



A PRODUCT OF APPLIED DATA CONSULTANTS

Fast fulfillment has transformed the Last Mile forever, and advanced dispatching technology is a necessity if you want to compete.

DEFINING *AND* SHRINKING THE LAST MILE

Advanced dispatch technology's role in last mile deliveries

What is the last mile challenge?

The “last mile” is defined as the final step in the shipping process — the last leg of a product’s journey from the manufacturer to the customer’s doorstep — whether the doorstep is someone’s home or another business. Therefore, the “last mile” could be a few blocks in dense urban areas, or many miles in the case of rural deliveries.

It is also the most expensive and time-consuming leg of the journey, accounting for upwards of 53% of the total costs of the delivery, according to Business Insider Intelligence.[1]

And now, with customers expecting “free shipping,” retailers and logistics providers are shouldering that cost. As such, many are looking for technology to lower their costs and drive process improvements.

But it isn’t all about costs. It is also about meeting the customer’s expectations. They expect fast order fulfillment, and retailers are working hard to not only expedite deliveries, but to get them there when and where the customer wants them delivered.

Capgemini, a global leader in consulting and technology services, found that 73% of consumers believe that receiving a delivery in a convenient time slot is more important than receiving it quickly.[2] It ultimately comes down to a question of time vs. money. Sometimes customers are willing to pay for a product to be delivered in a few hours, and other times they’d rather save money and receive it in a week. The bottom line is that consumers demand to have their products delivered in a time that works best for them.

Focus has been placed on last mile logistics because in addition to the high cost, it is a key differentiator for retailers. Because consumers can easily shop anywhere, retailers and their supply chain partners must provide exceptional service to gain, or just keep, market share and build brand loyalty and trust.

Instead of trying to compete with Amazon’s expedited shipping, retailers need to focus on building better customer experiences. From a delivery standpoint, this means creating a logistics infrastructure that can reliably deliver orders when buyers want them delivered. This is accomplished by leveraging multiple delivery models and creating a reliable set of options that include urgent, same-day, next-day, and more.

73% OF CONSUMERS
believe that receiving a
delivery in a convenient time
slot is more important than
receiving it quickly. [2]



In this paper compiled by Applied Data Consultants, a software development and GIS consulting firm with nearly 30 years of logistics experience and clients in over 40 vertical last mile industries, we take a look at the last mile disruption, offer tips on what to look for in a technology provider, as well as what to steer away from. We also look at futuristic technology, and offer ways to capitalize on the disruption.

Businesses Turning To Technology to Compete

For retailers determined to stay competitive, partnering with innovative technology providers for home delivery and last-mile logistics is necessary to improve the cost, efficiency, and customer experience of last mile deliveries.

Front's 2019 Logistics Tech Trends Report surveyed 400 businesses and found:

- **81% said they expect their software spending to increase over the next two years.**
- **84% said they are introducing some sort of automation into their supply chain.**
- **The estimated \$2.23 billion in disruptive logistics technology spending in 2017 will rise to \$2.63 billion in 2022. [3]**

Retailers are investing in many types of technology to compete. Among the top technology trends has been investment in advanced routing and dispatching software.

Advanced dispatch allows businesses to efficiently organize their fleets to take full advantage of the assets that they have. Additionally, future-ready mobile applications tied to dispatch software allows for easy communication between drivers and dispatchers, and real-time tracking of daily operations, which can result in accurate delivery expectations and timely delivery completion for customers.

Through these technologies, retailers can decrease delivery times, increase their delivery efficiency (more deliveries per day), effectively communicate with their customers, and monitor their success through advanced reporting and business intelligence.

The Customer Experience, Complete Visibility in Real-time

How can retailers satisfy customer expectations with advanced dispatch technology? It starts with integration, route optimization, visibility, and communication every step of the way. While artificial intelligence is not truly in use yet, retailers do expect a deep level of sophistication built into the technology.

For retailers trying to win in the last mile race, partnering with innovative providers for home delivery and

84% OF BUSINESSES
said they will introduce
automation into their
supply chain. [3]



last-mile logistics can add choices while avoiding the challenges of building their own systems or expanding service with traditional networks.

The bottom line is: consumers want what they want, when they want it. The maturation of e-commerce has ushered in an era of personalization at scale and growing customer demand for convenient, flexible shopping experiences. Next-day and same-day delivery sit at the center, but customers are ultimately focused on choosing the right fulfillment option for each and every order.

