

Navigating the Last Mile with Fleet Automation

How last mile delivery companies use cutting edge technology to increase productivity, improve safety and reduce costs.



While last mile deliveries have seen explosive growth in recent years, what hasn't kept pace is the adoption of technology that helps manage the most complex leg of a product's journey to a local address.

This rapid growth and time pressure has created vehicle and package security challenges for last-mile delivery fleets of all sizes. Facing aggressive schedules, drivers have been known to leave vehicle doors open or unlocked during deliveries.

All this growth has kept pressure on established, larger companies with legacy systems who have been forced to adapt to keep up, while newer players may struggle with hiring drivers and fleet maintenance expertise.

Automated workflows, including digital keys, bring more efficiency to last-mile operations – freeing up resources so staff can focus on other critical tasks.



CHALLENGES

The Growth of the Last Mile Industry and Impacts on Consumers

In this eBook, we'll take a closer look at the on-the-ground challenges, as well as the ways fleet automation can make life easier for those businesses in the last-mile industry.

U.S. ecommerce sales reached \$815 billion¹ in 2020, which was a 43% increase over the prior year. In 2022, U.S. ecommerce sales were expected to reach \$1 trillion² for the first time. Last-mile businesses must also consider reverse logistics – in 2021, retail returns made up \$761 billion³ worth of products.

Some big-picture challenges include non-optimized route planning, a fragmented courier market, ongoing labor shortages, and customer expectations for faster package arrivals. **Other more tactical challenges include:**



Safety roadblocks such as vehicle thefts



Productivity declines, especially during peak seasons



Rising costs for maintenance, fuel, and rental vehicles

CHALLENGE ①

Vehicle Security & Driver Safety Risk

Last mile delivery drivers may enter higher-crime neighborhoods on their route, which increases the risk that the vehicle or parcels could be stolen.

Fighting for curb space on dense, urban streets, they leave their vehicles to bring parcels to the porch. This creates risk, as unattended vehicles can become targets for vehicle and cargo thieves. While package theft, also known as porch piracy, has become the more common crime in the U.S. in recent years, vehicles can also be vulnerable. A labor shortage has also added risk.

“For regional box truck operators, another key risk is in driver experience,” Liberty Mutual Vice President Ryan Mee told Insurance Business.⁴ “This has become even more prevalent in the last few years as last mile delivery has grown, which has attracted newer, less sophisticated drivers into the industry. Less experienced drivers certainly pose an auto risk, which means they also pose a cargo risk.”



CHALLENGE ②

Uneven Productivity, Especially During Peak Seasons

Customers who use ecommerce companies have ratcheted up their expectations for faster delivery windows. Only a few years ago, the standard delivery was seven days. **Today, 90% of customers expect their package to arrive in two to three days from order placement, according to the Retail Industry Leaders Association.**⁵

Faster deliveries have been enabled by dynamic route optimization and real-time exception management software employed by these businesses. Poor delivery performance can be catastrophic during peak shopping seasons, when online retailers book most of their revenue. One study found that 73% of customers experienced delivery problems in the October to December 2021 holiday season.⁶

