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Urban fulfillment centers

Helping to deliver on the expectation of same-day delivery

Why urban fulfillment centers?

Deloitte recently published a paper on how the supply chain should adapt to serving the connected consumer. As we continue to explore how retailers are adapting, we look at the need for urban fulfillment centers. Why focus on urban fulfillment centers? In New York City alone, there are approximately 10 million people who spend more than \$16 billion annually through e-commerce purchases within a 20-mile radius of the Empire State Building. If you look across the United States, there are seven cities with populations in excess of 1.5 million people: Being able to serve the connected consumer in these large metropolitan areas with same-day or multi-hour service can add significant revenue, improve the customer experience, and drive brand differentiation for leading e-commerce and omnichannel retailers.

Some call it the “Amazon Effect.” Others attribute it to the e-commerce mind-set of “See now. Buy now. How fast can I get it?” Still others see it as an extension of the connected consumer’s need for 24/7 engagement.

Call it what you will, but one thing is clear: The bar has been raised for home-delivery options.

By 2023, same-day delivery will be the norm for most e-commerce purchases.¹ Nowhere is this expectation more apparent than in large metropolitan cities, with their high concentration of Millennials, high-end consumers, and dual-income families: Roughly three-quarters of urban shoppers have bought products on their mobile device, and about half say that same-day delivery is important to them.

Retailers should adapt to keep pace with the industry leaders—or chance being left behind. But to succeed, a different supply-chain model and mind-set is likely needed. The traditional retail distribution model, consisting of a macro hub-with-spokes, should evolve, bringing inventory closer to the consumer. Developing **an urban distribution center, coupled with local delivery vehicles, can lead to a sustainable, profitable logistics model for large urban markets.** And helping enable the strategy is a delivery model leveraging the gig economy with fast, savvy, and scalable crowdsourced delivery services. As an example, two major retailers have prioritized the top two metropolitan markets of New York City and Los Angeles as major areas of focus to grow their brands due to the connected consumer density. They have begun to open new stores and pilot same-day and multi-hour delivery to drive brand loyalty and differentiation with urban fulfillment models.

Sixty-four percent of online consumers expect orders placed by 5 p.m. to qualify for same day delivery.

Retailers: The pressure to deliver

The dominance of Amazon and other giants has fundamentally transformed retail—and disrupted the logistics of delivering products to customers. Since 1995 when Amazon was founded, the company has slashed expected shipping times—and now it is poised to reduce shipping times even more. Amazon is rapidly making two-day free-delivery service the standard—and with Prime Now, it is offering free two-hour delivery service on household items and essentials. This approach raises the bar on service to Millennial consumers, 71 percent of whom are Amazon Prime members and live in urban areas (see “The big players plant stakes in the cities”).

Meanwhile, e-commerce and mobile continue to gain traction, particularly in urban markets and key population segments. In the third quarter of 2018, e-commerce sales totaled \$121.5 billion, representing 9.8 percent of all retail sales, up 14.3 percent from the third quarter in 2017.² And more and more of those sales are being made on smartphones: From 2014 to 2017, the number of purchases made via smartphone rose 70 percent.³ Among high-income consumers, 52 percent are choosing to shop online,⁴ while 76 percent of Millennials prefer home delivery to other delivery options⁵ (home delivery is the default option for many consumers and particularly among Millennials).

See now. Buy now. How fast can I get it?

Additionally, consumers increasingly are guided by the mantra, “See now. Buy now. How fast can I get it?” That chant is the essence of the omnichannel retail experience.

Same-day capability increasingly plays a key role at critical points in the customer journey: 58 percent of consumers say that the ability to search for items that are available for same-day delivery matters to them when buying products online,⁶ while 64 percent of online consumers expect orders placed by 5 p.m. to qualify for next day delivery,⁷ and another 61 percent expect orders placed by noon to qualify for same-day delivery.⁸ With same-day spend projected to grow at a 25.3 percent CAGR between 2016 and 2022,⁹ retailers will have to build that capability if they wish to compete.



How fast can I get it?



