By the editors of **Internet Retailer**

FULLFILLMENT IN 2018: FASTER, BETTER, CHEAPER

How retailers are responding to increasing customer expectations and squeezing maximum efficiency from fulfillment operations.

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INTRODUCTION

In September 2018, FedEx Corp. expanded its FedEx Ground U.S. operations to six days per week year-round. That marked a shift for FedEx, which has previously run six- and seven-day ground operations only during the holiday season. The move matched that of competitor UPS Inc., which added year-round Saturday delivery last year.

Why do this now? E-commerce orders have grown so much and so fast that existing fulfillment and delivery channels are straining under the load. For example, when FedEx announced the addition of Saturday delivery, the company was delivering 14 million shipments on average per day—and that was before the expected increase during the upcoming holiday season. To support the higher volume, FedEx said it would increase hours for some of its 425,000 existing employees and hire about 55,000 seasonal workers.

Amazon, meanwhile, says it will provide technology, training and guaranteed package volume to people who start delivery companies. Amazon is taking that step because of the expectations the web giant was largely responsible for creating. E-commerce customers want things faster than ever before, and they want to pay as little for delivery as possible.

This marketplace has made it imperative that e-retailers wring as much efficiency as they can from their fulfillment operations. This report shows how consumer expectations have changed, and how e-retailers are rising to the fulfillment and delivery challenge.

CUSTOMER EXPECTATIONS INCREASE

In e-commerce, nothing else matters if orders fail to get to consumers undamaged, complete and in a timely manner. But if that was the only standard, fulfillment would be easy. And fulfillment is not easy.

Amazon.com Inc. has increased consumer expectations, making two-day free shipping the standard with its Amazon Prime loyalty program. Amazon also allows customers the option of picking up most orders at automated lockers installed at its Whole Foods stores and other locations. With that combination of speed and convenience, Amazon and the increasing number of retailers that offer at-store pickup of online orders or delivery to alternative locations such as UPS Access Points, have raised the bar even higher.

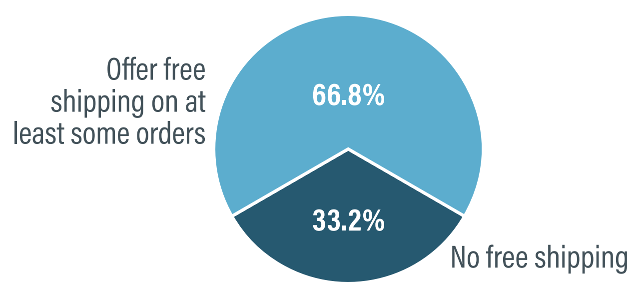
Among the e-retailers in the 2018 Internet Retailer Top 1000, 66.8% offer free shipping on at least some purchases. More than a quarter of those retailers, 25.9%, that offer free shipping grant it for any order, but more than half, 53.2%, have some kind of minimum order threshold consumers have to meet to qualify for free shipping. The median order minimum to qualify for free shipping among Top 1000 e-retailers is $50.

The remaining 20.9% of the Top 1000 online retailers have other requirements, such as purchasing products in certain categories or being part of a paid membership program. Six of those retailers, including J. Crew Group Inc.'s J. Crew brand, offer free shipping on qualifying online orders to shoppers who are part of their free rewards program. Non-members shopping JCrew.com pay $5 for standard shipping with delivery in three to six business days.

Retailers offer free shipping because it's popular with shoppers. According to a July Internet Retailer survey of 1,105 consumers conducted

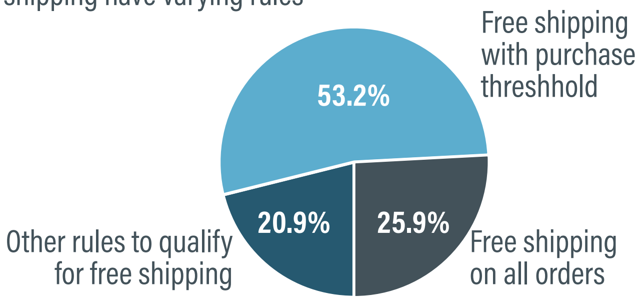
FREE SHIPPING AMONG THE TOP 1000 RETAILERS

How many offer free shipping?



