

AUTOMATION

**AUTOMATION:
CAN YOU AFFORD
NOT TO?**

**AN INDUSTRY DEBATE HOSTED BY LINDE
MATERIAL HANDLING**

INTRODUCTION

Low unemployment rates and high job vacancy levels are making for a tight labour market, which affects the logistics industry as it does many areas of business in the UK. Unlike in some other sectors however, warehouse operators have the option of filling skills gaps through automation.

Linde Material Handling UK brought together leading industry figures and experts in the sector to debate a number of issues around automation. Topics ranged from new choices in financing and the process of planning for automation to achieving reliability and consistency in materials handling and improving safety while also reducing accidental damage.

The discussion, hosted by former BBC producer Dave Harries, posed typical questions facing warehouse operators. How do you find out what technology you need? How do you finance such investments and measure the return? What is the right way – and the wrong way – to communicate the changes to your staff?

WITH THANKS TO OUR PANEL



Dave Berridge,
Secretary of the Automated
Material Handling Systems
Association.



Steve Probut,
Automation Project Engineer
at Linde Material Handling
(UK) Ltd.



David Cross,
Head of Programme for
TopHat, a 3D modular
housebuilder.



Mike Wilson,
Chief Automation Officer
at the Manufacturing
Technology Centre.



Matt Shacklock,
Automation Sales Manager
at Linde Material Handling
(UK) Ltd.



Howard Thomas,
Account Manager at KION
Financial Services Ltd.



SHORTAGE OF LABOUR IS STILL THE MAIN DRIVER OF AUTOMATION

“The real driver of automation at the moment is not cost reduction but labour availability,” – Dave Berridge

With not enough people around to operate warehouses, it’s not so much about saving on costs as about survival, actually having a warehouse operation to run, according to Dave.

He explained: “The underlying structural drivers are still in place: there’s a shortage of labour; ecommerce continues to grow; labour costs continue to rise. So there is still a requirement to automate.”

And he believes that automation is not just for the big boys these days. “What we are seeing now is that barriers to entry are starting to lower and automation is becoming available for smaller companies as well.

“This is being driven by some lower-cost automation products now becoming available, and some quite innovative models in how you pay for technology. Also, there are some more scalable solutions that can get SMEs into the market. But as with any entrant into automation, they need to fully understand the processes before applying automation to a project.”



OTHER INDUSTRIES CAN SHOW THE WAY ON AUTOMATION TECHNOLOGIES

“Is automation unstoppable? Definitely. The UK is behind the rest of the world in terms of adopting this kind of technology,” – Mike Wilson

In weighing up the likely impact of automation, logistics and warehouse inevitably look to other industries for lessons learned and even inspiration. But Mike pointed out that there were many different forms of automation.

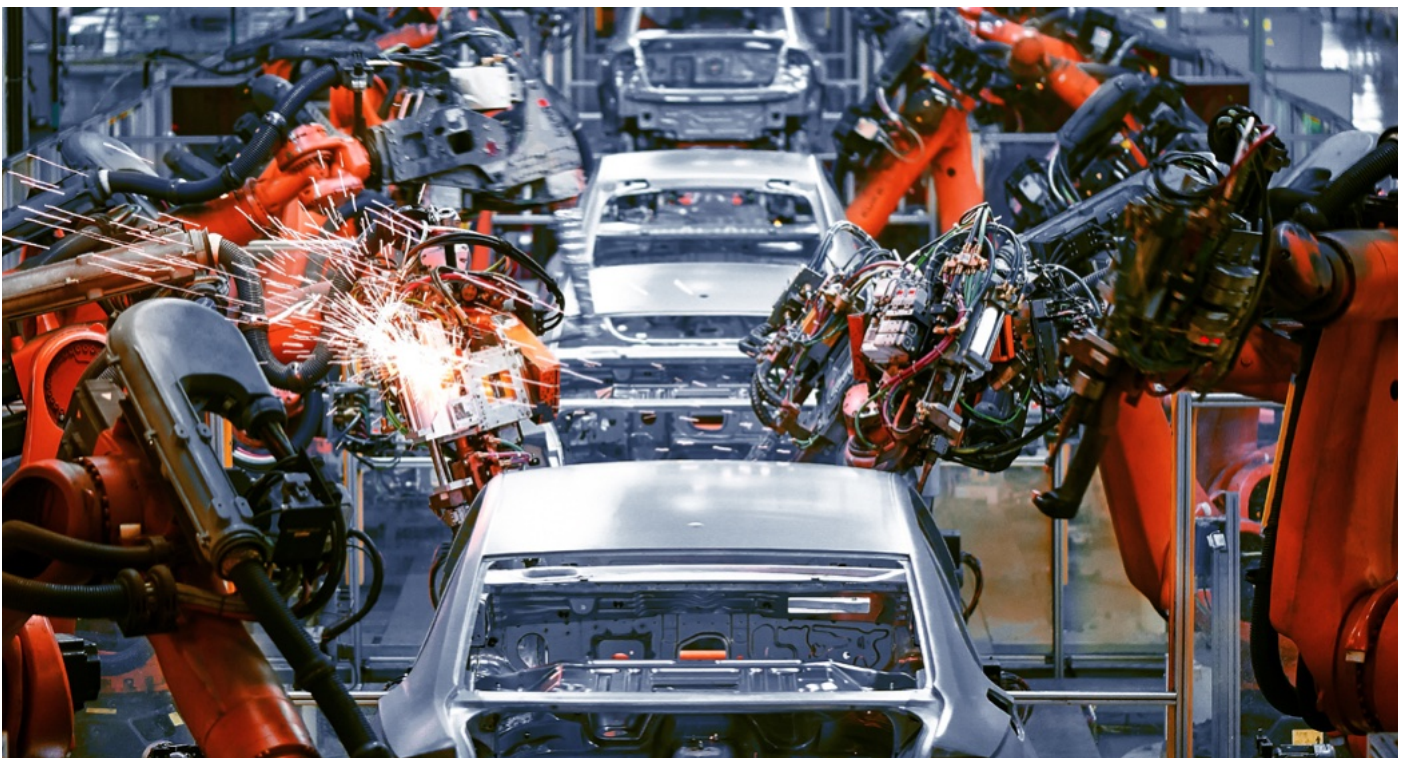
He elaborated: “We often think of automation as robots but it is much more than that and automation itself has been around for a very long time. There is a drive these days for more flexible automation, which is why you get the interest in robots.

