3 pointers to warehouse transformation

By Neil Gouveia

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It wasn't very long ago when fulfillment was described as "just logistics". How times change. And with the speed and accuracy of deliveries enabling competitive advantage, warehousing is high on boardroom agendas.

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While this change is good news, it comes with challenges. Along with consumers' expectations for ever faster delivery, issues like returns processing, the move to picking single items and worker high churn rates are testing operations. Zebra's latest Warehouse Vision Study reveals that 80% of decision makers are planning to invest in technology to be competitive, yet the change may not happen quickly.

There are often good reasons for reluctance to embrace new technology. However, it's important to focus on, and synchronise, three key areas to prepare for the future: optimising warehouse management systems (WMS), upgrading teams' mobile devices, and enhancing infrastructure to introduce more automation and improve visibility across operations.

From in-flight systems, to worker technology, to automation

As the WMS is the in-flight system of the warehouse, there can be resistance to changing it. Indeed, we often come across legacy systems that have been added to, enhanced, and maintained over many years. But there is recognition that investment is overdue. By 2024, 54% of the Warehouse Vision Study respondents plan to have added new modules or deployed best-of-breed warehouse solutions.

There are good reasons for this. Today's cloud-based WMS are automatically updated to new versions, they can handle the data demands needed for real-time visibility, and they are designed for changing workflows (e.g. returns). What's more, new inputs are supported to enable improved data-driven performance. For example, 43% of organisations plan to evolve, or add new, real-time locationing solutions (RTLS) by 2024, and 80% plan to interface their WMS with yard and fleet systems for full supply chain synchronisation.

A more attractive career

Another way to get more value from a WMS is to look at the technology used by teams. Upgrading users' mobile devices will ensure that WMS processes are executed quickly and consistently, and 73% of respondents plan to make this investment. Their decision is also motivated by a desire to enhance the job experience, with 79% believing that the warehouse will become a more attractive career due to the technological transformation taking place. And, with 83% saying they will use Android by 2024, employees will increasingly have access to these devices. Device expenditure will grow across a number of areas by 2022, especially in rugged tablets (62%) and industrial scanners (53%).

Enhancing warehouse infrastructure to support more automation and greater visibility is also an area of focus. In an effort to improve item-level visibility, data capture and track and trace solutions have been widely deployed – notably barcode labeling. However, there is still an opportunity to introduce more, given that less than one third of respondents say they have barcodes on more than 75% of their inbound items. This is almost certainly the key driver behind the plans of 60% of decision makers to deploy more mobile barcode and thermal printers over the next three years. Given that we often see workers in warehouses walking to find a shared printer, this move will improve supply chain visibility and help to achieve significant productivity gains too. Furthermore, Zebra's enterprise-grade printers and labels ensure high-quality printing and the adhesion of labels that remain legible and fixed across the supply chain.

Improving inventory management

To further boost item visibility, technology such as active RFID sensors (which can automatically register and track bulk or individual items) has a big role to play in improving inventory management, picking, and cross-docking efficiency. Over a third (36%) of the Warehouse Vision Study respondents say that they expect to roll out more RFID and other sensor-based systems, including RTLS, within five years, with the aim of increasing the accuracy and speed of data capture.

While the study indicates that 94% of repetitive tasks still require human involvement, the push in forward-thinking warehouses for automation is accelerating. By 2024, 30% of respondents plan to use robotics (up 8% from today), 26% drones (up 7%), and 32% autonomous vehicles (up 6%). Automation will not result in job elimination, instead it will augment human capabilities. It will also enrich tasks with assisted and augmented reality technologies, creating a more rewarding working environment. Advances like voice-guided apps and heads-up displays will help teams speed through repetitive tasks to meet the goal of 63% of respondents who want to improve team or individual worker productivity.

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