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Executive Summary

Same-day delivery once meant bicycle couriers bringing important documents from Point A to Point B. However, the same-day delivery market has fundamentally transformed in recent years. Consumers can now place an online order for groceries, medicine, electronics, and any number of other goods for delivery that day. This is partly due to a rise of crowdsourced delivery platforms that connect independent drivers with customers placing orders. If same-day delivery grows at or above the current rapid pace (up to 50 percent annually), it could disrupt last-mile delivery as we know it. This could have tremendous implications for the U.S. Postal Service and other traditional carriers.

Yet, same-day delivery’s current volumes do not appear to be a significant threat to the Postal Service’s own parcels volume at this time. We conducted research and estimated that same-day delivery of merchandise and groceries to consumers represented 249 million packages in 2018, which is only about 2 percent of all domestic parcel deliveries. The market is dominated by crowdsourced delivery companies, and major online retailers have started to acquire or develop their same-day delivery capabilities.

How large the same-day segment will become remains uncertain. In fact, consumers are not yet fully embracing same-day delivery. For now, it is largely a niche market that appeals mostly to urban Millennials. We recently conducted a consumer survey which found that relatively few Americans have ever used same-day delivery. Although consumers are more open to choosing same-day delivery for urgent needs like medication, many prefer cheaper alternatives, such as in-store pickup of online orders.

The most critical observation from our survey is that many consumers are simply unwilling to pay for same-day delivery at any price — even when the fee is extremely low.

It is not solely lackluster consumer enthusiasm or awareness of same-day delivery that makes its future growth uncertain. For retailers, the logistical requirements of same-day delivery are often complex and expensive. In addition, many same-day delivery providers have built a business model that may be unsustainable, losing money with each delivery. Early same-day efforts from the Postal Service, whose delivery network is not optimized for same-day delivery, were not successful. However, this is a fluid market, and the Postal Service should continue to monitor its developments in case it develops faster, or in different ways, than currently anticipated.

Highlights

Although it is a rapidly growing market, same-day delivery of merchandise and groceries to consumers remains relatively small — 249 million packages in 2018, which was only 2 percent of the total domestic parcels market.

Beyond a core of enthused urban Millennials, many consumers are unwilling to pay for same-day delivery at any price. If they are interested at all, it is mostly for urgent needs like medications or groceries.

The business model used by some major same-day delivery providers may be unsustainable because it loses money with each delivery.

There are indications that next-day delivery will be a more critical segment than same-day delivery. That would be consistent with the Postal Service’s established role as an important provider of next-day delivery through offerings like Parcel Select Destination Delivery Unit (DDU).
That said, there is an emerging focus on next-day delivery service as a potential good balance between low price and fast delivery. Some major retailers have introduced plans to shore up their next-day delivery options, at times even promising to offer the service for free. If next-day delivery becomes the option that reshapes future consumer preferences rather than same-day delivery, this would more closely align with the strengths of traditional carriers — especially the Postal Service.

In fact, the Postal Service’s network is well-suited for next-day delivery. The Postal Service is already a major provider of these services; in fiscal year (FY) 2018 alone, its Parcel Select DDU service moved [number] packages, which was [percentage] greater than in FY 2012. At a time when competing for every single dollar of revenue is so critically important, the USPS must strive to maintain its ability to quickly and effectively offer the services its customers demand, both now and in the future.
Observations

Introduction

There was a time when “same-day” delivery — the delivery of physical goods on the day they are ordered — evoked images of bicycle messengers carrying documents through the streets of Manhattan. In the past few years, crowdsourced delivery — "Uber"-like platforms coordinating independent drivers — has radically transformed this landscape. Amazon, Walmart, Target, and crowdsourced delivery startups now offer same-day delivery of groceries and merchandise in an increasing number of metropolitan areas.

In this paper, we seek to thoroughly assess current customer interest in same-day delivery products. We present a snapshot of the status and size of the same-day delivery market, and then discuss the hurdles to and drivers of its future growth. We unveil the results of our comprehensive survey of more than 2,500 18-to-75-year-old consumers from across the nation, who detail their experiences with and perceptions of same-day delivery service. Finally, we draw conclusions regarding the potential value of same-day delivery to USPS and its customers.

A Snapshot of the Same-Day Delivery Market

While the market for same-day ground delivery of groceries and merchandise to residential customers — referred to here as same-day business-to-consumer (B2C) delivery — is fast-growing, it is still largely a niche market dominated by startup delivery companies.

A Small But Fast-Growing Service

To determine the size of the same-day delivery market and analyze its competitive environment, we hired the market research firm Colography and used results from our own consumer survey. This market represented a total of 249 million packages in 2018. Ninety-one percent of this total was merchandise (227 million) and 9 percent groceries (22 million). The small number of same-day grocery deliveries reflects the fact that online grocery shopping is still not widespread in the United States: it represents less than 4 percent of the total U.S. grocery market by some estimates.

The same-day B2C market has grown by a very healthy 50 percent a year between 2016 and 2018. However, same-day B2C delivery is still a niche market, which in 2018 did not exceed 2 percent of total U.S. domestic air and ground volumes.

A Fluid, Competitive Environment

In the nascent same-day delivery B2C marketplace, a handful of nationwide crowdsourced delivery providers compete on price, type of service, and geographical coverage. Traditional players, such as UPS, have thus far taken a back seat to these innovators.