160,000
DRIVER SHORTAGE BY 2028 [5]



Dealing with the Driver Shortage

Another challenge in last mile deliveries is a lack of drivers. In 2019, there was a shortage of 60,000 drivers across multiple industries as an aging population takes its toll.[4] This shortage is projected to grow to over 100,000 drivers by 2021, 160,000 by 2028, and is going to cause widespread delivery delays and increased product prices.[5] Even with an uptick in last mile drivers due to the boom of the “gig-economy,” retailers are struggling to meet delivery demands.

With this rise of the gig economy, many consumers are already familiar with the concept of crowdsourcing local services through digital platforms like Lyft and Postmates. Location-based crowdsourcing allows consumers to open a mobile app to hail a ride, book a place to stay, order coffee to the office, hire a handyman to mount a TV, or even schedule takeout to arrive just as they’re walking through their apartment door.

The crowdsourcing model has been prevalent in transportation, hospitality, and food delivery for some time now, and retailers are eyeing its low startup costs, asset-light operations, and improved customer experience to ease their last mile delivery woes.

Recently, advanced dispatching has opened the doors to deliveries through crowdsourced options. Retailers, logistics partners, and consumers can connect directly with those who use their own transportation to make deliveries. The freedom to make on-demand and scheduled deliveries also ensures that customers are home at the time of delivery, if necessary — eliminating the need for a second (or third) attempt.

In addition to crowdsource technology, advanced dispatch technology allows couriers to begin to float their fleet throughout a city and fulfill pickups and deliveries as they are requested. A floating fleet is essentially a fleet where drivers are not dedicated to a single customer. These drivers can therefore deliver on-demand for retailers that need help with their daily deliveries.

A floating fleet will increase efficiency as drivers are delivering on-demand during their dead hauling and down time. While retailers are presented with more delivery options, couriers are able to supplement their contracts with on-demand deliveries to greatly increase revenue.

Selecting the Right Technology Partner

There are dozens of software technologies in this space; as a result, choosing the right technology partner can be daunting. Here are some things to look for:



Proven history - not a startup looking for a successful IPO or quick sale: There are a plethora of flashy new companies financed by Venture Capital firms. Many of these companies were developed for the sole purpose of creating a revenue stream to move towards an IPO or selling to another firm. If you choose one of these companies, you may end up with something less than what you bargained for, and without the support and feature development that you signed up for.



Continuous improvement: Does the company have a history of continuous improvement? Technology changes daily, and technology companies that haven't continually focused on innovation will lag behind in new features that customers will soon come to expect. If you choose a company that doesn't continuously innovate, you will lose a competitive advantage.



Secure/stable hosting: For some companies, getting to market quickly is more important than the site's stability. Make sure that there is redundancy and stability of the software as downtime for the application will mean downtime and dissatisfaction among your customers.



Future-ready: Is your technology partner looking to the future to see what's next? Do they have a track record of staying ahead of their competitors? Once again, if they don't, you will be left behind as technology innovation travels at lightning speeds.



Ability to measure -- mobile is key: Through the ability to track everything in real-time, accurate reporting jam-packed with meaningful data is possible. Through driver reports, e-signature captures, picture snapshots, and more, dispatching solutions can provide more measurability than ever before. Data should be collected to help retailers determine productivity, ROI and service levels.

What Makes a Dispatch Solution “Advanced”?

Not all dispatching solutions are created equally. When comparing different solutions, make sure to analyze each solution's ability to provide integration, real-time tracking automation/learning, customizability, route-optimization, delivery or service time windows, ability to manage capacity, measurability, and longevity.

Automated or Assisted Dispatching

Many dispatching software solutions can route and track, but there are also advanced solutions that provide the ability to auto-route and auto-suggest routes. Routes can be auto-created in the most

**LAST MILE = OVER 50%
OF DELIVERY COST [8]**



optimal order based on specific drivers, vehicle types, specified start and end times, and desired number of routes. Orders can be auto-suggested to an already active run in order to maximize routes in progress. Automated dispatching assists the dispatcher by reducing their amount of clicks and allows for easier dispatching.

Integration

Integration capabilities can make or break the ability to streamline orders directly from the ERP/POS system to the dispatching software. Though seemingly straightforward, this process is a crucial component of dispatching effectively.

Real-Time Tracking

The ability to track packages, drivers, the outside sales team, service drivers, and all daily operations in real-time can provide immense opportunities in efficiency, reporting, and customer satisfaction. Real-time tracking provides the ability to see a detailed full-picture view of where everything is in relation to the dispatching cycle at any given moment.

External Delivery Services

Driver shortages are having a heavy impact on the world of retail. With external delivery services, retailers now have the ability to call in an outside driver to help deliver products faster and more cost effectively. This same feature also benefits couriers, by allowing them to float their fleet and accept orders from retailers, creating a win-win scenario for both industries.

