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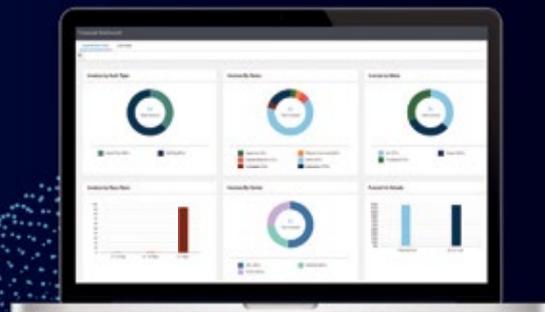
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Logistics evolved.

SUPPLY CHAIN RESILIENCE

Distributed in THE TIMES



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SUSTAINABILITY

Resetting with sustainability in mind

The coronavirus pandemic has forced organisations to rethink their supply chains, so is this the perfect opportunity to start again and ensure sustainability is engrained at every stage?

Jim McClelland

As the coronavirus calendar passes the six-month mark, ideas of what constitutes a sustainable supply chain in a post-pandemic world have changed, for the better. Gone are the early days of disruptive consumer desperation, panic buying toilet rolls and searching shop by shop for flour. Now, we can question what we really want from the big reset.

The all-too-real threat of climate risk means decarbonisation and net-zero targets remain on the table for any sustainable supply chain. So too do protestations around pollution, as images of ocean plastic found in washed-up marine mammals will not leave the public consciousness, or conscience, any time soon.

So, what has coronavirus actually done for supply chains? There are two different answers to that question: the practical one revolves around the spectacular spike in ecommerce and the more philosophical answer embraces the regenerative power of ecosystem-led resilience.

Either way, the sustainable supply chain of the future ought to be different, by design and by choice, says Kevin Quigley, commercial director of food-waste recyclers Warrens Group.

"Business owners shouldn't be in a hurry to get back to pre-COVID performance with quick-fix solutions. They need long-term sustainability goals," he says. "This is a rare moment in our history when there is an opportunity to rebuild on a clean path of growth."

To act fast, but think long term, is a tough ask. Sustainability is therefore a strategic play, to be backed by investment and innovation, says Mike Landry, global supply chain service line leader at digital transformation experts Genpact.

"COVID-19 has forced supply chain leaders to focus on short-term priorities in 2020, implementing agile responses to global disruption. But now is not the time to pause sustainability efforts; longer-term, systemic threats will still be there once disruption eases, along with consumer pressure to solve them," he says.

For many organisations, given a boom in ecommerce, delivering the sustainable supply chain has taken on a very literal meaning. Companies pioneering innovation in greener logistics include LivingPackets, that offers packaging that can be reused 1,000 times, with digital address displays to facilitate returns.



Also driving sustainable, digital change is the ORION platform, employed by UPS. ORION uses advanced algorithms, artificial intelligence (AI) and machine-learning to optimise deliveries and reduce carbon footprint, saving UPS about 100 million miles and 10 million gallons of fuel a year.

For traceability and transparency, from provenance to chain of custody, independent third-party validation also helps underpin brand credibility, mitigating risk, says Ruth Rennie, director of standards and assurance at the Rainforest Alliance.

"Sustainability standards and certification focus businesses on necessary actions and measurable requirements," she says. "This key data on risks and performance, updated through regular verification, is critical for businesses to constantly adapt their strategies for building more resilient and sustainable supply chains."

The influence of digitalisation on the business of supply chain management began long before

COVID-19, promising multiple sustainability gains. Initially, though, when the pandemic broke, fears surfaced that a reactive ecommerce surge might relegate environmental concerns down the list of priorities.

As supply lines and market confidence recover, however, so too will appreciation of the deeper green merits of digital, says Reid Fairbairn, business manager at DG International.

"Digitalisation of the supply chain means more oversight into how deliveries are being made, with supply chain managers able to make more informed choices based on sustainable credentials," he says.

Visibility is an issue, though. A recent study of UK businesses by smart procurement advocates Ivalua found almost four out of ten firms identified poor data quality as the biggest barrier to mitigating environmental concerns in their supply chain.

Much as digital solutions might promise a double dividend for supply chains, enabling sustainable growth, while increasing efficiency

and reducing waste, improved data on its own is insufficient, according to James MacGregor, environmental economist at Ramboll.

"There are questions about the value of data, plus the cost of collecting and analysing. We live with a mantra for accurate, up-to-date and dynamic data, to optimise efficiencies, understand pros and cons, but we are blinded to how this impacts or trickles down to true sustainability," he says.

Food security, and by association food waste, became a key focus for supply chain performance, with fierce media attention and public concern, during national lockdown. Feeding a nation effectively under siege involves big numbers. Indeed, data scientists at digital supply chain platform Blue Yonder predicted the UK's top eight grocers could cut £144 million a year in food waste by using AI and machine-learning in their supply chains.

Addressing the risk of a full-blown food crisis, therefore, opened up opportunities for digital to deliver, in every sense. Orderly, for example, worked with UK supermarket Morrisons to implement a direct-to-consumer offering in only six days.

Not surprisingly, then, a sustainable supply chain is essentially agile, says Orderly chief executive Peter Evans. However, he is also keen to point out there is more to sustainability than just efficiency and optimisation measures, such as streamlining journeys to cut air and road miles, or just-in-time local production to save on energy-hungry warehousing.

"The social contract between business and customers is changing," he says. "Sustainability is no longer an afterthought, but a must. The pandemic has opened up the public's eyes to how we must band together for the greater good and strive for connection."

Ultimately, though, for resilience to be regenerative, where the environment and local ecosystem are enhanced, not harmed, the only true reset is circular, says Louise Kjellerup Roper, chief executive of London-based change agency Volans.

"Over past decades, the pursuit of efficiency has squeezed resilience out of supply chains. So, highly efficiency-driven global supply chains must be dismantled to ensure not only resilience, but also sustainability," she concludes. "For a start, we need to stop thinking of them as supply chains and shift to a circular economy mindset." This is the real big reset. ●



JOBS

Recognition grows for warehouse workers

The surge in ecommerce, driven by the coronavirus pandemic, has increased reliance on efficient supply chains, as warehouse and logistics workers are increasingly recognised for their role in ensuring minimal disruption

Chris Stokel-Walker

Countless key workers are keeping the country going during the coronavirus pandemic. Health workers have kept people alive, while businesses are managing to keep the economy going, albeit at a slower pace. But it is supply chain workers who have become the unexpected heroes.

Warehouse and distribution workers became key workers during lockdown, delivering goods to the nation's doors, at a time when online shopping spiked, and ensuring supermarket shelves remained well stocked.

"The interest in supply chains has gone through the roof in the last three to four months," says Dr Andrew Lahy, global head of



JOHANNES BESELE/AFP via Getty Images

strategy and innovation, at DSV Panalpina, and co-director of Cardiff University's PARC Institute of Manufacturing, Logistics and Inventory, who has worked in supply chain operations for two decades. "It's always been perceived as a bit boring," he says. "It's trucks, it's warehouses, it's sheds. It's not the exciting stuff."

But now it's a major driver of employment as people recognise the importance of supply chain jobs to the economy. "What we've seen with coronavirus was just an acceleration of a change that was already happening," says Lahy.

COVID-19 came soon after Brexit, both of which attuned consumers to the idea of logistics and how their

goods are produced and shipped. Supply chain operations is a fast-paced industry that requires quick problem-solving skills and working in the sector is now a legitimate career path.

"People tend to recognise more what the supply chain is all about," says Michael Bourlakis, professor of logistics, procurement and supply chain management at Cranfield School of Management. "With COVID-19, we've had people panic buying and then the role of the supply chain got some recognition, but to have a bigger or more lasting impact, I think there needs to be more awareness about its role."

This could come through increasing employment. Alongside career opportunities for those who undertake a supply chain management degree, more and more people are slotting into supply chain jobs from other lines of work.

During the early stages of the pandemic, even airline pilots reskilled as Tesco delivery drivers and Amazon took on thousands of new workers. The online retailer has since said it plans to fill another 7,000 supply chain jobs in the UK to meet demand this year and a further 20,000 posts to deal with the Christmas rush. It's also building three new fulfilment centres where warehousing and distribution workers will work alongside robots to complete customer orders. In the

United States and Canada, it plans to hire 100,000.

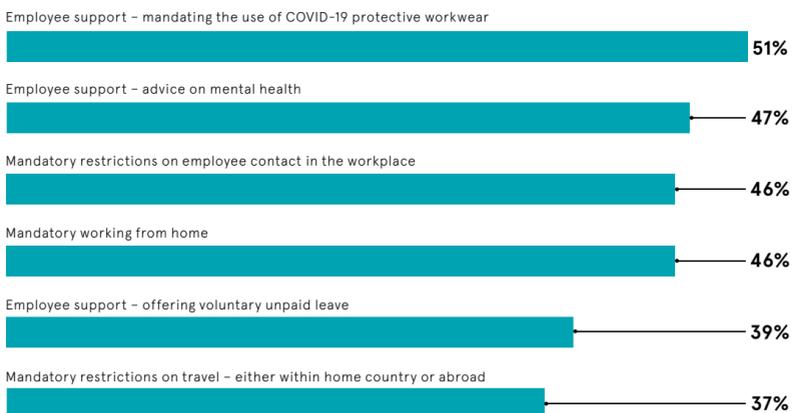
Yet many big ecommerce companies have come under fire for their treatment of supply chain workers. Amazon has been criticised for allowing its workers to take only minimal breaks, while fashion retailer Boohoo's supply chain was the subject of negative headlines during the height of the pandemic. With the rise of warehouse picking machines and the desire for ever-more fast-paced delivery and logistics, ensuring employees are treated well is more important than ever.

"It's the people, the processes and the technology as well now," says Lahy. "The companies doing it well manage to combine all three of those things. Just having one or two is often not enough and, definitely, if you're missing the people side, it doesn't matter how good your processes and your technology are, in the end supply chains are about people."

“The supply chain got some recognition, but to have a bigger or more lasting impact, there needs to be more awareness about its role

PROTECTING SUPPLY CHAIN WORKERS

Share of senior executives in operations and supply chain management who said their companies had taken the following steps to protect their employees from the impact of COVID-19



World Economic Forum 2020



Could supply chains be saviours of the job market?

The UK job market isn't looking good. The unemployment rate rose to 4.1 per cent in the three months to July, with nearly 700,000 people disappearing from the nation's payroll since March. The unemployment rate among 16 to 24 year olds is 13.4 per cent.

Bar workers, restaurant staff and temporary jobs are all off the table. Pinch points are occurring in the job market. But could the supply chain be a lifeline, bucking the downward trend of employment?

"The damage to the UK labour market over the near term is likely to be relatively uneven with sectors most acutely impacted by ongoing restrictions such as consumer-focused firms hardest hit, while those able to function more

easily are likely to see strong demand for labour," says Suren Thiru, head of economics at the British Chambers of Commerce.

"Support – assistance with retraining costs, cost of employment – to help people shift from struggling sectors to those that are growing can limit the expected surge in unemployment."

