

# Emerging Out of the Pandemic Supply Chain Report

Reuters Events in Partnership with CalAmp





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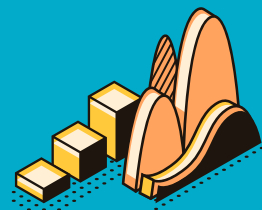
# Introduction

2020 has proven to be the most tumultuous year in recent memory. COVID-19 has radically changed the ways in which work is done and has fundamentally altered how we interact with one another. It's clear the supply chain has been shaken by recent events, but it has not been broken. Many opportunities for success have presented themselves in a short space of time. The companies that continue to scale their technical infrastructure, therefore placing the customer at the core of their operations will be the ones to thrive as we emerge from this pandemic.

## Key Facts

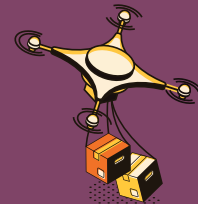
### Need for Demand Planning

51% of shippers identified “lack of clarity on customer demand” as the biggest supply chain bottleneck they are seeing due to COVID-19. This shows the growing need for demand planning software moving forward.



### eCommerce Boom

65% of shippers have either slightly or significantly increased their eCommerce operations due to COVID-19. The eCommerce boom is well underway and represents a huge growth opportunity for the industry.



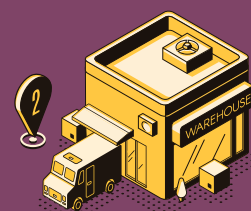
### The Changing Face of Work

On a scale of 0-100, shippers noted that workforce productivity scored 77, whilst it scored 80 for logistics service providers. Given the success of remote working, the future of the office is more uncertain than ever. Work as we know it may never be the same.



### Digital Excellence

58% of logistics service providers have shortened their technology roadmaps due to COVID-19. Continued focus upon digital infrastructures will provide medium-term gains and lay the foundation for a more resilient supply chain for years to come.



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# CalAmp Opening Insights

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The effects of COVID-19 are like nothing we have seen before.

After decades of continued globalization the world is more connected than ever. This connectivity has opened up large opportunities for global commerce. However, an interconnected world has its costs; the pandemic has sent shockwaves across the world and exposed foundational issues within the supply chain industry at large. The following report demonstrates that tackling a crisis of this magnitude can only be done by embracing both visibility and technical flexibility across the extended supply chain.

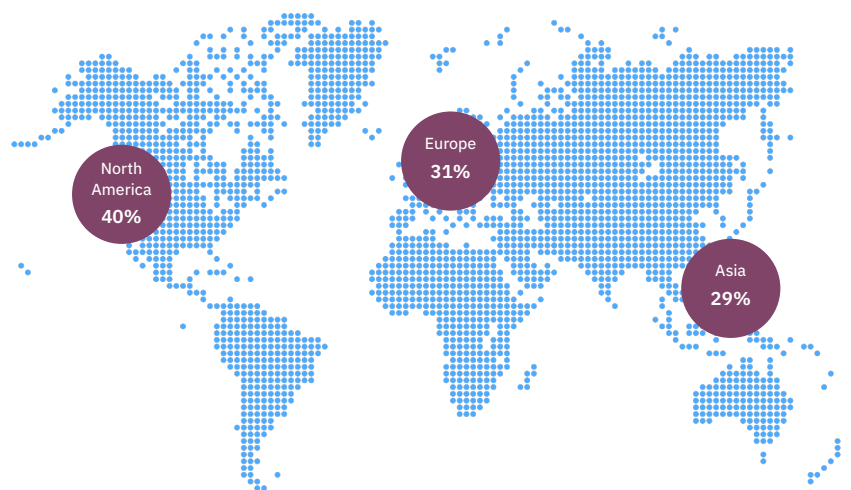
Those looking to build resilience and emerge from the pandemic stronger than before must accept the fundamental changes that it has brought about. **Pandora's Box cannot be closed.** No longer can businesses avoid investment into digitization or risk management in favour of cost reduction.

