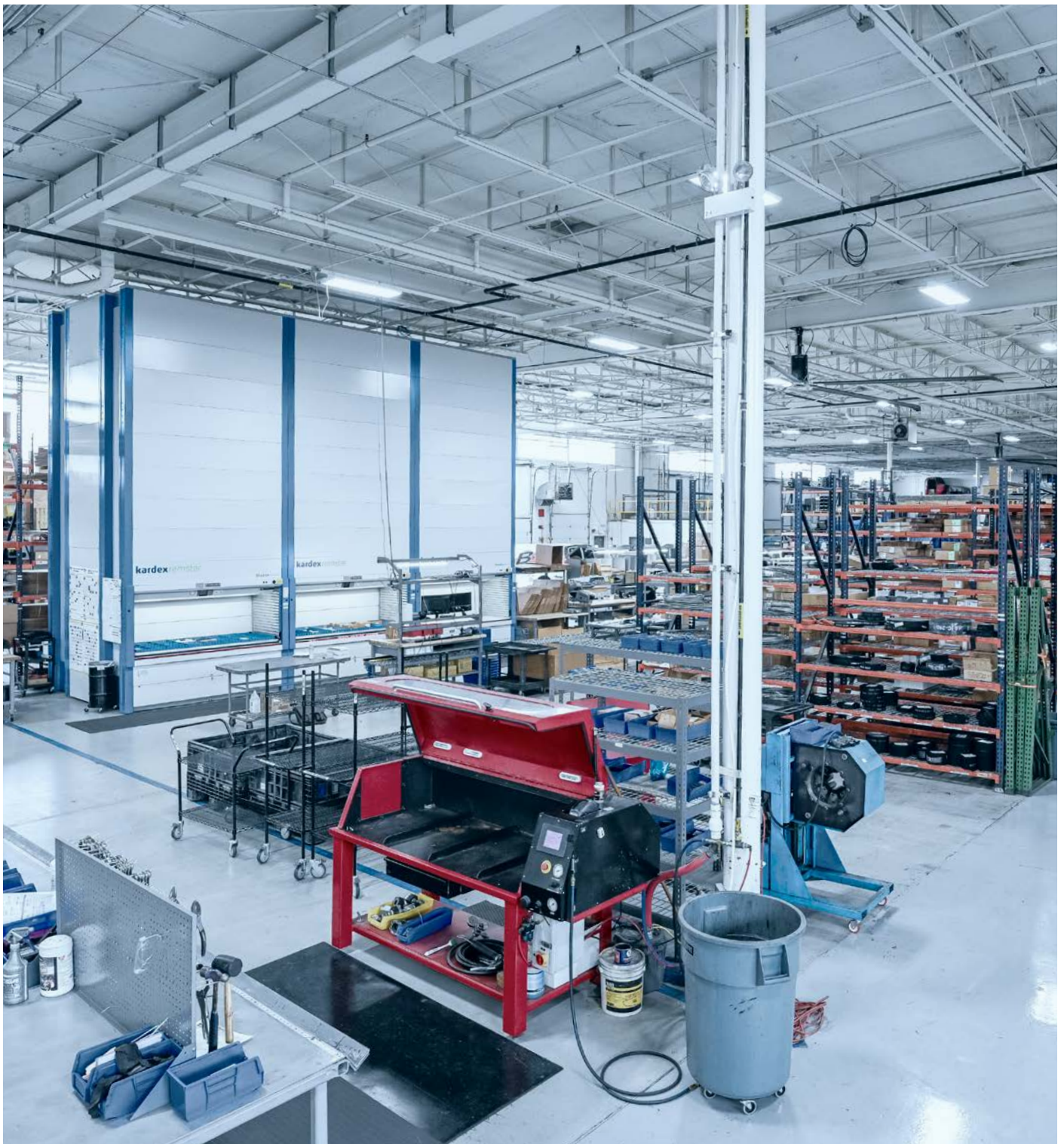Warehouse Insights

2024 Warehousing Industry Report

kardex

Introduction

This new report from Kardex Remstar features responses from more than 200 warehouse and distribution center professionals across a variety of industries. It highlights the current state of modern order fulfillment and distribution operations and provides detailed insights into and what lies ahead for 2024.
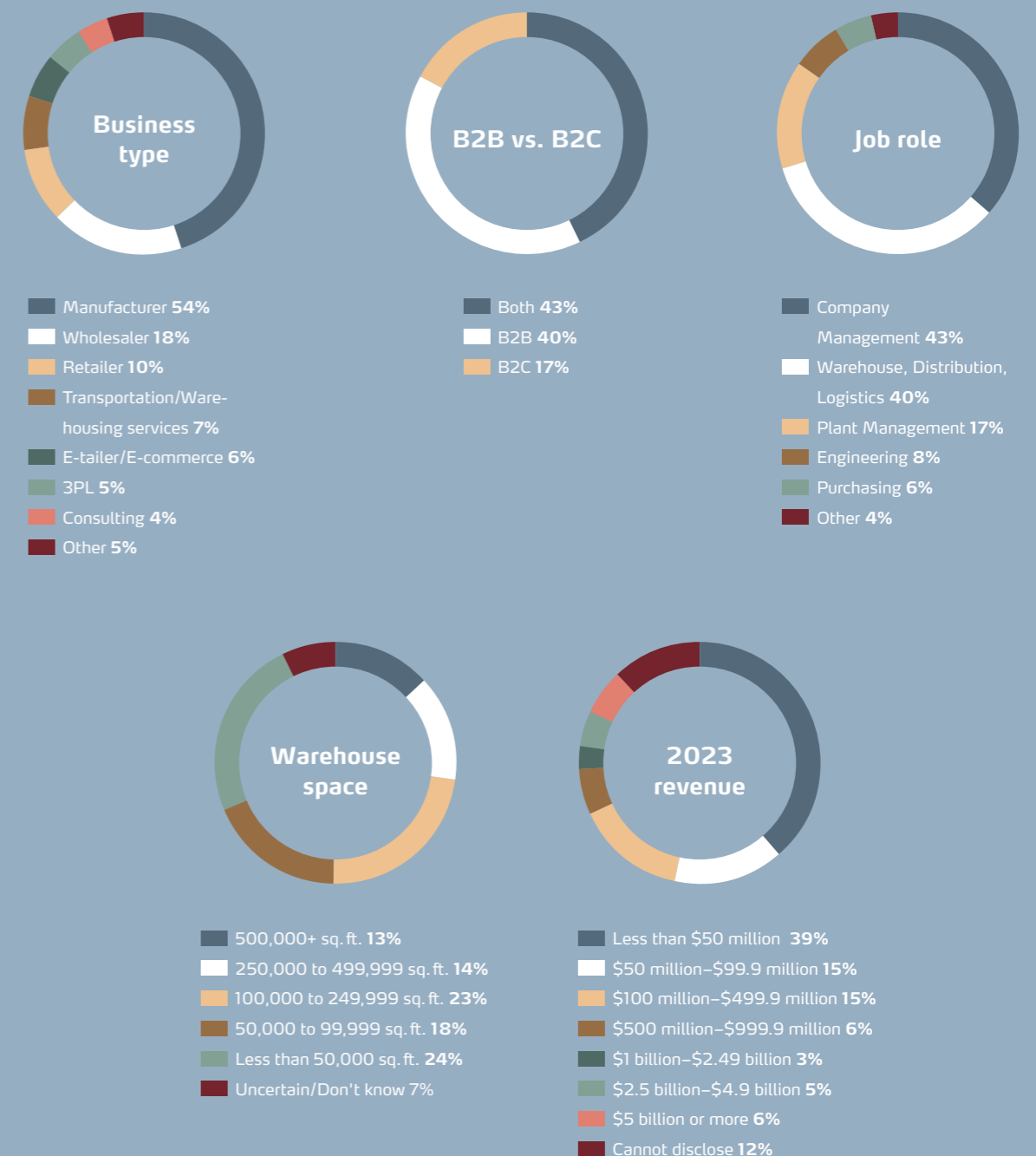
The persistent labor shortage, ongoing supply chain interruptions, rising freight costs and the fear of running out of physical space remain as top issues in the order fulfillment and distribution operations space. Organizations are also worried about meeting their customers' demand for faster delivery 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, Kardex commissioned this industry report with Peerless Research Group.