That's borne out with companies like Amazon hiring. Dr Andrew Lahy, global head of strategy and innovation, at DSV Panalpina, says: "There was a drop when coronavirus started, but I'm seeing people trying to hire now. Companies are realising they have to adapt their supply chains, and they need the skills and people who can do that."

The rise of automation in the sector is growing, but it's certainly still on the horizon, rather than at our fingertips. "We're a long way from having autonomous deliveries to get products to consumers," says Bourlakis. "It makes sense to me, whether it's Tesco, Amazon or Morrisons, for big retailers to hire workers. It's going to be a driver for sure, as long as this ecommerce increase will be sustainable, which I think it will be."

Keeping those employees happy will be crucial; even in a once-in-a-lifetime downturn, people won't stick with jobs if they are treated badly. And with public perception of supply chain workers never higher, employers would be foolish to mistreat their staff.

"There is still some work to be done to tackle this challenge in the supply chain," Bourlakis concedes. "In every sector you might see issues." But public views are shifting. "At the end of the day, food and products that come onto our tables wouldn't be there unless efficient supply chains bring them," he adds.

The supply chain is also mutating to adapt to demand, which means more jobs are required closer to home rather than abroad. "What we're seeing increasingly now is companies accelerating this drive towards distributed manufacturing," says Lahy.

“It's always been perceived as a bit boring. It's not the exciting stuff

When he started in the sector, manufacturing moved from the UK to Asia, with a separation of roles. Someone made a product in Asia, delivered a finished good to Europe, and it was picked and packed in the UK. "Increasingly, those two things – manufacturing and logistics – are merging. In the medium and long term, it's combining those skills," he says.

Workers looking to enter the industry will need to be multi-talented, with quick minds and problem-solving skills to unpick the logjams that occur. And companies that previously had not thought about their supply chain will now be seeing it with fresh eyes. "Some retailers didn't have the supply chain as a priority, but I think it will become something to think about very carefully in the future," says Bourlakis.

The future may be uncertain, especially when it comes to employment and the wider economy, but things are looking up for the supply chain. ●

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BEIRUT

Learnings from Lebanon on resilience

Last month's catastrophic explosion in Beirut has reinforced the significance of supply chain risk management and resilience, and has highlighted the importance of technology in adapting to disruption and crises

Mark Hillsdon

The huge explosion that destroyed so much of the Port of Beirut in August left Lebanon without its main trading gateway, exacerbating economic problems in a country already beset by spiralling inflation and growing levels of poverty and unemployment.

The blast killed 190 people and injured thousands when 2,750 tonnes of ammonium nitrate, which had been stored without the correct safety measures for the past six years, ignited.

The port is primarily an import hub for much of Lebanon's goods, food and fuel, handling one million containers and nearly six million tonnes of cargo from 3,000 ships a year. Its loss will have significant consequences for Lebanon's domestic supply chains and deprive shippers of a major Mediterranean and Middle-East trade hub.

"The Port of Beirut is significant for the region and its destruction will inevitably have an impact on the local economy in a myriad of ways," says Antony Lovell, vice president of applications at planning consultants Vuealta.

One of the main concerns is that the disaster will disrupt the delivery of construction and other recovery-related materials. But given that businesses can't plan in advance for such an unexpected humanitarian disaster, he says, the only way to avoid this is if supply chains are adaptable and quick to respond.

This agility could mean flexing processes so operations can resume at undamaged areas of the port or potentially diverting ships to Tripoli and then trucking the freight back to Beirut, he explains.

"Having achieved agility, the measure of resilience is defined by how all the links in the supply chain can adapt and respond to the new situation," says Lovell, but this requires co-ordinated planning, across multiple companies in close to real time. "Any deficiencies in planning agility will reduce the network resilience and at a time of a natural disaster there will be humanitarian consequences," he warns.

While the explosion in Beirut was both unexpected and unprecedented, says Philip Ashton, chief executive of logistics specialists 7 Bridges, transport hubs are constantly shutting down across the world. This can be a consequence of any number of events, from health crises and cyberattacks, to weather patterns and civil unrest.

To deal with what he dubs black swan events, Ashton believes artificial intelligence (AI) is now a fundamental technology for supply chains, especially as factors such as outsourcing, sub-contracting and globalisation add to their complexity.

In the past, companies have tried to stay on top of situations with huge teams working on sprawling spreadsheets, but now, he says: "You have to be able to build a system that is



STRAPP via Getty Images

The measure of resilience is defined by how all the links in the supply chain can adapt and respond to the new situation

adaptive without your intervention," allowing you to seamlessly re-route, shift capacity and keep supply chains moving.

Data-driven systems allow you to approach problems in a more systematic way, so you can simulate what's going to happen and run through all the different scenarios.

In essence, a hub should be able to go down without you even noticing and the system just adapts. "That's how you can move systematically from fragile to robust supply chains," says Ashton.

"Ultimately we believe AI is the only practical way to approach this problem because the computational power required to assess all the different ways you can get your products to a customer, and how to do that efficiently, is extremely complex and simply can't be processed by a person."

In Beirut, for instance, the extra data processing power would have enabled shippers and freight companies to handle a lot more information, scale up operations at Tripoli and re-route freight once it was landed. "What you want is inter-operability between multiple different ports, air freight hubs and road routes," says Ashton. "Rather than simply queuing up, AI can show shippers a faster route."

A recent survey of 200 supply chain and finance professionals by procurement specialists Ivalua looked at how organisations plan for supply chain risk. But despite the fact that three quarters (74 per cent) of UK businesses have encountered some form of risk, including supplier failure and supply shortages, it found more than half don't have any contingency plans in place.

It's something that worries Jay Muelhoefer, chief growth officer at supply chain management company Kinaxis. "The most dangerous thing a company can do in managing supply chain risks, is to do nothing at all," he says. "Even in these uncertain times, manufacturers can't be paralysed by fear of change and must start moving on their digital transformation journey."

"Well-worn sequential supply chain planning approaches have proven unfit for this purpose. They're too slow and inaccurate. That's unsurprising when you consider they're based on teams working independently in silos, gathering data in disconnected spreadsheets before passing results down the chain."

In contrast, concurrent planning, which can be powered by AI, creates and manages synchronised plans across the supply chain. Each node in the chain is connected to the next, and each team shares data with the others and has the ability to run multiple "what if?" scenarios. "If someone makes a change, it's instantly reflected up and down the rest of the network. Everyone stays strategically aligned, informed and confident," says Muelhoefer.

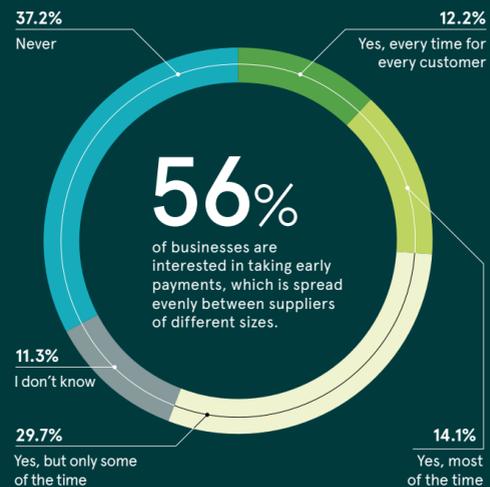
Concurrent planning is already being deployed by major players such as P&G and Merck, and has become essential to many operations because it's fast, connected and reliable. "It drives agility, enabling decision-makers to analyse and determine the best course of action hourly or even by the minute, for the entire supply chain," he says.

"This makes concurrent planning particularly well suited to helping supply chains cope with, plan for and respond to disasters, which by their nature require a rapid response." ●

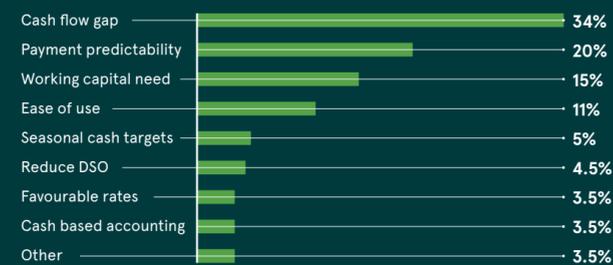
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DEMAND FOR EARLY PAYMENTS REMAINS STRONG

Are you interested in being paid as soon as an invoice is approved instead of waiting for the net due date in exchange for a small discount on the invoice's value?

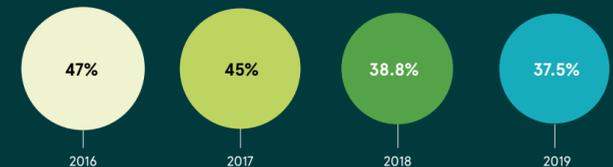


KEY REASONS WHY SUPPLIERS TAKE EARLY PAYMENTS



LATE PAYMENTS ARE DISRUPTIVE TO BUSINESSES

Suppliers claiming they have been paid late by their customers.



Liberating cash across the supply chain

As liquidity and cash-flow management become a greater problem for suppliers, early payment programmes by innovative fintech providers are providing a vital lifeline

Mainstream players in the banking sector have woken up to the rapid technology advancements made by agile fintech providers in supply chain finance and are eager to partner on solutions that enable companies to free up their liquidity.

Legacy banks face huge challenges in transforming their own operations to deliver new and more innovative financing options to businesses, such as early payments. Manual processes are still prevalent in major banks and in the area of early payments specifically; some even require buyers to add resource to help manage programmes.

Supply chain resilience and cash-flow management are an increasingly pressing concern for businesses. According to a recent announcement by Taulia,

early payment volume was up 208 per cent month-over-month in March 2020. New supplier adoption was up 178 per cent during the same period and 56 per cent of small businesses said they want to be paid early. A J.P. Morgan survey last year said small and medium-sized enterprises (SMEs) only have 27 days of cash reserves to survive any disruption.

Treatment of particularly smaller suppliers when it comes to payments is a major issue. According to Taulia's survey, 37.5 per cent of businesses are paid late on average. This problem, of course, is exacerbated during times of uncertainty. Supplier demand for early payment goes up, liquidity shrinks as banks tighten credit availability and companies become more reluctant to deploy their own cash.

"Early payment is a crucial tool for bridging cash flow gaps," says David Venables, head of UK and Ireland sales at Taulia. "It's a simple mechanism which, if structured and deployed correctly, can offer very flexible access to finance for SMEs at very competitive rates."

"Instead of being tied into the contractual payment terms that are put in place when they first begin selling to large customers, suppliers have complete flexibility to decide when and how they get paid, almost on a daily basis. It's handing control to suppliers to determine when they get paid to suit the needs of their business at any particular time."

There is a strong link between payment certainty and supply chain resilience. If suppliers have greater

208%

monthly increase in early payment volumes in March 2020

178%

jump in new supplier adoption

Suppliers have complete flexibility to decide when and how they get paid, almost on a daily basis

allow companies large and small to choose when and how they get paid.

Supporting the largest early payment programmes in the world, Taulia has provided much-needed robustness to companies during the coronavirus pandemic, which has demanded an even greater flexibility for smaller suppliers. Its technology also enables large corporates to improve and automate processes such as invoicing, which as well as driving cost savings can enhance the working capital benefits of the programme.

Companies can use Taulia's platform to calculate a selection of future invoices which they can take for early payment to meet a future obligation. If, for example, they're required to make a large tax payment in 45 days, they can put those details into the platform and the technology will suggest which invoices to take early payment on to meet that obligation.

