Wonderware's MES & EMI Software Solutions provide benefits that extend far beyond reducing the cost of manufacturing—achieve increased operational performance, more agile supply chains, on-demand, real-time information for your company, more responsive manufacturing and cross functional collaboration. You’ll see enduring benefits that reduce your cost-of-goods-sold, improve your perfect-order performance and raise your responsiveness to your customers.

“Wonderware gave us the ability to deploy a production and performance solution across our many different plants and helped us optimize processes and get our products faster to market.”

— Arne Svendsen, ARLA Foods
Invensys Operations Management understands that in order to win in the 21st Century, agility is the key to running a high-performance organization. Reformulate your business and manufacturing operations. Strengthen your corporate brand image. Leverage your capital assets and capabilities to deliver and sustain maximum performance.

To be successful in manufacturing today, you need more than individual automation solutions, data historians or ERP (Enterprise Resource Planning). These traditional information technology approaches support production and manufacturing processes, but alone they don’t serve the information and decision support needs of your overall enterprise.

Facing new challenges and sustaining profitability requires an innovative approach that balances:

- Greater visibility and true understanding of actual production capacity for predictable order fulfillment, flexibility and responsiveness across the entire operations management environment, including across multiple plants or facilities
- Reduction of production costs
- Improvement of product quality

Too often today’s investments in production systems are driven only by the functional requirements of the next project. High-performance organizations adopt a wider-ranging outlook where investment and technology choices are driven by a desire to accommodate evolving requirements over time – because you need the agility to adapt to whatever your actual requirements will be.

It is vital that each component within your enterprise be accurately represented by the systems you use to support your operational activities. This challenges your production IT strategy to:

- Develop standard templates for manufacturing and general operational practices that closely align with actual business requirements while building on existing core competencies
- Maintain and evolve these practices, propagating across multiple plants and facilities
- Address the variable size, topologies and vintage of systems in each facility, while providing a holistic view of the entire operation, and
- Prioritize current requirements to make small, incremental investments with visible returns, that at the same time increase the possibilities of leveraging earlier investments.

As understanding of your processes and the opportunities available to continuously improve operations grow, so may your actual requirements. Wonderware® software solutions for Manufacturing Execution Systems (MES) and Enterprise Manufacturing Intelligence (EMI) enable incremental, low-risk deployment of increased application functionality, one step at a time.
Companies that strategically pursue Operational Excellence or Lean Manufacturing base their investment choices on discipline, repeatability and efficiency. They make educated decisions and select the technology that can help them achieve the highest degree of consistency in whatever they do.

Automation and IT professionals are challenged to select the optimal technology for solutions that concurrently increase material velocity, fully leverage production assets, balance working and physical capital, and increase product quality.

Wonderware offers powerful MES and EMI software solutions that empower our customers to align their business strategy and key performance metrics.

With Wonderware solutions, companies can:
- Reduce lead time and costs for increased flexibility and responsiveness using unique capabilities that drive operations consistency and reliability
- Increase production throughput and product quality, leveraging unmatched capabilities for real-time plant data visibility of all operational activities and key performance indicators (KPIs)
- Reduce efforts involved in compliance and governance activities, leveraging automatic capabilities to capture complete system records for products, processes and activities for internal process harmonization
- Reduce total cost of ownership (TCO) by adding value to existing and new systems through an open, scalable and comprehensive platform that captures and standardizes best practices and fosters lean initiatives via continuous process improvements.

Market leaders must respond rapidly and cost effectively to variations in demand and supply. To remain competitive, they also must align their day-to-day operations and actual performance with the company’s high-level business objectives. Plus, top performers take advantage of profit making opportunities before they vanish.

