

## Last Mile 2020: Before and after COVID-19

**Last Mile**  
experts  
*Our focus drives your SUCCESS!*

  
**Postal Hub Podcast**  
The postal, parcels and express podcast

## Welcome to the Last Mile Report 2020

**What are the big trends in the last mile? When will electric vehicles be adopted at scale? Will seven-day delivery become standard?**

These were just some of the questions we asked in our Last Mile Survey 2020. We surveyed over 200 industry experts from around the world.

In this report, we share the results of the survey, along with expert analysis and commentary on the themes.

Survey respondents were from:

UK: 15%

USA: 9%

Australia: 6%

Brazil: 4%

Poland: 4%

NZ: 3%

Greece: 3%

Ireland: 3%

Belgium: 3%

Finland: 3%

Other respondents were from Saudi Arabia, France, Canada, Germany, Turkey, Switzerland, Spain, Italy, Austria and Bulgaria.

## The impact of COVID-19

When we conducted the survey in January and February, the novel coronavirus was silently making its way across the world, and its impact hadn't been felt in the last mile outside of parts of China.

The COVID-19 outbreak has affected work habits, e-commerce buying habits, parcel volumes, interactions with the customer in the last mile, and more.

We conducted an additional survey in April, to ask the same sample of industry experts what they were seeing in the last mile, and for their predictions for how the pandemic will affect the delivery sector in the longer term.

When the pandemic passes, and we enter the "new normal", working from home may increase compared to pre-COVID-19 levels, which will have an impact on all B2C delivery modes. There are many workers who simply cannot work from home, and in other workplaces work from home will still mean working in the office for a reduced number of days each week.

Whatever the new normal will be, all delivery and e-commerce operators will need to be prepared to offer the best possible customer experience in the last mile.



## Marek Różycki – Managing Partner, Last Mile Experts

With over 25 years in finance and general management roles, Marek is a seasoned manager and entrepreneur. His career has included senior Executive roles with Coopers & Lybrand Consulting, Kraft Jacobs Suchard, Allied Domecq, Grand Metropolitan and Monsanto.

Following a senior finance role with DHL, Marek set up Masterlink (now DPD) in Poland and developed it from scratch to reach market leadership in six years, before selling the company.

At GeoPost/DPD, Marek headed Central and South-Eastern Europe (16 countries, 300+ m EUR).

Marek was VP Amazon Logistics EU until 2015 and now heads Last Mile Experts, specialising in CEP and e-commerce last mile advisory. He has recently acted as Industry Advisor in several major due diligence exercises in Poland and Europe.

With Ian Kerr, he writes the weekly last mile analysis column published on the *Parcel & Postal Technology International* website.

[mrozycki@lmexpert.com](mailto:mrozycki@lmexpert.com)





## Ian Kerr – Founder, Postal Hub Podcast

Ian Kerr is the founder and host of the Postal Hub Podcast.

Ian has a deep knowledge of the Australian postal network, both in retail and delivery, through his many years working for the Post Office Agents Association Limited. POAAL is the national association for small business owners in the Australian postal sector, including the owner/operators of Licensed Post Offices and Mail Contractors who hold contracts to deliver letters and parcels.

He has contributed articles to *Parcel & Postal Technology International* and *Mail & Express Review*.

With Marek Różcki, he writes the weekly last mile analysis column published on the *Parcel & Postal Technology International* website.

[ian@thepostalhub.com](mailto:ian@thepostalhub.com)



**Postal Hub Podcast**  
The postal, parcels and express podcast

## Out-of-home delivery

Out-of-home delivery options, in particular parcel lockers and delivery to PUDO points, have grown in prominence in recent years. There has been significant expansion in the number of locker installations around the world, and more and more retailers are partnering with delivery companies (via delivery platforms) to become PUDO points.

Other out-of-home delivery options include in-car delivery, delivery to neighbour, and individual residential parcel lockers.

From the e-commerce shopper's perspective, the rise of out-of-home delivery has been fuelled by the growth in e-commerce, businesses refusing to accept B2C parcels for employees, and e-commerce customers not being at home during the day to receive their parcels.

From the shipper's perspective, cost is considered to be a leading factor. Making a single-item e-commerce delivery to a residence is a costly proposition. Low-volume residential deliveries will always be operationally expensive and, at some point, could become so pricey that the overall e-commerce value proposition could be placed in jeopardy.

From the carrier perspective it is also about capacity. PUDOs and lockers offer much more efficient operational capability with significantly more parcels per stop, almost 100% first time delivery (for "to door" this can be as low as 65%, even in some European markets) and ease of access to the stop

(same easily found location, with good and stable access times, and often better parking options).

PUDOs and lockers offer lower-cost alternatives to residential delivery. Multiple residential deliveries can be consolidated at a single PUDO/locker for consumer pickup. And, of course, PUDOs and parcel lockers offer much better first-time delivery statistics.

Will customers have to pay more for the convenience of the costly home delivery? Or is this a betrayal of one of the core values of e-commerce shopping – the convenience of receiving your purchases at home?

A middle road may exist – residential parcel lockers. These could be "standard" parcel lockers located in the lobby of an apartment complex, or lockable boxes at suburban properties.

To this point, residents have been resistant to paying for their own parcel locker installation. Could customers' newfound reliance on e-commerce change that attitude or will smart lock technology make this unnecessary?

Nonetheless, prepare to see e-commerce retailers offering pricing incentives for delivery to PUDO points and parcel lockers. In the future, free shipping or subscription offerings may very well be limited to access point pickups, as we are already seeing in some European markets.



## Carrier-specific or carrier-agnostic?

Carrier-neutral or carrier-specific? That's the big question for parcel locker or PUDO networks.

In Belgium, bpost has embraced the carrier-agnostic model with its Cubee network. PostNord is gradually moving to an open network in its Nærboks JV with locker manufacturer SwipBox, as is Collect+ in the UK as it distances itself from its old partnership with Yodel. As an open network, any parcel or logistics operator can access the parcel lockers.

