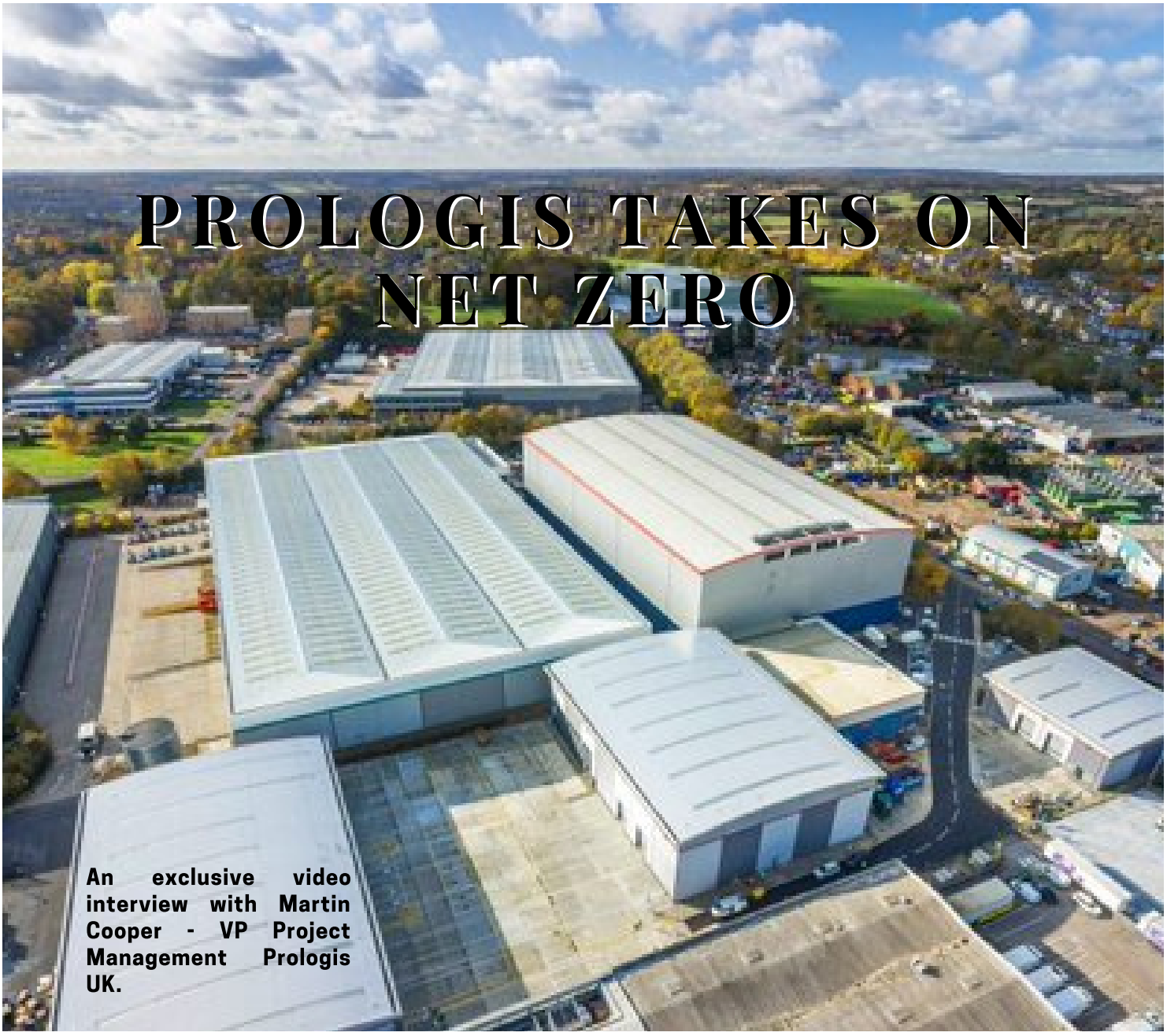
THE LOGISTICS POINT

ISSUE 9 | OCTOBER 2021

EXCLUSIVE VIDEO CONTENT INSIDE



PROLOGIS TAKES ON NET ZERO

An exclusive video interview with Martin Cooper - VP Project Management Prologis UK.

MAILROOMS & THE LAST MILE

The change in e-commerce has forced change in the mailroom

LOCKERS & EVS: WHO WILL WIN?

How can lockers help the last mile fulfillment

CHOOSING A CARGO BIKE

What you need to consider when choosing a cargo bike

THE LOGISTICS POINT

LAST MILE MONTH WEBINARS

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SUSTAINABILITY & THE LAST MILE: 26TH OCTOBER

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JOIN LAST MILE EXPERTS

Michael Hegeman
VP eTrac Technologies

Daniel Bianco, Transport planner Brighton & Hove City Council

Sandra Rothbard, Principal, Freight Matters

Michael Hegeman
VP eTrac Technologies

Sam Keam. Co-founder
Zedify UK

Seb Robert,
CEO, Goprh

George Kitchen,
Founder, Do It Properly

Paul Needler,
Partner, Arcadis

Marcus Hurd, Head of Hub-to-Home,
Stuart UK

Nick Fox, Logistics Lead,
Link Theory Europe

Freek Smoes,
Premonition

Dr Anand Assi
Last Mile Expert

Charles Jolley. CEO,
URB-E

Louisa Hosegood, Strategy & Marketing Director
Bis Henderson Consulting

Charlie Ford,
Hatat Solutions

Arthur Zargaryan, Co-founder,
Parcel Tracker

Vince Martinelli,
Product Executive,
RightHand Robotics

Martin Pečar, Founder,
OmniOpti

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EDITOR'S NOTE

There is no doubt that net zero in logistics is a bit like a mythical creature. Everyone is interested but not many really know where to start from. We had the chance to speak to Prologis UK and their VP in Project Management - Martin Cooper, about net zero and how the company approaches it.

We continue our exploration of the last mile with look at mailrooms, lockers and different fulfilment options.

Speaking of the last mile, it is impossible for me not to talk about our Last Mile Month Series of Webinars. We start on the 5th October at 10am UK time and continue all throughout the month. Join us for free every Tuesday at 10am UK to discover more about warehousing, fulfilment, technology and sustainability along the last mile.

You can add all the events in your calendar: Fulfilment - Add to calendar; Technology - Add to calendar; Sustainability - Add to calendar; and if you can't make it register for free to get the recordings!