Wonderware MES and EMI software solutions help manufacturers:
- Transform their business objectives into operational commands, and
- Understand how their operations impact the business as a whole.
THE TWO FUNDAMENTAL INFORMATION FLOWS IN PRODUCTION

MANUFACTURING EXECUTION SYSTEMS (MES)

Transform Your Business Objectives into Operational Commands

Wonderware offers Manufacturing Execution Systems (MES) software for managing production management information flow, disseminating production management data from your business system or disparate operations systems to the plant floor or production facility. MES software transforms your production schedule into operational commands within the physical resources and delivers feedback to your business system in real-time.

Wonderware MES capabilities include:
- Automatic downloading and execution of the production schedule
- Master data management for manufacturing operations such as recipes, bills-of-material and quality specifications
- Local dispatching of production work orders to lines and machines according to available capacity
- Tracking and analysis of work-in-progress (WIP) and inventory consumption,
- Downloading of equipment set points and coordinating the sequence of operational activities
- Creating “as built” records of the products; complete genealogy of materials, equipment, and systems used
- Product Quality Management and Statistical Process Control (SPC)
- Equipment availability and utilization tracking and analysis

ENTERPRISE MANUFACTURING INTELLIGENCE (EMI)

Understand How Your Operations Impact Your Business

Wonderware Intelligence software provides performance management information by capturing data directly from your multiple process/production/manufacturing data sources and turning it into valuable real-time information in the appropriate context of your overall production processes. Ease of use visualization tools empower your employees to explore all of the available data to leverage their process and business expertise in analyzing the information. Interactive, intuitive dashboards make information instantly available to people across your organization. Wonderware Intelligence software facilitates collaboration, enables improved decision making and provides the necessary drill-down capabilities to uncover hidden profits, costs and production improvements. Pre-aggregated and contextualized production data increases the value and information resolution of your corporate business intelligence systems.

Wonderware Intelligence EMI capabilities include:
- Connectivity to Industrial data sources and aggregation methods for plant historians
- Automatic real-time data collection, aggregation, normalization and contextualization (relationships)
- Operational KPIs (Key Performance Indicators) and performance metrics in near real-time resolution to take action within actual running production
- Analysis and visualization of collected data and calculated metrics in chart, graph, or custom formats
- Publishing of web based dashboards for KPI monitoring, including filtering and drilldown analysis
Wonderware offers a unique, integrated approach to effectively managing both production and performance management information flows. The result is consistent, real-time visibility into production operations, including orders, materials, equipment and general production activities.

This information is available across ALL disciplines in your organization, including the planning, quality, lean team, engineering, purchasing and receiving departments, as well as management, supervisors, team leaders and operators.

Wonderware software solutions have no equal in the marketplace because they are based on the powerful and modular ArchestrA® technology architecture, allowing you to easily and cost-effectively extend, integrate and manage complete solutions that fully align with your current infrastructure.

ArchestrA technology is at the heart of the ArchestrA System Platform – a powerful and comprehensive development, integration and management environment that is the backbone of Invensys’ unique InFusion Enterprise Control System. InFusion unifies Invensys components with your existing environment, protecting and extending the value of your current investments. InFusion utilizes ArchestrA’s proven, open industry standards-based capabilities, allowing you to easily and affordably integrate all the critical automation systems and equipment and operations management software components with your corporate business systems to deliver a unified enterprise management environment.

As integral components of the holistic InFusion Enterprise Control System family of offerings, the Wonderware MES and EMI offerings have been designed to provide specific functionality, while being easily combined, integrated and managed along with other InFusion Components. All InFusion Enterprise Control System components communicate with the open, industry standards-based ArchestrA System Platform software, which easily and affordably unites process and production control with business operations control. InFusion can help save significant time, effort and money by improving the ability to view and synchronize information from multiple systems and applications; improving collaboration, workflow execution and operations management.
HOW WONDERWARE SOFTWARE CAN HELP

Based on ArchestrA System Platform and part of the InFusion Enterprise Control System (ECS)

Achieve your business goals without abandoning prior investments in automation and information systems or production processes. Leverage Invensys’ open and distributed environment for unsurpassed connectivity and integration capabilities.

