# Increasing efficiency, productivity and providing quality in processing

One of the many phrases that emerged during the coronavirus pandemic was the reference to the 'new normal' as the Covid-19 virus impacted significantly on nearly every area of daily life, most notably on how we worked, shopped and socialised.

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It could be argued, however, that many of the changes which we saw during the pandemic were not so much caused, but rather accelerated, by it. Internet shopping, for example, was a very strong growth sector long before the temporary closure of many retailers, and it is several years since supermarkets introduced home deliveries.

## The growth of the Smart Food Factory

In the food sector, meanwhile, factory restrictions on external visits and the implementation of social distancing measures brought into even sharper focus the benefits of increased automation and remote management of operations.


**More intuitive control screens support ease of set-up and changeover.**

However, these were already being implemented by many businesses as part of Industry 4.0 and the establishment of the Smart Factory.

Indeed, now that the initial recovery after the pandemic has been replaced by the current cost-of-living crisis, with sharp rises in raw materials and energy costs, the advantages of Industry 4.0 in terms of increased productivity and efficiencies throughout the factory remain all the more critical.

This is especially true in highly competitive markets, where consumers are being very careful about what they spend.

**Automating systems helps to reduce overheads and ensure an identical output every time.**

## Making the best use of automation

Automation itself is not a new concept. On the processing and packing line, equipment suppliers have over the years developed and enhanced automated solutions for practically every task. They have integrated these processes so that machines communicate and work in conjunction with each other.

With many food manufacturers now running more products over shorter runs, the speed of set-up and changeover have become an important part of this.

As a result, information screens on processing and packing equipment are now more intuitive, with settings for different products inputted and stored for instant call up to further speed machine set up.

Automating systems helps to reduce manual operation and the interventions required, which in turn reduce overheads or enable the redeployment of staff to other areas.

An automated process will also ensure an identical output every time and remove the risk of human error on the production line.

One of the most notable advances, and a key factor in delivering these benefits, has been the increasing integration of lines, with the ability for machines to exchange live data with centralised and remote systems.

## Maintaining performance

At the same time, the importance of achieving maximum levels of uptime from equipment remains as critical as ever to achieve the desired throughout, while also maximising yield.

As the saying goes, 'knowledge is power'. Being able to easily access a line's current status and quickly analyse the data provided creates the increased visibility that allows lines to be kept running at maximum

*Continued on page 9*

*Continued from page 7*
performance and efficiency. For example, small issues that might otherwise slow down the line can be identified early and dealt with immediately.

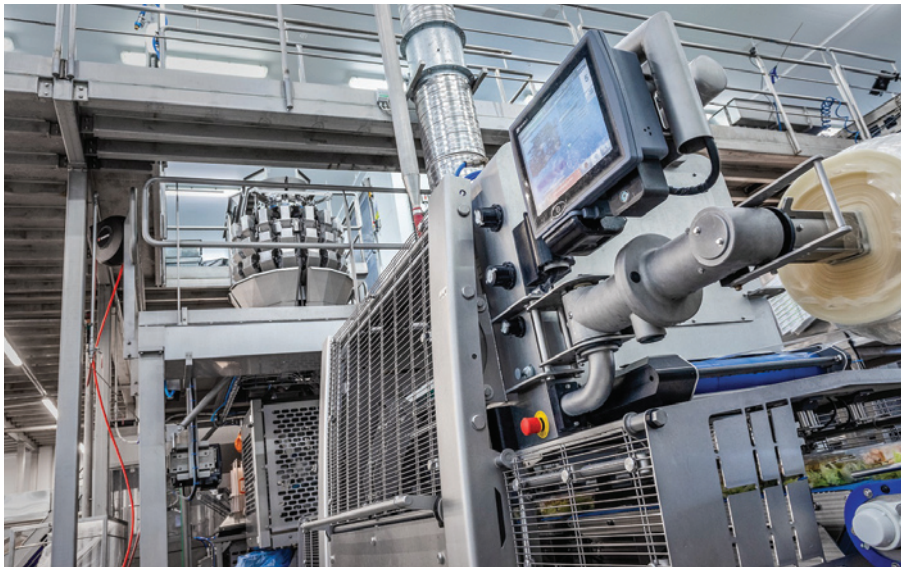
An effective monitoring system, such as our own Ishida Sentinel software, is invaluable in allowing individual machines, as well as complete single and multiple packing lines, to be monitored by both the equipment supplier and the processor and packer.

This provides a high level of preventative maintenance where potential issues can be anticipated, and action taken, before machines and packing lines experience even one minute of downtime.

Such systems also allow the planning of servicing and engineer visits, avoiding the need for any unscheduled calls. These were a particular challenge during the pandemic but at any time can have an adverse impact on production.

The data capture and analytical abilities of these monitoring systems are equally important as they are able to help companies manage their operations more profitably.

Businesses need to know exactly how much it costs to get a product or pack out of the factory and be able to easily identify bottlenecks in production or areas where there are opportunities for improvement.



**Integrated lines enable machines to communicate and work in conjunction with each other.**

## Competitive advantage

Capturing data allows companies to monitor remotely rather than deploying staff simply to monitor equipment. The information gathered gives businesses the competitive advantage of being able to optimise production and work as efficiently as possible.

Just as the integration of equipment streamlines processes in order to deliver greater efficiencies, the capture of data from multiple areas of the production line enables the building of a more complete picture.

This allows companies to be proactive rather than reactive when it comes to improving practices or methods, by using comprehensive reporting to give a breadth of information.

The systems can provide direct performance analysis in real time, focusing on the most important key indicators for individual companies.

Along with trends, batch information and statistics, there is also the possibility to compare the performance of different packing lines, even those located in different factories or countries.

This means that the best practices can be identified and shared throughout the business. The result can be a marked improvement in Overall Equipment Efficiency (OEE).

The wealth of information available can also support future planning and investment decisions.

While it can be tempting to run cap-ex investments to the very end of their life to maximise spend, the performance data may help to identify areas where new technology could deliver more substantial long-term cost savings and a faster return on investment.

These types of monitoring systems need not be restricted to large scale companies. Smaller businesses, even those with a single line, can benefit just as much from integrated processes, in-depth data and information transparency, to help them maximise profitability and provide the foundations for future growth.

## Future proofing

While the coronavirus pandemic may have focused minds on the benefits of new smarter technologies, it has always been important for companies to take a long-term view in their planning.

Whether in times of boom or bust, businesses that are able to deliver high output at maximum efficiency and quality will be best placed to succeed.

Data will therefore have an increasingly important role in the production lines of the future, giving companies the ability to make appropriate decisions quickly that will have a positive outcome on the entire production process. ■