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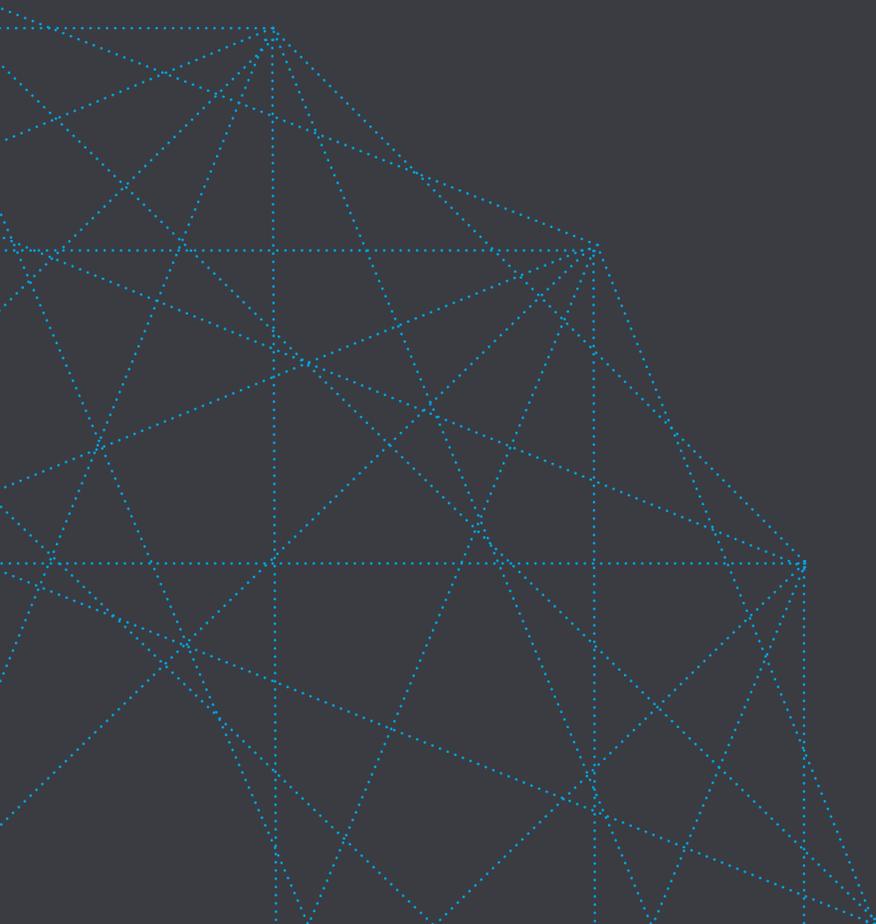


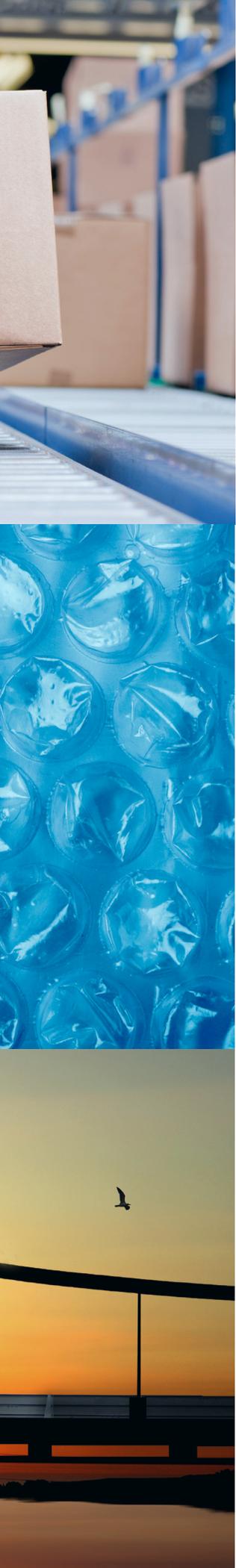
## **The last mile**

Enabling last mile through speed  
and flexibility upstream

# Contents

- 3 Introduction
- 4 The current landscape
- 5 The road to fulfillment
- 6 Minding the gaps in the value chain
- 8 The benefits of a holistic approach
- 9 Call to action
- 10 Authors
- 11 Endnotes





# Introduction

**With the proliferation of e-commerce and direct-to-customer brands, attention is shifting to supply chains as an avenue to effectively meet rapidly changing customer expectations for better service and lower costs.**

Facing rising competition, companies are looking to enhance the buying experience by enabling faster and more flexible delivery to the customer.

