

Epicor® Informance

Enterprise
Manufacturing
Intelligence Overview



Real-time information for better production

Epicor® Informance

Enterprise Manufacturing Intelligence (EMI)

You're an expert at making things, and your customers look to you to deliver the right product, at the right time, at the right cost. That's where Epicor Informance Enterprise Manufacturing Intelligence (EMI) comes in.

Discrete and mixed-mode manufacturers use Informance EMI to boost product throughput. It's all about getting more out of the same equipment. How do you make more without more assets? Uncover and eliminate, not minimize downtime, increase speed throughput, and decrease quality loss...to make more product and cut costs. EMI improves profitability by helping you find more capacity.

What will you do with more capacity? Use it to grow your business. Or, boost your financial performance. Either way, "making more" is very good for your business.

Epicor Informance EMI collects data directly from equipment and operators on the shop floor in real time, eliminating inaccurate and time-consuming manual data collection. With information in your hands "right now" you can become proactive, so you anticipate and solve production problems immediately. Real-time insight helps you pinpoint critical issues, reduce waste, and improve quality and customer service. As you collect data over time, it becomes easier to analyze chronic (repeating) issues with a wide variety of out-of-the-box reports and key performance indicators (KPIs). Everyone in the plant and throughout the business can take action to improve manufacturing performance.

To get more out of your manufacturing operations, and more for your business, get the EMI system that automatically monitors machines and analyzes production and performance data 24x7.

“Informance has given us a clear perspective on where the opportunities are for improvement and a way of prioritizing them.”

Tony Lippert, Plant Manager
Unilever

Deployed Your Way

You can get started right away...it's only weeks between you and software tools for every level of the organization, and operations and business results. Epicor makes it easy to get there, with software as a service (SaaS) or on-site deployment. Informance is a .NET Web services application that uses Microsoft® SQL Server® and Windows® Server. Plus, we know how to get a signal from any kind of machine, no matter how timeworn or modern. We want everyone throughout your organization to use Informance—from the shop floor to the top floor—so cost is based on the number of machines you want to monitor and the kind of insight you need—plant or enterprise.

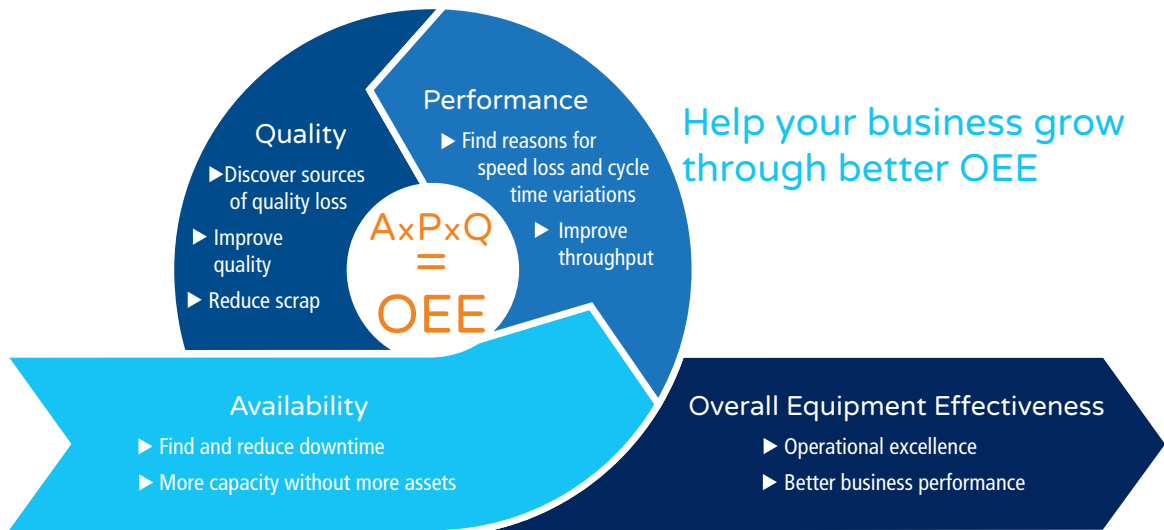
Usability

Epicor Informance EMI collects production data automatically—no more manual data collection to worry about. Operators on the shop floor use touch-screen technology to add depth and dimension to the automatic production data, so you get a clear picture of the what, why and when of downtime, cycle time, and scrap. The system also has real-time alerts, notifications and other communications, so the people who need to know are in the know when it matters the most—immediately, so they can take action to correct a problem, or improve performance on-the-spot. We have a proprietary data sharing module that allows us to connect to any ERP.