The big players plant stakes in the city

Many big players have recognized the need for an urban fulfillment strategy. While each player is approaching the problem differently, all of them recognize the importance of bringing their goods closer to the biggest urban market in the United States:

- **Amazon** will be opening its first major warehouse in New York City, a \$100 million, 855,000-square-foot state-of-the-art facility on Staten Island.¹⁰ With the move into New York, Amazon is raising the table stakes and is defining how e-commerce is going to work, particularly in an urban setting. In addition, Amazon recently leased two facilities in the Bronx and Queens to service the urban Manhattan market.
- **Walmart** has leased a 205,000-square-foot warehouse in the Bronx and will soon be supplying products to consumers through its e-commerce business Jet.com, which it bought in 2016. Jet's packages are being transported around the city by Parcel, a same-day, last-mile delivery service based in Brooklyn that Walmart acquired.
- **Target** is introducing "flow center," a distribution strategy aimed at reducing inventory at small-format urban stores and shortening the replenishment cycle from days to hours. The method is being applied at Target's Perth Amboy (NJ) warehouse as a pilot where shipments are sent to stores more frequently and in smaller batches. The flow center is expected to elevate backroom inventory management, reduce out-of-stock inventory, and increase total sales for Target.
- **IKEA** is opening its first Manhattan location, as it adjusts to retail's shifting landscape. The store is the first of its kind in the country, and IKEA plans to open another 30 new stores in cities over the next three years. The store will allow shoppers to look at IKEA products and have them delivered.

These trends have been apparent in large metropolitan cities, with their concentrated populations of Millennials, high-end consumers, and dual-earner families. Indeed, **74 percent of urban shoppers have purchased products on their mobile device¹¹—in contrast with the rest of the United States, where 51 percent of American adults report making an online purchase on their smartphone.¹²** Moreover, 45 percent of urban shoppers believe physical store same-day delivery is important (as opposed to 34 percent of suburban shoppers).¹³

Many retailers are lagging behind

But while many retailers recognize the importance of the first two pieces of the triangle (“See now” and “Buy now”), building websites, creating apps, using social media to stay uppermost in the minds of customers, and making “Buy now” a smooth

and frictionless experience, the last piece (“How fast can I get it?”) remains a struggle.

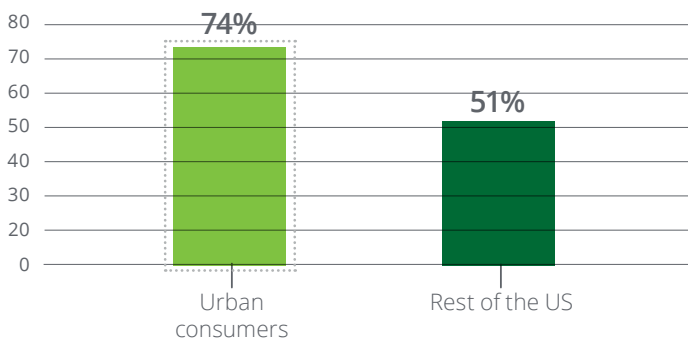
Retailers have tried responding: 47 percent invested in logistics services in 2017 (up from 42 percent in 2016).¹⁴ But those investments are not nearly enough. Consequently, they have been leveraging their existing-store infrastructure, with same-day and next-day delivery being fulfilled from stores by sales associates doing double duty: serving customers and fulfilling same-day orders. This fulfillment approach has often led to inefficiencies and a poorer consumer experience inside the store. Buy online and pickup in store is another option that retailers have tested, and it is working to a degree, but the approach in leveraging store inventory and store associates can have a higher cost of fulfillment and erodes the profit from a strategically planned urban fulfillment node.

One solution is to bring the fulfillment center closer to the end consumer so that items and products can be delivered effectively, efficiently, same day or next day. But the high costs of real estate, building a state-of-the-art warehouse and fulfillment facilities, creating an urban transportation infrastructure, and developing an urban delivery services network commonly have held retailers back.

However, with crowdsourced delivery services and technology tying together and enabling those services, you don’t have to be a Fortune 50 retailer to compete (see “An outer-borough fulfillment center”). An urban fulfillment center can allow products to be delivered same day or next day—and at a lower cost to service.

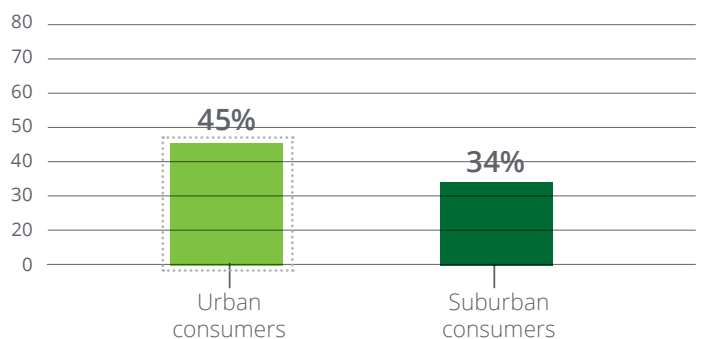
Urban consumers are increasingly using their phones...

