THE LOGISTICS POINT

YEAR 3| ISSUE 05 | JUNE 2022

EXCLUSIVE VIDEO CONTENT INSIDE

PUDO LOCKERS UNLOCK LAST MILE EFFICIENCIES

Two exclusive interviews on lockers and logistics with Bob Black from Doddle and Emily Snape from Lovespace.

NETZERO HITS THE ROAD

Logistics asks for more government clarity

INDUSTRY 4.0 FOR SUCCESS

SAP shares some ideas on how manufacturers to succeed

HOME DELIVERY EU

Join us in Amsterdam to talk about Home Delivery

THE LOGISTICS POINT'S

2022

LAST MILE & E-COMMERCE MONTH CONFERENCE

22ND NOVEMBER
10AM GMT

REGISTRATION:

Last Mile & E-Com Events

Join us for the second online conference on Last Mile & E-Commerce. Explore the world of consumer changing habits and how logistics fits in it.

EDITOR'S NOTE

Innovation is something that the logistics and supply chain industry have always been embracing with open arms. In this edition of The Logistics Point Magazine we are bringing you a look at how PUDO lockers and self-storage can become a new market area for the industry. In two interviews we try to understand the benefits, challenges and the business case for lockers.

Following our very successful Delivering Green: Creating Sustainable Supply Chains Online Conference in May we are now sharing all presentations and insights with you. You can find all videos in this edition.

Speaking of events. I would like to personally invite you to Amsterdam on the 22nd June to talk about micro-fulfilment. I am pleased to be part of this retail logistics event together with some great experts. You can get your free tickets here!

We are also gearing up for the second part of the year with an event on last mile and e-commerce. You can learn more about it in the edition and register here.

In addition, we explore how the UK's NetZero goals are so near and so far.. With the help of SAP we take a look at Industry 4.0 and more.

I hope you enjoy the edition and don't hesitate to drop me an email with any ideas, questions or comments you might have.

Nick Bozhilov
Editor in Chief
nick@thelogisticspoint.com

LAST MILE & E-COM ONLINE EVENT IN NOVEMBER

The last mile & e-com have changed forever but do we really know how to make them more efficient? Join us this November for an insight look!

The event will take place on the 22nd of November online and will gather top experts from the area to discover innovative ways to deal with last mile and e-com problems. And this is our official call for speakers. Message us now!

Are logistics & supply chain professionals getting the last mile and e-commerce operations? How can they be improved?

Join us for these sessions to explore more around the last mile: one of the most expensive processes in the logistics sector; and e-commerce: the growing hurdle for many companies.

Leading supply chain and retail experts will share their insights and knowledge into these tough topics.

Following on our successful Last Mile Month Event from 2021 we are bringing the focus on how logistics is operating orders to customers, innovations, and the impact e-commerce is having on the sector.

Main Areas of interest

Warehouse as An E-Com Service
How warehouses are accommodating e-commerce orders and the role of logistics operators in executing orders, promotions, operating returns, etc.

Q-Grocery
Understanding the financial sense of Q-grocery and how it can be done efficiently. The future of the sector and whether the boom of quick deliveries is over.

Urban Logistics
Storing and delivering options for cities and urban territories. How different solutions can be deployed to answer the need for NetZero cities.

Expected Attendees
200 supply chain & logistics experts have already registered for the event through our past events.

The Logistics Point Online Events attract a wide range of logistics and supply chain specialists.

Over 70% of all registered attendees are Senior Managers in Logistics & Supply Chain. ✷

IN THIS EDITION

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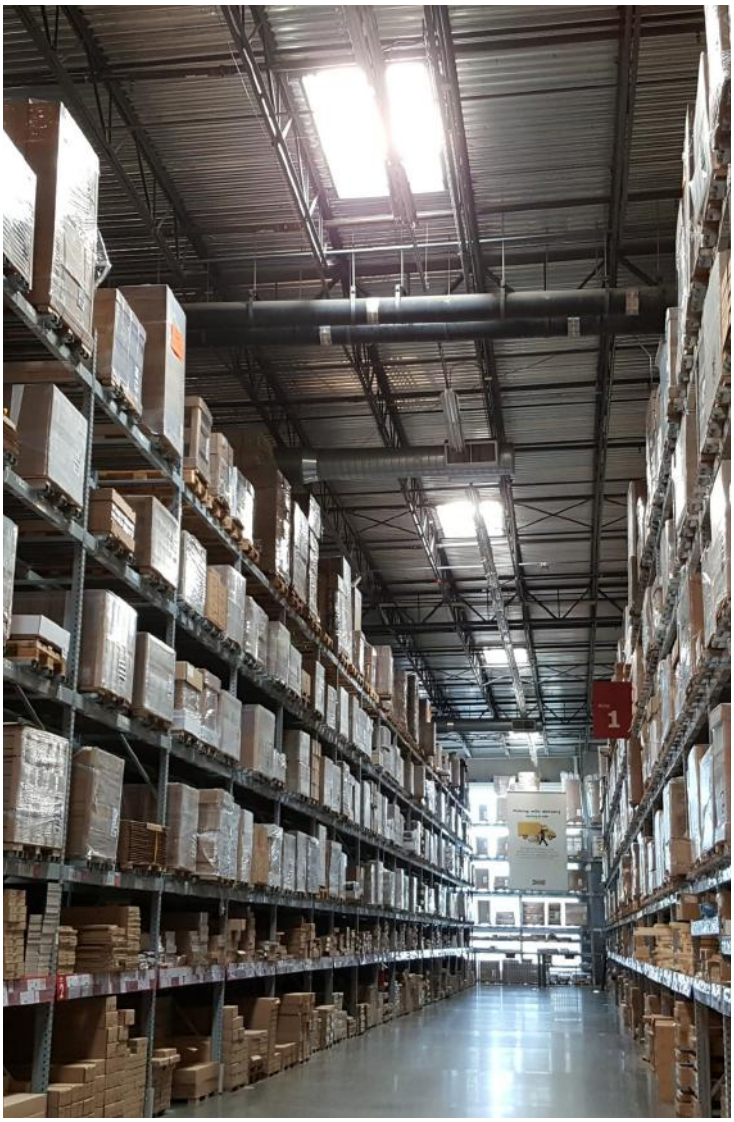


