

2024 Warehouse Outlook & Trends



New report from Peerless Research and Kardex Remstar highlights the top challenges and opportunities that modern order fulfillment and distribution operations are managing now and what lies ahead for 2024.

SPONSORED BY

kardex

Introduction

The persistent labor shortage, ongoing supply chain interruptions, rising freight costs and the fear of running out of physical space remain as some of the top issues that order fulfillment and distribution operations are grappling with right now. Organizations are also worried about their customers' demand for faster delivery times, how to effectively process returns and a lack of data visibility across multiple locations.

Not surprisingly, these and other pain points are keeping warehouse and distribution center (DC) operators up at night and are expected to roll right over into the new year. As labor, materials and shipping costs continue to put pressure on companies' bottom lines, more of them continue to turn to technology, automation and robotics to streamline their order fulfillment processes, reduce costs and compete more effectively. They're also making better use of vertical space and using space-saving equipment like automated storage and retrieval (AS/RS) systems to improve efficiency and further reduce costs.

To learn more about the current and future state of the modern order fulfillment operation, Peerless Research Group conducted a reader survey on behalf of Modern Materials Handling for Kardex Remstar. This study was executed in October / November 2023, and was administered via e-mail among MMH subscribers.

Respondents were pre-qualified for being involved in decisions regarding warehouse and/or distribution center (DC) operations. The survey garnered more than 200 responses from a variety of industries, including automotive and transportation equipment; chemicals and pharmaceuticals; food, beverage and tobacco; aerospace; and industrial machinery.

Many respondents (45%) work for manufacturing firms, with the balance employed by wholesalers (18%), retailers (10%), transportation/warehousing service providers (7%) and e-tailers (6%). Other respondents work for third-party logistics companies (3PLs) and consulting firms. The majority of these operations (43%) serve both B2C and B2B customers,

although 40% work solely in B2B and 17% with end consumers.

The survey attracted a broad swath of professionals who are currently working in the order fulfillment space. The majority of survey respondents (35%) work in management; in warehousing, distribution or supply chain (28%); or in plant management (19%) for manufacturers (45%), wholesalers (18%), retailers (10%) or transportation/warehousing service providers (7%).

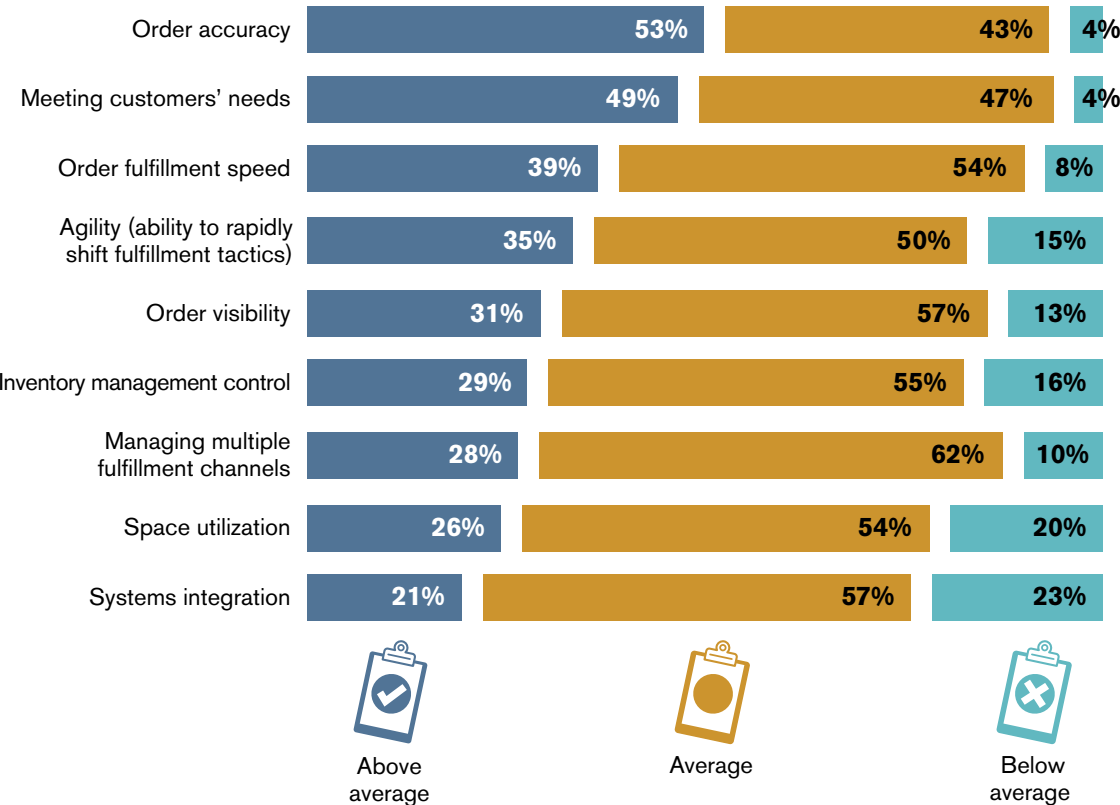
Most of the companies represented in the survey have either 100,000-249,999sf of warehouse space (23%), less than 50,000sf of space (24%) or somewhere between 50,000 and 99,999sf (18%). These organizations' revenues for 2023 are expected to be less than \$50 million (for 39% of respondents), between \$50 million and \$99.9 million (15%) or somewhere between \$100 million and \$499.9 million (15%).

With this research, Peerless and Kardex Remstar wanted to learn more about the current state of the world's order fulfillment operations, the related pain points that organizations are dealing with and what they can anticipate as we move into the new year. The survey also digs down into the specific technology solutions that are either already deployed in these operations, or that are currently being evaluated and implemented. Here's what they learned about the key, fulfillment-related roadblocks and how companies are using technology, automation and other processes to work through these challenges.

The Current State of Order Fulfillment & Distribution: What's Happening Today?