FREE SHIPPING RULES

Top 1000 retailers that offer free shipping have varying rules



Source: Internet Retailer

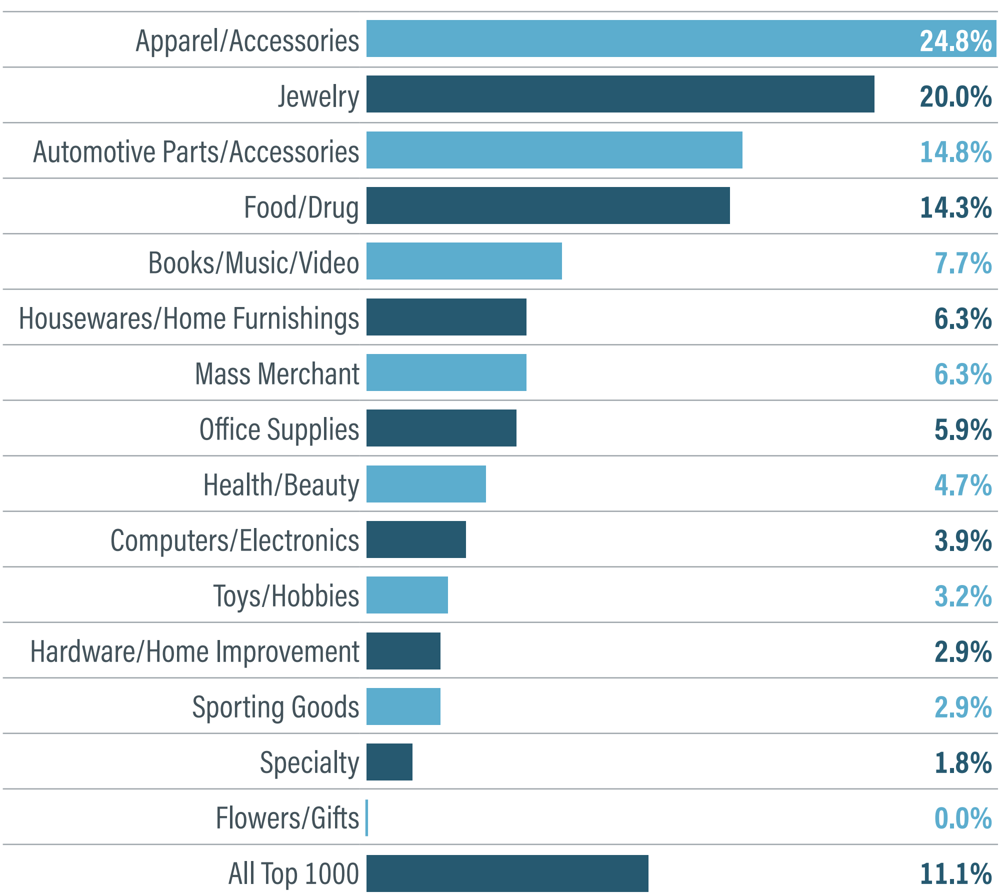
by Bizrate Insights, 94.8% of online shoppers took advantage of free shipping from a retailer, and 58.5% didn't place an order because delivery dates weren't offered or were too far out.

Customers not only want to receive their orders quickly and on their own terms, they also expect e-retailers to make returning merchandise easy and free. The Internet Retailer and Bizrate Insights survey found that 93% of those surveyed cited free return shipping as important to them. That was nearly 20 points higher than the second-place response of "timely refund to my debit or credit card," which was chosen by 74% of respondents.

Likewise, "I had to pay for return shipping" was the top "consumer pet peeve," cited by 49% of respondents. That was followed by "paying a restocking fee" (36%), "taking more than a week to credit my order" (27%) and "high fees associated with the return shipping" (26%).

HOW COMMON IS FREE RETURN SHIPPING?

