



Consumer Goods Industry Update

Warehouse Tips, Trends & Insights

Get Ready – Order Fulfillment is Changing!

By drawing conclusions from several leading studies, the Consumer Goods Industry Update, reveals top trends and insights with a focus on intralogistics. We'll walk you through how consumer demands and technology will cause massive disruption to current infrastructures and why automation is your all-around tool to combat warehouse order fulfillment chaos.

It's time to prepare your warehouse for a safe, efficient, and resilient future.

Topics to Discover:

- Impacts on the Consumer Goods Industry | Will technology, COVID-19, and consumer behavior turn warehouses upside down?
- Order Fulfillment | Today's Challenges, Tomorrow's Warehouse & The Next Step
- Meet Kardex Remstar

Estimated reading time: 15 min

Impacts on the Consumer Goods Industry | Will technology, COVID-19, and consumer behavior turn warehouses upside down?

For order fulfillment facilities to be successful in the future, it's essential to understand what changes and challenges the industry will face. With economic forecasts swaying unpredictably, warehouses need to implement new solutions based not only on what works now but also ten years from now. At Kardex Remstar, we find many companies start with small, but modular and scalable solutions. This leads them down an open path – one that provides the ability to grow and extend solutions when and if needed. Ideally, sales and automation grow together.

We identified four key trends that will have a significant impact on the consumer goods industry. These are important to keep in mind when planning warehouse operations and strategic investments.

1) Worldwide Pandemic

With the entire world experiencing a global pandemic, retailers and warehouse managers cannot escape its repercussions. The consumer goods industry has undoubtedly seen drastic shifts in operations and supply chains. Due to the spike in online shopping, warehouse operations need to remain in full flow, perhaps even more so than before.

There are a few areas that will continue to shift:

- **Hands-Free/Contactless Shopping Experiences.** A prediction by e-Marketer came to life even faster than expected. In their report, [The Future of Retail 2020](#)¹, they stated that companies are focused on delivering a “frictionless retail experience that includes the rise of click-and-collect, easy returns, mobile order-ahead, cashier-less checkout, and other innovations that streamline retail transactions”. These types of innovative shopping styles became the norm over the past months.
- **Consumer Spending.** A handful of sectors saw huge spikes in sales while many plummeted. According to [Visual Capitalist](#), grocery delivery services had a 558.4% increase compared to April of 2019 while retail apparel was down 51.9% from last year². What we don’t know yet is which sectors will continue to thrive and which will barely survive the pandemic and the associated contraction of the economy? Do consumers miss an in-person visit to the grocery store or will they continue to shop online once health issues are no longer a concern?
- **Warehouse Footprint.** If you combine the impacts mentioned above to the strict social distancing guidelines, warehouses are in a pinch for space and need to retrofit their operations. Physically separating workstations, installing hand sanitizing stations, and reworking traffic flow leaves facilities in need of more space. If you couple this with new consumer habits like click-and-collect, it provokes the question, “What do future warehouses look like and what tools are necessary to keep operations successful?” The answer starts with an underlying foundation: an automated, efficient production and order fulfillment process.

Kardex Tip: If social distancing has you desperate for space, one area to look at is shelving. By design, shelving has three main space limitations: Wasted Storage Capacity, Wasted Aisle Space, and Waisted Ceiling Height. Did you know that vertical storage can recover up to 85% of the floor space currently occupied by shelving and drawers by eliminating the aisle spacing and utilizing the full ceiling height of your facility?

Recovered Wasted Rack & Shelving Space Using Vertical Automation

Ceiling Height (meters)	Eliminated Shelving Sections	Space Savings (percentage)	Space Savings (square meters)
4.5	31–35	76%	29.5–30.5
6	45–49	82%	42.5–44
7.5	59–65	85%	52–57
9	73–80	88%	66–67
10.5	87–94	89%	76–80
12	to 100	91%	86

Recovered Wasted Drawer System Space Using Vertical Automation

Ceiling Height (meters)	Eliminated Drawer Cabinets	Space Savings (percentage)	Space Savings (square meters)
4.5	19	53%	8
6	28	66%	15
7.6	36	74%	21
9	46	80%	29
10.5	55	83%	37
12	65	86%	45

2) Industry 4.0

According to [Statista](#), Industry 4.0 will be a Macrotrend for 2020³. This will certainly impact the overall consumer goods and supply-chain industries. We'll see advances in automation, robotics, artificial intelligence (AI), and the reality of a Smart Factory (highly digitized and automated production facility).