FIGURE 1

How would you rate your order fulfillment and distribution operations on each of the following



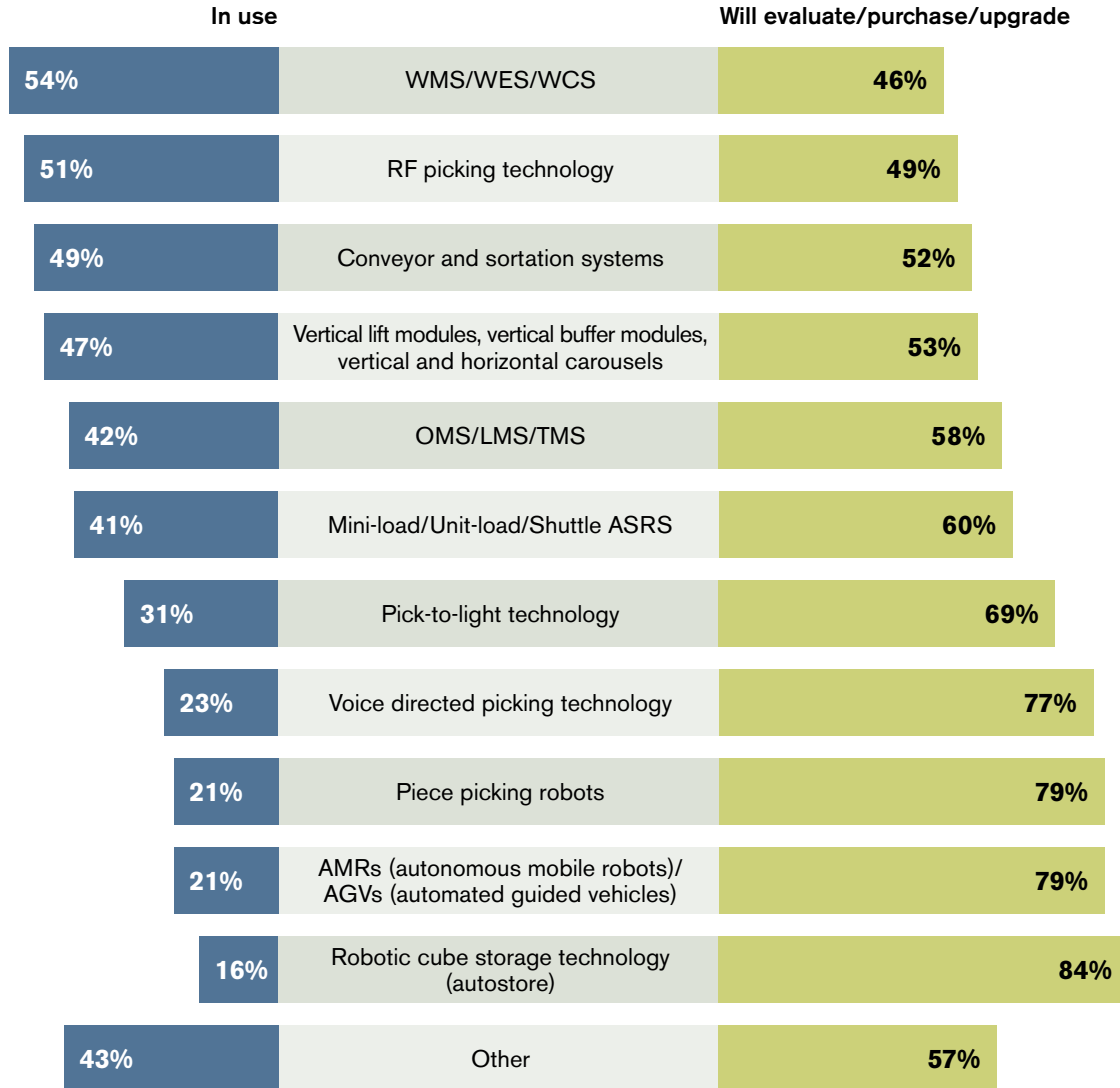
What's Working and What's Not

Asked to rate their order fulfillment and distribution operations on various metrics, 53% of the survey respondents give their order accuracy an above average ranking, 54% rate their order fulfillment speed as average and 57% say order visibility is average. Nearly half feel that they are meeting customers' needs while 55% rate their inventory management control as average.

The processes awarded the lowest rankings included systems integration (23% say theirs is below average), space utilization (20%), inventory management control (16%) and agility (15%). Summary sentence to connect here that these are the main challenges DCs are currently facing.

FIGURE 2

Which systems, technology, or automation solutions are currently in use for order fulfillment and distribution operations in your warehouse? Which are you planning to evaluate, purchase or upgrade within the next 12 months?

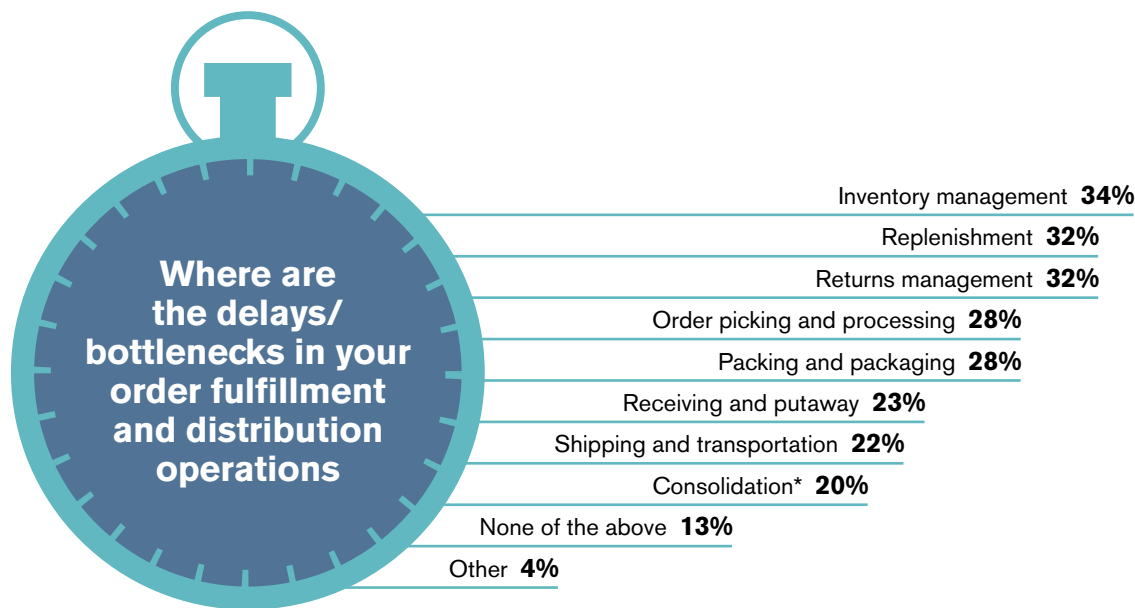


Systems Ranked by Popularity

The most popular systems, technology and/or automation solutions currently in use in the warehouse include warehouse management systems (WMS), warehouse execution systems (WES) and warehouse control systems (WCS), which are collectively being used by 54% of companies. Other popular systems include radiofrequency (RF) picking technology (used by 51% of organizations), conveyor and sortation systems (49%) and vertical lift modules, vertical buffer modules and vertical and horizontal carousels (47%).

In terms of which systems, technology and automation they'd like to evaluate, purchase and/or upgrade, respondents are most interested in voice-directed picking technology, piece-picking robots and autonomous mobile robots/automated guided vehicles (AMRs/AGVs). Other technologies of interest include pick-to-light applications, mini-load/unit-load/shuttle ASRS and conveyor and sortation systems.