“The original leaders in that kind of technology were the automotive sector, who have been doing it for 40-50 years and getting increasingly automated and largely driving robot development.”

A wider perspective would show that other sectors such as nuclear and agriculture provided valuable lessons too. He added: “They are developing advanced automation capabilities for guidance, for navigation, for sensing and vision that also have very direct applicability into the logistics sector. So it’s worth looking at what’s going on around the market.”

He acknowledged that there were “significant labour shortages these days, not only in manufacturing and logistics but across all sorts of industries including hospitality, construction and agriculture.

“And that is going to drive greater uptake of automation in the UK. To me, it is a journey we should be undertaking. We should be moving towards ensuring that automation does the dull, dirty and dangerous jobs and we use people where their skills can add value. And give them more interesting jobs.”



BE SURE YOUR ENTIRE VALUE STREAM IS AUTOMATION-READY

“Any design flaw will be produced over and over again. A very easy trap to fall into is to blame the automation,” – David Cross

Automation is “completely critical” to the business model at modular housebuilder TopHat but the burden of recruitment weighs heavily, explained David Cross. And skilled labour is still very much part of the mix.

“Firstly, in our new facility in Corby, when we produce one modular home per hour we’ll still need a thousand people, and that’s with heavy use of automation. Without automation we would more than double that number and to employ 2,000 people, the effort is exponential.

“Secondly, and more fundamentally to our model and the sector more generally are the skill sets. If you look at the construction workforce and the availability of resource, it’s not in a great place,” he said, pointing out that the available workforce has been reduced by 15 per cent since 2008. A quarter of those remaining are over 55.

What automation has allowed TopHat to do is focus its recruiting effort on a different type of resource – software, technology and automation skill sets, which are more readily available – and develops a more diverse workforce.

“I’d go further and say that the construction sector depends on this,” added David. “You can talk about building 300,000 homes a year or even 1.5 million over the life of a parliament but that will not happen. That’s impossible with the construction workforce as it stands today unless we employ automation in this sector.”

TopHat is teaming up with local colleges to ensure there is a flow of talent with the correct skill sets.

David explained why: “We have in mind 60,000 different structural models of houses in this factory and, by setting rules and parameters, the automation can cope with it. By having that flexibility on some of the heavier and more dangerous tasks we can concentrate on the more skilled aspects, whether that is programming, technology or even in skilled trades where we turn the house into a home.

“The reality is that bringing in automation puts pressure on the whole business. Automation can shine a light on flaws elsewhere. You must look at your entire value stream and ensure it is ‘automation ready’.”



FACTOR IN LONG TERM BENEFITS TO YOUR CALCULATIONS

“Using automated equipment, whether on production lines or in material handling, is inherently safer than relying on a human, who can make errors,” – Matt Shacklock

The tight labour market is causing issues at both financial and operational levels but Matt believes this brings opportunities for automation.

