

Technological inroads into labour intensive market

TRENDS According to robotics company Eiratech, most of the new technologies that are on the short-term horizon are variations of platforms and models that already exist in the market. “Advances in voice and light guided systems coupled with smart glasses and some new ‘cobots’ will all make further inroads into a sector that is slowly taking itself out of the traditional, more labour-intensive approach to order picking,” says Alexey Tabolkin, chief executive of Eiratech. “As the growth of the e-commerce share of the retail markets continues to grow, there should be more enthusiasm to embrace these technologies in the challenge to tackle the changing dynamics of small order fulfilment.”

Chris Tozer of Ivanti, says that contrary to some thinking, the increasing fragmentation of retail orders and the variety of locations needed to distribute to, means that human interaction in the order picking process will continue to rise. “Within full pallet operations however, I certainly see the future hosting a rise of robotics in the manual picking and handling element of these operations,” he says. “In more systematic order processes, where flexibility and

tailoring of orders is not needed, the rise of robotics and machine learning, will improve the speed and consistency of order picking on a large scale.”

Touchpath International’s chief executive David Myers says that today warehouse management systems have to support both zone and wave picking. “Where the order is split across different zones different pickers are picking the order at the same time; then it all comes together,” he says. “In wave picking the pickers are picking bulk – picking the same item for several orders at the same time.” Picked goods are then split into individual orders, then packed and shipped. “The trend now is towards warehouse slotting solutions – ensuring the fast moving items are at the front of the warehouse, to speed fulfilment,” he says. “The picker then does not have to move more than a few feet to reach a fast moving item, and may be doing so twenty times a day; whereas the slow, once-a-month item is stored further back.

“Big Data analytics now supports huge warehouse slotting algorithms. These enable the system to tell you where each item ought to be stocked – which location will

maximise efficiency.”

Swisslog has noticed an increase in demand for automated item picking robotics, automated case pick systems and automated mixed case palletising. Brian Whale predicts a push towards more automation in the picking market over the next two to five years. “Our robots are already able to interact with human operators to work as a team; robots can pick up to 30-60 per cent of the customer’s product range and a (human) operator finishes the order,” he says. “We predict this will continue to be a popular option in the near future, providing a big stride into the Industry 4.0 warehouse of the future.”

Myers says that companies are beginning to trial picking robots. “The robot retrieves a tote from the racking in the warehouse, brings it to a bench where a person picks out what is required, after which the robot returns the tote to the relevant racking location,” he says. He also says that autonomous vehicles are coming to the fore. “The warehouse operative completes the pick before putting it on (usually) a wire-guided vehicle, which then takes it to the packing or shipping area,” he adds.