FIGURE 3



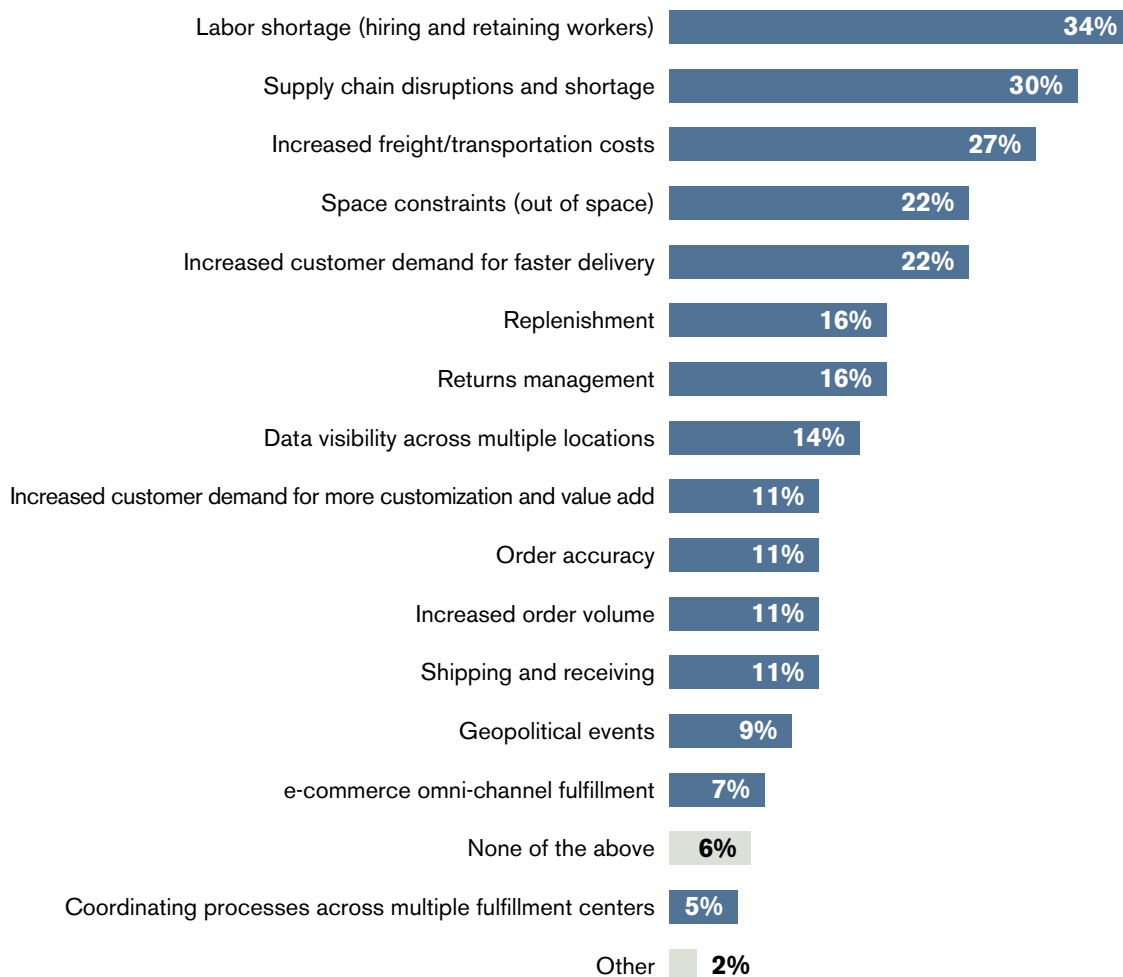
* marrying items selected from different areas of the distribution center

Fulfillment Bottlenecks & Challenges

For most companies, the biggest fulfillment and distribution bottlenecks happen in inventory management (for 34% of companies), replenishment (32%), returns management (32%) or order picking and processing (28%). Other organizations are dealing with issues like antiquated legacy ERP systems, a lack of inventory visibility and the need for better data accuracy.

FIGURE 4

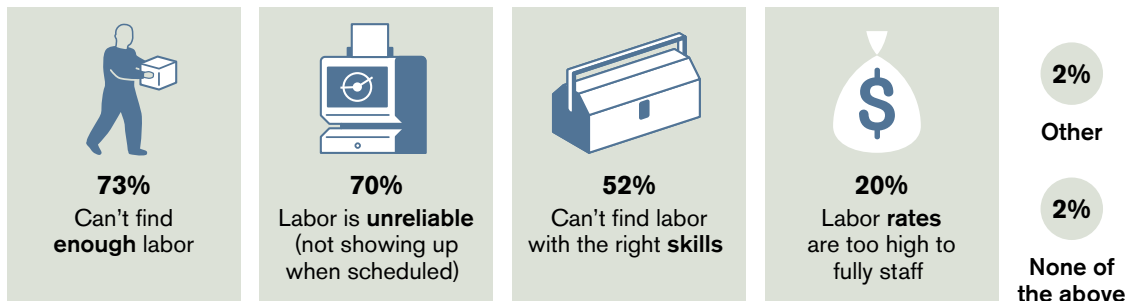
Currently, what is the biggest challenges your order fulfillment and distribution operations will face



Warehouse and DC operators continue to have a lot on their plates right now and are dealing with a wide range of daily challenges and roadblocks similar to what they have in years past. According to the survey, the top pain points include hiring and retaining workers (for 34% of companies); supply chain disruptions and shortages (30%); higher freight and transportation costs (27%); space constraints (22%) and increased customer demand for faster delivery (22%).

FIGURE 5

Currently, what contributes to your labor challenge in warehouse or distribution center order fulfillment operations?

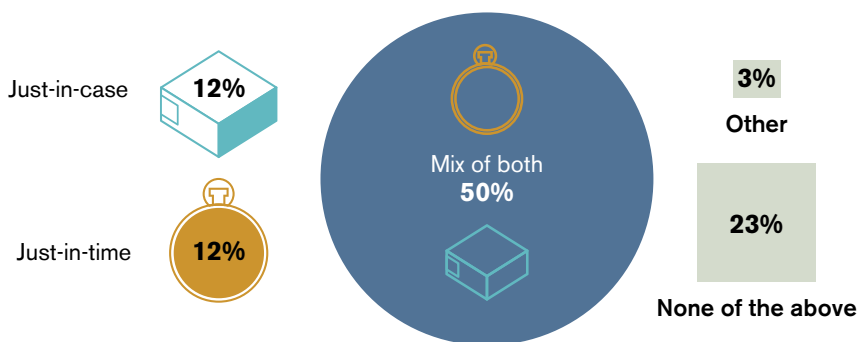


Inventory Management Strategies

Employee turnover isn't a new problem for the typical DC operator, but this problem has become more severe over the last few years. When asked about the major contributors to their individual labor challenges at the order fulfillment levels, most companies (73%) can't find enough labor while 70% are trying to manage unreliable employees who don't show up when scheduled. Other companies can't find labor with the right skills (52%) or are dealing with labor rates that are so high that they can't fully staff their operations (20%).

