SAP Solution Brief
SAP Enterprise Asset Management

Asset Visibility and Performance: Gain Insight to Drive Operational Improvements

Quick Facts

Summary

Integrated software from SAP can help your company gain greater visibility into and control over manufacturing operations. The SAP® Enterprise Asset Management solution, the SAP Manufacturing Integration and Intelligence application, and the SAP NetWeaver® technology platform integrate plant-floor systems with core enterprise applications. Employees involved in plant operations can use role-based dashboards to gain the operational visibility they need to do their jobs effectively.

Business Challenges

- Gain visibility into complex, globally based manufacturing operations
- Improve responsiveness to changing plant conditions
- Identify and respond to manufacturing issues and exceptions more rapidly
- Integrate manufacturing operations with business drivers to streamline the supply chain

Key Features

- **Manufacturing asset utilization** – Set up alerts for out-of-control conditions, compare overall equipment effectiveness, and drill into sources of poor performance
- **Business planning** – Match resource planning data on orders and production planning, correlate to actual plant experience, and adjust operations immediately
- **Plant maintenance** – Gain insight into the status of operating equipment and leverage this insight for improved uptime and reliability

Business Benefits

- **Increased uptime** within manufacturing operations due to real-time alerts
- **Greater product consistency** through better visibility of quality results and faster reaction to in-process events
- **Lower costs** through improved insight into manufacturing processes and controls that drive meaningful improvement projects
- **Higher profits** through optimized performance and reduced waste
- **Increased responsiveness** to changing market conditions or customer requests

For More Information

Call your SAP representative, or visit us online at www.sap.com/solutions/executiveview/manufacturing/improve-asset-visibility/index.epx.

Organizations can increase uptime, narrow process variability, control maintenance costs, react more quickly to process upsets, and satisfy customers more consistently when they have greater visibility into their operations and asset performance. Software from SAP can help you gain this visibility.

If the executives on the top floor had greater visibility into events and processes on the shop floor, what could you gain? What if a vice president of manufacturing could take in, at a glance, the real-time status of plant-floor operations in multiple locations? What if that executive could drill into operational details at a particular plant to see real-time information about production rates and yields, asset utilization, quality and safety metrics, and energy consumption and emission? Or, when seeing an exceptional situation, drill further, gaining insight into the actual performance of individual machines in a facility thousands of miles away?

With insights like these, your organization would have the ability to manage operations more effectively, improve asset utilization and plant performance, achieve higher product consistency and quality, lower costs and increase profits, deliver goods on time more reliably, and satisfy your customers more consistently.

To help you realize these highly desirable outcomes, look to software from SAP.

USING ROLE-APPROPRIATE DASHBOARDS

To gain greater control over your manufacturing operations, you need to link the systems that manage and monitor your production environment with the systems you use to plan and manage your business. SAP® software is designed to help you aggregate and act upon the information that is important to your enterprise, whether your shop floor or production environment operates on:

- A management execution system (MES)
- A laboratory information management system (LIMS)
- A supervisory control and data acquisition (SCADA) system
- A historian system
- Any other type of system

The software can automatically transfer data to business applications. Alternatively, clear user interfaces allow shop-floor workers to enter information manually if needed. Plant employees can use role-based dashboards to view the aggregated information at the operational levels they need to do their jobs effectively.

For Plant Managers

Instant visibility into metrics such as overall equipment effectiveness (OEE) enables plant managers to take quick action to maintain or improve asset utilization rates, quality, yield, energy consumption, emissions compliance, product mix, and other indicators tied to plant operations. Plant managers also benefit from the ability to compare different production lines and plants, helping them establish best practices and drive optimal delivery of production orders to their highest-performing locations. They can use this software to communicate continuous improvement opportunities in real time and react to unexpected deviations and exceptions before they affect customers.

For Line Managers

Real-time visibility into production, equipment performance, and maintenance information helps line managers responsible for the operation and performance of individual production lines. They can quickly follow up on problem areas identified by a plant manager, track progress toward improvements, and identify new areas for analysis. Built-in alerts can flag out-of-control situations and other exceptions, allowing you to rapidly make changes to improve performance and achieve manufacturing excellence.