Nick Bozhilov
Editor in Chief
nick@thelogisticspoint.com

CHECK OUT OUR YOUTUBE CHANNEL

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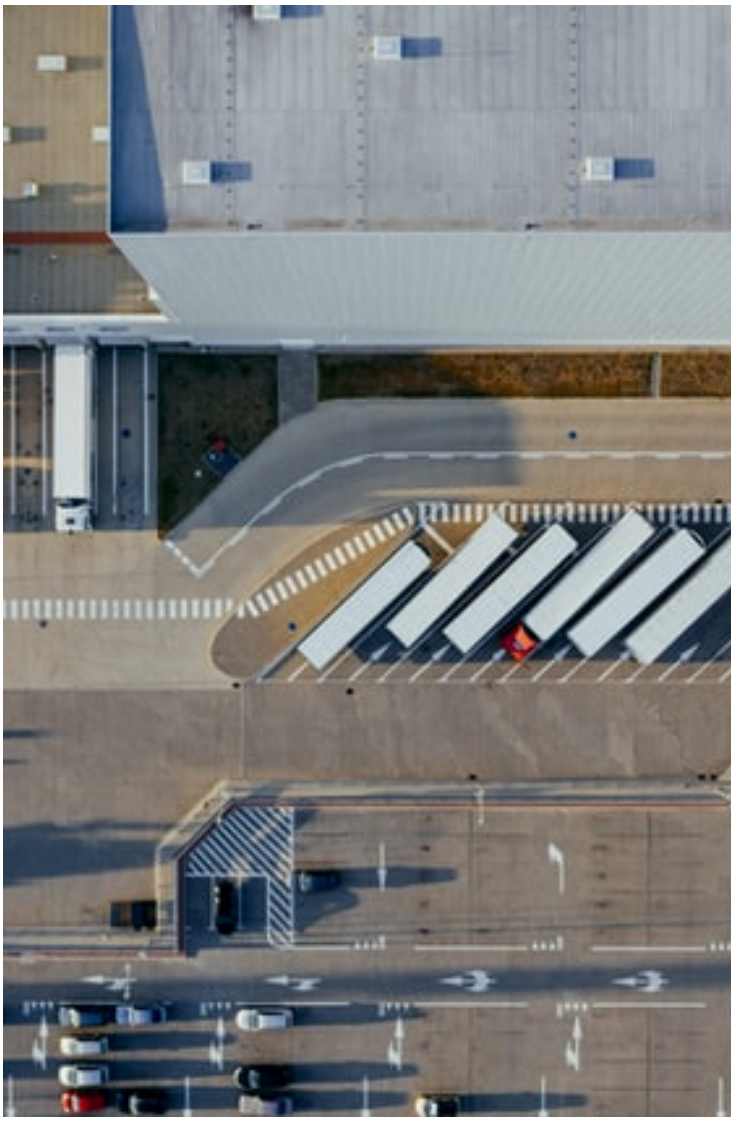

IN THIS EDITION

THE LAST MILE MONTH

Four Days of Last Mile Insights

5th, 12th, 19th and 26th October 2021, Online

MEET THE SPEAKERS OF THE LAST MILE MONTH WEBINARS

Vince Martinelli is Head of Product & Marketing at RightHand Robotics. Throughout his career, Vince has helped introduce new technologies and products into challenging, large-scale applications for telecommunications, aerospace, automotive, e-commerce and electric power utility customers worldwide. He earned his BS and MS degrees from MIT in Materials Science & Engineering, with a concentration in Economics. At MIT he was a Tau Beta Pi Fellow and an Academic All American athlete.

Michael Hegeman serves as the Vice President of Channel Operations for eTrac, a final mile visibility solution for shippers, 3PLs, and retailers that utilizes to create thriving supply chains. Michael has a strong background in technology and IoT, working for companies like At&t, Filewave, and Numerex.

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Sandra Rothbard is a certified urban planner with a multidisciplinary background and specialization in freight transportation, emergency management and community engagement. After spending over a decade working for government agencies in NYC, she now supports public, private and non-profit organizations as an independent consultant.

Paul Needler leads the Urban Logistics Sector at Arcadis UK and Ireland. Paul is particularly known for bringing together his entrepreneurial approach with a proven track record of delivering results, using innovation and best practice to create tailored solutions for clients which increase speed to market, maximise return on investment and improve sustainability and quality of life.

Seb Robert's entire career has been spent in digital, from digital music to multi-million-pound digital brand campaigns. Working originally in the music industry and latterly in advertising and creative agencies, he very quickly understood the power of platforms to change industries for the better through technology.

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Daniel Bianco, Transport planner at Brighton & Hove City Council and project manager for BHCCs eCargo Bike Accelerator Project, is joining our speakers' list to share with you how local authorities are engaging with logistics and last mile operators.

Arthur Zargaryan is the co-founder of Parcel Tracker an AI powered internal parcel tracking and mailroom management software. He has a BSc in computer Science and Robotics from Kings College London and an MSc in Bio Engineering from Imperial College London.

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Charlie Ford is a cargo bike expert and last-mile specialist. I have spent the last 10 years in operational, fleet management and consulting roles at large corporations and high growth start-ups (Pure Electric, Ministry of Defence, PA Consulting). I'm focused on helping businesses transform their last-mile operations through the use of e-cargo bikes and e-bike fleets.

Dr Anand Assi is a proven supply chain thought-leader and business-model evangelist. With an impressive career that couples both a flagship business education and over 20 years of domestic & international success; Anand passionately leads strategic pursuits, conjuring vision into reality. An expert in last-mile operations, Anand has chalked up a legacy of success in establishing startups, launching operations and scaling-up business across Europe.

Charles Jolley is the CEO of URB-E. URB-E is the compact container delivery network, replacing trucks with bikes. You can see URB-E's pedal-powered, collapsible containers around New York and other urban locations, enabling fast, clean last-mile delivery for major retailers and e-commerce companies.

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Louisa Hosegood, Digital & Strategy Director, Bis Henderson Consulting. She is supporting clients in developing successful and sustainable supply chains for the future. Hosegood is responsible for developing the breadth, depth and reach of Bis Henderson Consulting's retail and ecommerce proposition to enable us to offer the best service to their clients.

Nick Fox is Head Of Logistics Europe at LINK THEORY (UK) LTD. Fox specialises in Logistics, B2B, B2C, Supply Chain, e commerce and online commercial operations, apparel logistics specialist, international logistics, budgets & P&L, operations management, IT development, Duty Management, Customs warehousing,

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Sam Keam, Co-founder & CCO. Sam founded Brighton's first cargo bike logistics service, Recharge Cargo, in 2013. He has a background in Geography and Environmental Science policy and research. In 2018, Sam joined forces with Rob King to form Zedify, with a shared mission to make deliveries in cities more sustainable at an impactful scale. Sam leads on sustainability strategy, sales and marketing at Zedify.

Marcus Hurd is a logistics professional holding an MSc in Logistics and Supply Chain Management from Cranfield university and is a Chartered Fellow of the CILT. He has over 20yrs logistics and supply chain management experience with roles held within management consultancy, retail supply chain, e-commerce, fulfilment and carrier operations domestically and x-border. He is currently leading Hub-to-home operations at Stuart UK.

Sébastien Potts has over 20 years of senior logistics experience' and his journey has led him to working in both the UK and Australia. His professional journey started in supply chain and retail logistics in Melbourne before returning to the UK to a stint logistics consulting with the Royal Mail Group and green logistics startup Gnewt. Currently he is the urb-it UK Country Manager.

Freek Smoes has co-founded 2 startups. With Sparked Curiosity he supports startups, scale-ups and grown ups with Strategy, Innovation, Marketing and New Business. Currently he is the International Business Development & Partnerships lead in Premotion.io.

George Kitchen is the Founder of Do It Properly, a London consultancy that helps small businesses calculate and reduce product lifecycle emissions. He writes and speaks about the importance of value chain emissions, and how data helps meaningful decision making in the supply chain. In his spare time he likes to swim and cycle. A lot.

Martin Pečar is the founder of OmniOpti, provider of advanced solutions, focusing on mobility and logistics. A mathematician by profession, he has worked in R&D for over a decade, and led the R&D department of the fleet management company Telargo. After Telargo has been acquired by Descartes from Canada, he took over the business development for the Balkan region.

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EXCLUSIVE VIDEO CONTENT

VIDEO
PROLOGIS TAKES ON NET ZERO

Net zero in logistics properties is yet another challenge that the industry needs to address. We spoke to Martin Cooper, VP in the project management team and sustainability expert at Prologis UK, about net zero and how buildings are transforming. Prologis has also authored a white paper in conjunction with fellow developer, Tritax Symmetry, sharing best practice around net zero construction in the logistics sector.

How should we define net zero in logistics property?

In order to create net zero carbon buildings, it's first important to reduce the carbon associated with that building through its products and construction stages, either through careful specification, selection of products and components or through other measures. Until recently there weren't clear guidelines around measurement itself, however, in 2019, the UK Green Building Council (UKGBC) published a net zero carbon buildings framework, which clearly sets out how to go about measuring the sustainability of buildings. Their definitions are consistent with other such frameworks around the world.

