

# AI now powers 60% of global warehouses, transforming productivity and jobs

Artificial intelligence and automation are no longer experimental in warehousing — a new study from Mecalux and MIT's Intelligent Logistics Systems Lab finds that 60% of warehouses worldwide now rely on AI to drive operations. The research highlights faster payback, increased efficiency, and growing demand for skilled roles in logistics.



Source: Supplied | MIT Mecalux

Surveying over 2,000 logistics and supply chain professionals across 21 countries, the study found that more than half of organisations operate at advanced or fully automated maturity levels, especially in large, multi-site networks. AI is now embedded in day-to-day workflows, including order picking, inventory optimisation, equipment maintenance, labour planning, and safety monitoring.

"The data show that intelligent warehouses outperform not only in volume and accuracy, but in adaptability, says Javier Carrillo, CEO of Mecalux. "As peak season approaches, companies that have invested in AI aren't just faster — they're more resilient, more predictable and better positioned to navigate volatility."

## Rapid ROI and shifting budgets

Businesses report dedicating 11%-30% of warehouse technology budgets to AI and machine learning, with typical payback periods of just two to three years. Gains include improved inventory accuracy, throughput, labour efficiency, and error reduction. Investment is motivated not only by efficiency but also by cost savings, labour shortages, customer expectations, sustainability goals, and competitive pressure.

Despite fears about automation replacing staff, AI is creating new opportunities. Over three-quarters of organisations saw higher productivity and satisfaction, and more than half reported workforce growth. Emerging roles include AI/ML engineers, automation specialists, process-improvement experts, and data scientists.

"The hard part now is the last mile: integrating people, data and analytics seamlessly into existing systems says Dr Matthias Winkenbach, director of the MIT ILS Lab. He notes that challenges include technical expertise, system integration, data quality, and implementation costs.



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## The next frontier: Generative AI

Nearly every company surveyed plans to expand AI use over the next two to three years. Generative AI is seen as the most valuable tool, helping with automated documentation, warehouse layout optimisation, process-flow design, and even code generation for automation systems.

"Traditional machine learning is great at predicting problems, but generative AI actually helps you engineer the solution," says Dr Winkenbach. "Ultimately, the measurable gains from automation are productivity wins: making existing systems work smoother, faster and with fewer disruptions."

The study concludes that AI is reshaping warehouses into intelligent systems that boost efficiency, support workers, and enable new capabilities, signalling a major shift in global supply chain operations just in time for the holiday season.

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