



## Is it time for MES?

When you're considering an MES solution there are a number of important questions that need to be answered before you can tell whether it's the right time to implement MES, and to help you decide what constitutes the right solution to benefit your particular organization.

As an independent Systems Collaborator with a wealth of SCADA and systems integration expertise PARASYN is in a unique position to give impartial advice on how to select the right blend of products, how to avoid costly information bottlenecks, and what you need and what you don't to get the most from investing in an MES solution. Below are answers to some commonly asked questions to help you tell if it's the right time to develop an MES solution across your organization.

### What is MES?

This may seem a unusual question to consider if you're already thinking of implementing an MES solution, however it's very pertinent to selecting the right blend of products to deliver the information you need. The term MES has been around for a number of years and is often misconstrued (and indeed is presented by many software vendors) as simply a specific set of tools that bolt on the side of SCADA systems. It is more accurate however to describe the overall integrated enterprise-wide information solution as MES. If it delivers real operational information from across an organization in a readily accessible format from which informed management decisions can be made, it's a true MES solution.

### Do I need to add specialist MES tools to my solution?

Not necessarily. To easily analyse and interpret specific information a specialist MES tool may be required, however this function can often be provided via feature rich ERP (Enterprise Resource Planning) tools.

### Who will it benefit?

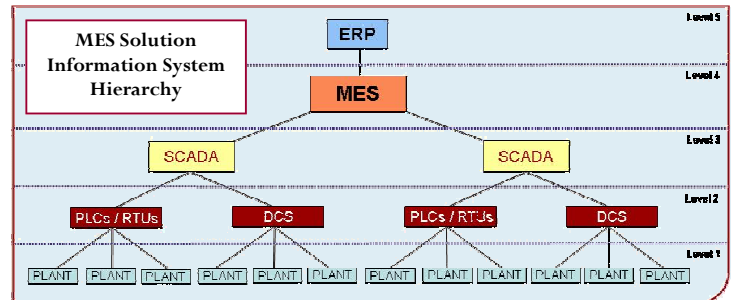
MES (Manufacturing Execution System) is a bit of a misnomer. Although as the term suggests it is particularly applicable to manufacturing industry, an MES style information solution can benefit any organisation where KPIs (Key Performance Indicators) need to be monitored and operational decisions need to be made based on information extracted from a regularly monitored series of processes. It can therefore benefit a diverse range of organizations across a wide range of industries.

### Isn't MES just an extension of SCADA?

No, although closely related MES and SCADA are separate entities. A common mistake is to simply add an MES tool to an existing SCADA solution and expect it to deliver real benefits to KPIs. The result rarely supplies all the information required to make informed management decisions and often degrades the performance of existing systems. MES and SCADA are complementary not conjoined technologies and to perform their tasks efficiently they need to work as separate but closely integrated entities within an overall enterprise information solution.

### What's the difference between SCADA and MES?

A SCADA system typically allows you to monitor and remotely control a specific set of plant engaged in a production process. It can warn of abnormalities in that process and in the course of its operation collects mission critical information which can then feed the overall MES solution. MES is effectively one information layer above SCADA. It extracts, consolidates and presents information for analysis from multiple processes across an entire enterprise. It will often be consolidating data from several SCADA systems in different operational locations, and thus has to store, order and analyse very large volumes of data.



### What Components are there in an MES solution?

MES is a composite solution made up of a number of separate components including SCADA systems and ERP tools. It is important that you select the right blend of products that compliment each other and which can be closely integrated together. The most crucial element is the MES data historian from which the solution is effectively powered. The historian extracts real-time process data from multiple SCADA systems across the organisation and stores it on-line for analysis by ERP tools or where necessary specialist MES tools.

### What should I consider when selecting a Data Historian?

An efficient MES solution pumps vast amounts of real-time data into it's historian where it's stored ready for analysis, and this necessarily needs to be maintained as a separate data repository. It is the most crucial element in the overall MES solution as the historian must act as much more than simply a reservoir in which to dump raw process data. So information can be retrieved and analysed quickly, and ERP tools don't become choked with a flood of irrelevant data, the historian must be capable of not only collecting, storing and retrieving large amounts of information, but also ordering and organising it into its proper context. A standard relational database can neither accommodate nor process data in the volume required, and therefore the heart of any efficient MES solution should always be a specialist, high performance historian.

### What are the potential benefits of an MES solution?

By providing real process and production information across an entire organization on which to base management decisions an MES solution can help deliver quantifiable improvements to key performance indicators. Specific benefits depend on the type of industry and the nature of the business, however MES typically brings:

- A shorter overall manufacturing cycle.
- Lower work-in-progress inventory through detailed material control and actual cost tracking.
- Shorter customer lead times and improved on-time delivery rates leading to a lower finished goods inventory (stock).
- More accurate quality control consistent across the whole enterprise.
- Higher customer satisfaction levels through on-time delivery of products of a consistent quality.
- A more efficient use of plant across the enterprise leading to a higher return on operational assets.



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