“When we look at a project we talk about real-life examples and return-on-investment calculations, often over three years and sometimes under two years. It might be a high investment cost but the payback can be pretty quick. Most of our equipment will go beyond ten years, though. You can see where the savings come from in that respect.

“There are other factors we look at too. I was with a customer in the pharmaceutical industry who has pallets carrying products worth millions of pounds. When you look at their operation, any damage to pallets is a serious issue.

“So where you have automated trucks that can carry out repetitive tasks, there’s an obvious advantage. All the automated equipment we supply is designed to work in a mixed environment of machines and people, with scanning technology on the trucks helping to ensure the safety of staff.”



FINANCING PRODUCTS PROVING A GAME CHANGER FOR AUTOMATION

“Rather than go to a seven-year contract hire you can quite easily reduce that to a much shorter time period if your cashflow allows,” – Howard Thomas

A maturing portfolio of fixed cost financial products has opened up opportunities for automation that did not exist ten years ago.

Howard explained: “You couldn’t get financing, whether by contract hire or hire purchase, for this type of product,” he said. “Finance houses and banks did not see it as an attractive asset to invest in.

“We now have a contract hire product for the hardware and access to hire purchase facilities for those customers who wish to take advantage of certain grants and allowances from government.”

Howard added: “We see payback typically within 36 or 30 months on that investment. Customers sometimes ask for long periods of finance for hire purchase or contract hire but they don’t need to do that. We can design a product which is over 48 months in terms of the primary hire period.

“That reduces the whole-life cost of the project because the financing costs are greatly reduced.”

By going down the route of automation, warehouse operators are immediately eliminating the cost of wages, overtime, sick pay, pensions, holiday cover and National Insurance, as Howard pointed out. Nor will they have to buy traditional manual forklift trucks and, less obviously, they benefit from a reduction in accident damage and maintenance costs.

He added: “By the very fact of being automated and guided, the equipment goes through a less rigorous cycle and there is a considerable saving in out-of-contract costs such as collision damage, compared with manually operated machines. Less wastage on product and less damage to product can be considerable as well.”

Along with that increased productivity, he predicted that adopters of automation could see a completely different workflow coming into their warehouse or manufacturing process.

“It’s not just a question of swapping out equipment for automated technology, it’s redesigning the workflow which can generate considerable productivity savings.”

Dave Berridge agreed that there was greater acceptance among financial institutions, recognising that it was not just about payback but actual survival of these businesses.

He added: “And if you have invested in automation, you have paid for that equipment to be there 24-7. Can you perhaps get four shifts out of that investment rather than a single shift operation?”

And Mike Wilson said there were other benefits to add to the calculation: “It might be quality. Automation is very repetitive and will produce the quality all day, every day, whereas with any manual system there is a risk of something going wrong and there is a cost associated with that.”

INVOLVE YOUR STAFF TO MAKE THE JOURNEY EASIER

“Automation can take away the arduous and repetitive tasks from the workforce, enabling them to focus on other tasks. We often find more engaged and less stressed workforce after the implementation of automation,” – Steve Probut.

Steve recognised that investing in automation can be a daunting task and it’s natural for both employers and employees to worry about the potential impact on their jobs.

“It’s crucial for organisations to communicate the transition effectively and clearly to their workforces. Be transparent and honest about the reasons for automation and the potential impact on the job.

“Also share information about the new technology and how it will be implemented and, more importantly, involve employees and encourage questions and provide feedback during the transition.”

He said companies should offer training and support to employees to help them adapt to the new technology, addressing any concerns or fears they might have. By following these strategies, organisations can ensure smooth transition towards automation and minimise disruption to the workforce.

Dave Berridge agreed that automation can quite often enrich the role of staff, citing the example of an innovative Tesco micro-fulfilment centre. “The workforce need to understand automation and believe in it, rather than fight against it.”

David Cross said he had never worked in an environment where automation was being introduced at the same time as compulsory job losses.

“It’s far more about making a site viable,” he said. “Some 60% of our logistics journeys will be covered by Linde autonomous guided vehicles. Instead of having people restocking shelves, we can have them being upskilled, training through our academy to learn skilled trades, how to tile a bathroom or mastering electrics.

“It should be a sigh of relief that jobs are safe for the future. You need to make sure that people understand how it’s making their lives easier.”

Mike acknowledged that there had been communications failings in the early days of automation in the automotive industry but added: “Staff can help to make automation work. Get them involved, explain clearly the impact and it will make the journey easier.

“Automation is not scary for Generation Z. It’s more of an attraction than doing mundane jobs.”

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