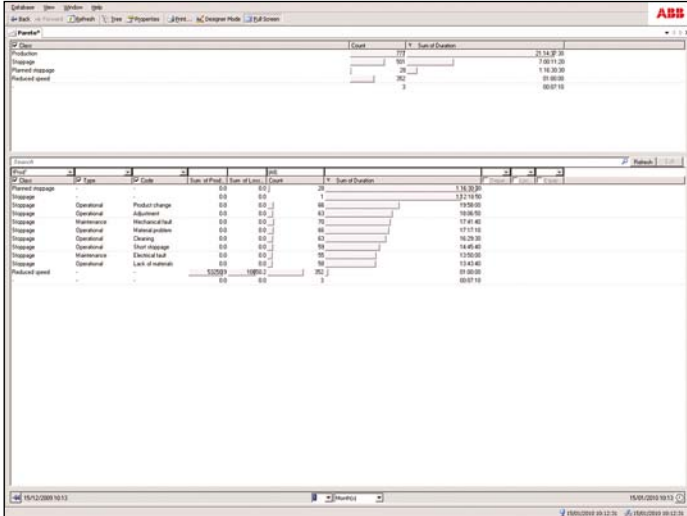
How is the factory performing right now?

The factory overview gives a clear and comprehensive picture of how your entire plant is performing right now – at a glance. The performance metrics from all machines are neatly fitted into an easy-to-visualize graphical view of your current production state according to the factory layout. Is there a production line that needs your actions right now? The factory overview serves as a visual navigator and answers to your questions are just a click away.

How big is my improvement potential?

From the main overview it is simple to drill down to examine the underlying information. One glance at the screen gives in-depth information about the magnitude of the improvement potential, making decisions on where to focus operational improvements easy and intuitive. The displays also give detailed information about the causes and durations of stoppages, speed losses and quality defects, quickly bringing the underlying causes of reduced performance into perspective. Questions such as the average availability or major causes of stoppages, or common factors for outages are quickly and easily addressed.

These displays, designed for both operations and management, have an essential role on the plant floor as the operators' main tool for monitoring production. Operators also use it for classification and commenting on losses.



Where are the biggest losses?

The Pareto report will allow you to drill down and easily identify the major loss categories. The stoppage data is grouped and summarized into easy-to-analyze information. The most significant reasons for production losses are automatically sorted, giving you the total count of events and duration. Finding lost potential has never been easier. This report is a great tool for your teams working on continuous improvement and root cause analyses.

Am I making the right improvements?

The OEE reports are used for understanding the long term performance of the production lines. They can be used to identify the largest potential for improvements, then to ensure that any change had the desired impact, and finally to make sure that there is no further room for improvement. The reports give direct answers to whether specific improvement actions have had the desired affect on the production, and can be looked at over different time spans, production lines and products.

Benefits

- Brings awareness of OEE to everyone in your organization
- Helps manage production efficiency through shared goals
- Helps understand where to find potential for improvement
- Helps prioritize actions in order to improve efficiency
- Helps find and solve production bottlenecks
- Real-time measurement for fast interaction, solving the problems before they become problems
- Accumulation of historical data for analyses and benchmarking purposes
- Automatic analyses and prioritization of the causes behind lost capacity
- Industry-independent
- Based on a robust product platform

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