



Manufacturing Execution Systems and the Human Factor

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By James Wood, Director, Factory & Activplant Product Lines at Aptean – a leading provider of CRM, ERP and Supply Chain software for businesses – discusses the benefits of bringing humanity to your workplace MES technologies.

In an age of increasing technological sophistication in manufacturing processes, human beings are the most important and valuable resource a company possesses. It is still this human element that dictates true operational efficiency – that is, if it can be optimally integrated into a business' production practices.

A manufacturing business will often measure its efficiency output by using a metric such as OEE – Overall Equipment Effectiveness. To maximise OEE and reveal hidden capacities, a business should use a number of real time Key Performance Indicators (KPIs) for evaluation: quantities produced, lead times, quality and substandard goods, and periods of disruption.

Incorporating People into Processes

Effective MES software directly involves production personnel. It is not about simply having staff to oversee the production processes, performing simple repetitive tasks in a continuous cycle; it is about empowering these staff with MES solutions that put the spotlight on them, their abilities and their personal performance levels.

This new approach is known as 'human MES'. With the human MES approach, everyone within a company – from the factory floor through to mid and senior level management – can contribute their expertise to the benefit of production and, ultimately, profitability.

In factories, it is the people that know 'their' machines best, and the people who are best positioned to inform management on work cycle improvements. Businesses should treat this expertise with the value it deserves.

The best human MES solution gets operators involved from the start and makes it easy to use the system. The software can automatically collect and collate all the data acquired from the production process and visualise it on a web-based platform that helps staff address every performance indicator from every machine and process.

The information will be available to factory floor staff in real time through easy-to-use terminals, which can allow operators to monitor current efficiency by calling up relevant equipment KPIs at the touch of a button. It provides instant staff motivation, enabling them to see if they are hitting targets, whilst allowing them to monitor production schedules and immediately disclose or act upon any errors or disruptions that are causing downtime or quality defects.

This removes any morale-sapping doubts that result from a lack of transparency between the factory floor and management. Not only that, it gives staff the personal satisfaction of knowing that actions they have taken have made a genuine difference to the company – and that they are being noticed by their supervisors.

Production Efficiency = Cost Efficiency

Many manufacturing plants are faced with spiralling costs and increasing competition. Even marginal improvements in their production efficiency can yield substantial financial gain. A business could face any number of problems, or even problems they don't yet know exist: a need to improve production yields, reduce overtime caused by machine downtime, or avoid unnecessary capital expenditure to rectify a batch of defective goods.

All of these must be considered whilst maintaining the ability to satisfy customer demand. But making these improvements is rarely achieved through gut instinct. In such a competitive environment, taking a chance with such an approach can leave a business in dire straits and reversing these punts can be incredibly difficult.

That is where the successful combination of people and technology really comes to fruition. If adopting a purpose-built human MES solution could drive efficiency by even just 5-10% – which could equate to savings of hundreds of thousands of pounds – then why wouldn't you consider it?

More than Software

A human MES solution is designed to be more than just a software system. It is designed to encourage a more holistic approach to refining manufacturing processes – achieved by encouraging communication and operational optimisation based on intelligence obtained through the integration of man and machine.

The system gives employees the opportunity to incorporate their knowledge and experience into an IT-supported platform that educates and motivates them. Happy, motivated employees plus sophisticated, tailored software. The final result? Efficiency, profitability and business longevity. Often, a business without such an optimised solution does not realise the gains that can be achieved or the problems that currently exist. By contacting a specialised provider of unique MES software, your business could be outperforming the competition with its own human MES solution in as little as six to eight weeks – from software implementation to staff training.