THE LOGISTICS POINT'S

2022

DELIVERING GREEN: SUSTAINABLE SUPPLY CHAINS

24TH MAY 2022
10:00 AM BST

DELIVERING GREEN

ERIK LUND
SONY VISILION

Erik is the head of Visilion, an asset-tracking and supply chain visibility solution provided by Sony Network Communications Europe. He has a background in transport and logistics.

ANTONY FRANCIS
ENDAVA

Antony is a supply chain consultant with vast experience in the field, helping organisations evaluate the impact their operations have and how to make them better.

POL SWEENEY
DESCARTES

Pól is the Descartes EMEA Vice President of Fleet Sales. Pól is a specialist in the solutions and technology that automate and create value for today's global supply chains.

PETER NEEDLE
SEGURA

Peter is the President & Founder of Segura Systems. His focus is on helping companies evaluate their supply chains and make them more ethical and sustainable.

ALAN MCCLEAVE
WALLBOX

Alan is the Country Director UK & Ireland at Wallbox, a leading smart charging and energy management solutions firm. He worked in the EV charging across the UK, Ireland and the Nordics

ELENOR SMITH
SLAVE-FREE ALLIANCE

Elenor works in the field of human rights, helping logistics companies to be more ethical. She worked within the Corporate Responsibility at Aldi around ethical trade, human rights.

DELIVERING GREEN

SONY VISILION

Based on IoT and 5G-enabled technology, Visilion allows manufacturers of critical and high-value assets, as well as logistics service providers, to gain control over the supply chain.

WALLBOX

Wallbox is a global technology company dedicated to changing the way the world uses energy. It creates advanced EV charging and energy management systems that redefine users' relationship to the grid.

ENDAVA

We have helped some of the world's leading companies accelerate their ability to take advantage of new business models and market opportunities.

SEGURA

Segura is a SaaS platform that is quick and easy to set up and deploy, and can work with existing systems. Segura captures your entire global multi-tiered supply chain, allowing you to map and monitor with ease.

DESCARTES

Descartes is the global leader in providing on-demand, software-as-a-service solutions focused on improving the productivity, performance and security of logistics-intensive businesses.

SLAVE-FREE ALLIANCE

Slave-Free Alliance was started in 2018 to deliver services to the commercial sector and support the development of activities and initiatives for businesses.

CREATING A RESILIENT & SUSTAINABLE SUPPLY CHAIN WITH IOT

The logistics industry is experiencing a few key challenged. Understanding supply chain problems and risks and acting pre-emptively is something many managers would like to be able to do. But how to achieve it? During his presentation at Delivering Green: Creating Sustainable Supply Chains Erik Lund from Sony Visilion shared a few options on how IoT can do just that.

Answering the important questions like 'Where is my shipment?' ,When is it going to arrive?' and 'What condition is it in?' cannot be done with the old tools. Erik put the focus on how technology and Internet of Things, in particular, can help supply chain executives to learn more about their operations and value chains.

Preventing Waste

On-time delivery is one of the most important KPIs for supply chains. Not only that but it also feeds into the goal of waste management as materials that arrive on-time are still in their best condition and can be put into use immediately. To get the most out of it, Erik suggests the use of smart devices. Such devices can tell managers what is happening with their cargo, why is it happening and ultimately how to prevent any problems.