So why open up a parcel locker network to competitors? Would it mean giving away a competitive advantage? Or is it a smart way to reduce its own last mile costs while making money from other operators?

The success of any parcel locker network depends on its density. Taking a multicarrier network can help immediately generate volumes for the network.

Speed of installation is another feature of these locker networks. Nærboks operate independently from external power sources or internet connections.

Carrier agnostic networks are few and far between in Europe, but there are good examples of this working elsewhere.

China's **Hive Box** is an example of a carrier neutral parcel locker network. SF Express and STO Express own stakes in Hive Box and it has incredible network density, with over 180,000 locker locations. Alibaba uses Hive Box extensively.

By comparison, JD.com's impressive parcel locker network of over 50,000 locations is restricted to JD's delivery fleet.

Carriers pay a fee-per-use for placing an item in a Hive Box parcel locker for customer collection. Doors can turn over several times a day.

The Singapore government is planning a national locker network of 1,000 locations open to all the logistics players and to all e-commerce platforms.

Results from the pilot showed that a driver was able to deliver up to 250 parcels per day to the parcel lockers, about four times more deliveries compared with doorstep deliveries... and with more coverage and more volumes, this efficiency is expected to grow up to 550/600 parcels per day

Parcel lockers (together with PUDOs) only make sense when offered at scale. Last Mile Experts estimates that an absolute minimum for any viable solution is one per 10,000 people – which equates to 8,000 lockers for a country like Germany. In Singapore's case, 1000 lockers for a city with a 5.6 million population is pretty good at 1.8 APMs per 10,000 inhabitants.

Carrier agnostic lockers offer many benefits. Apart from the economic advantages, there are ecological benefits from delivering several parcels to the same point and with first-time success (APM delivery success is close to 100%).

In a sense, carrier neutral parcel lockers are an infrastructure play and function like posts that deliver the last mile capability for commercial parcel carriers.

Typically, postal operators are closed networks. They grew from being state-owned letter delivery organisations, operating in a monopoly situation.

As e-commerce grew and posts' B2C e-commerce volumes grew, some posts considered their closed network to be a competitive advantage. Their approach to e-commerce retailers was to say, "We are the only carrier offering 100% nationwide coverage and our retail network is closest to the consignee."

Advocates of this approach will say that by not allowing anybody in, the incumbent operator strengthens its competitive advantage, meaning customers have no choice but to work with them. Moreover, the barriers to entry are too significant for any newcomer to become a serious challenger.

One of the best examples of this approach is Deutsche Post DHL, which believes its unparalleled network of post offices, access points and lockers creates an unassailable wall protecting their home market.

Some posts, such as USPS, deliver parcels for a variety of carriers – yes, including direct competitors – for a fee. The USPS's service is called Parcel Select, and is often used by

other private parcel companies to complete last-mile delivery of their shipments

Losing the title of the only carrier that delivers to 100% of the population may result in forfeiting some competitive advantage, but should guarantee more parcels going through the network – including parcels to rural and remote areas.

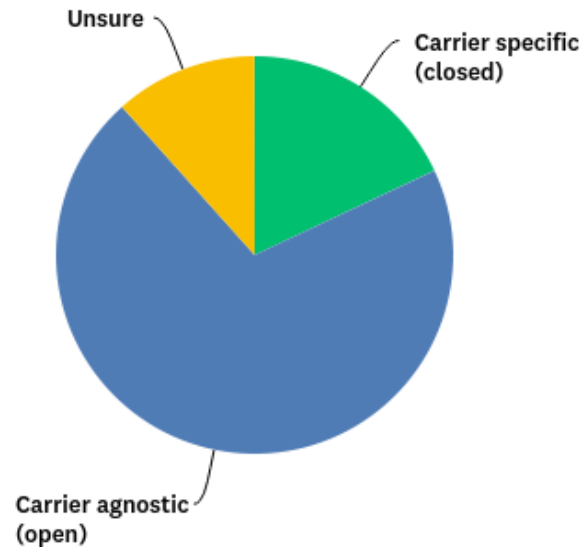
In addition, if this volume is used to expand to a wider network with better coverage (and customer experience) it actually makes it more difficult for any new challenger to enter or compete. And that includes 'stealth competitors' such as Amazon.

A final argument here is that if other carriers are allowed to use the postal network, they won't be 'forced' to set up their own alternative network due to consumer demand for PUDO or parcel locker alternatives, which will in turn compete with the incumbent.

Marek, who is a fan of military history, adds that unassailable walls such as the Maginot Line are fine until somebody decides to circumvent them in a disruptive or unexpected manner... as was the case with this 'invincible' fortress.

What we need for any final conclusion is to have more empirical evidence from those posts that have decided to bite the bullet and open up their networks.

## Q2 What is the optimal model for PUDO/parcel locker networks?



The overwhelming majority of respondents (70%) subscribe to the view that the future is with agnostic networks, while only 18% still feel that closed networks will be the way forward. Interestingly, just 12% were unsure, so this gives a rather clear result in favour of open networks.

This makes for an interesting contrast with the current approach of many postal operators, that manage carrier-specific parcel locker networks,

Marek's view is that ultimately the delivery sector – including postal operators – won't have much choice; if we are to deliver capacity in the last mile in line with e-commerce needs, the "sharing economy" will be a key enabler here.



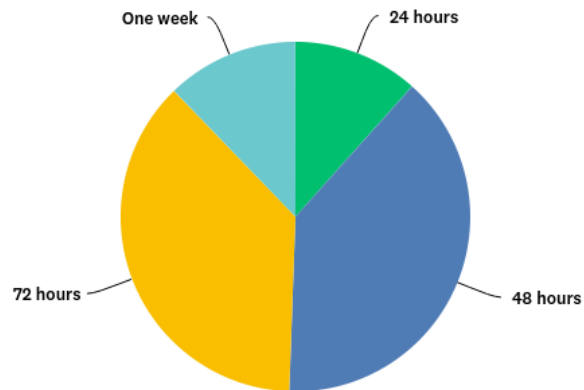
## Parcel hold times

There is no industry-wide standard on how long parcels should be held at a parcel locker before they are taken to a staffed facility (such as a post office, PUDO, or sorting facility) for collection.

