

Winning the Battle for eCommerce Last-Mile Excellence



Purolator
International

Introduction

To understand how significantly eCommerce service expectations have changed, consider a March 2017 [essay](#) written by a Pace University student about the increasing need among the millennial generation for instant gratification: “Just last week,” she wrote, “I felt my heartbeat rapidly increasing and my legs shaking when the customer service representative from Amazon put me on hold for a few minutes because my package didn’t arrive in two days like it was supposed to.”

The student eventually learned her package had been misplaced. And while it eventually found its way to her, it arrived two days late. “I had to wait a whole extra two days,” she noted, which “seems like an eternity in today’s society.”

This example illustrates two important trends taking place among eCommerce consumers:

- Changing expectations for increasingly fast deliveries; and
- Increased focus on last-mile service to avoid late deliveries and misplaced shipments.

For eCommerce retailers, these trends come at a time when competition for customers is intense

and a fierce battle is raging as retailers try and distinguish themselves. Much of this change, of course, has been driven by Amazon and the tremendous inroads the internet giant has had in revolutionizing eCommerce and fulfillment. Amazon Prime, which guarantees unlimited 2-day shipping for an annual fee of \$99, saw a 38 percent surge in membership last year and now counts an estimated [80 million](#) members in the United States.

As a result, expectations have changed with regard to delivery speed and flexibility. Consumers are very much in the driver’s seat, and they show little hesitancy about abandoning a retailer that does not offer the services they have come to expect or that does a poor job of executing a delivery. Consumers expect the flexibility to determine when and where a delivery will take place, to be able to make a change at any point in the process with no disruption to the delivery schedule, to know the exact location of their package via real-time tracking, to have any special needs (i.e., don’t ring the doorbell) accommodated, and to be able to easily send the package back for whatever reason.

According to the Council of Supply Chain Management Professionals (CSCMP), last-mile services account for as much as [28 percent](#) of total transportation spend.

This is why last-mile service has become so important and why retailers are investing so heavily in getting it right. According to the Council of Supply Chain Management Professionals (CSCMP), last-mile services account for as much as [28 percent](#) of total transportation spend. This is because of multiple factors, including fuel and labor costs, order size, number of orders going to the same area, and customized services such as installation or, in the case of appliances or furniture, removal of old pieces. Or, as one logistics professional told [Global Logistics & Supply Chain Strategies](#), a lot of credit goes to LTL, TL, and 3PL providers who do a “really good job getting it from A to B, but getting it from B to C is sometimes the trickiest part.”

“You have to utilize different equipment and different expertise,” he continued. “It takes a lot more overhead to get that delivery done, whether it’s inside delivery with two men or unpack, haul away, set up, and installation. Those are areas where very few providers have specialized, but they all know it’s a very important part of the supply chain.” Last-mile services can be so labor intensive that one LTL manager says drivers spend an average of [22 minutes](#) longer making a residential delivery than a business delivery.

Recent analysis in [Forbes](#) notes the impact today’s evolving customer expectations have had on retailer capabilities: “In the late 1990s and early 2000s, home-delivery startups focused on speed at the expense of variety: They could get you a small selection of goods relatively quickly. Today, when retailers approach the last mile, they make more nuanced trade-offs among speed, variety, and convenience. The right combination entails a complex set of compromises that depend on the product type, consumer segment, shopping occasion, and retailer positioning.”

The challenge for retailers, then, is to find “the sweet spot” that meets a customer’s expectations but at a price equal to or lower than the customer’s willingness to pay. Finding that sweet spot can be quite difficult, but rest assured, your customers will let you know if you have failed.

The challenge for retailers, then, is to find “the sweet spot” that meets a customer’s expectations but at a price equal to or lower than the customer’s willingness to pay.

The first step is understanding how customer expectations for last-mile service have changed and assessing current effectiveness at meeting these expectations. Chances are there is room for improvement, especially if regular logistics upgrades have not been made to align with industry best practices. Technology-fueled innovation has dramatically changed the logistics industry, and solutions are possible today that were unthinkable just a few years ago.

The following discussion will help retailers understand the dramatic changes taking place in last-mile expectations and opportunities to satisfy customers with new solutions. Last-mile service is truly the “make or break” part of a transaction, when a customer is either pleased with delivery services or disappointed when something goes wrong. As this discussion will make clear, with the right logistics strategy, last-mile service can be a true differentiator between competitors and a surefire way to meet customer expectations.

Changing Last-Mile Expectations

What exactly are customers looking for in last mile service?