So, for buildings that are net zero carbon in construction building, the amount of carbon emissions that are locked up in product specifications or in the construction stage are said to be zero, or, negative. This is generally achieved and recognized through carbon offsetting, as well as through careful product specification. By establishing your embodied carbon and where it's coming from you can then offset that through the purchase of carbon credits, or in the case of Prologis, by mitigation through other sustainability programmes, such as rainforest protection.

A building that is net zero carbon in operation goes a step further and concerns the energy that is consumed and used to operate that building. In order to meet this standard, you actually need to monitor the energy used and ensure that year on year you the building's net energy consumption is zero or negative. This can be achieved through the installation of solar PV, for example.

Is it more expensive to be net zero than the more traditional way of building?

At Prologis, we've been on a journey for over a decade now where we've been looking at streamlining our specification to reduce the embodied carbon, in a large part through tie-ups with certification body, Planet Mark, and with global sustainability charity, Cool Earth. Essentially, all of our buildings are net zero carbon in construction as standard. It's

MARTIN COOPER
VP PROJECT MANAGEMENT
PROLOGIS UK

part of our base specification, something that sets us apart from other developers and something that customers and investors want too.

However, much of the logistics property sector is working hard too and the UKGBC's framework is encouraging others to take this route as well. In reality, building net zero properties shouldn't cost too much more money because there are now frameworks in place to help measure embodied carbon and there are more ways than ever to mitigate or offset through the purchase of carbon credits, or through other sustainability schemes.

Can net zero strategies be retrofitted in existing buildings?

Following the approach of using what you've got for as long as you possibly can and building longevity into buildings, if a building still has a useful life, the best solution is to keep using it as tearing a building down and constructing a new one is always going to have a greater environmental impact that adapting one that's already there We've undertaken a number of projects helping our customers to reduce the operational energy of their existing industrial buildings to bring them as close to net zero carbon as is possible.

To learn more about net zero building in logistics, as well as how Prologis is taking on the task, watch the full video interview with Martin Cooper now. ✷

In order to create net zero carbon buildings, it's first important to reduce the carbon associated with that building through its products and construction stages, either through careful specification, selection of products and components or through other measures.

BY ARTHUR ZARGARYAN
FOUNDER PARCEL TRACKER

THE REVOLUTION IN THE LAST MILE AND THE NEW BURDEN ON MAILROOMS

During the early pandemic, DHL saw parcel deliveries increase from 5.3 to 9 million — levels only previously experienced during holiday peaks — a day. Six months later, throughout the 2020 holiday season, millions experienced a delay in packages as deliveries reached new record volumes. What may have been a Hanukkah or Christmas gift quickly turned into a New Year's or Valentine's Day present due to the busiest week in history for USPS.

These increases illustrate how the COVID-19 forever changed supply chains and last-mile logistics. And although companies like Amazon worked overtime to address their own delays (and hired 175,000 people to compensate), couriers such as UPS, Fedex and Royal Mail increased staffing; the ultimate burden fell on mailrooms, who were caught unaware. Commercial and Residential buildings were forced to take the brunt of the logistical burden that would usually fall on high street shops. These buildings, often built before the advent of online shopping, were now expected to act as a sorting and distribution hub for hundreds if not thousands of consumers living and working from there, and whose consumer habits had drastically changed!

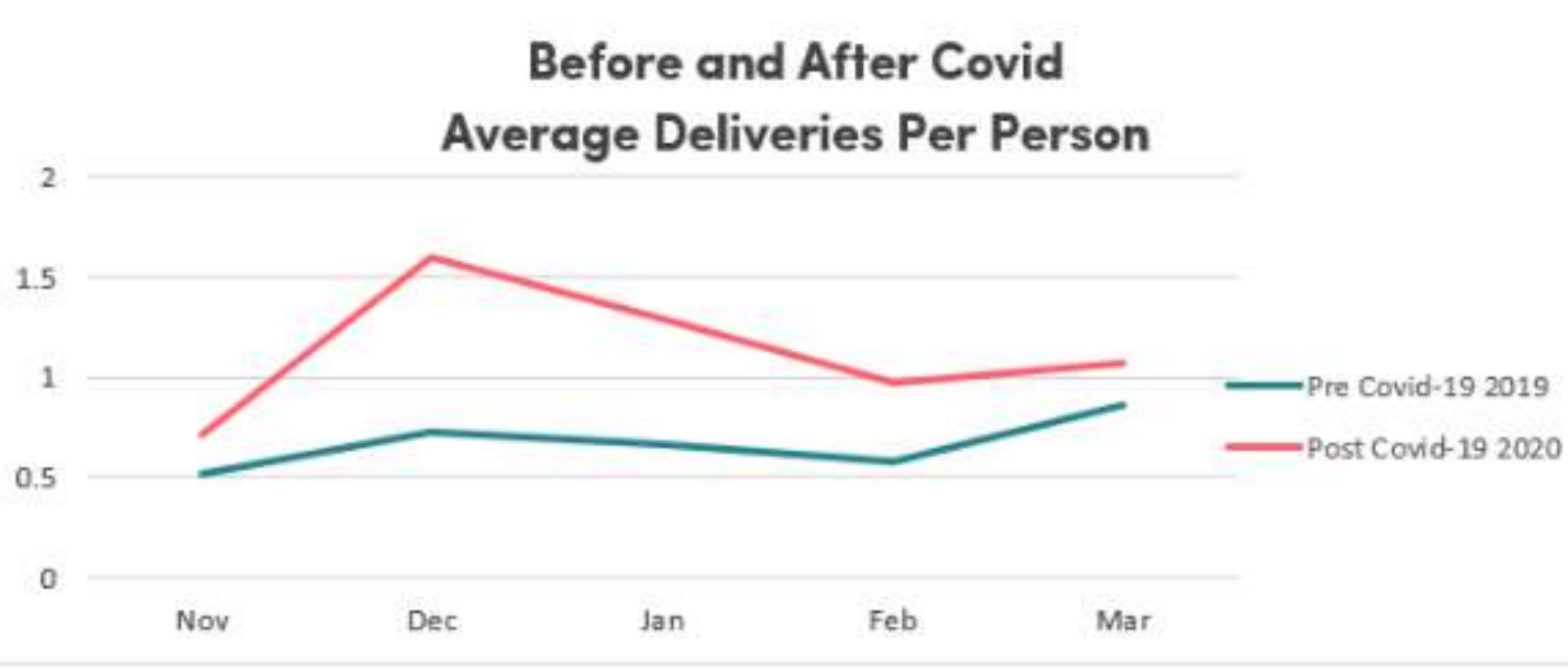


FIGURE 1: THIS GRAPH SHOWS THE RISE IN AVERAGE DELIVERIES PER PERSON BOTH BEFORE AND AFTER THE COVID-19 PANDEMIC WITH PARCEL RATES TRIPLING AT ITS HIGHEST POINT. DATA COURTESY OF PARCEL TRACKER, MAILROOM MANAGEMENT SOFTWARE ACROSS 1597 RECIPIENTS, AND 32,174 DELIVERIES.

What is Last-Mile Logistics?

Last-mile logistics refer to the end step of a delivery process. It occurs when a package is taken from a distribution center or facility to the end-user (i.e., purchaser). Recent revisions to last-mile logistics have been prompted by newly increased delivery speeds. For instance, Amazon Prime began offering 2-day delivery on over 1 million in-stock items in February 2005. In 2019, they dropped it down to 1-day or even same-day shipping on certain items.

Now, they've created the expectation of 2-day shipping, which has prompted their competitors to begin offering comparable deals. For example, massive retailers like Walmart and Target will provide free 2-day shipping if you purchase more than $35 worth of items.