Participant profile

This study was executed in October/November 2023, and was administered via e-mail. 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.

Business type
- Manufacturer **54%**
- Wholesaler **18%**
- Retailer **10%**
- Transportation/Warehousing services **7%**
- E-tailer/E-commerce **6%**
- 3PL **5%**
- Consulting **4%**
- Other **5%**

B2B vs. B2C
- Both **43%**
- B2B **40%**
- B2C **17%**

Job role
- Company Management **43%**
- Warehouse, Distribution, Logistics **40%**
- Plant Management **17%**
- Engineering **8%**
- Purchasing **6%**
- Other **4%**

Warehouse space
- 500,000+ sq. ft. **13%**
- 250,000 to 499,999 sq. ft. **14%**
- 100,000 to 249,999 sq. ft. **23%**
- 50,000 to 99,999 sq. ft. **18%**
- Less than 50,000 sq. ft. **24%**
- Uncertain/Don't know **7%**

2023 revenue
- Less than $50 million **39%**
- $50 million–$99.9 million **15%**
- $100 million–$499.9 million **15%**
- $500 million–$999.9 million **6%**
- $1 billion–$2.49 billion **3%**
- $2.5 billion–$4.9 billion **5%**
- $5 billion or more **6%**
- Cannot disclose **12%**
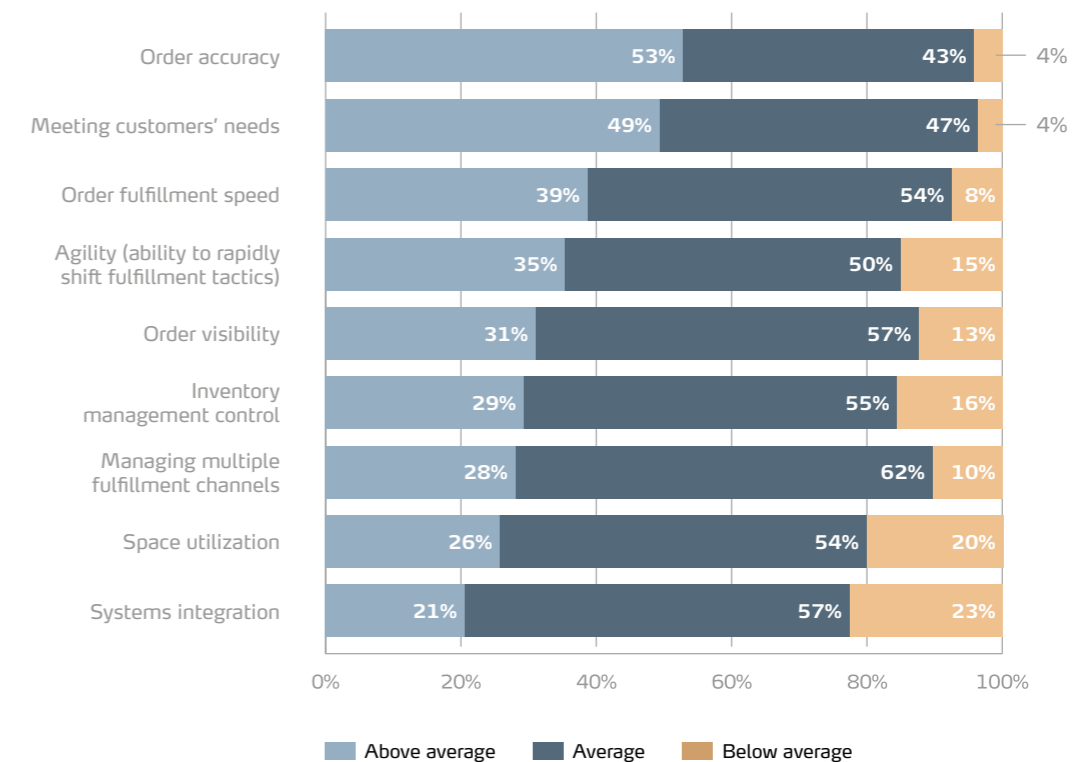
The current state of warehousing

In this section of the report, participant answers provide a clear snapshot of the current state of order fulfillment and distribution operations. Participants provided answers on critical topics such as how they evaluate their own operations, what systems and technologies are most popular, what their biggest challenges are, how they're managing their inventory and rising costs, and where they see the most room for improvement.