When addressing this challenge, many companies and retailers, however, often approach their last-mile strategy as a *last-minute issue*, treating it as a logistics or distribution matter—and by then, it may already be too late.

To be effective, companies should think holistically about last-mile strategies earlier in the product development process. Considerations for last-mile delivery need to be made as far upstream as the manufacturing site—which could include product development and packaging. Doing so can help fully leverage the entire end-to-end supply chain and enable effective delivery, rather than fixating on improving the final node of last-mile operations.

# The current landscape

Retailers are feeling increasing pressure to improve their last-mile fulfillment experience and invest in solutions that bring down the time to deliver to a customer.

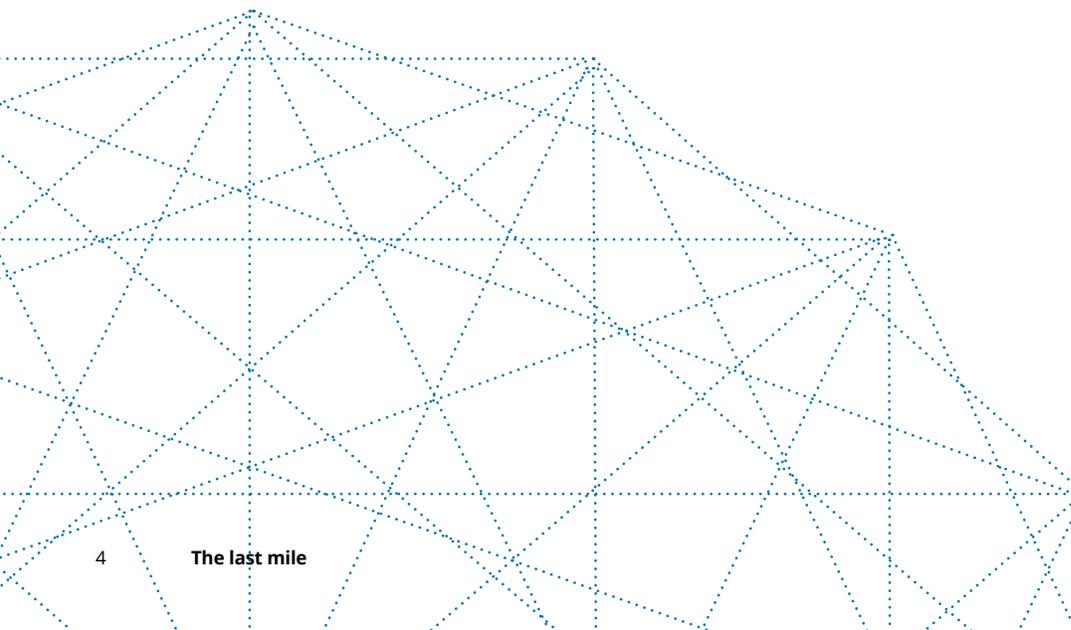
**Consumer behavior has changed dramatically over the past decade. Consumers are increasingly leveraging multiple channels to purchase goods and services. A recent study of consumer behavior found that only 7 percent were online-only shoppers and 20 percent were store-only shoppers. The vast majority—73 percent—were omnichannel customers, using multiple channels during their shopping journey.<sup>1</sup>**

In the current consumer landscape, the post-purchase experience matters as much as the first leg of the buying journey. Focusing on the post-purchase experience—the journey of the purchased item from channel to consumer—represents the next frontier for retailers.<sup>2</sup> Previously, retailers often handed off the customer experience to a third party, like UPS or FedEx, which focused on delivery. But as consumer expectations continue to evolve, retailers are realizing the potential benefit of investing more heavily in this area.