This convenience for customers comes with a lot of asks if you want to keep costs down for businesses, and that's where last-mile logistics come in. By focusing on digitalization and live tracking of fleets, you're able to improve route planning and analytics of delivery. You can also increase capacity and the density in urbanized areas. Amazon, for instance, can already ship to 72% of the population within a day based on this map.

Other notable trends are popping up in this area. Most relevantly, the increase in affordable automated collection points and the rise of driverless vehicles. As more of the delivery life cycle becomes managed by antonymous robotics, the last mile will continue to adjust as well.

How is Last-Mile Logistics Impacting Mailrooms?

The continuous innovation and automation in last mile logistics, combined with Marco factors such as Covid-19, have caused the price of deliveries to drop, and online shopping to increase.

Online shopping skyrocketed during the last 18 months, and there was a 74% month on month increase between March 2019 and March 2020. Mailrooms are currently overwhelmed and disorganized. Buildings are attempting to cope with deliveries by swiftly notifying their tenants, but a simple paper tracking system or an Excel document can't keep up with the current parcel quantities. With people returning to the office, these packages will undoubtedly sit in the mailroom for even longer, leaving mailrooms stretched to their breaking points.

Reducing the Logistic Burdon on the Built Environment?

Technology adoption by courier companies has been rapid, yet Property Managers and Building Owners have lagged in their adoption of tech enabled solutions to their own detriment. What are the tools that are available to help mailroom managers, front-of-house and reception staff to deal with deliveries?

ARTHUR ZARGARYAN,
FOUNDER PARCEL TRACKER

Hardware enabled solutions such as parcel lockers can help alleviate some of the pressure by completely offloading a part of the delivery management process. Couriers can deliver directly to the locker and the recipient can pickup their parcel without ever having to interact with the mailroom/reception team. Parcel lockers can, however, struggle during peak delivery seasons due to the high volumes of packages. If there is enough space on site, Property Owners can plan for these peak delivery times and install more lockers, however, they will be paying for lots of latent capacity most of the year.

As more of the delivery life cycle becomes managed by antonymous robotics, the last mile will continue to adjust as well.

FIGURE 2: THIS GRAPH SHOWS HOW A PARCEL MANAGEMENT SYSTEM CAN HELP REDUCE THE TIME SPENT IN THE MAILROOM AND INCREASE EFFICIENCY. BASED ON A STUDY IN MOTION BY PARCEL TRACKER.

An alternative or complement to a hardware-based solution such as parcel lockers is mailroom management software. This software empowers existing mailroom management resources and staff to effectively deal with deliveries. Mailroom management software uses mobile device cameras and AI to identify recipients from parcel labels, notify them to collect their parcel, and log the proof of collection. A range of studies-in-motion have shown that this type of software can speeds parcel collection times, effectively increase storage and also increase the speed at which parcels are managed through the system.

Mailrooms and the built environment has felt the brunt of online shopping and the revolutions in last mile logistics first hand. The tools, however, do exist to help them mitigate the biggest issues this new wave of ecommerce has caused.

Join Arthur on 19th October for the online Last Mile Month event when he will discuss how AI and automation can help the last mile. Registration is free! ✷

THE LAST MILE MONTH

Four Days of Last Mile Insights

5th, 12th, 19th and 26th October 2021, Online

THE RIGHT WAY TO INVEST IN CARGO BIKES

As logistics organisations are looking to become more sustainable and make their operations greener, cargo bikes are becoming an important part of the provided service. The Logistics Point spoke to Charlie Ford, independent fleet consultant at Hatat Solutions about how logistics firms can choose the right bike, what changes are needed to the existing infrastructure and what are the costs.

'It is a common challenge for companies to get stuck on which is the best cargo bike for their operations, when they have not experienced different bikes before,' says Charlie. There are a small but growing number of cargo bike manufacturers across Europe (approx. 100 to date) with new companies entering the market every year. With this huge choice it is important to first consider the below factors before choosing a suitable cargo bike.

When choosing the right cargo bike for an operation companies should consider:

- **Size of load**

How much does the bike need to carry? Is the company looking for heavy and bulky items or small, light packages? This will define the type of box that is required and influence the style/shape required.

- **How fast must the deliveries be?**

This is important to consider as large 3- and 4-wheel bikes are not as fast 2 wheeled bikes at moving between traffic and due to their size and often have to travel on the road, so can get stuck in traffic.

- **Storage space**

An important point to consider is where to store the cargo bikes when not in-use, due to their size additional storage space may be required.

- **Riders**

Who will be riding the bikes? Are you as an organisation investing in riders' training and competence? This is important as cargo bikes require skilled riders particularly 2-wheeled long-john style bikes, without sufficient training and up-skilling there will be an increased risk of accidents for the riders.

- **Maintenance**

It is essential that when you acquire or rent cargo bikes you also have in place a plan for maintenance – working with reputable suppliers to ensure the bikes are kept in good working order. Most cargo bikes used in a logistics setting will need at least fortnightly maintenance checks.

- **Try before you buy**

An essential part, once you have researched online or through speaking to cargo bike experts you can then reach out to companies offering demos/rentals. There are some new companies offering rentals which may be ideal for long-term testing of cargo bikes without the risk of investing in assets.

CHARLIE FORD, FOUDER
HATAT SOLUTIONS

Cargo bikes have a number of advantages over traditional vans and even electric vans:

- No road tax
- No mandatory insurance
- No driving licence requirement (or penalty point insurance price impact)
- No parking charges or fines
- No road charging (ULEZ)

There is also the low cost to charge a cargo bike, even less than an E-Van in terms of cost per km in range. Additionally, cargo bikes can easily carry spare batteries and swap these out quickly to increase range, this is not possible with Electric vans currently on the market which must be left for several hours to charge.

'Cargo bikes are faster at making deliveries than vans as they are more manoeuvrable, can use cycle lanes and move around traffic, it was reported in a study in central

London that journey times can be reduced by 25 – 50%,' Charlie continues.

Storage and maintenance

Covered storage space is required for the cargo bike and a place to charge the batteries. It is recommended that metal charging cabinet lockers are used to store and charge the batteries overnight. ' In terms of road infrastructure cargo bikes can ride on the road and cycle lanes, there is work on-going with TfL in London and infrastructure organisations to widen cycle lanes to accommodate larger cargo bikes,' Charlie comments on the state of current infrastructure.

In order to maintain cargo bikes companies will require specialist cargo bike mechanics, who are in short supply. However, regular cycle mechanics and motorbike mechanics can be trained on cargo bikes and will be able to quickly pick-up the skills required to service the bikes. It is recommended that training programmes are set up with the chosen manufacturer to ensure the mechanics are trained to the right standard and carry out maintenance in accordance with the manufacturer's instructions.

It is a common challenge for companies to get stuck on which is the best cargo bike for their operations, when they have not experienced different bikes before

Changing from vans

'Switching from Vans to cargo bikes will require some upfront investment, which will include testing the bikes, acquiring spare parts, training and the purchase or deposit on rentals,' Charlie admits. However, the impact of switching will be an immediate reduction in operational costs (fuel, tax, insurance, parking, ULEV etc.) and so savings will become apparent within 6 months from switching. It is recommended that bikes are rented or leased, similarly to how businesses acquire vans to lower the upfront cost and utilise the VAT savings from monthly payments. ✷

Join Charlie Ford on the 26th October to talk about last mile sustainability! Register now!