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2 The increase from 2016 to 2018 was 226 percent, according to Rakuten Intelligence, a research firm that operates a panel of several million U.S. online shoppers. Kenneth Cassar, “From the Warehouse to the Doorstep: Quantifying the Consumer Fulfillment Experience,” Presentation to the Home Delivery World Conference, Philadelphia, PA, April 4, 2019.
3 The increase from 2016 to 2018 was 226 percent, according to Rakuten Intelligence, a research firm that operates a panel of several million U.S. online shoppers. Kenneth Cassar, “From the Warehouse to the Doorstep: Quantifying the Consumer Fulfillment Experience,” Presentation to the Home Delivery World Conference, Philadelphia, PA, April 4, 2019.
4 The small number of same-day delivery market, which carried 159 million pieces in 2018 according to Colography and consists primarily of intra-city messengers delivering urgent business, legal, and financial documents; c) the same-day business-to-business (B2B) merchandise market — 275 million pieces in 2018 according to Colography — which consists of auto parts, medical goods, electrical components, and other goods; d) finally, the meal delivery segment — like ordering a pizza — because restaurant meals, strictly-speaking, are not packages.
5 To inform its analysis, Colography did a survey of U.S. business parcel shippers.
6 The groceries market segment estimate is based on Colography analysis, while the source for the merchandise segment is the OIG customers’ survey. See Appendix A for details on our methodology.
7 For the purposes of this paper the OIG defines this segment as e-commerce packages weighing 70 pounds or less delivered to households on the same day that the order is placed. This definition does not cover other same-day services, including a) express air, which business customers use to ship high-value items by air for delivery the same day or the next morning; b) the same-day ground document market, which carried 159 million pieces in 2018 according to Colography and consists primarily of intra-city messengers delivering urgent business, legal, and financial documents; c) the same-day business-to-business (B2B) merchandise market — 275 million pieces in 2018 according to Colography — which consists of auto parts, medical goods, electrical components, and other goods; d) finally, the meal delivery segment — like ordering a pizza — because restaurant meals, strictly-speaking, are not packages.
Competing Business Models

The same-day delivery market covers a variety of services differentiated in terms of delivery speed, type of products delivered, and business models. Most national same-day carriers offer a choice of delivery options: instant delivery, within a couple of hours of ordering, or later in the day, often within a convenient, customer-selected time window. Some carriers, like Instacart, deliver mostly groceries and household essentials while others, like Roadie, deliver just about anything. In addition, there are premium same-day services that serve specific niches, such as the medical/pharmaceutical market segment, which may require drivers certified in Health Insurance Portability and Accountability Act (HIPAA) compliance. Walmart’s concierge same-day/nex-day service, Jetblack, offers a personal shopping service via text message.

There are two main types of business models that companies use to provide same-day service to customers. The first is a “third-party provider” model, where customers buy directly from the retailer’s website or app and select a “same-day” option in their virtual shopping cart. An independent same-day delivery company, which has signed a delivery agreement with the retailer, handles delivery. Retailers offering this option typically have delivery agreements with one or more third-party same-day delivery companies — as many as seven, in the case of Walmart. Roadie and Deliv are examples of third-party providers.

The second type of same-day business model, the “same-day marketplace,” allows a customer to make a purchase through the same-day delivery company’s app or website, selecting from a menu of online merchants, such as local grocers. The provider then crowdsources the purchase to be picked up and delivered to the customer. An example is Shipt, which delivers groceries for its parent company Target but also for other chains like CVS. Shipt and Instacart employ shoppers who pick the groceries in-store and deliver them to the customer’s home. There has also been a recent trend towards vertical integration — for example, Amazon and Target (through its acquisition of Shipt) have both developed same-day delivery capabilities.

Crowdsourced Delivery Companies Dominate the Market

The first generation of same-day delivery startups emerged at the turn of the century, well before the smartphone was ubiquitous. However, due to the combined effects of the dot-com bubble bursting and ineffective business models, most of them quickly disappeared. As shown in Figure 1, many national same-day B2C companies that exist today were created between 2011 and 2015. They are part of a second generation of delivery startups mainly funded by venture capital. The two exceptions in the table are Amazon Flex and 1-800 Courier, a “traditional” messenger company that has developed a same-day package delivery business.
These companies took advantage of the availability of optimization technologies with platforms that quickly connect independent drivers to recipients.\textsuperscript{14} As they mostly use contracted drivers paid by the hour in lieu of salaried drivers operating company-owned vehicles, they are categorized as “crowdsourced” delivery companies.\textsuperscript{15}

Over time, same-day delivery’s geographical footprint has rapidly expanded. All seven national same-day delivery providers listed in Figure 1 operate in most major U.S. cities. As of mid-2019, Roadie and Instacart appeared to have the largest footprint, serving 89 and 80 percent of U.S. households, respectively.\textsuperscript{16} In the case of Roadie, this high percentage indicates that the service is available not only to urban customers but also to some of the nearly 20 percent of Americans

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**FIGURE 1: SELECTION OF NATIONAL SAME-DAY DELIVERY COMPANIES**

<table>
<thead>
<tr>
<th>Same-day carrier</th>
<th>Created</th>
<th>Main services</th>
<th>Product forms</th>
<th>Operations</th>
<th>Business model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Instant</td>
<td>Same-day</td>
<td>Groceries/household essentials</td>
<td>Merchandise</td>
</tr>
<tr>
<td>1-800 Courier</td>
<td>1997</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Postmates</td>
<td>2011</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Deliv</td>
<td>2012</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Instacart</td>
<td>2012</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Shipt™</td>
<td>2014</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Amazon Flex</td>
<td>2015</td>
<td>✔️ (Prime Now)</td>
<td>✔️ (Prime)</td>
<td>✔️ (Prime Now)</td>
<td>✔️ (Prime)</td>
</tr>
<tr>
<td>Roadie</td>
<td>2015</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

Source: OIG analysis

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\textsuperscript{14} Optimization technologies include geolocation technologies, advanced analytics, and machine learning that help coordinate and assign pickup and delivery orders to drivers, and calculate the shortest delivery routes. For more information, see U.S. Postal Service Office of Inspector General, Coordination and Optimization Technologies and Postal Applications, Report Number RARC-WP-18-014, September 6, 2018, https://www.uspsoig.gov/document/coordination-and-optimization-technologies-and-postal-applications.