What's working and what's not

Survey respondents generally express satisfaction with order accuracy, but note average ratings for order fulfillment speed and visibility. Challenges center around deficiencies in systems integration, space utilization, inventory management control, and agility.
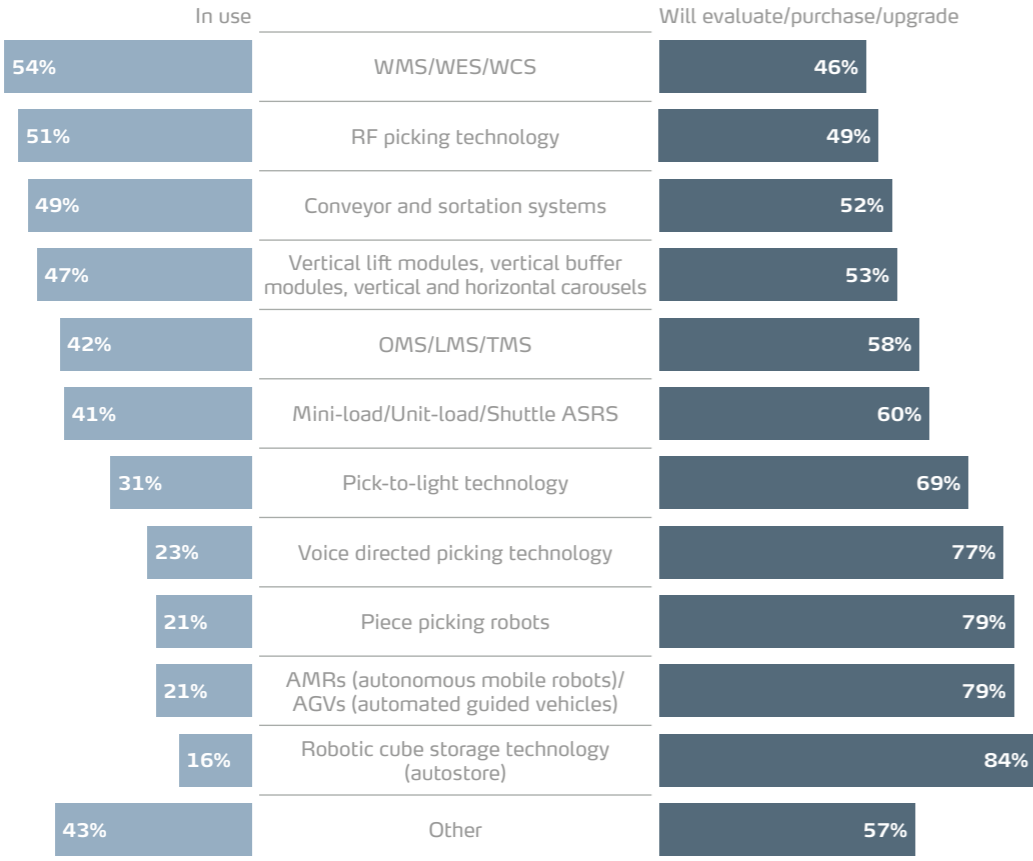
In line with what's being said by Kardex's ASRS customers, the industry is facing severe space utilization and inventory management control issues with a staggering 74% and 71%, respectively, of participants rating theirs average or below average.

Rate your order fulfillment and distribution operations on each of the following:

	Above average	Average	Below average
Order accuracy	53%	43%	4%
Meeting customers' needs	49%	47%	4%
Order fulfillment speed	39%	54%	8%
Agility (ability to rapidly shift fulfillment tactics)	35%	50%	15%
Order visibility	31%	57%	13%
Inventory management control	29%	55%	16%
Managing multiple fulfillment channels	28%	62%	10%
Space utilization	26%	54%	20%
Systems integration	21%	57%	23%

Systems ranked by popularity

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?

In use		Will evaluate/purchase/upgrade
54%	WMS/WES/WCS	46%
51%	RF picking technology	49%
49%	Conveyor and sortation systems	52%
47%	Vertical lift modules, vertical buffer modules, vertical and horizontal carousels	53%
42%	OMS/LMS/TMS	58%
41%	Mini-load/Unit-load/Shuttle ASRS	60%
31%	Pick-to-light technology	69%
23%	Voice directed picking technology	77%
21%	Piece picking robots	79%
21%	AMRs (autonomous mobile robots)/ AGVs (automated guided vehicles)	79%
16%	Robotic cube storage technology (autostore)	84%
43%	Other	57%

The most prevalent technology systems in use within warehouses include (unsurprisingly) warehouse management systems (WMS), warehouse execution systems (WES), and warehouse control systems (WCS). There is a high interest for future evaluations, purchases, or upgrades directed towards voice-directed picking technology, piece-picking robots, and autonomous mobile robots/automated guided vehicles (AMRs/AGVs), Additional technologies garnering attention include pick-to-light applications, mini-load/unit-load/shuttle ASRS, and conveyor and sortation systems.
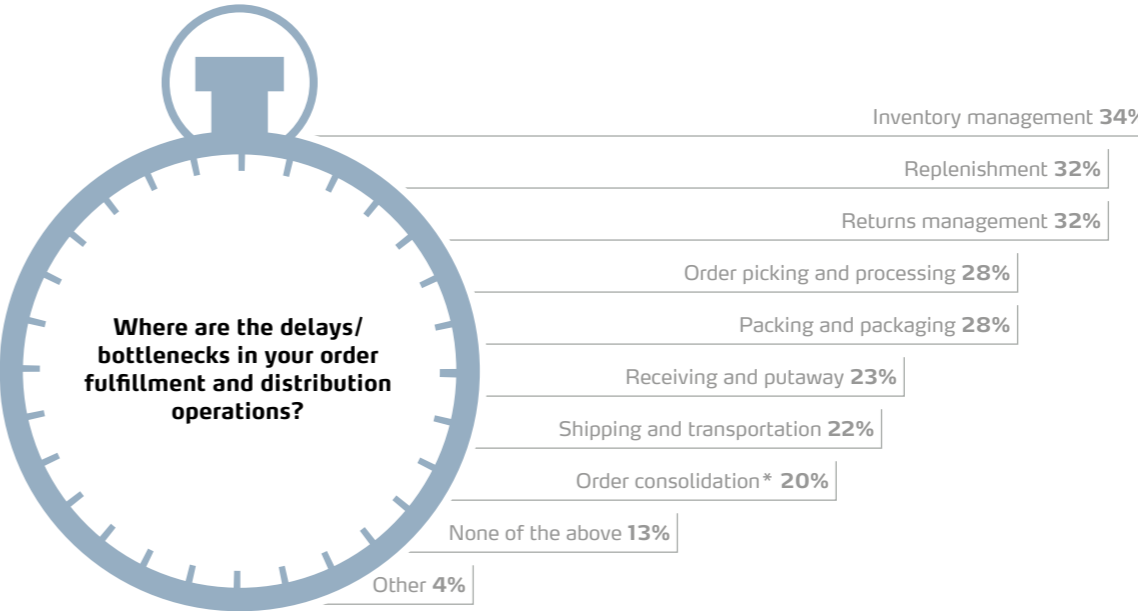
The experts at Kardex continue to see one prevalent trend in the order picking and distribution space that this survey has confirmed: **Automation is no longer a nice-to-have, it is now a must-have.** As companies continue to automate, those that wait or delay will fall behind the curve and miss out.