The visibility vacuum, coupled with an emphasis on just-in-time inventory management practices has meant that many businesses have lacked the flexibility to tackle this crisis. With delivery slowdowns compounding upon an inability to source crucial products, the dependence upon just-in-time inventory management and global sourcing networks demonstrates a fundamental weakness at the heart of modern supply chains. **The necessity of a buffer and improved visibility has been made painfully evident.**

This crisis has exposed the frailties inherent within global supply chains. Lack of total visibility has long been normalized as an inevitable part of doing business. **Shirking transparency and risk mitigation in favour of short-term cost reductions is no longer good enough.** If the pandemic has shown us one thing, it is that those unwilling to embrace digital technologies must rapidly change their outlook, before it is too late. Organizations must be agile in making short-term decisions to see their enterprise through the crisis and to adapt swiftly enough to lay out a stable vision for the long-term.

# Methodology

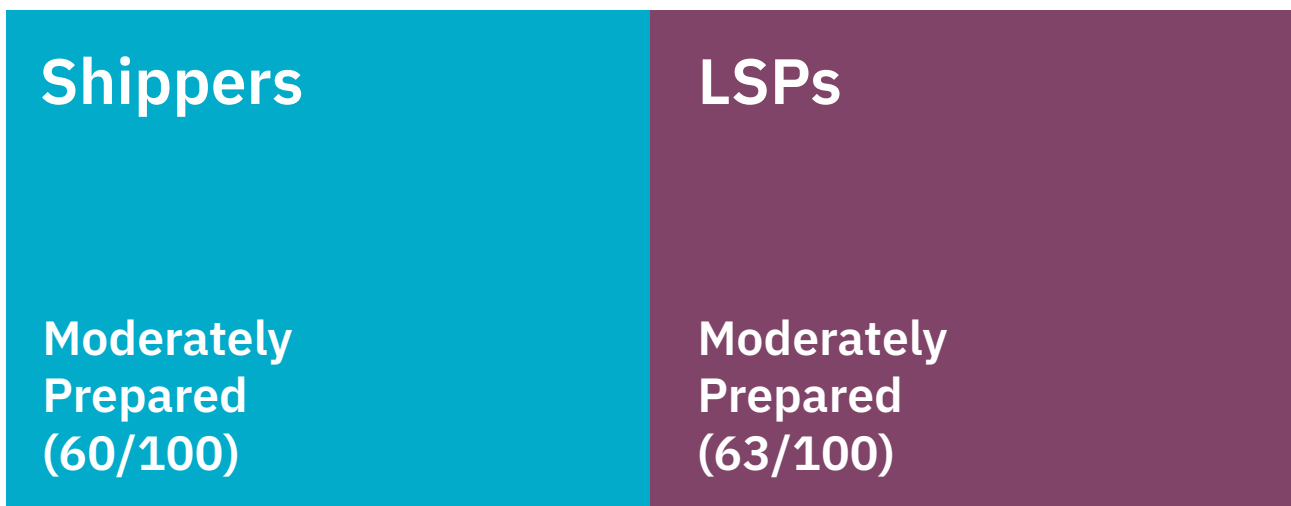
587 supply chain executives from across the globe were surveyed for this report. We gathered information from retailers, eTailers and brands, logistics service providers, technology solutions providers, legal and financial solutions providers as well as media associations to bring you insights into how the industry can emerge out of the COVID-19 crisis. Representatives from supply chain organizations across North America (40%), Europe (31%), Asia (29%) and are featured in this year's report, giving a truly global understanding of the concerns, challenges and future plans emerging in response to COVID-19.



# Preparedness

Risk management is central to any stable supply chain and has been a focal point in the logistics industry in recent months in particular with fears around trade wars, Brexit and environmental degradation. This has caused many companies to reconsider the level of visibility they have into their supply chains and to minimize their exposure to risk. Despite this, the COVID-19 crisis has caught the supply-chain industry off guard, destabilizing traditional ways of working, living, and doing business.

