

THE RISE OF THE MACHINES

Text: Gemma Balmford

Are robots set to revolutionise the in-store shopping experience?

The current Robots exhibition at the Science Museum in London explores humanity's 500-year quest to reimagine ourselves as machines. With more than 100 robots on display, including 12 working models, the exhibition encourages visitors to imagine what a shared future with robots would be like. In retail, robots are already helping to improve processes, management and the customer experience, but it seems there is much more yet to come, at least if the National Retail Federation's Big Show 2017 in New York and EuroShop in Düsseldorf is anything to go by.

'In 2017, robotics is poised to truly transform the retail landscape, for shoppers and retailers alike,' says Steve Carlin, vice president and general manager of Softbank Robotics America, which makes and markets humanoid and programmable robots. At NRF's Big Show in January, the company demonstrated new applications for Pepper, the humanoid robot, in retail to increase sales, innovate the customer experience and provide real-time business analytics. 'Pepper has the functionality and form factor to serve customers with the information and brand interaction they need to make smart and informed decisions, while allowing the retailer to monitor engagement and collect new customer insights that can be critical for growing a business in a crowded market place,' explains Carlin.

Pepper - one of the working robots currently on display at the Science Museum - has been used in stores in Japan for several years and in 2016, was introduced at two Westfield shopping centres in California to welcome shoppers. The humanoid is also being used in a number of Carrefour stores across France and Spain to welcome, advise, inform and entertain shoppers.

As well as NRF's Big Show, Pepper has also made an

appearance at this year's Mobile World Congress in Barcelona and EuroShop in Düsseldorf.

'Offering a form factor that is approachable and friendly, Pepper can proactively provide a personalised message to customers,' says Softbank Robotics America. 'With large expressive eyes and lifelike movements and gestures, the four-foot-tall humanoid robot was designed to interact and communicate with customers. When integrated into an in-store marketing mix, Pepper becomes a relationship management platform and an extension of the company's on-going targeted communication strategy.'

In San Francisco earlier this year, Cafe X Technologies opened its first fully automated robotic cafe, which aims to 'eliminate the variabilities that bog down today's coffee experience'. Working closely with local coffee roaster partners, the cafe sets itself apart by removing on-site wait times and the potential for preparation error. 'I've long been a big coffee consumer and there's never a guaranteed seamless experience,' says founder and CEO, Henry Hu. 'In today's world, you have two options for getting a cup of coffee: you're either in and out with something subpar, or you're waiting in a 15-minute line for a great cappuccino. I started Cafe X to eliminate that inherent compromise and give people access to a tasty cup of coffee consistently and conveniently.'

Customers can order customised espresso-based beverages on the spot at the ordering kiosk or they can download the Cafe X app onto their mobile device to order in advance. Once the beverage is ready, customers use the touch screens on the robotic cafe to type in a four-digit order number, which is either sent via text message or displayed on the Cafe X mobile app for iOS and Android.

Image: Cafe X Technologies opened its first fully automated robotic cafe in San Francisco earlier this year.





Above: Paul the robot greets customers at the Saturn store in Ingolstadt, Germany.

Bottom left: The Dream section of the Robots exhibition at the Science Museum in London. The exhibition is open until 3 September 2017 (Image: Plastiques Photography).

Bottom right: Pepper the robot is designed to welcome, advise, inform and entertain shoppers.

The Mitsubishi robot arm will then identify the customer's drink from the waiting stations and deliver it within seconds.

'This won't replace baristas or the coffee shop experience that so many people have come to love - we don't aim to do that,' says Hu. 'What we're offering is the best possible experience for people who are looking for consistent specialty coffee to-go.'

According to Deloitte, robots are set to be one of the top five retail trends in 2017. 'Robotic technology has long played a role in retail but in recent years we have seen the number and scope of user cases (moving from the back to the front office) increase dramatically, fuelled by the incorporation of ever more powerful AI,' says the business advisory firm.

At EuroShop in Düsseldorf this month, K.U.L.T. Objekt presented its QRRunning shoe shop concept, whereby pick and pack robots from Munich robotics company Magazino are used to collect shoes in the right size and style, and deliver them direct to customers on the shop floor. The Toru Cube robots, which are used to pick and stow shoe boxes, parcels and books in ecommerce warehouses, become visible to customers in this futuristic store concept as they locate, collect and deliver shoes to customers to try on.

At the Retail Technology Awards Europe ceremony held during EuroShop, Paul the Robot walked away with one of the three awards in the Best Customer Experience category. The robotic sales assistant, developed by Fraunhofer, is currently based at the electronics store Saturn in Ingolstadt.

Germany where it greets customers and shows them the way to the products they are looking for in store. Designed especially for use in the retail sector, Paul uses a semantic dialog system that enables context-aware speech interaction and he can also detect customers' emotions, gender and age.

Bhavesh Unadkat, principal consultant in retail customer engagement design at Capgemini, believes that initially incorporating robotics in store may be a challenge, but only time will tell. 'Provided in-store robotic technology is actually improving the customer experience and has relevance to them, as opposed to simply having the novelty factor, then customer reactions should be positive,' he says. 'The difficulty here will be the transition from having a conversation between a customer and a shop assistant, to having a conversation between a customer and a robot. This will only work if engaging with robots is at least as easy and convenient as engaging with a human shop assistant, and ideally offers some convenience that the customer could not get otherwise.'

Andrew Bowyer, digital director at Green Room Design, thinks that we can learn from self-service checkouts. 'No customer asked for them but eventually, given little other option, we stopped moaning and started scanning,' he says. 'We can be convinced that they make for a quicker shopping experience, but there is the nagging feeling that they are the retailer's subtle way of letting me know they don't care about me. If robots are used to cut staff costs at the risk of eroding the shopping experience, is this a worthwhile cost saving?

'Robots will make a real impact at the ends of the market: making premium products more unique, and getting commodity items off the shelf and into my cupboard at the lowest cost,' continues Bowyer. 'Finding a role for them that enhances the shopping experience in the mass middle is the big challenge.' **RF**

