

## New starting points for building a smart food factory

**Food producers currently span the full automation spectrum, from huge volume beverage production and packaging plants to artisan food producers that do everything they can by hand. There is a large portion of the UK food industry however that sits between these two extremes and it has been slow to adopt smart factory technology.**

Mitsubishi Electric sector manager John Rowley comments, "We often see food plants that are operating without an industrial network on the factory floor. Since establishing network connectivity across a production site is usually the first step in moving towards being a smart factory, then there are many companies out there that are yet to set out on the road to becoming a smart factory."

There are several reasons for this, however chief among them is usually identified as investment cost. The industry is typically run on high volumes and small margins, supply contracts can be short and seasonal demand makes it hard to build large processes that are flexible enough to be used flat-out all year round. The cost argument however is often the easiest to overcome.

A smart factory can be built a piece at a time, providing that the vision of the final goal is discussed at the beginning. Robots are a great example, they have been used in stand-alone packing applications for years now, mainly because the jobs are tiring and repetitive for human operators and the ROI for a packing robot can be achieved very quickly. So, robots are a good first step, they are increasingly being used in process and assembly situations now as they are easier to programme, more flexible and can work alongside human operatives easily without cumbersome traditional physical guarding systems.

The cost of basic automation provision can also be small when compared to a standalone piece of equipment such as a new filling machine or a process freezer for example, it is just perceived as large when you look at how far you can go with it.

Admittedly there is a knock-on effect when you get started. Once you have connected one piece of equipment to a control and monitoring platform - and it is giving you good quality production data that allows you to control and optimise the process better - then there is a strong driver to keep going and include everything in the system. This is no bad thing because it means embarking on the process of creating a fully smart factory, which will ultimately be more flexible, easier to control and more competitive.

New machinery is also easy, as it tends to be highly automated already, it is just a question of specifying the right options and connecting it to other systems, providing an automation network or platform has been established of course. Updating older equipment is frequently easier than you'd think and Mitsubishi Electric works with a wide range of system integration specialists that can do everything from track and trace systems to batch control and adding smart servo systems to existing mechanical plant machinery.

Once equipment is automated then it is far easier to achieve product variations on-the-fly, which means food producers can adapt what they produce to meet changing demand. Smart sensors and systems can also monitor variable in-feed materials and allow for greater consistency in product quality – while still compensating for more customisation in final output.

It is an interesting time for food producers and there are a whole host of other solutions that can be applied such as edge computing, predictive maintenance and OEE benchmarking for example that can improve profitability and scalability. Ultimately however, for a large number of SMEs it is about taking the first step, and that is being made very much easier by experienced integrators applying user friendly solutions from manufacturers such as Mitsubishi Electric.

### **Image Captions:**

**Image 1:** Robots are increasingly being used in process and assembly situations now as they are easier to programme, more flexible and can easily work alongside human operatives.

[Source: Mitsubishi Electric Europe B.V.]

**Image 2:** Once equipment is automated, it is far easier to achieve product variations on-the-fly, which means food producers can adapt what they produce to meet changing demand.

[Source: Mitsubishi Electric Europe B.V.]

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**Note to Editor:** if you would like the text in another language please contact Carolin Heel at DMA Europa – [carolin@dmaeuropa.com](mailto:carolin@dmaeuropa.com).

## **About Mitsubishi Electric**

With nearly 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of approximately 40.7 billion dollars\* in the fiscal year that ended on March 31, 2019.

Mitsubishi Electric Europe, Industrial Automation – UK Branch is located in Hatfield, United Kingdom. It is a part of the European Factory Automation Business Group based in Ratingen, Germany which in turn is part of Mitsubishi Electric Europe B.V., a wholly owned subsidiary of Mitsubishi Electric Corporation, Japan.

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.

*\*At an exchange rate of 111 Yen = 1 US Dollars, last updated 31.03.2019 (Source: Tokyo Foreign Exchange Market)*

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