For one thing, they want fast service. But fast doesn't necessarily mean what it used to. Research conducted last year by [Deloitte](#) found just 42 percent of shoppers now consider three- to four-day shipping "fast." This represents a significant drop from the 63 percent who thought so during 2015. In a sure sign of how much expectations have changed, 89 percent of shoppers say they consider fast shipping to mean delivery within two days or less.

The importance of fast shipping cannot be overstated. [Dotcom Marketing's](#) 2016 packaging study found nearly 90 percent of consumers said the amount of time it took to receive an eCommerce shipment would influence their decision to ship with that retailer again.

"In fact," [Supply Chain Quarterly](#) wrote in its analysis of the Dotcom Marketing research, "fast delivery is even more important than product quality," noting "nearly twice as many shoppers said fast delivery (44 percent) would motivate them to give repeat business to a new brand than those who said better quality (24 percent) would do the trick."

As retailers acclimate themselves to this new perception of "fast," the goalpost will apparently change once more, with Deloitte finding 97 percent of consumers favoring same-day shipping – a clear signal the pendulum is swinging in favor of even faster delivery expectations. A note of caution though:

While many consumers – 23 percent in a recent survey by [McKinsey](#) – said they would pay extra for same-day delivery, the amount they are willing to pay is not enough to cover the costs. This will create a new challenge for retailers, with McKinsey estimating that same-day or instant delivery will account for as much as 25 percent of all eCommerce deliveries by 2020.

Digging deeper, research by [Temando](#) revealed some specifics about what customers want. Beyond free and fast shipping, consumers want more shipping options. Lots more options:

- 77 percent would like guaranteed weekend or after-hours deliveries
- 80 percent would like same-day shipping with
 - 61 percent in favor of 1- to 3-hour shipping
- 76 percent want a specified time slot for delivery
- 82 percent want to collect their shipments from stores (This includes a growing preference for "click and collect," whereby customers collect their shipments at a designated location, which might be a local convenience store, dry cleaner, or a locker facility.)

Consumers have increased expectations for delivery speed, flexibility, and cost, among other last-mile services.



And with regard to the actual delivery:

- Customers want to be able to reroute their shipment up until the last minute.
- They want real-time tracking and visibility, similar to Uber driver tracking.
- Customers want great communication, including an email or a text when a delivery is imminent, with a follow-up text or email after the delivery has been made.
- They expect immediate notification when a problem arises, with information about how that problem is going to be solved.
- Depending on the shipment, if special services are required, (such as installation or assembly), customers expect the delivery personnel to be experienced, knowledgeable, courteous, and to have the right equipment with them at time of delivery.

Last Mile Also Means Returns Processing

Not surprisingly, consumers have similarly strong thoughts about the returns process. And with as much as one-third of online purchases returned, smart retailers realize the importance of prioritizing the returns process and providing an optimal customer experience.

With as many as one-third of eCommerce shipments returned, an efficient returns process has become an integral part of last-mile service.



Consumers care so much about the returns process that [66 percent](#) say they review a business's policy before making a purchase, and [80 percent](#) say they will not return to a retailer that has a non-customer-friendly policy.

As retailers work to develop their ideal returns policy, many have come to realize the tremendous benefit of leveraging last-mile services. For one thing, trucks already in a particular neighborhood dropping off packages can be directed to pick up returns on their return routes. Or those trucks can stop by a retail store or other designated drop-off point and pick up returns left by consumers. As noted by [Industry Week](#), involving last-mile services in the returns process can provide customers with high levels of service and can also facilitate movement of returned goods back into inventory.

Accommodations for Larger Items

While most eCommerce shipments fall within the range of packages easily handled by a parcel carrier, a growing number of consumers are purchasing increasingly larger items, either online or via omnichannel options such as “research online, purchase in-store with home delivery.” Research by [Alix Partners](#) found the percentage of consumers who were unwilling to purchase appliances online decreased from 38 percent in 2012 to just 12 percent in 2016.

As this ad makes clear, free delivery, installation, and removal of old appliances are among the last-mile services that consumers expect when purchasing large appliances.



Source: BJ's Wholesale Club

As a result, online retailers must accommodate the special requirements of these oversized shipments, including the reality that many residential neighborhoods simply cannot accommodate a standard LTL truck. “It’s tough for a Class 8 rig to get in and out of residential neighborhoods,” one logistics professional told [Heavy Duty Trucking](#). “Drivers have to avoid mailboxes, kids on bikes, and overhanging tree branches. Then they have to manhandle heavy delivery items, offloading from trailers designed more for docks and street-side office deliveries, using pallet jacks to pull deliveries up steep driveways or through muddy yards.” Another consideration includes the possibility of a doorway not being wide enough to accommodate a large appliance and the chance that no one will be home when the delivery arrives.

