



## **Training the spotlight on Overall Equipment Effectiveness (OEE)**

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OEE is by no means a new concept but it is growing in importance in manufacturing companies everywhere and has a long way to go before it is used as standard practice for monitoring and improving production processes. Although most manufacturers have heard of OEE and many have started to use it, there is still a significant gap in understanding within the industry and an even bigger gap in terms of usage. Making OEE a standard practice in all manufacturing organisations is the way forward because OEE is relatively simple, practical and above all incredibly effective in measuring production performance and identifying areas for improvement.

Improving OEE has a direct link to profitability. After all, increasing OEE percentages indicates greater output from the same overheads. Immediately this has a positive impact on the bottom line. Also, increasing OEE can obviate the need for new investment in manufacturing lines allowing them to maximise existing plant rather than buying new.

Setting targets for OEE may be tricky but it is useful to give a manufacturer something to aim for. Knowing where you are now is the first goal, and it is almost always surprisingly lower than people expect. The next step is setting improvement goals. The world class bench mark is 85 per cent. Most would find this target a challenge as the average OEE today is somewhere in the region of 60 per cent, with typical figures ranging from 40 to 85 per cent.

So, the challenge is clear and manufacturers now need to embrace OEE and all it can deliver. They need to capture three key types of information from which to

calculate their OEE. Availability shows the stoppages in the production line and gives reasons for these downtime events. Performance figures show the level of actual versus possible production and, finally, quality information specifies the level of waste in the production process at any given time. Once this information is collected and analysed the OEE can be calculated for each and every process.

The benefits of OEE are patent and simple so why are so many manufacturers not using it to their advantage? Management commitment to resourcing this practice is the biggest barrier. Collecting and analysing the data takes a significant effort. The data has to be collected at the process by the operators, these people are busy and there is always a question mark around its accuracy if manually collected. On the other hand hooking up data feeds directly to the production lines can be expensive and manufacturers are only going to do that if they have belief in the payback. It's a kind of chicken and egg – do it in a low cost way with unreliable results or commit to a big investment with a questionable payback.

The best approach is to pilot with manual methods in an important but limited area. Do this manually at first with good calibre support resources. Prove the value and understand the issues. Later the practice can be rolled out. Early on plan for how a system will support the data capture and analysis process. The problem is most software tools either work at the simple manual number crunching level or at the more sophisticated automation level. We need tools that bridge the gap, starting with a manual project and then adding automation data sources as and when necessary. This increases the accuracy of the data and reduces the operator load.

The added value of our approach is that other data can be captured by the system, like quality data, giving greater power to the OEE data. For example, joining quality data and availability data from OEE enables a manufacturer to look at issues such as the affect of line stoppages on quality. Although the user might believe there is a correlation between the two activities they would not have been able to support their supposition with any facts and figures in the past.

In conclusion, OEE can and will deliver real value to manufacturers and represents a powerful approach to process optimisation. It makes sense that manufacturers use the many sources of data that are available to them to provide real information on

which to base their process decisions. Lighthouse's approach to OEE supports users at every step of their journey to a fully automated and integrated manufacturing information system.