SUPPLYCHAIN MANAGEMENT REVIEW

PARTNERING FOR SUCCESS: CHOOSING THE RIGHT AUTOMATION SOLUTIONS FOR THE FUTURE

With the warehouse labor shortage persisting and e-commerce sales continuing to climb, organizations need the right solutions and a strong warehouse automation partner to help them through the hurdles and future-proof their operations.

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contents

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A Strategic Guide to Choosing the Right Warehouse Automation Partner

BY **BRIDGET McCREA, EDITOR AT LARGE**

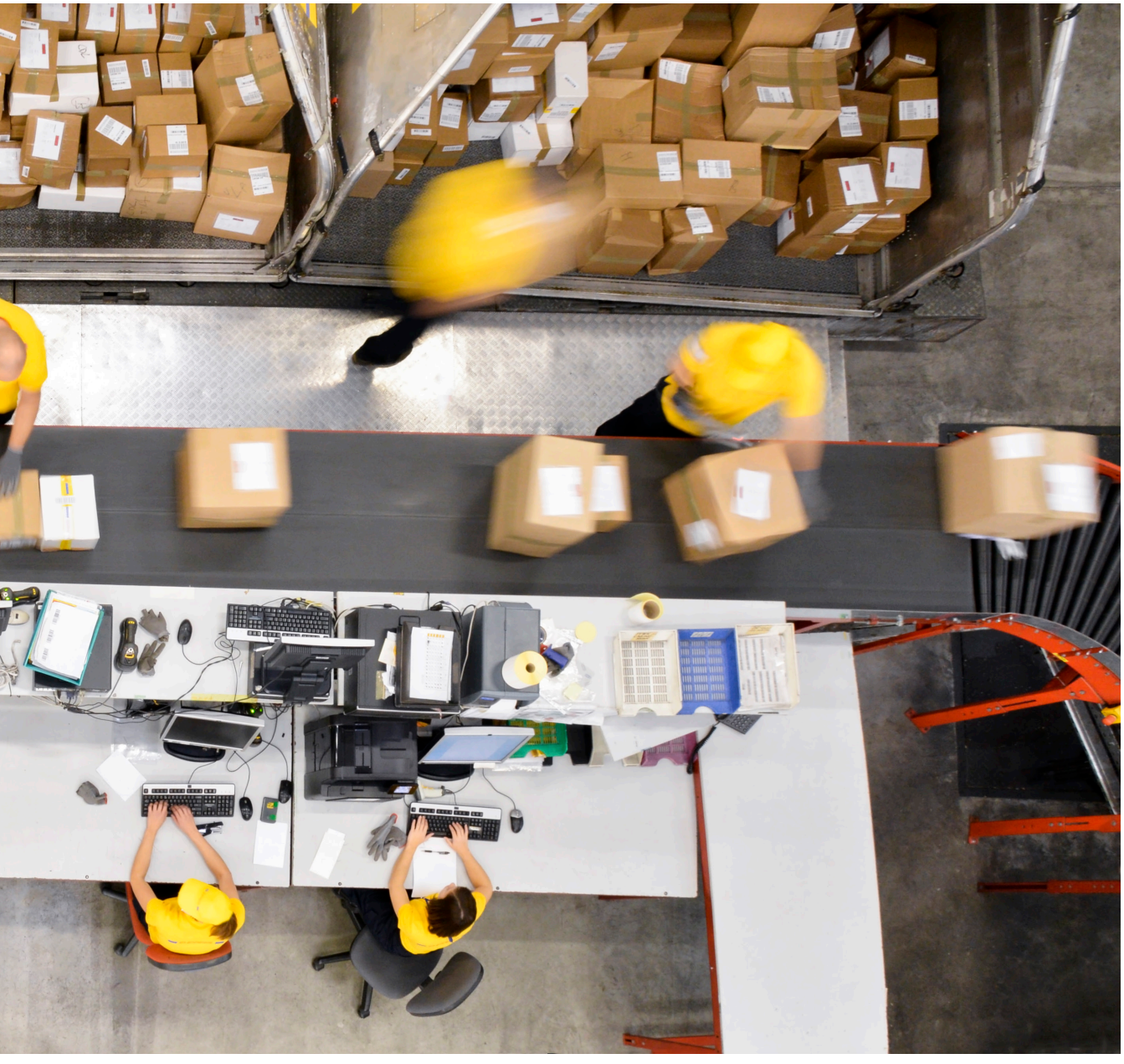
How to choose the right automation solutions partner to best meet your company's specific needs.

The mad rush to automate warehouses and DCs has left many companies to their own devices when it comes to connecting all the equipment, hardware and software they need to run their operations. In fact, many warehouse operators have found themselves awash in a maelstrom of new automation innovations—not all of which "talk" to or share data with one another.

These new automation innovations promise to improve efficiency and accuracy; speed order cycle and fulfillment times; minimize workforce strains; and ultimately enhance customer satisfaction. Unfortunately, without the right warehouse automation supplier in your corner, those promises can start to fall short pretty quickly.

***Deep Tayal**, VP of project engineering for Körber Supply Chain Automation North America*

"Organizations are increasingly seeking automation solutions, including the integration of autonomous mobile robots (AMRs), automated guided vehicles (AGVs), robotic arms, and other advanced technologies into their operations," says Deep Tayal, VP of project engineering for Körber



Supply Chain Automation North America.

Not only are the initial investments substantial, but integrating those solutions into existing applications—and then maintaining them over time—takes time, money and human resources. "Organizations are coming to understand that the investment required to achieve the 'digital vision' is significant, and many are currently grappling with this realization."

The problem is especially acute for smaller organizations that lack the resources to cover the initial investment and ongoing commitment to advancements like artificial intelligence (AI), machine learning, the Internet of Things (IoT) and other compelling technologies.

With the warehouse labor shortage persisting and e-commerce sales continuing to climb, organizations need a strong warehouse automation partner to help them through the hurdles and future-proof their operations.

Addressing key warehousing and fulfillment challenges

The labor shortage isn't a new problem for warehouse and DC operators, but the hurdle is becoming more and more difficult to clear. Not only are workers (skilled

or otherwise) hard to find and keep, but they're also commanding higher salaries, flexible job arrangements and other benefits. If a company can't match what the market is offering it risks missing out on new candidates and losing its existing employees to a nearby company.

The challenges don't end there. Organizations are also managing higher e-commerce volumes that require robust fulfillment, logistics and reverse logistics networks. The latter are especially critical in a world where roughly 20% of all goods purchased online get returned for some reason. If not handled properly, returned goods can turn into a major financial drain for online sellers.

Companies are also under pressure to operate more sustainably, and this impacts everything from sourcing to manufacturing to packaging and shipping (and all points in between). "Many organizations aspire to demonstrate their commitment to sustainability and achieve objectives such as becoming carbon-neutral by 2030," Tayal explains. "However, sustainable solutions—including eco-friendly packaging and automated systems that rely on renewable energy—can be costly. Consequently, companies are increasingly evaluating whether they're prepared to make such investments."

That level of uncertainty has also made its way to other areas of the warehouse floor, where companies that want to be able to use AI, business intelligence (BI) for analysis or improve their inventory management processes tend to gravitate towards pricier Tier 1 warehouse management systems (WMS). In these scenarios, a technology-agnostic partner like Körber can step in and really prove its value.

"The appropriate partner will engage in a thorough discussion and evaluation to determine whether the customer requires a warehouse control system (WCS) or a warehouse execution system (WES)," Tayal says, "as opposed to making a substantially larger investment in a warehouse management system (WMS)."

Don't pick the cheapest option

When Körber initiates engagement with a new customer, one of the preliminary inquiries made is: "What type of partner are you seeking?" Responses such as "the least expensive option" or "the one that can deliver a solution" are frequently encountered, which suggests that many companies may not fully understand the criteria for selecting an automation partner.

According to Tayal, an ideal partner would focus on comprehending the company's specific challenges and objectives during the initial meeting. If this level of understanding is not achieved, it may be prudent to consider alternative candidates on your evaluation list.

The next step should be a sit-down meeting with an engineering or solution expert who will develop a customized, scalable, modular solution for your organization. Avoid "one and done" solutions that have to be ripped-and-replaced every time your organization pivots or grows, and stick to partners that offer a tech-agnostic solution that integrates the best available options from different manufacturers.

Your partner should also keep you within the "automation guideposts" so to speak, and help you carve out a path that doesn't veer too far off course. "The partner should not hesitate to challenge you if you are committed to a solution that may pose greater business challenges in the long run," says Tayal, who also advocates for having a complete cost analysis completed.

