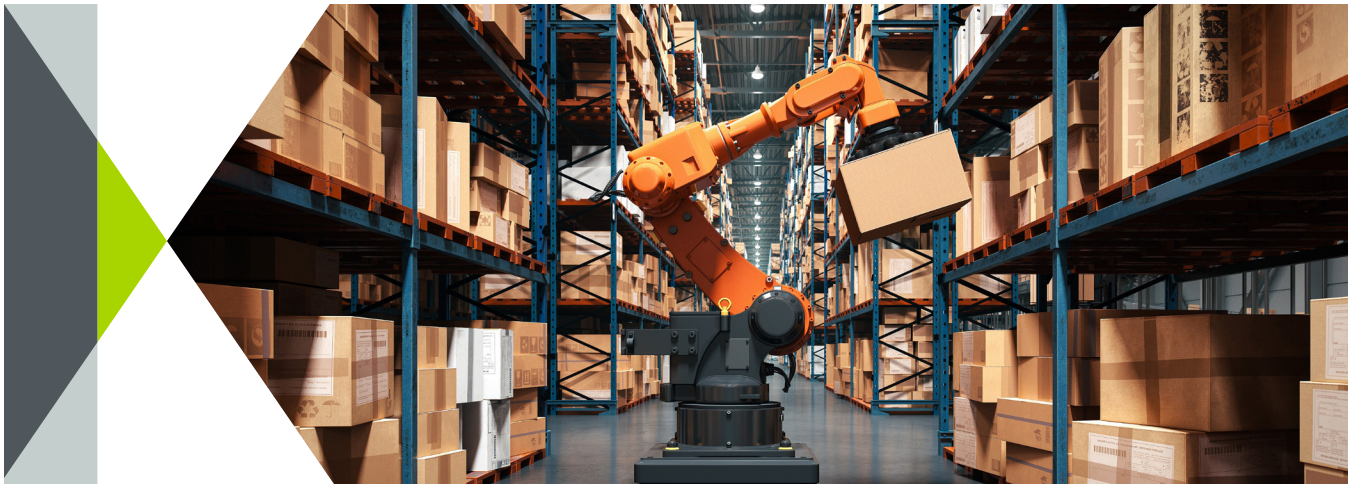


EXECUTIVE INSIGHTS

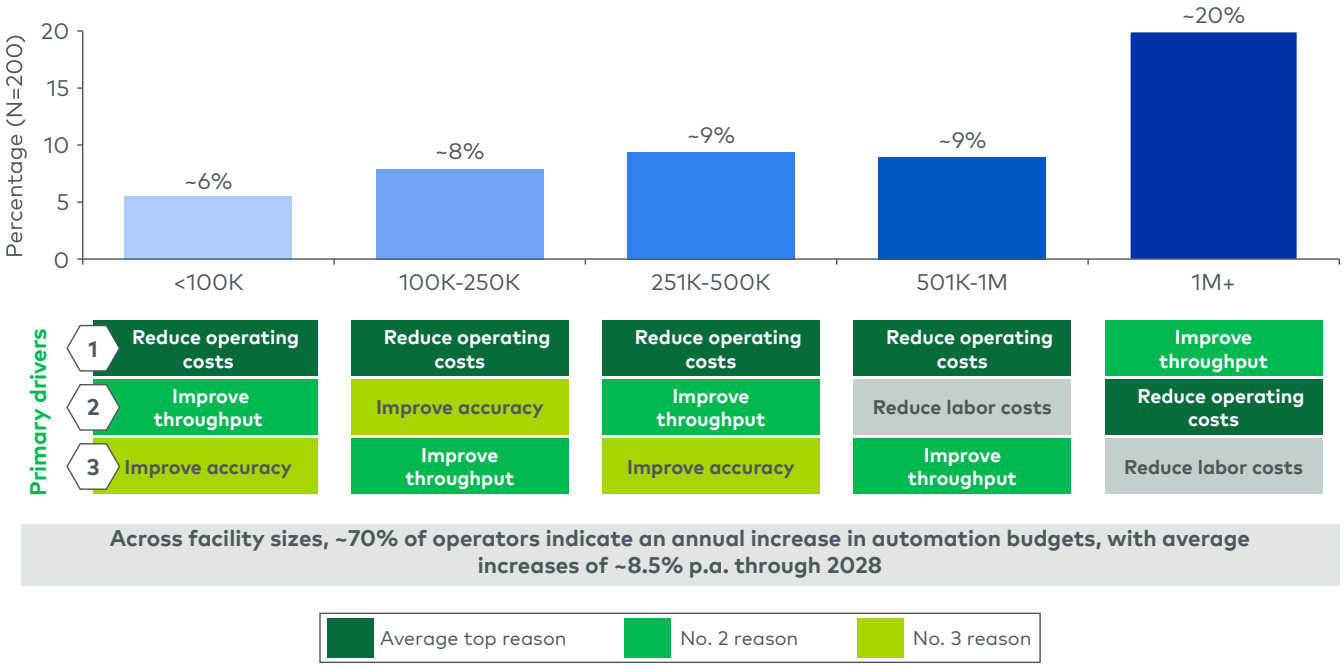
US Warehouse Automation's Next Act: A Broadening Automation Opportunity