More and more automation will take over or at a minimum support picking, sorting, inspecting, storing, handling, and classifying products. New technology will provide up-to-the-minute inventory accuracy, reduce overstock, and allow for mass customization.

A new logistics paradigm is emerging

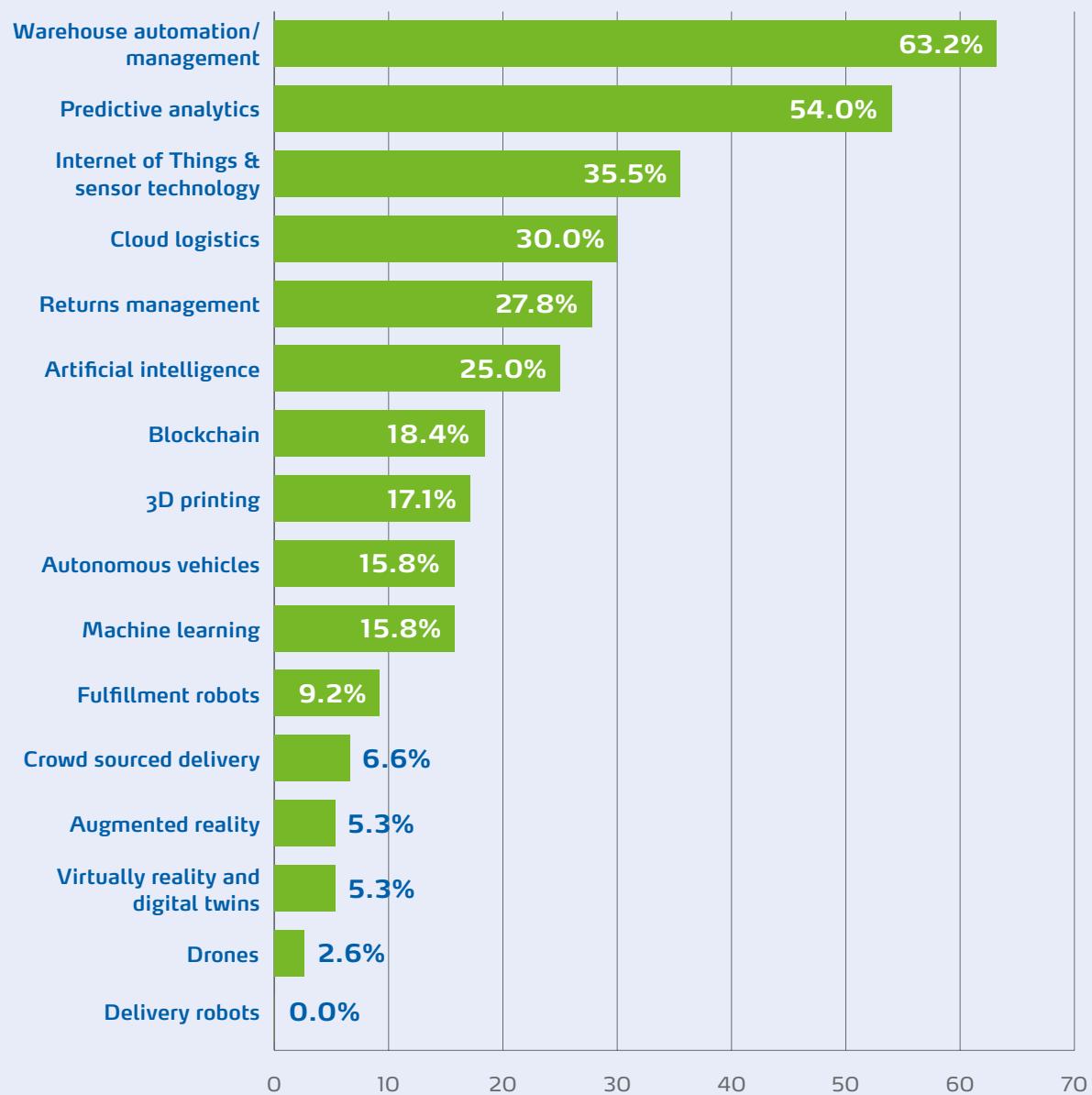
10 prominent technologies that could remake warehouse operations⁴