\textsuperscript{15} Unlike other companies listed in Figure 1, 1-800 Courier has salaried drivers.

\textsuperscript{16} Information based on OIG desk research on the seven companies listed in Figure 1.
who live in rural areas. Roadie claims it has “the nation’s largest local same-day footprint” and that it serves urban cities and rural towns nationwide.

**Traditional Delivery Providers**

Compared to the newer crowdsourced companies, FedEx and UPS are taking a cautious approach to the same-day delivery B2C market:

- FedEx is not directly active in this market. However, it is present in the high-end, same-day delivery B2B segment for high value products such as air-delayed baggage or medical supplies (FedEx SameDay City). In 2018, it introduced Extra Hours service, which allows for evening pickup of e-commerce orders for next-day local delivery. Extra Hours customers include Best Buy, AutoZone and Target.

- UPS has made investments in two national same-day players — Roadie in 2015 and Deliv in 2016 ($28 million).

As is often the case with emerging markets, the competitive environment is fluid. Some early crowdsourced companies, such as Uber’s UberRUSH and Shyp, exited the same-day market in 2018. In 2019, DHL quietly suspended its Parcel Metro service, which was launched a year earlier in five major urban areas. USPS made some forays into same-day delivery (such as Metro Post Same Day service, discussed later in this paper). In the absence of sufficient demand for these products, however, USPS found — as did others, including those companies noted above — that providing same-day service is difficult and costly. Our survey and this report are an effort to gauge whether consumer demand for same-day products has appreciably changed.

**Consumers are Not Yet Fully Embracing Same-Day Delivery**

In July 2018, we conducted a customer survey seeking insights into online shoppers’ use of same-day delivery as well as their attitudes and preferences regarding the service (see Appendix A). In general, the survey found that many consumers have not yet embraced same-day delivery, presenting a significant obstacle to future growth for this product.

**Few Americans, Mostly Young and Urban, Use Same-Day**

While more than 80 percent of those surveyed report having made at least one online purchase in their lifetime, just one-in-five online respondents have ever purchased non-food items for same-day delivery. See Figure 2 for other details on consumers’ use of same-day delivery.

Furthermore, results from the customer survey showed that this data varies significantly between urban and rural customers. As of 2018, 9 percent of rural customers and 29 percent of urban customers had ever purchased non-food items for same-day delivery. While these numbers could partially reflect consumers’ interest in same-day delivery or the affordability of the service to them, it is more likely due to rural consumers’ lack of access to same-day delivery. Indeed, as noted in the first section, same-day companies have only recently started to serve some rural areas.

Same-day delivery has made the most inroads with younger consumers. Millennials’ same-day deliveries as a percentage of total deliveries was almost twice that of baby boomers, 7.7 percent versus 4.1 percent. The survey results align with a recent Accenture study on younger generations’ preferences on delivery speed, which found that Generation Z (defined by Accenture for purposes of its survey as those aged 18 through 20) was slightly more willing to pay for faster delivery.

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20 The service mainly relied on a “virtual” delivery network of local and regional contract couriers as well as crowdsourced providers. In addition, it used DHL warehouses to sort and consolidate orders.
22 Urban residents also report choosing same-day delivery three times more often in the past year than their rural counterparts (9 percent of orders versus 3 percent).
same-day delivery than older Millennials. For example, 58 percent of Generation Z respondents to Accenture’s study said that they would pay at least $5 for one-hour delivery versus 48 percent of older Millennials.

![Image of Figure 2: Percent of Consumers Who Have Ordered Items Online for Same-Day Delivery](image)

**FIGURE 2: PERCENT OF CONSUMERS WHO HAVE ORDERED ITEMS ONLINE FOR SAME-DAY DELIVERY**

Consumers most frequently purchase groceries and electronics with same-day delivery.

- **Groceries or other food** (not for immediate consumption): 9%
- **Electronics or media**: 9%
- **Fashion, beauty, or personal care**: 7%
- **Recreational items**: 6%
- **Household or office goods**: 6%
- **Medicines / medical goods**: 5%

Source: OIG consumer survey (n = 1,539)

**Urgent Needs and Low Prices Drive Same-Day Delivery Demand**

Today, U.S. customers get “free” shipping on 92 percent of their domestic e-commerce orders. This raises the question of what will entice consumers to pay for same-day delivery. To explore, we asked consumers what drives them to choose same-day delivery for their online orders. Seventy-six percent of respondents indicated they choose same-day delivery because it is offered for free, while a similar percentage simply likes to get their items as soon as possible. Figure 3 shows additional reasons why consumers choose same-day delivery.

![Image of Figure 3: Reasons for Selecting Same-Day Delivery](image)

**FIGURE 3: REASONS FOR SELECTING SAME-DAY DELIVERY**

Three-quarters of customers say they choose same-day delivery when it is free or because they like getting things ASAP.