Protecting Valuable Goods

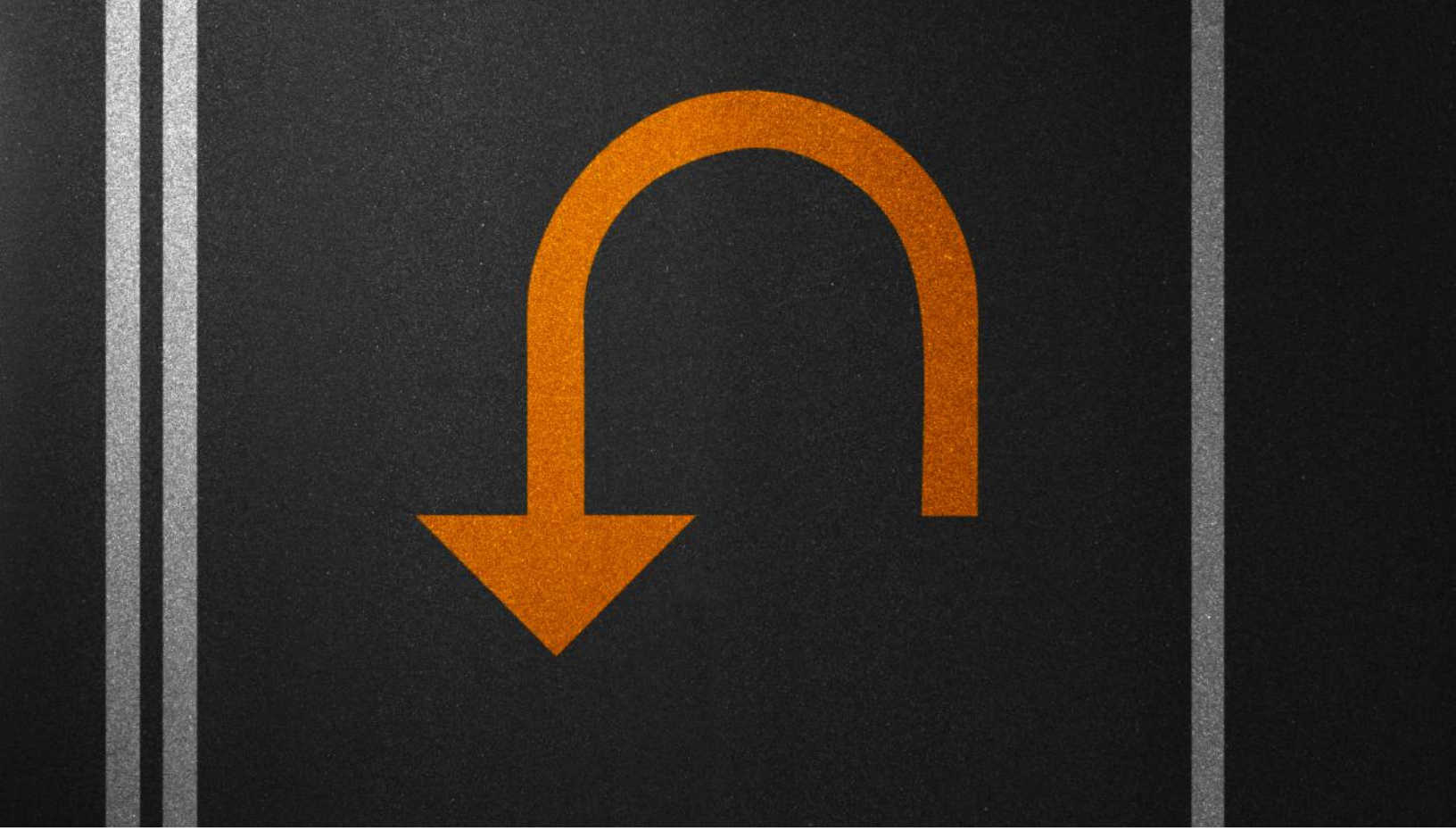
Having a system in place that can provide real-time information keeps the whole supply chain safer. Goods are constantly monitored and managers are provided with the data they need to act. 'You can discover deviations from the planned route,' Erik explains. This would help in case of thefts. In addition, monitoring the outside and inside environment would mean companies can quickly react and change the route if necessary.

Protecting the cargo and making sure no one has tampered with it is another benefit of sensors.

Sustainability and IoT

Internet of Things can be a great tool to reach your sustainability goals. Being able to monitor the full spectrum of supply chains operations is becoming a vital part of the whole value proposition.

You can watch the full presentation and discover more about the role of IoT in achieving sustainable supply chains now. ✷



REVERSE LOGISTICS: AS DUMPING INTO A LANDFILL IS NOT AN OPTION

Reverse logistics is one of the most complicated processes logistics organisations need to deal with. The rise of e-commerce brought the topic to managers with a new force and they are looking into innovative ways to deal with it. Antony Francis from Endava shared a few useful ways to deal with reverse logistics during our online Delivering Green: Creating Sustainable Supply Chains event.

Antony began his presentation with a photo of a landfill. A usual view for many of us and a usual place where most of our waste ends its life. According to Antony, however, there are a few other ways. Logistics organisations have started to think more about their role in sustainability and reverse logistics.

Circular Economy

The ability to reuse old materials and extract valuable components is a key way of lowering waste and controlling the supply chain better. The circular economy offers a wide range of environmental, social and economic benefits. Beyond product innovation it changes the way we use and consume products. It fits very well with what reverse logistics is trying to achieve - bring back to life products that someone did not want.

Challenges and Opportunities

Unfortunately, there are many challenges with reverse logistics. For once, there are high costs, especially for the first mile. In addition, Antony looks at how hard it is for companies to really understand what consumers want. Adding to that is the fact that there is very little visibility and control over what is being brought which often makes the whole process even more costly and inefficient.

For Antony, however, the conversation on reverse logistics and sustainability is here to stay. Companies are being forced to deal with the problem not only by consumers and governments but also by an internal push.

To align reverse logistics and circular economy would mean that consumers and manufacturers will join efforts and work together to improve the overall condition of the whole supply chain.

You can watch the full presentation and discover more about the role of circular economy in the reverse logistics process. ✷

SOLVING THE POWER SCARCITY PROBLEM IN FLEET DEPOTS

Energy is becoming a huge problem all over the world. With the move to more electric vehicles it is imperative that the logistics and supply chain industry address the issue the right way. There are many unknowns around how to use the energy in the most efficient way. Technology can help to control usage better. Alan McCleace from Wallbox shared a few great tips during our Delivering Green: Creating Sustainable Supply Chains online event.

Fleet electrification requires a lot of power and often it is way more power that most depots have. Current facilities are forced to retrofit their networks or replace the transformer substation to get the power they would need when moving to a fully electric fleet. Not surprisingly this costs a lot of money. According to Alan technology like a multilevel dynamic power sharing can really benefit not only the depot but the whole operation and make the transition to EVs much smoother.

Why it works

The way the system works is by using a software that can help with determining what needs to get priority and charges it first. By doing this a few things can be avoided. In the first place, the problem with a sudden power outage that could take down the whole operation.