Warehouse automation has historically been characterized as a greenfield arms race with a focus on bigger facilities and more robotics. This undersells the reality of the automation opportunity. For the more than 20 billion square feet of existing installed base, operators are increasingly looking to automation solutions in order to drive elevated safety, efficiency and cost savings. Warehouse automation provides a diverse set of expansion opportunities, particularly as the prevalence of smaller retrofit and brownfield projects (65%-70% of annual spend) enables new investment entry process improvement at a wide range of price points.

L.E.K. Consulting recently surveyed 200 warehouse automation decision-makers and identified a number of themes, the most pertinent being that warehouse operators are accelerating investment in automation to reduce costs and meet rising demand, with an emphasis on software, artificial intelligence (AI) and system integration (see Figure 1). Warehouse operators have been continually investing in automation solutions, with facility automation levels building up from 2022 to 2025.

Figure 1

Warehouse automation annual investment budget growth, by average facility size range in square footage (2025 comparison to 2028)



Note: p.a.=per annum
Source: L.E.K. 2026 Warehouse Automation Survey

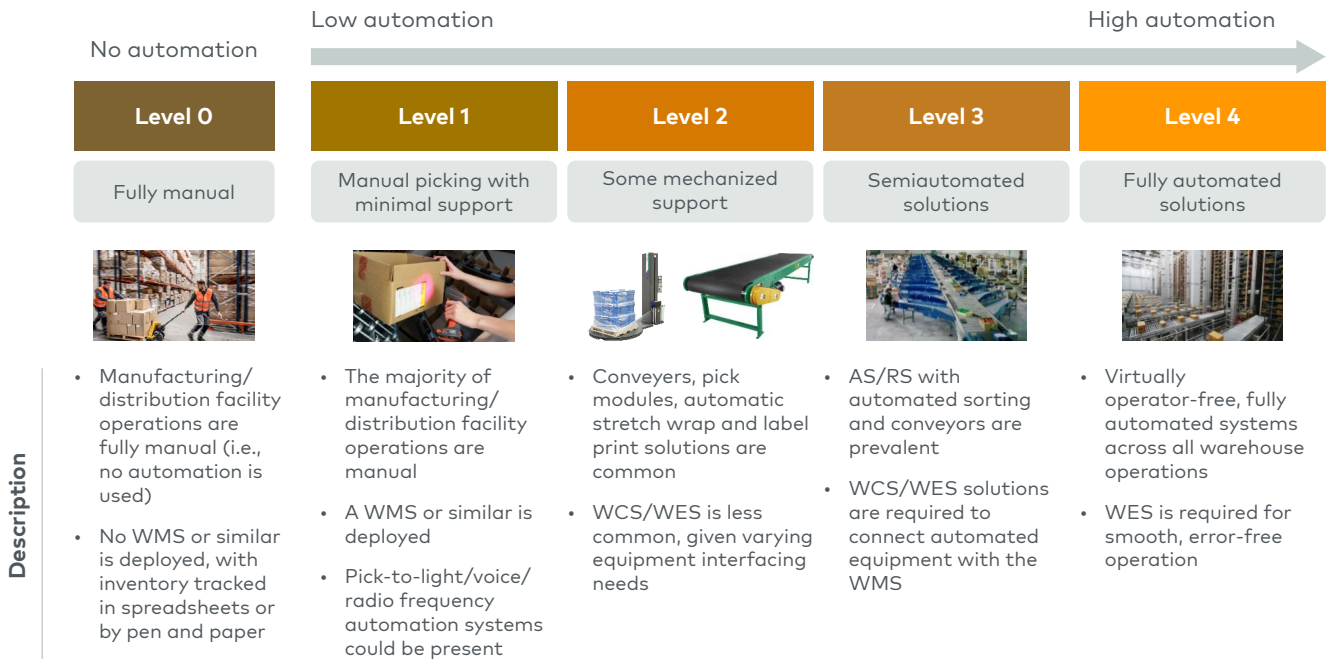
Equally important as the growth rate is the rationale for upping investment despite uncertain macroeconomic conditions. Warehouse decision-makers view this spend as one of the few credible ways to protect service levels while defending margins and generating a fast and favorable return profile. Survey respondents indicate they have realized an approximately 20%-40% return on investment (ROI) across warehouse automation investments. This combination is shifting the spend narrative from large discretionary projects to necessary improvements meant to drive return and differentiation.