Multishuttle system	Typically used with an automated storage and retrieval system (ASRS) that moves goods (mostly on pallets) in three dimensions to store and retrieve items without human intervention.
Analytics tools	Algorithms that help operators analyze performance, identify trends, and make predictions that inform operating decisions, often using machine learning to improve over time.
Optical recognition	A sensor that scans items (often on six axes) to apply sortation and other logistics. Examples include a conveyor's diverts, laser-guided vehicles, and camera-based movement of drones.
Conveyor connection	A connection between 2 disparate conveyor systems that often uses decision logic to affect the flow of items. Typically, connections integrate different systems of flow. For example, push and pull flows.
Management system	Analytic and digital systems that integrate analytics, performance reporting, and forecasting tools, allowing managers to easily control a full system such as a warehouse.
Smart storage	Storage solutions that use advanced analytics and digital tools to place and retrieve items in the most efficient way, adjusting storage media based on the product, picking, and order characteristics.
3-D printing	Also called additive manufacturing, this process creates parts by adding layers of a material (metal or plastic, typically) to create a desired shape.
Swarm AGV robots	Autonomous guided vehicles (AGV) that operate freely or on digital tracks to bring items (often from a storage rack) to a picking station based on instructions from the order-flow-software.
Smart glasses	Glasses that augment and assist the reality of wearers – for example, by displaying directions to storage locations for picking – reducing inefficiencies of searching.
Picking robot	Systems with robotic arms that mimic human picking motion. Picking robots can be fixed (with good brought to them) or mobile (traveling to storage to pick items).

The benefits of automation are not going unnoticed: the likelihood that machines will match or outperform human performance is rapidly increasing. According to the Wall Street Journal, the broader market for warehouse and logistics automation topped \$53 billion in 2019 and will exceed \$80 billion in 2023⁵.

In the [State of Retail Supply Chain Report](#), from 205 responses, it found that 63.2% are currently investing in warehouse automation/management⁶.

Which technologies are you currently investing in?⁷

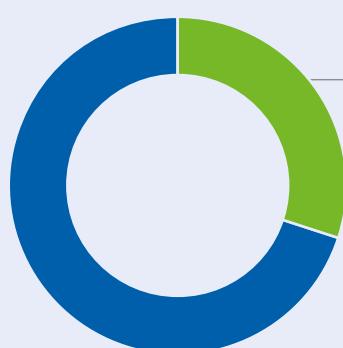


How will companies sticking to manual, traditional operations match the speed, precision, and efficiency of companies that switched to automation? They won't be able to! Here's [10 signs to look for to know it's time to switch to automation](#).

Kardex Tip: In our daily business, Industry 4.0 comes to life as well as its tangible benefits. When making a case for automation, the evidence speaks for itself.

Traditional Process: Person-to-Goods	Automated Order Fulfillment System
Order picker pushes a trolley up and down endless rows of racking to pick and fill orders	With little walking, the system delivers products to an ergonomic friendly picking window, increasing worker morale while decreasing worker injuries
Rising labor costs>Selecting staff from a shrinking labor pool of candidates	Minimal staff required/Minimal training necessary for new staff
Human errors are inevitable	Picking accuracy of 99%
50 lines per hour picked	Up to 600 lines per hour picked (at minimum, doubling picking performance)
120 bays of static shelving	One Vertical Lift Module (85% space savings); two vertical carousels (75% space savings); two horizontal carousels (66% space savings)
Static, open shelving may result in dirty, dusty and potentially even expired inventory	Inventory Management Software equipped with a FIFO (first in, first out) or LIFO (last in, first out) picking, mitigating the risk of dirt and dust impacting stock

Did you know?⁸



30%

of operational warehouse workers will be supplemented not replaced, by collaborative robots by 2023

Gartner 2019

3) Omnichannel Facilities

While we often envision warehouses in remote outskirts, that's not always the most efficient location. Cities are undergoing what [Brookings Institution](#) author Bruce Katz terms the "metropolitan revolution.⁹" By 2050, more than [70% of the world's population](#) will live in cities¹⁰.