Some locker networks give customers 48 hours to collect their parcels from lockers, others allow 72 hours.

Please see the following page for examples from InPost and Lietuvos paštas.

Q3 How long should parcels be held at a parcel locker before they are taken to a staffed facility for collection?



### Responses:

24 hours: 12%

48 hours: 39%

72 hours: 37%

One week: 12%

Lietuvos paštas (Lithuanian Post) has been refilling its lockers up to four times a day, as does InPost in Poland. Both players have also been running incentives to motivate customers to collect their parcels quickly.

This indicates that customers are increasingly motivated to collect their parcels from lockers. Just the same, a time limit needs to be imposed to deter a small minority of customers from treating parcel lockers as their own personal storage units.

InPost in Poland now has standard 48-hour parcel hold times (and during COVID-19, parcels automatically return to sender after this).

Lietuvos paštas noted that during the first month of the COVID-19 pandemic, parcels were collected from lockers in just over 10 hours on average – about four hours faster than before quarantine. Nevertheless, if parcel hold time could be reduced further then parcel locker usage (and convenience for customers) would be improved even further. The post constantly monitors the occupancy of the terminals, sending additional SMS messages to customers with an incentive to pick up their parcel faster.

The majority of survey respondents believe that 2-3 day collection limits are appropriate.

Our own view is that probably 48 hours is the most efficient solution, with a paid option to extend storage for longer periods.



## Unattended delivery

Over the past few years there has been growth in new forms of what we call unattended delivery.

Unattended delivery quite simply is delivery where the recipient isn't present. So in addition to parcel lockers and PUDOs, there are delivery options such as in-car delivery, delivery to neighbour, and in-home delivery.

Royal Mail has offered delivery to neighbour for some years, and now other networks are adopting a formalised version of this. We must note, however, that this model is quite UK-specific and doesn't seem to work so well elsewhere.

A variety of carriers and car manufacturers have trialled in-car delivery. It's available for recent model cars, but is subject to a range of restrictions. For example, cars must be easy to find and not parked in a secure car park. Also there's the issue that some larger courier vehicles will be too high to enter a garage.

Smart lock technology is powering in-home delivery.

Security and trust issues aside, in-home delivery offers the ultimate customer experience when it comes to unattended delivery. This can be mitigated by use of garages, closed porches or even garden sheds which don't give access to the main "home".

Smart lock technology also enables home delivery for large items such as fridges or washing machines. And while

PUDOs/lockers have more parcels per drop, in-home's virtually 100% first-time delivery rate means this solution is green, in that wasteful failed first-time deliveries are avoided.

In the USA, Walmart is enabling in-fridge delivery thanks to smart lock technology.

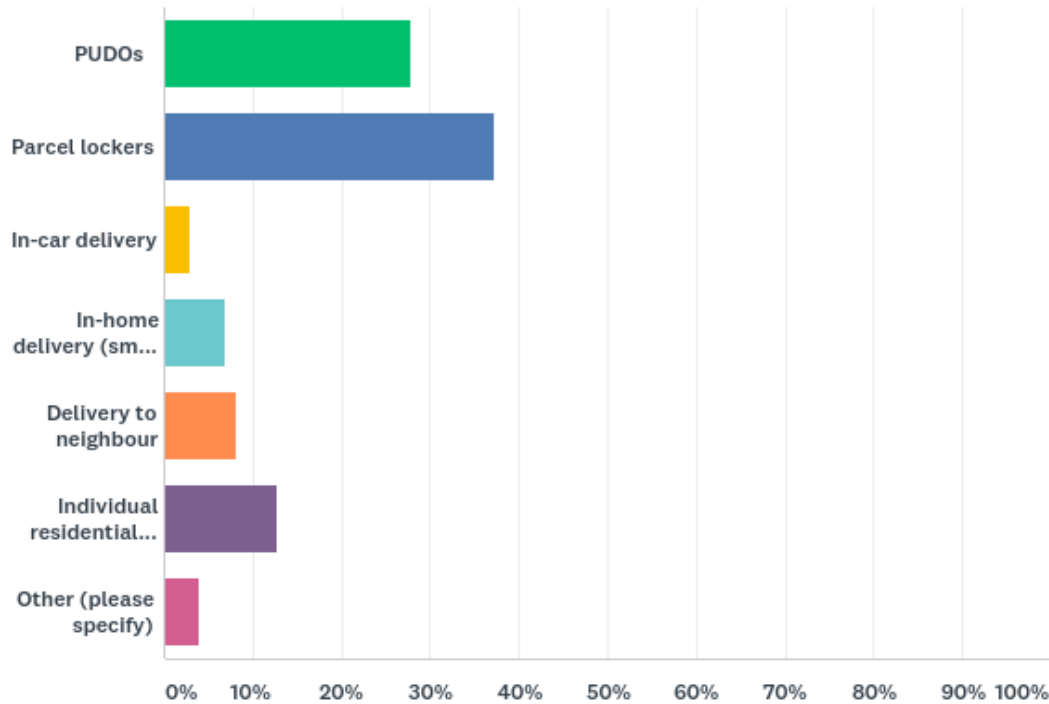
Delivery drivers will wear body cameras on their chests, so customers can watch live streams of deliveries being made.

Walmart will have specialised delivery drivers for this service. They will undergo extensive training in being respectful and careful in customers' homes, how to select the freshest grocery items, and how to organize the most efficient refrigerator.

Amazon hasn't been idle in the field of in-home delivery. With "Key by Amazon", Amazon customers will be able to use their garage as a delivery point, as well as grant access to their home remotely. The new products also integrate with Ring smart security solutions.

Amazon Key and similar products will be less relevant to multi-person dwellings, where residential parcel lockers would be more effective. Having said that, a concierge's room can be made into a large 'leave safe' area with this kind of technology.