"It's essential to review the flow diagrams, the complete system architecture, and the integration of various components," Tayal notes. For instance, you should understand how the AS/RS integrates with your conveyor system, which in turn should connect with your WCS, WES, WMS and other solutions.

Additionally, the individuals responsible for implementing your vision are crucial, so inquire about them. The evaluated companies should provide an organizational chart for the project team and detail the step-by-step process for progressing from concept to completion. Lastly, the ideal partner will clearly articulate the value they offer and designate a communicative point of contact to represent you throughout the project.

Success hinges on the perfect fit

Automation, robotics and AI all promise faster fulfillment, fewer errors and a workforce that's not overtaxed with manual work. But before you can realize the value of automation, here are three more important qualities to look for when making your selection:

• An ROI timeline that aligns with your goals. Set clear goals for your automation project and be sure to outline your return on investment (ROI) expectations. Are you looking for a future-proofed operation? Do you want to reduce OPEX? Are you looking for ways to minimize the pressure of the labor constraints? And, exactly what level of automation are you looking for? These are all important questions to ask because the right automation solutions provider should understand the answers and develop a solution that meets your needs, ROI goals and other targets. "It's crucial for your partner to grasp your return on investment (ROI) objectives, as you might anticipate recouping your investment and realizing ROI within, for instance, 36 months" says Tayal. "Alternatively, your objective might be to sell the company without any outstanding debt. Your automation partner must understand these goals and help you achieve them."

• A partner with longevity and staying power. When the pandemic-driven supply chain constraints began making headlines in 2020, a lot of new players got into the game of supporting companies that were plagued by these problems. The labor shortage was another catalyst for organizations looking for new opportunities in the supply chain technology world. Unfortunately, not all these providers have the longevity and experience of long-time automation partners like Körber.

To minimize costs, companies occasionally purchase a conveyor system from one supplier and a pallet shuttle from another, often overlooking the risks associated with integrating and managing multiple vendors, as well as the challenges of maintenance and spare parts from entirely independent distributors. There's also the possibility that these suppliers may become non-operational within a relatively short period. For best results, always evaluate the financial stability, bench strength and track record of every partner before signing on the dotted line.

• Strong after-sale support. The last thing you want is for a partner to disappear once the switch is flipped on your new automation system. There are always going to be issues to work out and processes to fine-tune after go-live, so make sure your partner offers robust after-sale support. That support should span months or even years, namely because your organization is going to scale and mature, and it needs a system that will grow right along with it.

Go beyond just asking your vendor if it offers support, knowing that any company trying to win your business will probably answer with an emphatic "yes" to that question. "Ask to see an organizational chart and also for a demo of how the company's support system works," Tayal adds. "The OEM should be prepared to supply these documents, along with a list of customer references upon request. Contact these references to obtain their feedback regarding their experiences with technology selection, implementation and post-implementation support."

An investment in your company's future

Selecting the right warehouse automation partner is an investment in your organization's future. Key benefits that companies get in return include faster automation implementation times, reduced project risk, faster ROI and optimized system performance. Other wins that only the right partner can provide include overall project satisfaction, reliable post-sale support and a path towards even more innovation.

Companies that find the right match can also get a leg up on competitors that are behind the digital curve and not yet realizing the full benefits of the tech-enabled, automated fulfillment environment.

"Strategic competitiveness is frequently highlighted by our clients as a major benefit," Tayal remarks. "When the appropriate partner implements a well-designed, scalable and customized solution, you not only acquire the optimal technology for the present but also ensure its relevance for the next two decades. This provides a significant and enduring competitive advantage." •

SOFTWARE USAGE SURVEY: Change on the horizon

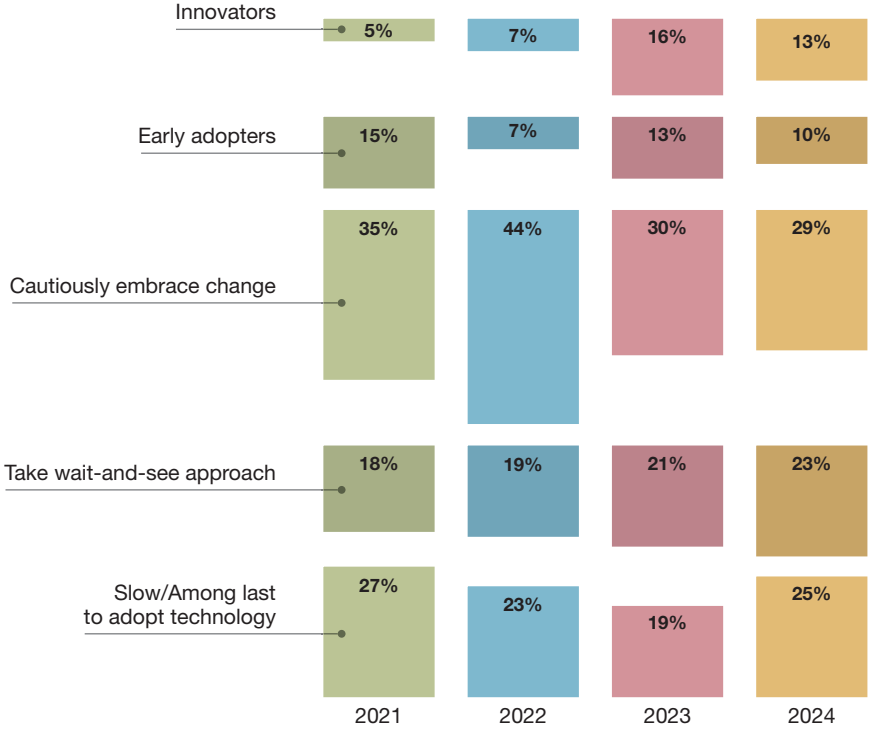
Key findings from *Modern Materials Handling*'s 2024 software reader survey reveal tech adoption trends, current tech spending and the role that software plays in today's materials handling environments.

BY **BRIDGET McCREA**,
EDITOR AT LARGE

The days when people manually pushed loaded carts across sprawling warehouses are slowly fading. Appearing in their place are automated, tech-powered facilities where software serves as the connective tissue for automation, robotics and other intelligent equipment. At the same time, repetitive tasks like picking are being managed by more robots; automated storage and retrieval systems (AS/RS) maximize vertical space; and autonomous mobile robots (AMRs) whisk orders around the fulfillment center.

Companies are responding to a persistent labor shortage and changing consumer demands. In fact, *Modern Materials Handling*'s 2024 Technology Study found that 23% of the magazine's readers consider themselves innovators or early adopters of materials handling technology while 29% say they're "cautiously

How would you best describe your company's adoption of technology for your materials handling procedures?



Source: Peerless Research Group (PRG)

embracing change" at this point.

The current economic conditions may be throttling some software investment pipelines this year. According to *Modern's* readers, 33% say they're "scrutinizing investments and moving forward cautiously," another 27% are moving forward with new software investments and an equal percentage are putting off software investments for the time being.

These are just some of the key findings of this year's survey, which took a deep dive into technology adoption, the impacts of the current economy, annual technology spending, usage plans and the adoption of cloud-based applications. The survey also explored the key challenges companies want to address and the types of materials handling software solutions currently in use/planned for purchase or upgrade.