Reduce the effort and costs associated with designing, building, deploying and maintaining secure and standardized applications for MES and EMI. Improve production processes by obtaining a more accurate understanding of equipment capabilities and behavior.

Operations Management

**Improve inventory** velocity through increased visibility into actual material consumption, movements and inventory levels

**Reduce production order lead time** for rapid response to changes in demand by dynamic allocation of production assets and a more granular production planning horizon

**Reduced time-to-volume for new product introductions**, including quick changeovers between products and lines

**Improved compliance and governance** through complete electronic system records for ‘as planned’ and ‘as built’ product information

**Improve predictability of order fulfillment** by monitoring ‘planned vs. actual’ production quantities for improved consistency in operational activities

Performance Management

**Increase the capacity** of your existing assets by pinpointing the causes of unplanned downtime to improve operational efficiencies

**Leverage best practices** by comparing line-to-line and plant-to-plant performance, including real-time production costs and OEE (Overall Equipment Effectiveness) measures

**Improve asset utilization** by identifying production bottlenecks more quickly

**Increase supplier accountability** (e.g., during production or production line startup) by monitoring materials performance through the transformation process

Enterprise Manufacturing Intelligence

**Improve your production performance** by comparing multiple production sites performance, based on unified KPIs identifying the most productive assets and monitoring alignment of production with business strategies

**Reduce variability in production results** by analyzing and exploring your various production systems data in context/relationship, for a holistic view to determine variations in quality, throughput and direct product costs like material or energy used.
Wonderware Quality

Minimize costly scrap and rework by detecting or limiting process variations before they adversely affect product quality

Reduce the safety margin required to conform to specifications by better understanding actual process capabilities

Perform corrective and preventive actions via event/case resolution

Relate production and process quality information to traceability and equipment performance for overall quality management

Wonderware InBatch

Increase capacity through the optimal utilization of shared equipment and raw materials by reconciling material inventory with actual quantities in vessels

Manage complex batch processes more effectively using a model-based batch system for standardization and consistency with dynamic resource allocation for fully automated operations

Reduce lifecycle engineering efforts using simplified control code in the underlying automation system, leveraging a library of reusable control blocks in conformance with S88 industry standards

Wonderware Enterprise Integrator

Adopt industry standards like ISA-95 for enterprise-to-control-system integration and production/manufacturing interoperability, for fast, low-risk and sustainable implementations

Achieve flexibility in Plant to Enterprise integration by open connectivity to business software systems such as SAP, Microsoft® Dynamics™, Oracle®, Infor and others

Ensure shop floor business continuity with reliable Plant to Enterprise integration by persisting information exchange and maintaining secure production response delivery

ArchestrA Workflow

Consistent execution of company policies and procedures through digital Standard Operating Procedures (SOPs), Good Manufacturing Practices (GMPs) and work instructions.

Automating manual processes and capturing best practices eliminates manual error-prone procedures, effectively coordinates people and systems to accomplish simple or complex tasks

Monitor and measure the performance of processes, change and adapt with a model-driven approach that empowers non-IT users to visually compose processes

Support of mobile workers, ensures a comprehensive workflow management solution that drives process consistency across the enterprise.
**BENEFIT FROM UNPARALLELED FUNCTIONALITY**

Wonderware MES and EMI software solutions enable incremental, low-risk deployment of increased application functionality. Offering an integrated environment for your production resources and operations activities enables you to increase application flexibility and while decreasing the risks associated with initial implementations and ongoing changes. Implementing an MES and EMI software solution based on a truly comprehensive software platform can eliminate many hours spent piecing together data that’s coming from a wide variety of sources. This integrated approach to MES and EMI frees up engineering and IT departments so they can focus on supporting operations where it matters the most—to increase the company’s performance, productivity and profitability.