## Q4 Which modes of unattended delivery will grow fastest?



### Responses:

PUDOs: 28%

Parcel lockers: 37%

In-car delivery: 3%

In-home delivery (smart locks): 7%

Delivery to neighbour: 8%

Individual residential parcel lockers: 13%

Other: 4%

It is of note that, as per our own view, respondents see a prominent place for both lockers and PUDOs in the last mile. These two options distance all others with 37% and 28% of respondents supporting them.

While smart locks only make up 7%, we are more optimistic about their use, especially for heavy and bulky items and

where a separated “leave safe” area is available such as a garage, shed or “lockable” porch. Recent evidence from one of our smart lock clients is that in a pilot over two thirds of users refused to give back their smart lock!

## Autonomous delivery

Will drone or robot delivery progress beyond trials and media stunts? While we've seen drones used for delivery of lab samples in Switzerland (Swiss Post) and in the USA (UPS), there have been a never-ending series of trials of ground-based and aerial delivery drones.

Unmanned aerial vehicles (UAVs) are the real headline-grabbers. The true strengths of UAVs lie in specific applications where drones can transport goods in a direct line, over mountains or water, which would otherwise be time-consuming or difficult to traverse.

Autonomous ground vehicles (AGVs) are currently deployed in a small number of markets, sometimes in closed environments (such as university campuses) and other times on public streets.

Swiss Post's started trialling a medical drone delivery service in March 2017 in partnership with drone company Matternet, connecting two hospitals in Lugano by drone. Laboratory samples were later transported by drone between various medical sites in three Swiss cities.

Swiss Post successfully completed well over 3000 medical deliveries via drone until the programme was grounded in the aftermath of drone crashes.

Starting in 2019, UPS has been delivering medical samples via unmanned drones in collaboration with Matternet.

UPS's drone programme has been running at WakeMed's flagship hospital and campus in the Raleigh, N.C., metropolitan area.

Drone transport provides an option for on-demand and same-day delivery, the ability to avoid roadway delays, increase medical delivery efficiency, lower costs and improve the patient experience with potentially life-saving benefits.

UPS partnered with GAVI and Zipline in 2016 to deliver blood products to remote locations in Rwanda. In early 2017 it launched a trial of van-borne package delivery drones.

On the ground, FedEx has launched a robotic delivery vehicle called the SameDay Bot, which will allow retailers to accept orders from nearby customers and send them directly to the consignee's home or office that very same day.

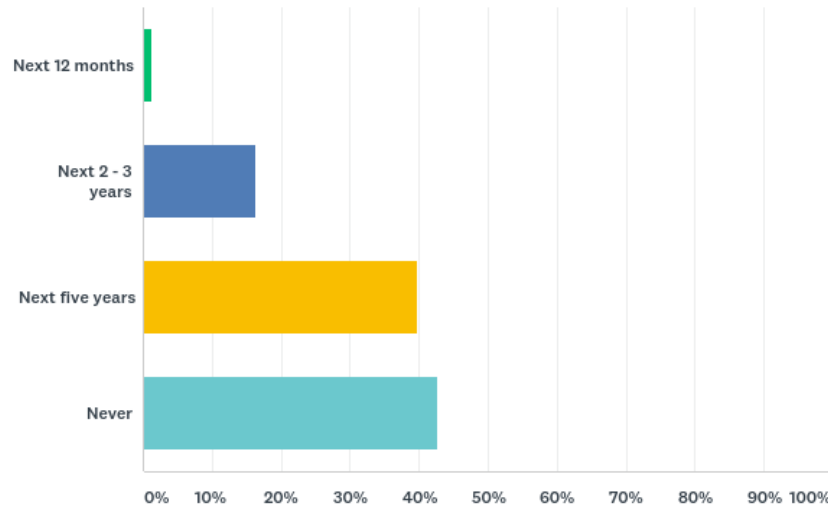
It can travel on pavements, roadside ramps and even steps, to deliver small parcels to the customers' door.

Amazon has launched its own AGV, called 'Scout', and applied for a patent for a home-based AGV that will travel from the consumer's doorstep to a delivery truck in the street to collect customer orders.

Other companies, such as Starship and Cleveron, have developed AGVs for delivery.

More recently, JD.com has used its AGV/locker prototype to deliver medical supplies to hospitals in COVID infected areas.

### Q5 How soon will we see airborne drones (UAVs) delivering B2C parcels at scale?



#### Responses:

Next 12 months:	1%
Next 2-3 years:	16%
Next five years:	40%
Never:	43%

While many respondents, and our own Ian Kerr, are very sceptical about UAVs, over half of respondents believe that they will be used at scale in the last mile over the next 5 years. Having said that, 43% still don't believe that this will ever be the case.

Our own view is that they will be used "at scale" for specific use cases such as medical related areas, where they can offer unique time or access advantages but not in core CEP last mile activities.

For AGVs (robots), 45% of respondents believe AGVs will be delivering B2C parcels at scale within the next five years. Only 12% think we'll never see AGVs prowling our streets in large numbers.

Sooner or later AGVs will come in the last mile, and COVID-19 will probably speed up their implementation, but the problem with the "last foot" remains.

Most survey respondents (70%) took the view that autonomous vehicles will be used at scale in line haul first, with only 22% opining that AGVs will first be used at scale in the last mile.

Still, autonomous trucks are still in the development and testing stage. Perhaps autonomous vehicles will first be used at scale in closed environments.



## Electric vehicles

Low-emission zones in cities like London and Berlin, as well as state and local regulations, are forcing carriers to deploy more and more electric vehicles to their fleets.

Growing environmental awareness will give rise to customer pressure on courier and postal services, as well as at online stores where they make purchases.

EVs are better than conventionally powered vehicles for noise levels and air quality in the city centres where millions of people live and work. Good examples can be found in more ecologically minded cities such as Rotterdam in the Netherlands.

The drive system of a typical car with an internal combustion engine (ICE) has over 2,000 moving parts, whereas EVs have only 20-30 in the electric drive – leading to lower maintenance costs and simple repairs.

Typical charge costs are a fraction of fuel costs – as low as 20% of comparable fossil fuel costs.