FIGURE 6

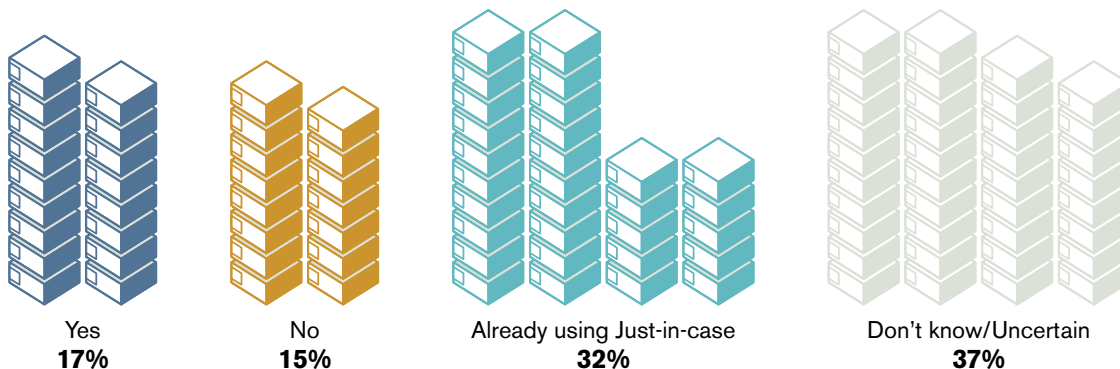
Do you use a "Just-in-case" or "Just-in-time" inventory management strategy?



When it comes to inventory management, flexibility is key. Half of the companies surveyed this year are using a combination of just-in-case and just-in-time inventory management strategy while 12% are using one of these two approaches. Other companies are using build-to-forecast, min/max or "order as needed" inventory approaches.

FIGURE 7

Do you plan on implementing a Just-in-case inventory management strategy in the next 12 months to combat supply chain shortages?



Asked whether they plan to implement a just in case inventory management strategy within the next year, 17% of respondents said yes and 15% said no.

FIGURE 8

Over the last 12 months, how have fulfillment and distribution costs changed in each of the following areas?

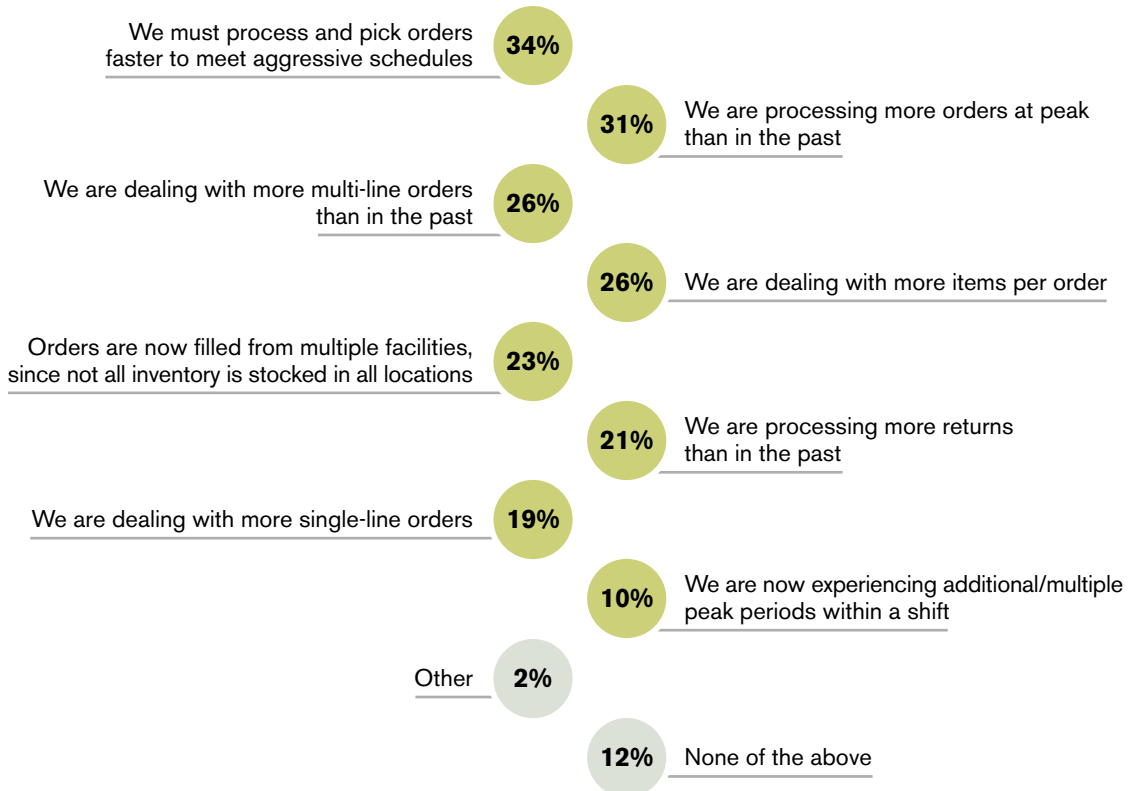


Dealing with Rising Costs & Changing Requirements

Like most industries right now, the fulfillment sector has seen its costs rise over the last 12 months. An equal percentage of companies (71%) have seen their labor and freight/transportation costs go up, while 67% are paying more for packaging and materials. Other areas where prices have escalated included inventory (for 65% of companies) and facilities space/maintenance (46%). Very few companies have experienced price decreases in these areas over the last 12 months, although some organizations say their costs have stayed the same.

FIGURE 9

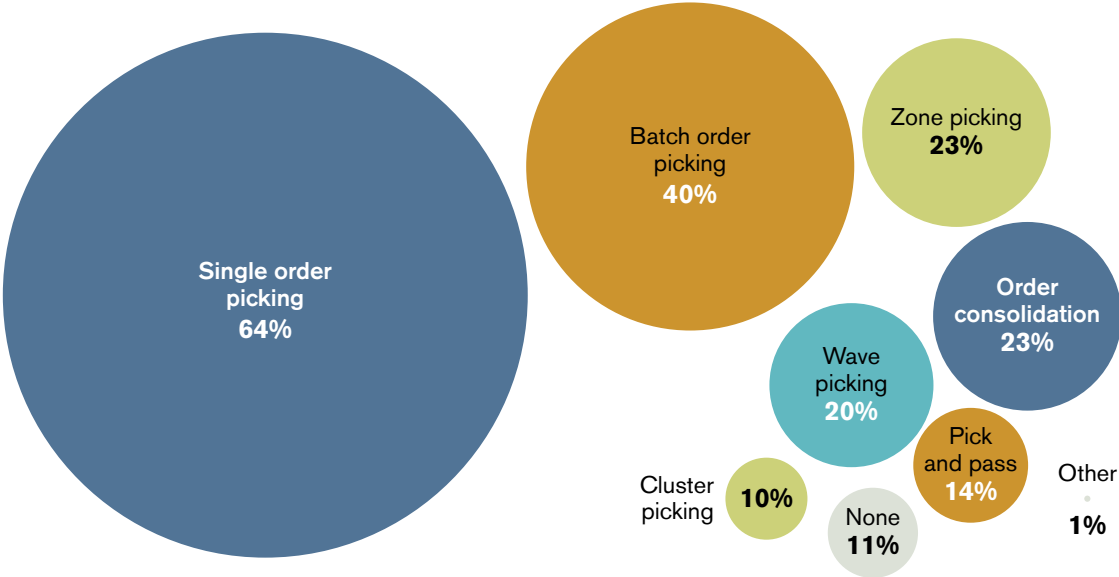
How has your order profile changed over the course of the past 24 months?



