



THE SUSTAINABLE LAST MILE. FASTER. CHEAPER. GREENER.

Something unexpected happened to last-mile delivery during the pandemic—it got greener. With many people stuck at home, e-commerce sales skyrocketed.¹ When supply chains started moving again, the ecosystem adapted fast. Stores became fulfilment centres. Ship from store and curbside pickup emerged. Parcel drop density rose.

Out of sheer necessity, new consumer behaviours and retailers' responses to them changed last mile delivery's carbon footprint. These sustainability gains could produce a remarkably more sustainable last mile. But only with action and smart investment.

The whole last-mile ecosystem—post and parcel organisations, retailers, delivery companies, governments and consumers—is at a tipping point. Go one way, and it can create a truly sustainable last mile. Go the other way, and things worsen unchecked.

No single entity can solve this problem alone.

It will take all ecosystem players working together in ways they never have before.

The potential of local fulfilment

Local or market-based fulfilment surged during the pandemic. Retailers accelerated fulfil-from-store investments to adapt. These investments won't be rolled back, and now many more items will come from local inventory. This creates an opportunity for new experiences around local fulfilment for consumers and exciting potential for a more sustainable last mile.

To understand this potential, Accenture developed a robust econometric model of the impact of local fulfilment centres for e-commerce using data from London, Chicago, and Sydney.² The model estimates the impact on outputs such as emissions and traffic congestion, based on inputs including local fulfilment centres prevalence, population density, average distance travelled per parcel, delivery vehicle mix and consumer demand projections.

The analysis is revealing. **The last-mile supply chain made possible by local fulfilment centres could lower last-mile emissions between 17 - 26% through 2025.** This improvement is broadly consistent across all three cities. Using local fulfilment for even half of e-commerce orders between 2020 and 2025 could lead to significant impacts.

3 ways to think outside the box to deliver the box

To make the last mile greener, it's critical to invest smartly in innovative technologies and balance high- and low-impact opportunities. Local fulfilment strategies are a starting point to drive change, but there are more actions that the ecosystem can take to make a lasting impact. Three fundamentals are key to any plan, and success involves coordinated investment and creative ecosystem cooperation.

01 Incentivise greener choices

Develop incentives and “choice architectures” that encourage consumers to receive deliveries in more sustainable—yet convenient—ways, and ecosystem players to make green investments.

- Retailers and delivery companies should make consumers more aware of the environmental impact of delivery options and offer greener choices at checkout. Choice architectures can include green shipping buttons and GHG calculators.
- Governments and city planners should weigh the trade-offs they can make to incentivise delivery companies to invest in greener fleets, enable the circular economy and develop greener route management practices.
- Cities can incentivise delivery companies to invest further in electric vehicles with a convenient electric vehicle charging infrastructure. They can also offer green vehicle driving lanes, ticketing and toll exemptions, or carbon credits for green vehicles.

02 Rethink asset use

Repurpose, retrofit and share assets like stores, infrastructure and fleets—while investing in green technology and evolving regulations to support these innovative approaches.

- Retailers can repurpose stores into local fulfilment centres, transforming them into omnichannel fulfilment hubs. These are hybrid spaces for shopping, collecting and returning deliveries.
- Delivery companies can also enhance cooperation and move to share assets in new ways. Providing access to each other's networks can eliminate costly redundancies and reduce emissions.
- Cities and regulators can encourage asset sharing. One way is by opening unused urban spaces as multi-tenant hubs. Another way to do this is by creating points at the outskirts of cities where deliveries are concentrated for all carriers.

03 Harness data and analytics

Act on real-time insights into consumer preferences and purchasing patterns to innovate and optimise inventory and route management for a lower last-mile carbon footprint.

- Retailers can stock the right SKUs locally with contextual insights into what specific customer groups in specific geographies need. This involves analysing a mix of internal and external data, social listening and monitoring local trends and events.
- Delivery companies can pursue more proactive delivery approaches that are kinder to the environment. Take anticipatory shipping, for example. Delivery companies use customer and geolocation data to ensure a package is delivered the first time.
- With more data, delivery companies can make routes more efficient, accounting for traffic and other real time-conditions. The goal is to optimise routes with extraordinary precision, maximising parcel drop density and reducing complexity and downtime.

In a world forever changed by the pandemic, the opportunity for a sustainable last mile has never been greater—or more urgent. Everyone has a part to play. What will yours be?

References

¹ Accenture, “COVID-19: New Habits are Here to Stay for Retail Consumers,” at <https://www.accenture.com/us-en/insights/retail/coronavirus-consumer-habits>

² Accenture and Frontier Economics, “Last-Mile Delivery Modeling: Estimating the Impact of Micro-Fulfillment,” 2020. See Research Methodology for more information on how the analysis was done.