



Necessary evil?

Poorly managed MRO stores are costing plants serious money. Brian Tingham examines systems, methods, equipment and services that claim to help plant engineers

Maintenance workshops and plant stores generally don't enjoy the best of reputations when it comes to efficiency, speed and cost effectiveness. And no wonder: lean engineering and training consultancy MCP reports that its spare parts audits, which assess plants' operations against best practices, show average scores around the 55% mark. Not good, given that world class is at least 75%.

That matters a lot. As MCP managing director Peter Gagg explains, you can think of your MRO (maintenance, repair and operations) stores as a goldmine waiting to be tapped. "You could save an investment of, say, £10,000 one hundred times over in just two years. That's around £1 million for a store issuing, say, £200,000 [of parts] per year."

How? "Typically, stock turns are around three to five per year, where they should be nearer one. So I would expect to save 10% per annum of that £200,000 spend, as well as a one-off windfall of about 10–15% of total stock value, because stock levels are almost always too high."

And the good news, he says, is that, generally, plant managers don't have to do a great deal to achieve this reward. For Gagg, it's all about taking it seriously, applying standard lean methodologies, coding and recording parts using an electronic system, and training the individuals concerned.

It's not difficult to see the potential. Problems with

which we're all familiar will include: disorganised stores, meaning that time is wasted finding items; the right parts not in stock; conversely, multiple duplicates resulting from poor coding and cataloguing; and obsolete or redundant parts, because finance won't release them. And we've all seen the paper-based systems and poorly motivated storemen, near the end of their careers or sidelined from operator or technician roles.

Poor parts practice

Beyond these, parts are too often not priced at the right value (they may even show zero, because they were bought as part of a project so, from an opex perspective, they're now free). But the result is confusion over plant lifecycle costs, which impacts business decisions around machine replacements.

Clearly, the ripples go out much further than stores alone. Think about procurement: typically, MRO inventory represents 15–20% of spend for a manufacturing site, yet that can account for 80% of the procurement department's workload. No wonder a growing number of plants are seeking to outsource the problem, seeing it as a cost-saving opportunity – especially as internal transaction costs may exceed the product price, which itself might also be reduced under a third party, with more buying power.

So goes the theory and practice can reflect it perfectly – but it's good to be aware of the pitfalls,

Above, centre and below right: Propeller's technology can transform the management of MRO stores and parts provision

too. Gagg warns that few outsource companies can provide a site with all the MRO parts it needs. "They might be specialists in mechanical parts, but then have to pay more by going direct to OEMs for electrical components. Also, at a local level, plant engineers might see a problem that they could solve by getting a part from a local supplier in 30 minutes, whereas the third party might take three hours – that's a lot of expensive downtime."

That said, there are plenty of good and successful MRO outsourcers. One such is Eriks, and sales director Paul Lynch explains that his organisation has taken over the management of engineering stores at both ends of the scale. "We see everything, from unmanaged Aladdin's caves to highly systemised shops, with barcode-based systems for booking parts in and out, often as part of their CMMSs [computerised maintenance management systems]. We also see shops managed by procurement teams, in which case they're doing a good job of keeping costs under control, but no one is equipped to provide a service to the engineering team."

Lynch sees Eriks' role as first auditing plant stores' requirements, then introducing a robust

system for controlling the receiving, issuing and checking of items in the stores – if one isn't already in place – and then treating plant technicians as customers. "Our service is based on agreed SLAs [service level

agreements] and KPIs that dramatically improve service and allow us to monitor and measure performance, and so look to instigate continuous improvement programmes," he asserts.

Example KPIs include OTIF (on-time, in-full) parts delivery, percentage stock accuracy and stock outs. "Some plants already do this, but the hardest thing for them is to maintain good internal relationships, when engineers and stores guys always blame each other," comments Lynch. "So we use a variety of tools to find the root cause of, for instance, why a particular spare, required in an emergency, wasn't on the shelf. Was it the first time this problem had come up? Was the lead time from the manufacturer not in sync with the frequency of use?"

"The objective has to be minimising or eliminating production losses, and we see ourselves as being an integral part of a plant's maintenance improvement process." And he adds that the firm also makes that work by offering on-site workshops, where Eriks' application engineers work with plant engineers to solve problems. "We also look for what we would deem to be over-consumption. We're after a long-term relationship, so it's in our interests to point out, for example, bearing lubrication problems or

misaligned pulleys causing trips to the stores."


Other organisations offering systems and/or services include Propeller and Barcode-IT. Peterlee-based Propeller, for example, has just received £750,000 worth of funding to massively expand its 10 year-old business, which centres on two MRO systems – a point-of-use parts vending machine, dubbed Pro-Vyda, and an RFID-based stores management system, called Pro-Pod.

Propeller CEO Tony Goodwin explains that Pro-Vyda gives access to inventory close to production lines, using swipe cards, key fobs or biometrics, while Pro-Pod provides for automatic management of central engineering and maintenance stores. He also says that the firm offers MRO services ranging from managing the lifecycle of plant machinery to VMI (vendor managed inventory) and providing a central point of call for MRO parts logistics.

Users include TRW, BAE Systems, precision components firm Presspart, bearings and steering systems supplier NSK, global batteries brand Rayovac and savoury snacks company Intermark. "Propeller has achieved MRO spend reductions of up to 40% and six-figure savings on obsolete parts and indirect material costs," claims Goodwin.

Meanwhile, Barcode-IT's flagship system is Dex-MRO, which the firm describes as being "designed from the ground up to keep track of every part, its location, usage, minimum order quantity, supplier and delivery lead time". For management, the system reports when minimum parts levels are reached and provides details of re-order quantities, as well as primary and other suppliers. It also tracks cost centres, works order numbers and outstanding orders. Then, for technicians and storesmen, it guides them to the correct stock locations, using barcode-based mobile data terminals, adds parts to works orders and down-dates inventory.

At the end of the day, none of what these companies do is particularly difficult. Nor is seeing for yourself the scale of your MRO improvement potential. As MCP's Gagg puts it: "If you know the min and max parts levels, just check to see how many are above the maximum. Calculate the excess value and then work on a stock turn of one. Those two points alone will give you a good indication."

Convincing management, however, is another matter entirely. 



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