When it comes to order profiles, 34% of companies say they're processing and picking orders faster, 31% are processing more orders at peak and 26% are either dealing with more multi-line orders or more items per order. Companies also say that orders are now filled from multiple facilities (because not all inventory is stocked in all locations), that they're processing more returns than they have in the past and that they're managing more single-line orders.

FIGURE 10

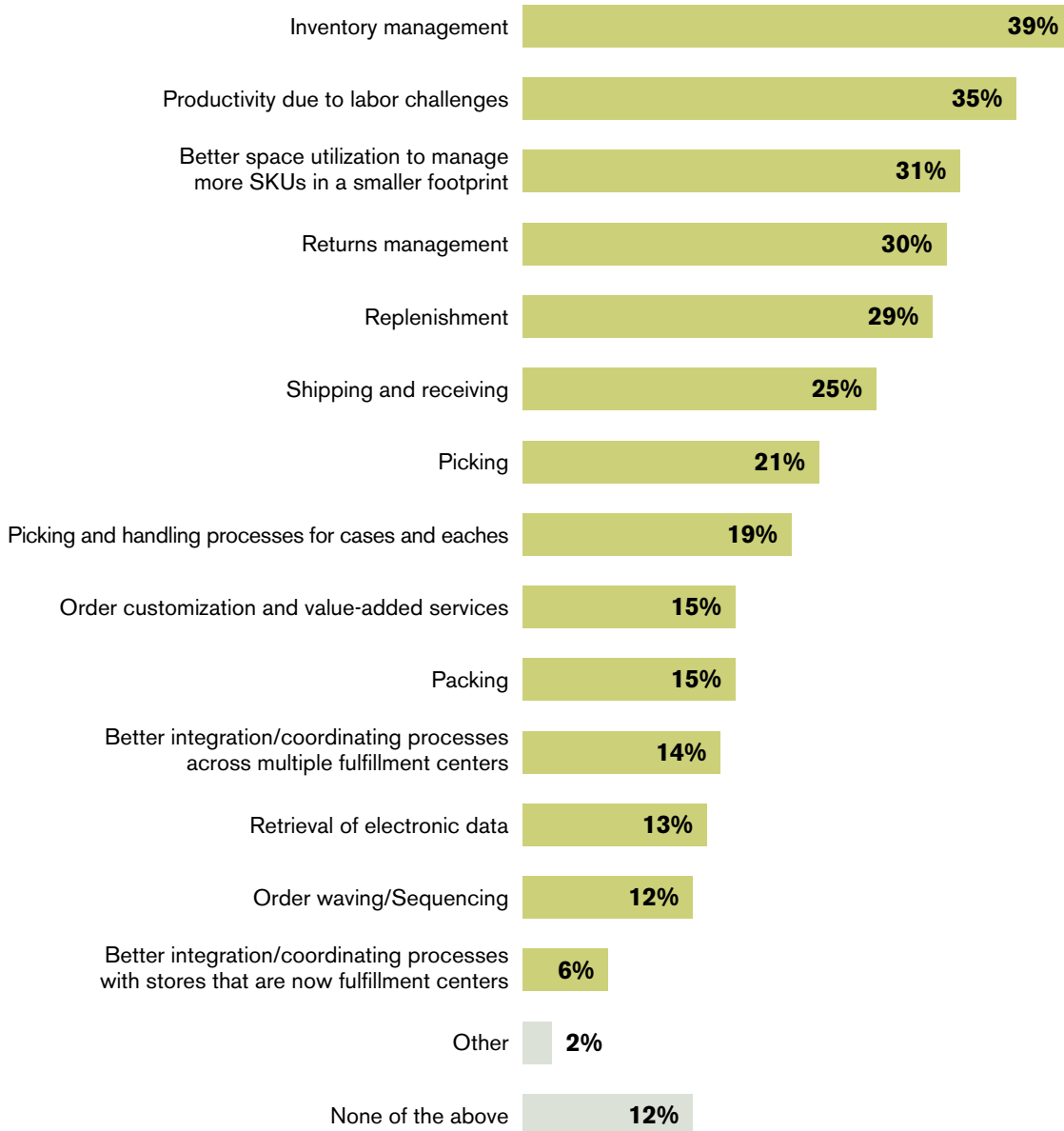
Which of the following order fulfillment methodologies do you use?



To deal with these new requirements, companies are using single-order picking (64%), batch-order picking (40%), zone picking (23%) and order consolidation (23%). Other order fulfillment methodologies currently being used include wave picking, pick and pass and cluster picking.

FIGURE 11

What aspects of your current order fulfillment and distribution operations would you like to improve?