Last-Mile Special Services

As consumers become increasingly comfortable ordering appliances, furniture, large electronics, and even lawn equipment online, retailers must accommodate the special white-glove care and services required for successful delivery. Not only does a product need to be successfully carried into a consumer’s home or preferred location but delivery personnel must be trained and equipped to provide assembly or installation services. Deliveries of electronics, jewelry, mobile phones, and other pricey items also require proper security protocols to guard against theft. Other

white-glove services include having a specific delivery time slotted, removal and disposal of replaced items, and, depending on the type of delivery, chain of custody documentation.

Premium Service

[Temando's](#) “State of Commerce 2017” report focused on reasons consumers abandon their online shopping carts. While shipping costs and lack of free shipping topped the list, nearly half of survey respondents – 47 percent – said they would abandon their carts and buy from a competitor’s site when a premium delivery option is not available. Similar research by [Alix Partners](#) found 37 percent of consumers said they were willing to pay for a premium expedited-shipping service.

Clearly, this expectation is being driven by Amazon Prime’s 2-day “free” shipping service. Amazon Prime has clearly raised the bar in terms of premium customer service and shipping expectations. And while shippers can find comfort knowing at least some customers recognize there is a price associated with premium services, the problem is most customers are not willing to pay enough to cover the actual cost of expedited services. As Alix Partners learned, when respondents were asked how much they would be willing to pay, “the mean amount was \$31.55 as an annual fee, though the bulk of respondents (60 percent) named fees ranging from less than \$9.99 to \$29.99.”

Urban Deliveries

Retailers must also contend with the challenges of providing last-mile service to eCommerce packages headed to urban locations. An added obstacle is the large number of “instant-gratification-hungry” millennials residing in cities, who according to CBRE research, make more than 40 percent of non-food purchases online. With that same survey showing more than 75 percent of urban dwellers prefer home delivery, the logistics become even trickier: Delivery trucks must navigate busy streets with strict parking/idling restrictions, limited options to leave a package if a consumer is not at home, and inventory must be sourced close by to allow for rapid fulfillment.

Urban delivery has benefitted in recent years from tremendous innovation, as several crowdsourced local delivery services have popped up in cities across the country. Deliv, for example, offers same-day delivery service for large national retailers, including Best Buy and Bloomingdales, and operates in [18 markets](#). Other options include the use of parcel lockers, whereby consumers pick up their purchases from a retailer’s designated facilities, usually located in malls. Other retailers, including Amazon, are partnering with local neighborhood stores to accept consumer deliveries. In Amazon’s case, the company has successfully partnered with 7-11 convenience stores, with Amazon lockers added to 200 stores across the U.S. and Canada.

Retailers Not Meeting Expectations

It’s clear that consumers have definite expectations about last-mile services: Shipments should arrive fast, on time, at little-to-no cost to the consumer, and with high degrees of visibility and flexibility throughout the process. Unfortunately though, it seems many retailers are not meeting these expectations. As [Temando](#) explains in its research summary: “It turns out consumers don’t just want Amazon Prime from Amazon.” Instead, consumers expect premium service from other companies they interact with, and essentially they hold others to the high standards Amazon has set. About 40 percent of consumers told Temando they expect widespread access to Amazon Prime-type memberships in the next one to three years. But in a sign of how far ahead customer expectations are, only 25 percent of retailers plan to introduce a “Prime-like” service during that period.

Additional research by Temando reported:

- Only 50 percent of retailers offer in-store pickup for online orders
- 47 percent do not offer same-day shipping
- 43 percent provide time-definite delivery windows

In fact, the survey found nearly a quarter of retailers still manually book couriers and manage their warehouse operations, and 33 percent still use manual processes to handle product returns.

With only 11 percent of consumers satisfied with retailers' current delivery services, savvy retailers have an opportunity to differentiate themselves from competitors.

This current state of dissatisfaction presents an opportunity for committed retailers to fill the void, and step up and provide consumers with the services they are looking for. [Convey](#) software surveyed consumers last year on the topic of delivery services and found 73 percent said superior delivery would impact their decision to choose a retailer over Amazon. But, only 11 percent said they are happy with how retailers are currently handling the delivery experience. In other words, if a retailer gives consumers a reason to choose it over Amazon, they will do it.