- **Offered free**: 76%
- **Like getting items ASAP**: 75%
- **Wanted food or drink quickly**: 67%
- **Needed item quickly (not gift/health)**: 66%
- **Gift needed quickly**: 64%
- **Reasonable price (not free)**: 64%
- **Free through subscription service**: 61%
- **Needed for a health situation**: 58%
- **Inexpensive via subscription service**: 57%

Source: OIG consumer survey (Among same-day purchasers, n = 1,062)

Our survey also asked consumers what might motivate them to order same-day delivery more often in the future. The top responses, consistent with those to the previous question, were “if I have an immediate need for an item” and “lower delivery prices.” Survey respondents also said that they are interested in being able to schedule deliveries for specific times (51 percent) and in receiving orders at any given address (40 percent). This indicates that some consumers may associate a lack of convenience with same-day delivery. Figure 4 shows additional responses.
FIGURE 4: WHAT COULD PROMPT CONSUMERS TO CHOOSE SAME-DAY DELIVERY MORE OFTEN?
Six out of ten customers would choose same-day more often if they had urgent needs or delivery was cheaper.

Which of the following would induce you to select same-day shipping more often?

- Immediate need for an item: 61%
- Lower delivery price: 59%
- Able to choose delivery time: 51%
- Joined subscription service with lower delivery price: 48%
- Flexible “where you are” delivery: 40%

Source: OIG online consumer survey (n = 2,572)

The preference for price over speed — absent an urgent need — is confirmed by several other studies. Research from Pitney Bowes suggests that when delivery is free, about 95 percent of customers are satisfied with a two-day delivery of their parcels, and more than 80 percent will accept delivery within three to four days. A 2018 study by global consulting firm AlixPartners confirms that the maximum acceptable delivery time for Amazon Prime customers was 3.8 days, on average.

Many Consumers Are Unwilling to Pay for Same-Day Delivery, Even at Minimal Prices

Our consumer survey revealed some interesting insights into people’s willingness to pay for same-day delivery. The lower the same-day delivery fee, the more often customers would be willing to pay it. However, there is a caveat — their willingness to pay is not only tied to lower fees but also to what they are buying. Consumers are more willing to pay same-day delivery fees for food or medicine compared to other types of goods, regardless of price point. For example, at a $6.99 delivery price, respondents estimated that they would use same-day delivery for 30 percent of their orders of food and medicine, but for only 18 percent of other types of orders (Figure 5). Moreover, the generational gap previously discussed also emerged in respondents’ willingness to pay. At the same $6.99 delivery price, Millennials would choose same-day delivery for 28 percent of their non-food, non-medicine orders. For baby boomers, however, it was only 11 percent.

FIGURE 5: CONSUMERS’ WILLINGNESS TO PAY FOR SAME-DAY DELIVERY AT DIFFERENT PRICE POINTS

At all price points, customers are more willing to pay for same-day delivery if it involves food or medicine.

Source: OIG online consumer survey (Selected respondents, n = 1,300)

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28 The effect was similarly pronounced at lower price levels: Millennials stated that they were willing to pay $1.99 for nearly half (44 percent) of their online orders, as compared to 21 percent of orders for baby boomers.
The most surprising result of the survey also involved consumers’ willingness to pay for same-day delivery — or, more precisely, their unwillingness to pay. At all price points, approximately half of all respondents reported that they would never be willing to pay for the same-day delivery of non-food, non-medicine items, as shown in Figure 6. The consumer attitudes that we detected through our survey could have critical implications for the future of same-day delivery. For one thing, our observations may indicate that once the novelty of same-day delivery has worn off, low delivery fees alone might not guarantee increased growth in demand.

Many Customers Still Favor Visiting Stores Over Same-Day Delivery

One of the main alternatives to same-day home delivery may be obvious — going to a store to buy an item instead of getting it online. A combination of the two — ordering an item online for in-store pickup — is becoming increasingly popular and represented one fourth of large retailers’ online orders in 2018.

According to Accenture, at least 40 percent of U.S. retailers offer in-store pickup. This cheaper alternative to same-day delivery allows customers to pick up their packages within 2.5 hours of order, on average. For example, Walmart has acquired automated Pickup Towers for about 1,600 of its stores (as shown in Figure 7). Target and others have installed counters dedicated to pickups and can also bring pre-ordered items to customers’ cars in the parking lot.

Our survey results confirm that customers value in-store pickup. In fact, two-thirds of respondents said that even if they shop online, they prefer to pick up their orders in store (referred to as “click and collect”). In addition, 80 percent prefer traditional brick and-mortar retail shopping over

FIGURE 7: WALMART PICKUP TOWERS ALLOW CUSTOMERS TO RETRIEVE PACKAGES QUICKLY

Source: Walmart.

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29 Our results slightly differ from the conclusions of a McKinsey study, which showed that more than half of U.S. consumers would generally pay extra for same-day delivery. For more information, see McKinsey, Parcel Delivery – The Future of Last Mile, September 2016, https://www.mckinsey.com/~/media/mckinsey/industries/travel%20transport%20and%20logistics/our%20insights/how%20customer%20demands%20are%20reshaping%20last%20mile%20delivery/parcel_delivery_the_future_of_last_mile.ashx, p.12.
30 Cassar, “From the Warehouse to the Doorstep.”
same-day delivery. Figure 8 shows the primary reasons consumers do not use same-day delivery more often.

Overall, the responses to our survey suggest that many consumers might not yet be ready to embrace same-day delivery. If they have an urgent need for something like food or medicine, customers might be willing to pay to get it same day — at least up to a certain point, depending on the delivery fee. But for other items, delivery options other than same-day might provide consumers with a better value while maintaining acceptable delivery speed.

FIGURE 8: REASONS FOR NOT CHOOSING SAME-DAY DELIVERY MORE OFTEN

High delivery fees and a preference for in-store shopping are the top reasons customers do not use same-day delivery more often.