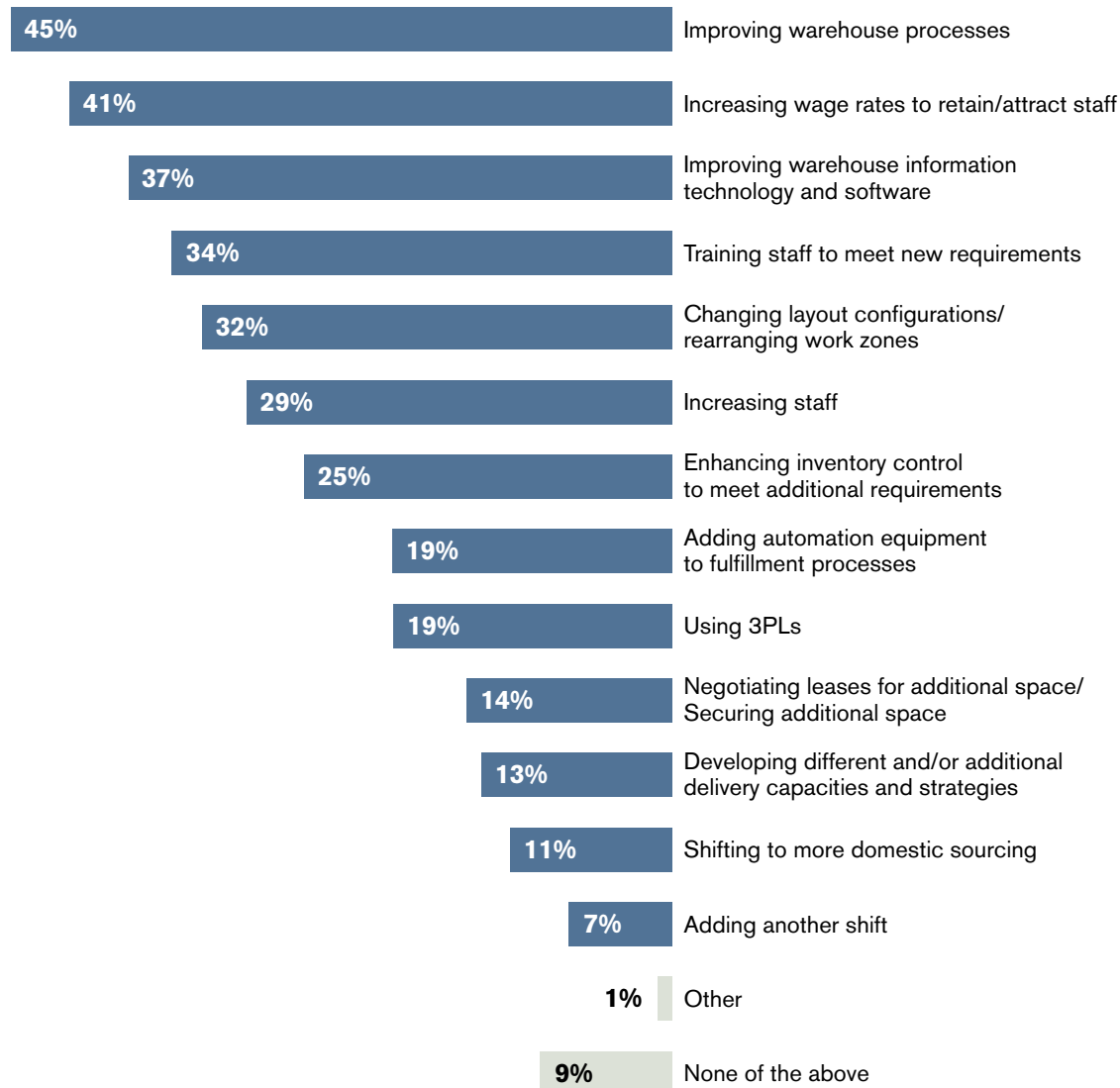
Areas that are Ripe for Improvement

In assessing their current order fulfillment and distribution operations, survey respondents pinpointed a number of different areas that are ripe for improvement. For example, 39% of companies want to improve their inventory management processes, 35% would like to improve productivity and 31% want to make better use of their space and manage more SKUs within a smaller physical footprint.

Other areas that companies want to improve include returns management, replenishment shipping and receiving, picking, case/each picking and handling processes, order customization and value-added services. The write-in answers to this question pointed to inventory turns, label management and simulation tools for better planning as three other areas that companies want to improve.

FIGURE 12

What actions have you been taking to adjust operations to accommodate changing requirements within your fulfillment and distribution operations?



Addressing Core Challenges

In light of the new constraints and requirements that exist within the typical warehouse or DC right now, companies are taking steps to adjust their operations and better serve their customers.

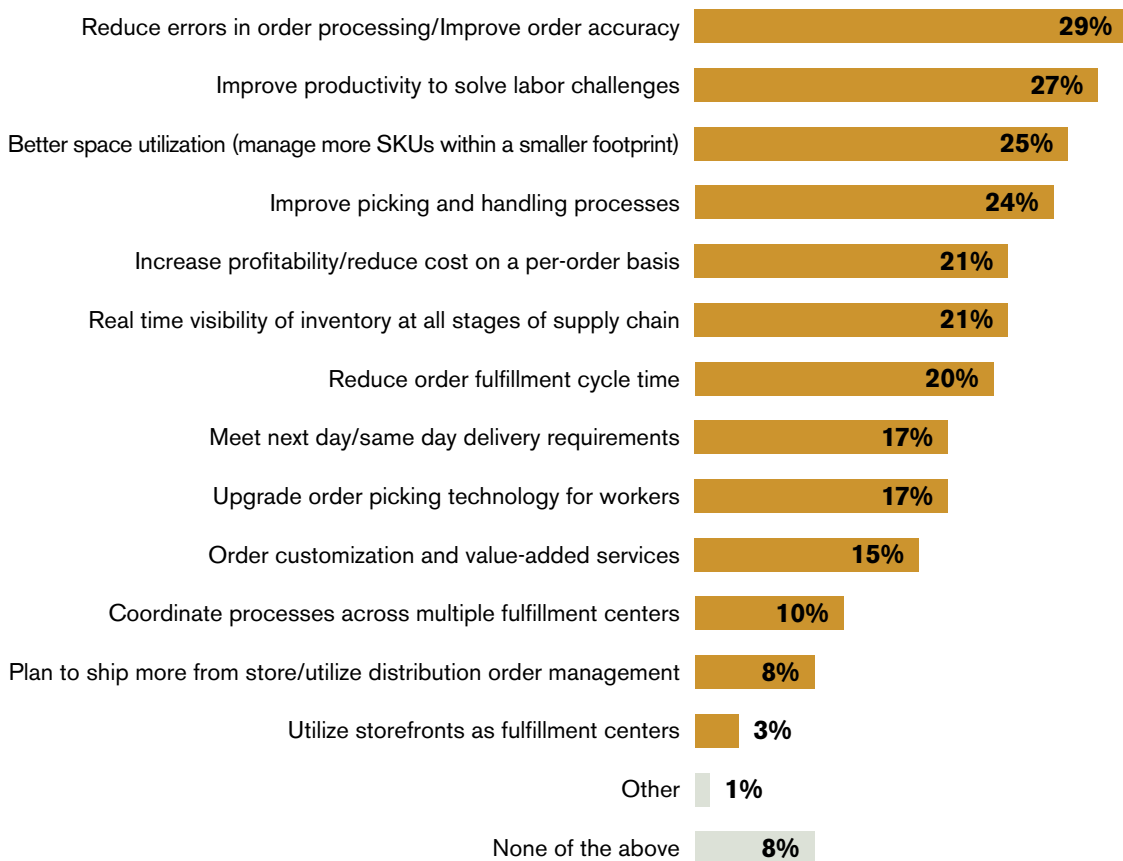
According to the survey, 45% of companies are improving their overall warehouse processes, 41% are increasing staff wage rates, 37% are improving their warehouse IT and software and 34% are training staff to manage the new realities of the warehouse environment.

Other key changes that companies are making include changing layout configurations and rearranging work zones (32%), adding automation equipment to their fulfillment processes (19%) and securing more physical space for their operations (14%).