From daily operations meetings to management dashboards and reports, Epicor Informance is easy-to-use and ideal for one-click drill down insight and reporting. Most importantly, it's system-agnostic so you can link it with your leading ERP system for data sharing.

Epicor Informance sets the standard in EMI

- ▶ Boost efficiency with clear manufacturing facts and real-time information
- ▶ Accurate, visual performance trend analysis
- ▶ Automated data collection to eliminate time-consuming, error-prone manual intervention
- ▶ Role-based metrics, displays and dashboards for operations, plant, and management
- ▶ Metrics in standard and financial context, based on product types, size, brand (and many others)
- ▶ Single plant and multi-site performance analysis
- ▶ Pinpoint critical issues to reduce waste and improve quality and customer service
- ▶ Examine tradeoffs between using existing equipment and capital investments
- ▶ Over 1000 analysis choices available out-of-the-box
- ▶ One-click drill-down visual root-cause indicators



Real-time insight for better production and business performance

Your business isn't like anyone else's and neither is ours. Is better productivity your goal? You need accurate data and fast information. If you've set your sights on operations excellence, you need it even faster. Either way, real-time automated data direct from your machines is the gold standard in performance improvement, and we exceed that standard with analysis, reporting and planning to help you achieve your goals.

Yes, "we do OEE," but it's much more than that. Epicor is there when you're doing strategic planning, and turning strategies into tactics for improvement, because getting better is easy when the facts are clear. Ready to skip manual data collection and intervention? With Informance EMI, you get accurate data instantly and on-the-fly, not minutes, hours, or shifts later. You and the entire operations and production teams can work collaboratively to reduce downtime, and optimize equipment, capital, and worker resources, and drive performance gains with Epicor.

Real-time production information boosts your continuous improvement initiative, and lets you discover hidden opportunities to increase yield. With more free capacity, you can consistently exceed customer expectations, and gain more business.

Office, mobile, global

Take the power of Informance EMI with you on a Web-enabled mobile device or tablet with browser-based dashboards, information, and analysis. Plus, it doesn't matter if you have a single operation, or a distributed network of plants internationally, Informance is currently available in nearly 10 languages. Language customization is quick and easy because the system supports full double-byte characters and all language translations throughout the user interface.

Monitoring, Data, and Communication

The shop floor is a real-time environment—so your EMI should be real-time too. Things happen and change instantly. Sometimes a machine was down just a few minutes more than you thought, or perhaps the scrap or part count is off—just a couple of pieces can mean the difference between a happy or frustrated customer. Real-time, automatic production monitoring with Epicor Informance keeps your business on-track, and eliminates the ripple effect to customers and vendors.

We're there to help you re-connect the shop floor with 24x7x365 monitoring—data directly from the machine—and turn it into information for your team, with automatic notifications when and how you need them, and data to feed the rest of your business.

- ▶ Automated production monitoring for downtime and runtime
- ▶ Real-time production displays
- ▶ Automatic alerts, messaging, and escalation for cycle variations, efficiency, and scrap rates



“Informance EMI gives us a new way to look at our business—by line, by plant, a set of plants, or the entire network. We derive insights not possible before, and we know that the information we see is up-to-the-minute and accurate.”