EVs can be more comfortable for drivers on short distances because they're quick to start, virtually silent, and smooth to drive. Full engine power is accessible from 0km/h. They can also lead to more productivity as seen in the Norwegian Post case study, below.

EVs are usually more expensive than their ICE counterparts, typically costing 50% more. Some government subsidies can compensate part of this difference.

If we talk about last-mile deliveries or generally corporate use, most companies – with a little help from experts – are capable of implementing EVs on sufficiently long routes, while avoiding the need to charge during the day.

So what's holding back the widespread adoption of electric vehicles? Our survey respondents identified three major factors:

- Charging infrastructure (59% of respondents)
- Vehicle purchase price (54%)
- Range (47%)

Fleet purchasers can set up their own charging infrastructure, so perhaps we can discount that as an inhibitor.

With regard to vehicle purchase price, electric vehicle advocates say EVs' total cost of ownership is less than that of ICE vehicles.

There is very little availability of suitable electric delivery vehicles, especially at the lower-priced end of the market. Many of the cheaper models have shortcomings such as small payload, or a poorly-finished cabin interior.

A new wave of improved electric delivery vehicles is coming. Currently, selected large companies can already test (or buy in small quantities) slightly more expensive German last-mile EVs, such as the Mercedes eVito and Volkswagen eCrafter. Nissan's NV200 also has an adapted version in the form of

the Voltia which offers all of the benefits of a tested EV with double the cubic capacity. These vehicles have the advantage of being supported globally by major car producers, with a dense service network and long-term relations with fleet managers.

As identified by our survey respondents, range is a continuing concern for fleet managers. EVs are typically deployed in urban environments, where routes are shorter than those in rural areas.

Some respondents (14%) raised a concern over the lack of green energy choices. In countries like Poland where the vast majority of electricity comes from fossil fuel combustion, one can question just how “green” an electric fleet is. Ironically, EU penalties for pollution mean that electricity is more expensive and usage of EVs becomes less attractive.

Payload (17%), reliability (17%), and ability to function in hot or cold conditions (14%) were identified as other factors hindering the widespread adoption of electric vehicles.

Good planning, flexibility in route management and understanding of the various types of EVs and their relative merits is key to any successful project aimed at electrifying the last mile. See our case study on the next page to understand Norwegian postal operator Posten Norge’s approach to creating an efficient electric delivery fleet.



## Electric vehicle fleet case study

Posten Norge started looking at electric vehicles in 2010, at a time where there weren't many options to choose from. It had a delivery fleet of 4,500 diesel vans, comprising 96% of the fleet. Its EV story started with the realisation that a diesel van wasn't suited to all types of route.

"We defined a fairly simple vehicle strategy that we would use for future implementation," says Gunnar Inderberg, head of operational development at Posten Norge. "We separated routes into city centre, suburban and rural. All had different characteristics with regard to number of stops, distance travelled, weight/volume carried, etc."

Based on this analysis, it became easier to see what kind of vehicle fits where. Postal delivery in city centres is generally characterised by a medium number of stops but with multiple delivery points (due to blocks of flats), fairly low kilometres travelled and poor parking availability. Suburban areas have more stops (more single houses) and a medium range of kilometres travelled per route. Rural routes have relatively few stops, but a large number of kilometres travelled.

What Posten saw was that by replacing combustion vehicles in city centres and suburban areas it could improve productivity. There was no 'one size fits all' option, though. For city centres, electric trolleys and eBikes made sense, but for suburban areas range often became an issue and larger, more powerful EVs were needed.

Many posties were making 300+ stops per route, which took a lot of time with a car (drive up to the mailboxes, brake, park, pick the mail, get out of the car, walk to the mail box) but with smaller/lighter vehicles without doors, they could access the mailbox faster. Posten actually saw time savings of up to 15% here.

This was the background for embarking on a major electrification initiative with Paxster, which produces a niche vehicle for postal and logistics deliveries, and larger EVs such as the Renault Kangoo and Peugeot Partner. Today Posten has more than a 1,000 EVs in the fleet (about a third the total) and this number is growing.

"Our EV policy has reduced annual CO2 emissions by 40% over the past few years," says Inderberg. "We have an ambition of increasing the electric ratio even more, but with current battery technology we can't cover all routes."



## The green grocer last mile

There's growing focus on the carbon footprint and environmental impact of grocery delivery.

Some grocers are using cargo bikes (pedal powered or electric) to boost their green credentials, but they form only a part of grocers' delivery fleets, which are still stacked with diesel vans.

Dutch grocery start-up Picnic has built up a 100% electric delivery fleet. Picnic's restrictions on ordering (including set delivery times for each neighbourhood) reduce the distance travelled by its drivers. Picnic also announced it will install solar panels on top of its electric delivery vehicles.

In the UK, grocery chain Sainsbury's has two electric vans in its home delivery fleet. It's a start... but that's all. And consider that a 2018 study named Sainsbury's the UK's "greenest supermarket", finding the retailer to be the least polluting of all UK supermarkets.

The market for the delivery of fresh groceries has enormous potential for growth – as we've seen during the COVID-19 outbreak. In Germany and the USA, annual growth expectations for eGrocery from 2018 to 2023 are running at about 20 per cent. (This prediction was released pre-COVID-19, obviously.) In the UK, considered by many to be the most mature e-commerce market, annual growth stands at 8.7 per cent.

A key question for the sector relates to the last mile. Should it be outsourced? Or brought in house? What does this mean for branding and for customer-centric delivery features such as specific delivery windows. What gives a higher quality of service?

The sector faces major challenges when it comes to transporting temperature-sensitive goods. Different foods require different storage temperatures, complicating the matter of optimising the usage and cooling of the load space.