Ready to automate? You should be.

Deciding whether or not to start automating your order fulfillment or distribution operation is one of the most important decisions a company can make in today's day and age. If you're interested in taking the next step or want to learn more about how automation can help.

Click here to get in touch with Kardex and start your automation journey.

Fulfillment bottlenecks

Where are the delays/ bottlenecks in your order fulfillment and distribution operations?

Inventory management **34%**
Replenishment **32%**
Returns management **32%**
Order picking and processing **28%**
Packing and packaging **28%**
Receiving and putaway **23%**
Shipping and transportation **22%**
Order consolidation* **20%**
None of the above **13%**
Other **4%**

Primary challenges in fulfillment and distribution arise in inventory management, with a significant portion of companies citing it as their foremost bottleneck. Other critical bottlenecks include replenishment and returns management, emphasizing key areas demanding operational improvement. Some organizations grapple with additional challenges such as outdated legacy ERP systems, insufficient inventory visibility, and the imperative for enhanced data accuracy.

Labor crisis update

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

73% Can't find enough labor

70% Labor is unreliable (not showing up when scheduled)

52% Can't find labor with the right skills

20% Labor rates are too high to fully staff

Is labor still an issue?
Well... yes.

Hiring and retaining workers remains as the #1 concern for 34% of companies, underlining the fact that the "Labor Crisis" is still alive and well. The severity of employee turnover has notably escalated in recent years, with 73% of companies struggling to find sufficient labor, 70% grappling with unreliable employees, and 52% facing challenges in recruiting workers with the requisite skills.

Additionally, 20% of companies are contending with high labor rates, hindering their ability to fully staff operations. These labor-related issues compound the broader challenges, including supply chain disruptions, increased transportation costs, space constraints, and heightened customer demands for faster delivery.

Inventory management strategies

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

Other **26%**

Just-in-case **12%**

Just-in-time **12%**

Mix of Both **50%**
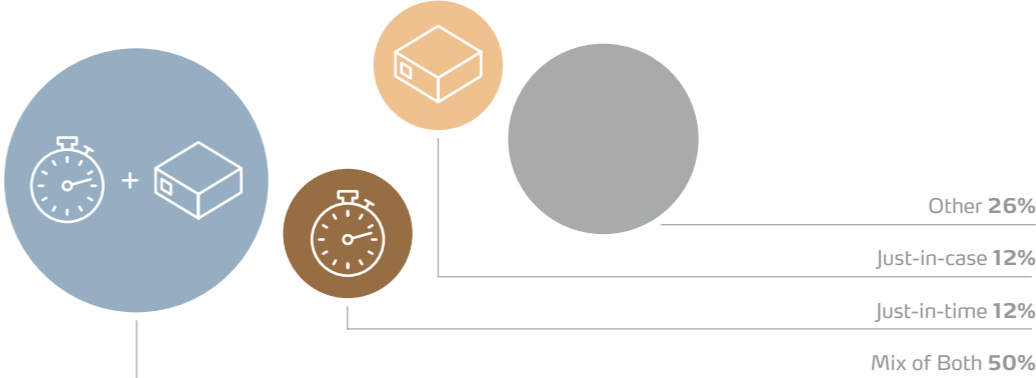
Effectively managing inventory demands foresight and flexibility. A significant portion of companies surveyed employ a dual strategy, blending just-in-case and just-in-time inventory management. Only 24% exclusively adopt either the just-in-case or just-in-time approach, emphasizing the industry's recognition of the pivotal role flexibility plays in addressing inventory challenges.
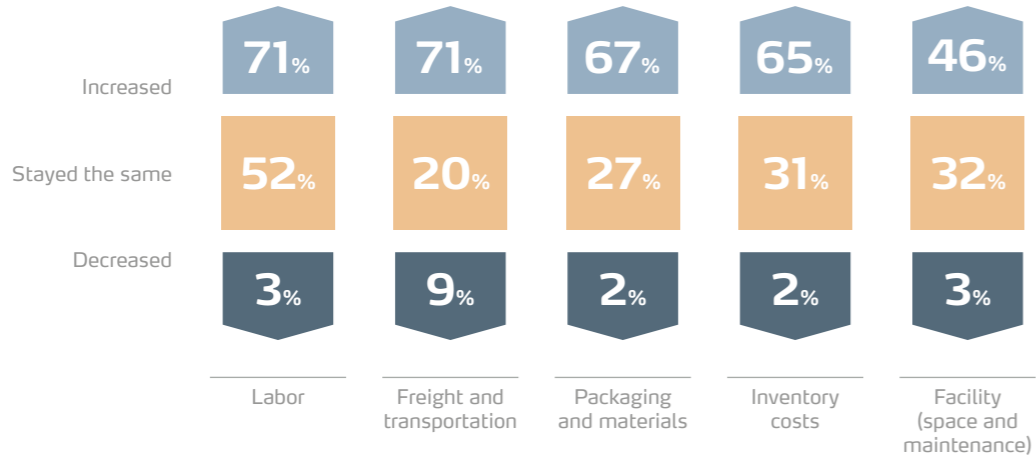
Do you plan on implementing a Just-in-case inventory management strategy in the next 12 months to combat supply chain shortages?