Another great benefit of such a system is the fact that it would reduce the costs associated with electrification of the fleet. Last but not least. the system would be capable of monitoring in real time all the facility loads and balances the power delivered to chargers according to what has been set up as rules from the manager.

Reducing peak issues

A smart charging infrastructure is capable of reducing the way electricity is being used. Vans, for example, are being charged on a priority bases and Alan explains that by using a cloud-based solution, logistics operators can have a full control and visibility over what is happening where and when.

The ultimate goal is to use every single power that is available in the smartest way possible so there are no surprises at the beginning of the day like vans not being

fully charged and ready to execute their routes.

You can watch the full presentation and discover more about the role of smart, dynamic charging and how it can help sustainability efforts and the transition to EVs. ✷

ADVANCED OCEAN DATA AS FUEL FOR NETZERO

The maritime industry is working hard on reducing its carbon footprint. Many things are being done but some experts say that the work needs to intensify. Thomas Donslund from Gatehouse Maritime shared a few ways the maritime sector can speed up the process of NetZero and how technology can help during our online Delivering Green: Creating Sustainable Supply Chains event.

Ships will carry more than three quarters of goods around the world by 2050. That is why it is so important that the industry reaches its NetZero targets. A problem is that with the current pace logistics emissions would at least double by 2050 and more works needs to be done.

For Thomas container carrier lines are an untapped area where the maritime industry can work to reduce its negative emissions. For Thomas data will be key and shipping would need to embrace the digital with open arms.

Tracking vessels and collecting data will certainly help with understanding what are the areas that need to change the most. GateHouse is specifically looking at this and provides insightful information.

Improving transparency

One of the areas Thomas thinks that good work is being done is around transparency. He looks at the GLEC framework, which provides logistics organisations from different areas, with ways to reduce their carbon footprint. Thomas argues that by having the real-time data ship owners and container owners can make decisions that could positively impact the environment.

No more idling

A huge problem in recent years has been the idling of ships waiting to be admitted to ports. By using a real-time data system companies would be able to understand better what is happening at ports and act accordingly. Thomas believes that would mean a more spread out way of choosing ports based on how polluted they are.

In order to reach that level of detail ship owners and the whole industry would need to ask themselves some tough questions.

You can watch the full presentation and discover more about the role of advanced ocean data in creating a more sustainable maritime sector. ✷

BEYOND MAPPING – WHY TRACEABILITY IS ESSENTIAL FOR THE FUTURE

The pressure on retailers in the fashion industry to change the way they do their business in mounting with every single day. It is essential that organisations know what is happening in their supply chains and who their suppliers are. That knowledge is not always easy to come by but according to Peter Needle from Segura technology can provide a better view. Peter spoke at our online Delivering Green: Creating Sustainable Supply Chains event.

Governments, investors and consumers are putting an immense pressure on business to be ethical, sustainable and to achieve NetZero as soon as possible. In addition to that Peter looks at a survey that says that more than half of investors would divest from companies that have not taken substantial ESG actions for their supply chains.

Consumers are also very involved in the issue. 83% of them say that companies should actively look at the way they engage with issues around ESG. With the commitment of so many parts of the world economy to become NetZero by 2050 there really is no time to waste. And scandals can very quickly destroy whole corporations who have not bothered to look deeper into their operations.

The power in supply chain

Peter says that procurement and supply chain leaders have the power to shape the ESG talk in their organisations. They can shape and redefine how companies react and what their new rules are when it comes to ethical procurement. Peter, however, says that it is essential for organisations to be able to measure what is happening actively. Otherwise, no actions with true, long-lasting effects can take shape.

At the moment the fashion industry relies on manual processes and forms to monitor its ESG. That is far from enough and it is often very easy for suppliers to hide something. Having a multi-tier transparency is a way to unlock the full potential of supply chains and make them more ethical and better suited for the new times ahead.

You can watch the full presentation and discover more about the role of software and traceability in the way fashion retail is transforming. ✷

MOVING AWAY FROM SLOGANS INTO TRUE SUSTAINABILITY

Sustainability is a hot topic in logistics and supply chain but unfortunately it can mean so many things. Very often organisations pledge to do something and then the promise is buried somewhere where no one will hear about it ever again. With the 2050 NetZero goal fast approaching we cannot close our eyes anymore. During our online Delivering Green: Creating Sustainable Supply Chains event a great group of experts gathered to discuss how to achieve true sustainability.

Free from slavery

Elenor Smith from Free-Slave Alliance looked at how important it is for companies to recognise slave labour in their supply chains. Although a huge challenge Elenor believes organisations can deal with the problem and should be more active. 'We are respecting the environment but we also need to respect the people within it,' Elenor says.

Cyber security

Jonathan Wood from C2 Cyber spoke about the importance of cyber security and its relationship to sustainability. With supply chains going more and more digital it cannot be underestimated what a cyber attack would do to operations. For Jonathan many companies still do not understand why they need to invest heavily in tools that would protect them digitally.

Optimal usage of resources

Pol Sweeney from Descartes covered the way organisations use their resources. Pol underlined how important it is to take full advantage of modern software and technology to achieve NetZero goals. He looked at a survey done by Descartes which showed that billions of tones of CO2 can be saved by simply tracking operations.

Better Control

Erik Lund from Sony also agreed that better control over what is happening would propel NetZero forward. His words were echoed by Antony Francis from Endava and Peter Needle from Segura. Antony spoke about how much paperwork is involved in logistics despite all the cloud technologies.