<table>
<thead>
<tr>
<th>Reason</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too expensive</td>
<td>81%</td>
</tr>
<tr>
<td>Go to store instead</td>
<td>80%</td>
</tr>
<tr>
<td>Do not usually need items quickly</td>
<td>78%</td>
</tr>
<tr>
<td>“Click and collect” instead</td>
<td>67%</td>
</tr>
<tr>
<td>Not home to receive items</td>
<td>45%</td>
</tr>
<tr>
<td>Do not usually shop online</td>
<td>35%</td>
</tr>
<tr>
<td>Do not like ordering online</td>
<td>32%</td>
</tr>
<tr>
<td>Not available where I shop</td>
<td>21%</td>
</tr>
<tr>
<td>Not available where I live</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: OIG online consumer survey (Among online purchasers, n = 2,268)

An Uncertain Future for Businesses Offering Same-Day

It is not clear how the same-day B2C market will evolve in the coming years. The main uncertainties include pricing strategies and retailers’ willingness to put in place supply chains enabling the service. Last-mile innovations, industry consolidation, and environmental regulations may also come into play.

The Logistical Requirements of Same-Day Are Complex and Expensive

While same-day delivery companies are, for the most part, “asset-free,” retailers fulfilling orders for same-day delivery must often make large investments. This is because orders must be prepared and shipped from a warehouse or retail store located close to the recipient. DHL has estimated that making same-day delivery available to 90 percent of the U.S. population required up to 100 distribution centers from which delivery companies pick up orders.33 Indeed, some of today’s largest retailers and merchants have networks in place that enable same-day delivery across a vast territory.

- As part of its large distribution network (460 facilities), Amazon operates 53 Prime Now distribution centers, 21 pantry and fresh food fulfillment centers, and 12 Whole Foods Market retail distribution centers in the U.S.34

- At the end of 2019, Walmart will ship same-day grocery orders from 1,600 of its 4,600 U.S. locations, twice as many as at the end of 2018. Building such an extensive network is likely out of reach of small and mid-size retailers.35

Same-day fulfillment from distribution centers on a large scale is an extremely complex endeavor. It generally requires not only costly investments in urban warehouses but also cutting-edge order management and warehouse inventory solutions.

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warehouse inventory solutions as well as demand prediction software. These tools are necessary for retailers to accurately determine the number of products needed in each location for fulfilling online orders locally while also trying to keep costly inventories at a minimum. A shortage of product in the wrong areas or excess inventory sitting on shelves for too long can be tremendously costly. In addition, to make fulfillment from stores faster and more effective, large retail chains are investing in “micro-fulfillment centers” in densely populated urban areas. Through a mix of robots and human operators, these facilities are dedicated to customer pickup and same-day delivery.

While these investments are possible for large retailers, smaller shippers and retailers may not be willing or able to follow suit. This is in fact a hotly-debated issue. Speaking at recent industry conferences, experts have advised retailers entering the same-day market. Their views, summarized in a May 2019 Wall Street Journal article, center on the following arguments:

- Retailers that do not fulfill a promise of fast delivery risk losing customers. With a slower, more achievable delivery promise, this risk is minimized.
- A free and reliable three-day delivery or a scheduled delivery in a convenient time slot can usually meet consumers’ expectations without any negative impact on the shipper’s market share.
- According to a Forrester Research analyst, ultra-fast deliveries are “high-cost endeavors” that are expensive to execute and do not necessarily improve a retailer’s profitability.

On the other hand, participants in a July 2019 OIG roundtable discussion argued that same-day delivery was starting to help retailers differentiate from their competition and driving customer loyalty and higher sales. Panelists also noted that technological innovations, such as artificial intelligence (AI), machine learning and retail automation could make same-day delivery a viable option. Smaller retailers wishing to remain competitive will need to take advantage of alternative strategies, such as shared distribution centers.

### Inexpensive Same-Day Delivery May Be Unsustainable

We have previously stated that “retailers are experimenting with same-day delivery, but have not yet found a way to make it economically sustainable.” Several years later, it appears that the profitability of same-day delivery is still questionable.

Same-day delivery is mainly “point-to-point” delivery, in which the driver will typically pick up a few orders, deliver them to individual consumers, and then return to the distribution center or to another store to pick up the next batch of deliveries. As a result, same-day delivery cost per package is quite expensive, at times reaching slightly more than $10. That model is a major departure from traditional ground delivery, in which a driver may deliver 100 packages along a regular, scheduled, or optimized delivery route at a much lower cost per package.

In some cases, same-day delivery companies’ prices reflect these operational challenges. Colography’s analysis of the Atlanta, Georgia market shows that some carriers set prices according to speed, distance, weight, or type of transporting vehicle. As a result, their same-day shipping prices can reach or even exceed $30.

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36 To reduce investment, however, some retailers can in some cases position merchandise in the warehouses of same-day fulfillment companies in select U.S. urban centers. Megan Rose Dickey, “Darkstore Raises $7.5 Million Series A Round for Its Same-day Fulfillment Center,” Tech Crunch, January 29, 2019, https://techcrunch.com/2019/01/29/darkstore-raises-7-5-million-series-a-round-for-its-same-day-fulfillment-center/.