Yes **17%**   No **15%**   Already using Just-in-case **32%**   Don't know/Uncertain **37%**

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

Dealing with rising costs

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

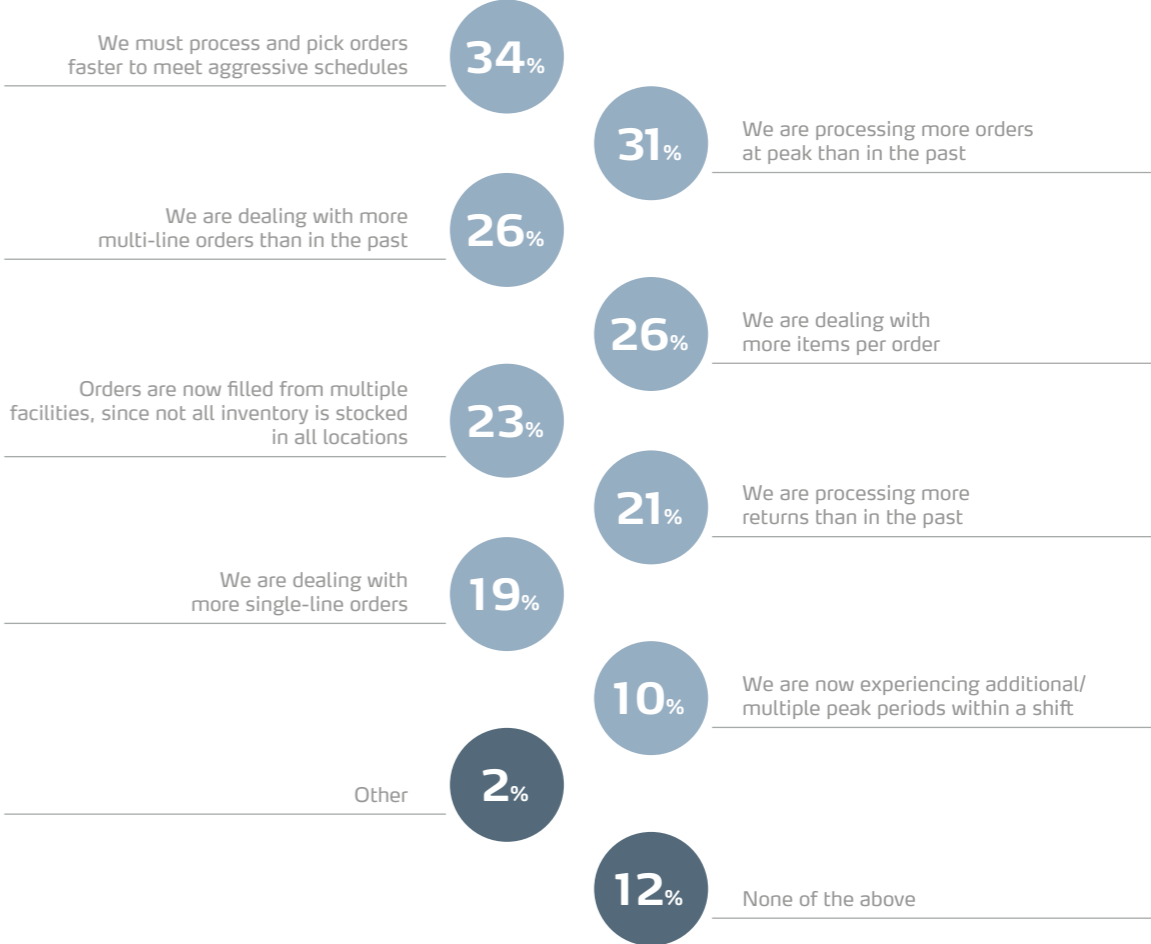|	Labor	Freight and transportation	Packaging and materials	Inventory costs	Facility (space and maintenance)
Increased	71%	71%	67%	65%	46%
Stayed the same	52%	20%	27%	31%	32%
Decreased	3%	9%	2%	2%	3%

In the dynamic landscape of the fulfillment sector, costs have witnessed a notable uptrend over the past year, with the most affected areas being—you guessed it— labor, as well as transportation expenses.

Companies are also grappling with elevated costs in packaging and materials and price hikes in other crucial areas like inventory and facilities space/maintenance. While a minority note cost stability or decreases, the prevailing trend underscores the widespread challenges and financial impacts within the industry.

Fulfillment profiles: faster and fuller

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

- We must process and pick orders faster to meet aggressive schedules — **34%**
- We are processing more orders at peak than in the past — **31%**
- We are dealing with more multi-line orders than in the past — **26%**
- We are dealing with more items per order — **26%**
- Orders are now filled from multiple facilities, since not all inventory is stocked in all locations — **23%**
- We are processing more returns than in the past — **21%**
- We are dealing with more single-line orders — **19%**
- We are now experiencing additional/ multiple peak periods within a shift — **10%**
- Other — **2%**
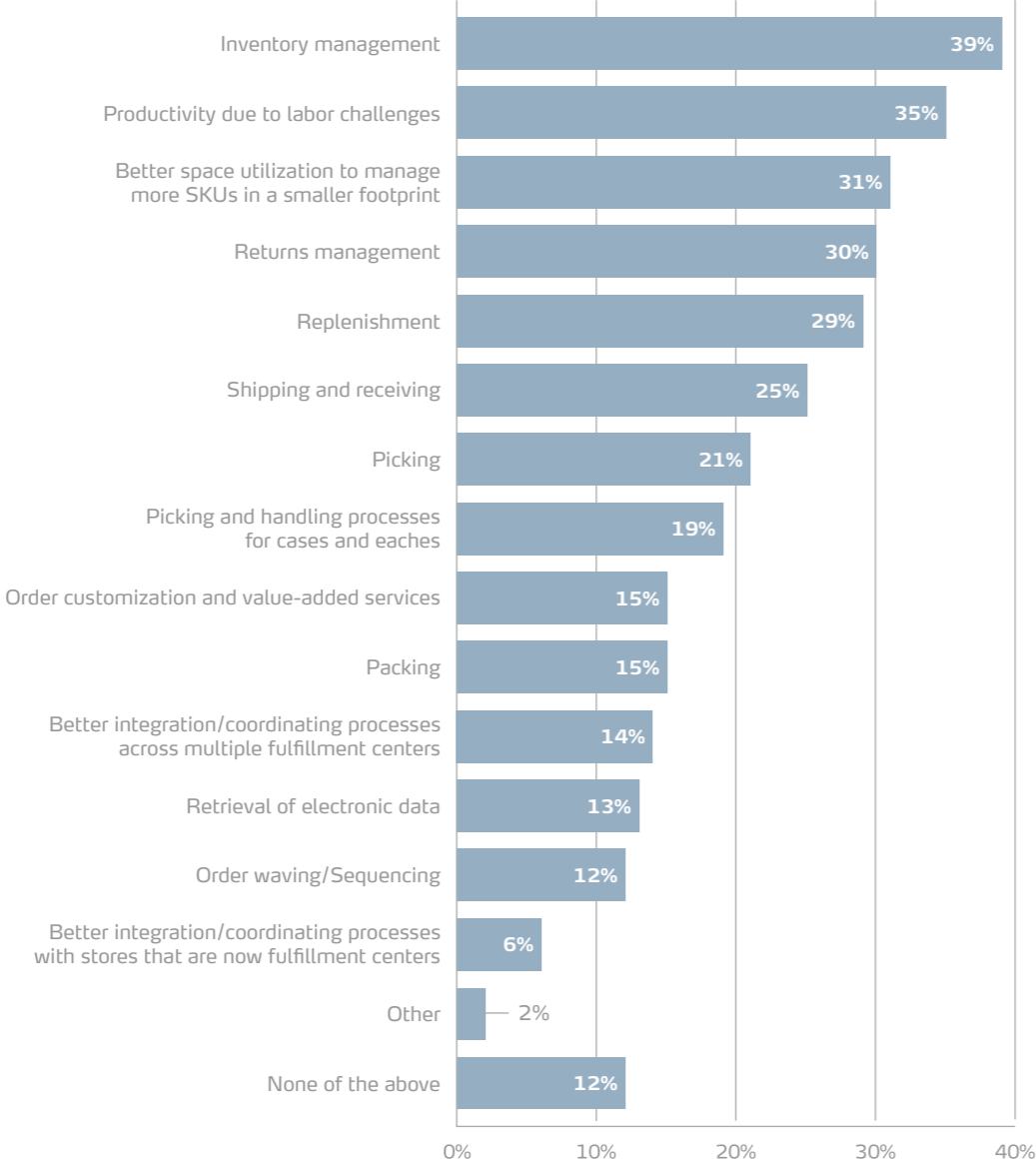- None of the above — **12%**