BY JUAN SOTOLONGO, CEO LOCKARS

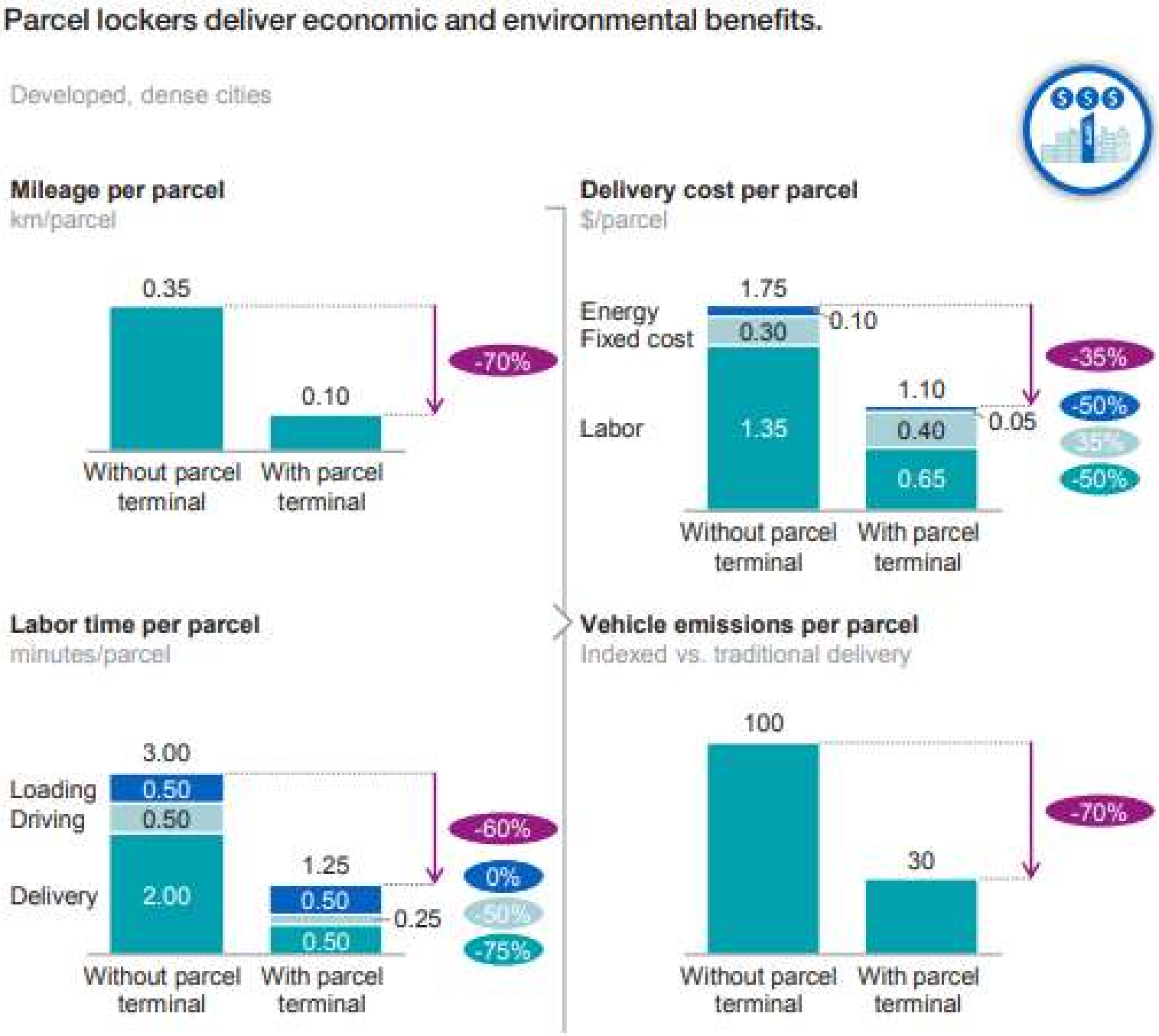
WHY PARCEL LOCKERS ARE BETTER THAN EVS? THEY REDUCE TRAFFIC CONGESTION!

I think that most would agree that reducing the number of delivery vans constantly circulating on our busy streets would be a very desirable outcome. This would arguably be even more attractive than replacing petrol vans with EV vans, especially as it relieves traffic congestion. This reduction in delivery vans is precisely what parcel lockers can deliver. I live in London (where Lockars is launching its first parcel locker) and am quite familiar with the current situation here.

A recent Mckinsey Study on Urban Logistics found parcel lockers to be one of main contributors to reducing CO2 emissions and traffic congestion. The chart below summarizes their conclusion that the consolidation opportunity that parcel lockers provide would result in a 70% reduction in CO2 emissions due to the reduction of delivery vehicles required.

For those of you interested in the analysis, all the data and assumptions are included below, with the conclusion being that in London a large network of 5,500 parcel lockers would **reduce circulating vans by 4,500 and CO2 emissions by 26 million kg's per year.**

No effective solution can be implemented as quickly. What is required is the support of the local and central governments to



SOURCE: AN INTEGRATED PERSPECTIVE ON THE FUTURE OF MOBILITY, PART 2: TRANSFORMING URBAN DELIVERY , MCKINSEY CENTER FOR BUSINESS AND ENVIRONMENT | SEPTEMBER 2017

give this initiative the same priority that EV charging locations have been given. In fact, combining these two complementary initiatives would be by far the greatest win for the local communities!

Current Status in London (2020 data)

- Annual home delivery volume: 630 million packages
- Daily average: 2 million packages
- Delivery vans: 22,000 circulating per day
- Avg kilometers per van per year 40,000
- Avg CO2 emissions for a van per KM 145 g
- Avg CO2 emissions per van per year 5.8 million grams or 5,800 kg

Transformation in a London with Lockers

If London had a dense network of lockers 300m from every home, 5,500 lockers would be required. Assuming that 30% of the volume would be converted to locker deliveries as a consequence of close proximity to the homes, lower delivery prices from the carriers, and the consumers recognizing the sustainability benefits of lockers, then we would have the following transformed situation:

- Annual home delivery volume: 441 million
- Daily home delivery volume: 1.4 million
- Annual parcel locker delivery volume: 189 million

JUAN SOTOLONGO, CEO LOCKARS

- Daily parcel locker delivery volume: 610,000
- Total delivery vans 17,500 or a reduction of 4,500 vans per day or 26 million kg of CO2
- Avg parcels delivered per van would increase from 90 to 114 per day ✷

COULD FORWARD INVENTORY HELP THE DRIVERS' SHORTAGE ON THE LAST MILE?

The drivers' shortage is something many countries around the developed world are experiencing. There isn't just one solution that could work and according to Brenda Stoner, CEO and Founder, PICKUP, one possible answer is forward inventory. The Logistics Point spoke to Stoner about the last mile and how it is transforming.

What are the problems for last mile delivery of larger goods?

The pandemic and material shortages are contributing to the many supply chain obstacles that retailers have had to overcome. Transportation issues are only exasperating the problem, and the capacity to move available products quickly is not even close to being able to keep up with consumer demand. There are also hurdles when inventory is local to a market but is miles away from the nearest sales and distribution center. This is especially true for big, heavy and high value items because the larger and more expensive the item is, the higher the customer expectation for a seamless delivery.

Consumers ordering big and heavy items online not only expect the same delivery experience they get from small packages – one that's fast, convenient and easy to track – but they also require an extra layer of added service such as in-home assembly or installation. Supply chains need an advanced way to respond to consumers' expectations that spiked during COVID-19, especially as consumers continue buying furniture and appliances for their homes.

Additionally, retailers need to identify a way to create flexibility in their supply chain. This is especially true for larger goods since many retailers don't have the capacity to store these bulky items at their physical stores or fulfillment centers due to space constraints. This is also starting to become an issue in the reverse logistics area, as many retailers are having to tell consumers to just keep the item for now until space can be allocated to receive these returned items.

How can inventory management help the last mile?