Midsize facilities are driving warehouse automation demand

Warehouse operators are facing business challenges due to labor shortages, escalating complexity and fulfillment speed requirements, necessitating investments in solutions that reduce operating costs, improve throughput/processing speed and enhance accuracy/reduce errors. Fortunately, modest investments are able to deliver tangible benefits for operators. Warehouses span a spectrum of automation levels, from fully manual (Level 0) to fully automated systems (Level 4) (see Figure 2). Incremental automation investments drive movement to higher-level scores as the role of manual processes is reduced.

Figure 2

Levels of warehouse automation

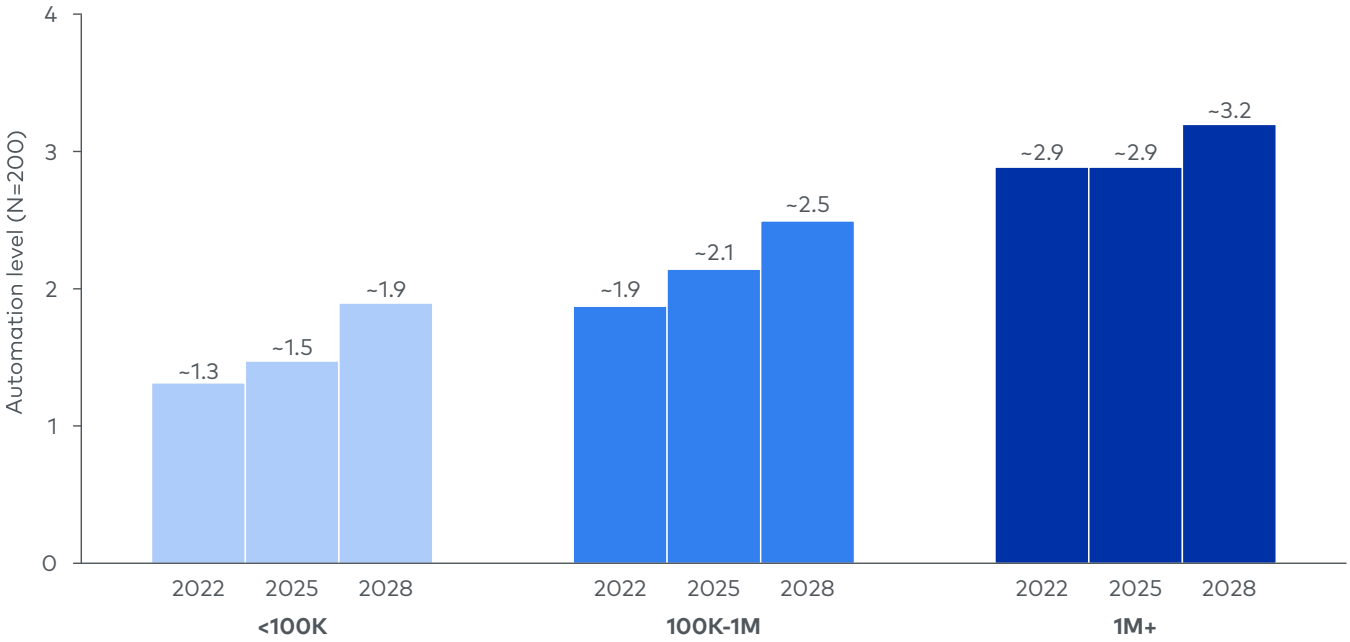


Note: WMS=warehouse management system; WCS=warehouse control system; WES=warehouse execution system; AS/RS=automated storage and retrieval system
Source: L.E.K. research and analysis

Investment is causing facility automation levels to gradually rise. There is significant runway for further adoption, as average facility automation is expected to move from 2.04 (out of 4) in 2025 to 2.41 in 2028, enhancing the degree of mechanized support found in each building (see Figure 3). The market is upgrading gradually by expanding the role of technology in critical workflows, rather than rapidly shifting to Level 4 automation. That is why the opportunity is