Greg Yeager, Industrial Salt, Reliability Leader | Cargill Salt

Epicor Informance EMI

Performance Benchmarking

- Correlate attributes across performance metrics
- Internal benchmarking
- Comparative inter-industry benchmarking
- Industry best practices
- Comparisons to world-class operations

Production Optimization

- Asset, plant, and enterprise optimization
- Analyze downtime and measure impact
- Evaluate schedule conformance
- Evaluate tactical options
- Rate optimization for cycle times

Quality Management

- Automated defect data collection
- Product quality audit
- Machine inspection audit

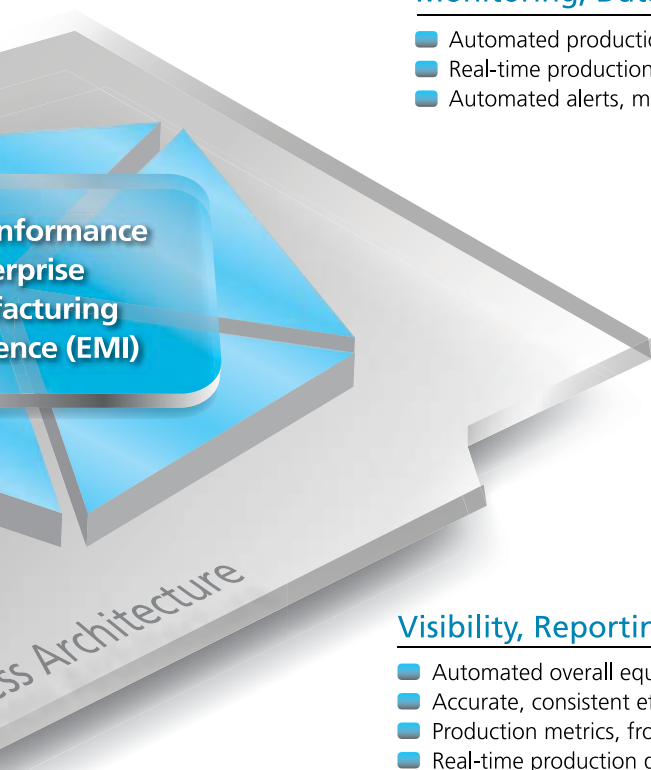
Advisory Services and Project Management

- Accelerate improvements for faster ROI
- Project leadership to drive vertical implementation
- Best practice sharing
- Structured on-the-job training for stakeholders
- Coaching for standard work process integration
- Educate to interpret and analyze data
- Post-implementation need-based services

Business Architecture

- On-premise or SaaS
- Enterprise hub with
- Microsoft® .NET Fra
- Web Services
- Microsoft SQL Serv
- Data warehouse
- Web reporting
- Mobile application
- Integration server
- OPC, PLC, & PC inte

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Monitoring, Data, and Communications

- Automated production monitoring
- Real-time production displays
- Automated alerts, messaging, and escalation

Visibility, Reporting, and Analysis

- Automated overall equipment effectiveness (OEE)
- Accurate, consistent efficiency metrics
- Production metrics, from machine to enterprise
- Real-time production displays
- Financial context OEE and performance metrics
- Visual root-cause indicators
- Capture downtime where, what, why
- Mobile apps to monitor performance

<p>Structure</p> <p>S deployment</p> <p>n plant nodes structure</p> <p>network</p> <p>er°</p> <p>s</p> <p>erfaces</p>	<h3><u>Continuous Improvement (CI) Integration</u></h3> <ul style="list-style-type: none"> ■ Lean ■ Six Sigma® ■ Theory of constraints (TOC) ■ Total productive maintenance (TPM) ■ Common and custom CI metrics ■ OEE, asset utilization, capacity utilization ■ Mean time between failures (MTBF) ■ Minor stops per runtime hour (MS/RH) ■ Mean time to repair (MTTR) ■ Root cause factors
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We give you real-time, accurate data. You start asking the right questions. The result is well-informed, timely decisions.

Plant Operational Performance

- ▶ Which losses should we tackle first?...next?
- ▶ Which metrics are the right ones for our plant?
- ▶ Is the planning rate right in the ERP system?
- ▶ How does raw material impact performance?
- ▶ Why does machine speed vary from shift to shift?
- ▶ Why is there more scrap during certain jobs?
- ▶ Why is OEE/efficiency low? How do we get better?

Network & Enterprise Operational Performance

- ▶ Which plants are most/least efficient?
- ▶ What are other plants doing to solve this problem?
- ▶ What are the top performance problems across the network?
- ▶ Do production metrics reflect actual costs?
- ▶ Where can we obtain n% more capacity in my network?
- ▶ Which investments will improve performance?
- ▶ Can/should we consolidate the network?