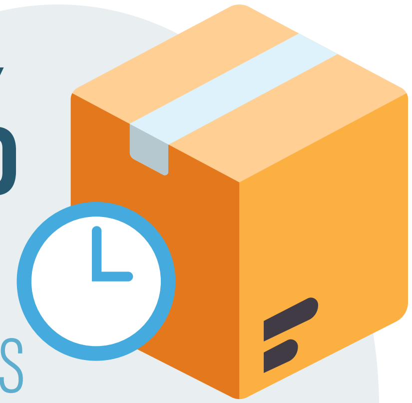
Portion of Top 1000 retailers offering free return shipping, by category



Source: Internet Retailer

Yet the vast majority of top North American e-retailers don't pay for return shipping. Across the 2018 Internet Retailer Top 1000, just 11.1% of retailers offer free return shipping. The percentage of retailers offering free returns is higher in some categories, but still far from universal. For example, 24.8% of apparel retailers and 20.0% of jewelry retailers in the Top 1000 pay for return shipping.

70% of web shoppers say at least one recent online order arrived late.



MILLENNIALS ARE HARD TO PLEASE

Consumers—especially consumers who are millennials or younger—are getting used to free and/or fast fulfillment. And those younger customers are most likely to form negative impressions about fulfillment performance.

A study conducted in May by omnichannel commerce technology company Radial found 59.2% of Americans between the ages of 18-34 reported that they typically receive their orders on time and in perfect condition, while 71.9% age 55 and older were generally satisfied with the deliveries they get. These results "likely reveal a pattern where younger consumers, who grew up more willing to engage in e-commerce, have higher expectations for the quality of the delivery experience," Radial says.

Consumers Internet Retailer/Bizrate surveyed said they have had challenges receiving online orders at least occasionally. 32% said at least one order placed in the prior six months was not delivered, and 70% say an order arrived late.

E-retailers know unhappy customers have plenty of other places to shop. To help improve the speed and efficiency of their fulfillment operations, many online merchants—along with third-party logistics vendors that handle fulfillment on behalf of e-retailers—have been investing in automation and/or opening new fulfillment centers.

LEVERAGING STORES

Retailers that operate stores are using them to help them compete against Amazon on delivery or convenience. Amazon, for its part, aligned with Kohl's Corp. in late 2017 to allow shoppers to return Amazon orders to Kohl's stores.

Despite Amazon's arrangement with Kohl's, using stores as distribution centers has created options for retail chains that Amazon can't replicate on the same scale—such as enabling customers to pick up online purchases at the closest location to avoid shipping fees. The omnichannel approach also has given physical locations added value because they can be used to fulfill purchases made in other channels.

Internet Retailer data and other research shows that, as of the end of early 2018, there was plenty of room for improvement in omnichannel fulfillment. Fewer than half (45.7%) of the 221 retail chains in the Internet Retailer 2018 Top 1000 allow customers to buy products online and pick them up in stores. However, a solid majority (59.3%) of the retail chains in the Top 1000 allow customers to return online orders to stores.

At least some retailers are willing to admit they have a problem. According to a March 2018 survey of 76 North American retailers conducted by Forrester Research Inc. on behalf of the National Retail Federation, 33% of merchants surveyed do not have a clear omnichannel fulfillment strategy in place. Also, 33% said they did not have the right metrics in place to measure how effective their omnichannel experience strategy is.

PICKUP AND RETURN OF ONLINE ORDERS

Among 221 retail chains in the Top 1000	
Offer in-store pickup	101
Offer in-store returns	132

Source: Internet Retailer

Asked about their top customer-facing fulfillment priorities for 2018, 42% of respondents to the survey cited "generally faster shipping." 15% of respondents selected ship-from-store capabilities and 12% selected omnichannel fulfillment—which includes shipping from stores and in-store pickup of online orders.

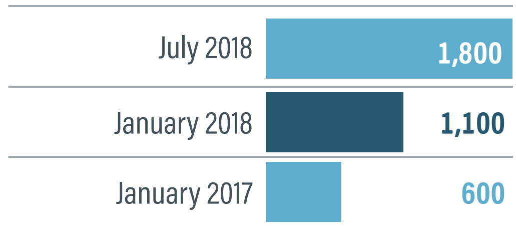
Establishing top-notch omnichannel fulfillment functionality requires investment and can be complicated.

Among those willing to invest the time and resources is home improvement chain Home Depot Inc. The company, which says 47% of its online orders are picked up in its stores, announced plans in late 2017 to spend $5.4 billion to improve its omnichannel operations. In September 2018, Home Depot, as part of an ongoing $1.2 billion supply chain upgrade, started offering same-day delivery across the United States. Lowe's Cos. Inc., Home Depot's chief competitor, also is testing same-day delivery in a few markets and does offer next-day shipping for in-stock appliances.