## How well prepared was your company for COVID-19?



Of the 202 shippers we surveyed, the average score they gave their companies for preparedness for a shock on the scale of COVID-19 was 60/100. Among the 200 Logistics Service Providers (LSPs) the mood has been similar, telling us that their industry was only moderately prepared for COVID-19, scoring an average of 63/100.

Anticipating crises on the scale of COVID-19 requires a nuanced understanding of the interconnected aspects of the globalized supply chain, as well as an understanding of how lean manufacturing and just-in-time inventory management can drastically change both the efficiency and the risk profile of logistics operations. To be better prepared for future shocks companies would do well to identify the specific problems caused by COVID-19 to their operations. Doing so will help to articulate the best response to these issues and prepare a suitable strategy that minimizes deviation from existing business vision whilst ensuring adequate risk management in the coming years.

# Preparedness

Crucial to understanding the impact of COVID-19 in the logistics industry is the backdrop of political tensions against which it occurred. The protracted trade war between China and the US had already forced some companies to reconsider their operations, the focus of which centered around a 'China +1' strategy which sources low-cost inputs from markets such as Vietnam and Mexico, amongst others. Doing so has somewhat eased the strain of transition during this pandemic, as multiple sourcing locations helped to ensure flexibility as China began to lockdown. However, as is the case with many industries, there is still a dependence upon China for key inputs. This means that dual sourcing options must be considered carefully, prioritizing relocation on the basis of a country's ability to pull from a diversity of supply chain inputs rather than low costs or speed. Defining a risk index for your components at each stage of the production process is crucial to understanding both the feasibility of dual sourcing for your operations.

Similar changes have taken place across the Chinese market, with manufacturers turning inward, selling goods previously destined for export to the domestic market, as tariff constraints reduced the amount of shipments going overseas. Consumer-to-manufacturer (C2M) models were initially touted as a way to attract more consumers towards a modernizing manufacturing industry, but now help to shore up domestic consumption amidst decreasing overseas demand.

*We've always been focused on three main areas of innovation, which we believe will become even more relevant in a post-COVID-19 world. The first is dynamic data science. The second is intelligent logistics automation, which has been driven by the employees to make the warehouse safer and more efficient. The third priority is the digitalization of transportation and the customer experience. These are trends we already saw before COVID-19, and that are accelerating now.*

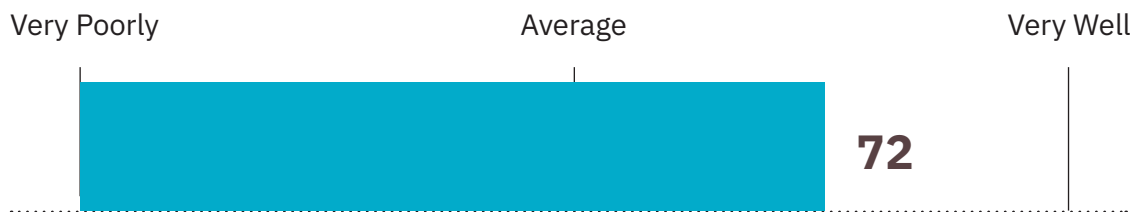


**Erik Caldwell, Divisional Chief Operations Officer, XPO Logistics - Supply Chain (Americas & Asia Pacific)**

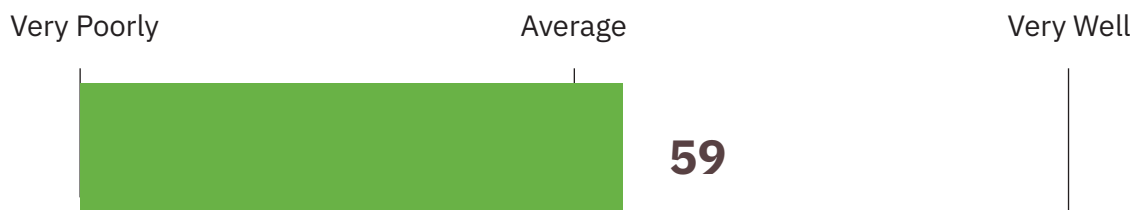
# Impact

The lack of preparedness in the industry has had numerous impacts on the supply chain industry's ability to navigate this crisis. Those enterprises found to be lacking in risk management protocols struggled to maintain the flexibility and clarity that would have allowed their partners and customers to better navigate the crisis.