Connecting at a deep level with enterprise resource planning (ERP) systems means Taulia can rely on the data and client information that buyers have built up and automate the exchange of information to a far greater degree than when using a traditional file exchange-type arrangement.

"It means the ongoing programme management and visibility of performance for any large buyer corporate is far improved," says Venables. "They can manage the programme within their own ERP system, which is an IT environment they're already familiar with. We can deliver reporting and data back to them to a level of detail that most other providers cannot provide, and also in a format that's easily understood for them and allows them to manage the programme at a granular level on a day-to-day basis."

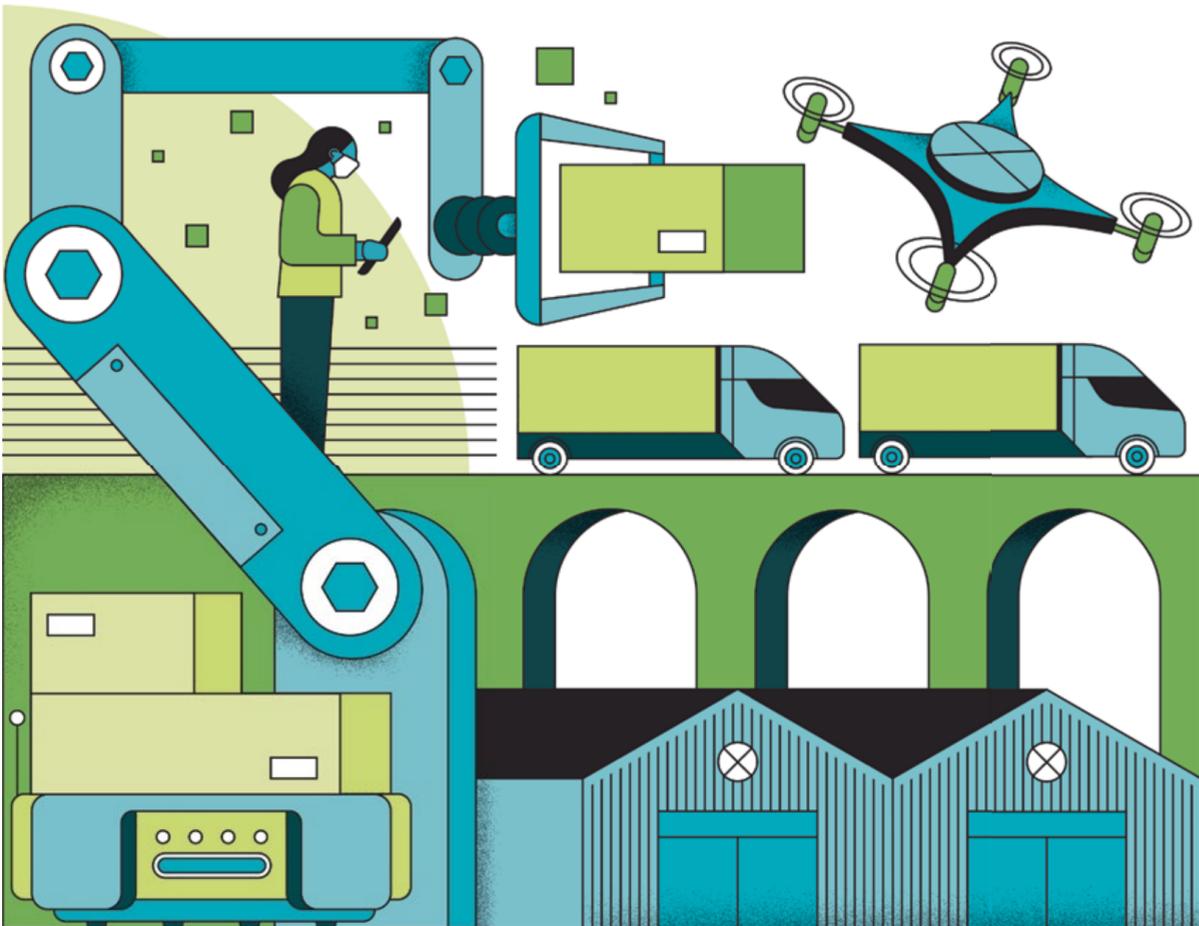
"I think we will continue to see growing demand for supply chain finance across the globe, with companies increasingly looking for providers that can offer access to large swathes of their supply chain and technology, which delivers process efficiency and high data quality and reporting. I also believe that the pool of liquidity available to support supply chain finance programmes globally will grow beyond traditional bank sources to include other complementary providers, such as asset managers and pension funds."

For more information please visit taulia.com

taulia

6m

tonnes of cargo from 3,000 ships is processed through the Port of Beirut every year



TECHNOLOGY

Fast tracking the future warehouse

How the global coronavirus outbreak has triggered years' worth of progress in a matter of months

Alexandra Leonards

The traditional vision of the future warehouse, where shiny drones zip up and down high bays, speedy robots pick goods with humanoid arms and staff navigate aisles with advanced smart glasses, is certainly both a compelling and feasible prospect. But has the unforeseen arrival of a pandemic threatened the evolution of this supply chain utopia?

The short answer is no. New requirements in place to curb the spread of the coronavirus, such as social distancing and reduced labour forces, alongside the need to handle snowballing demand, have actually accelerated investment in the future warehouse, with all its tech-powered bells and whistles.

Supply chains have had no choice but to rely on smart technology to ensure better standards of hygiene,

fill the labour gap and cope with increased inventory levels.

"The ramp-up of innovation we've seen over the past six months prompted by COVID-19 would in normal times have taken years," says Ian Keilty, chief operating officer at Wincanton. "Having experienced both supply and demand shocks, many customers are looking to technology to make their supply chains more responsive, particularly to meet increased online demand."

Existing trends, which have been magnified by the pandemic, hint at the kind of technologies likely to shape the future warehouse.

"There was already a move away from utilising core labour to carry out some of the more indirect activity in the warehouse environment, such as moving empty pallets or pallet layering, and the pandemic has increased the focus in this area," says Angela Howard, vice president of operations, retail and consumer, at DHL Supply Chain. "For example, we're looking at robotic arms and autonomous trucks to support and work alongside our warehouse colleagues."

She says that from a safety point of view, the future warehouse is expected to continue to focus more on technologies that enable social distancing, such as robotics, automation, widespread use of sensors and the internet of things.

"Similarly, in the manufacturing space, we are seeing new

technologies like fully automatic very narrow aisle robotics being introduced, which can pick and put away full pallets without any human resource, allowing space in the warehouse to be maximised, and health and safety risk minimised," says Howard.

Ocado has relied on data from warehouse management technology to handle increased demand. "While demand at the height of lockdown was off the chart, our Erith [south-east London] facility ramped up to process over 110,000 orders a week, compared with 80,000 just a few months earlier," says Alex Harvey, engineering director for handling robotics at Ocado Technology. "We used our warehouse system data for quick, adaptive decision-making to squeeze new levels of optimisation out of things like van space."

During lockdown the company temporarily delisted bottled water, which is heavy and bulky, enabling Ocado.com to make 6,000 more deliveries a week.

"There is increased interest in technologies that make existing warehouses smarter, such as robots that can travel safely around warehouses and work with the people in those environments to get more product through the same space, rather than having to invest in a brand new site before making a start on building the warehouse of the future," says Keilty. "We are working with our customers

“We are seeing new technologies like fully automatic very narrow aisle robotics being introduced, which can pick and put away full pallets without any human resource

to use artificial intelligence on the increasing amounts of data to make the decisions about when and where the warehouses of the future need to be.”

Wincanton is also looking at digital twins, or digital replicas, of the supply chain. "With digital twins we can ask questions of the data and evaluate different operating strategies before investing tens or even hundreds of millions of pounds in future supply chains," he says.

Not all the impacts of COVID-19 on the future warehouse relate to futuristic equipment or flashy digital technologies. The pandemic is also likely to prompt a whole new way of addressing team management and engagement.

"Aside from the advances in robotics, automation and smart technology that will no doubt continue, we expect to see the future warehouse to look very different in terms of the structure of the day and the overall approach to flexibility and shift patterns," says Howard.

COVID-19 has encouraged businesses to think differently about how they manage their workforce, including how they think about talent engagement and training. DHL has seen an acceleration in the adoption of new innovations in response to this.

"The pandemic has allowed the world of work as a whole to see how things might be done differently, with flexible working now adopted far and wide, and many enjoying a much-improved work-life balance as a result," adds Howard. "The same can be true for those working in warehouses, whether that might be looking at two-hour shifts, changing the shift patterns offered to people or flexing and adapting the patterns to suit each employee."

Another likely feature of the future warehouse is space sharing and collaboration. Tony Mannix, chief executive of Clipper Logistics, expects increased collaboration and partnerships in a post-pandemic world, with dedicated shared-user warehouse and transport solutions that can provide cost-efficient warehousing and advanced stock management systems

"This could allow physical and online retail to run seamlessly alongside each other, creating new routes to market and competitive costs, and provides scalability, while reducing congestion and final-mile deliveries," he concludes. ●

It's time UK government prioritised logistics

To keep local economies strong, the needs of the logistics sector must not be overlooked as the UK plans to build much-needed new homes

Every minute, of every hour, of every day, products are being picked and packed in warehouses across the UK ready for delivery to a house in your neighbourhood, to your home or to your place of work. A fine-tuned, just-in-time logistics industry thrives in the UK, turbocharged by the coronavirus outbreak and an economy driven by consumption. But with the British government poised to prioritise housing over logistics, there's cause for concern in urban areas.

"The pandemic saw supply chains flex their muscles. For some it was like

trying to deliver Christmas every day. The sector experienced a decade of growth in a few months. The lack of toilet rolls or pasta on shelves highlighted how vital logistics is to keeping the country running. Delivery drivers are now considered key workers," says Robin Woodbridge, head of capital deployment in the UK for Prologis, the world's largest provider of logistics buildings.

"Yet sadly ours is the Cinderella industry. A rising star that's shown incredible resilience, yet often overlooked by government and taken for granted by the public. This attitude needs to change if we're to keep the UK economy running efficiently."

A RECENT REPORT BY OXFORD ECONOMICS ESTIMATES THAT OVER

£54bn

of goods flow through Prologis' buildings in the UK annually representing

2.6%

of national GDP and

10.1%

of household consumption, excluding services'

The 'Future Flow of Goods' report also revealed that customers operating within Prologis' warehouses in the UK employ

32.5k²

direct employees in the Midlands, South East and London.

1. Based on 2019 data, as per the Oxford Economics report.
2. The study defines 'direct employees' as jobs and activities that are directly attributable to Prologis warehouses.

means companies won't be able to store goods close enough to where people live and work, let alone meet the demand for same-day or next-day deliveries," says Woodbridge.

"We understand the priorities for residential housing, but it needs a holistic approach. More homes means more logistics fulfilment, especially with the rate of growth in online shopping. They are interconnected. The government needs to have a joined-up approach on planning that includes the vital logistics sector. Given that Whitehall suffered its own supply chain issues around personal protective equipment, you'd think they would be acutely aware of the need to prioritise logistics."