Walmart also offers in-store pickup of online orders at about 1,800 stores and says that will increase to 2,100 by the end of 2018. Walmart, which has more than 5,000 stores and membership clubs nationwide, employs more than 25,000 personal shoppers, up from 18,000 earlier this year, in its online grocery operations.

GROWTH OF WALMART PICKUP POINTS

Number of stores offering pickup of online orders



Source: Internet Retailer

GROCERY E-COMMERCE FULFILLMENT HEATS UP

Nowhere is the on-demand delivery battle fiercer than in groceries—an arena where Amazon gained a sizable foothold when it acquired Whole Foods Market in mid-2017. Here again, retailers are leveraging their stores to double as distribution centers.

Amazon now delivers groceries from Whole Foods in two hours or less via its Prime Now service in 53 cities, mostly replicating what Whole Foods previously offered via Instacart. In October 2018, Whole Foods further announced store pickup of online orders in Dayton, Ohio; Louisville, Kentucky; and Omaha, Nebraska, with more locations to come, giving consumers the option to choose delivery or pickup, whichever is more convenient to them.

By the end of 2018, Walmart—the nation's largest grocer—says it will offer grocery delivery to 100 metro areas, covering 40% of U.S. households. As of September 2018, it offered the service in nearly 50 markets including Atlanta, Chicago, Denver, Miami and Seattle. To reach 100 markets, Walmart is working with third-party delivery providers including Postmates Inc. and DoorDash Inc.

In early September 2018, Walmart began testing a grocery delivery service that uses independent drivers to get groceries from Walmart stores to customers' homes. The new pilot program, called Spark Delivery, launched Sept. 5 and uses drivers who contract with Delivery Drivers Inc. (DDI). As the administrator of the program, DDI manages recruiting, screening and background checks, payment, accounting and other services for drivers.

KROGER ADDS PICKUP POINTS

Number of stores offering pickup of online orders

Source: Internet Retailer

Kroger Cos., the largest stand-alone grocery retailer in the country, recently expanded its relationship with the app-based grocery delivery service Instacart and said it would add the service to 75 additional markets—more than 1,600 of Kroger's 2,800 stores—by late October 2018. As of March 2018, Kroger had almost 1,100 pickup points, up from 640 a year earlier and 221 in March 2016, according to company reports. Kroger also is partnering with autonomous vehicle startup Nuro to test the delivery of groceries using an unmanned road vehicle that can steer itself from the grocery store to a customer's home.

Kroger also recently increased its stake in British online grocer Ocado Group Plc, which is known for automated warehouses where robots quickly fill orders. As part of the deal, Kroger will become the exclusive user of Ocado's warehouse automation technology in the United States.

Delivering groceries is more complex than selling books or video games because food needs to be stored at the right temperature to ensure it doesn't spoil. Ocado's software also helps trucks take the best route, so that deliveries arrive at the customer's door within a one-hour window.

'SUPPLY-CHAIN ARMS RACE' IN WAREHOUSE MARKET

In September, Overstock.com Inc. said it planned to open a distribution center in Kansas City, Kansas, with plans to begin shipping from the facility in October. The location is strategic as it will allow Overstock to offer two-day ground shipping to more than 99% of customers in the contiguous United States, Jonathan Johnson III, a member of the retailer's board of directors and its former president, told Internet Retailer.

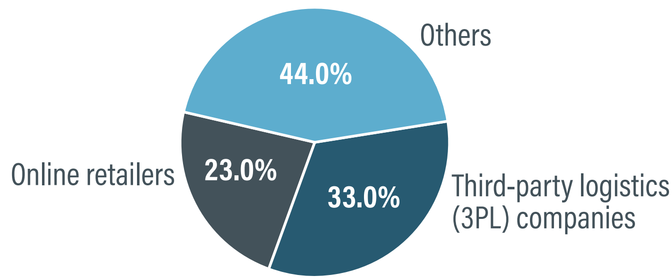
The new distribution center is part of a broader overhaul of how Overstock operates. In the past, Overstock was reluctant to add many new distribution centers and affiliates out of fear that those operations would constitute nexus, or a physical presence, in a state that would require Overstock to collect sales tax on sales in that state. But all that changed in the wake of the U.S. Supreme Court's decision in Wayfair v. South Dakota, which allows states to require out-of-state merchants to collect and remit local sales tax on goods sold to their residents.

