

Five ways Industry 4.0 could transform your industrial operations

Digital technologies have already driven radical change in many sectors, from retail to transportation. The power of connected devices, high speed data processing and advanced analytics is now reshaping industrial activities too. Here are five areas where your business could see significant, and perhaps unexpected, benefits from Industry 4.0.

1 A healthier, safer workplace

Digital technologies can make industrial processes more stable, more predictable and more transparent. Their use can improve the working environment for personnel, reduce the risk of accidents and allow organisations to respond more effectively to problems.

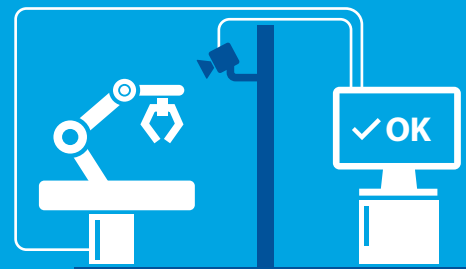
Automation, remote monitoring and control capabilities mean personnel spend less time doing risky tasks or working in noisy, dirty or dangerous areas. Digital technologies help staff work safely and efficiently, standardising operations and workflows and ensuring compliance with safe operating procedures. Digital tools can automate, simplify and clarify emergency processes too, helping people get their responses right when things do go wrong.



2 Greater reliability

Giving machines the ability to monitor their own health and performance is one of the most exciting – and accessible – applications for Industry 4.0 technologies. Robust, inexpensive, networked sensors can monitor multiple machine parameters, from the temperature of motors to vibration levels in bearings and other components. Smart algorithms can process that data automatically, using it to identify developing problems before they lead to shutdowns and unscheduled stoppages.

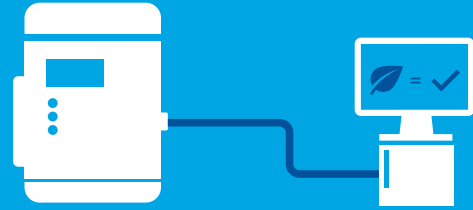
The transition to predictive maintenance has a host of benefits for industrial operations, helping companies reduce productive time lost to scheduled and unscheduled stoppages, and cutting maintenance, repair and overhaul costs. It has important safety benefits too, reducing the need for high-pressure, time-critical interventions where accidents often occur.



3 Improved sustainability

Industry 4.0 allows companies to take control of their environmental footprint. Smart monitoring systems can reveal precisely where, when and how an operation uses energy, water and other resources. Real time dashboards can automate environmental performance reporting and the calculation of KPIs.

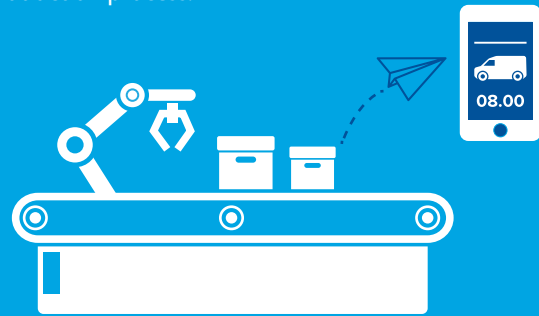
Advanced digital tools help organisations reduce their environmental impact too. Advanced analytics can uncover the most efficient process operating conditions, balancing the challenging trade-offs between energy use, throughput and yield. And smart, automated control can keep processes running at maximum efficiency as demand varies or conditions change.



4 Happier customers

Rich, accurate data isn't just useful within an organisation. It's valuable for customers too. Connected organisations can provide better information to their customers – like exact delivery dates or clear information about the progress of their order through the production process.

Advanced monitoring, modelling and simulation techniques can give companies an unprecedented level of insight into their available capacity and production constraints. That can transform planning and pricing decisions, and ensure organisations always deliver on their promises to customers.



5 Higher profits

Ultimately, Industry 4.0 helps industrial companies do things better, with greater efficiency, higher productivity, increased flexibility and less waste. Even businesses that have already spent decades refining and streamlining their operations are finding new ways to squeeze significant extra performance from their processes using the power of digital techniques.

High-performing processes, a well-supported and motivated workforce and happy customers help lift sales while cutting costs. All of these boost the most important performance indicator of all: the bottom line.



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