40 Ibid.


42 Capgemini Research Institute, The Last-Mile Delivery Challenge, p.21.
In other cases, however, prices paid by consumers are kept quite low, especially for those who sign up for paid subscription services and therefore receive unlimited “free” same-day shipping on thousands of items.\textsuperscript{43} A 2019 Capgemini study found that grocers that deliver same-day incurred a $2 loss on average for every order delivered.\textsuperscript{44}

One way for same-day delivery companies to achieve profitability is to generate additional revenue on top of shipping fees. For example, Instacart receives grocery store partner fees and placement or promotional fees paid by manufacturers. It also collects service fees and revenue from markups on store prices.\textsuperscript{45} Instacart is not alone in this practice of charging more than in-store prices. For example, Kroger customers can expect to pay about 15 percent more using Shipt than they would purchasing in the store themselves.\textsuperscript{46}

There is no evidence, however, that the same-day B2C companies are making a profit. As of mid-2019, the main providers were still privately-held and, therefore, did not publish financial data. In the adjacent restaurant delivery business, crowdsourced delivery company Grubhub, the market leader, earned $78.5 million in 2018 delivering 159 million orders from 105,000 restaurants across 2,000 U.S. cities.\textsuperscript{47} This may indicate that if the market continues to grow quickly, some same-day B2C delivery companies may also reach a level of delivery density that will allow them to generate profits. That said, the scarce information available seems to indicate this is not yet the case. In 2018, Postmates stated that it was profitable only “on a contribution margin basis” — the difference between sales revenue and variable costs — in 90 percent of its markets.\textsuperscript{48}

It is not clear whether such below-cost pricing strategies are sustainable. Large retailers and e-commerce merchants might be able to sustain a strategy like this provided they continue to grow sales or market share. For example, Macy’s has decided to test free same-day delivery as of October 2019: the company, instead of its customers, incurs the $8 delivery fees.\textsuperscript{49} Alternatively, these companies may decide to raise their prices to improve margins or to incentivize customers to choose less-costly alternatives to same-day delivery.

**Last-Mile Delivery Costs May Decrease, But the Future is Uncertain**

The evolution of delivery costs will partly determine same-day delivery providers’ future profitability. Specific factors impacting their last-mile costs will include:

**Speed of implementation of last-mile innovations.** FedEx, Amazon, Postmates, Kroger, and other companies are testing the viability of different types of autonomous delivery robots in U.S. cities.\textsuperscript{50} In fact, McKinsey has predicted that autonomous vehicles could reduce the cost of urban deliveries by up to

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\textsuperscript{44} The average delivery fee was $8 but the average delivery cost $10. Capgemini also developed a model that shows that retailers’ profitability could decrease by 26 percent from 2018 to 2021 as the share of home deliveries continues to increase compared to less costly in-store purchases and store pickups. For more information, see Capgemini Research Institute, *The Last-mile Delivery Challenge*, pp.21-23.

\textsuperscript{45} Instacart, “Payments,” https://www.instacart.com/help/section/200761924#115005645866.

\textsuperscript{46} “How are your prices determined?”, https://help.shipt.com/pricing/how-are-your-prices-determined.


\textsuperscript{49} Macy’s was planning to make free same-day delivery available on orders of $75 and above in 30 markets nationwide. Daphne Howland, “Macy’s to Make Same-day Delivery Free in 30 Markets, for a Limited Time,” Retail Dive, September 19, 2019, https://www.retaildive.com/news/macy-s-to-make-same-day-delivery-free-in-30-markets-for-a-limited-time/563279/.

40 percent. New business models may also help decrease delivery costs over time.

**Degree of last-mile market consolidation.** Carriers unable to reach profitability might disappear or merge with other players, which would lead to a consolidation of the same-day market around a small number of large same-day delivery players. This could be the result of mergers, takeovers, or other companies’ decisions to leave the market. Consolidation could lead to higher delivery density and, therefore, lower costs per delivery.

**Impact of cities’ environmental policies.** Upcoming environmental regulations could affect same-day delivery’s growth. On one hand, congestion taxes or curbside delivery bans during peak hours, as already considered by New York City, could make same-day delivery more expensive. On the other hand, large cities may develop initiatives to make deliveries more effective and less costly. Pilots of new approaches to the use of loading areas, traffic control, and street design have already been implemented in some areas. Trials conducted in New York City and abroad also show that shifting deliveries from daytime to “off hours” (7 p.m. to 6 a.m.) not only reduces delivery costs by 30 to 55 percent but also cuts CO₂ emissions by up to 55 percent.

**The Postal Service Should Continue to Monitor Same-Day Developments**

So far, the Postal Service has been a minor player in B2C same-day delivery. USPS took some steps in that market starting with its Metro Post Same Day pilot program (see inset). However, the pilot program attracted only six small retailers and generated low volumes.

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52 One example is U.S. startup Boxbot, which is piloting automated local neighborhood hubs with a fleet of delivery vehicles — including self-driving electronic vehicles — that can be loaded several times throughout the day. The company claims that its model enables lower-cost shipping for next-day and same-day delivery. “Boxbot Launches Last-Mile, Self-Driving Parcel Delivery System,” *Robotics Business Review*, June 7, 2019, https://www.roboticsbusinessreview.com/supply-chain/boxbot-launches-last-mile-self-driving-parcel-delivery-system/.


57 This occurred around the same time that Amazon, after buying Whole Foods, incorporated AmazonFresh into its Prime Now same-day offerings.

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From 2014 to 2017, the Postal Service also conducted “Customized Delivery” pilots of grocery deliveries for the AmazonFresh program in several markets. After the end of the pilot, the Postal Service phased out its remaining deliveries.