When it comes to order profiles, a substantial portion of companies say they're processing and picking orders faster than in the past two years, processing more orders at peak, and filling orders from more places. This sharp upward trending in order fulfillment was sparked a decade ago, propelled higher by COVID's boost to e-commerce and has apparently continued to skyrocket in the present.

Not only are orders having to be filled faster and fuller, companies are generally dealing with more multi-line orders or more items per order. Unsurprisingly, 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 as customer expectations around returns continue to elevate.

Room for improvement

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

Category	Percentage
Inventory management	39%
Productivity due to labor challenges	35%
Better space utilization to manage more SKUs in a smaller footprint	31%
Returns management	30%
Replenishment	29%
Shipping and receiving	25%
Picking	21%
Picking and handling processes for cases and eaches	19%
Order customization and value-added services	15%
Packing	15%
Better integration/coordinating processes across multiple fulfillment centers	14%
Retrieval of electronic data	13%
Order waving/Sequencing	12%
Better integration/coordinating processes with stores that are now fulfillment centers	6%
Other	2%
None of the above	12%

Survey respondents keenly identify several areas within their order fulfillment and distribution operations that warrant enhancement. Notably, 39% of companies express a desire to refine their inventory management processes, while 35% prioritize improving overall productivity. Efficient space utilization and the management of a greater number of SKUs within a compact footprint are also focal points, with 31% emphasizing these goals.

Furthermore, companies seek improvement in diverse areas such as returns management, replenishment, shipping and receiving, picking, case/each picking, handling processes, order customization, and value-added services. The qualitative responses underscore additional areas for improvement, including inventory turns, label management, and the integration of simulation tools for enhanced planning.

Sound familiar?
Are you one of the 39% of companies struggling with inventory management? Or 35% with productivity challenges? Or 31% wanting to use space more effectively?

ASRS may be the solution you're looking for.

ⓘ Learn more about the benefits of ASRS in this Buyer's Guide: Vertical Storage Solutions.
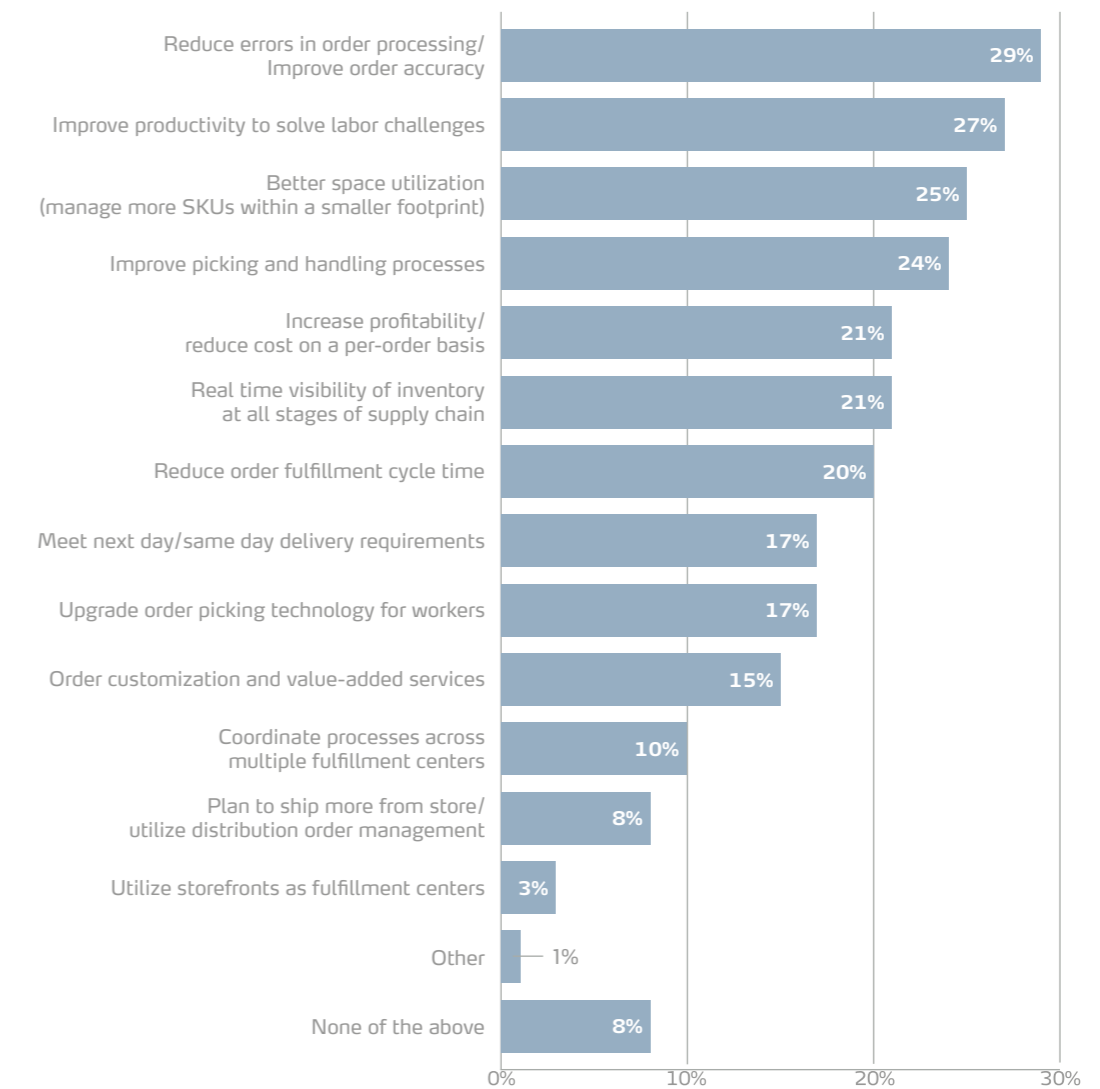
What's coming in 2024?