To overcome these challenges, logistics and supply chain leaders can lean on Buy Anywhere, Deliver Anywhere (BADA) offering to provide a best-in-class delivery experience with convenience, control, communication and consistency.

A BADA model enabled by inventory visibility can track products throughout the supply chain and ensure items are available to fulfill customer orders. By understanding where their inventory is and how they can get the inventory closer to

BRENDA STONER,
CEO AND FOUNDER, PICKUP

their customers, shippers and other business professionals can position inventory in the most advantageous way to increase same day sales and drive revenue.

Implementing BADA capabilities successfully requires a real-time view of inventory, especially at the store level where the exact number of items available can be accurately accounted for. A unified platform can provide this information immediately, helping organizations understand which items are available in proximity and how to route orders quickly to the customer. This can be done with a single integration to e-commerce or POS in-store, allowing for a BADA model that helps meet retailers' needs at scale.

Innovative technology is helping to meet customers' requirements by providing business intelligence on what consumers are buying and how to get these items closest to their customers for delivery. It's with these tools that retailers like Target

are successfully positioning the right inventory as close as they can get it to each consumer, making fast delivery possible. By optimizing delivery and logistics, supply chains can quickly deliver items anywhere and anytime.

What strategies are there for delivering larger goods on the last mile? What do you think would be the best one?

"Companies like Amazon, Uber, and Postmates paved the way for shoppers to expect fast, convenient delivery experiences, prompting other retailers to expedite their last-mile delivery services. The ability to deliver everything from consumer-packaged goods to big, heavy and high-value goods without adding cost and complexity is now necessary.

Three key factors retailers need to win the last mile experience focus on offering multiple fulfillment options, optimizing logistics and developing a curated delivery network.

To provide experiential deliveries for customers, it's essential that retailers offer buy anywhere delivery anywhere (BADA) and buy online deliver from store (BODFS) capabilities to give customers what they want, when they want it. This is especially important for big and heavy items where it can be challenging for consumers to figure out how to get these high-ticket purchases directly to their homes.

Shoppers don't want to wait weeks for their delivery to arrive, and they certainly don't want to deal with a long delivery window on the day of their delivery. Convenience and trust are key as consumers also want to be able to handle delivery on their own terms and have clear visibility and control throughout the process. Retailers need to provide same day or scheduled delivery within a single window to provide this type of speed and flexibility. By having convenient fulfillment options for heavy goods, consumers can choose a time that works best for their schedule and enjoy the fast and frictionless delivery they have come to expect.

How can we address the driver shortage on the last mile?

Many retailers today still operate a traditional legacy carrier network with days or weeks of lead times, multiple carriers and all-day windows. This results in an inconsistent customer experience. To overcome these operational challenges as well as mitigate against the current driver shortage, retailers should analyze the option of implementing forward inventory to support forecasted demand.

One way retailers can achieve optimized delivery and logistics is by partnering with an all-in-one last-mile delivery provider to implement a platform integration that can help meet these needs at scale. This will enable a strong network of resources that can help effectively manage fulfillment operations while ensuring fast and accurate delivery at the convenience of the shopper. By outsourcing the last mile, retailers will see increased inventory velocity and spend less time solving delivery issues and risks. ✷

EXCLUSIVE VIDEO CONTENT

VIDEO
FOOD LOGISTICS COMPANIES SEEK DEEPER COOPERATION

'There isn't a part of the logistics in the food industry that hasn't changed in the last 18 months,' begins Louisa Hosegood, Digital and Strategy Director at Bis Henderson. Hosegood spoke to The Logistics Point about the challenges the food industry faced during Covid, how logistics organisations are supporting the sector and what to expect in the coming years.

The food industry has so many different parts that it is hard to think of it as a single area but Covid and most-recently Brexit had a tremendous impact on the way retailers and the hospitality industry operate. The acceleration of e-commerce has disrupted traditional models and news players are constantly entering the market. 'There is a perfect storm of things that have been happening,' Hosegood continues and lists Covid, Brexit and shipping problems around the world's ports.'Supply challenges and customers' expectations have clashed and I do not think anybody would think it has been an exciting time. I certainly think it has been challenging.'

About the positives

Despite the challenges the food industry is still standing on its feet and Hosegood believes people have realised that there is

no other alternative to continuing to operate. 'It has made people realise that you do not need to take years and think about decisions,' Hosegood explains. The speeding up of decision making and adoption of technologies and new methods has been part of the last 18 months throughout.

The unprecedented demand forced by Covid has accelerated the risk taking and served as an engine for change. More and more organisations are embracing flexibility in the way they perform their daily operations adopting more omnichannel market strategies. For Hosegood a big positive is how traditional competitors have decided to work together in order to improve the overall market position. She believes that before Covid there was little to no interest in cooperation partly because of regulations but mostly because companies were just not looking at it as a viable option.

In the future

Due to the complexity of the food industry it is hard to see the future clearly. For Hosegood one of the trends that will occupy people' minds is the different level of service required for city and urban deliveries. Logistics is expected to put more importance on being closer to the customer. 'Change is always constant but can we accept that it is always there and that things are not always perfect?' asks Hosegood.

Watch the full video interview below and learn more about how the food industry and logistics are transforming together and how consumers are playing their role.✷

HOW COMPUTER VISION TECHNOLOGY IS ENABLING MICRO-FULFILMENT

The supply chain industry grew during COVID-19 crisis and so did the need for faster operational processes and automation of human tasks. As part of it, the logistics sector is struggling to meet the growing consumer demands, high labor costs, regulatory measures, and siloed data, whilst complying with a dynamic environment. Complexities woven in the industry are not just occasional but tend to create a ripple effect across the infrastructure.

Ultimately, the warehouse workforce strives to meet customers' requirements by managing incoming orders through multiple layers, regardless of inventory processes.

To improve the last mile of logistics operations, companies started looking into micro-fulfillment. This hybrid model brings the inventory closer to consumers, encompassing traditional technology and automation with in-store picking. Micro-fulfillment ensures quicker product delivery to the end-users, involves efficient tech-based order picking, is easier to establish, and reduces operational costs. Retailers are now adopting micro-fulfillment strategies for instant consumer gratification and improved product accessibility, as a competitive advantage.

Micro-fulfillment infrastructure relies on automation and, although hardware capabilities are highly relevant, the software is what determines the true value added to the whole process. Such a robust vision software enables the automated picking and stacking of random objects and ensures easy segmentation, classification, and quality control, while suggesting the best way to pick any item varying in shape, size, colour, and position. This allows robots to handle closely stacked or overlapping items, as well as transparent or highly reflective objects. Just as the camera and gripper are the eyes and arms of a robot, the vision software is the brain that translates the image and directs the robot to move accordingly.

Since we are talking about complex technologies in a very dynamic industry, it is essential for system integrators to look for a transparent long-term partnership with companies that empower them to understand the technologies used, rather than a one-time solution provider. This will allow them to remain flexible in a very fast-paced market, avoiding the hardware lock-ins of black-box solutions and ensuring they can always integrate the latest technologies in their systems. The path towards success for system integrators starts with recognizing their true challenges, considering alternative solutions to tackle them, and employing the right tools to do so, all while making sure they remain self-reliant.

With trust as a driving factor of long-term success, Fizyr ensures each client receives a robust solution with proven software architecture to facilitate the successful development, management, and maintenance of installations. To stimulate system integrators' independency, they are encouraged to consider a holistic approach by reflecting on topics, such as:

Micro-fulfillment infrastructure relies on automation and, although hardware capabilities are highly relevant, the software is what determines the true value added to the whole process.

- Does the vendor provide a high-quality software that escalates their logistics performance?
- Will they receive additional services, such as support and maintenance?
- How experienced, stable, and specialized is the software provider in the global market?
- How do they manage software deployment processes?