Another consideration is that consumers will hold the retailer accountable – and not the delivery company – when something goes wrong. Marketing consultant [Acquity Group](#) found more than half of surveyed consumers (52 percent) blamed the retailer when a shipment arrived late, versus 49 percent who said they would blame the shipping company. And the impact can be devastating to a retailer. Of the 69 percent who said they had experienced a late delivery, 63 percent said it would negatively impact their relationship with the retailer, with 23 percent indicating they would “cease ordering from that company altogether.”

Adapting Your Last-Mile Strategy

Building a superior last-mile solution has two key ingredients: technology and a logistics provider.

Technology, of course, makes everything possible, including the all-important visibility necessary to tie all your processes together. Technology also enables the algorithms upon which highly efficient last-mile services are based.

And an experienced courier or logistics provider – which must also be technology-based – will be your best weapon and strategic partner in ensuring flawless service.

As stated previously, a surprising number of retailers still rely on manual processes and have yet to automate critical functions, including warehouse, inventory, and transportation processes. Some [managers](#) don't see the value, while for others, the assumption is that it will be too costly.

The fact is that unless you're a Walmart, Macy's, or some international chain that needs a customized technology system, chances are an off-the-shelf software package will be adequate for your needs. Adopting a technology solution will require an initial investment, including expending resources to train employees, but the benefits will far outweigh any inconvenience.

Benefits of integrating core processes include:

- **Inventory Management.** The need for faster service has cast a light on retailer inventory and warehouse management processes. For larger retailers with established warehouse networks already in place, and with existing brick-and-mortar stores that can be transformed into eCommerce fulfillment centers, locating inventory close to end customers is much easier.

Consumer expectations for increasingly fast deliveries have fueled a surge in warehouse construction.



In recent years, tens of millions of new warehouse square footage has been built to accommodate the demand for faster eCommerce deliveries. Amazon has been at the forefront, with more than [70 fulfillment](#) centers operating across the U.S. as of early 2017.

Analysis from commercial real estate leader Collier's International suggests retailers may be taking a "two-pronged approach." On the one hand, larger warehouses (300,000 square feet and larger) are necessary to handle the tremendous volume of merchandise passing through to satisfy one-day and same-day deliveries. But smaller warehouses, usually located in urban settings, are increasingly used to satisfy one-hour deliveries. Dwight Hotchkiss, national director of U.S. industrial services for Collier's, told the [Wall Street Journal](#) that what's happening now is "just the tip of the iceberg," as online retailers will continue to adapt to accommodate surging eCommerce sales.

But for smaller retailers that do not have a broad geographic reach – or the resources to build their own networks – warehouse issues can be problematic. A growing number are solving this problem by turning to their logistics provider for help. Many established providers maintain networks of warehouses that are leased to customers. An obvious advantage of this is the scalability afforded in being able to lease "just enough" space in the precise locations needed.

And, since the logistics provider will have an integral role in making the last-mile deliveries, it makes sense to integrate the carrier in the warehouse process.

- **Visibility.** A retailer must also know precisely where inventory is located at any given moment and be able to fulfill an order using inventory located as close to the customer as possible. Visibility gives a manager 180-degree awareness of all moving parts. In addition, real-time visibility might allow a retailer to offer a customer an in-store pickup option, thereby eliminating the need to involve a delivery company.
- **Big Data.** Big data is king, particularly when it comes to helping businesses understand what's working and what's not working. Data can help pinpoint problems in last-mile operations, including communication issues, customer pain points, or causes behind failed deliveries. But as helpful as data can be, it's very important to limit the scope of your data collection to a few priority issues, to have a process for analyzing the information, and then to act on what you've learned.

Keep in mind that according to the Massachusetts Institute of Technology, [99.5 percent](#) of all data is never analyzed – there is a seemingly infinite amount of data available. But the information that is helpful can be vitally important. You'll need to zero in on the metrics that will truly benefit

your operation and disregard everything else that is essentially clutter.

And technology, of course, has a starring role in the actual delivery process. And that role is growing as capabilities expand and consumers expect increasingly fast and personalized service. Current capabilities include:

GPS Technology. Customers want to be able to track their packages in real time. It's no longer enough to update a tracking message with an "out for delivery" message. Today's customers are growing accustomed to real-time visibility, similar to the tracking capability offered by Uber, where a passenger can track a driver in real time as he or she moves toward the passenger pickup point.