Share of the population that live in urban areas 2018¹¹

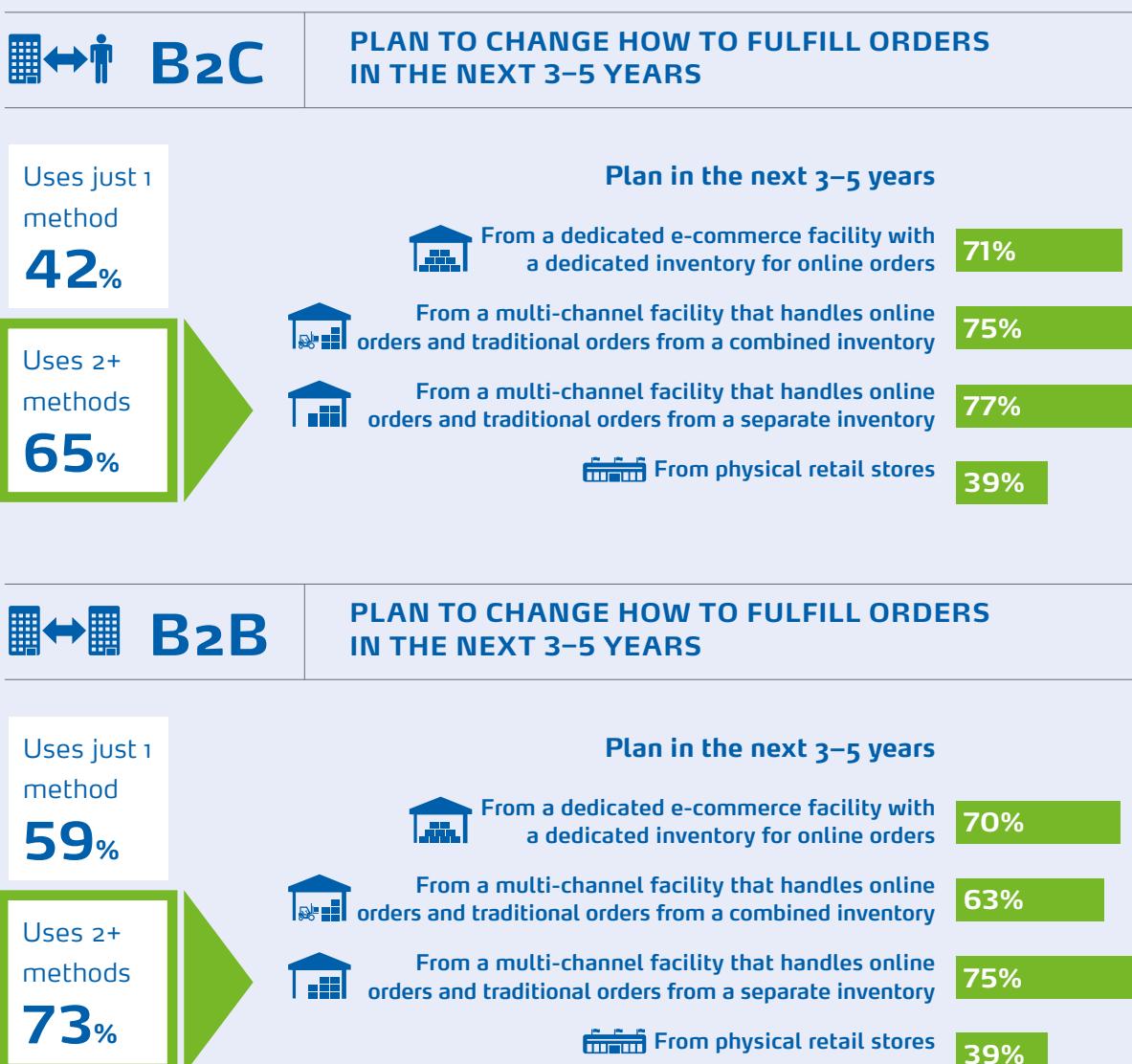


80% of global GDP was generated in cities

Micro-fulfillment is a way to ensure city slickers don't miss out on fast deliveries. It creates mini distribution centers in the back of retail stores, urban fulfillment centers, and dark stores to serve local markets. While a retail space might look like a traditional bricks and mortar store when walking by, it, in fact could be serving as an outlet for e-commerce returns and fulfillment points. The [Future of Fulfillment Vision Study](#) shows 76% of retailers are compiling online orders with store inventory and six out of ten retailers surveyed think this number will continue to increase¹². Another study, [Dynamic Distribution Disruption 2019](#), showed e-commerce returns at bricks and mortar stores increased from 24.2% to 35.5%, and as a place to ship from, increased from 25.8% to 30.3%.¹³