For Reliability Engineers

Reliability engineers can take advantage of the insights gained from this software solution to support continuous improvement and Six Sigma strategies. By taking advantage of the visibility enabled by these integrated tools, reliability engineers gain real-time insight into moment-by-moment fluctuations in asset performance. Dashboards can display the key performance indicators each person needs for tracking, configured according to organizational needs. At the same time, integrated reliability-centered maintenance (RCM) software can analyze input from all areas of the production environment and automatically refine maintenance programs for optimal performance.

DRILLING DOWN INTO THE DETAILS

Integrated software solutions from SAP make it easier for you to gain insight into operational details at a level that is right for each user. You might start with a view of manufacturing operations that shows high-level performance metrics at plants around the world. But what if one plant shows signs for concern? By clicking on a single plant, you drill into greater levels of detail for just that plant – how individual lines are performing within the plant, for

example. Click again, and the visibility sharpens to show the details associated with just the one problematic line.

While a vice president of manufacturing may never want to drill so deeply as to see real-time alarm information from a single machine on the shop floor, a line manager or reliability engineer would definitely want that level of insight – and software from SAP can provide it. The plant manager might have real-time visibility into all the lines at a plant and can drill into each line for more insight. The reliability engineer might have visibility into each system – viewing real-time performance information in one dashboard panel and suggestions for ways to improve performance in another.

ACTING ON CONSOLIDATED INPUT

Manufacturing facilities produce information from a wide range of sources – shop-floor equipment, emissions control systems, quality tracking systems, and more. There are other systems that support these systems too – maintenance systems, monitoring systems, and the like. Visibility into the systems on the line is critical, but effective action requires a level of visibility that goes beyond the components on the line itself. You need to be able to consolidate information from multiple sources – the equipment and the maintenance systems that support them, for example – to make the best decisions possible about the equipment and the line.

Again, integrated solutions from SAP have been designed with these needs in mind. The software includes connectors that are already configured to integrate a wide range of commonly used systems – allowing you to construct custom-built connectors to integrate virtually any production system.

SOFTWARE AND SERVICES FOR GAINING ASSET VISIBILITY

Solutions and services from SAP and our partners can provide you with the functionality you need to gain visibility into the utilization and performance of your assets.

The SAP Enterprise Asset Management solution helps you streamline your manufacturing processes – from planning and scheduling through sequencing and execution to monitoring, quality management, and analysis – and improve efficiency along your entire value chain.

The SAP Manufacturing Integration and Intelligence (SAP MII) application provides the direct connections between business operations and shop-floor systems. It helps ensure that all data that affects manufacturing is visible in real time – including information about orders, materials, equipment status, costs, and product quality. The application delivers preconfigured connectors to many commonly used production environment systems and a set of visualization and analytics tools that support your Six Sigma initiatives.

Underlying these applications is the SAP NetWeaver® technology platform. SAP NetWeaver unifies technology components, providing the best way to integrate all systems running SAP and non-SAP software. SAP NetWeaver also helps organizations align IT with their business. As the foundation for service-oriented architecture (SOA), SAP NetWeaver allows organizations to compose and enhance business applications rapidly to drive business change.

Working together – and with other applications as your organizational needs dictate, such as the SAP Supply Chain Management application or Meridium RCMO – these integrated applications can help you gain visibility across the entire operational continuum. SAP MII is powered by SAP NetWeaver, which enables your organization to reduce IT complexity and obtain more business value from its infrastructure investments. SAP MII and SAP NetWeaver support the ISA-95 standard, which provides uniform terminology, concepts, and models for

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integrating enterprise resource planning systems with MES and process control systems. Prebuilt connectors enable you to consolidate information from many different sources, gaining the insight you need to manage your operations with peak effectiveness.

In addition, the SAP Services organization can assess your manufacturing processes and present a clear road map to gain increased visibility within your manufacturing operations, helping you keep manufacturing operations running at peak levels in support of your business goals.

TRANSLATING INSIGHT INTO CONTROL

Greater insight into the activities and events taking place within your manufacturing operations can drive operational improvements across the enterprise. The real challenge is gaining visibility into assets and operations. And integrated software from SAP can help. You can gain greater visibility into – and increased control over – complex, heterogeneous, multiplant environments. You can improve your ability to manage shop-floor operations from the top floor, improve asset utilization and plant performance, raise product consistency and quality, lower costs, increase profits, and better serve your customers.

FIND OUT MORE

To learn more about how integrated software from SAP can help your organization improve asset visibility, call your SAP representative today or visit us at www.sap.com/solutions/executiveview/manufacturing/improve-asset-visibility/index.epx.