In a span of five years, the value of same-day delivery sales has grown significantly, starting from practically zero in 2013 to more than \$4 billion in 2018.<sup>3</sup> Moreover, same-day service is something shoppers expect: consumers increasingly want same-day delivery, with more than 50 percent of consumers willing to pay for it. Amazon has set the standard for making same-day and next-day fulfillment more common, putting severe downward pressure on fulfillment service levels at much lower costs. It is now offering free one-day delivery on more than 10 million items.<sup>4</sup> In response, other retailers are experimenting with and implementing their own last-mile innovations. Walmart is testing a crowdsourced model, Spark Delivery, where independent drivers pick up orders from Walmart stores and warehouses and deliver them to customers.<sup>5</sup> Other companies have revamped their operations to ship to customers more effectively. A leading retailer, for example, is using its stores to ship more than 80 percent of online orders, bringing down the time to ship to customers.<sup>6</sup>

Ultimately, retailers are feeling increasing pressure to improve their last-mile fulfillment experience and invest in solutions that bring down the time to deliver to a customer. Even so, only 65 percent of retailers either offer same-day delivery or are getting ready to offer it in the next year.<sup>7</sup>

Achieving faster and more flexible delivery to customers means rethinking workforce strategies around hiring and training for new skills, rewards, and scheduling to accommodate fluid work, as well as organizational design to enable new ways of working and efficient decision-making.



# The road to fulfillment

What are the key changes needed across the end-to-end supply chain, such as manufacturing and logistics, to enable effective last-mile fulfillment? Additionally, how should retailers reorganize their operations to enable successful last-mile delivery?

A packaged item's journey from production to the consumer has traditionally been broken down into three stages: the first mile, the middle mile, and the last mile.



Most companies and retailers, to date, have focused their efforts on optimizing last-mile transport. And for good reason: last-mile logistics is the least efficient stage in the supply chain, making up 28 percent of the total delivery cost.<sup>8</sup> However, retailers have tended to develop tunnel vision in designing efficient last-mile solutions, concentrating for the most part on improving transportation to enhance last-mile delivery (such as parcel delivery, crowdsourcing, and network redesign). Their emphasis has been disproportionately placed on improving transportation operations and entering partnerships with delivery service providers for faster service. But the weight placed on delivery service providers can limit the true extent to which effective last-mile can be facilitated and enabled.

Moving toward an effective last-mile strategy will require a supply-chain transformation. The transformation should examine the end-to-end supply chain, taking into account people, processes, and technology to help understand how to create an environment that's not only flexible, but also data-driven, based on customer needs.

# Minding the gaps in the value chain

Companies should develop a strategy that starts by identifying the existing gaps in their end-to-end supply chain and position them against the end goals while designing their last-mile solutions. Operational improvements at each node of the value chain (such as manufacturing and distribution centers) can allow companies to design a holistic last-mile solution that will bring down delivery lead times and enable more flexible last-mile fulfillment options for customers (such as store pickup). Considering people-related changes in parallel with broader operational decisions is critical, as the nodes in which those changes occur will have unique impacts on workforce, rewards, and ways of working among teams.

Retailers and consumer product companies can utilize the following considerations for each node of the supply chain: manufacturing, distribution centers, and stores.



## Manufacturing

**To help meet the challenges of the last mile, manufacturers should rethink packaging products, flexible plant layouts, and handling and shipping processes.** Historically, manufacturers have designed packaging to be shelf-ready rather than last-mile-ready. Instead, inventory needs to be flexibly packaged so that it can be adjusted to customers seamlessly from any channel. Last-mile considerations should also drive how products are packed (whether as singles or as packs) and physically prepped (polybag, ticketing). Manufacturers will need to design packaging concurrent with product development, identifying the overlap between shelf-ready packaging and last-mile-ready packaging. Packaging should also include customizable shipment and carton labeling for rapid execution of orders in downstream nodes such as warehouses and stores. Further, manufacturers will need to be able to fulfill directly from the plant to the customer, bypassing the distribution center or store network. Doing so will entail developing the capabilities to create customized, personalized, or value-added services from the plant to ship directly to the consumer. This approach will mean creating flexible layouts and handling processes. Manufacturers will have to develop end-to-end visibility into the supply chain to identify demand triggers early, adjust to customer trends quickly, and ensure products are always available for shipment.