Logistics is also one of the only sectors currently creating local employment opportunities. Hardly a day seems to go by when there isn't a media headline about another online retail or ecommerce business recruiting for its logistics operations. Tesco, Iceland and

the UK government's recent white paper entitled Planning for the Future, represents the most fundamental change in England's planning system since 1947 yet fails to mention logistics once in all of its 84 pages. Housing is mentioned 95 times. This lack of recognition has huge implications for supply chains up and down the country.

"To be honest, it's shocking and I don't think online retailers and logistics companies have fully grasped the significance of this white paper and its implications for the future of urban logistics. A lack of strategically located land on which to build facilities

means companies won't be able to store goods close enough to where people live and work, let alone meet the demand for same-day or next-day deliveries," says Woodbridge.

"The sector's ability to deliver goods on time will be severely compromised if government fails to understand and prioritise its needs. We're facing the greatest pressure on logistics space in living memory."

Prologis has £4.6 billion of assets under management in the UK, located on 22 Prologis parks, and more than \$2 trillion flowing through its distribution centres in 19 countries. Its logistics buildings in the UK see the equivalent of 2.6 per cent of UK GDP flowing through them each year.

Commercial feature



Ao.com are just some of the household names looking to boost their supply chains with thousands of new workers. This is at a time when the economy is shedding jobs; nearly 700,000 have been lost since lockdown began.

Industry does not have sufficient building land in some cities, particularly London. Competition for uses other than building supply chain resilience is increasingly intense, but there's not enough allocated sites to meet existing or anticipated demand for urban warehousing.

Yet for every extra £1 billion spent by British consumers online, an additional 900,000 square feet of logistics space is needed. Other figures astound: if you build 300,000 new homes you need 280 football pitches of new warehouse space to support the goods and services these households demand.

"If government continues to underestimate the real value of or need for logistics space, local people and the environment will suffer. You cannot push all your industrial warehousing outside the M25 or beyond city green belts. We need strategic sites close to where demand is. They already exist in most places, but are at risk of being sold off for residential developments. We need to safeguard land use for logistics," says Woodbridge.

"There's a climate change dimension to this as well. If we're to meet our self-proclaimed target in the UK of zero net emissions by 2050, we need logistics hubs to be located close to where

residential demand is, deploying short-range electric vehicles that are energy efficient. It's the only solution."

In the long-term the answer could be multi-storey warehouses, which are popular in Japan, South Korea and Singapore, where dense populations and limited land availability have made them a necessity. These come with their own issues concerning planning and the sheer size and height of the warehouse needed.

Then there is Brexit, the transition period is ending at the end of 2020. This could create further issues for supply chains. With so much uncertainty, near-shoring is already being put in place, where companies keep more stock in UK warehouses to ensure continuity of supply; again this requires more space.

"Everyone wants a robust 21st-century logistics network in the UK, one that's fit for a post-COVID-19 and post-Brexit world. Businesses need to respond to the white paper with their concerns before October 29. If not, the current housing crisis could be a logistics crisis in the making. It's time we all took action," Woodbridge urges.

“The current housing crisis could be a logistics crisis in the making

For more information please visit prologis.co.uk



1%
1%
14%

SUPPLY CHAIN SHOCK

COVID-19 has disrupted almost every element of daily life around the world, and its impact on global supply chains has been unprecedented. With international travel halted, customer demand affected, and at least 51,000 companies around the world with tier-1 suppliers in China's worst-affected regions left high and dry, the ramifications have been severe. So, how are supply chains faring now, and how are organisations planning to build resilience for the future?

90%



of Fortune 1000 companies have tier-2 suppliers in the regions of China most impacted by the pandemic

Dun & Bradstreet 2020

4%



drop in global trade in Q1 2020, contracting for only the second time since the mid-1980s

Baker McKenzie 2020

HOW SEVERE HAS COVID-19'S IMPACT BEEN?

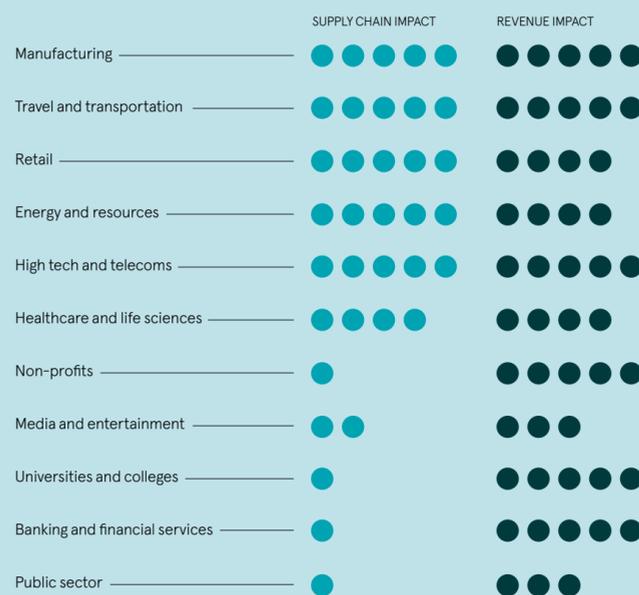
Global shipping and freight professionals on how their operations have been impacted by the pandemic.



Shipping and Freight Resource 2020

WHOSE SUPPLY CHAINS HAVE WEATHERED THE STORM?

COVID's impact on supply chain and revenue across sectors worldwide, where one dot denotes 'minor impact' and five dots denote 'severe impact'

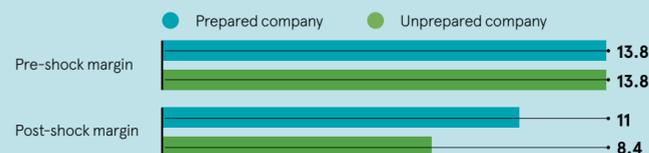


Avasant 2020

WHY BEING PREPARED REALLY PAYS

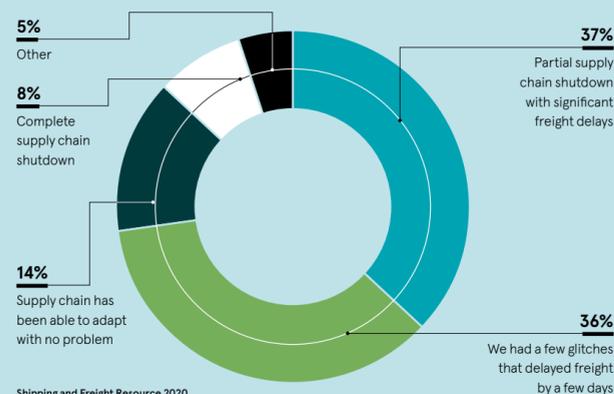
McKinsey 2020

The following is based on automotive companies - one of the most heavily exported manufacturing sectors - taking opposite approaches to dual-siting production, holding inventory, and carrying more comprehensive insurance; numbers show the impact a 50-day supply chain disruption has on profit margins



SUPPLY CHAINS NOT AS ADAPTABLE AS THEY NEED TO BE

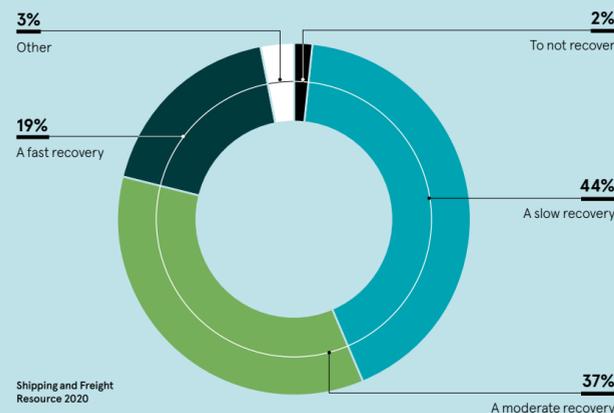
Global shipping and freight professionals on how they reacted to the pandemic



Shipping and Freight Resource 2020

GETTING BACK TO NORMAL TAKES TIME

Global shipping and freight professionals are positive for the future, but don't expect a speedy recovery



Shipping and Freight Resource 2020

MAKING PLANS FOR A STRONGER FUTURE

Gartner 2020

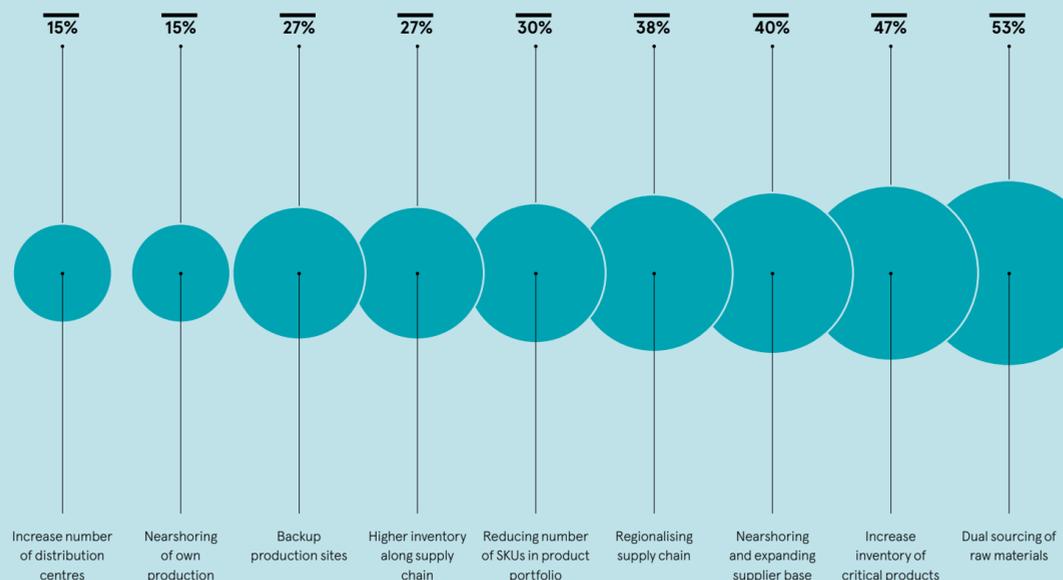
Supply chain leaders rate their resilience today and going forward



HOW SUPPLY CHAIN LEADERS ARE BUILDING RESILIENCE

McKinsey 2020

Top strategies global business leaders have chosen to ensure they can weather and adapt to future disruptions in supply chain and production



59%



CUSTOMER EXPERIENCE

Delivering on brand at the doorstep

As online sales account for more and more of the retail market, last-mile delivery has become an increasingly important touchpoint for brands to differentiate themselves

Megan Tatum

High street stores may have been shuttered in March, as the UK entered into a national lockdown, but the pressure on ecommerce and last-mile logistics had never been greater.

Food, fashion, flatpack furniture and gifts all flew off websites as consumers sat and shopped at home. By April, ecommerce had reached a record high, accounting for a third (30.7 per cent) of all UK retail sales, according to the Office for National Statistics, a spike of 10 percentage points in just a few short weeks. In one week alone, Tesco fulfilled one million online orders, hiring 4,000 new drivers and 12,000 new pickers to meet demand.