Order Fulfillment & Distribution Outlook: What's Coming in 2024?

FIGURE 13

During the next 12 months, what will be your top priorities in your fulfillment and distribution operations?



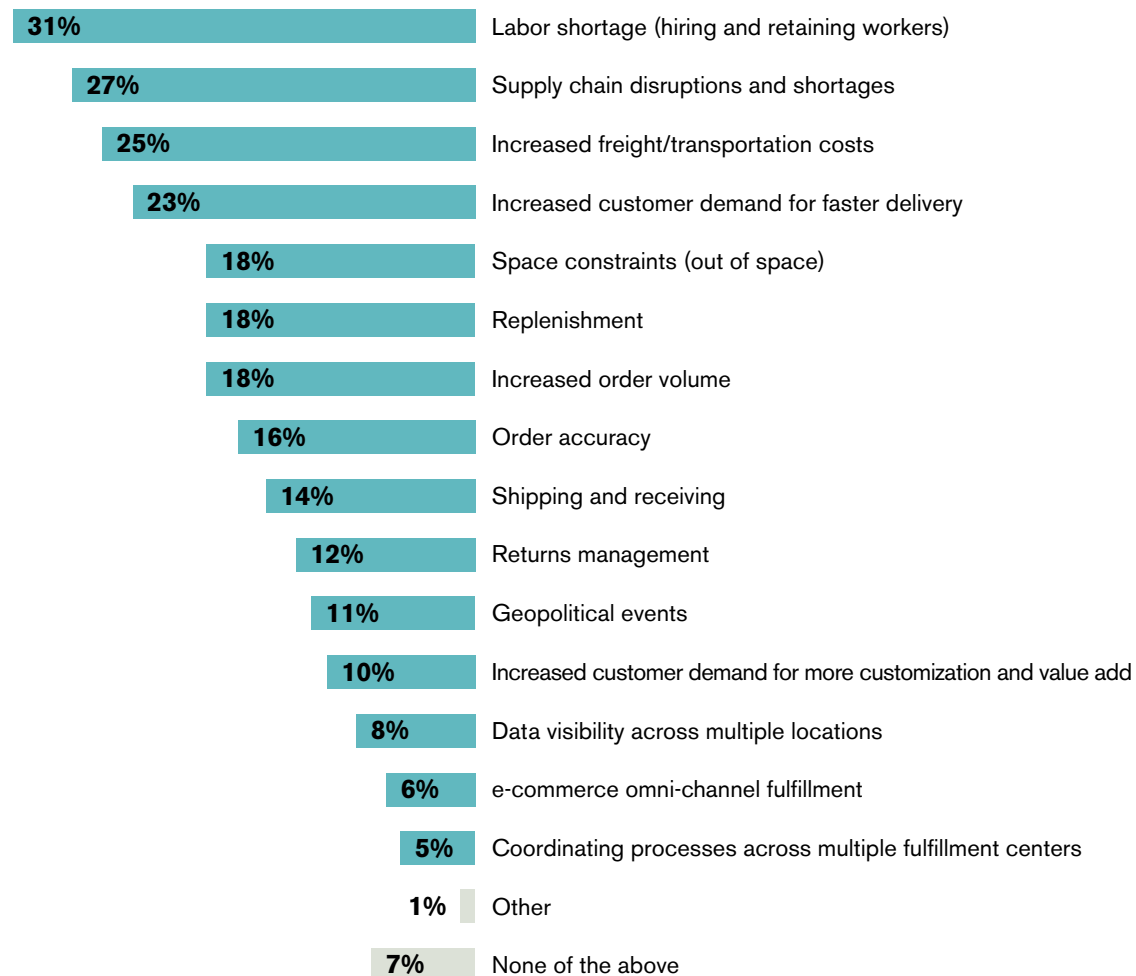
Wanted: Increased Profitability & Lower Costs

Looking into 2024, companies are making error reduction and improved order accuracy (for 27% of organizations), higher productivity levels (27%), better space utilization (25%) and improved picking and handling processes (24%) as their top goals.

Other core goals for the next 12 months include increased profitability and reduced cost on a per-order basis, real-time visibility of inventory at all stages of the supply chain, reduced order fulfillment cycle times and order-picking technology upgrades.

FIGURE 14

During the next 12 months, what will be the biggest challenges your fulfillment and distribution operations will face



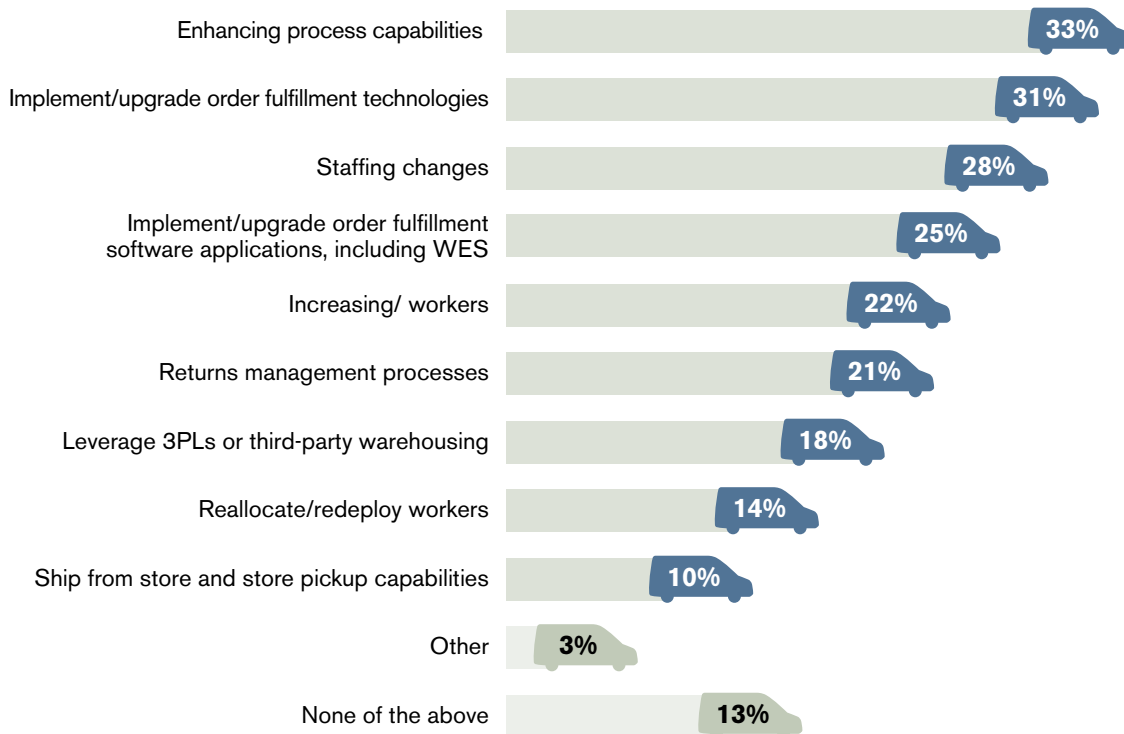
As they work toward these and other goals, companies expect to encounter headwinds like the persistent labor shortage (31% expect this issue to continue), supply chain disruptions and shortages (27%), higher freight costs (25%), demand for faster delivery (23%) and physical space constraints (18%).