Micro-fulfillment also addresses how to handle multiple consumer purchasing points. Today, [41% of consumers](#) use two or more channels during the purchase process¹⁴. According to [Zebra's](#) 10th annual shopper study, "51% of online shoppers ship to home, 35% pick up in stores and 29% ship to an alternate location".¹⁵

Plan for Future Approach to Physical Order Fulfillment¹⁶

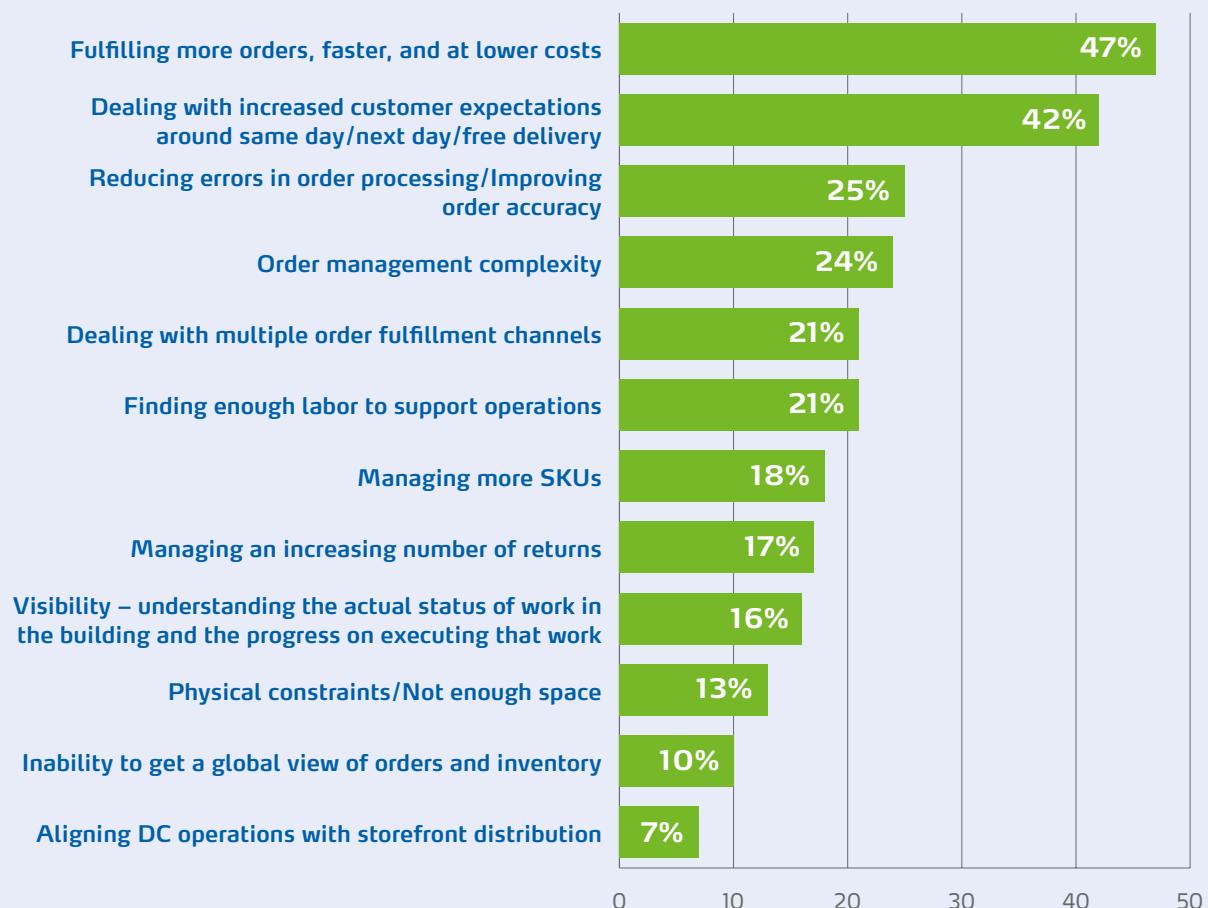


With all these different shopping channels, how can you be confident your order fulfillment operations are accurate? Do you manage one integrated warehouse for all sales channels or do you manage several facilities, each one designated to a specific sales channel? And are these located in remote areas with plenty of warehouse space or in smaller outlets scattered throughout cities?