Yes, the shift in shopping habits brought with it brand-new opportunities. By the end of 2020, ecommerce will see a £5.3-billion lift thanks to coronavirus, says Edge Retail Insight. But it has also exposed major challenges and gaps when it comes to customer experience. After all, without bricks-and-mortar stores, the opportunity for consumer interaction has been cut down, with fewer chances to impress and excel at customer service. The only exception? The last mile.

“It’s sometimes the only physical touchpoint, so the doorstep experience is absolutely critical to brand perception,” says Louisa Hosegood, digital and strategy director at Bis Henderson Consulting. “Customers often want speed, but more than that, they want certainty of delivery and good communications.”

These were expectations that were incredibly difficult to meet as last-mile logistics became a minefield. “The massive spike in demand on lockdown caused significant difficulties for retailers in terms of mobilising additional resources and capacity at such short notice, all with consideration to the enormous constraints posed by strict social distancing rules,” says Hosegood.

Majed Zambaraji, founder and chief executive of international courier Time Express, says: “Retailers eager to sell more and cut their losses made unrealistic parcel delivery commitments to customers, who in turn put pressure on logistics couriers to deliver shipments on time.”

At Moo, an online print business delivering materials to customers across 200 countries, the disruption to last-mile logistics was a major sticking point when it came to

customer experience. “We had lots of challenges getting stuff to people in the timeframe we wanted to and a big increase in queries to customer support,” says director of customer experience Dan Moross.

“But once they contacted us as the issues were so fractious and spread across different carriers, we didn’t always have the help to give them.”

For Moo and many other companies, the experience has forced an acceleration in the integration of technology and dedicated software designed to help minimise these issues in the last mile. Even in the middle of a crisis.

In April, for example, just as international restrictions gained pace, Moo partnered with data and technology providers parcelLab to send new updates to customers providing more accurate delivery times. Exception emails were also created to keep customers updated on delays or failed deliveries, while insights on international couriers also allowed Moo to provide more accurate delivery timelines at the point of checkout.

“It immediately helped to reduce inbound queries about ‘where is my order’ as customers had better information,” says Moross. Its net promoter score, or customer satisfaction rating, also began to recover.

“COVID has made retailers realise their online offer is crucial and a major part of that is delivery

Reducing costly inbound queries to customer service agents was also a top priority for The Diamond Store as it grappled with a 250 per cent spike in orders over lockdown, explains chief executive Gary Ingram. “People kept calling in and we wanted to stop the calls and let the customer know before they had to question what was going on,” he says.

It used software provider HubSpot to create regular email updates. “They’d say ‘we’re now setting the sapphire; we’re now taking it to the polisher and so on’ for any product where delivery would take longer than 24 hours. It led to a massive decline in queries,” says Ingram. “It saved us, to be honest.”

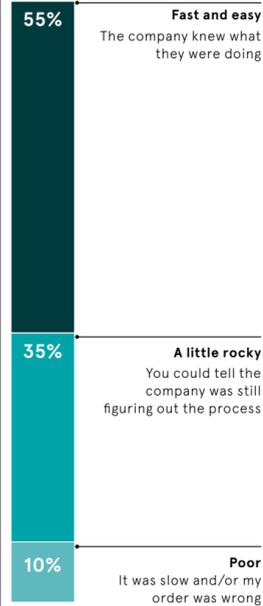
At vitamin and CBD (cannabidiol) supplement retailer YourZooki, the experience of COVID-19, and a huge increase in demand, has led to dramatic changes to its last-mile logistics operations, says co-founder Marcus Mollinga. The company now has a fully automated shipping integration platform that enables it to ship all orders made before 5pm on the same day and offer more shipping options to customers.

“At the same time, we updated our inventory management to a more powerful cloud-based system,” he says. “This has allowed us to have real-time inventory control and reporting, as well as greater clarity across our suppliers, production and customers.”

A new artificial intelligence chatbot has also joined its customer service team to help manage the increase in queries to its call centre. “Our customer’s experience is incredibly important to us and these tech solutions have enabled us to improve our service,” adds Mollinga.

CURBSIDE PICKUP EXPERIENCE

How consumers rated their experience with curbside pickup options during the pandemic; surveyed in mid-May



Medallia Zingle 2020

Even as retailers emerge from the height of the online rush during lockdown, many are still making moves to improve the last-mile customer experience. In August, Asda confirmed its clothing brand George would be trialling delivery management software Sorted, to track parcels and provide customers with real-time updates.

It came off the back of a realisation that when customers hear nothing about a delay, it can really hurt retention and loyalty, says Sorted founder and chief executive David Grimes. “Asda recognised they were behind and needed to address this issue, particularly as they approach the peak period of Black Friday [November 27] and Christmas,” he says.

The Sorted React software will now enable them to alert customers proactively to delivery status in customer-friendly language, reducing the need to reach out to a support centre, which greatly reduces costs.

Its investment in this technology is symptomatic of a longer-term shift among retailers when it comes to last-mile logistics, one accelerated by the experience of the last few months, says Grimes. “Retailers are now recognising the importance of delivery. It was often the forgotten part of the e-commerce transaction, but we’re seeing a real surge in them acknowledging they need to improve their delivery offer,” he says.

“COVID has made retailers realise their online offer is crucial and a major part of that is delivery; the question of how do I get this product to a customer?”

Perhaps, more importantly, companies need to ask themselves, how do you get your products to a happy customer? ●

How resilience forms the strongest link in the digital supply chain

Recent times have brought the importance of supply chain resilience into even sharper focus

Organisations that had already built resilience into both their technology and operational networks are weathering the turbulent times of the coronavirus pandemic. For others, it has been a huge wake-up call.

As we now stand back and attempt to regroup, rebuild and regenerate, every business has a chance to reflect and decide how to become better prepared.

This is the point at which organisations in every vertical market should realise that resilience needs to be built in at a granular executional level. It is a function that should apply to and connect with the architectural foundations of every process in the company. It is not some sort of dial or switch that you simply turn on or up at the start of a crisis, whether it be a global contagion or some other form of economic upheaval.

Shape of change

But before we consider the nature of resilience, we need to decide what we really mean by “change” itself to understand the various forms it manifests itself in.

At the force-majeure level, there is sudden catastrophic change, the likes of which we have of course witnessed in 2020. Outside pandemics, we should also include other so-called black swan events that disrupt supply chains, such as a sunken container ship, a hurricane, or perhaps a widespread contamination incident.

While these massively disruptive and dreadful events typically cause chaos and the loss of life, they are comparatively infrequent and so, in any normal world, they don’t threaten the long-term viability of a business with the same types of market forces and fluctuations that emanate from deeper-set market trends. There are more ground-level changes in demand patterns that nibble away at margins and service capabilities slowly. Less cataclysmic, these changes can ultimately have even more impact than a hurricane.

Knowing how and why change itself occurs, and what shape it comes in,

94%

of Fortune 1000 companies experienced supply chain disruption from COVID-19

Accenture, Building supply chain resilience: What to do now and next during COVID-19, March 17, 2020

can help us to build a resilient supply chain capable of driving business operations today, with a constant eye on every variable factor that could impact business tomorrow.

Visibility, intelligence, digital connection

A resilient supply chain is based on three core capabilities: visibility, intelligence and a digitally connected ecosystem. To restate these cornerstones in more depth, we are talking about end-to-end real-time visibility; intelligence across root-cause identification, exception detection and resolution management; and an exceptional ability to execute through a digitalised ecosystem that provides a path to autonomous “sense and respond” activities.

Taking each of these elements in turn, let’s look at visibility. In a traditional business model, an enterprise bases its visibility only on what its suppliers are telling it. You don’t really know where your order is or when it’s going to arrive. However, cloud-based supply chain networks offer the opportunity for all parties to view and interact with one single view of an order in real time. The net result is that the business, its suppliers and its carriers operate using a single instance and version of data: a single source of truth.

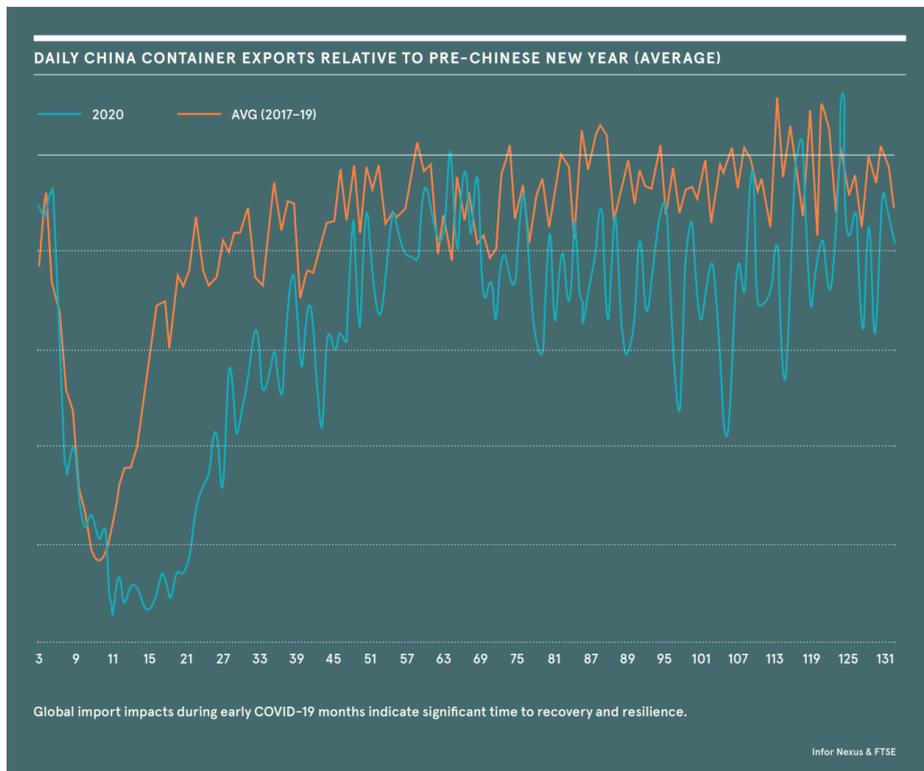
This singularity is important. It cuts out uncertainty, delays and eradicates separation so there is little or no contingency factor in daily operations. But visibility needs to run end to end for true clarity. The business needs to know the impact of its actions upstream, on its suppliers, and as far as possible downstream into its sales channel and customer base.

Additionally, end-to-end visibility needs to happen in real time, that is all of the information relating to all supply chain transactions, movements, price fluctuations and so on needs to be available all the time, in real time. Without real-time, super-high data quality, it is not possible to drive the supply chain by exception and take advantage of machine-learning technologies.

Intelligence to separate the noise

As the resilient supply chain company moves forward, it has the advantage of software algorithms that are able to detect events which can cause disruptive issues. It’s important to remember there will always be an element of “operational noise” throughout both the physical and financial supply chain, so the organisation will need to qualify just how much noise it can live with in the normal course of business.

At this point we can then drill down into the root causes behind any single event. When there is a shortage of materials for a production plant, or perhaps



“A resilient supply chain is based on three core capabilities: visibility, intelligence and a digitally connected ecosystem

a shortfall in the supply of finished materials for a retail store, we need to understand the ‘why’ factor behind these events. Knowing the difference between a shortage caused by a shift in market demands and scarcity resulting from a container ship being stuck in a port is fundamentally important.