Cautiously embracing change

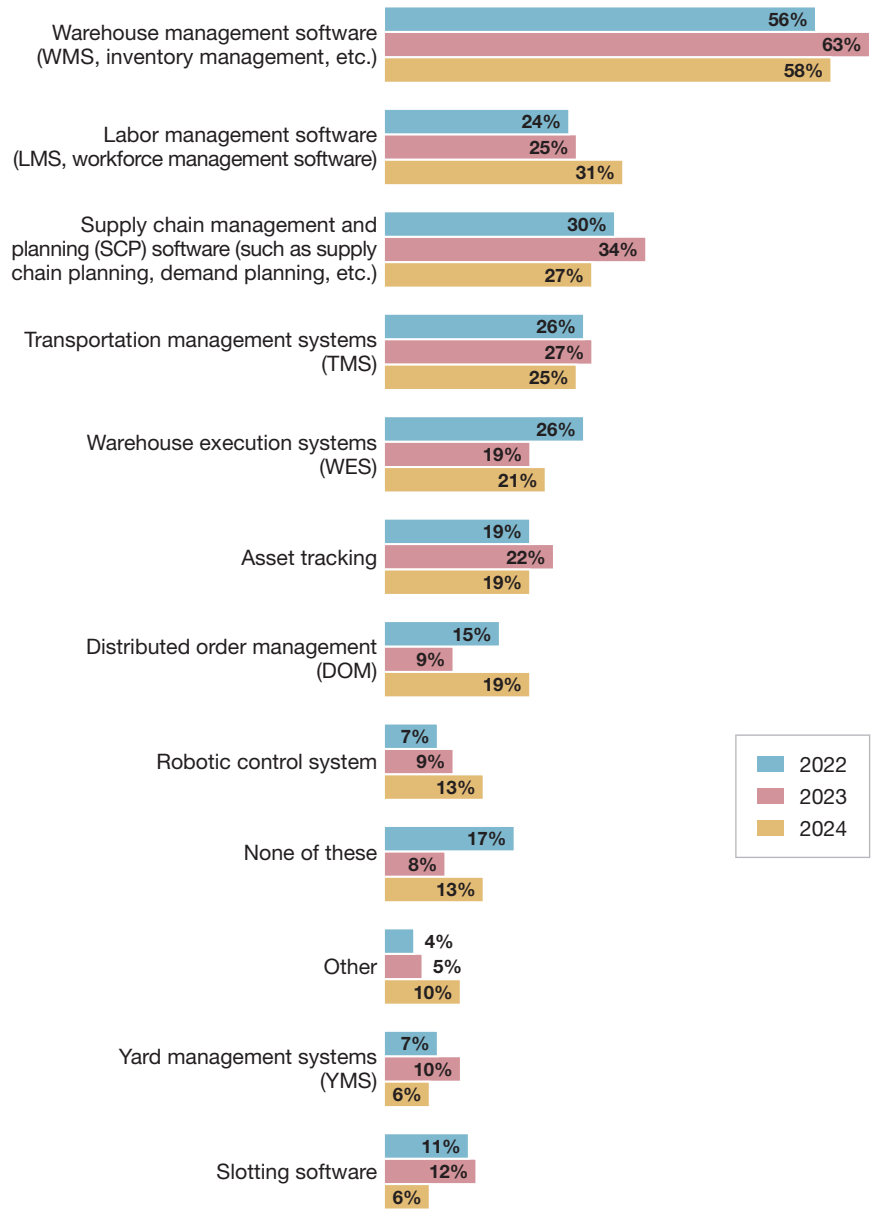
This year's respondents work in a variety of different industries, with 51% employed by manufacturers, 11% employed by a retailer/e-tailer, and 9% employed by a wholesaler. Some are corporate or divisional managers (24%), while 20% are vice presidents or general managers, 14% are supply chain managers, 11% are operations managers, and 8% are logistics or distribution managers. Nearly half (47%) of their companies have revenues of less than $49.9 million while 24% have annual revenues of $250 million or more.

Asked about their adoption of technology for materials handling procedures, 29% of respondents are cautiously embracing change; 25% say they're generally among the last to adopt technology; and 23% are taking the wait-and-see approach. At the other end of the spectrum, 13% consider themselves innovators, and 10% say they are early adopters.

High interest rates, inflation and geopolitical tensions are all impacting corporate investment this year and the warehousing sector hasn't been immune to these external forces. According to the survey, about one-third of companies are scrutinizing software investments and moving forward cautiously due to the current economic environment. Other companies are either holding off on such investments, moving forward with them or upgrading their existing software (versus buying new packages).

Over the past two years, more than half of companies have kept their use of materials handling software steady, while 40% say usage has increased, and 2% have decreased their use of such software.

Which of the following software applications are currently in use in your warehousing and distribution environment?



*Note: Multiple answers accepted

Source: Peerless Research Group (PRG)

Who's using what?

Companies have implemented various types of software in their warehouses and DCs over the last few years. Warehouse management systems (WMS) remain the most-adopted applications in the warehouse, followed by labor management systems (LMS) and supply chain planning (SCP) and demand planning. Other popular warehouse applications include transportation management systems (TMS), warehouse execution systems (WES), asset tracking software and distributed order management (DOM) applications.

One noticeable uptick was the increased use of LMS—31% this year versus 25% in 2023—by companies that are likely looking for ways to optimize their available labor resources. In fact, the modern LMS has come a long way since replacing industrial engineers who used stopwatches and clipboards to conduct time-and-motion studies on the factory floor. Today's LMS applications incorporate everything from self-scheduling capabilities that give workers more control over their schedules to advanced analytics capabilities beyond basic performance metrics.

Over the next two years, 29% of companies plan to evaluate, purchase or upgrade their LMS (compared to 15% last year), 25% will do the same with WMS, and 25% plan to evaluate, purchase or upgrade their WES (compared to 13% last year). Others will be looking more carefully at slotting software (15%), asset tracking (13%), TMS (13%) and supply chain management and planning software (10%) during that time period.

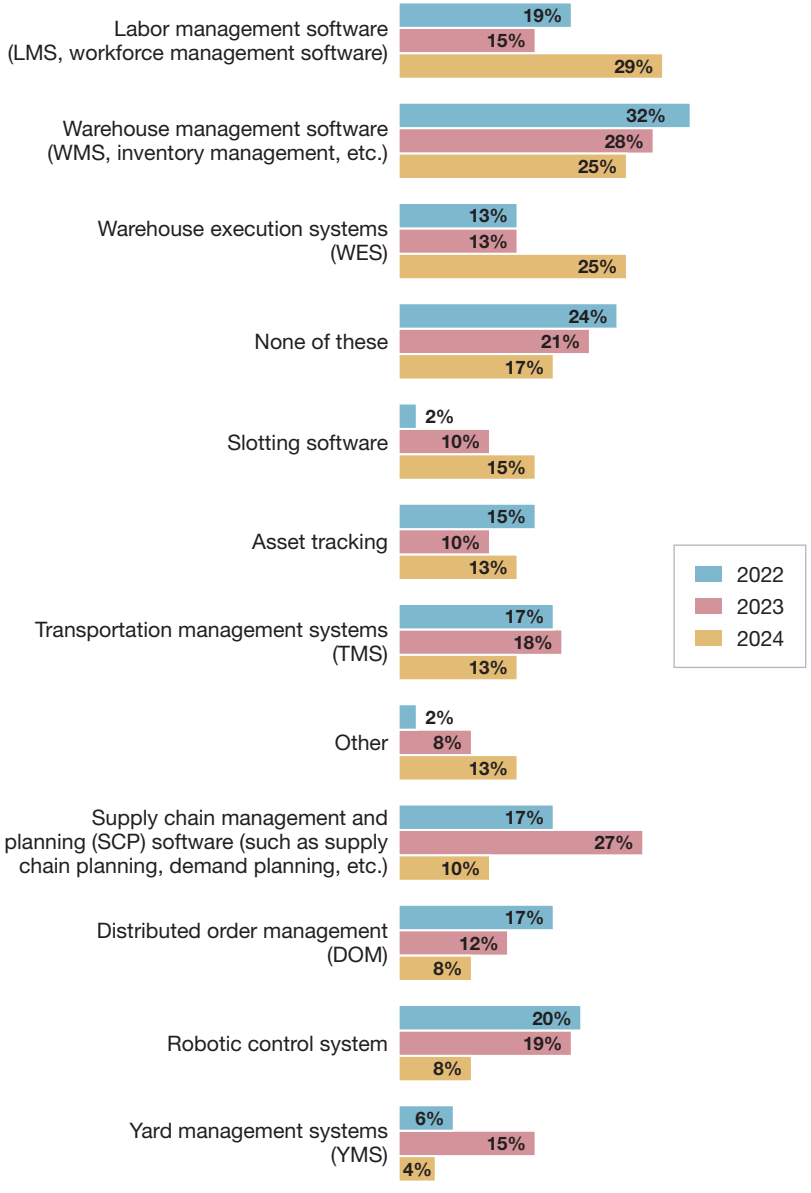
Companies face various challenges when adopting or implementing new materials handling software applications. One of the biggest concerns is total cost of ownership (46%) for the software, followed by compatibility with existing systems (46%), user acceptance (43%), and integration with existing software applications (41%).

Other common challenges that organizations face with software integrations include a lack of implementation resources, no funding, application performance issues, incompatibility with host/legacy systems and being able to substantiate return on investment (ROI).