You can watch the full discussion panel on how to reach your true sustainability goals now. ✷

VIDEO
PUDO LOCKERS TAKE ON LAST MILE INEFFICIENCIES

The Pick-up Drop-off (PUDO) lockers' market has exploded in recent years. With the rise of e-commerce more and more logistics operators are looking into bringing lockers onto the streets of cities where last mile operations need fast improvement. We spoke to Bob Black, Deputy Chairman of Doddle, about the benefits of lockers, how they are transforming the urban logistics landscape and more. Watch the full video interview now.

What are the benefits of PUDO lockers?
It's a great question, and it's one that many operators around the globe are grappling with. The lockers' network has become a great opportunity for carriers and post operators around the world to expand their out-of-home delivery options. So we're seeing an approach to that in many different ways. In some countries it is the incumbent post office that is the market leader. For instance, the post operator in Australia has over 1,100 lockers deployed. In Germany the postal service has taken a similar approach.

In other countries, like in the UK, it is quite fragmented. There are locker companies installing them and companies like Amazon who do it. Doddle also has a locker network that we support in the UK. That is trying to push volume into more efficient out-of-home solutions.

So rather than the final mile being at the consumer's door, we're able to divert that final mile delivery into a convenient collection point.

What we saw during my time, my six years at Australia Post, was that offering this gave the consumer the control of their own choice. We actually realised that consumers selecting their own out-of-home delivery option gave them a collection at any point in time that they could go and do it. There was a certainty that it was going to arrive. They'd be notified when it arrived and it would be safe and secure.

When can you see the return of investment?

What we found is that it was very difficult for us to then monetize that. People were saying they had to do the job and that we didn't deliver to their door. They would ask why we would charge them. So you have to look at the investment in what is in a very different way. It isn't necessarily going to be something that you're going to generate revenue from. You're actually going to make your delivery network greener, more efficient, reduce your costs to serve and be able to consolidate deliveries to one point when multiple consumers will come at their convenience. So the way that we looked at this was through efficiencies: cost efficiencies and environmental issues to reduce the impacts of roadside delivery to homes.

Is there the perfect location and a critical mass of people that would justify an investment in PUDO?

We're back into a period of change where people who are going back to the office will use the lockers at train stations, bus stops, etc. That's where you've got good foot traffic already. So superstores, town centres where you've got high footfall.

The way that we looked at this was through efficiencies: cost efficiencies and environmental issues to reduce the impacts of roadside delivery to homes.

Are lockers useful for just a specific type of goods - no perishables or large goods?
They can be adapted and fitted out with temperature controlled units. There's an additional cost to go with a locker that is oversize. When you double a locker with a post office, a bank or a superstore you get options.

When we move through e-commerce channels and we look at the more mature markets, the likes of the US or the UK, where we're now seeing white goods being ordered online and beds or mattresses, of course, lockers don't solve that problem.

Watch the full video interview with Bob Black to learn more about the experience of Australian Posts with PUDO, how the UK market is transforming and its fragmented nature would mean for the locker industry and couriers. ✷

VIDEO SELF-STORAGE OFFERS NEW CHANNELS FOR LOGISTICS

Self-storage spaces are often outside of city limits in industrial parks. This increases logistics costs and makes the whole delivery and operation far from sustainable. We spoke to Emily Snape, Growth Director at Lovespace, a self-storage company that offers self-storage with collection and delivery, on the link between self-storage and logistics and how the company is bringing it closer to consumers. You can watch the full video interview now.

'By leveraging a logistics network, it means that you can bring storage much, much closer to the people who need it,' Emily explains when talking about the link between self-storage and logistics couriers. Lovespace participated in a trail with Transport for London and provided self-storage drop-off facilities across different locations. This shortened journeys and ultimately increased efficiency.

Lovespace is able to use its network and positioned self-storage units on parking spaces and other public areas. 'There's lots of opportunity within warehouses to utilise otherwise unutilized space,' Emily continues. 'particularly if you do it on a per item level. We do know lots of our customers are storing by the box.'

Consolidating items from multiple customers and using a well-developed logistics network limits mileage and pollution.

Emily says there are many things that need to be considered before delivering one of the units to a public space. Many areas would not be suitable or are just too busy. Companies would need to actively work with local authorities and other interested parties to make sure units help the local community. 'It is a brand new concept, and one of the challenges I think is explaining to people what it is and how it could benefit,' Emily goes on. Currently Lovespace plans to go beyond London and into other parts of the UK.

EMILY SNAPE,
GROWTH DIRECTOR, LOVESPACE

You can learn more about the trial Lovespace did with Transport for London as well how much is the upfront investment in the full video interview now. ✷

WHAT CHALLENGES ARE THE LOGISTICS INDUSTRY NOW FACING?

The last few years have had a major impact on logistics, making customer demands and expectations difficult to meet. Technological advances, sustainability and the pandemic have all added to this very challenging time for the logistics industry.

The most significant challenge that logistics are currently facing can be divided into three categories, all of which influence each other:

Advancing globalisation inevitably leads to an increase in transport volume. This means that thanks to the increase in cross-border business transactions, there will be therefore also an increase in the flow of goods. For example, the DHL Global Connectedness Index, which DHL collects annually, clearly shows that although the Coronavirus pandemic led to a slowdown in the globalisation process, it is now clearly picking up speed again and will also accelerate in the future.

This naturally requires an expansion of transport capacities or the number of vessels. It is likely that we will be confronted with a grow of traffic volume by land, sea and air.

In order to deliver goods according to customers' needs (six R's of logistics – right product, right quality, right time, right place, right quantity and right cost), new capacities such as the expansion of sea-harbours/airports or additional warehouses/intermediate storage facilities must be considered.