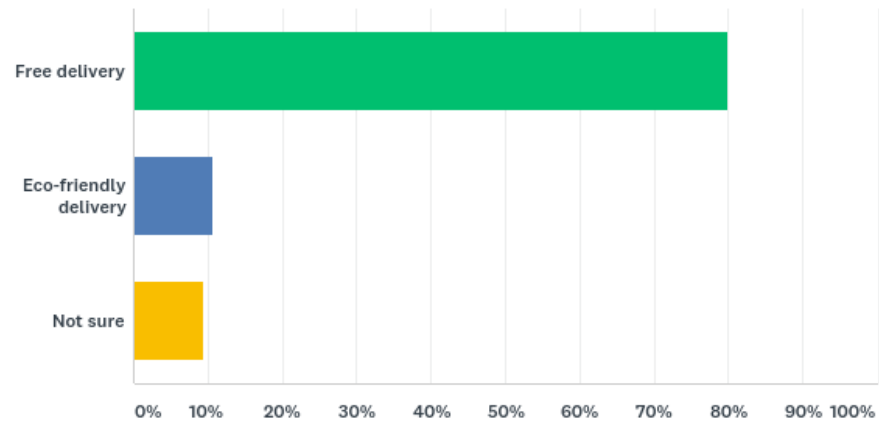
Then there's access to green zones. Growing numbers of cities restrict access to low emissions vehicles – and not everything can be delivered by cargo bike.

The battery-electric cargo bike is an inexpensive delivery vehicle, and easy to manoeuvre especially in traffic, but has a lesser payload than electric vans.

Food safety is one of many factors critical to the success of grocery delivery. Delivery vehicles must be capable of transporting food at the right temperature, carrying enough volume to make delivery profitable, and be capable of entering green zones.

EVs can help reduce delivery's carbon footprint (provided electricity isn't mainly generated from coal) and any initiative in this space is good. Another way to be greener is to improve successful first time delivery via unattended delivery methods like smart locks.

## Q9 Which is more important for e-commerce shoppers: free delivery or eco-friendly delivery?



### Free vs green

When it comes to free vs green delivery, free is still customers' preference according to our survey respondents (80%). Only 11% said eco-friendly delivery is more important than free delivery.

Of course, free delivery and green delivery aren't mutually exclusive. But does "free" delivery encourage cheaper, less green delivery options? Should customers be made fully

aware of the financial and environmental cost of their deliveries?

A desire for free shipping suggests that some time will need to pass before "Green" will be seen as more important "Free", perhaps with the exception of "eco friendly" areas such as the Nordics or Switzerland,

## Green zones and low emission zones

Smart cities are actively looking at developing more “green zones” and this will lead to increased demand for EVs, bicycle delivery, parcel locker and PUDO delivery options.

City logistics is still a new trend, but keep an eye on this as local authorities encourage or even coerce carriers to share routes or delivery infrastructure.

Green zones are likely to become more and more prevalent as pollution and congestion increases. All eyes are now on London’s ULEZ and associated green delivery initiatives.

## Technology and future trends

Interactive Delivery Management – IDM – is one of the most important tools in e-commerce delivery.

IDM empowers the customer to be in control of their deliveries, and helps power first-time delivery success.

Best-in-class systems give full and real time parcel information to the consignee, allowing recipients to choose how, when and where parcels will be delivered – as well as giving consignees the ability to change their mind “on the fly”.

Good examples are DPD UK’s “Predict” and Amazon Logistics IDM systems where consignees have a variety of delivery options, change their mind on the fly and see the van on an “Uber like” map...to end up with a final 15-minute delivery window!

### Responses:

Increased EV demand:	63%
More lockers and PUDOs:	58%
City logistics:	45%
Higher surcharges:	20%
Off-peak delivery:	19%
Restricted delivery days:	9%
Below ground delivery:	6%

### Responses:

Delivery time prediction will become standard:	48%
More accurate delivery time prediction:	42%
Increased use of out-of-home:	42%
Higher first-time delivery rates:	38%
Better visibility for recipient of where the driver is:	30%
In-flight delivery changes (by the recipient) will become standard:	28%
Better communication of “leave safe” options to driver:	24%
Drivers able to find addresses faster:	16%
“Rate your driver” functionality will be more widely available:	10%



## Seven-day delivery

Last year FedEx and UPS announced that in 2020 they would commence seven-day delivery. The US Postal Service (USPS) already delivers parcels on Sundays – mostly for Amazon. Is Sunday delivery the new standard in the USA? So it would seem.

Under the new UPS seven-day service, USPS will deliver selected UPS packages to homes, probably in less dense or hard-to-reach areas, using Parcel Select (USPS's economical ground delivery service for packages entered in bulk), which UPS calls SurePost. USPS says the arrangement is part of its strategy to expand its shipping and packages business.

UPS will probably use USPS to deliver to rural and low-volume areas.

While Sunday deliveries might help relieve capacity concerns for UPS and FedEx, it's more likely the move is the result of increased concern about Amazon's logistics operations, which have operated seven days a week for some time now.

Amazon and FedEx have been reducing the volumes they deliver via the USPS, and perhaps UPS will work towards delivering more of its own Sunday volumes, leaving the USPS with high-cost rural deliveries.

The intensifying competition in the urban last mile (including on Sundays) could consign the post to being the deliverer of last resort – unless it strives to improve quality of service and the customer experience.

There is also a lesson here for other posts: competition arrives in many forms, and customers expect a higher quality service than previously demanded of the post.

Interestingly, 85% of our respondents agree that seven-day delivery will become standard within the next 10 years, while only 15% don't feel this will ever be the case.

Many experienced CEP operators have always doubted the economics on seven-day delivery... and they were right in the B2B days. With e-commerce B2C deliveries this has changed.

## E-commerce players challenging in the last mile

If the Chinese e-commerce giants Alibaba and JD.com are to have any chance of competing in the lucrative European market, they need to offer a customer experience closer to Amazon's best-in-class offering. Cheap prices alone aren't a world-beating formula. Delivery quality and customer control are crucial to a first-rate customer experience.

JD.com has supposedly had plans to make a major play in Europe for some time – perhaps management was distracted by its failed Australian experiment.

“Both Alibaba and JD are making concrete steps to create their initial European hubs. Alibaba signed a deal with the Belgium government for a 220,000m<sup>2</sup> warehouse at Liege Airport which will open next year, and JD has held high level meetings for a similar operation in Zeebrugge,” explains Juan Sotolongo, senior partner at 722 Consulting and an expert in Chinese e-commerce delivery.