Customizable

While some solutions may provide a cookie-cutter, one size fits all option, other solutions provide customization to help meet each company's individual dispatching needs. In addition, software customizability allows the business to adapt its operations as well as grow with future trends and needs.

Route Optimization

Taking delivery to the next level requires the ability to optimize and also prioritize routes. Optimized routes organize each invoice in the most efficient order possible and may allow for re-arranging and customization of routes to prioritize VIP customers.

Scheduled Routes

Many times, certain routes will operate on a schedule of daily, weekly, or even monthly runs. Advanced dispatching software should allow a customer to set up their scheduled routes so that they are auto-created at the time of dispatch. This saves the dispatcher and manager immense amounts of time while also increasing efficiency of the operation.

B2C DELIVERIES UP 70% BY 2026 ^[6]



Delivery or Service Windows

When service or delivery windows are part of the delivery equation, it is important to be able to organize and route properly to meet the indicated time windows. Routes can be built to meet time windowed deliveries in the most optimal order to ensure that all deliveries are completed when the customer needs them to be.

Capacity

Many industries rely on the ability to fit the proper amount of product in each vehicle as well as follow vehicle restrictions. Advanced dispatching solutions can formulate routes based on weight, size, vehicle capacity, driver specifications, and much more.

Communication

Communication is key in the quickly changing dispatching operation. Through email and text alerts, better customer communication is both possible and necessary to compete against larger e-commerce corporations. Customers expect more, and with the proper dispatching tool at your fingertips, providing key details to customers can be done automatically.

Future of Last Mile

The future of the last mile lies in the use of advanced technology to dynamically manage demand and available delivery resources to get the deliveries to businesses or consumers as quickly as possible and when expected -- with real-time visibility to all.

As with any technology, there is no single solution to the last mile delivery challenge. Instead, the answer lies in combining a range of solutions, depending on the business model that each employs.

Expect drones, robots, and autonomous vehicles to play a significant role in the delivery of the future, depending on where the customer resides. For example, drones are expected to dominate rural areas, and robots are already making a splash in food deliveries in certain urban settings.

For those businesses that have invested wisely in a technology partner, they will most assuredly stay in the game of last mile deliveries as those partners are already engaging in future-ready features. For those who haven't yet invested, it's not too late, but it is time to research and move forward to stay in the game.

Last mile deliveries started with consumer demand, and they will continue to be fueled by customer expectations, which will most likely grow. This means that new technologies will be introduced to save time, reduce operational costs, and enhance the customer experience.

CONSUMER REACTION TO DRONES

54% DISAPPROVE

11% SUPPORT

34% FAVOR LIMITS [9]



References

1 Business Insider, May 2018

<https://www.businessinsider.com/last-mile-delivery-shipping-explained>

2 Parcel, October 2019

https://parcelindustry.com/article-5331-giving-customers-a-choice-the-power-of-personalized-delivery-in-the-age-of-amazon.html?utm_campaign=PARCEL%20Enews&utm_source=hs_email&utm_medium=email&utm_content=76445882&_hsenc=p2ANqtz-8T1ZX_nHk5jnCOul7Bw_

3 Supply and Demand Chain (SDC) Executive, October 2019

<https://www.sdexec.com/software-technology/article/21090345/report-shows-technology-is-changing-the-logistics-industry>

4 American Trucking Association (ATA): Truck Driver Shortage Analysis, 2019

<https://www.trucking.org/ATA%20Docs/News%20and%20Information/Reports%20Trends%20and%20Statistics/ATAs%20Driver%20Shortage%20Report%202019%20with%20cover.pdf>

5 (ATA): Truck Driver Shortage Analysis, 2019

<https://www.trucking.org/ATA%20Docs/News%20and%20Information/Reports%20Trends%20and%20Statistics/ATAs%20Driver%20Shortage%20Report%202019%20with%20cover.pdf>

6 Marketwatch, December 2019

<https://www.marketwatch.com/story/ups-stock-at-risk-as-rising-e-commerce-volumes-disrupt-delivery-business-says-bmo-2019-12-11>

7 Supply Chain 24/7: April 2019

https://www.supplychain247.com/article/7_top_trends_in_last_mile_logistics_the_revolution_is_coming

8 Marketwatch, December 2019

<https://www.marketwatch.com/story/ups-stock-at-risk-as-rising-e-commerce-volumes-disrupt-delivery-business-says-bmo-2019-12-11>

9 New YorkTimes, March 2019

<https://www.nytimes.com/2019/03/19/technology/drone-deliveries-faa-pilot-programs.html>