73% OF CUSTOMERS

Experienced delivery problems in the October to December 2021 holiday season.⁶



CHALLENGE ③

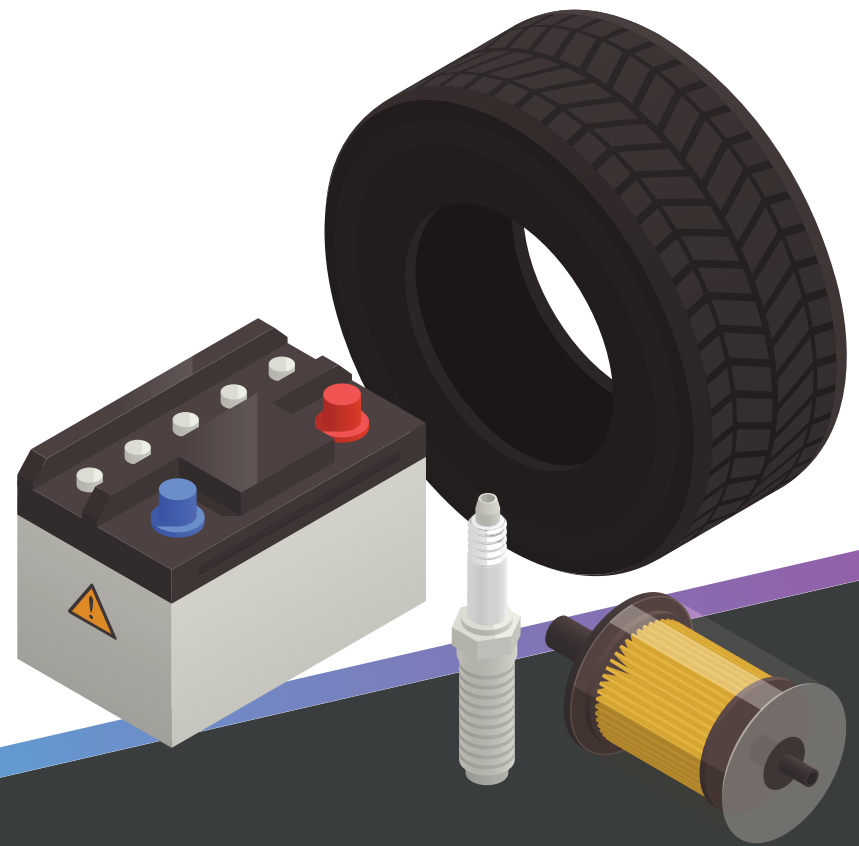
Spiking Operating Costs

Effective fleet management solutions help control costs, which are rising with every passing day, while reducing vehicle downtime and promoting smart utilization. Increasing costs are being driven by longer vehicle service lives, higher replacement tire prices, spare parts availability, higher labor rates, and increased vehicle complexity, according to Automotive Fleet.⁷

Maintenance has consistently been a focal point of rising fleet-related costs, reaching 20 cents per mile, which was almost two cents higher than the prior year, according to the 2022 HDT Fact Book.⁸

Last mile duty cycles impose more stress on vehicles than almost any other niche in fleet management. While the average person drives about 13,500 miles per year, a final mile vehicle can accrue 25,000 miles or more.⁹ With all those extra miles, there's a reason these fleets are increasingly considering electric vehicles to lower fuel costs accrued by more intensive duty cycles.

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BENEFITS

The True Benefits of Fleet Automation for Last Mile Fleets

Luckily, fleet-based businesses can face these challenges and, at the same time, transform their operations with the help of fleet automation and digitization.

Fleet automation solutions enable greater efficiency by reducing or eliminating paper-based and manual workflows. This allows businesses to reallocate precious resources to areas that are more impactful as fleet managers and operators deal with adverse macroeconomic trends.

With a digital-first approach, fleet automation platforms transform physical key management, reduce notification overload, prioritize tasks, and boost vehicle security while increasing productivity, efficiency, and customer service. In the last mile sector, automation can supercharge productivity in a world where every minute counts.

Let's take a closer look at how this works.



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BENEFIT ①

Boosting Productivity and Efficiency



Last mile delivery fleets see significant productivity gains by implementing automation solutions, especially by converting physical keys to digital keys.

Keyless technology enables three main benefits that are particularly impactful, from an efficiency lens, for last-mile operators:

1. Assign or reassign drivers, in the case of a maintenance event, to keep vehicles roadworthy and drivers behind the wheel
2. Set doors to lock or unlock automatically via proximity-locking functionality to increase efficiency and productivity
3. Preventing vehicle and cargo theft which are events associated with lengthy recovery times and high replacement costs

Granting vehicle access remotely reduces the “human factor” of a driver forgetting or losing his key along the route and becoming stranded. It also helps deal with preventative and unexpected maintenance events, allowing fleet managers to easily assign drivers to an alternative vehicle and quickly be on their way.

With proximity locking, fleet managers can set doors to lock automatically as the driver walks away from the vehicle as well as upon their return, allowing them to focus on delivering the package rather than fumbling for a key while trying to open and close doors and locate the proper parcel.