This operational flexibility could have numerous implications for the workforce. For example, workers may be expected to navigate between various types of packaging or shipping processes based on customer demand. Identifying what processes allow for the flexible deployment of workers and which require more advanced safety protocols or certifications is important in building flexibility into operations. The ability to redeploy workers quickly will require some to be cross-trained. Additionally, there may be benefit to the manufacturer maintaining a workforce continuum that allows for both predictability of full-time workers and the flexibility of short-term workers (gig workers). Moreover, managers will need to know not only how to identify demand triggers, but also how to flex their workforce to meet the demand accordingly.



### Distribution centers

**Distribution centers will increasingly require systems and processes that enable real-time inventory and order-flow decision-making to reduce pick times and eliminate process waste.**

Handling processes will need upgrading to execute batch and small-package handling versus pallet handling. The layouts of distribution center facilities should be adjusted to fully leverage holistic process flows until points of divergence occur. Data flows will serve an important role at distribution points to ensure the most efficient process.

The system and process changes in the distribution centers could also have workforce implications. For example, the ability to respond to real-time inventory changes requires a workforce that is comfortable navigating fluid circumstances and is cross-trained to shift as needed within the distribution center. Additionally, managers will need to understand how data affects operations and the workforce to quickly redeploy workers. Organizationally, team structures may also need to change to enable speed and flexibility. This could mean flattening the organization, distributing decision rights closer to the work, and developing “utility players” who can effectively move from one area to another based on real-time needs. Changes in processes and batch sizes will likely affect individual productivity measures and may require reviewing rewards and performance pay. Finally, the trade-off between cost and service/speed could affect how workers are scheduled. Service-level agreements, customer promises, and the like may require a change to shift schedules and reconsideration of the workforce continuum (full-time to contingent mix) to meet demand.



### Store operations

**Moving inventory from stores and decentralizing from massive distribution centers into mini-hubs or dark stores will help speed up fulfillment, enabling the backroom of stores to double as last-mile fulfillment centers.** An effective shift to this model will require adjusting store layouts to ensure efficient shipping-ready backrooms. Technology will also play a huge role in the transition of stores, such as using product locators enabled by RFID and integrating with cloud-based, distributed order management systems to assist stores in fulfilling customer ship orders efficiently. A single view of an item and corresponding inventory, agnostic of the channel, along with integrated point of sale and manifested ship orders in the order management system, can allow the organization to fulfill from the best possible location, whether it is a store or a distribution center. Finally, retailers should develop strategic alliances with other retailers to expand the reach of their networks and utilize unused capacity for shipments or customer pickups.

Similar to the other nodes, changes to store operations may affect the workforce. Like in a distribution center, a store’s workforce should be comfortable with fluid circumstances. For example, store doors may be used for both incoming and outgoing shipments and could require cross-training to ensure that workers can flex between front-of-store and backroom operations. Additionally, workforce scheduling may need to change to allow for more frequent shipments and potentially 24/7 operations. Changes in processes and the use of technology will also affect rewards and performance pay. Finally, store manager skills may need to expand to not only include an ability to understand data and deploy workers across operations quickly, but also to navigate new alliances among stores and strategically utilize capacity.