Visibility, Reporting, and Analysis

From the “top floor to the shop floor”, it’s important to know the score, every minute of every shift, every day of the year. That’s why Epicor built the most powerful out-of-the-box reporting and analytics system and delivers it in easy-to-digest dials, graphs, and charts. Informance scoreboards and displays empower front-line professionals to take action and make improvements instantly, without having to wait for days or weeks to find out how they’re doing. Operations stakeholders have facts in-hand to support their recommendations, and management has what they need to understand tradeoffs from every angle. Epicor Informance EMI delivers a complete picture of production, from the top floor to the shop floor.

- ▶ Consistent, automated, OEE and other efficiency metrics
- ▶ Production metrics from machine to enterprise level
- ▶ Downtime and scrap analysis
- ▶ Financial context around OEE and performance metrics
- ▶ Operator labor and productivity
- ▶ Capture the where, what, why of downtime
- ▶ Mobile apps to monitor performance on-the-go

Continuous Improvement (CI) Integration

Put “sustainable” in your continuous improvement (CI) program with good data and the right metrics. Just like OEE reflects performance during a specific period, you need more depth of insight to solve problems. Epicor Informance helps operations, engineering, and maintenance teams stay focused on eliminating losses, regardless of which approach your company prefers.

- ▶ Lean
- ▶ Six Sigma®
- ▶ Theory of constraints (TOC)
- ▶ Total productive maintenance (TPM)
- ▶ Other continuous improvement (CI) methodologies

Production Optimization

More capacity, same assets—that’s what Epicor Informance is there for. Knowing which changes have the greatest impact on performance makes it easy for everyone to work toward the same goal, whatever that goal is—more product, or better cost structure. We’re here with data and information to answer key questions about performance, so the tough decisions get a little easier.

- ▶ Analyze downtime and measure impact
- ▶ Minimize downtime and scrap
- ▶ Evaluate tactical options
- ▶ Cost reporting for scrap and machine downtime
- ▶ Compare actual cycle times to standard and planning rates
- ▶ Asset, plant, and network optimization





BONFIGLI

BONFIGLI COMMUNITY CENTER

Computer workstation with keyboard and mouse.

“This new mobile technology from Epicor, together with the entire manufacturing intelligence suite is a critical piece to achieving optimum performance at our sites and driving growth for Diageo in North America.”

Ewan Andrew, Senior Vice President of Manufacturing and Distilling | Diageo North America

Performance Benchmarking

Start with granular quantitative data captured by Informance—then add rich qualitative information about strategic and tactical actions. Our senior researchers examine the data and correlate operations practices—strategic and tactical—with manufacturing performance. It's performance benchmarking for manufacturing, and you can only get it with Informance and Epicor. We make it possible to share best knowledge throughout your enterprise and borrow best practices from outside your four walls—from your vertical, and from other industries.

With performance benchmarking, you add a new dimension to your improvement initiative. Internal and external benchmarking gives manufacturing executives more insight and fresh, new direction as they develop and refine action plans for operational excellence. “Best-in-class” isn't just a number. We show you how other manufacturers get there, and which actions drive results. Regardless of where you are in the improvement journey, there's always room for improvement. Your starting point is with Epicor and the facts—to understand how you stack up, and which steps will help you reach best-in-class then redefine world-class.

Advisory Services and Project Management

Informance doesn't show you how to improve—we give you the facts so you can ask the right questions, and make better decisions. Getting started with Informance is exciting, and companies often discover a bit of friendly competition among

plants or operations professionals. If you're tempted to fix everything all at once, it might be time to bring in a coach, to show you how to interpret your company's unique data and metrics, so improvements “stick”, and the process of improvement becomes repeatable and sustainable.

- ▶ Accelerate improvements for faster ROI
- ▶ Project leadership to drive vertical implementation
- ▶ Best practice sharing
- ▶ Structured on-the-job training for stakeholders
- ▶ Coaching for standard work process integration
- ▶ Educate to interpret and analyze data
- ▶ Post-implementation need-based services

Quality Management

- ▶ Monitor every cycle and every machine, 24/7
- ▶ Automated defect data collection
- ▶ Product quality audit
- ▶ Machine inspection audit

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