Communication. Beyond tracking capability, communication technology helps keep customers informed with delivery status updates and notified about any unexpected delays. This can help alleviate some of the aggravation that comes when a scheduled delivery window comes and goes with no sign of the expected shipment. Current consumer expectations include text messages, emails, and even telephone calls when a delivery is imminent, along with a follow-up contact once the delivery has been made. Real-time communication, even if it's to convey bad news, is appreciated and goes a long way toward solidifying customer relationships.

Technology allows carriers to provide consumers with real-time visibility and high levels of communication about pending deliveries.



Route Optimization. Route optimization is the process in which a transportation provider enters delivery times, addresses, volume, and any number of additional variables into a technology system, and the system devises an optimal route for that day's deliveries.

Then, as a driver goes about the day, any changes can be plugged into the system and the route readjusted. For example, a driver with a signature-required delivery who finds no one at home can enter the missed delivery into the system and ask the customer to confirm a new delivery time. That rescheduled delivery will be reconfigured back into the driver's schedule, which keeps the driver from having to return to the warehouse with the undelivered package.

For many reasons, route optimization has truly been a game changer. From a carrier's perspective, it eliminates significant numbers of empty miles and unnecessary stops, helps to circumvent traffic delays and weather events, and prevents having to end the day with undelivered packages still on the truck.

From a retailer's perspective, it ensures on-time deliveries, which allows promises to be kept to consumers. And from the consumer's perspective, it means they can count on a delivery arriving on the scheduled date and time.

The Best Offense Is An Experienced Logistics Partner

According to analysis from [McKinsey & Company](#), last-mile services have become so important that “large eCommerce players, as well as various startups, have identified last-mile services as a key differentiator. In fact, the variety of delivery options and the perceived quality of the delivery service are major decision-making criteria for online customers and hence directly affect eCommerce players’ success in the marketing place.”

Choosing the right last-mile service provider cannot be overstated.

A business can invest time and resources to build a dynamic website that offers fabulous products at competitive prices with great advertising and loyalty programs. But all that can be for naught if the delivery company doesn’t do its job.

The process begins with a basic understanding that not every company has the same capabilities, and certainly not every company prioritizes last-mile services.

So when choosing a delivery company, you better choose right! The process begins with a basic understanding that not every company has the same capabilities, and certainly not every company prioritizes last-mile services. Don’t be fooled by a “brand name” or by slick advertising. Instead, it’s essential to spend time researching different providers, asking questions, and finding the absolute best match to meet your specific last-mile needs. Among the top considerations in choosing a logistics provider:

- **Range of Service Offerings.** As retailers seek to meet consumer demand for fast deliveries, transportation providers have responded with increasingly innovative, technology-based solutions. Whereas just a few years ago a retailer would have few delivery options, experienced providers now offer a range of solutions at different price points.

In many instances, it makes sense to go with an asset-light provider rather than a company that owns its entire inventory of trucks and networks. This is because an experienced asset-light provider will be able to tap into its vast network of resources and determine the best solution for a particular shipment. A Florida retailer that promises next-day service to Toronto, for example, must have a logistics provider with the resources to make this happen. An asset-light provider will have the required flexibility, whereas other providers are locked in to using their own equipment and must abide by set schedules.

Using a more flexible provider often allows for more cost-efficient service. This is critically important since, as [McKinsey’s](#) analysis reveals, although most consumers value fast service, roughly 70 percent will choose the cheapest form of delivery. A service provider with multiple service offerings will allow a retailer to select the service that best meets its customers’ needs and price point.

The key is to find an innovative logistics provider that will work with you to build a solution for your specific needs. In some instances, for example, a provider may be able to offer ground service that is actually faster than some companies’ air service! In this instance, consumers would receive expedited levels of service but at a ground-level price.

That said, there are times when premium levels of service are the best option. Consumers are increasingly open to

paying for expedited levels of shipping, although not enough to cover the true costs of having the product delivered in the expected timeframe – usually same day or within a two- or three-hour window. McKinsey found 20 to 25 percent of consumers would pay up to \$3 for an expedited shipment, which is far below the actual cost. But with consumer preferences trending toward expedited-like service, a retailer will need to work with its logistics company to develop a solution that meets expectations at a fair price.