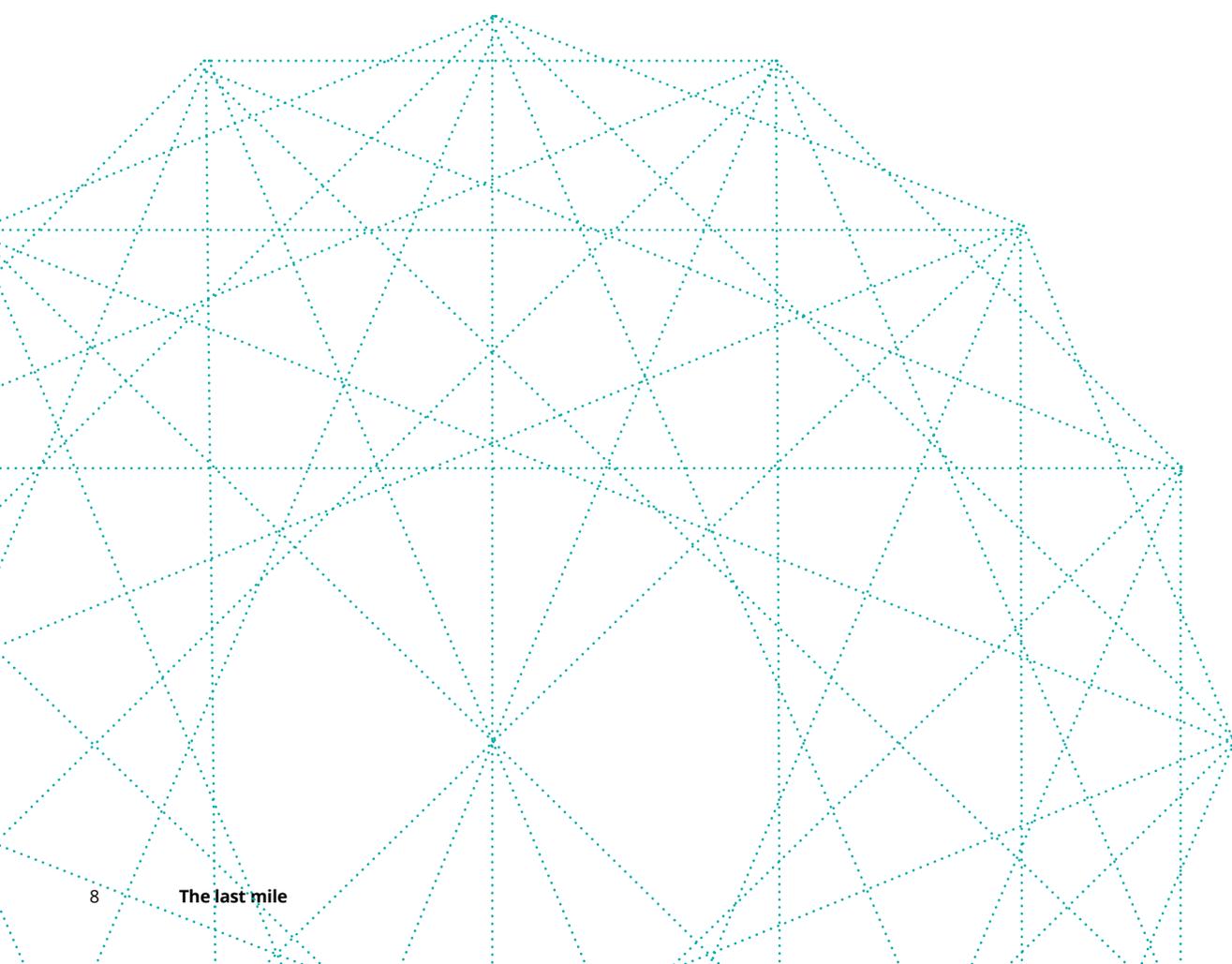
# The benefits of a holistic approach

A holistic approach can help build trust with current customers and gains new customers through an enhanced delivery experience.

A holistic approach to developing a last-mile strategy can provide organizations with numerous benefits. It provides increased visibility and flexibility to the organization to deliver customer products from multiple nodes within the supply chain, as well as the ability to tailor shipments to customer requirements. It can reduce the order-to-delivery time and improve reliability, enhancing customer experience and increasing overall competitiveness. It can also help build trust with current customers and gains new customers through an enhanced delivery experience. Finally, it can help decrease the total cost of last-mile fulfillment through efficient processes and reduced waste through the network.

Before making the shift, retailers and companies should recognize the barriers that stand in the way of succeeding in this integrated and holistic approach. For example, lack of reliable and actionable data and insights makes decision-making a challenge. Further, limited system infrastructure and capabilities can cause poor cross-functional visibility, making reporting a challenge for a holistic approach.

Lastly, one of the most stubborn obstacles is cultural. Organizational siloes, accountability, and controls can make end-to-end thinking and approach in traditional organizations a cultural barrier.



# Call to action

To help solve the last-mile puzzle, it is important to take a holistic approach, looking at the entire life cycle of the process and making the changes necessary to have an impact on driving efficiency and differentiations throughout manufacturing, distribution centers, and stores.