Digitization is also a challenge for logistics. The internet has not only ensured that digital business in the B2C sector has continued to grow, but it has also grown in the B2B area. Digitization enables companies to introduce and to take advantage of e-sourcing with various suppliers (worldwide) or even to use the upcoming Industry 4.0 for themselves. In connection with Industry 4.0, companies have the opportunity to collaborate more closely with other companies in order to achieve a better utilisation of production capacities as just one example among others. However, this possibility can only be successfully implemented if the corresponding logistics is planned or integrated.

In the future, logistics service providers will probably have to deal more with small lot sizes instead of a large load of one good. Due to this fragmentation/atomisation of freight logistics service providers will be forced to deal more with artificial intelligence and autonomous logistics (e.g. warehouse robots, self-driving delivery vehicles, drone transport) in order to be able to meet customers' needs in the future.

Sustainability is the final challenge for logistics. At the latest, through the Fridays for Future movement, it has become clear to everyone that the earth's resources are limited and that we should pay more attention to our environment. However, the growth in logistics services inevitably leads to an increase in pollutant emissions.

The growth in logistics services inevitably leads to an increase in pollutant emissions. To counteract this, logistics service providers such as UPS, DHL or Amazon have already converted their vehicles to gas or electric operation.

To counteract this, logistics service providers such as UPS, DHL or Amazon have already converted their vehicles to gas or electric operation.

In shipping, too, research is increasingly being conducted into using alternative energies for transport in order to protect the environment as much as possible and save energy simultaneously.

Adapting to the new normal

The Coronavirus pandemic has clearly shown us how cross-linked we all are and how globally we have planned our supply chains. The pandemic has also shown how dependent we are as soon as a flow of goods is interrupted. Good evidences for this are the shutdown of the port in Shanghai or the accident of the MV Ever Given in the Suez Canal. The aforementioned examples and the current shift in the geopolitical situation, as well as trade wars between nations, are ultimately drivers for maritime transport companies to rethink their processes in terms of being able to react faster and more flexibly to such developments in the future without incurring significantly higher costs and/or time.

Accordingly, it may be a matter of new sea routes that require the bit more time, but at the same cost due to new propulsion technologies, or faster conversions of tankers that previously had to transport oil and now LNG. ✷

Professor Dr Werner Frese, Lecturer and Programme leader for Dual Study Programmes & MBA Programmes at University of Europe for Applied Sciences (UE)

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HOMEDELIVERY

WORLD EUROPE

June 22-23, 2022
RAI Amsterdam, Amsterdam

THE EVENT

FOR RETAIL LOGISTICS

HIGH TECH FULFILLMENT: INNOVATION IN MICRO-FULFILLMENT & URBAN CONSOLIDATION CENTERS

It is no secret that urban centres are attracting more and more people. This is putting a significant pressure on logistics operations and companies are looking into innovative ways to counter the increase in deliveries they do in cities.

Technology can help solve many of these problems but big questions still remain. We are very pleased to announce that our Editor Nick Bozhilov will be joinin Home Delivery Europe this 22 - 23 June in Amsterdam to discuss how micro-fulfillment centres can help urban logistics.

You can register for free for the event here and join the discussion now! Nick will be joined by some great experts on the stage at 3 pm CET. Learn more about them below.

Hans Schurmans is the logistics operations Director at Proximus Group, the major telecom and digital service provider in Belgium. He has extensive experience in operational execution in a multisite retail environment and led major innovation and transformation programs within the group. Transforming classic logistic operations into a logistic customer experience added value service provider. Previously, Hans held management positions in multiple domains such as IT, purchase, commercial and project management. His focus besides operations is digital transformation, sustainability / innovation and people development.

Jos Miermans is the co-founder and business partner of etheclo.He is a commercial engineer, graduated from KUL – Leuven, with a long track record in project management, logistics, customer service and cold chain management. He was, from the beginning till the end, involved in an internal innovation project @ bpost on home delivery of groceries and medication, before creating in 2015 – together with Marnix Van Bockhaven - “etheclo

HOMEDELIVERY WORLD EUROPE

June 22-23, 2022
RAI Amsterdam, Amsterdam

THE EVENT FOR RETAIL LOGISTICS

Lu Zheng: Industry x.0 Transformation/ supply chain logistics automation & digitization, collaborating with 5 + Global Warehousing; Distribution Suppliers, 2 million square feet of warehousing space all under one program towards the future warehousing roadmap. Having help shape & led transformation of value chain relationships in 3 continents (Asia, North America & Europe) and lived in 3, I am constantly seeking my next adventure and challenging assignment in the consumer electronics/internet sectors.

Gaurav Mogra is the founder and CEO of OPTIFLOW, a SaaS platform for creating supply chain digital twins. A digital twin enables simulation and optimization of a real-world supply chain to arrive at the most optimal network configuration balanced for costs, service levels and risk. Prior to starting up, Gaurav help multiple leadership positions in consulting with Deloitte Consulting LLP, USA and industry with ITC, Ltd, India in the domain of supply chain strategy and operations. He holds a Bachelor's degree in Mechanical Engineering from Indian Institute of Technology, Madras, India and a MBA from Indian School of Business, Hyderabad, India

INDUSTRY 4.0 TECH TO KEEP MANUFACTURERS IN TOP SHAPE

The manufacturing industry has pioneered global shifts in commerce and trade since the first industrial revolution brought affordable, mass-produced consumer products to the market. The advent of automation, a commonplace feature in factories and production plants for generations, increased efficiency, delivered better value to customers, and placed safety at the forefront of the workplace.