Percentage of consumers who have used their phones to make a purchase



...and expect same-day delivery

Percentage of consumers who believe same-day delivery is important



Sources: UPS Pulse of the Online Shopper, Executive Summary, 2017. Andrew Perrin, “10 facts about smartphones as the iPhone turns 10,” Pew Research, June 28, 2017, <http://www.pewresearch.org/fact-tank/2017/06/28/10-facts-about-smartphones/>.

Source: Andrew Perrin, “10 facts about smartphones as the iPhone turns 10,” Pew Research, June 28, 2017, <http://www.pewresearch.org/fact-tank/2017/06/28/10-facts-about-smartphones/>.

An outer-borough fulfillment center

The surge in competition among retailers to deliver goods fast has contributed to the need for more warehouse facilities—something that has almost vanished from the urban landscape over the past few decades, as older warehouse facilities have been torn down or repurposed. Now, developers are scrambling to satisfy the need for modern retail fulfillment centers based in the urban core that provide customer value over and above the traditional inventory warehousing needs.

For example, in downtown Chicago, a real estate firm is converting a 3.8 million-square-foot parking garage under Millennium Park into last-mile logistics facilities for retailers. The site is at the center of the city and a population of 2.7 million people, just a few blocks from Chicago's popular Magnificent Mile shopping district.¹⁵ Amazon is running delivery operations out of tents pitched on vacant land: Independent drivers working through a smartphone app called Amazon Flex use their own vehicles, choose their shifts, and schedule their own pickups.

“There has been no need for urban warehouses since the Industrial Age. What’s interesting is that because of the confluence of factors—the demographic trend to live in cities, the smartphone, shorter delivery time frame requirements, and the advent of a shared services new economy, which focuses on capacity utilization to drive down costs—has created a need for a total new sector in real estate, which is the urban warehouse,” says Andrew Chung, founder of Innovo Property Group, which is breaking ground on a modern urban warehouse in the Bronx. “In addition to addressing shorter delivery times, the facility can also accommodate multiple needs for the retailer, serving as an expanded back room to allow for more frequent store replenishment.”



Changing economics of the urban fulfillment center

Until recently, the conventional wisdom held that it was more economical to concentrate inventory in a central hub-with-spokes reaching out. That truism no longer holds: Given rapidly changing consumer expectations, the reality that same-day availability influences shopping decisions and the fact that large metropolitan cities are at the vanguard of the surge in e-commerce, large fulfillment centers located outside the city core, or in other parts of the United States, are typically no longer viable if retailers are to meet the evolving demands of customers (see “**Case study: A Bronx-based urban fulfillment center**”).

Case study:

A Bronx-based urban fulfillment center

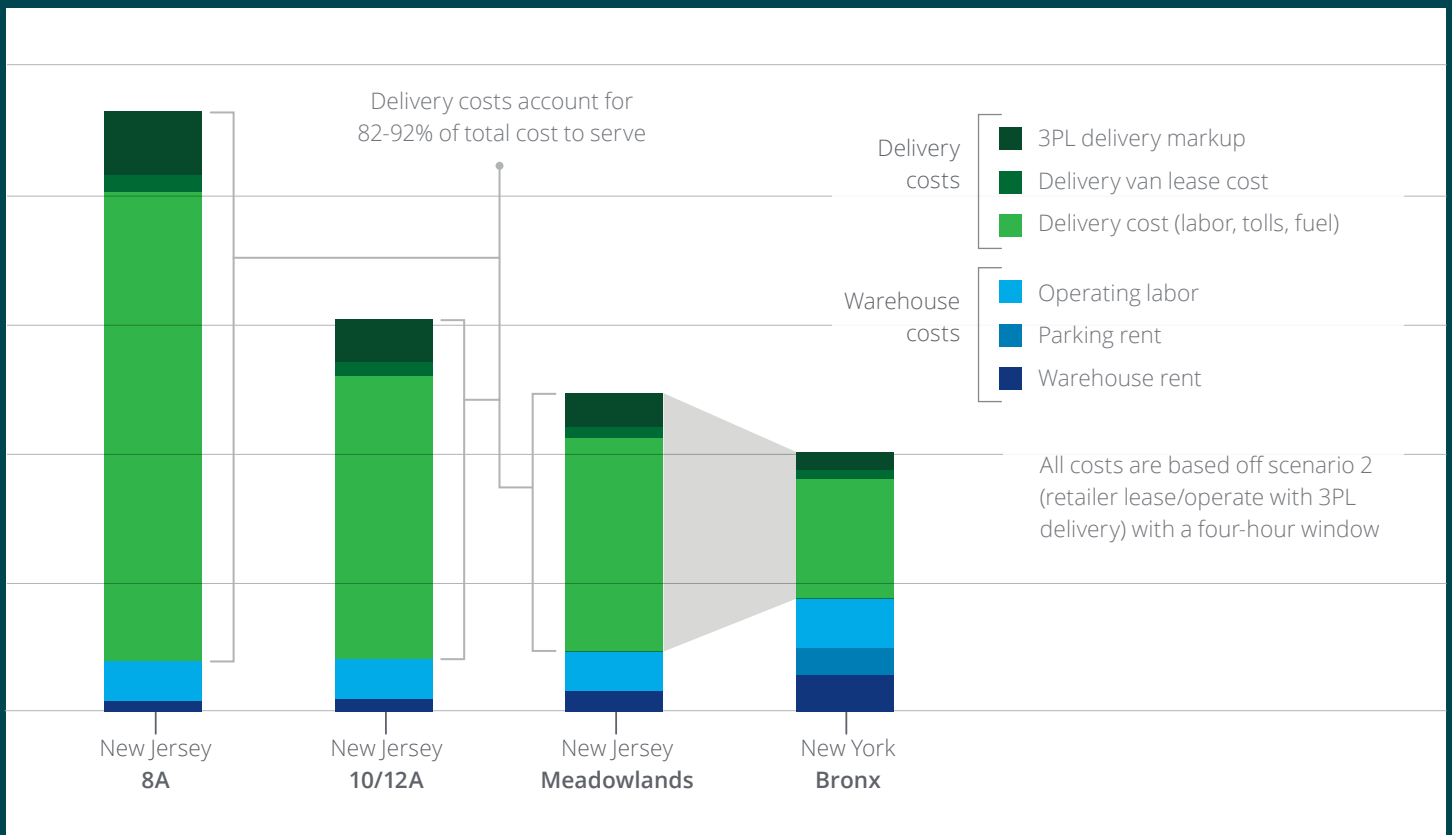
“Aren’t the costs of having an urban fulfillment center in the Bronx much higher than outside of New York City?”

Retail clients have told us that while they may see the value of having a fulfillment center located in the city, they believe that the costs of having one are prohibitive. That thinking led us to do some research of our own. We did a series of studies of the New York City market to understand the demographics and income while uncovering neighborhoods where same-day delivery and high-spend e-commerce consumers are concentrated currently. Then we analyzed

the economics of providing same-day delivery from a location in the city versus a distribution center in New Jersey.

What we discovered was interesting: We found that while real estate and labor is more expensive in the Bronx (as opposed to outside the city), when considering the last-mile delivery costs, the total cost to serve is less, and its competitive advantage to service from a fulfillment center in the

city increases as the delivery commitment window reduces from same day to hours. It is at least 22 percent more cost-effective to serve the same multibillion-dollar e-commerce demand in NYC out of the Bronx versus other New Jersey locations due to higher transportation costs from locations outside the city after considering the cost of getting in and out of the city.

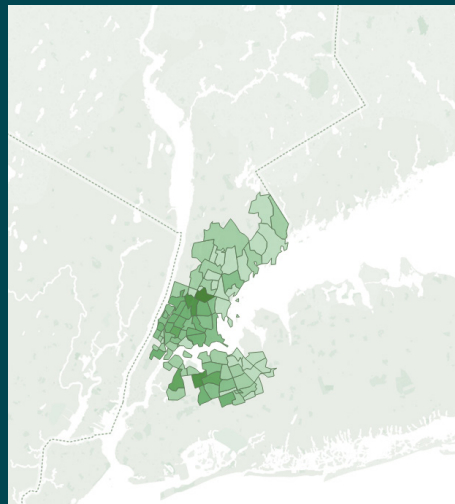


In addition, an urban warehouse can enable a portfolio of services as an extended back room:

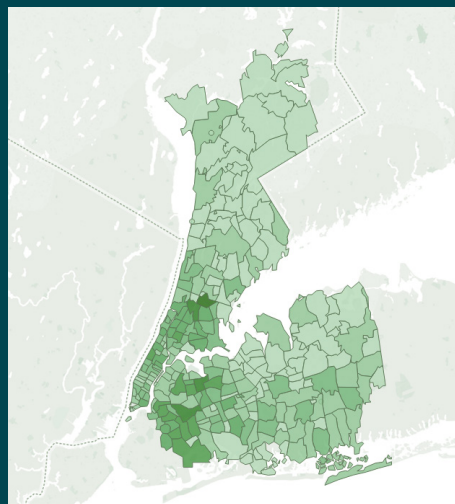
- Inventory close to the consumer, which allows multi-hour delivery capability throughout the day and results in higher sell-through
- E-commerce order fulfillment, which allows store employees to focus on in-store customer experience rather than BOPIS (buy online, pick up in store) orders
- Daily or intraday store replenishment, which provides right inventory at the right time and results in reduced stockouts
- Pooled inventory storage, which results in reduced store safety stock
- Dedicated area and trained labor for product customization/personalization
- Store returns consolidation and processing

Moreover, we expect demand to grow, particularly as new development spreads to other areas of the city and the Millennial cohort grows. For example, an urban warehouse based in the Bronx has the capability of reaching more than 8 million people out of the target market of 10 million within 30 minutes. And about 90 percent of the most populated neighborhoods can be reached within 60 minutes.

Coverage in 30 minutes



Coverage in 60 minutes





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The role of technology in driving same-day delivery

Geography alone does not tell the whole story. Rapid technology advances have enabled the urban logistics model. Thanks to the rapid convergence of the automotive, communications, and tech industries, a robust ecosystem has sprung up around logistics and fulfillment. The ecosystem is wrapped around an expanding shared-services economy based on capacity utilization that is making same-day delivery and multi-hour fulfillment possible. It is the same ecosystem that has given rise to Uber and Airbnb, which have disrupted the taxi and hotel industries. Technology-based crowdsourcing networks consisting of independent, local contractors capable of doing same-day deliveries are disrupting the old ways.

Moreover, telematics technology is advancing, particularly as new delivery startups enter the last-mile logistics services market. Software is expected to represent \$8.2 billion of the total telematics market (which is expected to exceed \$10 billion in 2026).¹⁶ Companies like Deliv, Homer, and Bringg combine cutting-edge technology, route optimization, and operational expertise for businesses looking to leapfrog and compete with Amazon's same-day shipping service.

The new startups are often also providing greater visibility throughout the entire process to the consumer and the retailer—enabling consumers to participate in the journey of the item, plan accordingly, and make changes when necessary, and enabling retailers to manage orders and inventory efficiently.

Call to action

It's important for retailers to strategize and think ahead: Thinking about the next quarter isn't enough. In a relatively short space of time, consumer delivery expectations have risen.

To compete in the urban landscape and to have a presence in an urban market such as New York City, retailers should solve the last piece of the e-commerce triangle: last-mile delivery. It means looking at the supply chain, understanding how it should operate as the mobile consumer evolves, and figuring out how to fulfill their quest for "How fast can I get it?"

Looking forward, retailers should consider urban fulfillment from a total cost perspective. While now it may appear expensive to get a mini hub or a distribution center in an urban area, providing next-day or two-day delivery from a regional or national hub located hundreds of miles away isn't likely sustainable long term because of increasing parcel rates and consumer demands that are changing around delivery expectations. Longer term, the total cost to deliver can be lower with a node in an urban market.

Moreover, the value of the local urban fulfillment center goes beyond improving quality of service for customers: Currently, out-of-stock inventory leads to retailer losses of more than \$144 billion annually.¹⁷ Moving the fulfillment center closer to the consumer allows retailers to create greater efficiencies: Same-day delivery to stores in smaller vehicles that can be driven without a commercial driver's license (CDL) can enable stores to replenish high-volume SKUs, allowing them to shift inventory and removing the need for backroom storage. Through this approach, stores can be utilized to create experiences for consumers and build brand loyalty.

The time to act is now: Retailers should adapt and keep pace with the industry leaders. They should conduct their own due diligence to understand the benefits to their supply chain and customer experience based on their inventory stocking and replenishment strategy, SKU assortment, distribution network, and retail and direct-to-consumer fulfillment strategy. By establishing urban nodes, retailers can move merchandise closer to customers, capitalizing on population density. In addition, by adopting a shared-services model and leveraging a crowdsourced labor pool of local nonprofessional couriers connected via mobile to deliver products to the consumer, retailers can shift supply-chain dynamics and drive down the costs of same-day and multi-hour delivery.

Endnotes

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