Given the uncertainties described above, it would not make sense for the Postal Service to re-focus on same-day delivery at this time. However, that does not mean that it should abandon the idea forever. As discussed, the same-day delivery market is fluid: new models, players, technologies, and growing demand might turn same-day delivery into a profitable venture. Participants in the previously-noted July 2019 OIG roundtable discussion expressed confidence that same-day carriers would eventually reach a critical mass and become profitable.
at least in some cities. (In fact, according to Accenture, Amazon Prime Now same-day service already reaches a high level of “delivery density”: it makes up to 15 deliveries per hour, compared with one to three for competitors.59)

There are strategies that USPS could pursue to create the structure to help make same-day delivery a success. For example, USPS could lease excess capacity in its larger and underutilized facilities to mid-size merchants seeking to move their fulfillment centers closer to large metropolitan areas. This could potentially enable these merchants to offer same-day delivery to more of their customers.60 Similarly, USPS could pursue a “microhub” delivery model, whereby existing delivery networks would be redesigned to establish additional parcel distribution points (or microhubs) from which deliveries would originate.61 If carefully and strategically designed, the microhubs could create additional opportunities for same-day delivery.

The feasibility of these and other strategies will depend largely on future demand for same-day delivery. In a very favorable scenario where B2C same-day delivery grows at 30 percent annually, it would represent 1.5 billion items, or about 8 percent of the total domestic air and ground parcels delivery market by 2025. In other words, same-day service would no longer be a niche product but still would not be a major component of the domestic parcels market.62

In this current context, it behooves the Postal Service to closely monitor developments in the same-day delivery market. If market conditions were to change dramatically, it might even be ideal for the Postal Service to explore potential viable business models that would allow it to re-establish a foothold in same-day delivery, such as those detailed above but possibly also including others, such as partnerships with crowdsourced same-day delivery providers. For now, however, the Postal Service’s existing network is not a natural fit for same-day delivery.

Next-Day Delivery May Be a Better Fit for the Postal Service’s Network

The Postal Service’s delivery network is not optimized for delivering a package the same day an order is placed. When a customer places an order in the morning, the package will in most cases be handed over to the Postal Service after carriers have left the delivery office for that day’s routes. In fact, same-day delivery often requires expensive and parcels-only routes, illustrated by the Postal Service’s early same-day delivery product, Metro Post Same Day.63

Same-day delivery is part of a continuum of delivery speeds available to customers, linked to different price points all along the spectrum. Customers’ preference for free and faster deliveries, as well as the intense competition between Amazon and other retail heavyweights, may lead to the rapid emergence of low-cost next-day delivery as the future driver of the marketplace.

Some major retailers currently offer a range of next-day delivery options. In April 2019, Amazon announced its intent to offer Amazon Prime members free, next-day delivery, which would be even faster than today’s two-day delivery for its members.64 In response, Walmart said it would introduce free, next-day deliveries later in 2019. Orders fulfilled from Walmart’s network of local warehouses will be delivered in areas covering 75 percent of the U.S. population.65 Other large retailers that offer both next-day and same-day delivery options include Target, Walgreens, and CVS.

60 USPS OIG, *Coordination and Optimization Technologies*, p.17. 
61 Id., pp. 15-16. 
62 We assumed that the total air and ground market that Colography estimates at 13.7 billion parcels in 2017 would grow at 5 percent a year. 
63 While the Postal Service could use its current delivery network to deliver packages the same day an order is made, this would only be possible when the shipper and the recipient are both within a reasonable distance from the route — a very limiting factor. USPS OIG, *Coordination and Optimization Technologies*, pp. 12-13.
Through its Parcel Select Destination Delivery Unit (DDU) service, a bulk drop-ship product, Parcel Select DDU service provides for the next-day delivery of packages entered by a critical time — for example, 4 or 5 p.m. — at one of 24,000 delivery offices.66 This service already handles an extraordinarily high volume. In fiscal year (FY) 2018 alone, the Postal Service delivered Parcel Select DDU packages 67 than in FY 2012. Put differently, this service carries about packages than the whole same-day B2C market.

In addition, since 2015 the Postal Service has introduced value-added services, mostly for its large, negotiated service agreement (NSA) shippers.68 Those include:

- Parcel Select DDU Same-Day, 69 For example, if an order is placed in the afternoon, fulfilled and handed over to the Postal Service before early morning, local delivery can take place just a few hours later. In other words, customers can receive their packages only one day after placing an order.
- Parcel Select Destination Sectional Center Facility (DSCF) Next-Day, which allows shippers to enter packages at about 350 larger postal processing facilities from which the Postal Service transports them to delivery offices for delivery the next day.
- “Ship from Store” targets local retailers, which allows for the local next-day delivery of packages to be picked up in the afternoon by a regular Postal Service carrier.70

Although Parcel Select 71 have resulted in Parcel Select volumes recording a 4.5 percent year-on-year decrease for the last quarter of FY 2019 and 2.7 percent decrease for the full fiscal year. Nevertheless, 71 As the marketplace continues to evolve in response to technological innovations and ever-shifting consumer preferences, it is important that USPS remain well-positioned to nimbly and effectively meet these challenges.

66 As shown in the Postal Service’s Delivery Units Acceptance Times database, earliest and latest acceptance times vary significantly across locations. Some delivery units, for example in New York City, start accepting parcels as early as between but can also be set earlier or later. Large shippers and consolidators must schedule and provide advance notification of their drop shipments through the Postal Service’s Facility Access and Shipment Tracking (FAST®) system.
67 U.S. Postal Service, FY 2018 Non-Public Billing Determinants, USPS-FY18-NPI, December 28, 2018. Parcel Select DDU handles ground delivery service for packages entered in bulk, sorted and transported by a shipper, shipping consolidator, or carrier (such as DHL, FedEx, or UPS) to a Postal Service facility close to the recipient, such as a delivery office, for final delivery by the Postal Service. Parcel Select prices reflect the degree of work-sharing these partners do in presorting and entering their parcels at a destination facility located closer to the delivery point. USPS, “Overview — Parcel Select Mail,” https://about.usps.com/postal-bulletin/2007/html/pb22219/kit2_002.html.
68 NSAs are customized contractual agreements between the Postal Service and specific mailers that provide customers special rebates, discounts, or pricing flexibility in return for increased mail volume and revenue growth.
Conclusion

While savvy tech startups, the media, and industry observers are all paying close attention to same-day delivery services, the trend has not yet made inroads with the average American consumer. Although same-day e-commerce orders resulted in about 249 million packages shipped in 2018, it is still largely a niche product. The industry’s problems we noted six years ago — fragile business models and a low customer willingness to pay — have not yet been solved. In fact, the cost of same-day delivery, the growing availability of cheaper alternatives, and shippers’ uncertain level of engagement with same-day delivery could all inhibit its growth potential for the foreseeable future.