Conclusion

Despite the pandemic, the micro-fulfillment operations are maximizing the efficiency of the supply chain industry. The amplified need to incorporate automation technologies is urging companies to modify their logistics strategies for better supply chain management. Warehouse automation is crucial in responding to this growing market economy and having a robust software is pivotal.

System integrators must seek sustainable solutions that best align with their interests, can integrate seamlessly and meet end-users' expectations. Additionally, partnering up with a software provider with extensive experience in computer vision and software development can improve their overall performance. Fizyr remains dedicated to creating an authentic value for its partners, so they can create cutting-edge logistics solutions for their clients.

Join Fizyr October 5th to discuss last mile warehousing . You can register for free here! ✷

ON-DEMAND LOGISTICS WELCOMES SMALLER COURRIERS

The logistics market is transforming and on-demand services are only expected to grow. On-demand has a couple of unique characteristics and we spoke to Justin Blackhurst, Co-Founder of Delivery App, an on-demand logistics provider.

How has on-demand logistics changed over the last few years and what was the effect of Covid?

On-demand logistics is undoubtedly one of the most exciting areas of innovation in the logistics industry and one which presents a major opportunity which isn't just reserved for the major players with capital available to invest into the infrastructure.

Customers have started to use technology to book their couriers. Traditionally people would pick up the phone to their local courier supplier to book a job. Now they're visiting websites and turning to apps.

That's made it hard for smaller operators to market and pick up jobs as the need to invest into new technology and infrastructure has become a barrier.

Now Apps such as DeliveryApp are opening up this marketplace to small independent couriers creating an even playing ground as they can register their fleet and generate new jobs without having to invest into expensive tech and marketing to meet their customer requirements surrounding information, payment and fulfilment.

For freelance drivers, on-demand apps are making life simpler. More time can be spent on the road completing deliveries and generating revenue, instead of having to market for new business or conduct admin for those jobs completed.

And for businesses, it's helping to meet customer demands without having to invest into fleets or invest large amounts of time to find available couriers.

These are all particularly important as a response to the pandemic. The logistics industry has experienced exponential growth as businesses have had to pivot operations to meet demand. That demand has created a need for slicker, integrated, solutions which can deliver quality customer experience like those businesses which have been operating online to your door solutions for years, and as a result, on-demand apps such as DeliveryApp are gaining more traction as they integrate into SMEs seamlessly.

JUSTIN BLACKHURST,
CO-FOUNDER DELIVERY APP

What we're also seeing drive the category is some final mile delivery solutions trying to capitalise on the lack of delivery capacity from big supermarkets for grocery deliveries. With stores re-opening and people making their way back out for grocery shopping, we expect this to plateau and drop off in the New Year once we move through the winter and hopefully make our way out of the pandemic.

How is on-demand logistics different to traditional models and do you expect it to grow in the future?

If you think about the traditional cycle to getting a job fulfilled, on-demand services such as DeliveryApp simplify that process. Where you may have had to call three local couriers to find one with an available driver and get the best price, now you're just posting your job to one platform, and you know it'll then quickly be seen by couriers in the area with capacity to fulfil it. So instantly the end user has saved time.

There's also shared cost savings thanks to reduced overheads. Once a platform has been created, whether it handles five jobs or five hundred jobs, the need to scale administrative resource isn't the same as traditional models so the customer saves on money as well as time.

Finally, there's the constant stream of data. Dialogue between the platform and the customer keeps the user informed and provides peace of mind that their delivery is on its way. Previously customers would be calling depots to chase up estimated collection and delivery times, in-turn increasing the amount of time needed to fulfil a job. With on-demand services, that's removed.

The opportunity comes from the way the technology can be integrated and this is where the industry will continue to see growth over the coming years. APIs integrating with existing ecommerce sites will create smooth customer experiences. This will give small businesses the chance to compete on a bigger scale without having to invest in technology or logistics infrastructure.

And whilst on-demand logistics is something we've been talking about within the industry for some time, users are now starting to see the benefits of adopting the technology and moving away from calling round their usual providers. As such, consumer confidence is now starting to really grow and this will be an upward trend as it turns to adopted behaviour.

What goods are most commonly transported?

Like a traditional courier, our customer base ranges from individuals moving furniture and bulky items to other courier companies using us as overspill when they're struggling to fulfil jobs.

We do a lot of work in print, with packaging being one of our most moved items. We also move a lot of wholesale goods – recently eScooters have seen a boom in demand and as businesses prepare for Christmas, they've clearly been building up inventory.

We also move a lot of bespoke engineered items and large parts. We're also seeing increased demand coming from customers who would usually

What is DeliveryApp's model and how has technology enabled it?

DeliveryApp's tech-platform creates the infrastructure of a traditional large-scale national courier provider.

Where a firm may have localised infrastructure with branches around the country connecting customers to their driver networks, DeliveryApp's technology creates this vast network of independent couriers without the requirement for expensive assets.

As a result of this tech-based solution, it drives down the cost for the customer whilst also ensuring our drivers are being paid fairly. Unlike bidding platforms, this isn't an unsustainable race to the bottom, it has the transparency our customers and drivers love which is why our network of users (both customers and drivers) is growing at a rapid pace.

THE TEAM AT DELIVERYAPP

We continue to invest heavily into our platform software in-order to bring new products to market in order to meet new customer demands. Most recently this has seen new card-less payment functionality being introduced but will include integration of multi-drop and green delivery as our platform evolves.

Our focus is always on making this functionality easily accessible to everyone, as such, all anything will ever need is a smartphone or web browser in order to be a user. ✷

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NEW LAWS FORCE SUPPLY CHAINS TO BE MORE ETHICAL

News laws from governments across the worls are forcing supply chain organisations to be more ethical. The implications are vast and companies around the globe have to adapt to the changes. We spoke to Rajat Jain, Consultant, GEP, a leading provider of procurement and supply chain solutions to Fortune 500 companies.

How do laws affect supply chain operations, and what can companies do to prepare and understand them better?
Laws and regulations in supply chain operations are like the suspension of a car — it may slow down the speed of the car but it's sacrosanct for its smooth functioning and control.

Germany recently passed the new supply chain due diligence act, making global companies (1,000+ employees) responsible for identifying and addressing human rights and environmental risks across their entire multi-tier, multi-geography supply chains. This law, which takes effect in 2023, impacts all enterprises that are part of global supply chains of larger enterprises.

We anticipate more countries and regions will follow Germany's lead with similar legislation. This expands the remit for supply chain and procurement leaders to track, report and be truly responsible for environmental and ethical practices across their extended network of suppliers.

The German legislation provides an impetus for chief supply chain and procurement leaders to operate more strategically and drive sustainable and resilient supply chains, by:

- Revisiting and verifying corporate social, ethical and environmental goals, policies and auditing requirements. Patagonia and, more recently, Marks & Spencer created their own standards in response to allegations of child labor and unsafe working conditions in their supply chains.
- Proactively communicating new law(s) and your organization's own policies to all suppliers.
- Creating transparency across your entire supply chain by using the same cloud-based supply chain software that manages your supply chain to both track raw materials and components from the point of origin and validate suppliers' practice declarations.
- Using technology to identify hot spots: We already know the regions of the world and the industries where there are potential issues. Start by requiring all suppliers, and their suppliers, to

RAJAT JAIN, CONSULTANT, GEP

provide independent third-party-issued certification that they adhere to your sustainability and ethical standards. Moreover, demand more from auditors and third-party certifiers. Require your independent auditors to reflect the diversity of workers on the ground and ensure they have their own corporate sustainability program. Then, go beyond table-stake certifications and use the latest web-crawling software to create a risk profile of your immediate Tier two and Tier three suppliers, especially in the supply chain hot spots.