- **Comprehensive Service Provider.** Since last-mile service often warrants specialized services, including installation, indoor delivery, assembly, and disposal, it's essential to enlist a provider with the required skills and capabilities – and experience! A retailer can do tremendous damage to its brand by sending an unqualified delivery person or technician into a customer's home. It's essential to enlist a logistics partner with access to a team of experienced installers, assemblers, and delivery people. A service provider must have the correct tools, knowledge, and skill set to perform the required task, as well as the interpersonal skills to interact with customers in a professional, courteous manner.
- **Innovative Solution Provider.** Because the nature of last-mile logistics is changing so quickly, it's critical to have a logistics partner that is deeply committed to continual improvement. Logistics providers have made tremendous

progress in finding new and better solutions. But these achievements only came about through out-of-the-box thinking and by challenging the status quo. It's essential for a retailer to conduct periodic "logistics checkups" to gauge a provider's efforts to improve service. In doing so, a retailer should ask a few questions:

- Am I still using the same last-mile strategy that's been in place for the past several years?
- Have my last-mile results improved in recent years?
- Does my logistics provider proactively offer new ideas for improved service?
- Do my competitors seem to have a leg up in offering faster or more creative last-mile options?

If the answer to any of these questions is yes, it's probably a good idea to assess your current relationship with your logistics provider.

- **Technology-Based.** With technology playing such a prominent role in shaping last-mile innovation, it's essential to partner with a logistics company that has embraced the power of technology-fueled solutions. It's one thing for a logistics company to invest in a technology system and provide some modicum of efficiency. But a truly tech-savvy company will continually look for the next great innovation and always want to be on the forefront of introducing new options and better solutions.

- As tech-savvy consumers continue to expect faster and more flexible delivery options, a retailer must be able to depend on its logistics company to not only keep pace but to lead the way with new options for impressing customers with flexible, fast, and cost-efficient solutions

- **Premium Levels of Customer Service.** As retailers face the challenges of last-mile expectations, it's essential to have not just a relationship with a logistics provider but a genuine partnership. As we have seen, customers are very likely to blame the retailer – rather than the delivery company – when a shipment arrives late or damaged. So it's important for the logistics company to feel invested in the retailer's success and to genuinely want to help the retailer excel.

This investment in success is most evident in the logistics company's commitment to customer service. A good logistics provider will offer high levels of service that include dedicated personnel who are thoroughly versed with the retailer's shipping needs and priorities. Those dedicated customer service reps should be easy to access and ready to handle any last-minute changes or unforeseen situations. In fact, a truly exceptional customer service representative will know about a problem early on and have a workable solution by the time it gets to the retailer's attention.

Looking Ahead: Technology-Backed Disruption Will Drive Expectations

Although package-delivering drones and self-driving vehicles have certainly captured consumers' imaginations, disruptive innovation is rapidly becoming a game changer in improving last-mile efficiency. Last mile is a segment of the logistics industry that is ripe for change, and innovators around the world are diligently working on the next big thing. Among the exciting projects that are likely to become everyday realities:

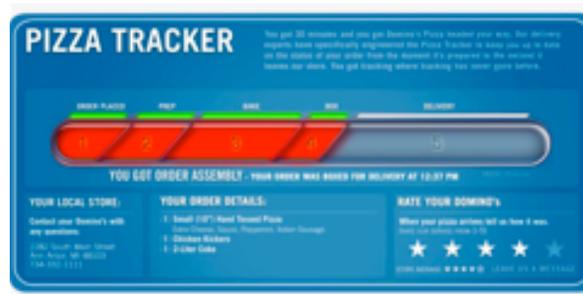
3-D printing. According to the [McKinsey Global Institute](#), the global impact of 3-D printing could surpass \$550 billion by 2025. “The technology is at a tipping point,” an Institute report notes. “It appears ready to emerge from its niche status and become a viable alternative to conventional manufacturing processes in an increasing number of applications.”

The technology is still in its formative stages among U.S. businesses, as managers get their arms around its potential – and its enormity. Although some companies – Hasbro, Ford, General Electric, and Hershey's – have started to implement the technology for certain parts. [Boeing](#), for example, said it expects to cut as much as \$3 million from the cost of its 787 Dreamliner by using 3-D printed titanium components.

If the technology truly does take off, there could be a tremendous impact on supply chains, including last mile. Imagine a delivery truck equipped with a 3-D printer that can “build” a product while en route to a customer.

Looking Ahead: Technology-Backed Disruption Will Drive Expectations

The “Domino's Tracker” allows consumers to follow the progress of their pizza from the time it's ordered until it shows up at their door.



