



REPORT

Maintenance matters

Reducing downtime in four key steps



MRO: Maintenance matters – four steps for success

Introduction

The correct maintenance regime can keep machinery and business operations going. But it won't happen by osmosis – it needs to be part of a strategy for long-term success.

Around **42% of unplanned downtime is caused by equipment failure**. There will always be extreme circumstances where a machine stops functioning with no prior warning but for the most part, a robust maintenance strategy can help limit such eventualities.

In the **Indirect Procurement Report 2021**, 44% of procurement professionals said that maintaining ageing assets was a key business challenge, while 35% said they faced pressure to improve asset performance. Whether it's a brand new, high-tech machine or one that is 20 years old, the right maintenance regime is absolutely critical.

Innovations like the industrial internet of things (IIoT) have meant that some machinery can monitor itself and summon help when needed. According to Made Smarter UK, 5G sensors will eventually become an invisible technology. **“It will work silently in the background, enabling other technologies** – such as mobile robots, autonomous vehicles, the IIoT, augmented reality for maintenance technicians, and virtual reality apps,” writes Made Smarter's Industrial Digital Technology Adviser, Kevin Smith.

The word 'eventually' is significant here. Today, many industrial businesses remain focused on getting the maximum return from older equipment. Even without internet-enabled machinery or sensors, it is still possible for engineering and maintenance teams to pay attention to what their machinery is telling them.

RS Components has successfully helped many engineering companies to develop maintenance strategies designed to do just that. Here we outline four steps to a more nuanced approach to maintenance that can help identify and rectify challenges before they become problems.

1: Lubrication choice

Understanding why things fail is a key part of avoiding failure in the future. Basic asset-care regimes like clean, inspect, lubricate and tighten can help engineers to spot any early signs of failure. The next step, following condition monitoring, needs to be condition-based maintenance.

Additional assessments, including ensuring that the right lubricant is used for a particular machine are much-needed steps in this process. Likewise, avoiding any potential over or under-lubrication by ensuring the optimal reapplication timescales. That will depend on regular monitoring, especially in the early stages of establishing the process and application timetable.

“This kind of insight into the health of your equipment allows you to react accordingly,” says Rob Webster, RS Components’ Head of On Site Condition Monitoring and Asset Management. “This can help **reduce the risk of unscheduled outages, avoiding intrusive downtime**, while maintaining machine-performance optimisation.”

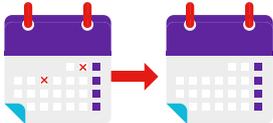
Predictive maintenance programmes can offer a **10-fold increase in ROI, 25%-30% reduction in maintenance costs**, 70%-75% decrease in breakdowns and increased uptime of 35%-45%.

Benefits of predictive maintenance programmes:

- 1

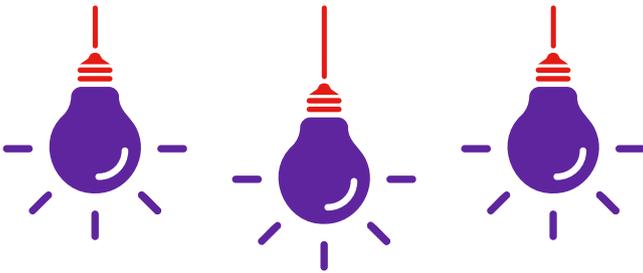
10-fold increase in ROI
- 2

reduction in maintenance costs
- 3

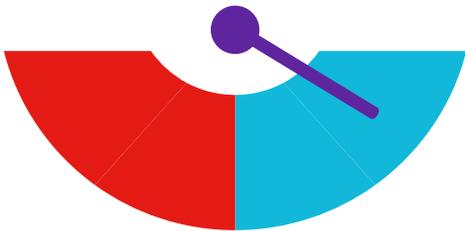
70%-75% decrease in breakdowns
- 4

Increased uptime of 35%-45%

2: Energy management

**Installing LED bulbs
can result in...**



80%-90%



**...less energy
being consumed**

Solid energy management protocols can help keep costs under control while improving performance and reliability. Such plans even have the scope to assist with environmental and sustainability targets, if appropriate.

No two businesses are exactly alike and all have their own particular needs where energy is concerned. Yet there will be some considerations that apply regardless of size, sector or specialism – including energy efficiency, productivity and employee health and safety. RS Components is well practised at helping organisations find energy management solutions that meet a wide range of requirements. RS uses Carbon Trust energy loss calculations to help achieve cost savings for customers by spotting opportunities to reduce energy use and CO₂ emissions.

In the case of one utility business, RS was able to **assist in the public rollout of LED bulbs to domestic customers, which cut costs and reduced demand on the grid.** LED bulbs use 80%-90% less electricity than standard ones, creating real opportunities for reducing energy demand and cutting domestic bills.

3: Condition monitoring

Downtime **costs UK manufacturing businesses more than £180 billion every year**. Faulty machinery is responsible for around £31,000 in losses per company, and 70% of businesses agree that downtime erodes customer satisfaction.

Older machinery in particular, often needs higher levels of care and maintenance. Historically that was a completely manual process. An engineer would check machines as part of a routine schedule and service them when appropriate.