**PARTNERSHIPS THAT MATTERS**

Invensys has a long-standing alliance with Microsoft, enjoying Gold Certified Partner status in the Microsoft Partner Program. Companies that obtain this level of certification have a successful record of developing and marketing software based on the latest Microsoft technologies, which Wonderware as done since its inception in 1987.

This close, long-term collaboration with Microsoft not only brings you powerful software products, but confirms that our technology is always state-of-the-art. Furthermore, your investment in Wonderware software solutions can help you achieve sustainable business success for many years to come.
WE UNDERSTAND WHAT IT TAKES TO BE SUCCESSFUL

At Invensys Operations Management, we know that the right support and services are just as important to you as the right software solutions. We are here to help you achieve the very best return on your IT and automation investments, put you on the fast track to success and help you protect your Wonderware software investments—for life.

Wonderware offers award-winning customer support through a network of more than 2,000 engineers in over 100 certified facilities globally, so you are never more than a phone call away from the help you need.

Get the very best out of your investment in Wonderware software at any phase of your system lifecycle with timely expertise from Invensys Operations Management Consulting Services.

“One of the things we were able to do with the Wonderware solution as well was we were able to carry across our entire plant, not just on the new line that was part of our DBF line. When we started evaluating all the packages that were out there, from OE suppliers, as well as Wonderware... when we looked at a plant wide integration... Wonderware offered us the best cost/value proposition.”

— Scott Jamison, Vice President of Engineering, Pepsi Bottling Ventures

Engage Invensys as your trusted technology advisor to help you justify, standardize, plan, develop, roll-out, secure, optimize and maintain your Wonderware software solution, as well as benefit from the industry’s most comprehensive network of over 3,500 independent system integrators.

Match the power and excellence of Wonderware software with comprehensive, world-class training courses at 60 facilities around the globe, including our state-of-the-art training center in Lake Forest, California.

Trust Wonderware expertise and experience in software solutions for MES and EMI to help you improve your production/manufacturing operations, reduce project risk and improve the effectiveness of your application lifecycle management.

Select Wonderware MES and EMI software solutions to achieve the agility you need to meet today’s manufacturing challenges and to make outstanding improvements in efficiency and profitability.
WHAT ARE PEOPLE SAYING ABOUT WONDERWARE’S MES AND INTELLIGENCE SOFTWARE SOLUTIONS?

Offering an integrated environment for your production resources and operations activities enables you to increase application flexibility and while decreasing the risks associated with initial implementations and ongoing changes. Implementing an MES and EMI software solution based on the InFusion Enterprise Control System can eliminate many hours spent piecing together data that’s coming from a wide variety of sources. This integrated approach to MES and EMI frees up engineering and IT departments so they can focus on supporting operations where it matters the most—to increase the company’s performance, productivity and profitability.

“With Wonderware in place, our internal failures have really reduced. Our goal for internal failures is less than 1%, and we’ve been meeting these goals.”

– Subburaman Ananthanarayanan, PVC COMPOUNDERS

“All in all, for the first time, we now have an automated system giving us the information to achieve what everybody is striving for - continuous improvement.”

– Eddie Jordaan, SOUTH AFRICAN BREWERIES LIMITED

“The automated management of scheduling activities and online information coming directly from the plant floor facilitates the coordination with other divisions. Response time to changes in scheduling has been substantially reduced.”

– Thomas Brandes, SIA ABRASIVES INDUSTRIES

Don’t just meet business objectives. Exceed them— with Wonderware Software

Now is the time to start becoming a high-performance organization and unleash your business’s operational excellence to:

• Reduce your manufacturing and operational costs
• Bring your products to market faster
• Become more agile and responsive to your customer’s needs

Consult with our solutions representatives to find the Wonderware MES and EMI Software Solutions that are right for your operation. And start achieving the agility you need to meet today’s manufacturing challenges. Make significant improvements in efficiency and profitability. Achieve 21st Century operations performance. Start by contacting your local Invensys or Wonderware representative.

http://global.wonderware.com/EN/Pages/ContactSales.aspx