4) E-Commerce

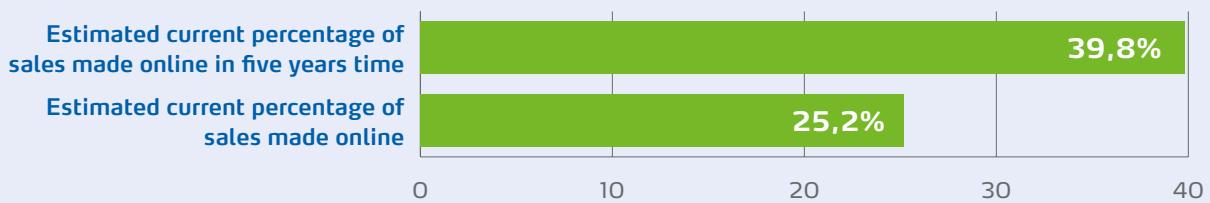
The rise in e-commerce and its roller-coaster of delivery and personalization demands have put a massive strain on warehouse operations. A recent study by Kardex Remstar and Modern Materials Handling showed e-commerce is the primary driver of fulfillment and distribution pain points.

The impact of e-commerce fulfillment on order management, fulfillment and distribution processes



Despite the difficulties companies are facing in perfecting e-commerce order fulfillment, it is not a trend to overlook. According to [e-Marketer](#), the global e-commerce market will reach \$5 trillion by 2021, up from \$3.5 trillion in 2019¹⁷. This can only be good news to online retailers.

Estimated Online Sales Now and in Five Years' Time¹⁸



Of course, to benefit from the online spending surge, warehouse solutions must meet consumer demands. It's certainly not a news flash that e-shoppers' expectations are on fire! The countless demands from consumers create a circus juggling act for many warehouse operators. To gain customer loyalty, it is now essential to have accurate information about product availability, shipping, and inventory. According to a recent [BRP Study](#), "digital consumers" are driven by rapid order fulfillment and delivery, with 77% of consumers more likely to shop at a store if it offers same-day delivery¹⁹.

[The Future of Fulfillment Vision Study](#) found that "within five years, 78% of logistics companies surveyed expect to provide same-day delivery and in ten years, 39% anticipate delivery within a two-hour window".²⁰

Warehouse manager must strategically consider these future predictions: it is critical to have the right tools in place to succeed in the e-commerce world.

Did you know? Worldwide, shoppers return an estimated \$642.6 billion in goods each year, which is continuing to be a problem for warehouse facilities that do not have efficient processes in place²¹.

[Here's 6 steps to optimize your Order Fulfillment that might interest you](#)