The king of the mountain: WMS

Warehouse management systems continue to reign as the top software in use in the modern warehouse or fulfillment facility. According to the survey, 45% of respondents say they have had their WMS for 1 to 5 years, 24% for 15+ years and 19% for less than 10 years. Some

Which are you planning to evaluate, purchase or upgrade within the next 24 months?



*Note: Multiple answers accepted

Source: Peerless Research Group (PRG)

newer users have only been using their WMS for less than a year, while 4% have had their WMS for 10 to 15 years.

The majority of readers (62%) have upgraded their WMS at some point within the last five years while 10% say they've never upgraded these systems, which tend to produce a fairly fast ROI. For example, 43% of companies realized their WMS ROI in less than 18 months; and 8% say it took less than 6 months to realize a return on their software investment.

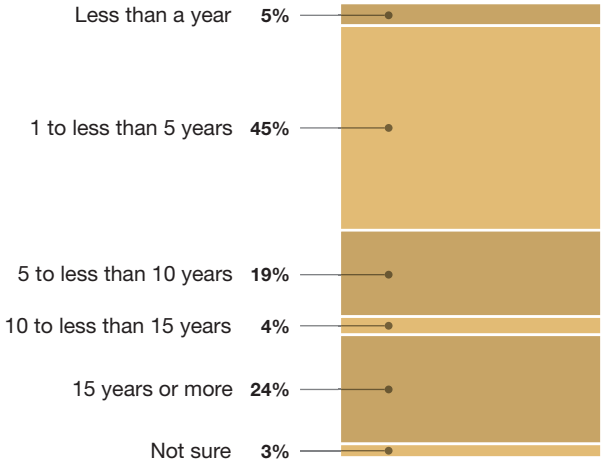
Companies that plan to invest in WMS over the next two years want to leverage the systems' real-time controls or use the platforms to manage new picking requirements or labor. Other reasons for adding a new WMS include the need to replace an existing system, manage inventory deployment or to handle slotting activities.

Managing the complexities of transportation

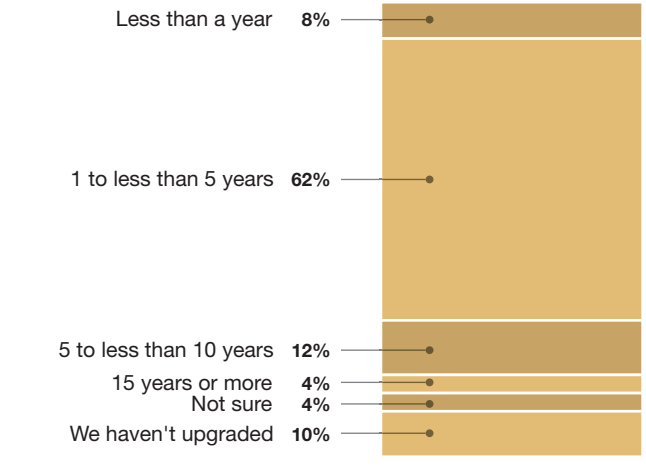
Transportation management systems are another well-used software solution for the modern fulfillment facility, and these platforms also tend to produce a fairly fast return on investment. The survey found that most TMS solutions have been in place anywhere from one year (10%) to 15+ years (8%). The majority

About warehouse management system use:

How long have you had your current WMS application in place?



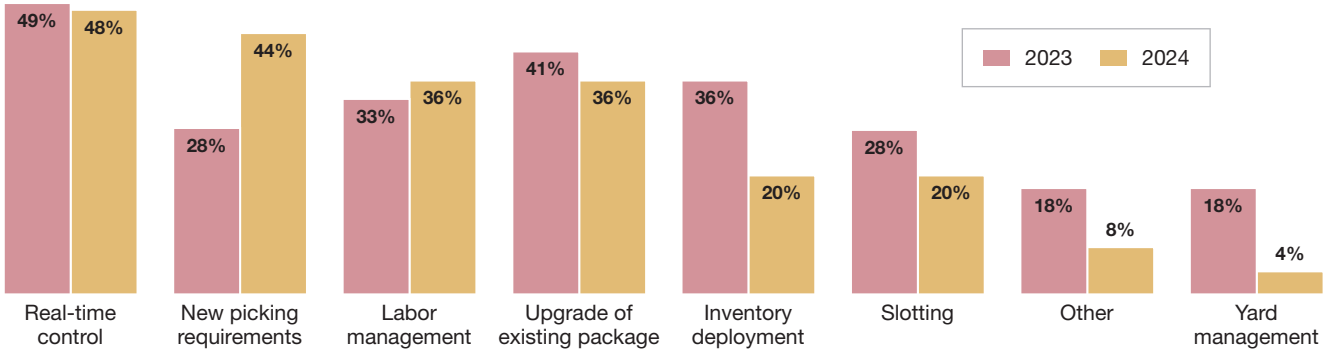
And, when did you last upgrade this application?



*Note: Due to the small number of cases for WMS, data are unstable and any projections based on this information may be unreliable. Figures should be used with caution.

Source: Peerless Research Group (PRG)

What are the main reasons your company is planning to consider or buy WMS during the next 2 years?



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Source: Peerless Research Group (PRG)

of users have had these systems in place anywhere from 1 to 5 years.

Most of the survey respondents (58%) are using TMS solutions they upgraded less than five years ago, although 25% say their systems haven't been upgraded in the last five years. In terms of ROI, the majority of companies say their TMS paid off in less than 18 months. And 8% of companies say it took more than 18 months to realize an ROI from this investment.

Companies are also using SCP applications in their warehouses, where these platforms are used to manage orders, inventory, demand planning, manufacturing and procurement. Forty-two percent of respondents use SCP for collaborative forecasting, planning and replenishment; and 42% use these platforms to manage e-commerce fulfillment.

Software continues to move into the cloud

Like most types of software, supply chain and logistics applications continue to move further into the cloud. According to the survey, 72% of companies are either already using or currently evaluating cloud-based applications. And 8% say cloud is "not an option" for them while 19% are unsure of their interest in the cloud.

The reasons for using cloud-based applications vary, with 46% of companies viewing this software delivery model as more cost effective than on-premises options. Companies also see the cloud as an access point for analytical data, a more secure software option, and a way to get everyone in the enterprise working from a single source of truth.

Half of respondents (50%) say they are using or planning to evaluate cloud-based applications for WMS, TMS, LMS, slotting or order management, while 46% to monitor systems, manage information or predict system failures for their automated warehouse equipment. Also, 42% are using or adopting cloud to manage or collect data about their lift truck fleets.

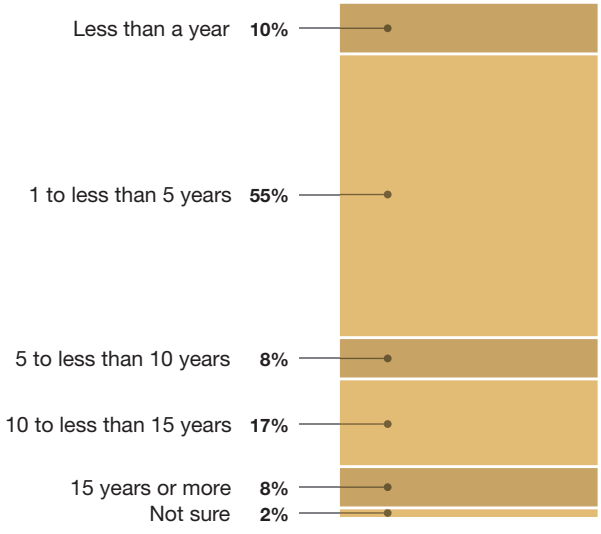
Emerging tech trends

Some of the new technologies that warehouse operators are investing in are artificial intelligence (AI), the Internet of Things (IoT), blockchain and machine learning. The survey revealed some wide disparities between the "early adopters" and the "wait-and-see" crowd when it comes to these emerging technologies. All in all, it appears that warehousing operations are slowly adopting these and other technologies as the business use cases increase and as more vendors add these capabilities into their solutions.

