

Curbside Pickup is not enough: how climate friendly retail delivering is protecting our environment

Last-mile delivery traffic is responsible for one-quarter of all greenhouse gas emissions from the transportation sector. Curbside pickup is helping but a wider logistical efficiency is needed.

Breathe in. Breathe out. What are you doing? You are moving air. Just like many partially filled delivery vehicles that you see on the road.

We all accept that there are too many delivery vehicles making too many journeys and that too many of them are so empty that they are moving more air than parcels. But what can be done? The obvious answer is to make sure every vehicle is completely full. Right? That might be the obvious answer but it isn't always the right answer.

Let's assume you have a lot of parcels to deliver and two vehicles to deliver them in. You can fit them all into one vehicle. This is great news. Now you only need one driver and your cost-per-delivery will be lower. Happy days!

You send your driver out at 8 am with the van full of parcels. But 14 hours later they still haven't come back. They are out there somewhere driving from street to street, from house to house, dropping off one parcel after another, slowly emptying their load.

That's why every carrier has lots of vehicles that are only partially filled, with the smartest firms using [route optimisation and data analytics](#) to be as efficient as they can. But that's still not enough.

Why all the urgency?

Last-mile delivery traffic is responsible for one-quarter of all greenhouse gas emissions from the transportation sector. The European Union wants to see a reduction of 80%–95% in greenhouse gas emissions by 2050. Achieving that can only happen if the transport industry can reduce its emissions by 60%.

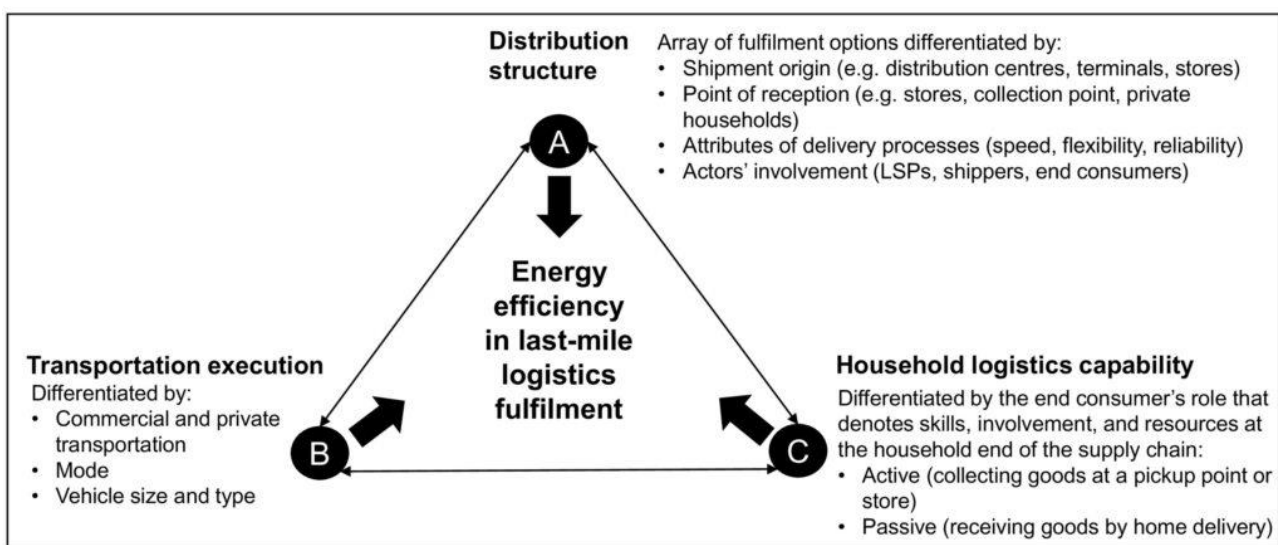
It's not hard to see that [last-mile delivery](#) needs to make some changes. One of the most obvious targets for change is home delivery, which by its very nature consumes a great deal of energy and time.

One solution to the emissions challenge will be electric delivery vehicles. There is no doubt that electric vehicles are growing in popularity. But in 2019, just [1.3% of new commercial vehicles registered were electric](#). Meanwhile, across Europe, there are many millions of diesel-powered vans and trucks pushing out fumes. It will be a long time before the rise of electric vehicles reaches the emissions tipping point.

In the meantime, there needs to be a very focused effort to squeeze every last drop of efficiency out of every single resource in the last mile. Part of that should include the redesign of [delivery networks' locations](#) and an acceptance that we are all in this together – we all suffer from the climate crisis, and we should all play our part in fighting against it.

A scientific approach

Árni Halldórsson is a Professor in Supply Chain Management at the Chalmers University of Technology, Gothenburg. He and his colleague, logistics specialist Jessica Wehner PhD, recently carried out a study into the problem of achieving greater sustainability in the delivery sector. It's called *Last-mile logistics fulfilment: A framework for energy efficiency*.



Although the study concerned itself with the Swedish retail sector, it contains some broad observations that can be applied anywhere. “[Last-mile fulfilment](#) is among the most energy-consuming logistics operations in the supply chain because of the vast amount of stops and low fill rates,” the report says, and this is true of just about any market.

To reduce energy consumption and increase efficiency, large amounts of goods should be [shipped collectively as far down the supply chain as possible](#), the researchers suggest. Instead of home delivery, parcels should go to drop-off points. Ideally, these would be located close to densely populated areas, so that the end-customer can collect their parcel easily.

We need a bigger ecosystem

This is a topic I have written about several times in the past, usually in relation to changes in grocery-shopper behaviour in the UK. Huge supermarkets in suburban locations made sense 15 years ago, when grocery shopping dominated people's weekends. But that is no longer the stand-out feature of the retail landscape. Instead, people buy online and top-up from local shops. The past 14+ months of pandemic life has made that change even more profound.

A more efficient and environmentally friendly click and collect model would be much more of a closed-loop than the kind we are typically familiar with today. There remains a significant reliance on hope, in the click and collect sector.

Retailers hope customers will make additional purchases while collecting their parcels. Customers hope they won't have to wait too long at the counter. And we all hope that encouraging shoppers to give up home delivery won't mean they get in their cars and drive to the collection point, completely reversing any emissions reductions derived from decreased home delivery.

But hope is not a [strategy for success](#). This is why the whole sector needs to think of itself as an ecosystem made up of retailers, carriers, couriers, logistics service providers, app creators, data analysts and customers – yes, customers too. The retail logistics world [needs to involve the end customer in finding long-term sustainable solutions](#) to challenges like emissions reductions.

That might involve incentives for not driving to a collection point. Or allowing customers greater flexibility and reduced wait times when picking up a parcel. Maybe it might mean neighbourhood collection centres within easy walking distance. Or parcel lockers in more creative locations.

Who knows, perhaps we will need a combination of all of the above so that we can all, finally, start to breathe more easily.