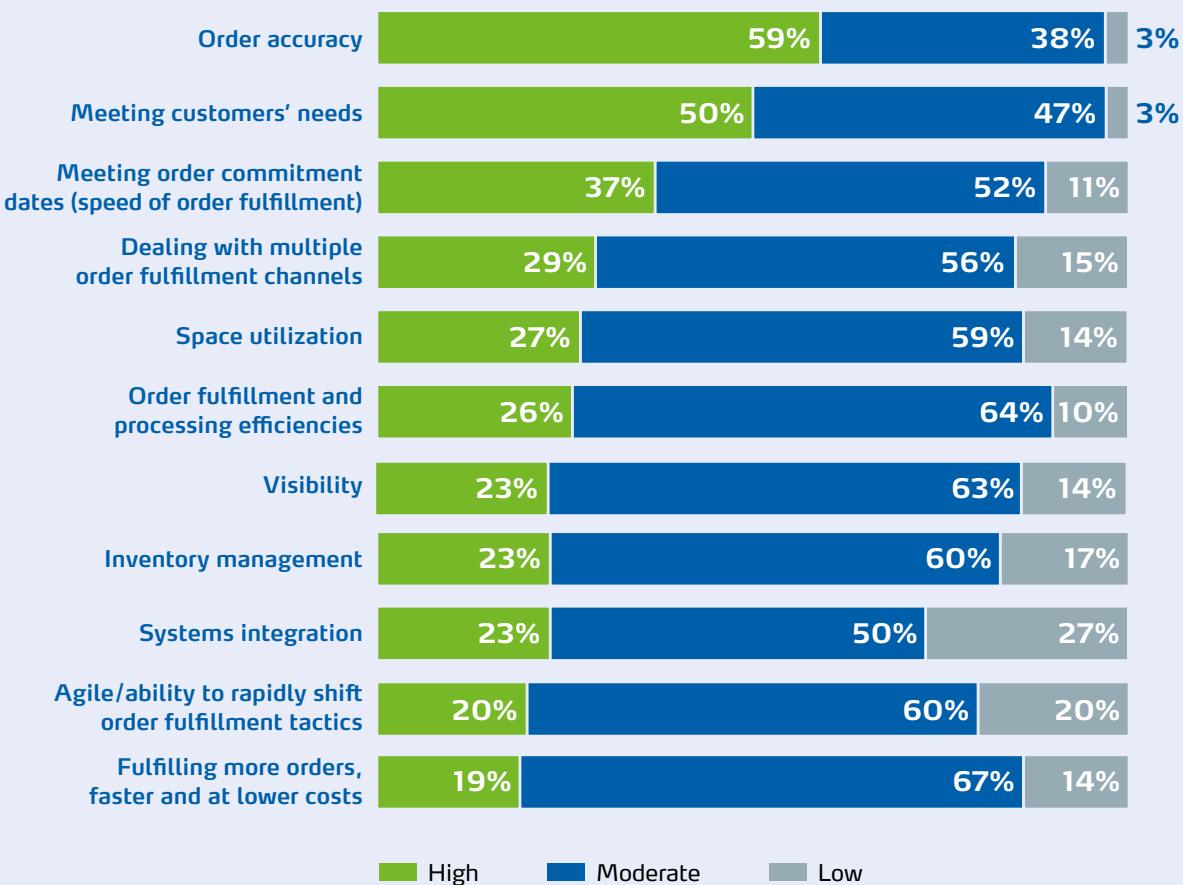
Order Fulfillment – Today's Challenges

If you had 90 seconds to list order fulfillment headaches, what comes to mind? Do you jot down bottlenecks, low throughput, no transparency, product availability, and picking accuracy? Since the worldwide pandemic do shipping demands move to the forefront of this list?

In a Kardex Remstar and Modern Material Handling survey, the below topics were named as high to moderate levels of concern in regards to online fulfillment:

- Improving order accuracy (97%)
- Meeting customers' needs (97%)
- Speeding up order fulfillment times (89%)
- Dealing with multiple order fulfillment channels (85%)

Evaluating organizations' fulfillment operations



This same survey showed that 95% of companies surveyed experienced delays or bottlenecks in their order fulfillment operations in the last year. 40% face issues with order picking and processing, while 37% struggle with inventory management. We can only guess what this is doing to their customer experiences. It can't be good!

A [Voxware Study](#) of 500 consumers found that 69% of respondents are much less or less likely to shop with a retailer in the future if an item they purchased is not delivered within two days of the date promised²². The only way to meet these expectations is an efficient intralogistics solution.

To retain customer loyalty, warehouse operations must play their part in contributing to outstanding customer experiences.

Order Fulfillment – Tomorrow's Warehouse

The only way to overcome these struggles are to implement efficient warehouse solutions, tools, and technology. When considering new intralogistics, it's important to ask if they will:

- Maximize warehouse space
- Meet same-day and next-day shipping demands
- Meet new requirements of social distancing
- Manage seasonal peaks and new trends flawlessly
- Eliminate downtime
- Deliver zero-defect products
- Provide impeccable order accuracy and short delivery times
- Maintain a constant availability of products
- Organize returns efficiently
- Show real-time data
- Minimize employee training time
- Adjust single-line orders accordingly
- Ensure ergonomic working conditions
- Keep intralogistics costs to a minimum
- Enable fast replenishment of goods
- Allow scalable processes