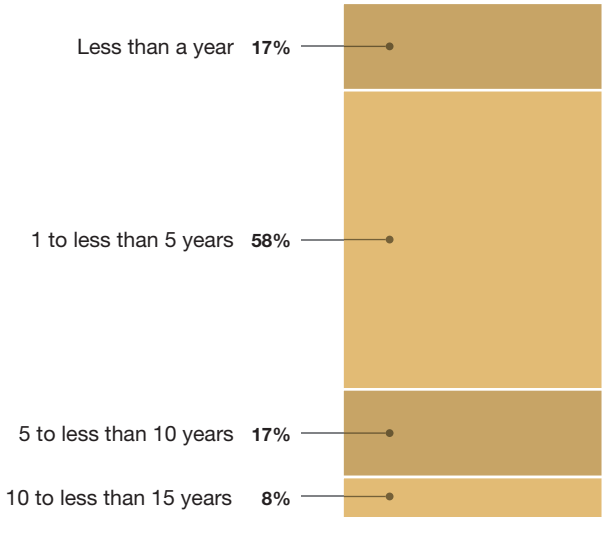
Asked about their expected supply chain software spending over the next 12 months, readers plan to continue investing in more solutions that help them work better, smarter and faster in

About transportation management system use:

How long have you had your current TMS application in place?



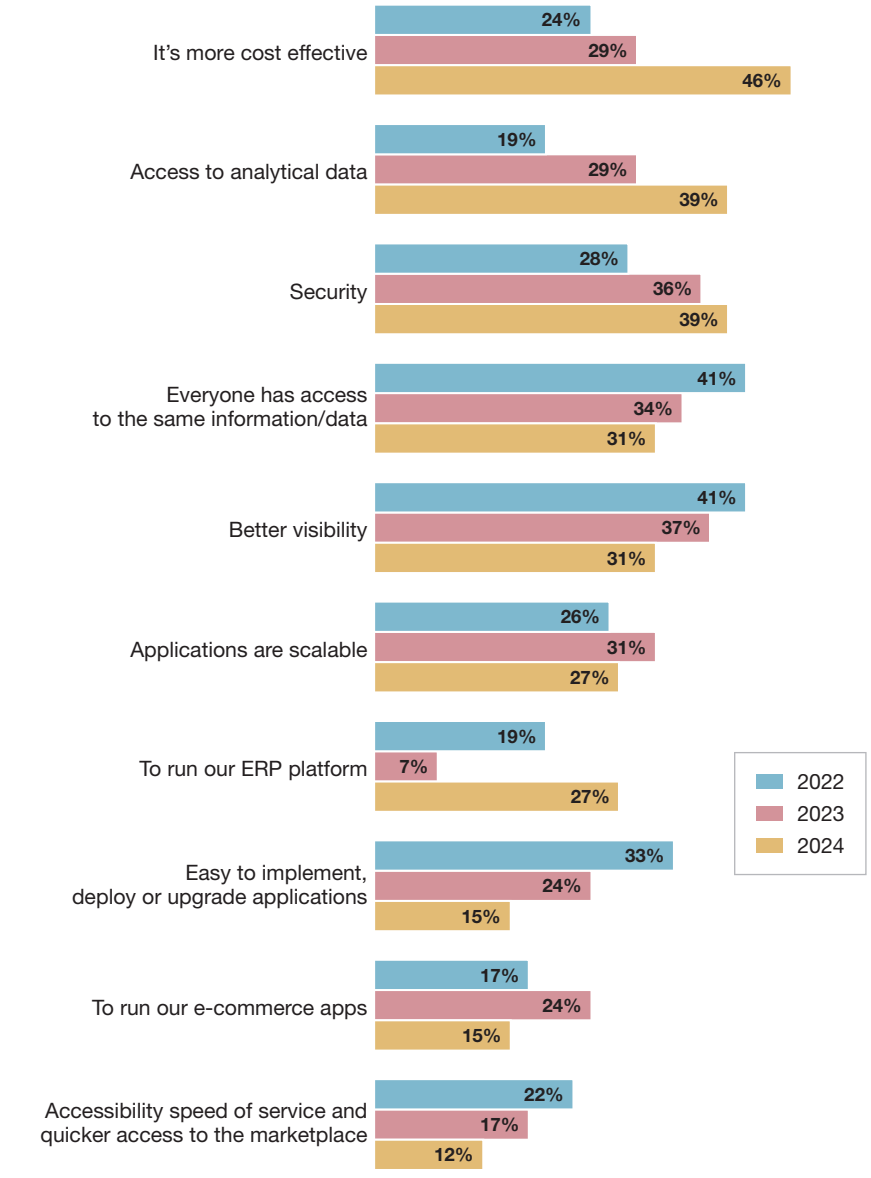
And, when did you last upgrade this application?



*Note: Due to the small number of cases for TMS, data are unstable and any projections based on this information may be unreliable. Figures should be used with caution.

Source: Peerless Research Group (PRG)

Why are you/or will you be using cloud-based applications? What do you see as the benefits?



*Note: Multiple answers accepted

Source: Peerless Research Group (PRG)

the fulfillment environment. However, economic factors and other outside forces may continue to keep spending at bay as companies work to do more with less.

Including license, integration and training, the majority of readers (86%) say their companies will shell out $500,000 or less on software over the next 12 months. Ten percent of companies plan to spend anywhere from $500,000 to $4.9 million on new software programs while 2% will be investing $5 million or more. On average, companies are planning $544,450 in supply chain software purchases over the coming 12 months, down from $743,137 in 2023 but significantly higher than the prior year's expected investment of $436,830. •

2024 Intralogistics Robotics Survey: Robot demand

Two years ago, 40% of companies had no plans to use robots. That number has been whittled down to 8% according to the annual Intralogistics Robotics Survey from Peerless Research Group, MHI and The Robotics Group.

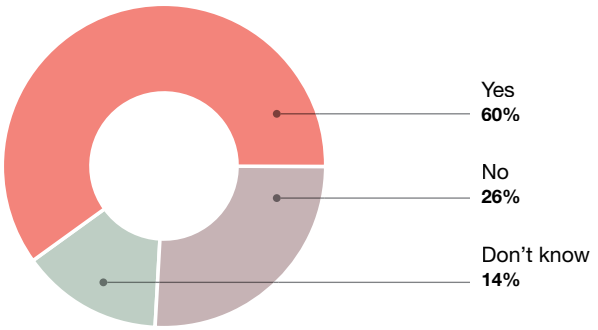
BY **BRIDGET McCREA**, EDITOR AT LARGE

Whirring machinery and humming conveyor belts are no longer the only mechanical sounds heard throughout the modern warehouse or DC operation, where the rise of robotics is transforming the industry and helping companies improve efficiency, accuracy and productivity.

And because automatic guided vehicles (AGVs), articulated robots and collaborative robots (cobots) work tirelessly—in some cases even around the clock—they're also helping companies cure an ill they've been grappling with for years: the warehouse worker shortage.

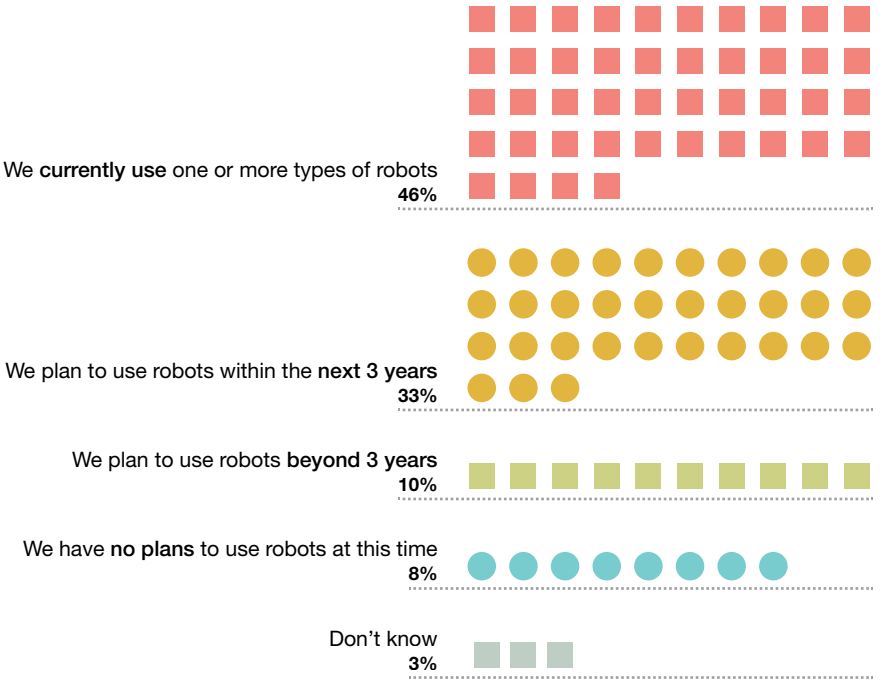
To gauge how companies are using and plan to use robotics in their operations, Peerless Research Group partnered with MHI and The Robotics Group to produce the third annual Intralogistics Survey. A lot has changed since the survey was first conducted in 2022, at which point many companies were just beginning to test the waters of intralogistics robotics. For others, the intersection of logistics and robotics was still a far-off notion.

