Predictive Maintenance

Maintenance fit for the future

Predictive Maintenance enables a maximisation of your assets through analysing sensor data to provide an intelligent profile on the condition of your equipment.
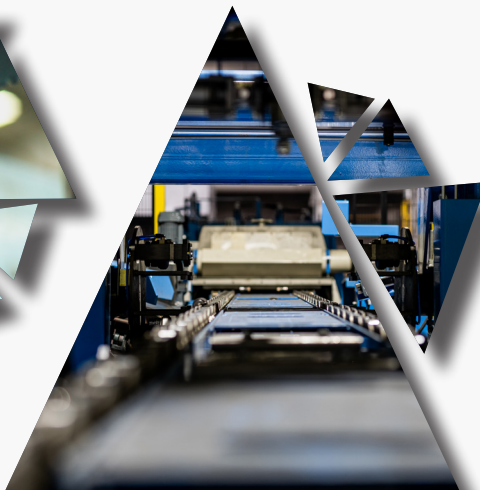
Changing parts too early means a loss of value, while breakdowns cause costly downtime which can impact many other areas of your business.

Predictive Maintenance is a strong prospect for seeing ongoing return from increased uptime, reduced maintenance costs and improved quality and efficiency.

Unlock operational potential

Reduce
maintenance costs

Increase
productivity and
efficiency

Reduce spares
inventory

Powerful
machine learning

Machine learning enables autonomous analysis which drives Predictive Maintenance. The system will continue to develop its understanding of the data markers which are relevant for desired outcomes and proper functionality.

By presenting your operators with accurate information and actionable alerts regarding equipment condition, planning and executing maintenance becomes increasingly efficient.

Data value

One of the best ways to derive value from your data is to increase the uptime of assets.

Predictive Maintenance is a regimen for moving to maintenance based on condition rather than reacting to breakdowns or taking equipment offline on a routine basis following manufacturer recommendations.

Predictive Maintenance enables a maximisation of your assets through analysing data from your existing sensors to provide an intelligent profile of the condition of your assets.
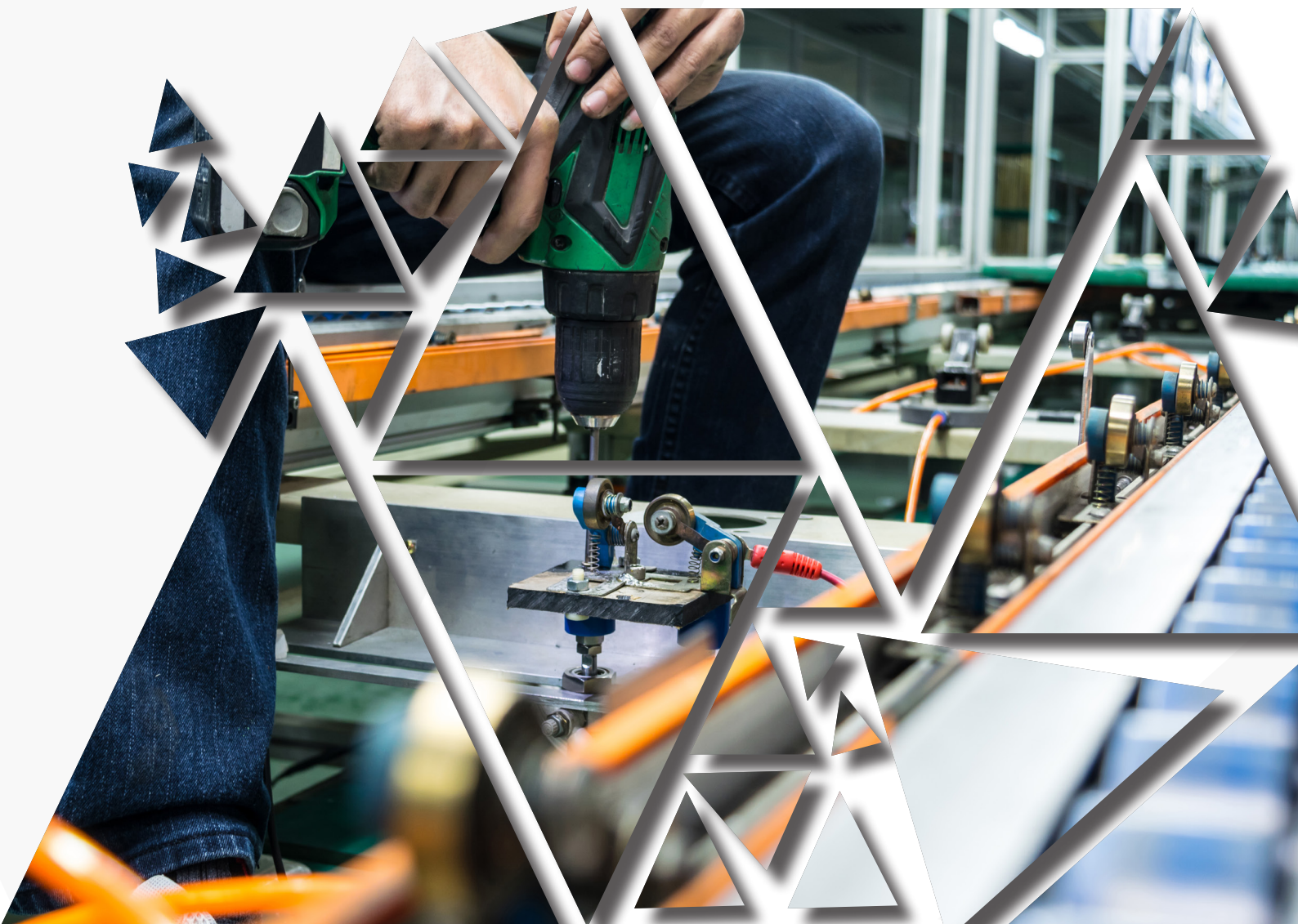
The true cost of unplanned downtime