durable: After one workflow is upgraded, companies look to find the next area to upgrade. The installed base is large, under-automated and expensive to replace outright; therefore, operators are spending to make existing networks more productive before they reinvent them.

Figure 3

Average warehouse automation level, by average facility size range in square footage (2022, 2025, 2028)



Source: L.E.K. 2026 Warehouse Automation Survey

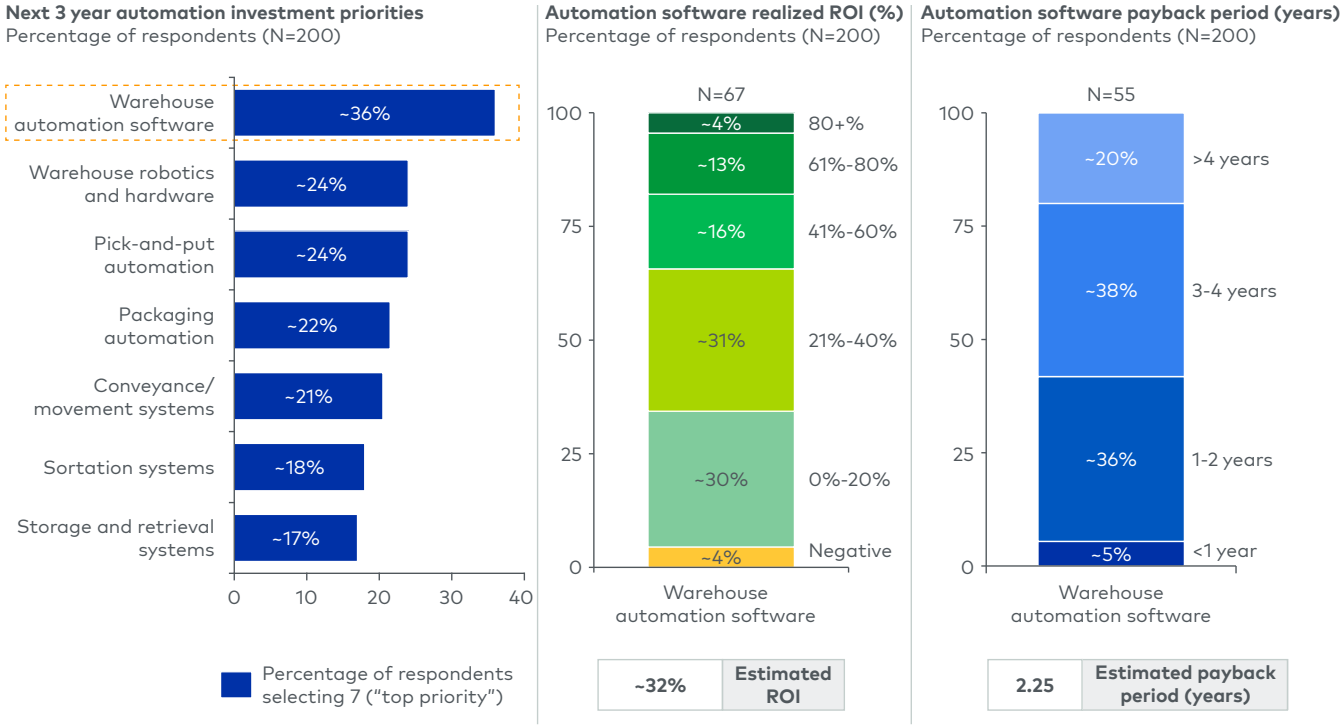
Facility automation levels are concentrated at midsize buildings (100,000 to 1 million square feet) rather than at the extreme ends. This signals that future investment is not concentrated in fully manual laggards or already highly automated flagship nodes; instead, it sits in the broad middle of the market, where operators already have some mechanization but now need better orchestration, better labor leverage and better asset utilization. While organizations with average facility sizes of 1 million+ square feet anticipate the most meaningful growth in warehouse automation budgets, the adoption wave is expected to expand over time, with smaller and midsize facilities still expecting significant gains in automation levels by 2028. That is a particularly favorable demand pattern: Large-node projects anchor near-term spend while the long tail gradually opens as modular solutions and software reduce deployment friction.