The real intelligence comes from being able to group together different events happening in various locations around an organisation’s total global supply chain. If the business can

pinpoint the same root cause across multiple operational issues, then it can deliver resolution management more quickly.

Digital ecosystem

An intelligent resilient supply chain can process thousands of variables and data sources across a single cloud-based platform to help the business navigate forwards. Working at speeds far in advance of any human capabilities, a digital supply chain ecosystem helps all parties connect and collaborate over dates, times, shipping orders, financing and so on. When all partners open up the external-facing parts of their own systems accordingly, business decisions happen faster, with improved accuracy and less uncertainty. This is important because it is uncertainty that breeds contingency and cost.

Onward from Automation 1.0

In the immediate future, more and more of the actions we take inside our most resilient digital supply chains will be carried out autonomously by intelligent agents and smart algorithms. Our

physical and our accompanying financial supply chain networks will reflect the automation intelligence already being applied to manufacturing via Industry 4.0 practices.

If today we stand at automation stage 1.0, then business is set to apply more algorithmic intelligence in the future. When and where this intelligence is not just smart, but also resilient, is when it starts to make decisions not just based on short-term prices, supply availability and market demand, but also on perceived business longevity. The core truth is that building a supply chain capable of resilience to ‘normal’ change will allow a business to adapt to massive upheavals if and when we have to adjust to some wildly different “new normal”.

For more information please visit infor.com/resilience



MANUFACTURING

Reshoring works for some but obstacles remain

Coronavirus has highlighted the fragility of global supply chains, so with reshoring now a major talking point, are the days of concentrating manufacturing in countries where labour is cheap and plentiful now over?

Olivia Gagan

China has been the locus of low-cost manufacturing for decades. But as China's factories shut their doors in early-2020, and then other countries followed suit, businesses around the globe have been forced to reconsider what has long been considered an expensive way to make products: reshoring.

Reshoring represents the opposite of sprawling global supply chains. Moving production and labour back to business's home countries, or where the actual demand for a product lies, has become a necessity as global supply chains ground to a halt.

“We're hearing from our contacts that the cost of shipping and air freight has gone through the roof”

Dr Sam Roscoe, senior lecturer in operations management at the University of Sussex Business School, points out that while globalisation has been the accepted method of mass production for many years, this year its weaknesses are becoming apparent.

“UK businesses have been extending their supply chains in search of low-cost labour since the 1970s. That means we have these hugely complex supply chains all over the world,” he says.

“One of the big issues that's come up during the pandemic is European companies have seen key sources of supply close. China shut down, then India and recently it's Latin America. Many weren't aware of what this could mean for a critical component of their vehicle engine or for a pharmaceutical product.”

The automotive industry was particularly hard hit by the shutdown of international manufacturing capacity. Vehicle sales plunged during lockdown and, once factories and showrooms reopened, supply was hit by months of delays for deliveries of raw materials, parts and completed products. Researchers at Statista now expect global car sales to drop 20 per cent in 2020 compared to last year.

Companies that can source and make their products locally might therefore be the ones to emerge from the pandemic less scathed than those that favour sourcing from overseas.

Chris Ford, managing director of Ford Engineering in South Tyneside, which manufactures parts for the aerospace and automotive industries, says buying materials and hiring staff as locally as possible has meant the firm has been able to keep working and keep its supply chain intact. The firm has also managed to avoid the rising costs of importing into the UK.

“We don't source materials from East Asia, but we're hearing from our contacts that the cost of shipping

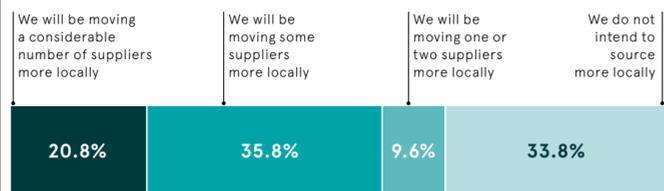


Monty Rakusen/Getty Images

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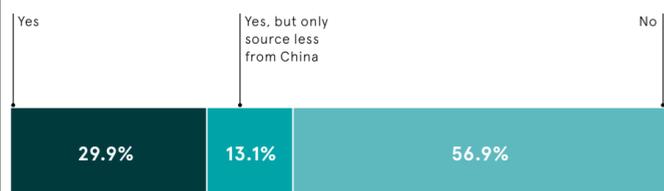
RESHORING/NEARSHORING APPETITE

How global supply chain professionals are planning to source suppliers post-pandemic



CASUALTIES OF RESHORING/NEARSHORING

Global supply chain professionals were asked if they were planning to source less from the Far East



The Business Continuity Institute 2020

and air freight has gone through the roof,” he says.

Businesses may have to accept that the days of searching the globe to find the cheapest labour to make the cheapest products possible may be over. “It has been a very difficult time for the automotive sector over the past couple of years because it is so cost focused. Sales volumes are low at the minute. And global supply chains have become quite fragile because there's so much pressure on price,” says Ford.

To solve the issue of higher labour costs in Europe, some industries are deploying digital technology to replace factory man hours. Aerospace is already making a move into more localised manufacturing through the use of emerging technologies. Rolls-Royce, for example, is trialling 3D-printing technology to make engine parts.

“The automotive industry is also getting into 3D printing,” says Roscoe. “It really opens up the possibilities of more localised manufacturing because it makes your labour costs significantly lower.”

It will take a while to replace the current, human labour-intensive automotive manufacturing model, however, as 3D printing is yet to be deployed on a mass scale.

The focus on finding the cheapest labour costs ignores the economic benefits that can come with reshoring initiatives. “By being closer to the centre of demand, you can be more responsive. You can sell products quicker. And if there are shifts in consumer demand, then a company is able to adapt faster,” Roscoe argues.

“At the moment, we're seeing a huge downturn in car sales, for example. If you're making your cars in China, and it takes three or four months to ship them here, [when demand drops] stock is already on boats sailing to Europe. You have money tied up in that inventory.

“This idea of being closer to the point of consumption means you can quickly scale production down until demand picks up and you're also saving a significant amount of money by not needing additional warehouse space. This will bring down your overall costs.”

Yet moving production closer to demand is unlikely to take place completely in the wake of COVID-19. If the vulnerabilities of offshoring have been exposed, but reshoring is prohibitively expensive, the solution perhaps lies somewhere in the middle.

“This idea of being closer to the point of consumption means you can quickly scale production down until demand picks up”

“The reality is we can't say to all companies, ‘Listen, you have to reshore everything,’” says Roscoe. “Because they won't; the costs do not make sense. But if we're arguing that we need to have more resilience in our supply chains, and more flexibility, then companies are going to have to eat some of those costs and begin to look at having a component of their manufacturing based within their home countries.”

Business costs aside, the potential public health consequences of making goods thousands of miles from where they are needed became clear in the scramble for ventilators in the UK this spring. As COVID-19 infection rates spiralled and individual nations competed to stockpile available medical equipment, the UK became one of many nations urgently calling upon its domestic manufacturers to suddenly design and produce essential equipment.

A concept Roscoe recommended to the UK's International Trade Committee (ITC), as it investigated the COVID-19 pandemic and international trade in April, is the idea of parallel supply chains. Under this concept, reshoring initiatives would not aim to dismantle existing global supply chains. Instead, multiple supply chains are set up.

A pharmaceutical firm, for example, could locate a third of its critical drug manufacturing in the UK, while the remainder is still made overseas. Having a parallel supply chain in place would mean local production volumes can be ramped up at short notice and, if one country or supplier fails, there are alternative options available. The ITC has included the proposal in its recommendations to the government.

In extreme circumstances, perhaps a pragmatic approach is needed, one where neither reshoring or offshoring is the answer, but a considered mix of both. “Globalisation was fine when things were relatively calm, but we're now living in a business environment where we have not only COVID-19, but a possible no-deal Brexit in the next couple of months,” says Roscoe.

“We also have a US-China trade war, which has really driven up costs in tariffs on aluminium and steel. Then we have natural disasters, which are occurring more frequently. Companies are really waking up to the realisation that you can't just focus your supply chain on low-cost labour and making efficiencies.”

Robotics revolution enables affordable automation

A revolution in the availability and affordability of scalable warehouse automation solutions is enabling companies to create much-needed efficiencies in their supply chain

Warehouse robotics has broken significant new ground in the world of ecommerce and logistics, with the likes of Amazon and Ocado pioneering its use. The enormous costs associated with adopting the technology, however, meant flexible robotics was long seen as unviable for most organisations.

Meanwhile, customers have continued to demand products faster and cheaper, but supply chain inefficiencies have meant companies have been significantly squeezed in their operational margins while trying to compete with the more technologically advanced giants of the industry. Fortunately, the barriers are now coming down.

The rapid advancement of robotics innovation has meant warehouse automation is quickly becoming more mainstream, affordable and accessible to companies of all sizes, which are increasingly realising they can adopt the technology to reduce their costs.

The ecommerce industry has had traditional automation systems for a long time now, but big machinery is fixed, it costs tens of millions of pounds to install and only the big players could access it. The rise of affordable flexible automation is driving a robotics revolution. With a new wave of innovative providers, companies can start with one or hundreds of robots, leasing them or putting them against their capital expenditure, and it's not fixed.

“It's now getting to the point where robotics is commercially viable for everyone,” says David Hallam, founder and chief executive of OW Robotics, which provides flexible and scalable warehouse automation solutions.

“It was available many years ago, but it was inherently slow and very costly. With flexible robotics, it's becoming more mainstream and affordable for smaller companies, with return on investment evidenced within 18 to 24 months. Meanwhile, a new generation of executives are seeing its business case is undeniable.

“The rise of affordable flexible automation is driving a robotics revolution”



“Automation isn't just about replacing humans, but rather enhancing their value and utilising the existing workforce to do more. We spoke to a haulage firm recently that employed over 50 forklift drivers to move goods from one side of the warehouse to the other all day every day. That's just not good business sense.

“Flexible robotics enables companies to drive significant operational efficiencies while utilising existing workforces for higher-value tasks. Workers are also happier because they're no longer working in harsh environments on monotonous, laborious tasks and they're given more responsibility.”

The coronavirus pandemic has amplified operational efficiencies in supply chains, driving a big spike in inquiries for companies such as OW Robotics. However, the pandemic isn't the only major event that has complicated supply chains. In London, the average cost of a product picker is already around £26,000. With Brexit, these labour costs are just going to keep rising. Warehouses are fighting for the same labour and the only way to attract more talent is to offer more money and benefits, dwindling profit margins even further.

OW Robotics' technology is available through a partnership with Hikrobot, a robotics manufacturer whose technology has seen average efficiency improvements of 90 per cent and labour cost savings of 50 per cent. The

solutions contain simple and flexible components that fit the needs of each business. As well as multi-functional racks, it could be picking stations, picking walls or replenishment stations for targeted support.

“For us, our primary focus is on logistical movements, whether it be goods to person, A to B robotics or manufacturing lines,” says Hallam. “We want to use the same technology not just in one area of a business, but everywhere. That could mean starting with picking products, but then moving the robotics to a zone, quality stage or lorry.”