But today, assailed on all sides by the global disruption of a prevailing pandemic, regionalised geopolitical complexity including the Ukraine conflict, supply chain disruptions and ever-changing customer demands, manufacturers face a considerable number of new challenges. Overcoming them isn't about a complete revolution - as was the solution to mounting globalisation in the 19th century, but it will call for a similar leap of faith in new processes and technologies.

In an era of business uncertainty, industry 4.0 has a leading part to play in the next seismic technology shift that addresses today's global challenges. For manufacturers, there's no doubt about technology's role in delivering continuity and resilience against what may come, but also in helping them to thrive.

If manufacturers want to emerge ahead of their competitors from today's challenges, here's the top three industry 4.0 technologies they should be paying attention to.

The influence of the cloud on modern manufacturing

First and foremost, manufacturers must pay attention to the evolution of cloud computing and understand how it can continue to make an impact in the future. While most manufacturers have embraced the cloud in some capacity, research suggests that some remain concerned about legacy integration and the performance of applications in the cloud. This indicates that there may still be some hesitancy to go 'all-in' and this could be a concern as the industry looks to thrive, not just survive, in the current business landscape.

Cloud computing is not just the enabler of industry 4.0 but also wider digital transformation. It is the foundation in which most advanced technologies, such as the IoT and real-time data analytics, operate, and can be scaled up or down to manage shifting project workloads, react to demand and improve visibility across the business.

In the context of the supply chain crisis, this can have a real positive impact. For instance, the shortage of cars has been a permanent fixture on the news agenda over the last two years, with long waiting times in production.

For many original equipment manufacturers, the cloud has been a game-changing solution in maintaining levels of customer experience. It has facilitated greater end-to-end visibility of the supply chain, meaning faster and more accurate customer communications, as well as the capacity to forecast demand, plan in advance and improve the efficiency of the production line.

The power of the Industrial Internet of Things

At a time where the future of industry remains in flux, determined by the outcome of global events, the Industrial Internet of Things (IIoT) has a critical role to play in supporting manufacturers to be agile to change. Unlike the IoT which is commonly used as an umbrella term for connected consumer devices, like a smart watch, the IIoT uses connected machines, devices and sensors in industrial applications such as robotics.

These devices produce large volumes of data that when analysed, can improve efficiency, productivity and visibility, both in manufacturing and along the supply chain.

To explore this further, the IIoT is pioneering a concept called smart factories. While the concept of automation has been in use in manufacturing for decades with barcode scanners, cameras and digitised production equipment, those devices are rarely interconnected. Instead, the people, assets and data management often operate in isolation and must be manually coordinated and integrated on an ongoing basis.

Through the IIoT, manufacturers are able to build an interconnected factory by collecting disparate sets of useful data across the business and supply chain. This can then be stored and actioned to inform product development or quality control. Moreover, in the case of global challenges such as the blockage of the Suez Canal in 2021 or the start of the conflict in Ukraine, the IIoT allows manufacturers to be proactive, as opposed to reactive, to crises. Spotlighting the Suez Canal blockage, for instance, during the period of severe supply chain disruption - it was the IIoT that supported manufacturers with contingency planning, understanding where raw materials were and which suppliers had them, enabling them to mitigate against disruption.

Managing the tide of data

While large quantities of data at your fingertips is paramount, it can easily go to waste without the ability to effectively manage and analyse it in real-time. This is where Big Data management, machine-learning and real-time analytics play an important role in supporting industry leaders to glean the best insights from their data, and inform smart strategic choices.

Typically, manufacturers will produce vast amounts of both structured data and unstructured data. Structured data is the simplest to organise and search, and can include financial information and machine logs, like an Excel sheet - that can be easily categorised and doesn't require intensive resources to manage.

Unstructured data, on the other hand, typifies the volume of information produced by connected machines, and isn't as easily captured. Today, manufacturers still use laborious manual processes at an exorbitant cost to read and analyse this data, but this is no longer necessary.

During a crisis or business uncertainty, manufacturers need to move fast and make smart, accurate choices. Slow, costly data insights could be the difference between making the right or wrong choice. Through machine learning and real-time analytics platforms, manufacturers can accelerate connectivity across the business, collecting and analysing data at speed and scale. In practice, this means they can pivot faster to changes in trading conditions or identify and address issues before they reach the customer. This could be machines in need of repair, maintaining field equipment or adjusting their supplier based on the availability of chips or raw materials.

Helping companies meet their sustainability targets

Innovative companies are now able to drive comprehensive sustainability agendas while boosting their bottom line and market share – but how are they doing this? Conscious that all stakeholders, from investors to end users, are asking companies to reduce their carbon footprints, forward-thinking enterprises are specifically targeting manufacturing processes to make sustainability improvements.

In fact, Industry 4.0 is specifically able to enable this by improving operating efficiency, optimising cost and eliminating sustainability issues right at the point of product design. By harnessing the power of automation, augmented reality, AI/Machine Learning and the IoT, Industry 4.0 can promise improved methods of production and enhanced business models. With Scope 3 emissions accounting for 80-90% of your total emissions, this can be a game-changer for organisations with their eye on the environment.