Overstock is not the only e-retailer adding to its network of fulfillment centers. A surge in fulfillment centers has helped drive up demand for warehouse space around the country, according to commercial real estate services and investment company CBRE Group Inc.

As of September, CBRE says more than half of the 100 biggest leases for warehouse space have been signed by manufacturers, distributors, retailers and other online sellers or their logistics services providers. Of those deals, 56 were for e-commerce companies—23 deals by online sellers and 33 lease agreements for third-party logistics, or 3PL companies, says Adam Mullen, CBRE Americas leader of industrial and logistics.

100 BIGGEST WAREHOUSE LEASES IN 2018

Through early September 2018



"The supply chain arms race is as competitive as it's ever been," Mullen says. "While e-commerce is driving many new leases, there still is a solid diversity of users throughout the top 100 leases."

Altogether, the 100 largest warehouse leases represented about 67 million square feet of space, CBRE says. Of that total, the square footage leased for e-commerce use by various companies totaled about 40 million square feet. Overall for all companies, the lease agreements ranged in size from 417,000 to 2 million square feet, while 30 of the 100 leases were for warehouses sized 750,000 square feet or more, reflecting demand for modern buildings that have become larger and taller in recent years.

California’s Inland Empire was the metropolitan area with the most leases for the first six months of the year. California had 14 transactions spanning 11.6 million square feet, followed by Chicago (11 deals for 6.8 million square feet), Pennsylvania’s I-78/I-81 corridor (10 deals for 6.8 million square feet) Atlanta (10 deals for 7 million square feet) and Dallas-Fort Worth (eight deals for 5.2 million square feet).

CBRE didn’t include data for a year-over-year comparison. But as business-to-business and business-to-consumer e-commerce continues to grow, manufacturers, distributors, web merchants and others are going to be competing for more modern warehouse space.

“1.25 million square feet of logistics space is needed per $1 billion of annual incremental online sales,” Mullen says. “This translates into approximately 184 million square feet of e-commerce logistics demand by 2020.”

AUTOMATION ON THE RISE

Getting products that “last mile” from a warehouse to a consumer’s home is labor-intensive. To help bring down those costs, e-retailers and third-party fulfillment companies have invested in robotics and other technologies.

For example, Amazon uses robots rather than people to move inventory around in its more than 75 fulfillment centers in North America. In 2012, Amazon acquired robotics firm Kiva Systems, now called Amazon Robotics, for $775 million. The wholly owned subsidiary automates fulfillment center operations using autonomous mobile robots, control software, language perception, power management, computer vision, depth sensing, machine learning, object recognition and other technologies, according to Amazon.

Other retailers are investing in similar technology. Boxed Wholesale, an online-only seller of groceries and other fast-moving consumer goods, raised $111 million in a new financing round (bringing its funding to date to nearly $250 million) and plans to use much of that on robotics and expanding its distribution footprint. Boxed’s fulfillment centers use robotics developed by Boxed to help automate fulfillment and get orders out the door efficiently. In a recent test, Internet Retailer found Boxed processed an order and issued the shipment notification—meaning it was packaged and ready to hand off to the delivery carrier—less than five hours after Internet Retailer submitted

Boxed’s fulfillment centers use robotics developed by Boxed to help automate fulfillment and get orders out the door efficiently.

SPONSORED ARTICLE

THIRD-PARTY LOGISTICS PARTNERS CAN HELP RETAILERS MEET INCREASING CUSTOMER DEMANDS

Consumer expectations for fast, free shipping are at an all-time high, and retailers are faced with the challenge of meeting those demands while keeping their fulfillment and delivery costs down. Rapid growth, unpredictable sales and peak holiday season volume can complicate matters.

"To deliver more quickly and cost-effectively, retailers are realizing that they need to move products closer to consumers," says Perry Belcastro, senior vice president, operations, at Saddle Creek Logistics Services, an omnichannel supply chain solutions company.