The challenges don't end there. Companies also expect to deal with replenishment issues, higher order volumes, the need for better order accuracy and ongoing returns management pain points. For at least one respondent, "convincing corporate that we need to move into the 21st Century in warehousing" will present the biggest roadblock over the next 12 months.

Comparing these results with the current challenges that warehouse and DC operators are dealing with—hiring and retaining workers; supply chain disruptions and shortages; higher freight and transportation costs and increased customer demand for faster delivery (22%)—it's clear that companies expect many of 2023's top challenges to roll over into 2024.

FIGURE 15

During the next 12 months, what actions will you take or evaluate to address order fulfillment and/or distribution challenges?



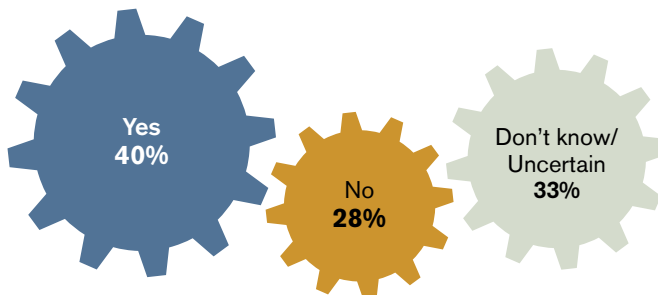
Tackling Core Challenges

Moving into 2024, companies will tackle their order fulfillment and distribution challenges by enhancing their process capabilities (33% of respondents want to take their route), implement or upgrade order fulfillment technologies (31%), make staffing changes (28%) or implement/upgrade order fulfillment software (25%).

To deal with the new order fulfillment and distribution realities, companies also plan to hire more employees, improve their returns management processes, work with more third-party providers, redeploy workers to different jobs or improve their ship from store and store pickup capabilities.

FIGURE 16

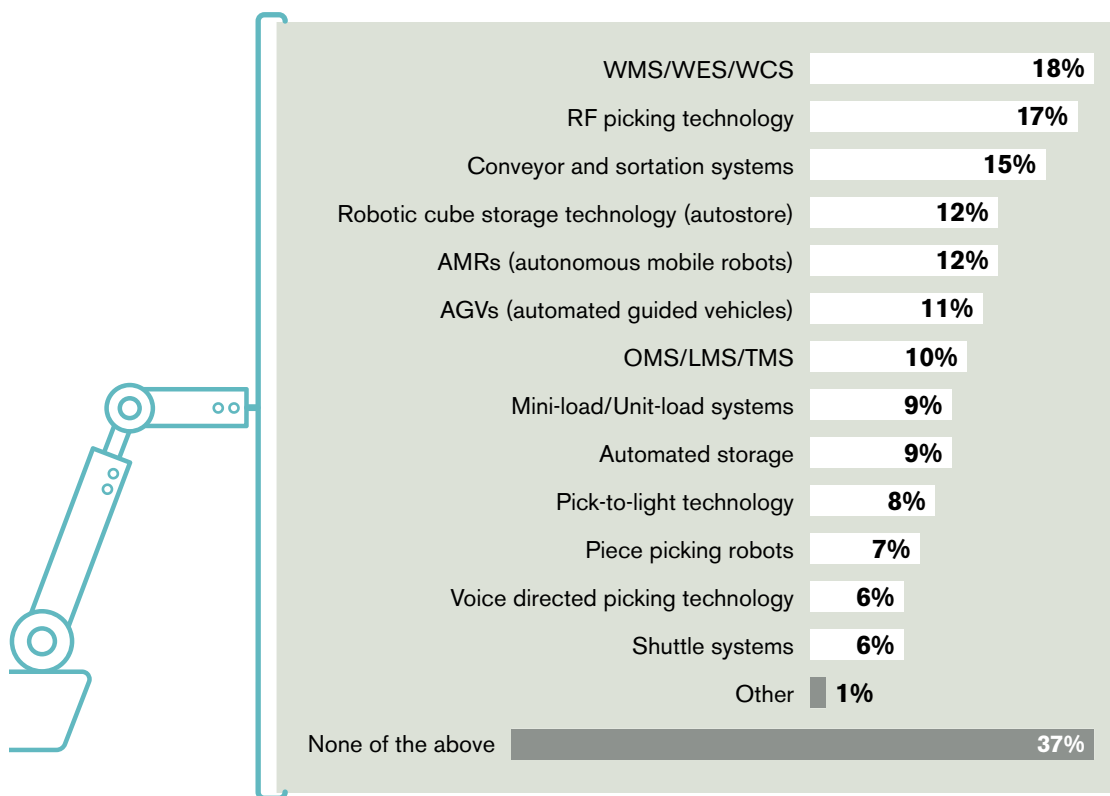
During the next 12 months, do you intend to invest in automation systems and technologies to improve your order fulfillment operations?



Technology and automation continue to play an increasingly important role in the modern order fulfillment or distribution environment. According to the survey, 40% of companies plan to further invest in additional automation systems and technologies or add to their existing systems during the coming year.

FIGURE 17

What technology/automation/systems are you considering to add to your order fulfillment operations? (Top 3)



Specifically, organizations plan to implement WMS/WES/WCS software (18% are taking this route), radio frequency picking technology (17%), conveyor and sortation systems (15%), robotic cube storage (12%), AMRs (12%) and AGVs (11%), and ASRS including vertical lift modules, vertical carousels, and horizontal carousels (9%).

As companies find ways to meet current demands while also future-proofing their fulfillment operations, they're increasingly looking for ways to incorporate automation into their warehouses and DCs. Focused on streamlining processes, improving labor utilization, increasing throughput and improving customer satisfaction levels, organizations that make this move now versus later will be best positioned for success in 2024 and beyond.

ABOUT KARDEX REMSTAR

Kardex Remstar, LLC, a company of the Kardex Group is a leading provider of automated storage and retrieval systems for manufacturing, distribution, warehousing, offices, and institutions. Kardex Remstar offers a wide range of AS/RS solutions, including vertical lift modules (VLMs), shuttle systems, miniload systems, and automated conveyor systems. These systems can be used to store and retrieve a wide variety of products, from small items such as pharmaceuticals and electronics to large items such as automotive parts and building materials. The company's WMS provides businesses with a single platform to manage their entire warehouse operations.

For more information about these dynamic storage solutions, please call 800-639-5805 or visit the company online at www.kardex.com.