Are you currently using or considering other types of large-scale intralogistics automation like conveyors, sortation, storage/retrieval or shuttle systems?



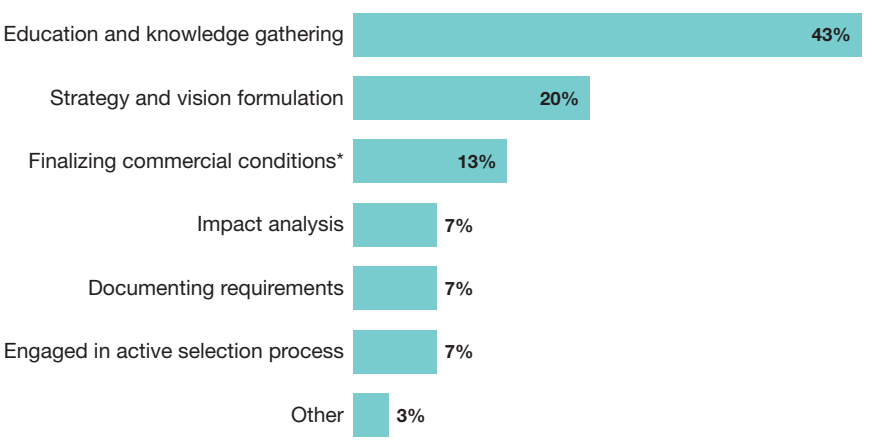
Source: Peerless Research Group (PRG)

What best describes your organization's use of robotic automation systems and/or autonomous mobile robots in your warehouses, distribution centers and/or manufacturing operations?



Source: Peerless Research Group (PRG)

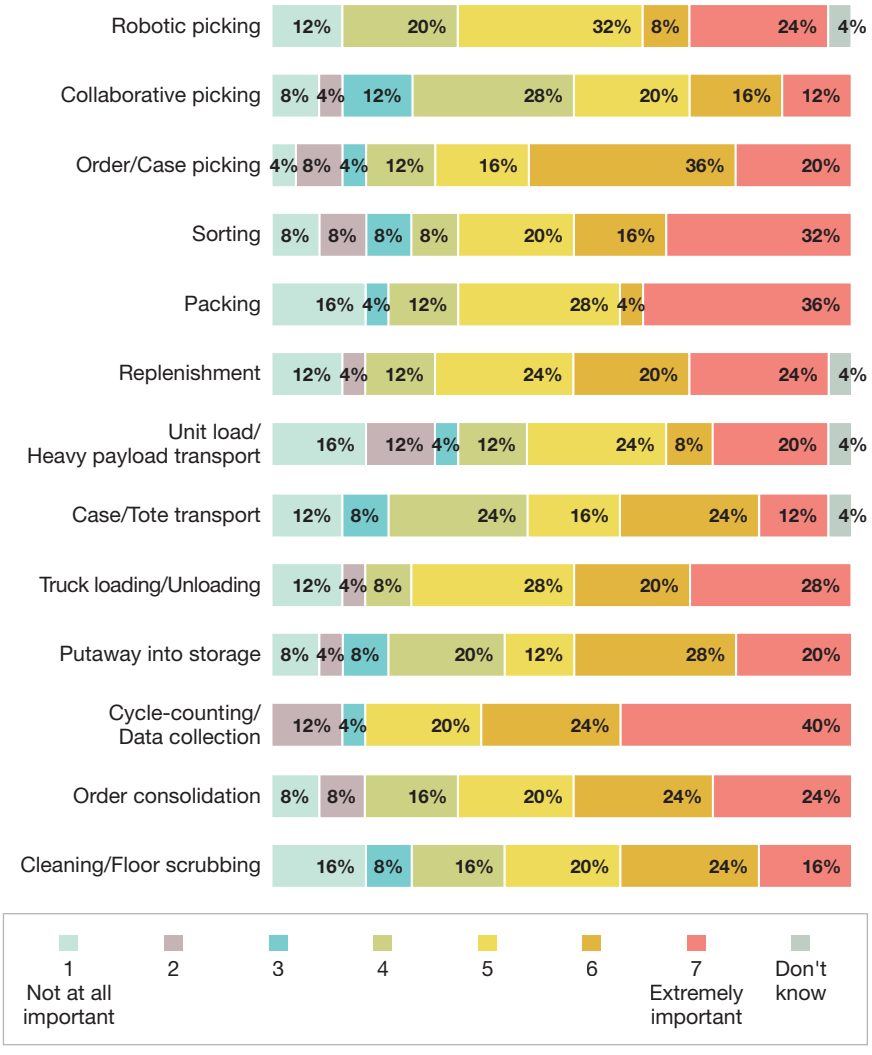
What is the current state of your organization's pursuit of robot systems in your warehouse or DCs?



*e.g., business case, capital appropriation, contracting

Source: Peerless Research Group (PRG)

How important is the need for your operations to improve each of these processes?



Source: Peerless Research Group (PRG)

Consider this: When Peerless published the first survey, 40% of respondents said they had no plans to use robots in the future. Only 23% of respondents said they were currently using robotics. Fast-forward to 2024 and 46% of companies now have plans to use robots and just 8% have no such plans.

This is a significant jump in a short period of time, and it proves the undeniable value that comes from having robots perform increasingly complex tasks in the DC or warehouse.

Who's buying robotics?

For this report, subscribers to *Logistics Management*, *Supply Chain Management Review* and *Modern Materials Handling* were surveyed by e-mail between January and February 2024. This year's 216 respondents are employed at a variety of different organizations, including manufacturing (32%), other non-manufacturing (21%), transportation or warehousing services (15%) and retail trade (14%).

Respondents hold a wide range of positions from corporate management (28%) to logistics director or manager (16%), to plant manager (12%), to material handling director or manager (7%).

Most participants (40%) work for companies that have less than $50 million in annual revenues, with the next largest group (17%) working for organizations with revenues of $2.5 billion or more. The remaining companies have revenues that range from $100 million to $2.49 billion.

Thirty-three percent of respondents are potential buyers or current users of robotic automation systems and/or services, while 13% provide robotic automation consulting and systems integration services, and 7% are sellers of robotic automation systems and/or services.

Intralogistics automation trends

Nearly half (46%) of survey respondents are using one or more types of robots, 33% plan to use robots in the next three years, 10% say they plan to use robots beyond three years, and 8% have no plans to use robots at this time. Most companies (60%) are currently using or considering other types of large-scale intralogistics automation like conveyors, sortation, storage/retrieval or shuttle systems, while 26% are not.

In assessing the "outside factors" that may impact their decision to implement more robotics, 34% expect a significant impact from economic recession; 28% point to labor costs and constraints; 24% expect significant impacts from inflation, and 17% expect significant issues related to environmental, social and governance (ESG) issues. A small percentage of respondents expect no impacts from any of these issues.

Fourteen percent of companies say labor costs and constraints will significantly increase their investment in robotics. Nine percent say inflation will significantly increase their investment plans and a similar percentage see economic recession as a

driving force behind their robotics investments over the next two years.