Ultimately, the manufacturing industry has experienced greater disruption and challenge in the last decade than the previous three combined. As before, manufacturers looking to resurface ahead of competitors need to be bold and take a leap of faith on embracing new technologies and processes. It's here that they must recognise the role of industry 4.0 technologies, in the cloud, IIoT and Big Data with real-time analytics, in helping them to successfully navigate the ongoing supply chain crises and geo-political complexity, while maintaining business continuity and a level of service end-customers have come to expect. ✷

By Greg Moyle, Head of Energy & Discrete Industries, SAP UKI

LOGISTICS CALLS FOR NETZERO CLARITY AND REGULATORY HELP

The logistics industry is taking unprecedented measures to limit its impact on the environment. The drive to NetZero is becoming something everyone is involved with from managers to government. We spoke to Denise Beedell, Logistics UK's Public Policy Manager, about how the UK government can further support the industry when it comes to achieving NetZero and why the organisation believes the current support does not go far enough.

Where are we now when it comes to achieving our NetZero targets?

Well, it's not a very straightforward question, because it really does depend on who you're talking to. The road sector has probably moved further than any other at the moment. Obviously there has been a huge take up with cars but from a logistics point of view, it's mainly at the light vans side of things. The initial progress has been made, but it's really very early days. There are some companies and some manufacturers that are now starting to offer zero emission lorries, but again, they tend to be at the lighter end. We've still got some way to go for the heavy, really heavy goods vehicles.

We've had discussions with National Grid and energy suppliers, and in fact, at the select committee, they did say that there would be sufficient electricity supply to cope with the NetZero demands.

Is this based mostly on what the market can offer in terms of technological capabilities?

Yes, but it isn't just about the technology of the vehicles, that's part of it. There are some more fundamental things that need to be looked at before we really start to worry about the vehicles. The key point is about the refuelling network.

Logistics UK is agnostic, completely neutral about what technology is used, and if anything, we believe that we'll probably need a range of technologies across the whole of the industry. There will be different routes to NetZero for different modes and different types of operations. For whichever one you go for, we do need to have improved infrastructure. Take electricity, for instance. It's actually a fairly straightforward case for vans to move to electric for the majority of operations, but some will still find it very hard to electrify certain types of operations, like those who use their vehicles 24/7 or those that operate off grids in very remote locations.

There are so many elements that we, as the partner connecting companies to the candidates, can bring to both sides. We invest time learning about the organisation we represent because then we become exceptional ambassadors towards potential candidates, addressing all possible barriers in our approach to them. We explain about the company, its strategic plans, the unit, its focus, future road-map, and all those elements give them much confidence to say ''sounds like a company I'd like to explore''.

This cannot be addressed by just putting a job ad on LinkedIn and stating ''Looking for a Sales Director in Japan''. If the candidates do not receive the full message and understand that the company will be attentive to them, the response rate will be problematic.

Before we start buying the vans, we need to make sure that we know where we're actually going to charge them. If you have a depot, then it seems like an obvious place. That would depend on what sort of charging system companies want to use. So there are lots of things you need to know before you even think about it.

What is being done at the moment?

We've had discussions with National Grid and energy suppliers, and in fact, at the select committee, they did say that there would be sufficient electricity supply to cope with the NetZero demands. I'm sure they must be doing a lot of work behind the scenes to make sure this is happening. There are things logistics companies can do to help themselves.

We've seen some of our operators utilising old electric batteries from cars to operate as an extra storage facility. We've heard of our members putting solar panels and other forms of storage into their systems. There are lots of technologies out there that are starting to emerge, but there aren't any obvious winners just yet at the moment. And a lot of it relies on who is the actual owner of the property. if it's rented your landlord might not want to allow you to do certain things. If you're in a certain area, you may find that planning regulations cut across what you're trying to do. If you actually have vehicles that don't come back to the depot, then you need to think about installing charging facilities at the homes of your employees. But if they only have space for one vehicle and they've also got their own personal vehicle as well, which one would you actually put on their drive?

If you are a parcel delivery company or you're in the construction industry and the goods that you carry are very heavy, then you'll have to just put extra vehicles on the road. Now that has its own issues and we don't necessarily want to see more vehicles on the road.

So for vehicles that are taken home, we need to make sure that the public charging infrastructure is on purpose and can allow usage by commercial vehicles. And this is another issue because a lot of councils are charged with putting in charging points. Their focus has largely been on making sure that car owners have access to public charge points. I think a lot of the work the industry is doing isn't visible.

Why do you think the UK government is not providing enough clarity on the NetZero strategy?

They have got a framework out there, but there's too many gaps in it at the moment. We want them to speed up all the trials that are being done, which are great and we are fully supportive. But we can't be hanging around. We need to get on with moving many of them now to large scale ones. At our conference the Minister for Transport announced £200 million just to push those trials along into larger scales. And we totally welcome that. That's exactly what we want to see happening.

But it goes beyond that. We want to have that confidence that the charging network is actually going to be there and have an understanding of when it's going to be there and in what form. So it doesn't just focus on cars, it actually looks at all vehicles that are likely to need to use the public charging network. We need to make sure that in those plans the cabling on the ground is going to be there ready for the heavier goods vehicles.

The other big elephant in the room is the regulatory system. The manufacturers have told us that vehicles, particularly battery vehicles, are going to be heavier in the quest for longer mileage range. So then operators have a difficulty because the battery in the propulsion unit actually weighs more at the moment, so that eats into how much capacity you have for the load carrying.

If you are a parcel delivery company or you're in the construction industry and the goods that you carry are very heavy, then you'll have to just put extra vehicles on the road. Now that has its own issues and we don't necessarily want to see more vehicles on the road. We want to maximise the efficiency of the vehicles that are being used. Currently a diesel vehicle is quite efficient in how much load it can carry and how many times it needs to be refuelled. So we need to get to a point where the vehicles can operate in a way that they can operate just as efficiently, maximising the load carrying capacity and making sure that they're not constantly off the road refuelling.✷

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