Automation also allows the doors to unlock as the driver approaches, meaning drivers can quickly be on her way to the next stop, cutting out inefficient time between deliveries.



BENEFIT ②

Enhancing Vehicle Security



Fleet automation solutions enhance vehicle security because they reduce targets of opportunity – delivery vehicles parked in crowded or unsafe locations that may have been accidentally left unlocked.

◀ **Proximity locking ensures that the vehicle will always remain locked when the driver steps away from the vehicle to make a delivery.** When the driver exits the vehicle, the doors automatically lock based on proximity and distance set by your compliance regulations. And when the driver approaches the vehicle for re-entry, the doors unlock, preventing the driver from having to use a physical key to enter and exit.



Proximity locking also protects cargo as it travels from point A to point B. Cargo theft increased to \$223 million in 2022, according to CargoNet.¹⁰ The average value of stolen cargo per event was \$214,104.

The use of digital keys also helps protect vehicles from disgruntled or former employees, allowing fleet managers to immediately assign or revoke access from anywhere, anytime. Fleet managers can also immobilize a vehicle's engine if they detect suspicious activity or a theft in progress.

BENEFIT ③

Lowering Downtime Caused by Maintenance



Vehicle downtime is a productivity destroyer for fleets, especially delivery fleets. Every day a vehicle remains in the shop is a day of lost income for that asset - and the business. **As a critical business asset, a delivery vehicle's value equates to how many stops it can make along its route.**

Fleet automation helps fleet managers know the health of the vehicle before it hits the road. This technology identifies maintenance needs instantly and schedules needed service, which helps vehicles stay roadworthy and returns the vehicle to the road more quickly in the event of an issue that needs repaired.

Fleet managers can then use automated workflows to assign a backup vehicle once repairs are scheduled to limit downtime and disruption while ensuring drivers and vehicles remain on the road, using remote access to grant permission to the necessary vehicles.

BENEFIT ④

Reducing Time Spent on Notifications

Fleet automation solutions help fleet-based businesses manage notification overload by connecting other fleet management systems such as telematics and video cameras under one umbrella. This streamlining of fleet management technology isn't always possible with telematics alone, which can overwhelm staff who need to prioritize the notifications.

And with automated workflows, many of the alerts fleet managers receive each day can be quickly addressed and resolved without the need for manual intervention or labor.



BENEFIT ⑤

Improving Cost-Control Initiatives

Fleet management is mostly a cost-containment game. Operating costs are always increasing for fuel and maintenance, especially for wear-and-tear items such as tires and brake systems.

Fleet automation provides a hedge against rising costs by nearly eliminating waste in a fleet's operations. By reducing time-intensive manual workflows, businesses can redeploy resources to tasks that provide a higher impact on the business, significantly increasing profitability and ensuring happy customers every step of the way.

To learn more about how Ridecell helps fleets increase productivity, efficiency, and safety, click here:

ridecell.com/fleet-automation



LAST MILE BY THE NUMBERS

\$1 Trillion

Estimated ecommerce sales (2022)



\$761 Billion

Reverse logistics product value (2021)

1,137

Number of Amazon
distribution centers in the U.S.
(January 2022)¹¹

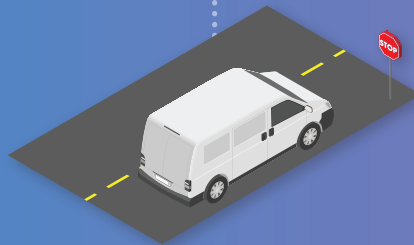


225

Number of packages delivered
per day by UPS driver¹²

125

Number of miles driven
per day by a UPS driver



100 – 200

Number of stops per
day by a UPS driver

Sources

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- ⁹ <https://blog.donlen.com/blog/7-steps-to-an-efficient-last-mile-delivery-fleet>
- ¹⁰ <https://www.ccjdigital.com/business/article/15305474/2022-saw-significant-uptick-in-cargo-theft-activity>
- ¹¹ <https://tinuiti.com/blog/amazon/amazon-fulfillment-centers-map>
- ¹² <https://www.businessinsider.com/im-a-ups-delivery-driver-what-my-job-is-like-2022-2>