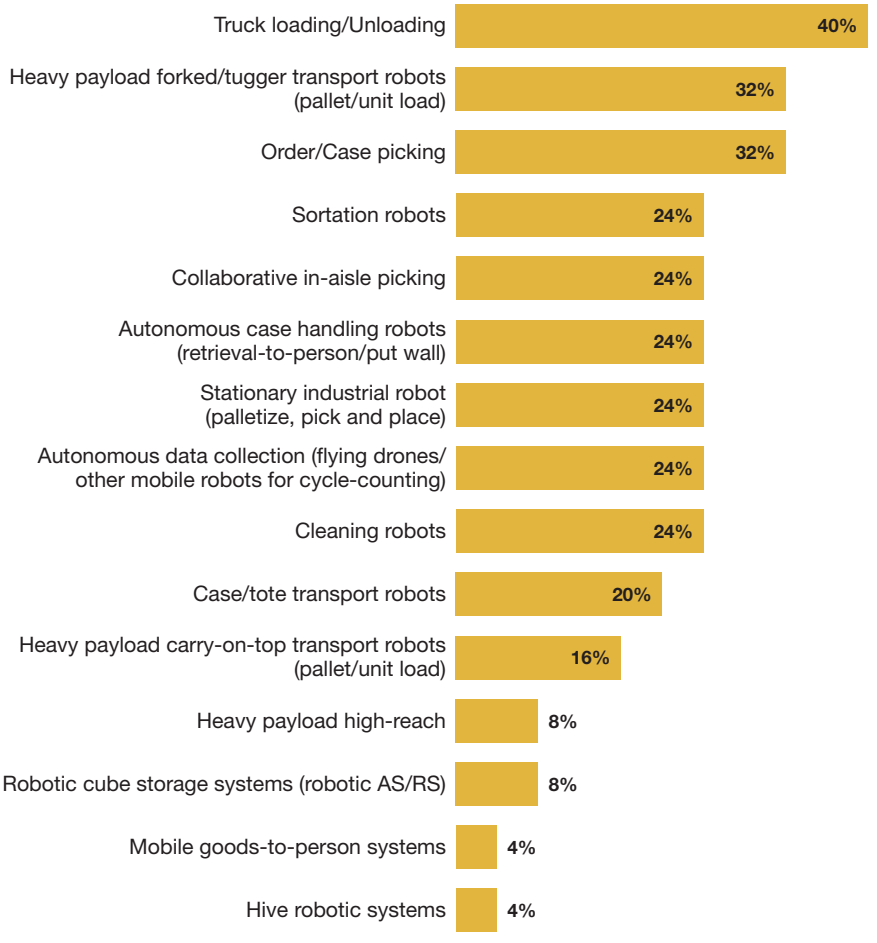
Gearing up for robotics implementation

Asked to describe the current state of their organizations' warehouse robotics initiatives, 43% of companies are in the education and knowledge gathering stage; 20% are in the strategy and vision formulation stage; and 13% are finalizing their business cases and capital appropriation. Others are in the process of impact analysis (7%), documenting requirements (7%) or are engaged in the active selection process (7%).

In ranking the top three motivating factors for pursuing a robotics strategy, companies are most interested in addressing labor shortages and availability constraints, reducing labor costs and improving labor productivity.

Of the respondents that want to implement robots in the future, most (63%) plan to work with robotics vendors—up from 39% last year, industry peers (56%, versus 29% last year) and materials handling suppliers (33%). Others turn to industry trade associations (30%), internal domain experts (22%), systems integrations (15%) or industry analysts/advisory firms (15%) for help in this area.

What are the primary types of robotic automation systems you are considering?



Source: Peerless Research Group (PRG)

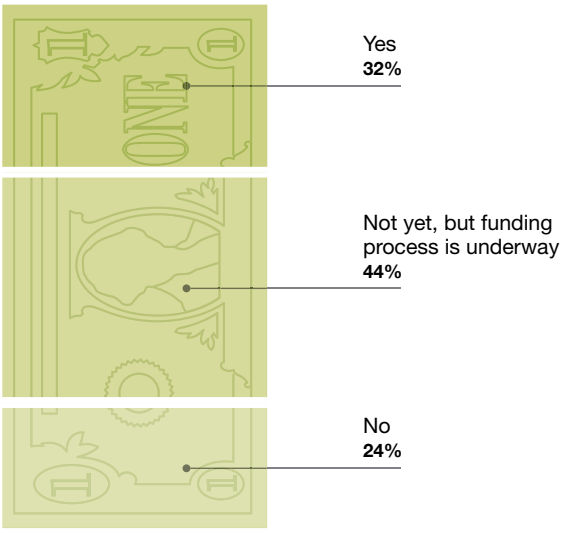
Looking for improvement

The modern warehouse is a complex animal where cycle counting and data collection (40%), packing processes (36%), sorting (32%) and truck loading and unloading (28%) are all processes that are ripe for improvement. Twenty-four percent of companies see robotic picking as being extremely important, while 24% want to improve replenishment processes, and an equal number want better than 24% order consolidation processes.

The top priorities for robotics right now include robotic picking (32%), cycle-counting and data collection (32%), sorting (28%), replenishment (28%), and truck loading and unloading (28%). Other companies want to use robotics for order/case picking (24%), packing (24%), unit load/heavy payload transport (20%) and order consolidation (20%).

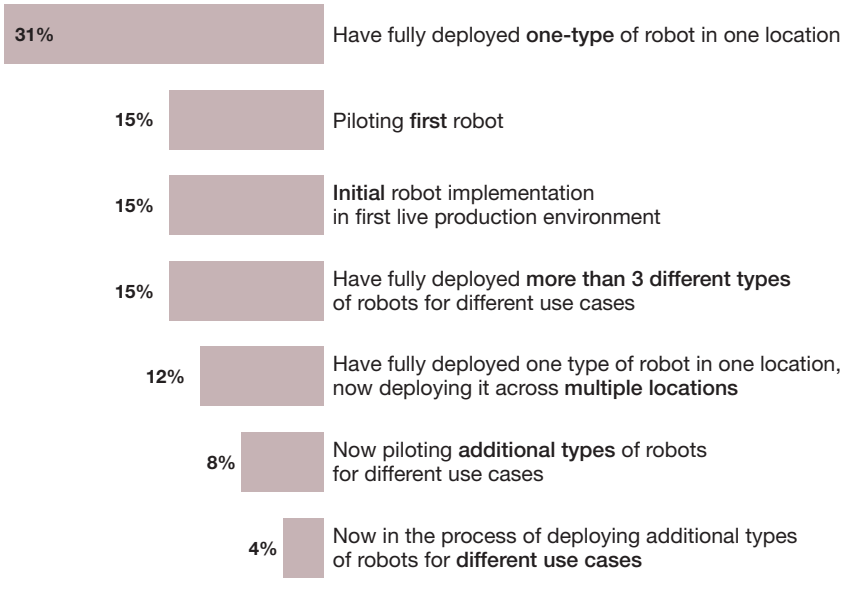
Looking out over the next three years, 40% of companies hope to use robotics for truck loading and unloading, 32% for heavy payload forked/tugger transport robots, 32% for order/case picking and 24% for sortation. Other types of robotics of interest include collaborative in-aisle picking systems (24%), autonomous case handling robots (24%) and stationary industrial robots (24%).

Do you currently have funding for a robotic automation system initiative?



Source: Peerless Research Group (PRG)

What is the current state of your organization's use of robots in your warehouse or DCs?



Source: Peerless Research Group (PRG)

Making the investment

Organizations are investing in warehouse robotics for a number of different reasons, with the top three being to improve labor productivity, reduce labor costs and help address labor shortages and availability constraints. Nearly one-third (32%) of companies say they already have the funding in place for these initiatives (versus 14% in 2023), while 44% lack the funding but are going ahead with the process anyway.

Of the companies currently using robotics, 31% of companies have fully deployed one type of robot in one location (compared to 22% last year), while 15% are piloting their first robot (6% last year), 15% say they have an initial robot implementation in the first live production environment and 15% have fully deployed more than three different types of robots for different use cases.

If forced to make a choice, most companies (58%) say labor availability constraints would be their most important motivation when considering robotics, while 38% say labor costs are the primary driver.

Take robotic fleets to the next level

The most popular use cases for robotics today are picking (40%), autonomous data collection (36%), sorting (28%) and palletizing/depalletizing (28%). Twenty-eight percent of companies are using robotics for order consolidation, 24% for packing (down from 35% last year), 24% for case/tote transport and 24% for put-away into storage.

