

ARTICLE TAG Asset Management, Data Visualisation, Analysis



## The Intelligent Explorer

DISCOVERING THE VALUE OF DATA VISUALISATION SOFTWARE.  
BY DR WARREN BECRAFT, SENIOR PRINCIPAL BUSINESS  
CONSULTANT, ASPENTECH ASIA PACIFIC

Asset effectiveness is the essence of running a profitable operation in today's highly-competitive market. The primary measure of business performance is the ability to intelligently assess real-time production data in a way that contextualises, visualises, reports and shares information, while enabling operators to make the right decisions affecting operational performance.

For many chemical companies, batch analysis often fails to provide the ability to visualise data in flexible formats and to incorporate characteristic data to identify and correct the root causes of operational problems. Manufacturing Execution Systems (MES) software delivers knowledge

that optimises processes and opens up the opportunity to explore and discover all possibilities, including the use of web-enabled data analysis capabilities to understand issues quickly.

By identifying and adopting best practices and implementing collaborative and integrated technology into the business, companies can readily transfer vital knowledge across the operation from equipment engineering to process engineering, which ensures continuous improvement initiatives. MES software allows organisations to collect, manage and leverage vast volumes of production data to provide operational intelligence, via rich visualisation and analytics, for improved production execution, effectively turning the data into usable and tailored information.

Information must be relevant, timely and collaborative. The more you uncover – the more you can discover, enabling process manufacturers to efficiently resolve operational issues to remain profitable.

### Discovering Knowledge

Through the process of discovery, we understand the unknown and make sense of our environment. Process manufacturers generate data on a second-by-second basis and therefore, need to use intelligent MES software to display tag data, view trends and graphics, as well as analyse plant performance using the most innovative operations data visualisation capabilities available.

Often, too much time is spent by knowledge-seekers trying to find relevant information, correcting errors and using data sources that are unreliable. Purposeful information must be relevant, timely and collaborative. Being able to share pertinent data to make better and faster decisions will give companies the competitive edge and allow operations to be more agile to respond to changes,



producing more effective execution.

Every moment of time is critical in manufacturing. MES software, which is fast, flexible and easy-to-use, can give company operations a timely and in-depth understanding of asset performance. By quickly discovering issues using advanced analytic functionalities and tapping into business intelligence, it is possible to minimise response times to production issues, as well as improve overall equipment effectiveness and turn the acquired data

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Context makes analysis meaningful. Having information displayed in a logical, easy-to-understand manner with the appropriate tools enables operations to influence optimal outcomes. Solving problems quickly, therefore, is essential to meet customer demand and to be competitive.

With effective ways to explore — you will deliver much more. Modern MES software enables manufacturers to easily exchange real-time information between the shop floor, through the enterprise and up to the executive boardroom. With an integrated infrastructure, manufacturers can utilise available operational data to maintain and improve quality standards, adopt best practices and achieve operational excellence.

Many leading companies have adopted MES software solutions to increase profitability, reduce variability and improve overall asset utilisation. Such data management capabilities puts information at your fingertips, anytime and anywhere, by collecting and organising process data across disparate systems and distributes it across the enterprise to make it easy to optimise the value of the data.

Software solutions that collect and store large volumes of real-time and historical data from process control, manufacturing operations, laboratory systems and business systems form the foundation for an enterprise-level platform. Rich calculations, analytic and visualisation tools unlock the data's value, allowing operators to compare performance across a range of assets and disseminate best practices to processes and sites that require improvement. As a scalable and flexible solution, the data historian software delivers enterprise-wide global deployments across hundreds of locations.

MES software solutions also provide secure access from any device connected to the network without

the need for client-side add-ins or software installation. Users have the ability to choose between desktop, laptop, tablets and smartphones, so they are always in touch with their production data, anytime and anywhere. Such solutions intelligently help to provide context that drives effective analysis, builds asset hierarchies that simplify monitoring and diagnostics, as well as expands batch and event visualisation. With dynamic gauges, dials and other dashboard elements, operations can deliver performance dashboards that are lightning-fast and quickly convey important information in one platform.

Chemical companies around the globe use these MES tools to make better and faster decisions, driven by a comprehensive view of production operations to maximise asset effectiveness. Adding context to analyses helps identify root causes, such as batch variability, for faster problem resolution and enables operators to take corrective actions to preserve product quality.

The advantages of MES software solutions include:

- Searches across a wide set of data sources and content types, including production records, alarms, graphics, trends, ad hoc tag lists and comments to locate all pertinent information
- Looks at data by production segment, event or batch within a single tool
- Events are flexible and users can plot periods of time where operators have placed comment markers or where alarms exist
- Gives mobile workers, managers and executives access to current production information on their laptops, desktop, tablet or smartphone with a true thin client solution
- Produces dashboards tailored for different users' needs within minutes
- Understands batch variability



more easily; over time, within batch and batch-to-batch

### Explore. Dream. Discover.

Manufacturers are constantly searching for ways to preserve margins, improve product quality and make optimal use of global assets. Now is the time to ensure your operation is fully equipped with intelligent MES technology to better understand what is going on in the plant.

Interestingly, Mark Twain, the American author (1835 – 1910), once said: “Twenty years from now you will be more disappointed by the things you did not do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbour. Catch the trade winds in your sails. Explore. Dream. Discover.”

Having access to secure production data from any device connected to your network without the need for client-side software is no longer just a dream, but a reality. Being able to see the bigger picture and discover vital information helps solve production issues fast. An effective MES system lets you visualise processes, event and alarm data in a consolidated view, so each user can share data from their production operations.

MES software solutions incorporate features for batch visualisation and help spot process and product variation to identify poor quality batches. Contextual data can now be viewed alongside process data to provide production teams with the required information to maximise production assets — a truly intelligent solution to explore and discover ways to make more profit.