There is no one-size-fits-all formula for success in this area: Each retailer varies in the value and range of SKUs offered online versus in-store. As organizations develop their future-state supply chain strategies, a holistic approach is necessary to assess current practices, systems, workforce, and physical and organizational infrastructure across nodes to ensure they are developing an end-to-end integrated approach to build their last-mile capabilities. To get started, consider how upstream processes can affect last-mile fulfillment and develop a solution that covers the end-to-end supply chain. Invest in systems and tools that provide visibility across the network. Put in place a change management program that ensures that organizational silos are broken down and new processes and solutions are adopted at the earliest. Finally, develop a performance management plan with the right KPIs in order to measure performance from an end-to-end perspective.



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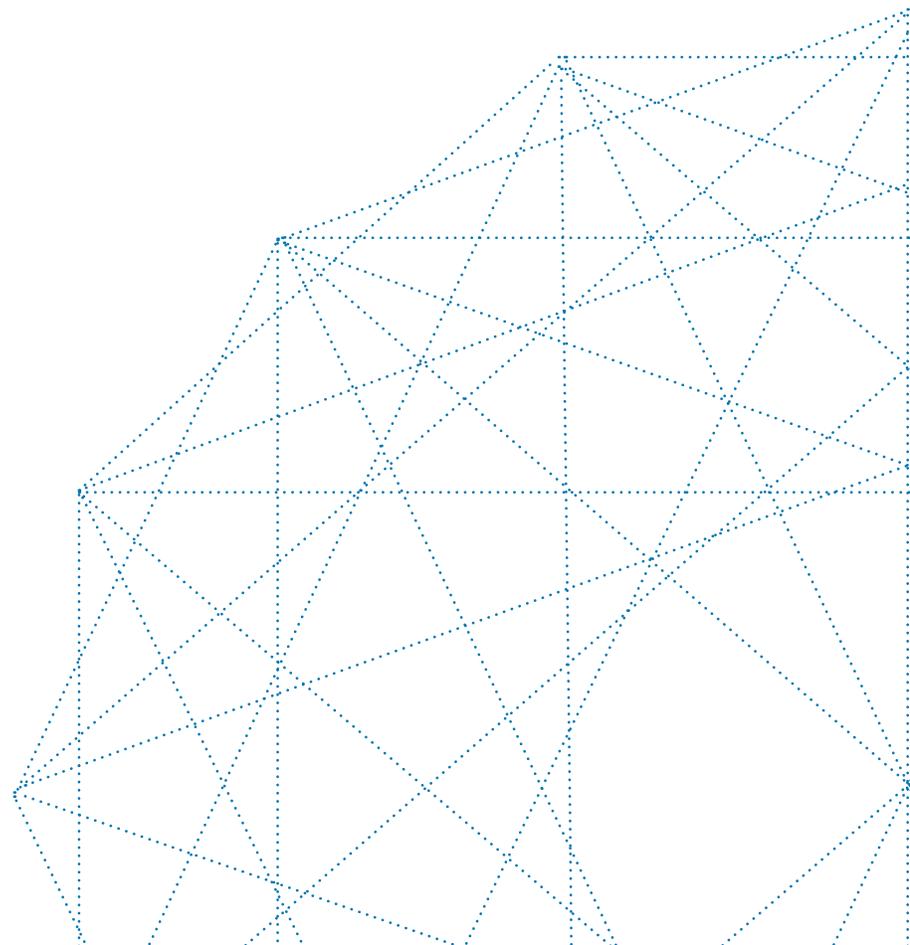
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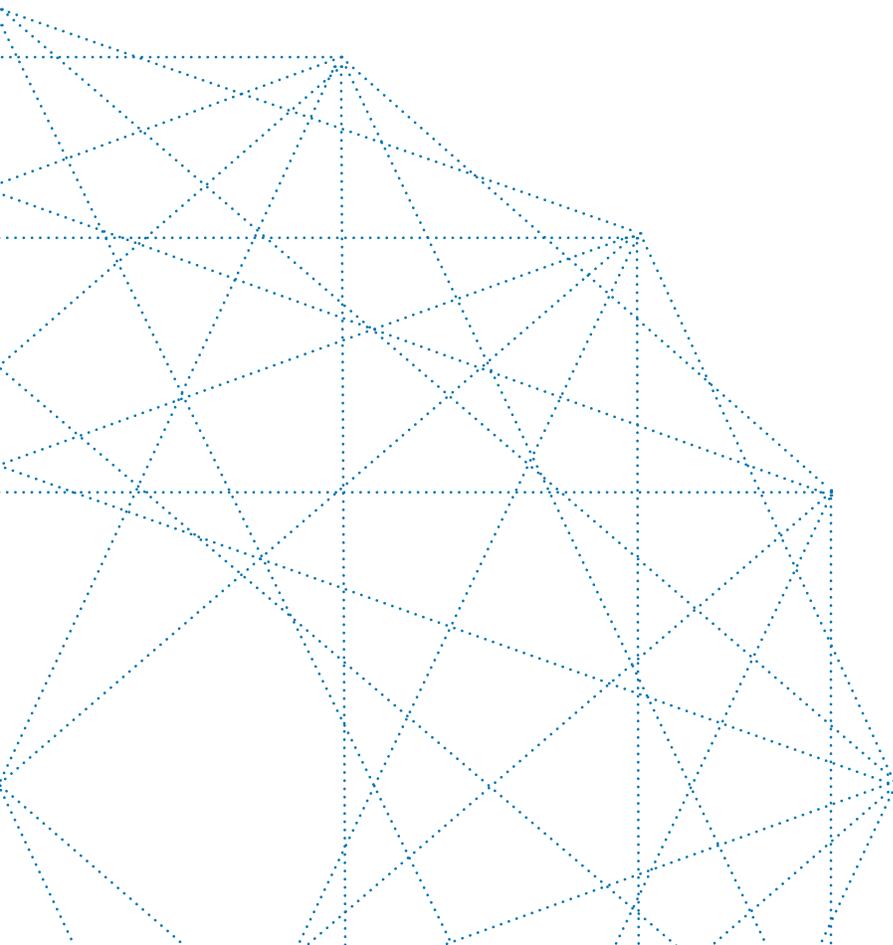
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## Endnotes