Downtime is the bane of any manufacturing operation, and unexpected downtime can limit your potential for profit, capacity and efficiency.

On average manufacturers experience:

- ► 25 incidents of unplanned downtime a month per facility.
- ► 27 hours of monthly unplanned downtime per plant.
- ► An 8% loss of annual revenue through unplanned downtime.

The average cost for an hour of downtime for these same firms is roughly £300,000. When considering how many hours of downtime are experienced, and the costs relevant to your business, the impact is certainly considerable.

Minimial downtime, maximimum value

While Predictive Maintenance enables accurate equipment condition reporting and therefore a considerable reduction in unplanned downtime, it also provides ROI in maximising asset value and reducing undue operator workload.

By undertaking routine maintenance or following manufacturer recommendations, there is a likelihood of relinquishing value in assets, parts and equipment with remaining useful life. Predictive Maintenance not only provides the ability to gain an accurate understanding of your assets current condition but also the confidence to repair and replace at the optimum time for your operation.

Changing parts too early means a loss of value, while breakdowns cause costly downtime which can have a wide-ranging impact across all areas of your business.

Unique digital fingerprints

Predictive Maintenance is currently being utilised to great effect across the spectrum of manufacturing industries. Across these diverse disciplines, the technology utilises the same methodology to achieve its unique and powerful results - digital fingerprints.

The machine learning algorithms take in data such as pressure, current, torque and vibration to develop a unique digital fingerprint of normal asset behaviour. When your assets deviate from this expected pattern, key insights can be derived.

With a deep and automated understanding of asset behaviour, issues can be accurately diagnosed and highlighted well ahead of the expected failure of the asset. This conditional reporting combined with timely alerts provides confidence in your operation and the toolset to create a maintenance regimen which is fit for the future.