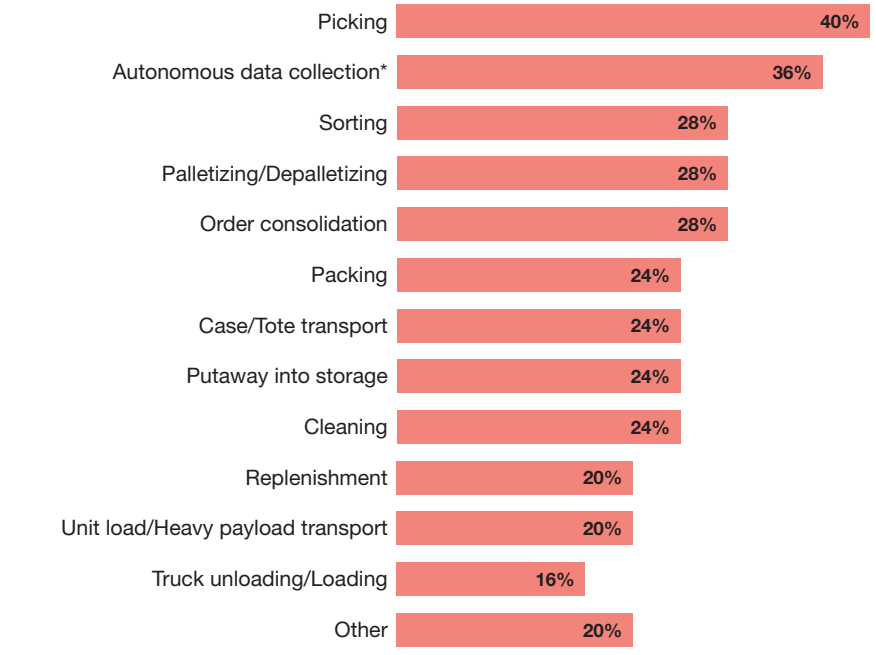
The most popular robotics include stationary industrial robots (36%), robotic picking systems (32%), cleaning robots (28%) and sortation robots (24%). Case/tote transport robots are currently in use at 20% of companies, while 12% rely on heavy payload carry-on-top transport robots and 12% use mobile goods-to-person systems. Other types of robotics currently in use include autonomous case-handling robots (12%) and robotic cube storage systems (12%).

Most survey respondents (71%) plan to expand their robotic fleet in the next two years. Twenty-five anticipate a significant increase in fleet size across multiple facilities and 21% expect a significant fleet size increase within a single facility during that period.

For the majority of companies (46%), picking is the next use case priority for robots (up from 38% last year). Other processes that respondents want to automate with robotics include sorting, packing, truck loading/unloading, put-away into storage, case/tote transport, replenishment and palletizing/depalletizing.

Over the next two to five years, com-

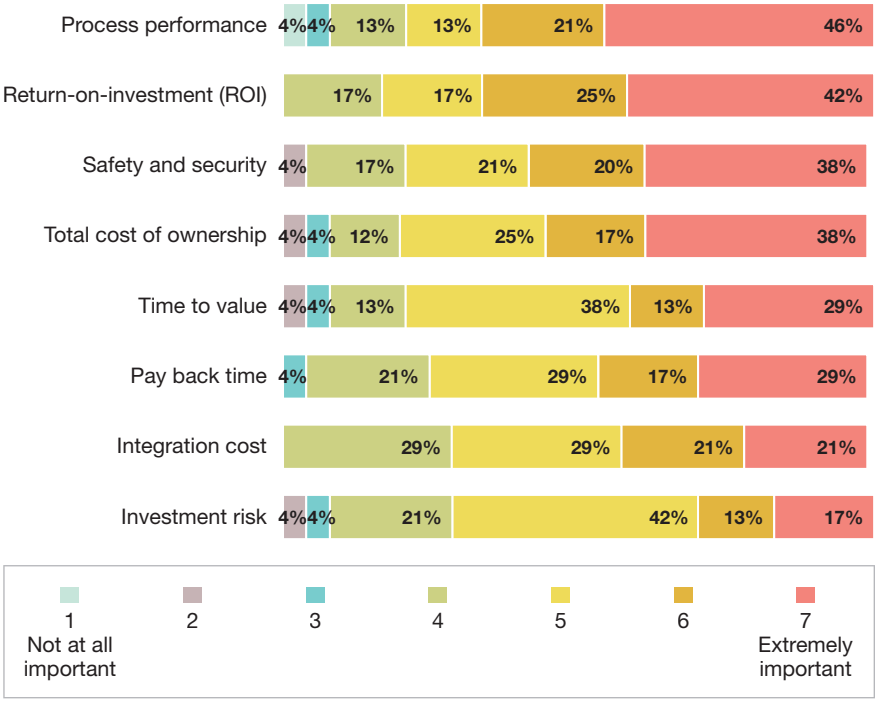
Which use cases are you addressing with robots today?



* (e.g., cycle-counting)

Source: Peerless Research Group (PRG)

How important were the following business case factors when you were choosing your robotics solutions?



Source: Peerless Research Group (PRG)

panies say they'll be most interested in sortation robots (33%), robotics picking systems (33%), robotic cube storage systems (29%) and case/tote transport robots (25%).

Twenty-one percent will consider heavy payload forker/tugger transport robots, another 21% say they'll consider autonomous case-handling robots and an equal percentage have set their sights on stationary industrial robots.

Using robots to hit business goals

In the increasingly competitive logistics landscape, automation can be a strategic step toward unlocking efficiency, profitability and a competitive edge. When selecting robotics, companies use process performance (46%), return on investment (42%), safety and security (38%) and total cost of ownership (38%) as their key criteria. Other important metrics that factor into buying decisions include time to value (29%), payback time (29%), integration cost (21%) and investment risk (21%).

So how well are today's intralogistics robotics meeting these expectations? According to the survey, nearly all (91%) of companies had their time-to-value objectives met or exceeded; 88% were satisfied with the integration costs and 83% had their process performance objectives met or exceeded. Finally, 79% of respondents say the total cost of ownership expectations were either met or exceeded for their robotics investments.

The rise of e-commerce, ever-increasing customer expectations and the persistent warehouse worker shortage are all putting pressure on warehouses to work faster, improve throughput, be more accurate and operate more efficiently. And while there's no doubt that human workers are irreplaceable, this year's intralogistics survey proves that robots are emerging as powerful tools that help fulfillment centers boost performance and do more with less.•

CCEP ACHIEVES A HIGHER VOLUME AT A LOWER COST

How Körber's automated layer picker solution helped Coca-Cola increase order preparation efficiency and quality, at a lower cost

In Belgium, Coca-Cola Europacific Partners (CCEP) produces and distributes a broad range of beverages, serving close to 12 million consumers.

To improve customer service, CCEP decided to optimize their supply chain network, reducing external storage, and moving all logistics operations to production sites. As a result, 90% of all external warehousing was redirected to the Antwerp site, significantly increasing its picking and order preparation volume.

"We have chosen Körber because the company stands out in know-how and has demonstrated experience in the world of layer picking systems."

— Guy Vansant, Associate Director for Logistics Operations, CCEP

Higher expectations

CCEP quickly realized that merely extending manual picking operations would not keep up with the ever-growing volume. A more flexible solution was needed to pick the wide range of SKUs, as well as the large variety of products and product shapes.

All of this, while reducing damages and errors, and improving the quality and stability of customer pallets. CCEP needed a new automated solution. Something fast, resilient, safe, and cost-efficient.

A fully automated future

Taking on this project was a big challenge for CCEP, but also a great opportunity. This completely automated layer picking process meant answering increasing customer demand for mixed layer pallets efficiently. Körber's in-depth knowledge of automated layer picking was crucial to the partnership.

The layer picker solution receives full pallets from the ASRS, and prepares and delivers mixed-layer pallets in a fully automated, software-driven process. The system consists of a layer picker gantry with two-layer picker heads, three transfer cars and a conveyor system, including automatic strapping.

It handles 150 layers per hour and can manage 110 SKUs simultaneously. Its maximum capacity is 200 cycles per hour, with the possibility of picking more than one layer per cycle. Its scalable and expandable design means CCEP is now prepared for the challenges of a fast-moving business, wherein the customers set the pace.

CASE STUDY SNAPSHOT

COMPANY:
Coca-Cola Europacific Partners (CCEP)

INDUSTRY:
Beverages

NUMBER OF ANTWERP EMPLOYEES:
300

ANTWERP WAREHOUSE CAPACITY:
29.400 pallets

KÖRBER COMPETENCY:
Layer Picker Technology

SOLUTIONS(S):
Layer Picker Solution

COMPLEXITY
To handle the sudden increase in volume in their Antwerp distribution center, with a flexible, fast, and reliable layer picking solution.

BEST PRACTICE
An automated layer picker solution integrated seamlessly into the existing operation, increasing efficiency, accuracy and quality, while reducing costs and health and safety risks.

Safer for workers and better for clients

By partially replacing manual handling with automation, picking operations are now more efficient, and staff safety has significantly improved.

To continue supporting CCEP, the Körber service team is always available to help. The 24/5 hotline agreement allows CCEP to communicate with our technicians and operators should any issue arise. Twice a year, our technical team will also take care of their system's technical maintenance, as well as providing preventive maintenance. •

"We had a good experience with the Körber team. Throughout the different phases of the project, they showed professionalism and flexibility. Even though we have been severely impacted by COVID lockdowns and travel limitations, they were always looking for solutions in order to reduce this impact on the product schedule."

— Attila Csongrad Engineering Project Manager, CCEP