While any network doesn't need to be asset heavy, Alibaba and JD must have a European base with localized customer service and state-of-the-art interactive delivery management solutions. More importantly, they need to move away from cost-only thinking, in favour of customer experience – in the way Amazon does.

So, what are the options? There are no pan-European networks available right now; Hermes does cover several important markets and has been looking for a strategic

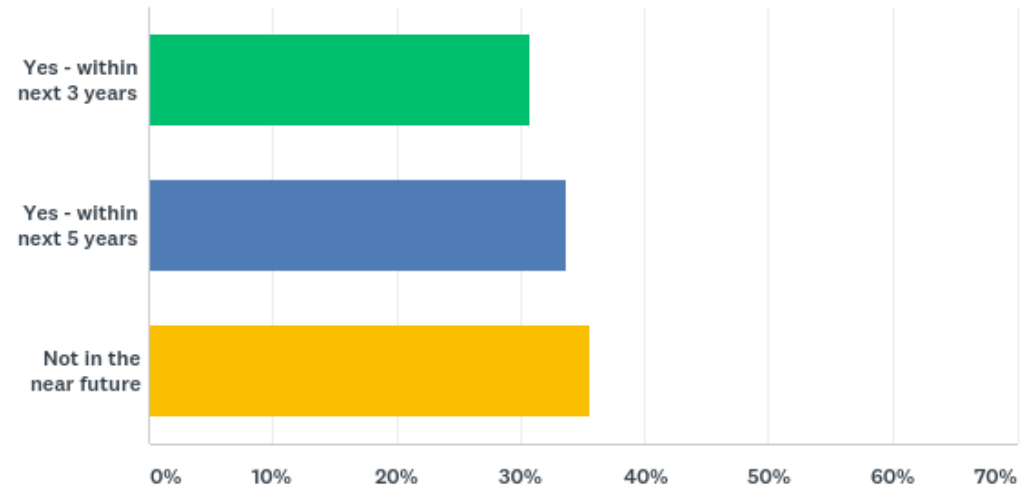
investor (who can offer synergy) for some time – it is rumoured that DPD could be close to finalizing something here. Other than this, there are several opportunities in Central and Eastern Europe. The best bet would arguably be for them to set up a large 'consolidator' type business leveraging their volumes to secure attractive agreements with all key carriers and to then slowly build up their own competence to complement this, in much the same way Amazon has done. Moreover, if they are smart they can look at creating a strong out-of-home footprint of lockers and PUDOs, at the same time.

Some two-thirds of respondents believe that Alibaba will set up their own last mile network in Europe within the next five years, with 35% stating that Alibaba won't enter the European last mile in the near future.

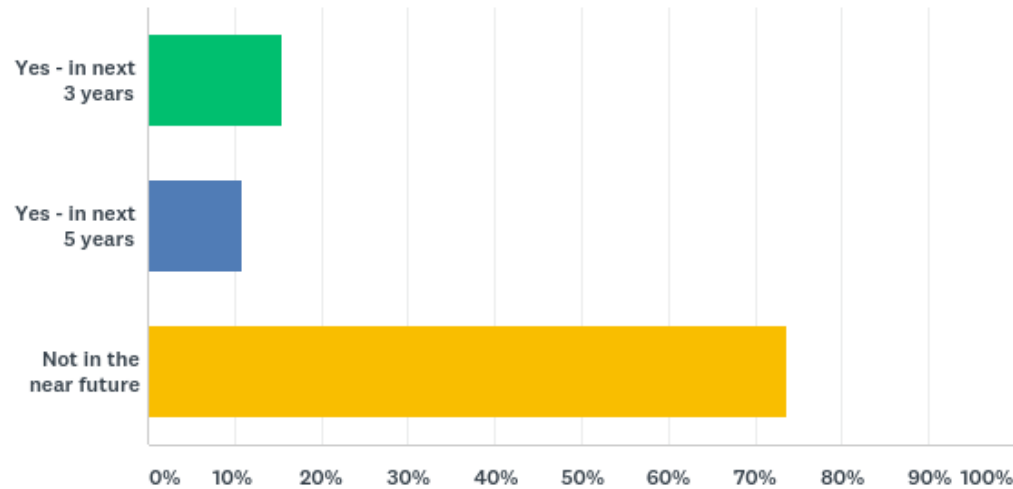
Amazon is leveraging its last mile capability and CX in this space to win and retain customers. If the Chinese are to challenge the current incumbent, they will need to offer a service more akin to Amazon's.

Of the big e-commerce names, only eBay has little to commend them in the last mile. After buying Shutl in 2013 they don't seem to have been able to develop this business or use it to create a better last mile capability for its merchants and buyers. Almost three quarters of respondents felt that eBay won't be able to challenge Amazon in the near future.

### Q13 Will Alibaba set up its own last mile network in Europe?



### Q14 Will eBay challenge Amazon in the last mile?



## E-commerce returns

E-commerce returns have always been a headache for carriers and e-commerce customers alike. This is the latest e-commerce battleground, with posts and parcel companies jockeying to offer convenient and seamless returns processes.

A number of postal operators are letting customers return goods directly from their own mailbox.

From a convenience perspective, it's hard to beat home collection of e-commerce returns. But with the rise of porch piracy, there are some risks with leaving parcels in the mailbox for collection, especially if the service becomes popular. In particular, mailboxes in rural and urban fringe areas could be targets for speculative thieves.

Not every home has a mailbox suitable for handling parcels, and while such a model probably won't work for apartment buildings, it is likely to be very convenient for rural or suburban areas.

Dropping off returns at a post office or PUDO might be less convenient, depending on opening times, queues and proximity of the network, but the customer immediately receives proof of receipt of the return – and for some e-commerce merchants, this is enough to start the refund process.

Smart locks could improve the concept of residential collection of e-commerce returns.

