Revenues from warehouse robotics to exceed US$51 billion by 2030

Monday, 23 August, 2021

The warehousing industry has ramped up its automation efforts considering the increased order volume and labour shortages fuelled by the pandemic. In addition to technology solutions such as augmented reality-powered smart glasses and handheld devices with enhanced capabilities, autonomous, collaborative and mobile robots are proving to be the most popular and

fastest-growing productivity-enhancing solution in the warehouse workspace. According to ABI Research, worldwide commercial robot revenue in warehouses will have a compound annual growth rate (CAGR) of over 23% from 2021 to 2030 and exceed US$51 billion by 2030.

"Mobile robots are at the heart of the warehouse robotics market and account for most shipments and revenue. These robots, made up of autonomous guided vehicles (AGVs) and autonomous mobile robots (AMRs), are being used to move goods within the

warehouse and being integrated within wider automated or manual workflows," said Adhish Luitel, Industry Analyst, Supply Chain Management and Logistics at ABI Research.

Commercially speaking, in the warehouse sector robotics has moved from the early exploration phase to a more mature market in which early adopters are benefiting from live implementations of fully capable technical solutions. As a sign of the growing maturity of the market, a wide number of vendors such as Advantech, Brochesia, Kontakt.io and RightHand Robotics now offer compelling products and solutions. The surrounding ecosystem of software vendors and systems integrators is also maturing, as software and integration capabilities become increasingly important factors for commercial differentiation. ABI Research has assessed fulfilment and warehousing processes of dominant operators such as Penske, A. Duie Pyle, Amazon and JD.com to evaluate the efficacy of deploying solutions and friction points that might arise. These companies have been reaping the benefits of enhanced key performance metrics such as shorter dock-to-stock cycles and improved inventory accuracy due to the successful deployment of various automation and vision-based solutions in their day-to-day operations.

"In addition to robots, warehouse operators should be seeking to combine the value of multiple solutions across the fulfilment workflow to achieve desired results," said Luitel. "There is also a need for operators to look beyond productivity and assess how technologies affect worker satisfaction and safety, worker comfort, energy consumption, distance travelled and error rates."

For example, 'pick by vision' solutions from augmented reality vendors such as Picavi demand a mere 15-minute training time and can offer up to 30% efficiency gains and up to 60% in time savings for training. In addition, order storage and automated order dispenser solutions can help retailers enhance their ROI by over 50% versus traditional automated picking systems.

"We can also expect intelligent automation solutions to influence processes across the supply chain. In the future, operators will be venturing further into solutions like robotic process automation and mobile warehousing," Luitel concluded.

The findings are from ABI Research's 'Modern Fulfillment Trends: Warehouse Robotics, Handheld Devices and Wearables' technology analysis report.

Image credit: ©stock.adobe.com/au/markobe