Internet of Things/Real-Time Tracking. Domino's pizza made headlines earlier this year when it introduced the “[Domino's Tracker](#),” which allows a customer to follow the process of a pizza from the moment it is ordered until it arrives at the customer's door. As described by *Forbes*, the tracker shows “when the order is prepped, in the oven, quality checked, out for delivery, or ready for pickup.” The device is a good example of how the interconnectedness of devices – known as the Internet of Things (IoT) – is already changing customer expectations with regard to visibility and transparency. Among other creative uses, the *Forbes* article

notes, consumers are using the IoT capability to connect the tracker with their lights so that the porch light turns on just as the pizza arrives.

Delivery Drones. Despite tremendous media attention, research from [Gartner](#) concluded that delivery drones will make up less than 1 percent of the commercial drone market by 2020, and it does not expect them to be a major factor for several years.

Amazon continues to test and refine its drone delivery model.

That said, there's no denying the impact these delivery models will have in coming years.

- Amazon, through its Amazon Prime Air, is developing a drone solution to deliver products in less than 30 minutes. The internet retailer submitted a [patent](#) application in June 2017 that outlined a “multi-level fulfillment center for unmanned aerial vehicles,” which would serve as an urban base for its drone program. Some industry watchers have called the design a “drone beehive,” due to its shape and the multiple entry points buzzing drones would use to gain access. Whether or not Amazon chooses to pursue this option remains to be seen, but it is clear the company is working to address potential problems and logistical issues.

- DHL is also testing a drone-based delivery concept. DHL's product is called the Parcelcopter, and it's currently being tested in Germany.

Self-Driving/Autonomous Vehicles. McKinsey projects that 80 percent of parcel deliveries will be made via autonomous ground vehicles (AGVs) within the next 10 years. The remaining 20 percent of deliveries will be made via traditional methods, but will mostly consist of large, hard-to-deliver products and items that require installation and special handling.

McKinsey projects that 80 percent of parcel deliveries will be made via autonomous ground vehicles (AGVs) within the next 10 years.



Looking Ahead: Technology-Backed Disruption Will Drive Expectations

The “big players” in autonomous vehicle development – Google, Daimler, Ford, Tesla, Volvo, Apple, and Uber (including its subsidiary Otto) – are among the leaders in developing and testing driverless car technology. In fact, it was [big news](#) in late April when Apple's autonomous car was spotted on roads across Silicon Valley.

Tremendous innovation is also taking place in the crowdsourcing category. [Accenture](#) recently summarized a few solutions in various stages of use and development, including:

- **UberRUSH** is an on-demand service that provides fast and affordable deliveries throughout certain urban areas.
- **Deliv** is a California-based startup that Forbes has called the “Uber of the Retail World.” The crowdsourced delivery service is used by retailers typically found in malls, including Williams-Sonoma and Foot Locker, to have customers' purchases delivered on the same day at a cost of roughly \$5. The service allows customers to schedule deliveries based on their schedules rather than having to adjust to meet a courier's schedule.
- **Doorman's** unique selling proposition is its ability to deliver between 6 PM and midnight, which makes the service ideal for people who work away from home all day.

- **Instacart** connects the consumer with personal shoppers who pick up and deliver groceries from local stores. Instacart currently operates in more than 100 U.S. cities and is aligned with 16 retailers, including Wholefoods, Costco, and Target.

Important to note though, most of these new crowdsourced services focus on the final leg of the last mile. That, of course, is critical but does not take into account the “big picture” issues associated with last mile, including inventory, fulfillment, and warehouse services.

Conclusion

Last-mile delivery is the most important – and the most expensive – part of the logistics process, accounting for an estimated 28 percent of overall transportation spend. And it is arguably the most exciting part.

For one thing, last mile is the current focus of the customer experience – it's the point at which a retailer either satisfies a customer with exceptional service or it doesn't. And in today's customer-driven retail environment, all it can take is one less-than-stellar delivery to lose a customer for good.

Last mile is also the focus of tremendous innovation, with technology-based solutions in development that are certain to change the way in which last-mile services are performed. Crowdsourced startups are developing niche solutions to address all facets of consumer demands – from California-based [Happy Returns](#), which processes customer returns via conveniently located kiosks, to Portland, Oregon's [B-Line](#), which offers sustainable deliveries using “electric-assist cargo trikes.” In fact, research by [Accenture](#) consultants reported venture capital investments in supply chain and logistics startups were four times larger during 2015 than in the previous year. Venture capitalists invested \$1.75 billion in startups during just the first quarter of 2016.