1. Emma Sopadjieva, Utpal M. Dholakia, and Beth Benjamin, "A Study of 46,000 Shoppers Shows That Omnichannel Retailing Works," *Harvard Business Review*, January 3, 2017, <https://hbr.org/2017/01/a-study-of-46000-shoppers-shows-that-omnichannel-retailing-works>.
2. Amit Sharma, "Online Retailers Should Care More About the Post-Purchase Experience," *Harvard Business Review*, May 24, 2016, <https://hbr.org/2016/05/online-retailers-should-care-more-about-the-post-purchase-experience>.
3. "Same-day delivery merchandise value and shipping fees generated in the United States from 2013 to 2018," *Statista*, January 2015, <https://www.statista.com/statistics/272496/us-same-day-delivery-order-value-shipping-fees>.
4. Sarah Perez, "Amazon says over 10 million items are now available for one-day shipping," *TechCrunch*, June 3, 2019, <https://techcrunch.com/2019/06/03/amazon-says-over-10-million-items-are-now-available-for-one-day-shipping>.
5. "Walmart Tests New Last-Mile Grocery Delivery Service," *Walmart*, September 5, 2018, <https://corporate.walmart.com/newsroom/2018/09/05/walmart-tests-new-last-mile-grocery-delivery-service>.
6. Don Davis, "Target's Q4 sales grow 20% as stores fulfill 4 of 5 web orders," *Digital Commerce 360*, March 3, 2020, <https://www.digitalcommerce360.com/2020/03/03/targets-q4-online-sales-grow-20-as-stores-fulfill-4-of-5-web-orders>.
7. Khalid Saleh, "The Importance of Same Day Delivery—Statistics and Trends," *Invesp*, <https://www.invespcro.com/blog/same-day-delivery>.
8. Barry Hochfelder, "What retailers can do to make the last mile more efficient," *Supply Chain Dive*, May 22, 2017, [www.supplychaindive.com/news/last-mile-spotlight-retail-costs-fulfillment/443094/](http://www.supplychaindive.com/news/last-mile-spotlight-retail-costs-fulfillment/443094/).





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