

ANALYSIS It's a hot topic across the industry, but will an increase in automation necessarily lead to mass job losses? **Susie Mesure** investigates

In a busy branch of Lidl in Peckham, southeast London, a shopper struggles to choose between the maple plaits and pink doughnuts piled high in the bakery section.

Across the Channel, in a store owned by French electricals specialist Darty, a robot flashes its way through a demonstration of Samsung products.

Behind Lidl's tempting goods, the bakery is deserted, the ovens cool and silent. The only staff in sight are scanning goods at one of the four tills. Hovering near the robot at Darty, however, two sales associates are on hand, checking their newest colleague is not malfunctioning.

These are just two examples of the impact automation is having on the retail industry, which the consultancy firm Deloitte recently warned is poised to lose more jobs than any other sector as companies step up the pace of technological change in their businesses.

As many as 2.1 million jobs could disappear from the retail and wholesale industries over the next 20 years, Deloitte predicts. The evidence lies in that Lidl bakery, which opened last year and requires the barest of human input to churn out tray after tray of freshly baked goods, even if traditional bakers might balk at the process.

Paul Foley, who set up Foley Retail Consulting after a career in the supermarket sector, including a period as Aldi's UK boss, says the discounters' semi-automated bakeries have drastically cut workforce costs in countries such as Germany,

Automation and the future of the retail workforce

Austria and Switzerland, where bread needs to be baked fresh every day but wages are high.

"Traditionally, baking is quite a labour-intensive process, but now it involves one person, pressing buttons, and the rest is computerised. All the bread-making is done in a factory prior to arriving in store. The ovens do everything, from defrosting to proofing to cooking," he says.

The human touch

With additional pressure from the national living wage increase, retailers are doing anything they can to cut staffing costs, even if they would rather not talk about it.

Every company asked by *Retail Week* to predict what their future workforce might look like declined, which highlights the sensitivity



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of axing jobs in an industry that thrives on human interaction.

"Retailers recognise the importance of the people who are the front line, so I'm not surprised they're sensitive," says Ben Perkins, head of consumer business research at Deloitte. "There are always nice stories about people that enter the industry on the shop floor and make it up to the executive boardroom. But [automation] can remove staff from the drudgery of stocking shelves, helping customers find goods and taking payments, and open up the opportunity for more personal service, offering more interaction in a way that adds value, such as personal shoppers."

Step into any central London supermarket and the constant chirruping from the bank of self-service tills might make it appear that retailers are choosing to save money by cutting the number of checkout staff. Indeed, about 15% of all transactions are made via self-checkouts in most Western countries, according to research from Foley Retail Consulting.

But it's hard for retailers to increase that figure because the process is often so slow it becomes unviable when large trolley-loads are involved.

"Anything retailers can save on labour would be counteracted by the cost of needing extra space and equipment to install more self-service tills, so the bulk will always be handled through manned checkouts, even though they are one of the most labour-intensive areas of the store," Foley believes.

The one technological advance experts predict could dramatically impact the shopfloor is RFID – radio-frequency identification – which, if used to tag each item on sale, could do the job of humans in a flash if the cost falls enough.

"If a product has an RFID tag, you'd only need to push it near a sensor, rather than pass it over a scanner. Everything in a trolley could be added up instantly; that technology is available," Mr Foley explains.

Nick Carroll, retail analyst at researcher Mintel, notes that Amazon has filed a patent for a fully automated store.

"It's a bit pie-in-the-sky, but using RFID tags, cameras and sensors means customers wouldn't even have to complete a payment transaction, so you wouldn't need any staff," he says.

But he queries whether the incentive is there. "Human interaction is very important for retailers. Our research shows that, in electricals 40% of customers prefer to go into a store to get advice, and 59% prefer to see items physically before buying them. And 28% of grocery shoppers say having friendly, helpful staff is one reason why they buy from that store."

Fit for purpose

Another place RFID technology could help is in the fitting room. Chris Donnelly, senior managing director at Accenture Strategy, says stores lose sales when customers select the wrong sizes and cannot be bothered to request the right ones.

"In a connected fitting room, there would be a monitor with a touch-screen that would



Darty's robots demonstrate products in store (inset, far left), while Ocado's robots move thousands of crates behind the scenes (above)

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**Nathan Wrench,
Cambridge Consultants**

recognise the product by RFID and tell you what other sizes are available, alerting a sales associate to bring one to you," he adds. A number of luxury fashion brands, including Ralph Lauren and Burberry, have tested the concept.

Not all automation threatens jobs. One UK technology firm, Cambridge Consultants, has invented sensors for supermarket trolleys that can alert shoppers to promotions and alert store staff when shoppers are nearing the tills to pay, saving on queueing time.

With retailers limited in the ways they can automate to save front-of-store labour costs, much of their attention is directed behind the scenes, where they can use machines to replace humans more discreetly.

Here, online grocer Ocado is leading the way, for obvious reasons. It recently installed what it claims to be the world's most advanced wireless system, which can co-ordinate robots, communicating with them 10 times a second as they move tens of thousands of crates containing millions of items.

Nathan Wrench, head of the industrial and energy business at Cambridge Consultants, which developed the system with Ocado, says the new technology provides "massive efficiencies of scale" compared with how grocers traditionally fulfilled customers' online orders: hand-picking them in stores.

He defended replacing people with machines: "We're talking about the most mechanistic of jobs. People don't want to do them, and they don't have any aspirations for their kids to do them."

Other retailers leading the way in automating their business include Asos, Shop Direct and John Lewis, which will shortly open its first dedicated online grocery fulfilment centre for Waitrose.

"Who are the biggest online players?" says Mintel's Carroll. "You don't get to be a big online player with terrible logistics."

Countries to watch include Japan, where an aging population means employers need to find alternative sources of labour, and the US, home to Amazon and Google.

Automation is helping companies to gather more than just physical goods. AJ Van Bochoven, Cambridge Consultants' head of innovation strategy, says data analytics is giving retailers important insights into how customers shop.

"At the moment, Amazon will look at what you bought and recommend something. In the future, it may anticipate you ordering those items again, even to the extent that it might ship them to you before you think of them."

Far from a threat

He hopes his company's invention of a robot capable of complex picking and sorting tasks means machines will be able to pinpoint soft, irregular-shaped fruit and vegetables in a warehouse, or even in the fields where they grow.

US-based Trunk Club, which describes itself as an online personal stylist, recommends items to shoppers based on what they have bought before. "It started by helping male shoppers who were bad at putting together an outfit. They'd say, 'Here's a shirt that would work with those trousers you bought last year,'" says Accenture's Donnolly.

As for Darty's robot, the group's boss Regis Schultz laughs when I ask if it threatens jobs. He admits that the mechanised employee is uneconomic, despite Darty splitting the cost with suppliers such as Samsung and Philips, because it takes three people to programme it.

"What's putting jobs at risk is the internet, and going direct from warehouse to the consumer without having any stores," he says.

As the productivity puzzle continues to trouble retailers, automation looks more likely to rise up the agenda. At this juncture though, it's almost impossible to predict where that could end up and what that might mean for jobs in the sector.