What are the direct implications of the German law on supply chains, and can we expect more countries to follow?

This German law for protection of human rights and the environment in supply chains is basically along the lines of the EU Due Diligence law. The start of this year saw the European Parliament voting in

favor of an initial legislative report that would urge the European Commission to finalize and introduce a due diligence law for all its member states. Therefore, we can expect other countries to formulate business and human rights laws pertaining to supply chains, especially in Europe — but a standard European regulation would benefit all stakeholders across Europe.

Beyond Europe, we will soon see Australia establish stricter laws for supply chain operations. Its parliamentary inquiry committee — consisting of foreign affairs, defense and trade unions — noted that the government should strengthen the already existing Modern Slavery Act (after a public hearing where officials conceded that there has been almost no enforcement of the act until now).

Should organizations think about implementing their own ethics frameworks to be better prepared for future laws?

German companies, anecdotally, lead the rest of the world in working with suppliers to meet stated environmental and ethical practices.

For instance, Bayer (disclosure: GEP client) provides very clear policies and operations regarding sustainability and ethical practices, and really set the gold standard for all global companies. Another German company, Naturaline, put a traceability code on all its clothes to provide customers with details from sourcing and production to distribution and finally to sales.

Companies must now find suppliers who can solve environmental challenges as a core value proposition. It's no longer

Require your independent auditors to reflect the diversity of workers on the ground and ensure they have their own corporate sustainability program.

sufficient to just track KPIs around waste, water usage and CO2 emissions. Companies expressly need suppliers to be competitive in both sustainability and price. This approach will allow organizations to align, formalize and continuously review and deepen understanding and assessment of their suppliers. At the center of the approach is engagement with direct suppliers to encourage continuous improvement in their capacity to manage environmental, ethical and labor practices in their subcontractors and broader supply chain, including suppliers' suppliers.

The German law also firmly establishes fiduciary responsibility for chief supply chain officers in the way that CFOs have fiduciary responsibility to investors. It provides an impetus to supply and procurement leaders to:

- **Systematically identify and track** the history, distribution, location and application of raw materials, components products and their parts using radio frequency identification, bar codes, blockchain technology and material certification. Nestlé in the food sector and H&M in clothing list the details of nearly all their suppliers in the public domain.

- **Establish a SWAT team:** Create specialized, lean internal teams within the company's corporate sustainability group and actively work with local communities to understand the root causes practices in the farms, mines and factories. In the same way, company employees should conduct regular vendor quality checks on the ground and in the factories. Embed members of your SWAT team side-by-side with suppliers to identify issues and report back on activities and conditions.

- **Ramp up auditing:** Nearly all global businesses conduct periodic in-person supply chain audits with their immediate (Tier one) suppliers to verify that they do not, for instance, utilize child labor. But these "fly bys" are infrequent and involve traveling to a small number of top-tier suppliers who prepare in advance. To be able to conduct regular evaluations of working conditions on the ground and in vendors' factories, farms, fulfilment centers and transportation companies, businesses need to increase their spend on auditing from about 0.1% today to 1% of their annual profit.

Do you believe countries should intervene in the way supply chains are run?

Yes. First, investors led by BlackRock — the world's largest investment management firm — are beginning to compel companies to track and report their corporate social responsibility efforts and impact. Second, there is an increasing realization that the environment will cause massive economic and social damage to the world and growing political will to require commercial companies to become part of the solution. Third, in everything from rare earth materials to energy to chip manufacturing, the world is entering a new phase of global nationalist competition with commercial trade. The Biden administration identified several strategically vital supply chains that it is intent on gaining greater control of going forward. While China and Russia pursue geopolitical objectives through control of supply lines, the reality is that we're already experiencing greater direct intervention, beyond traditional levers like tariffs and regulation, in an increasingly active government-led intervention. ✷

We can expect other countries to formulate business and human rights laws pertaining to supply chains, especially in Europe — but a standard European regulation would benefit all stakeholders across Europe.

RISK MANAGEMENT TAKES OVER SUPPLY CHAIN OPERATIONS

Risk management across the supply chain has always been a tough game. With Covid still challenging traditional operational models, organisations are looking into ways to deepen their knowledge and build networks on visibility and extended data. We spoke to Harald Nitschinger, Co-Founder & Managing Director at Prewave, a predictive risk intelligence for SCM, Sustainability and Insurance.

'We were able to send the first warning about the pandemic late December 2019,' begins Nitschinger when asked if supply chains were prepared for what happened during the last nearly two years. 'When the lockdown in Italy happened there wasn't much that could be done as nobody would have that kind of safety stock. It is hard and almost impossible to plan for such an event.

A very sensitive area along the supply chain was communication. What worried most organisations was the inability to predict when manufacturing will start again. According to Nitschinger the area with the biggest vulnerability was supplier-customer communication. Prewave launched a 'Covid Map' which showed which suppliers were operating and which were still shutdown.

The database was constructed with information both from suppliers as well as publicly available data. 'The same way you can mark yourself 'SAFE' on Facebook, suppliers were able to mark themselves as 'ACTIVE'.

Predicting with AI

The conversations move to how technology and AI in particular helps supply chains. Based on predictive tools, organisations can learn about possible problems before they occur. This is done by software that can monitor the Internet about specific events and areas and then analyse disruptive events. A good AI would be able to detect a strike in a major port and alert supply chain managers about possible cargo issues. The management can then evaluate how much of a problem the strike is and if any action is needed. If the port in question is not being used at the moment of the strike or the cargo had already left it, then nothing needs to be done.

Following the Covid crisis supply chains are now more engaged with risk management and want to be able to monitor operations closer. 'It is hard to say what lessons have been learnt but people are more interested in risk management,' says Nitschinger. 'Companies are taking a more targeted approach towards risk management. They increase safety stock, substituting suppliers and moving away from single source suppliers.'

HARALD NITSCHINGER
CO-FOUNDER & MANAGING DIRECTOR AT PREWAVE

Organisations are not rebuilding their supply chains completely but try to target those areas that are most at risk of being affected by a negative event. This is where technology comes again to map out global events and zones of higher risk.

Automating tasks

Once Covid hit people quickly realised that they cannot rely on manual research as things were happening too quickly. 'People are not preparing for the next crisis and understand that they need to professionalise their risk management,' Nitschinger explains.

Automation however is just a part of the whole risk management strategy and organisations need to build a well-developed process. A tool can give information and insights but if the company lacks the needed processes no amount of data could help it.✷

VIDEO
DATA IMPROVES PREDICTABILITY IN PORTS

Ports generate a lot of data, however many of them are not using their data to its full potential. The Logistics Point spoke to David Yeo, founder and CEO of Innovez One, a provider of digital solutions for port optimisation, about the journey ports have to make when digitising, what deep tech is and how it can help optimise operations.

'Using AI and machine learning can help ports predict events and plan better,' begins Yeo. Ports produce a lot of data and machine learning can be used as a tool to speed up decisions and improve overall performance. As all other industries, world ports saw the importance of digitising due to Covid-19, with more of them looking to implement or already using digital solutions that can bring better visibility. 'In the past, digitisation was something ports just talked about but now they actually do it,' Yeo explains.

Costs of digitisation

In the past, smaller or medium size ports were unable to compete with their larger counterparts due to the high costs of digital solutions. Companies are now adopting a subscription-based model where ports can easily handle the costs and still enjoy all the benefits.

According to data from Innovez One, nearly 80% of world ports are still relying heavily on manual operations, which is slowing down growth and becoming a real bottleneck for the whole supply chain. The first and last mile at a port can be improved by simple scheduling solutions that can bring much-needed visibility.

You can learn more about port digitisation and what tools like those developed by Innovez One can do to improve operations down below. ✷

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