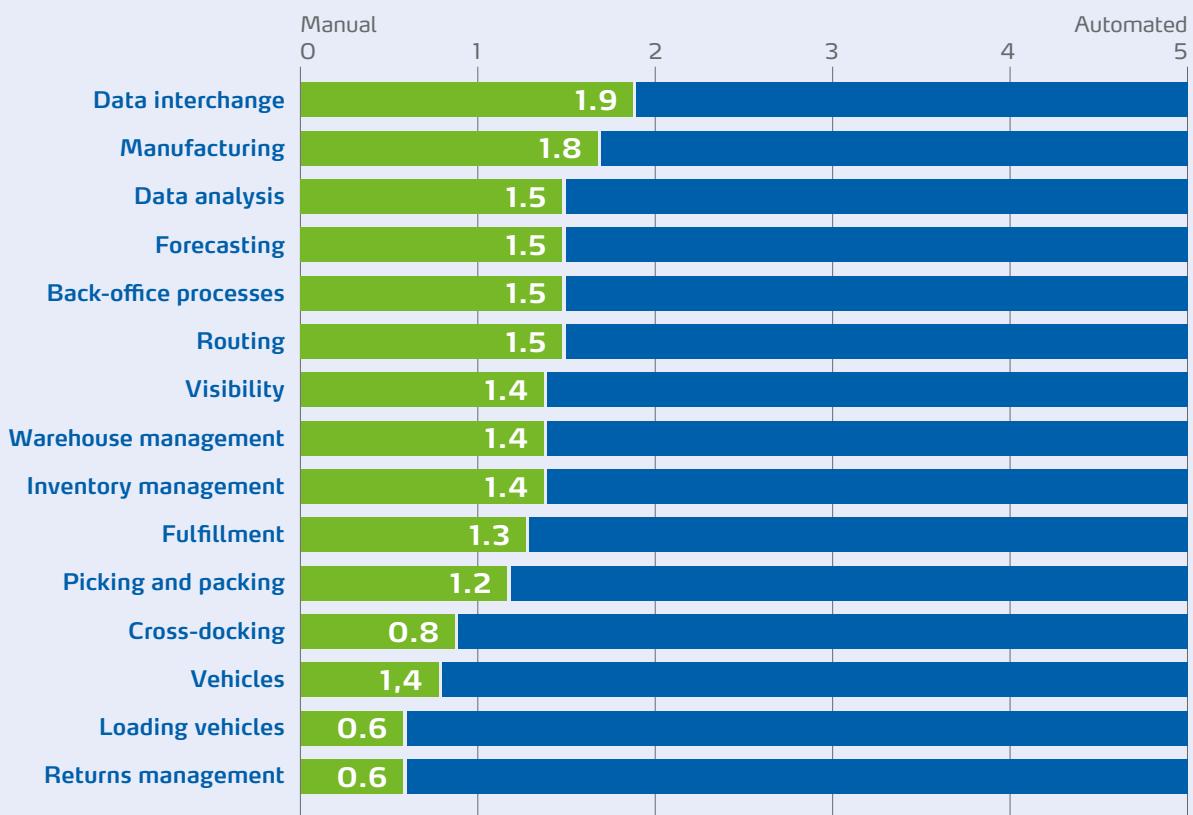
Order Fulfillment – The Next Step

Automation is the key to success and essential if you want to ensure sustainable growth. By combining automated storage solutions with software management systems and features like remote services and the right picking strategies, it checks all the above boxes. The result is an efficient, resilient, and cost-effective warehouse that proves its Return on Investment (ROI) in approximately 18 months.

As a first step, many companies start by partially automating different parts of their supply chain. In the [EyeforTransport 2019 Survey](#), when asking retail, manufacturing and logistics professionals to rank the degree of automation in their warehouses; warehouse management, inventory management, fulfillment, and picking and packing ranked between a one and two (with five being full automation).²³

Extent of Supply Chain Automation²⁴

Retail, manufacturing and logistic professionals ranked the degree of their supply chain automation; using a scale of one to five, with five representing full automation and zero representing fully manual processes



EyeforTransport 2019

It's important to keep the conversation going once automation begins. The best type of solutions are modular and scalable and can be modified as a business develops. Therefore, it's essential to put existing solutions to the test. Do they still meet the business needs? Do they execute the most efficient order picking possible?

But what we worry about most are the businesses that are not investing at all. The ones who are still working with manual processes. Without automation, competitors will always be two steps ahead!

Meet Kardex Remstar | How can we help you?

As a global leader in intralogistics and a leading supplier of automated storage and retrieval systems (ASRS), we can help optimize your warehouse. Vertical Lift Modules (VLMs), Vertical Buffer Modules (VBMs), Vertical (VCM) and Horizontal (HCM) Carousel Modules from Kardex Remstar provide a ROI in under 18 months due to the labor, space, and picking efficiencies they offer.

If you are considering automation, one of our experts can help you. [Send a request](#) to receive more information on our solutions and how they can improve your warehouse.

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