



Taking the right steps on an automation journey

Suzanne Gill recently spoke to *Peter Mellon* of PWR Pack about the effect that the current pandemic is having on packaging line productivity.

Traditionally, manual food packaging operations have been designed with just 1m distance between operators working on a line and often operators will also be positioned on both sides of a line. The current social distancing measures, introduced by the UK government to help stop the spread of Covid-19 have therefore effectively halved production speeds on a typical manual packaging line because it is now only possible to have 50% of operators working on the line. Of course, one solution is to install screens between operators, but these also take up space and still require operators to be spaced further apart than they traditionally would have been. So, productivity on many packaging lines has been reduced – at a time that many

retail suppliers are seeing unprecedented increases in demand. “Customers are telling us that social distancing and the need for self-isolation is having an impact on their business today and this is just one of the reasons that many food processors are now starting to look more seriously at automated robotic packaging solutions,” explained Peter Mellon, director of PWR Pack, specialists in developing automated robotic packaging solutions for the food industry. “The pandemic has given many food processors a more serious appetite to look at automation. The current 2m social distancing measures are effectively putting UK industry at a disadvantage with the rest of Europe, where less stringent distancing is being implemented.”

An adoption catalyst

Mellon believes that the current pandemic will act as a catalyst for greater adoption of automation technology for packaging. He says that those supplying the retail trade are increasingly trying to find ways to produce more from the same production space so are looking at new technologies that will also help mitigate the risk posed by similar events in the future and to help cope with the higher demand that they are seeing today. “Automation will therefore play a key role in improving productivity as we come out of the pandemic,” he said.

Focusing solely on robotic packaging solutions for the food industry, PWR Pack has been working in close partnership on robot automation projects with Schneider



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would typically look at how many packaging operatives they would be able to save on the packaging line and redeploy elsewhere. To do this they would take the average salary of an operative and if it was possible to save, say 10 people over two shifts at X amount per year, that would mean that an investment of X amount in robotics would be repaid within 24-26 months in labour savings. However, according to Mellon, in the last two years the situation has changed dramatically, with the main driver for automated packaging shifting due to an inability to employ enough operators. "For many reasons, the traditional workforce has diminished in recent years and we have seen the purchasing decision shifting from being just about ROI to a need to find packaging solutions that are not so people-reliant," he said.

"In the coming months, as things settle into a new normal, I think we will see more food manufacturers looking to invest in robotic automation because, with Brexit looming, they will be even less likely to be able to source cost-effective manual labour, and will also want to mitigate the risk posed by similar events to the current pandemic," continued Mellon.

Mellon advises those who are new to automation, but are now considering implementing it, to first seek advice. He said: "Many think that they are ready for automation, but it is not something that you can just decide to do without a great deal of thought and planning. It is not simply a case of just doing a survey – looking at space and power – and finding a robot that will handle the products at the right speed. There are many other considerations and the first step of any automation journey should always be to gain a good understanding about the knock on effects that robotic automation would have across the wider factory – what effect will it have on the rest of the process and what changes would need to be implemented across the business as a whole in order to ensure everything works harmoniously alongside robotic automation?"

When considering implementing robotic

solutions, it is important to take the right steps, at the right time and in the right order.

- Understand and define what the core objectives are that the robotic automation should achieve. Keep an open mind to changes in the process and layout to ensure you get the best possible solution.
- Partner with a supplier that can guide you through the purchasing process and demonstrate competence in the core key technology areas which robotic automation solutions require. These include having the ability to:
 1. Accurately identify good products. Precise identification of the product determines the accuracy of the robot pick action and as such the placement. The system should never pack product that is out of specification.
 2. Pick and place all good products to ensure there is no rework.
 3. Understand the environment the robotic solution will work in and design the system to run at the highest possible efficiency and be operator friendly.
 4. Ensure safety and hygiene are embedded into the design.

"For us, efficiency, safety and hygiene are vital elements to consider when creating a packaging solution. All our systems are designed with safety and hygiene in mind and all our systems will go through a series of rigorous safety checks before installation. We always work closely with customers' in-house safety teams to ensure that their own hygiene and safety practices are taken into account in our bespoke designs," explained Mellon.

"Our systems are often required to pick-and-place naked products so we need to have a good understanding of the type of products being picked and the cleaning regimes that are undertaken in the factory."

In conclusion, Mellon wanted to dispel a common misconception, that robotic automation requires users to have a higher level of skillsets. This really should not be the case with today's robots which should be able to look after themselves. He said: "Robot technology is now at such a point that they are extremely reliable and low maintenance and there is no need for skilled operators to look after them. We have found that it is this myth that has, traditionally put companies off in adopting robotic solutions." ■

Electric for over 20 years, and has recently been appointed as its first Master Robot Partner. The partner programme aims to ensure that today's high-speed, multi-robotic picking and packing lines feature tightly coupled control and information systems and this requires high levels of engineering and programming expertise to both design and build.

Partners of the programme need to have a minimum of five years' experience in robotic packaging automation, an established install base, and must have their own fully trained software engineers proficient in Schneider controls, before they can become an authorised supplier of robotic solutions. "Because we have such a long working relationship with Schneider Electric we have been able to move immediately to its top tier of competence levels. We believe that this will help give food industry customers confidence that the controls are being utilised effectively in our automated packaging solutions," explained Mellon.

Changing drivers

Looking back, say five to seven years, the main driver for adoption of robotic automation for many food processors was simply to see a return on investment (ROI). Breaking this down simply, companies