However, should same-day delivery remain a niche product mostly appealing to urban Millennials, next-day delivery could instead become the “new normal” for many online orders. As it keeps one eye on the future of same-day delivery, the Postal Service should also continue to focus on next-day delivery. Failing to do so could jeopardize the long-term viability of the Postal Service’s unmatched last-mile delivery network.
Appendices

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Overview of the OIG’s Survey Methodology

Business-to-Business Telephone Survey

The Colography Group (Colography), a U.S.-based market research company with a focus on the logistics industry, developed the “Same-Day Market Characteristics Survey” to explore the same-day delivery market from the perspective of shipping companies. The survey was fielded between August 13 and September 5, 2018. Its 969 respondents were contacted by phone based on respondents’ previously reported use of same-day services or on their propensity to use same-day services based on their market segment, as discovered through Colography’s separately-fielded “National Survey of U.S. Expedited Cargo.”

All survey results were cleaned, weighted, and analyzed by Colography per its standard procedures. Data were weighted to the universe of all U.S. shippers through implementing the same extrapolation methodologies Colography uses for its “National Survey.” Amazon and the same-day grocery market were not captured by the survey and were instead modeled and added to the survey extrapolation per Colography’s standard approach.

Online Survey of Residents of the United States

The “Same-Day Delivery Survey” was fielded online by USPS OIG between July 9 and July 27, 2018. The survey’s questionnaire and sampling plans were developed by an in-house survey research expert and were then reviewed prior to field by an external expert in survey methods.

The confidential survey targeted a nationally representative sample of 18-to-75-year-old residents of the 50 states and the District of Columbia. The survey’s 2,572 respondents completed the survey on our online survey platform and were solicited by the sampling services provider Research Now-SSI, per its standard procedures. The survey was conducted in English and Spanish. For some questions, the sample was split in half to shorten the overall length of the survey and alleviate respondent fatigue.

Quota sampling procedures were employed during the survey field period to improve the representativeness of the data collected by modeling a geographically diverse sample of 18-to-75-year-old U.S. residents. Quotas were employed on age, gender, nativity within ethnicity, race, education, and geographic sub-region, and e-commerce participation. Apart from e-commerce participation, all data were weighted prior to analysis according to U.S. Bureau of the Census population estimates on all quota variables as well as on income and employment status. E-commerce participation was weighted to reflect the proportion of Americans that made an online purchase in the previous month, per the results of a national general population probability telephone survey. Data were also weighted to reflect the proportion of online orders purchased for same-day delivery by e-commerce participants, per the results of another national general population probability telephone survey.

Telephone Survey of Residents of the United States

To enhance the accuracy of our online survey results, we contracted with the research firm SSRS to ask OIG-designed questions in its national general population probability telephone survey, the SSRS Omnibus Survey. The survey was fielded between September 4 and 9, 2018. Its 1,008 respondents were contacted, and all data were weighted per SSRS’s standard methodology. The results were used for reporting and were also implemented as weights for our online survey data.

Additional information on SSRS’s national omnibus survey can be found online at https://ssrs.com/ssrs-omnibus-survey/.

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Appendix B: Management’s Comments

December 23, 2019

MICHAEL COSS
MANAGER, OPERATIONS CENTRAL (ACTING)
RESEARCH AND INSIGHTS SOLUTION CENTER

SUBJECT: Draft White Paper - Same-Day Delivery: Implications for the U.S. Postal Service (Project Number: RISC-WP-20-002)

Thank you for providing the Postal Service with an opportunity to review and comment on the Draft White Paper Audit, "Same-Day Delivery: Implications for the U.S. Postal Service".

Postal Management agrees with the OIG’s finding that same-day delivery is a growing market niche. Despite recent growth, however, same-day service currently represents only 2% of the domestic package market - a relatively small portion. The draft shows most customers still prefer other alternatives such as reliable next day delivery for their online purchases. Postal Management's early tests of this market niche with Metro Post Same Day (2012 to 2014) and Customized Delivery (2014 to 2017) confirmed this observation. While both pilots were useful in gathering analytics, neither attracted significant numbers of customers nor generated the volumes needed to justify continuation.

The report further recognizes that the prohibitive costs and expensive logistics are impacting same-day delivery. Ultimately, Postal Management concludes that the apparent reluctance by consumers to embrace same-day service, along with the complex logistics needed to support a shift to same-day delivery, are all valid reasons to look closely at its customer value proposition.

Management will continue to monitor same-day delivery from both a consumer and commercial perspective and explore business models that would allow it...
to expand same-day capability, to be prepared in the event the current market climate were to change more favorably to Same Day Delivery.

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Vice President, Marketing

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Attachment

c: CAPM
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  E-FCIA, USPS OIG
We conducted work for this white paper in accordance with the Council of the Inspectors General on Integrity and Efficiency’s Quality Standards for Inspection and Evaluation (January 2012).