

PRESS RELEASE

Making productivity sustainable with Pharma 4.0

David Bean, Solutions Group Manager at Mitsubishi Electric looks at how industrial automation can improve the environmental footprint of pharmaceutical manufacturing activities.

Smart pharmaceutical manufacturing can do more than drive up productivity. It can transform the lives of patients by providing access to high-quality medicines while also improving the sustainability of operations and contributing to net zero policies. As a result, pharmaceutical companies can help to protect both people and the environment.

The future of pharmaceutical manufacturing, also known as Pharma 4.0, is based on data-driven technologies. These can generate in-depth knowledge on processes and activities, share this information with key equipment and automatically act upon this intelligence in real-time to optimise entire production lines.

This digital transformation of pharmaceutical operations can make businesses more lean and agile, delivering key opportunities in a number of areas beyond the shopfloor. In particular, smart manufacturing can help companies improve their environmental footprint.

The pharmaceutical industry is considered a major emitter, producing 55% more greenhouse gases than the automotive sector¹. As a result, businesses in this market will need to invest in key actions to help facilitate their journey to net zero. Digital transformation technologies offer a unique opportunity to support net zero policies with quick ROIs. In addition to forming a gateway to green manufacturing, they can also enhance the competitiveness of pharmaceutical manufacturers in a demanding marketplace, making digitalisation a particularly appealing strategy.

¹ Belkhir, L., & Elmeligi, A. (2019). Carbon footprint of the global pharmaceutical industry and relative impact of its major players. *Journal of Cleaner Production*, 214, 185-194.

Pharma 4.0 is green

Well-designed automation solutions can optimise resource utilisation, reducing both waste and rework. Mitsubishi Electric's specialist teams have supported a multitude of projects in the pharmaceutical and life sciences sectors, delivering improvements using customised automated systems. For example, smart process control solutions and robotics can improve yield and process performance whilst reducing energy consumption and thus improve manufacturing sustainability metrics.

These technologies can also reduce emissions, production time and costs, which in turn benefits both businesses and patients. In effect, it is estimated that Pharma 4.0 will save 30 minutes per year for each clinical trial patient and cost savings for customers of £1 billion are expected.²

As the manufacture of increasingly advanced treatments and medical equipment becomes more expensive and resource intensive, the utilisation of automation offers pharmaceutical companies an opportunity to thrive. By leveraging state-of-the-art components, such as Mitsubishi Electric's range of robots, controllers, drives, HMIs and Maisart™ based AI technologies, businesses can meet ambitious environmental goals while creating highly responsive production facilities.

To learn more about how industrial automation can help pharmaceutical manufacturers improve their environmental footprint and operations, download Mitsubishi Electric's latest white paper 'Advancing pharmaceutical manufacturing now - Key automation technologies, applications and real-world benefits':
<https://gb.mitsubishielectric.com/fa/lp/white-paper-robots-in-pharma-technology-guide>

² Maier, J. (2017). Made Smarter Review. Department for Business, Energy and Industrial Strategy, London. Accessible at: <https://www.gov.uk/government/publications/made-smarter-review> [Accessed: 02 December 2021].

Image captions



Image 1: The future of pharmaceutical manufacturing, also known as Pharma 4.0, is based on data-driven technologies

[Source: Mitsubishi Electric Europe B.V.]

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The role of Industrial Automation – UK Branch is to manage sales, service and support across its network of local branches and distributors throughout the United Kingdom.

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