Clearly there is change afoot when it comes to last-mile services. Retailers who understand their customers' expectations for faster and better service will embrace these changes and be rewarded by their customers. And as Amazon CEO Jeff Bezos famously [said](#): “The most important single thing is to focus obsessively on the customer.” If you don't, your competitors will.

Purolator. We deliver Canada.

Purolator is the best-kept secret among leading U.S. companies who need reliable, efficient, and cost-effective shipping to Canada. We deliver unsurpassed Canadian expertise because of our Canadian roots, U.S. reach, and exclusive focus on cross-border shipping.

Every day, Purolator delivers more than 1,000,000 packages. With the largest dedicated air fleet and ground network, including hybrid vehicles, and more guaranteed delivery points in Canada than anyone else, we are part of the fifth-largest postal organization in the world.

But size alone doesn't make Purolator different. We also understand that the needs of no two customers are the same. We can design the right mix of proprietary services that will make your shipments to Canada hassle-free at every point in the supply chain.

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References

- Chao, Loretta, "[Big-Box Warehouse Construction Surges.](#)" *The Wall Street Journal*, March 2, 2016.
- "[E-Commerce Returns Statistics: Key Facts You Need to Know.](#)" Ready Cloud, N.D.
- "[Final-Mile Delivery.](#)" AlixPartners, July 2016.
- Garcia, Tonya, "[Amazon's aggressive warehouse and shipping strategy is paying off.](#)" MarketWatch, January 10, 2017.
- Goodman, Russell W., "[Whatever You Call It, Just Don't Think of Last-Mile Logistics. Last.](#)" *Global Logistics & Supply Chain Strategies*, 2005.
- Joerss, Dr. Martin, Schroder, Dr. Jurgen, Neuhaus, Florian, Klink, Dr. Christoph, and Mann, Dr. Florian, "[Parcel delivery: The Future of last mile.](#)" McKinsey & Company, September 2016.
- Kaplan, Deborah Adams, "[9 trends in last-mile delivery.](#)" Supply Chain DIVE, May 22, 2017.
- King, Lewis, "[It's the Last Mile, Stupid!.](#)" Air Cargo World, May 16, 2017.
- Laseter, Tim, Egol, Matt, and Bauer, Scott, "[Navigating Retail's Last Mile.](#)" *Forbes*, November 16, 2015.
- "[Last Mile City Logistics.](#)" CBRE, July 2017.
- Leggatt, Helen, "[Who do consumers blame for late deliveries?.](#)" *BizReport*, June 18, 2015.
- Lindner, Matt, "[Amazon Prime members number 80 million in the US, up 38% year over year.](#)" DigitalCommerce360.com, April 25, 2017.
- Lockridge, Deborah, "[The Big and Small of Last Mile Delivery.](#)" *Heavy Duty Trucking*, April 2017.
- O'Shea, Dan, "[Survey: Retailers struggle to keep up with demand for hyperlocal delivery.](#)" Retaildive.com, June 26, 2017.
- Regalado, Antonio, "[The Data Made Me Do It.](#)" MIT Technology Review, May 3, 2013.
- "Return Shoppers by Rethinking Your Online Returns." UPS Pulse of the Online Shopper Study, July 2015.
- Scheidies, Nick, "[15 Business Lessons from Amazon's Jeff Bezos.](#)" Incomediary.com, N.D.
- Sides, Rod, "[2016 Deloitte Holiday Survey.](#)" Deloitte University Press, October 25, 2016.
- Silver, Curtis, "[Domino's Delivers Its Pizza Tracker To Your IoT Devices.](#)" *Forbes*, May 1, 2017.
- "[Survey: Online shoppers demand visibility as well as speed in delivery.](#)" *CSCMP's Supply Chain [Quarterly]*, October 4, 2016.
- Taubenfeld, Emma, "[Patience Isn't Virtual.](#)" StudyBreaks.com, March 23, 2017.
- "[Tech-savvy shoppers transforming retail.](#)" UPS Pulse of the Online Shopper, June 2016.
- "[Temando Survey Says U.S. Retailers Do Not Fully Meet Consumers' Shipping Demands.](#)" Temando, January 18, 2016.
- "[The State of Shipping in E-Commerce.](#)" Temando, July 2017.
- Vincent, James, "[Amazon's vision for the future: delivery drone beehives in every city.](#)" *The Verge*, June 23, 2017.
- White, Burton, "[Last Mile: New Frontier in the Retail Supply Chain.](#)" *IndustryWeek*, May 3, 2015.