With a clear understanding of what's going on currently in the order fulfillment and distribution industry, this section analyzes the responses of survey respondents with questions about what they're planning to do in the coming year. It will address their top goals for 2024, challenges they expect to face, and how they plan to navigate those challenges.

Top goals for 2024

As companies look into the horizon of 2024, key objectives align with bolstering overall operational efficiency. A notable percentage are prioritizing error reduction and enhanced order accuracy, while an equivalent percentage seeks higher productivity levels. Companies aim to tackle their space utilization challenges and target improvement in picking and handling processes.
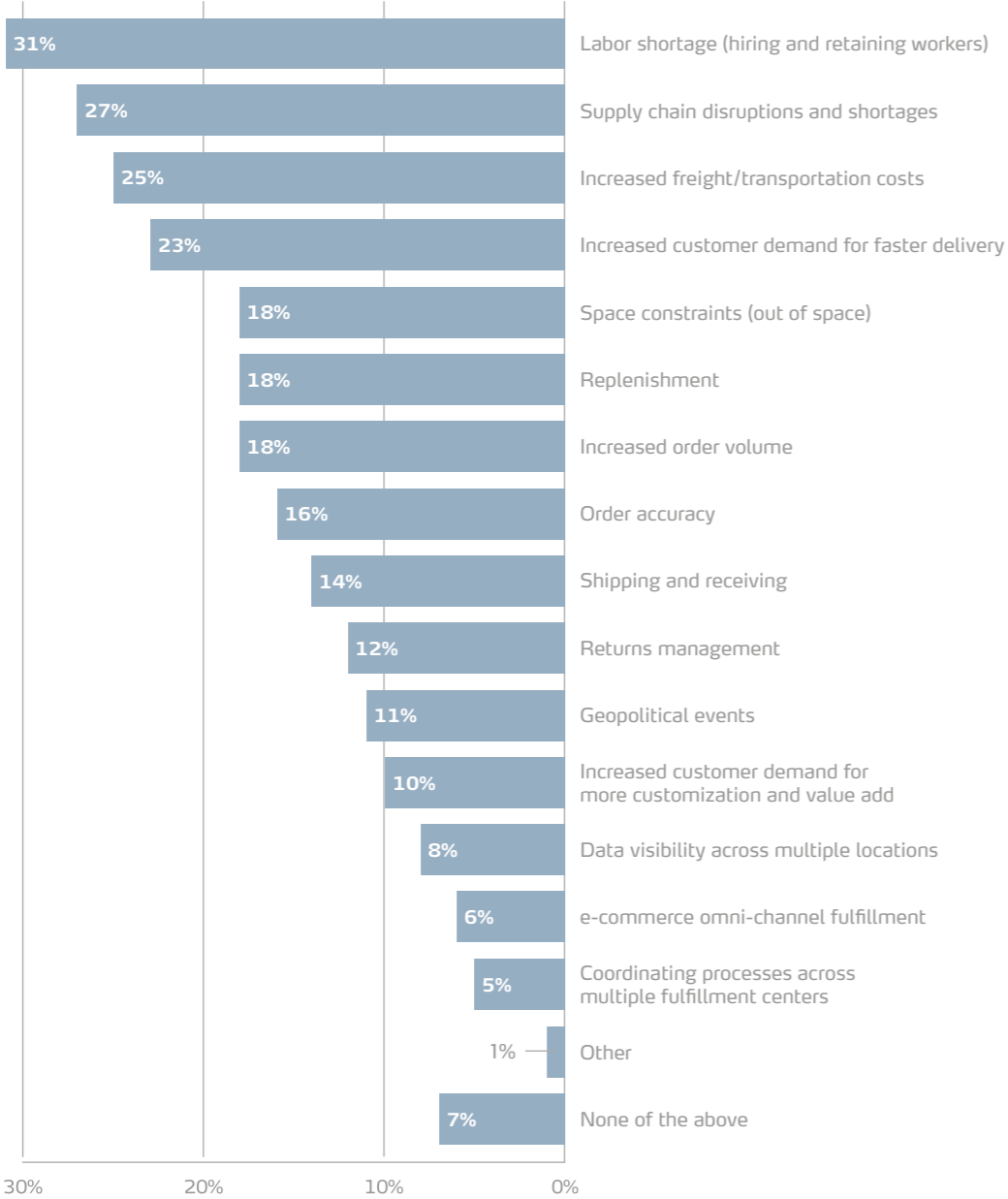
Core goals for the upcoming year extend to increased profitability, decreased costs per order, real-time inventory visibility throughout the supply chain, streamlined order fulfillment cycle times, and upgrades in order-picking technology. This collective focus reflects the industry's commitment to achieving both financial gains and operational excellence.

