

# Festo: Engaging automation

In this series of four articles **Gary Wyles** discusses the people and organisational issues that arise when a food processing organisation starts thinking about an automation project

THERE'S NO ARGUMENT that automation increases efficiency and effectiveness. Often though an automation project can have deep reaching consequences for the people internally in an organisation. This impact can be so hard that the loss of productivity negates the benefits of automation, leaving businesses to wonder what on earth made them start down this road in the first place.

The usual scenario is that the board decides that automation of manufacturing processes is something that needs to be undertaken. The strategy is drafted and ratified. The machinery is specified. Now, all that's left to do is let the staff know what's happening.

In our experience this is the main stumbling block of business strategies. Engaging employees is left till the last minute. Managers then wonder why when the financials add up

and it seems like common sense that employees just don't seem to 'get' it.

Few employers engage their employees in formulating the strategy perhaps because in the UK there is a very simple equation. Automation equals job loss. Even Wikipedia highlights that its main purpose is to reduce the need for human work. Is it any wonder that the employee reaction is not at all enthusiastic when announcing the strategy to automate?

Employee engagement is critical to organisations that require any project to be successful. Experience shows that if there is a top down approach such as the business telling employees what is happening, there will be a low level of engagement. Employees will be less productive, potentially disruptive if actively disengaged and would have no hesitation in leaving, taking business-critical knowledge



with them when they go.

If, however, a business engages a cross-section of employees at the start of an automation project to define the remit, inform the specification and liaise with the machine builders not only automation equipment be fit for purpose there will be advocates across the business who can communicate the benefits of the project. Research has shown that peer-to-peer communication is much more trusted than management down

information.

The final benefit is that engaged employees stay longer, are more productive and conscientious, make fewer errors and take better care of customers. An automation project increases the efficiency and effectiveness of production so key employees can be well utilised elsewhere in the business helping deliver a better product for less.

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## 'Secret recipe for efficient process'

UNILEVER UK'S SEARCH for a recipe for success to modernise its Marmite production plant in Burton found the right ingredient for an optimised, efficient process: an automation solution with the Siemens process control system – SIMATIC PCS 7.

A benchmarking exercise demonstrated that the production process was in need of an upgrade to increase throughput and flexibility. As well as improving the manufacturing process and tackling inefficiencies, Unilever UK also hoped that upgrading the production line would improve the sustainability of the

manufacturing operations.

The manufacturing process of Marmite is a unique process. The raw material used is brewer's yeast slurry. The yeast cell content is first separated and then concentrated in an evaporator before being transported into storage vessels. The mixture then undergoes further filtration and evaporation stages until the final product is ready for packaging.

Throughout the manufacturing process, one tank is being filled, while another is being emptied and a third is being cleaned, which has a 'start-stop' effect on production. This is further

aggravated by the fact that the copper vessels, which are used to separate and evaporate the yeast mixture, have to be operated manually.

Marmite production is also affected by the seasonality of the raw material. As the raw material cannot be stored for long periods and has to be processed immediately, this results in peak and off-peak times in production throughout the year. This means the production line has to be as flexible as possible to cope with the influx of yeast when it is available.

SIMATIC PCS 7 was the ideal

choice for Unilever. With its open, modular architecture, it meets the high demands of the production process in terms of scalability and flexibility and enables a cost efficient plant operation.

PCS 7 system has revolutionised the production process and the company is now able to cope much better with the seasonality of product and the effect that has on manufacturing. The benefits in terms of plant efficiency were obvious early on and the system's improved flexibility has greatly expanded the manufacturing capability.