Environmental impact is an emerging trend in e-commerce returns. Climate-aware consumers will be more careful with ordering to attempt to reduce the volume of returns.

Returns policies and processes – including “free” returns – are sometimes seen as a key differentiator between e-commerce merchants. Are “seamless” returns more important than free returns? Perhaps a question for a future survey!

Almost 70% of survey respondents predicted growth of returns in 2020, with one third of all respondents forecasting an increase of over 20%.

Just over a quarter (27%) predicted e-commerce return volumes will remain about the same, while 4% predict a fall.

To an extent, the increase in volumes of e-commerce returns can be linked to the ongoing growth in e-commerce purchases.

While climate aware consignees in areas such as the Nordics may be more careful when ordering items, we would tend to agree that as more e-commerce merchants aim to be customer centric and as out of home networks (PUDOS and parcel lockers) make return easier, this upward growth trend will indeed continue. .

## COVID-19

What will be the new delivery reality when the pandemic is over?

COVID-19's initial impact on the last mile can be summed up by:

- Contactless delivery
- Boost in parcel volumes (and capacity issues)
- Health and safety concerns for workers

While those three points sum up the delivery sector's current response, what about the future? We asked our survey respondents to peer into their crystal balls and predict what the future e-commerce demand might be and customers' delivery preferences.

### **Will the pandemic result in a long-term boost to e-commerce?**

The coronavirus-fuelled e-commerce boom will continue once the pandemic recedes, according to 91% of respondents. Only 6% thought that e-commerce growth will revert to its pre-coronavirus levels.

Many respondents saw grocery e-commerce and delivery as a longer-term winner, with consumers previously reluctant to buy online converted to online shopping.

E-commerce will become crucial to retailers' business continuity plans, with the digital channel available to step in whenever the bricks-and-mortar channel is unavailable.

### **Work from home**

Isn't work from home (WFH) wonderful? First-time delivery rates are through the roof! WFH has fuelled residential parcel delivery, as well as growth in sectors such as food and drink.

### **Parcel lockers**

While parcel lockers have offered customers a form of contactless delivery, their use during the pandemic has varied. As mentioned earlier in this report, Lietuvos paštas has seen (and encouraged) a significant increase in parcel locker usage.

As workers desert city centres, parcel volumes at lockers in CBD areas have plummeted. The location of parcel lockers could well be influenced by the impact WFH has on office districts.

### **Same-day delivery**

Will same-day delivery become commercially tenable after COVID-19? A quarter of respondents think so, but 40% said "no", with the remaining 35% not sure.

Our view is that same-day cannot be commercially viable as a standalone solution unless carrier infrastructure changes significantly. For this to work, a mixture of localised stock (as offered by Walmart or Amazon-Wholefoods) would be needed as well as a willingness by retailers to cross-subsidise this form of delivery. Without this only specific customer groups

(affluent consignees wishing to have fast and hassle free gratification) or uses such as hot, restaurant food delivery.

### **Grocery delivery**

Delivery of food and essential items has grabbed the headlines during the pandemic, with supermarkets scrambling to develop new offerings for consumers. Some have partnered with same-day operators, while others have created subscription-style services.

Grocery delivery will remain stronger than it was before the COVID-19 outbreak, according to 71% of respondents. A quarter of respondents think grocery delivery will return to its pre-coronavirus levels once restrictions on movement are lifted.

### **Autonomous delivery**

Many last mile operators have been hastily hiring new workers to prepare and deliver shipments while e-commerce booms.

But what about autonomous delivery? Could AGVs or even – dare we say it – UAVs help provide capacity and a sanitary delivery alternative?

Our survey respondents were mildly positive towards the concept at best, with 37% saying that there will be more interest in autonomous delivery as a result of the pandemic.

Just over half of the survey respondents thought that COVID-19 will have no impact on the development or adoption of autonomous delivery options.

### **Our take**

We are greatly encouraged at the uptake of our survey and the views presented by our sample of specialists. Moreover, given expected post-coronavirus changes, this is arguably one of the most important and timely last mile reports over the last few years.

Some other factors worth considering include:

- Capacity (in the last mile, but also in e-commerce fulfilment and the first mile) will be a challenge for the years to come.
- IDM. COVID-19 is likely to encourage e-commerce growth as new users (non-tech or older buyers) who tested this retail form decide to continue post-pandemic.
- B2C volumes will continue to outgrow B2B volumes meaning there will be a need to focus on efficient operations if the last mile is to be profitable. Here IDM, AI, route optimisation tools and a range of alternative delivery options (including out of home) will be critical.
- Growth in direct-to-consumer (D2C) means manufacturers need to develop last mile competence or partnerships so as to offer financial and operationally efficient delivery with suitable CX.
- E-commerce returns make the need for multiple convenient returns channels a key priority. Due to the cost and the need for flexibility here, multiple return channels including PUDOs/parcel lockers will be important.



- Could we see the end of “free” delivery and returns? Probably not. “Free delivery” and “free returns” are likely to be here to stay, largely in the form of subscription models such as Amazon Prime, Allegro Smart or Empik Premium. Consignees would do well to remember that in the long term these models will only work where the “free” service is cross-subsidised by revenues elsewhere (i.e. other high margin products bought by them). Companies offering free or low cost delivery without any option for cross-subsidy and where shareholders chronically finance losses will be doomed to failure.
- COVID-19 in an era of populist protectionism has exposed fault lines between countries and even EU member states. What will that mean for seamless (and indeed invisible) cross-border e-commerce? Decisive actions by competent individuals, not “wordplay”, are at a premium today. If this populism and a “my country above all” approach prevail then we can expect the demise of seamless borders and a move towards national economies and reduced international e-commerce trade.

## Contact:

### **Marek Różycki**

Managing Partner

Last Mile Experts

[lastmileexperts.com](http://lastmileexperts.com)

[mrozycki@lmexpert.com](mailto:mrozycki@lmexpert.com)

### **Ian Kerr**

Postal Hub Podcast

[thepostalhub.com](http://thepostalhub.com)

[ian@thepostalhub.com](mailto:ian@thepostalhub.com)