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

Priority	%
Reduce errors in order processing/Improve order accuracy	29%
Improve productivity to solve labor challenges	27%
Better space utilization (manage more SKUs within a smaller footprint)	25%
Improve picking and handling processes	24%
Increase profitability/reduce cost on a per-order basis	21%
Real time visibility of inventory at all stages of supply chain	21%
Reduce order fulfillment cycle time	20%
Meet next day/same day delivery requirements	17%
Upgrade order picking technology for workers	17%
Order customization and value-added services	15%
Coordinate processes across multiple fulfillment centers	10%
Plan to ship more from store/utilize distribution order management	8%
Utilize storefronts as fulfillment centers	3%
Other	1%
None of the above	8%

Expected challenges

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

Challenge	Percentage
Labor shortage (hiring and retaining workers)	31%
Supply chain disruptions and shortages	27%
Increased freight/transportation costs	25%
Increased customer demand for faster delivery	23%
Space constraints (out of space)	18%
Replenishment	18%
Increased order volume	18%
Order accuracy	16%
Shipping and receiving	14%
Returns management	12%
Geopolitical events	11%
Increased customer demand for more customization and value add	10%
Data visibility across multiple locations	8%
e-commerce omni-channel fulfillment	6%
Coordinating processes across multiple fulfillment centers	5%
Other	1%
None of the above	7%

To no one's surprise, Labor reigns supreme at the top of order fulfillment and distribution center managers' hit lists. It's also no surprise to see supply chain and freight costs continue to keep them up at night as well while the world recovers from the lingering aftershocks of the COVID-19 disruptions. As if that wasn't enough, customer demand for faster delivery continues to trend upwards as more consumers' e-commerce delivery time expectations continue to balloon and the "big fish" drive delivery times down.
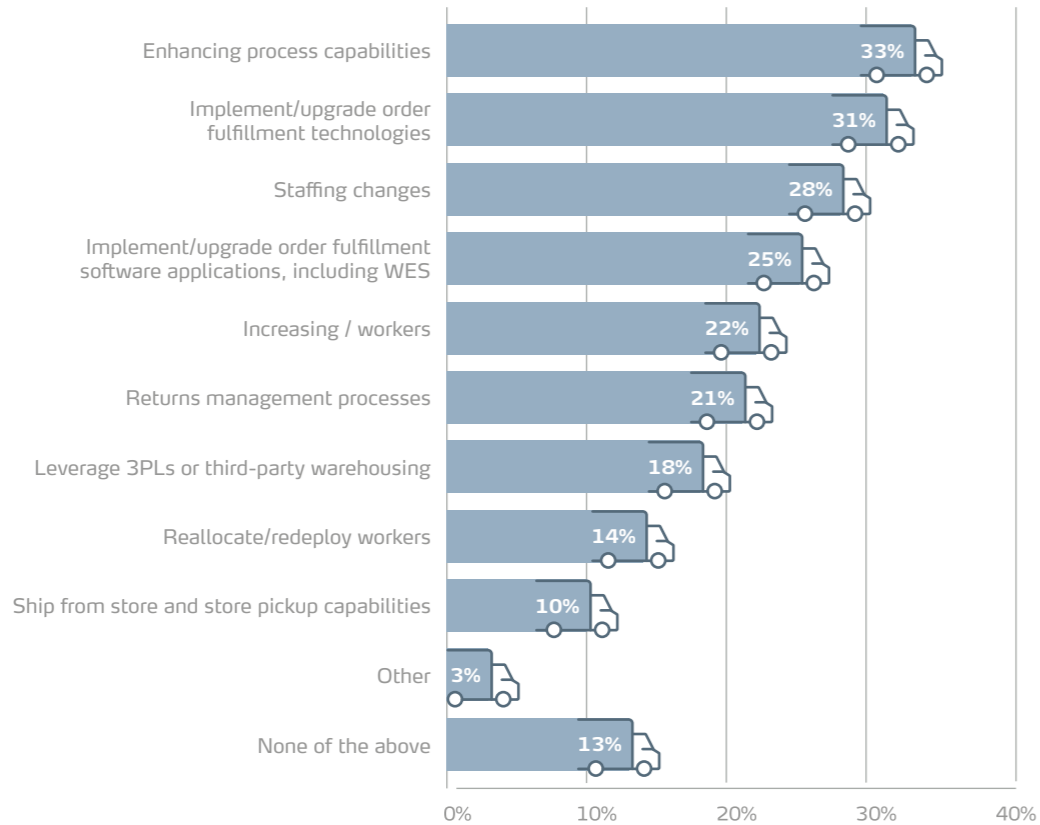
The challenges don't end there. Companies also expect to deal with replenishment issues, higher order volumes, the need for better order accuracy and ongoing returns management pain points. For at least one respondent, "convincing corporate that we need to move into the 21st Century in warehousing" will 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—it's clear that companies expect many of 2023's top challenges to roll over into 2024.

ⓘ Download our Boss Toolkit for practical resources that can help convince management to support your automation project.

So, what's the plan?

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

Action	Percentage
Enhancing process capabilities	33%
Implement/upgrade order fulfillment technologies	31%
Staffing changes	28%
Implement/upgrade order fulfillment software applications, including WES	25%
Increasing / workers	22%
Returns management processes	21%
Leverage 3PLs or third-party warehousing	18%
Reallocate/redeploy workers	14%
Ship from store and store pickup capabilities	10%
Other	3%
None of the above	13%

Moving into 2024, companies will tackle their order fulfillment and distribution challenges by enhancing their process capabilities, implementing or upgrading order fulfillment technologies, make staffing changes, or implementing/upgrading their order fulfillment software.

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.

Technology and automation will 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.»

Specifically, organizations plan to implement WMS/WES/WCS software (18%), 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 vertical buffer modules (9%). Companies also plan to evaluate and implement more mini-load/unit-load systems and pick-to-light technology.

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.

Ready to take the next step?

The 2024 Warehousing Industry Report commissioned by Kardex Remstar provides a keen look into the landscape of order fulfillment and distribution operations. This survey captured the current challenges, opportunities, and strategic shifts in the industry, highlighting the persistent labor shortage, supply chain disruptions, rising costs, and the imperative for increased efficiency as paramount concerns.

As companies continue to grapple with the ongoing warehousing complexities, the report underscores a resounding trend towards technology, automation, and robotics adoption to streamline processes, reduce costs, and enhance competitiveness. Looking ahead to 2024, the industry is poised to address these challenges through targeted improvements, technology investments, and a strategic focus on automation to ensure optimal performance.

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