Confident maintenance

Without Predictive Maintenance, considerable inventories of spares are required for the purposes of reacting to the unexpected or to undertake routine maintenance. Instead, detailed reports from the system provide the ability to order and take delivery of parts just in time, reducing associated capital costs in storing the required spares to keep your operation running.
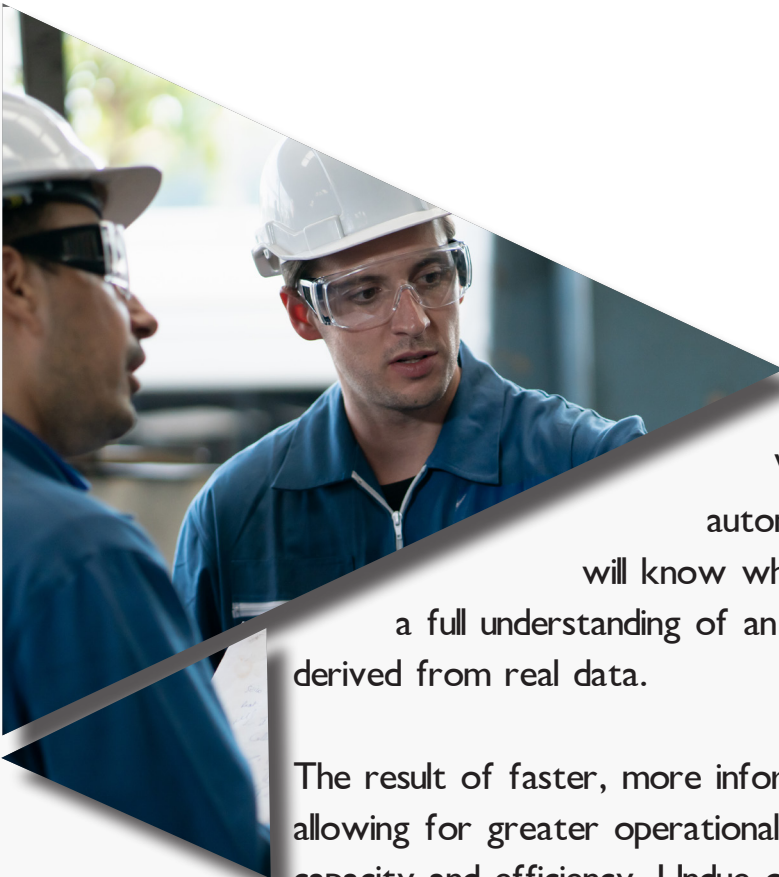
Confidence in the condition of your assets offers the ability to plan and execute maintenance based on real data derived from your operation.

Agile decision making

With algorithmic diagnostics allowing for automated recommendations, your operators will know when to undertake crucial maintenance with a full understanding of an assets condition and specific action points derived from real data.

The result of faster, more informed decision making is increased uptime, allowing for greater operational consistency and as such increased capacity and efficiency. Undue operator workload is also reduced through greater diagnostic capabilities which enable faster and more accurate decision making.

Quality assured

Quality issues relating to equipment malfunction or degradation are mitigated with Predictive Maintenance. Often quality issues are difficult to diagnose, requiring a considerable time investment, reducing capacity as the problem is investigated and resolved.

Instead, Predictive Maintenance can alert operators to deviations in expected behaviour and as such reduce the time required to identify and resolve these issues.

Key outcomes

▶ Transform enterprise-wide data into intuitive visualisations

▶ Gain immediate insights into operational and asset issues

▶ Mitigate the risk of asset failure or malfunction

▶ Maximise asset value, uptime and quality

▶ Minimise downtime, unexpected downtime and reduce associated costs

▶ Operational excellence and sustainability

▶ Manage IT/OT convergence in a single environment

▶ OT integration into MS Azure

▶ OT integration with Power BI and MS Analytics

Astec

Astec IT Solutions delivers world-class Smart Manufacturing Solutions for the Consumer Packaged Goods, Food & Beverage, Chemicals, Oil & Gas, Life Science and Utilities Industries.

With expertise spanning Industrial IoT, MES and Automation & Control, Astec works in close collaboration with clients to ensure desired outcomes in operational efficiency, flexibility and uptime.

As the sole Premier Solution Partner for GE Digital in the UK, Astec has an unmatched depth of knowledge with a high-calibre team of Microsoft Certified Professional software engineers.

With a dedicated support team and trusted solutions, your operation is fit for the future with Astec IT Solutions.

GE

ptc
partner network

Gold
Microsoft
Partner
Microsoft

QMS ISO 9001 : 2015 REGISTERED
Certificate No:14129786

QMS ISO 27001 : 2013 REGISTERED
Certificate No:376682021

Continue the conversation. Get in touch with our expert team:

+44 (0) 1543 888 134
www.astecsolutions.com
enquiries@astecsolutions.com

Astec IT Solutions ltd, Edrice House, Towers Plaza, Wheelhouse Road, Rugeley, Staffordshire, WS15 1UW