Software, AI and orchestration are the most important value layer

Many warehouses have made initial inroads into equipment that helps drive process speed and efficiency, which is now driving a wave of investment around extracting more performance from existing equipment. One key investment lever for driving incremental value is automation software, which is ranked by facility operators as the single highest priority for future investment (see Figure 4).

Figure 4

Warehouse automation software investment themes



Note: ROI=return on investment
Source: L.E.K. 2026 Warehouse Automation Survey

Warehouse execution systems (WES) are becoming more sophisticated, featuring better interface and integration with warehouse management system layers as multisystem warehouses become harder to manage through rules-based control alone. AI is increasingly part of the same story, with nearly half of operators rating it as highly important to warehouse automation investment. The primary use cases for AI in this context are centered on forecasting, knowledge support, warehouse planning and demand prediction.

As the warehouse automation space evolves, investment is not moving away from hardware. Instead, it is moving toward the orchestration layer, which makes existing hardware more productive and selectively pulls through additional robotics. With operators moving from isolated automation purchases to interconnected systems, value migrates toward the layer that can coordinate people, equipment and decisions in real time. Consequently, in warehouse automation, a growing margin pool is expected to sit less in the most visible machine and more in the intelligence wrapped around it.

Integrators play a central role in ROI delivery

As warehouse automation investment grows in complexity, system integrators have emerged as the primary purchase channel, providing the expertise across hardware and software that drives measurable returns. Rather than purchasing discrete components, operators increasingly seek end-to-end solutions tailored to the physical and operational realities of their facilities, with integrators helping navigate trade-offs between near-term disruption and long-term efficiency gains.

Effective integrators are shifting from hardware-led integration to software-driven orchestration to drive service differentiation and margin, placing added focus on the ability to develop or access complementary technology capabilities. When done well, the results are compelling: More than 80% of warehouse operators report automation payback periods under two years, with approximately 20%-40% ROI driven by labor savings, throughput gains, damage reduction and lower operating costs. As a result, integrator use is expected to expand, making it one of several durable, high-value entry points for automation investors.

Warehouse automation offers diverse value creation opportunities

U.S. warehouse automation is growing and increasingly has multiple vectors for investment. Operators are not only turning toward new scaled facility build-out but also prioritizing brownfield modernization, software-led orchestration and high-ROI upgrades inside the installed base. They are concentrating their efforts first on large throughput-critical nodes, then expanding into smaller facilities as technologies become easier to deploy. And they are favoring the partner that can make heterogeneous systems work together reliably. In a market still early in its penetration curve, structural growth and favorable value capture are beginning to converge.

At L.E.K., we support warehouse automation stakeholders across the value chain as they navigate their most pressing challenges. Our experts bring proprietary perspectives on investable opportunities and operational due diligence, identifying stress points and inefficiencies in existing models in order to deliver tangible cost savings and productivity improvements.

Please **contact us** for more information.

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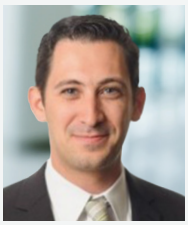

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