“Look at how you can automate along the way in logical steps because making one improvement could have a knock-on effect elsewhere, which means you're just shifting the labour. Automation needs to tie into an overall digital strategy. Businesses need to be willing to disrupt and embrace new technology a lot quicker. The robotics revolution is enabling end-to-end automation and it's accessible and affordable to all businesses.”

For more information and to find out more about booking a tour at the OW Robotics Demonstration Centre, please visit www.owrobotics.co.uk/tour-2020/



REPUTATION

Why resilience and reputation go hand in hand



Transparent and ethical supply chains are now vital in managing disruption and mitigating reputational risk

Morag Cuddeford-Jones

How happy are you with your new jeans? Or indeed, the people tasked with making them? Consumers are putting their favourite brands under increasing scrutiny but, without a transparent and ethical supply chain, there can be significant risk to brand reputation.

Current murkiness around companies' supply chains works somewhat

in their favour, however it won't stay that way for long. A recent Ipsos MORI survey found that most people polled (55 per cent) would be put off buying clothes from a company that polluted.

Yet a further survey by Ipsos MORI for Changing Markets Foundation found that 44 per cent didn't know if any well-known fashion brands were associated with sustainability.

Only 11 per cent felt well informed about the environmental and societal impacts of clothing manufacturing.

Supply chain resilience is becoming a bigger factor in cementing a strong brand reputation. Sarah Duncan, author of *The Ethical Business Book*, explains: "We're becoming more and more 'dark green' as consumers, but it has to be really, really easy.

"Demonstrating ethical credentials can't put in too much of an extra step for the 'light green' consumer because they can't be bothered. If they can get something that is high quality, cheap and really convenient, they'll buy that by default."

There are many resources where consumers can access information about companies' supply chain strategies, such as Labour Behind the Label, the Fashion Transparency Index and publications such as *Ethical Consumer*. However, companies realise their brand reputation rests on their openness and transparency.

"There are a lot of people working on blockchain technology for us to easily see the supply chain of everyday products," says Duncan, although she concedes this is just part of the solution.

Alberto Lopez-Valenzuela, founder and chief executive of Alva, a reputation intelligence agency, adds: "The challenge right now is that there is no certification or standardisation. It will have to be as simple as the traffic light system so consumers can assess how the company stands in terms of sustainability. It needs simplification."

Day-to-day consumerism may not be turning into full-blown activism just yet, but the signs are there. And when a natural disaster like the COVID pandemic exposes supply chain risk, such as for fashion retailer boohoo.com, there are immediate and obvious impacts on brand reputation. But no one can afford to rest on their laurels.

Lopez-Valenzuela concludes: "Companies might not be tempted to do something, but when all your competitors are, you're not just falling behind; in some cases, you'll lose the licence to operate altogether." ●



boohoo.com: rebuilding consumers' trust

Following a July investigation by an undercover reporter from *The Sunday Times*, a factory in Leicester was alleged to be flouting regulations including coronavirus measures and undercutting the minimum wage. The factory appeared to have links to fashion retailer Boohoo, but the company claimed it was not one of its declared suppliers.

However, the news was enough to impact the company's brand

reputation and its share price slid 16 per cent the day after the investigation was revealed. An initial announcement from group chief executive John Lyttle said the board was "deeply shocked by the recent allegations". In late-July, the company launched an independent review of its Leicester supply chain, led by Alison Levitt QC.

Its objectives were to investigate allegations, consider how well Boohoo monitored its supply chain, consider the company's compliance with law and to make recommendations based on the findings.

As a result of that review, a further two suppliers were cut from the company's roster. Boohoo also hired an independent factory auditor, whose services included a confidential whistleblower hotline, and announced it was also developing a "model factory" for 250 people in Leicester, to bolster supply chain resilience.

A spokesman said: "The company can confirm that Boohoo will provide an update on the findings of the Levitt report by September 30, 2020."



zalando.com: commitment to supply chain resilience

Zalando supplies 600,000 products from more than 2,500 brands across 17 countries. It also offers its own private label. To maintain supply chain resilience and brand reputation, the company requires its brand and sourcing partners to sign up to its code of conduct and ethical sourcing standards. When it launched its do.MORE strategy in October 2019, the company made assessments around ethical and sustainable parameters for its brand partners mandatory.

In May 2020, the company also announced a collaboration with the Sustainable Apparel Coalition and Higg Co to accelerate a global sustainability standard in the fashion industry. "The

lack of an industry-wide standard of what constitutes sustainable fashion is the number-one challenge. It results in brands using broad and often conflicting language which confuses customers." Zalando sustainability director Kate Heiny concedes. "We see a clear link between sustainability and continued commercial success."

The company has set itself six targets within its do.MORE framework. The first, to be carbon neutral and set science-based targets in 2020, has been achieved.

The others are set to complete in 2023, including minimising waste in packaging and eliminating single-use plastics, only working with partners that align with the company's ethical standards, generating 20 per cent of gross merchandise value with more sustainable products, extending the life of at least 50 million fashion products and supporting 10,000 people in the workforce through upskilling to meet future requirements.

"Both our current and future customer base are calling for more sustainable choices in fashion," says Heiny. "We want to make it easier for customers to spot and shop for more sustainable fashion on our platform."

OPINION

'We have to rethink the way our organisations operate, and where and how we source our goods and services'

In recent years businesses have been managing complex supply chains with the help of low-cost country-sourcing strategies, reliable suppliers and strong lean logistics capabilities.

However, with the impact of the coronavirus, they have had to turn on a sixpence to change business operating models quickly and some are even producing entirely different goods to meet new demand.

Now the dust is settling, supply chain managers are looking to improve the viability of their supply chains, to mitigate against further risks and give their businesses competitive advantage.

Perhaps due to excessive cost focus, many businesses have forgotten the basic procurement principles that make supply chains more resilient. Becoming pandemic-proof may be a dream, but the lessons of past volcanic eruptions clearly were not learnt.

Then, as now, companies suffered as a result of sole sourcing strategies and lazy procurement, making their operations critically weak, susceptible to crises as crucial supplies were cut off. But that is not the full story. Others have embraced disruption to make changes with well-prepared recovery plans, strong supplier relationships and innovative thinking.

Technological advances have taken their place here too. Digital programmes have been rolled out faster with artificial intelligence for quicker and arguably better decision-making, and automating simpler processes to increase efficiency and transparency across supply chains.

That's not to say that this type of efficiency can replace the instinct and skill trained professionals have. That strategic thinking is still essential for businesses that look to procurement teams to solve the challenges they face.

Using a mix of forecasting tools to see trouble ahead, improving transparency and using digital automation put them ahead of the curve. Accessing and using data at a more detailed level helped decision-making on both insourcing and re-sourcing as some businesses sought to bring supply closer to home.

So these success stories have shown that procurement professionals, who really understood what was essential for their business, paid attention to critical suppliers and looked beyond the first few tiers in the supply chain,

were better prepared to ride the wave of disruption.

As the pandemic caused catastrophic disruption to supply chains, businesses were under pressure to find new ways to operate and to manage cash flow and inventory, which I hope will continue. Relationships with suppliers became closer, more collaborative and innovative, and for some, even working with competitors on buying and logistics became the norm.

This horizontal collaboration has been in existence for many years and retailers, especially in the food industry, have discovered this approach not only cuts overall costs for their business, but improves speed to market so customers see improved availability and receive fresher goods. The collaboration between Nestlé and PepsiCo proves that point where the bundling of warehousing, packing and outbound distribution reduced their costs, improved goods delivery and reduced CO₂ emissions.

This year H&M, the fashion retailer, launched the Treadler initiative, which opened up a new era for collaboration. It allowed other businesses to tap into the H&M network of suppliers and improve sustainability change at a faster pace and across more companies, increasing transparency and ethical procurement.

Developing resilience in all its forms will depend on an organisation's appetite for risk, their particular challenges and the competitiveness of their market. There may be costs attached to building a tougher ecosystem of suppliers, but I think the investment will bring dividends. We have to rethink the way our organisations operate, and where and how we source our goods and services. Strong procurement principles show how it should be done. ●



Malcolm Harrison
Chief executive, Chartered Institute of Procurement & Supply

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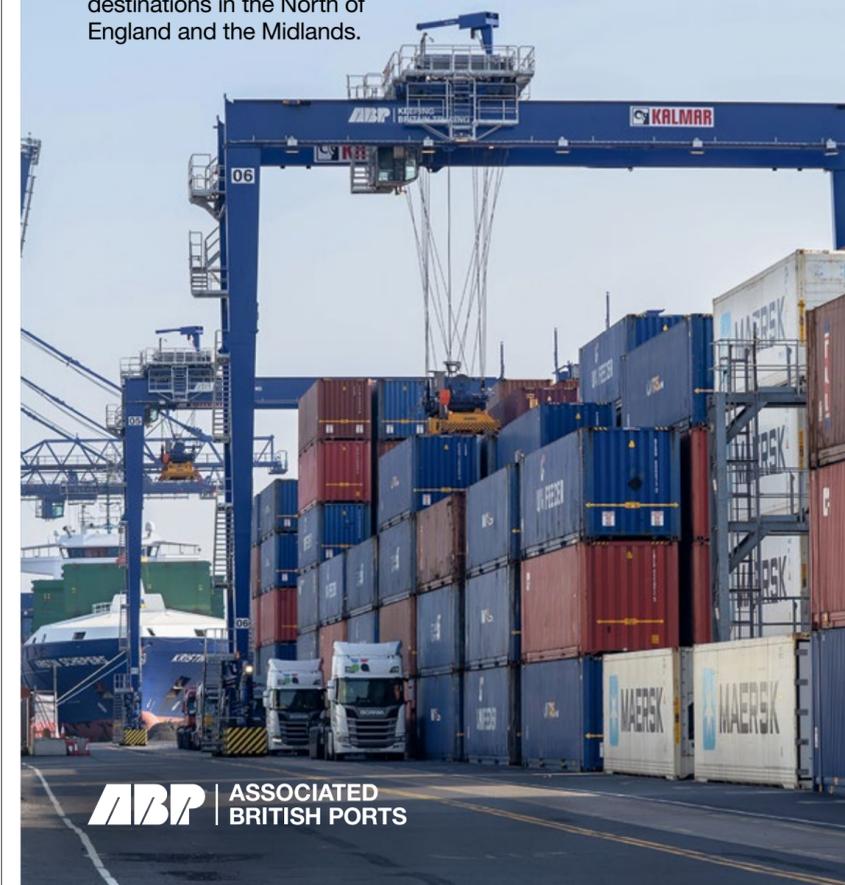
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ENERGY

Disrupting the global energy transition

Coronavirus has temporarily slowed the growth of clean energy capacity, but reshoring could have a longer-term impact on global supply chains

Duncan Jefferies

Renewables such as wind and solar photovoltaics, or PV, now provide almost three tenths of global electricity. The industry's spectacular growth over the past two decades has been supported by global supply chains that have helped to drive down costs. But the coronavirus pandemic threw an almighty spanner in the works, with border closures, lockdown restrictions and component delays slowing the progress of many clean energy projects. "These ventures subsequently ran the risk of increased construction