Transportation is a major pain point for retailers, Belcastro explains. "Freight costs typically represent the largest operating cost of a distribution center – and they're on the rise," he says.

To control shipping costs and shorten delivery times, many retailers are expanding their distribution networks. "With two or more strategically located DCs, retailers can reach more than 90 percent of customers in the U.S. within two days via ground service," Belcastro explains. "This allows them to be responsive to customer demand while minimizing the need for expedited shipments."

But as retailers attempt to add distribution nodes in key markets, Belcastro says they're finding that warehouse space and skilled labor are at a premium. "The availability rate for industrial space has been hovering around 5%, and that's driving up costs," he adds. "And staffing that space is also challenging. It can be difficult to not only find, but also keep, experienced warehouse workers."

Additionally, technology limitations prevent many retailers from handling their omnichannel fulfillment operations effectively. A recent study conducted by Saddle Creek shows that visibility, order and inventory management, and real-time tracking are common challenges.

Third-party logistics providers (3PLs) can be valuable allies for retailers as they try to minimize costs and increase order velocity, Belcastro says. "Well-established 3PLs typically have a number of facilities to aid with distribution center network configuration, allowing retailers to expand their geographic footprint without a major overhead investment," he says.

They also tend to have robust technology resources, according to Belcastro. "Investing in a top-tier technology system like an OMS can be expensive, and technology is continually evolving," he adds. "Outsourcing gives retailers a more affordable way to take advantage of the latest advancements."

the order. The median processing time among 40 online retailers tested was 23.4 hours.

Meanwhile, Canada-based global retailer Hudson's Bay Corp. spent more than $44 million to install a robot-powered warehouse automation system that uses robotic wireless vehicles to retrieve products as orders come in and deliver them to pickers at workstations. The system eliminates the need for workers to pick up products manually throughout the warehouse. Hudson's Bay says the system can process about 12,000 items an hour, which adds up to approximately 5,500 customer orders. The company says that on average it takes about 15 minutes from the time it receives an order until it is ready to ship.

The automation of warehouses is creating steady growth in the sales of warehouse robotics. According to a September 2018 report from Data Bridge Market Research, the global warehouse robotics market (which includes robots used in e-commerce fulfillment centers) was $1.950 billion in 2017 and is expected to reach $2.450 billion in 2025—a 12.0% compound annual growth rate (CAGR).

But the automation of online fulfillment is not limited to warehouses. Walmart will soon begin testing a system for automating the backrooms of its stores to make fulfilling online orders faster and more efficient.

In collaboration with startup Alert Innovation, Walmart is using a robotics system called Alphabot to help store associates fill online grocery orders. The system, which was installed in Walmart's Salem, New Hampshire, location is housed in a 20,000-square-foot extension connected to the store that also serves as a dedicated grocery pickup point with drive-thru lanes for customers.

Alphabot uses automated mobile carts to retrieve ordered items and deliver them to Walmart employees at one of four pick stations. Personal shoppers will then pick, assemble and deliver orders to customers. The vast majority of grocery products offered in the store can be fulfilled through this system, though personal shoppers will continue to hand-pick produce and other fresh items. The system will be operational before the end of 2018, Walmart says.

The Salem store, which was remodeled and re-opened in July, also has an automated pickup tower for Walmart.com orders and an automated shelf-scanner that helps identify out-of-stock items, incorrect pricing and missing labels.

CONCLUSION

Customers are demanding faster, cheaper and better service when it comes to e-commerce fulfillment and that is not likely to change. The two-day delivery expectation is already morphing into a growing demand for same-day delivery—especially among online grocery customers.

The arms race for better, bigger and more automated warehouse space is likely to continue. The same is true for the need for smarter technology to fulfill orders more accurately and quickly. And the dividing line between store-based commerce and internet retailing will continue to blur as retailers continue to view their stores as centers for omnichannel interaction with consumers.

Customers increasingly expect to pick up orders made on smartphones or computers, order items for delivery and return purchases easily across channels. Those capabilities are difficult and expensive to develop and implement. But, when done right, omnichannel fulfillment reduces friction and can generate sales that otherwise might never be completed—or might go to a competitor with better, less painful fulfillment options.