It is now possible to retrofit almost any production environment with smart sensors that feed data into an analytics platform. This effectively blends existing industrial assets with the latest technology like the IIoT and smart sensors, making it possible for machinery to monitor itself and report any performance issues.

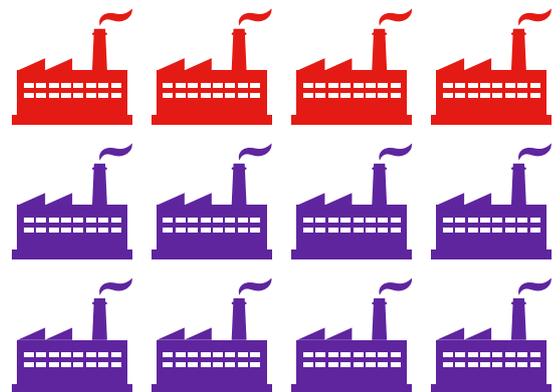
RS Components carried out this kind of project for a major pharmaceutical company, which produces £1 million worth of plasma products

every day. The process helped to **predict production failures caused by the breakdown of sterilising oven fans, avoiding a potential £4 million outage**.

Even without relying on cutting-edge technology, condition monitoring offers significant improvements in machine performance and maintenance. All industrial machinery generates heat, noise and vibration. Within normal operating parameters, that's fine. But levels that start to exceed expected limits could be an indication of impending trouble.

Machinery with rotating parts, such as gearboxes, fans, motors, pumps or a host of other active equipment, can benefit from ongoing vibration analysis. Meanwhile, a routine analysis of oil extracted from cutting or grinding tools can flag up any unexpected residue or traces of metal.

More than £180 billion...



...is lost to UK manufacturing businesses every year through downtime

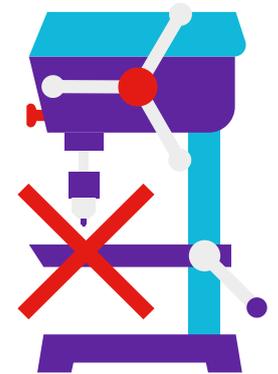
4: Workplace organisation

In 2018/19, **147 people were killed at work and around 580,000 workers sustained a non-fatal injury**. Apart from the obvious need to protect workers, these sorts of incidents can prove damaging for companies in both a financial and reputational sense. Those workplace accident figures come from the Health and Safety Executive (HSE), which has also estimated that the costs of work-related injury and ill health are running at around £15 billion per year.

The issue of safety in the workplace has probably never been as prominent as it was during the COVID-19 pandemic. The need to operate socially distanced, safe working environments has meant reorganising entire workshop settings in many cases.

RS Maintenance Solutions can help ensure the right tools and equipment are in the right part of the workshop at the right time, for use by the right people, thereby reducing lost production time. We achieve this through a combination of workshop design and fitout, to maximise the overall use of space in a safe and convenient way. We also offer equipment isolation, precision maintenance tooling and calibration.

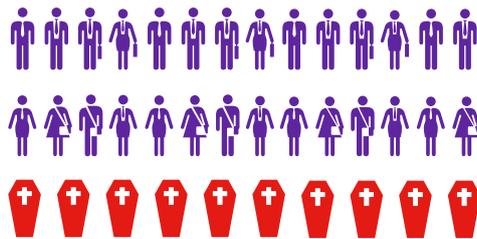
In environments where frequent recalibration is needed, we can also streamline processes using our on site RS VendStock® solution as part of our calibration service. RS Vendstock® provides a safe, controlled environment for storage, testing and recalibration within our United Kingdom Accreditation Service (UKAS) approved facilities. Tools can be deposited there, collected by our service engineers and then recalibrated and returned as needed. It can also be used to put tool-access restrictions in place to stop uncalibrated products being used.



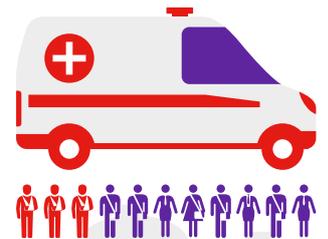
Average losses of £31,000 per company...

...are due to faulty machinery

147 people
were killed at work in 2018/19



580,000 workers
sustained a non-fatal injury



Conclusion

Having correctly installed, aligned and maintained machines and components will help eradicate a high percentage of failures, reduce unexpected downtime and control costs.

Getting this right can seem like a daunting undertaking but with the right outlook and the right partners, it needn't be. With experience in helping businesses formulate the right maintenance strategies for their needs, RS Components is well positioned to be part of that long-term success for its customers. Whether you're getting started in condition monitoring or looking for IIoT solutions, wanting advice on energy efficiency or lubricants, in need of help with workforce safety or workplace fitout, our depth of knowledge sets us apart.

RS Components has expert advisors on hand to talk through these and related issues and discuss how we've helped organisations like yours. One of our team will be in contact shortly.

If you have been forwarded a copy of this report and you would like to speak with one of our expert advisors, please email us at:

connectedthinking@rs-components.com

For more information and expert insight on the subject of indirect procurement and MRO supplies, please visit: [rs-connectedthinking.com](https://rs-components.com)

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