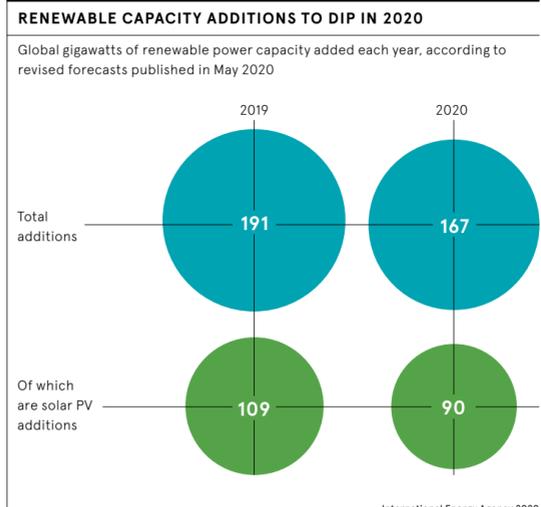
costs, as project developers tried to source parts from elsewhere," says Somik Das, senior power analyst at GlobalData. Quarantine measures also reduced the workforce on some construction sites, he adds, and contractors reliant on international labour were further impacted by travel restrictions. As such, it's perhaps no surprise that the International Energy Agency (IEA) forecasts the amount of renewable power capacity added in 2020 will be down 13 per cent on 2019. However, the IEA also predicts that renewable

power additions will rebound next year to the level reached in 2019. This suggests that COVID-19's impact on the clean energy transition is short term rather than long term. "Nationwide lockdowns forced factories to temporarily shut their doors although many restrictions eased after the first few weeks as these industries were often deemed essential," says Logan Goldie-Scot, head of clean power research at BloombergNEF. "Less robust parts of the value chain, often when activity was concentrated in a single region, were most affected." He cites Ecuador, which supplies 90 per cent of the world's balsa wood, a key component used in wind turbine blades, as an example. "It had a strict lockdown, but this was lifted before lasting damage occurred," says Goldie-Scot. China dominates the global supply of solar PV modules, as well as the raw materials for module assembly. Plants halted operations at the end of January, leading to equipment and material shortages and shipping delays. However, production has now recovered, according to Dr Xiaojing Sun, senior analyst, solar systems and technologies, at Wood Mackenzie. "Overall, supply interruption was short lived and had limited impact on project timelines around the world," she says. Bottlenecks for some wind components, caused by a surge in demand in annual wind installations, were exacerbated by COVID-19, says Shashi Barla, principal analyst for global wind supply chain and technology, onshore and offshore, at Wood Mackenzie. He adds that personnel movement and travel restrictions have, to an

“Most jurisdictions have gone as far as they possibly can to enable construction to continue and for supply chains to remain open

extent, impacted building projects in a few onshore markets, as well as the availability of service technicians for regular operations and maintenance. Wood Mackenzie has therefore downgraded its global wind market outlook for 2020 by 6 gigawatts (GWs). "We anticipate further cuts to these forecasts in a few markets like India, though this will be largely offset by upgrades in China," says Barla. In many respects, both the wind and solar industry have proved remarkably resilient during the COVID-19 crisis. Governments around the world understand the importance of continuing with projects that will support the global transition to renewable energy, says Rob Marsh, a partner at international law firm Norton Rose Fulbright and co-chair of the firm's renewable energy practice. "Within the realms of safety, most jurisdictions have gone as far as they possibly can to enable construction to continue and for supply chains to remain open and viable on an individual project basis," he says. "So if you look across the market as a whole, the impact certainly has not been as marked as perhaps it has in other parts of the economy." It's a reassuring assessment, but could government stimulus packages designed to shore up struggling economies in the wake of COVID-19 lead to further disruption of global supply chains? It wouldn't be surprising if some countries were to attempt to reshore some clean energy manufacturing processes, but the results could be a mixed bag. In January 2018, for example, the Trump administration introduced tariffs on US imports of solar cells and modules in an apparent effort to accelerate reshoring. US module

manufacturing capacity rose as a result, but solar cell capacity didn't. "It [the tariff] provides a 2.5GW tariff-free quota for solar cells, which is not enough to meet all the newly built domestic module manufacturing's demand," says Wood Mackenzie's Sun. "As a result, the module factories in the United States may have to pay tariffs to buy inputs into their modules, which drive up the domestic products' prices." A report by the Solar Energy Industries Association claims the tariffs will cost the United States \$19 billion in investment and result in the loss of 62,000 jobs by 2021. In other words, tariffs are a blunt instrument that can have unforeseen effects on the domestic clean energy sector. Goldie-Scot at BloombergNEF believes it will ultimately be impossible and inefficient to untangle global supply chains fully. But this still leaves room to reshore a lot of manufacturing, particularly where there are logical supply chain benefits. "Manufacturing batteries near to demand for electric vehicles is logical as transporting millions of cells around the world is impractical and costly," he says. Whereas: "Reshoring PV module manufacturing by contrast would make less sense and would distract from broader efforts to tackle climate change." According to GlobalData's Das, many organisations are considering a hybrid framework for the supply chain, whereby a proportion of production and suppliers operate abroad, while some production and vendors are apportioned to the home country. "During a crisis, this combination provides the flexibility to maintain a balance in production depending on customer needs," he says. In fact, Marsh of Norton Rose Fulbright believes reshoring some of the supply chain and manufacturing processes for renewables could ultimately be a positive development. "These reshoring strategies are being delivered to further enable and boost the renewables economy in the relevant jurisdictions," he says. "It would be quite a perverse outcome if that actually slowed down or increased the cost of deployment." ●



UPS AND DOWNS

83% of retailers saw increases in demand for some of their products during lockdown

75% also experienced decreases in demand

LIMITED STOCK

63% experienced stock shortages as a result of COVID-19

TIME FOR CHANGE

4 in 5 are changing their approach to stock management following COVID-19

STAY SMART

33% rank smart, connected technologies as the most important thing for strengthening supply chain resilience

BOUNCING BACK

69% are now likely to invest more capital in stock management technology

ALWAYS AVAILABLE

57% are prioritising investment to optimise stock availability

BALANCING ACT

33% say that managing stock flow to avoid stock piling and shortages is their biggest challenge

COVID-19 rewrites supply chain rules

Though retailers were already evolving their supply chain models to serve a multichannel digital strategy, coronavirus has accelerated this shift and amplified the challenges

The number of channels that retailers sell through has exploded as companies embrace social and digital platforms to reach new customers. The way in which businesses approach supply chain software has evolved in line with this, as organisations increasingly move away from off-the-shelf solutions and instead invest in bespoke systems that better fit their supply chain model in the digital age. At the heart of this shift in strategy is the desire for a more accurate, real-time view of stock inventory. With the right technology, retailers can optimise stock availability and performance powered by analytics insights that enable them to make better-informed decisions about retail selling prices, consumer promotions, stock levels and replenishment. Ultimately, this allows them to focus on their most profitable items. The coronavirus pandemic has amplified the importance of stock availability to consumer satisfaction and brand loyalty, and in many instances exposed the fragility of global supply chains. While consumers were initially forgiving of out-of-stock situations, that soon changed when they felt retailers had had sufficient time to adapt to the conditions. If shoppers couldn't get hold of products or there were extensive shipping delays, they took

their business elsewhere. Realising the delicacy of brand loyalty, retailers are now eager to change their supply chain models to ensure they can minimise stock shortages. "The pandemic showed how lean many supply chain models are," says Claire Webb, managing director at Advanced Supply Chain Group, which offers a complete end-to-end supply chain service. "They are designed to get the right products to places at the right time, with supply closely matching demand to avoid margin dilution. This leanness was quickly affected by lockdown and we expect lean practices like 'just in time' to drastically change because they are less able to cope with increasing unpredictability; they quickly become 'just out of time'. Supply chains will evolve as retailers aim to better mobilise stock, keeping it more agile to sweat its value across multiple routes to market." When the UK entered lockdown in March, the government was clear that logistics professionals needed to keep supply chains moving. Advanced reacted quickly while protecting its staff and customers. As well as setting up sanitiser stations, implementing social distancing, increasing site cleaning and developing new shift patterns to create team bubbles, the company also opened designated

“More than ever, supply chains must be data driven and this data needs to be accurate and readily available

and demand. This often means supply chains grow larger as back-up suppliers are brought on board and more localised fulfilment is used to protect against delays and stock shortages. A bespoke supply chain software solution can evolve with the supply chain, rather than failing to keep up with changes. Advanced develops stock management and supply chain software and systems that suit retailer objectives, rather than working backwards and using an off-the-shelf product to determine what a retailer can have. Supply chains are made up of so many different components and often bring together various operators, processes and systems. It will sit at the heart of all this, acting as the control centre that keeps everything synchronised, making bespoke supply chain software and models crucial. "Supply chains will need to be increasingly agile in the future, so they can quickly adapt to unseen peaks and troughs in demand," says Webb. "This will drive innovation in 'open' software, similar to what we've seen in the finance sector with open banking. Retailers want supply chain systems that can easily integrate with the processes and systems used by their customers, suppliers and partners, no matter who these are, where they are based globally or when they become active in the supply chain. "As software creators and innovators, Advanced is highly experienced in integrating different systems and processes into one central supply chain model. We're well positioned to determine what will be required to develop open supply chain software." For more information please visit advancedsupplychain.com or contact ben.balfour@asc.group

wellbeing rooms and provided staff with access to a 24-hour human resources helpline. It rapidly ensured customer supply chains were COVID-compliant, helping its clients, including large furniture and homeware retailers, to respond to overnight spikes in consumer demand and build customer loyalty during a time when many shoppers were left frustrated by not being able to get hold of products. A recent survey of 200 retail professionals by Advanced found retailers will gain supply chain resilience by prioritising investment in smart, connected technology that improves accuracy and visibility of stock management. This will involve optimising the accuracy of stock inventory management and stock performance. To ensure maximum value from every sale, retailers need

The pandemic will also alter the traditional periods of peak retail demand, according to nearly 90 per cent of survey respondents, with two-thirds assuming the changes will have a negative impact on key sales periods such as Christmas. Economic uncertainty and low consumer confidence are expected to cause a decline in sales, but the research also suggests sales spikes during lockdown mean many consumers have already purchased big-ticket items that they would typically splash out on at Christmas time. Year-on-year online retail sales surged 32.7 per cent in May and 33.9 per cent in June, according to the Online Retail Index from IMRG and Capgemini. Conservative spending during traditional peak periods and general uncertainty around demand places even more importance on stock performance. This will heighten the need for retailers to ensure they're monitoring stock and have an accurate view of sales, so they can act at the right time to avoid the costs of stock depreciation and write-offs. "The so-called 'new normal' is dominated by unpredictability and a constant state of change, which can happen almost overnight," says Ben Balfour, commercial director at Advanced. "You can't fully protect supply chains against this, but you can strengthen resilience by acting quickly and decisively. More than ever, supply chains must be data driven and this data needs to be accurate and readily available. Retailers should ensure all their different data sources, whether that's the retail sales channels, the supplier of goods or the partner moving goods, are constantly communicating with each other. "This will provide retailers with the ability to analyse and understand trends in supply and demand, and make more effective decisions about moving and replenishing stock. Retailers are investing more in contingency plans to counter economic uncertainty and the unpredictability this causes in supply



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