**We asked 202 shippers how well are your logistics partners coping during COVID-19 (out of a score of 100)?**



**We asked 200 LSPs how well are your customers coping during COVID-19 (out of a score of 100)?**



Of those we surveyed, the broad perception amongst shippers is that their LSP partners are coping well with the increased strain during the pandemic. Shippers believe that their logistics partners are managing the uncertainty of customer demand, scoring them an average of 72/100. In contrast, LSPs only scored shippers an average of 59/100. This disparity indicates the tension LSPs have felt working with shippers during a period of unprecedented uncertainty. Lack of preparation has meant that shippers have been unable to properly account for customer demand, resulting in bottlenecks in the supply chain.



# Impact

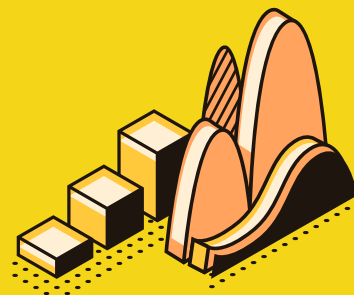
What's the biggest supply chain bottleneck you're seeing due to COVID-19?



Scaling a supply chain effectively can be difficult in the most optimal circumstances, but in the compressed timescale faced by operators today it represents a Herculean task. Amongst shippers, 51% told us that a lack of clarity on customer demand was the biggest bottleneck emerging as a result of COVID-19. This was echoed by 46% of solutions providers also noting uncertainty on customer demand as a significant bottleneck on current operations. The low score given to shippers by their LSP partners could be seen as a problem on the demand-planning side, creating bottlenecks that make it difficult to meet customer expectations.

## Demand Planning

Taking into account factors such as the labor force, weather conditions and geopolitical events, demand planning software attempts to create a picture of shifting market needs. Effective forecasting can help to ensure accurate inventory levels, revenue estimates and effective supply chain organization.



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# Impact

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The issues around demand-planning reflect a continued concern noted in our Hot Trends report (released January 2020), in which we emphasised the critical challenge that demand forecasting posed for shippers. The pandemic has introduced unexpected volatility into customer demand, making it even more difficult to discern demand patterns.

Furthermore, silos between sales and operations has hindered data-sharing which would have proven useful in navigating these issues. Supply and demand sides need to work together more effectively in order to identify these purchase behaviours early on. Orienting manufacturing pipelines in tandem with customer demand will help to build a cohesive and resilient supply chain strategy. Consolidating data flows within your organization and managing procurement, demand and inventory are all opportunities that can be realized via demand-planning software.

Of the shippers we surveyed, a small amount also cited difficulties with outbound shipments to customers (16%). 33% of shippers also highlighted the lack of inbound flows of goods from suppliers as a detriment to their supply side operations, a point also made by 37% of solutions providers. This is no surprise; international exports have fallen due to border closures, consequently having a knock-on effect for transportation providers in those countries. Such a drastic fall in exports has had severe consequences for transportation networks and logistics providers, especially with border lockdowns in force. Rail and sea transportation, however, have become increasingly popular, driving forward intermodal logistics planning.

*The reality is that legacy transportation technology and the limitation of traditional supply chain practices are no longer enough to keep pace with the market. But in many ways, the widespread impact of COVID-19 has been a forcing-function for innovation, and shippers for whom digital transformation wasn't a top priority are suddenly moving quickly.*



**Bill Driegert, Head of Operations, Uber Freight.**

# Impact



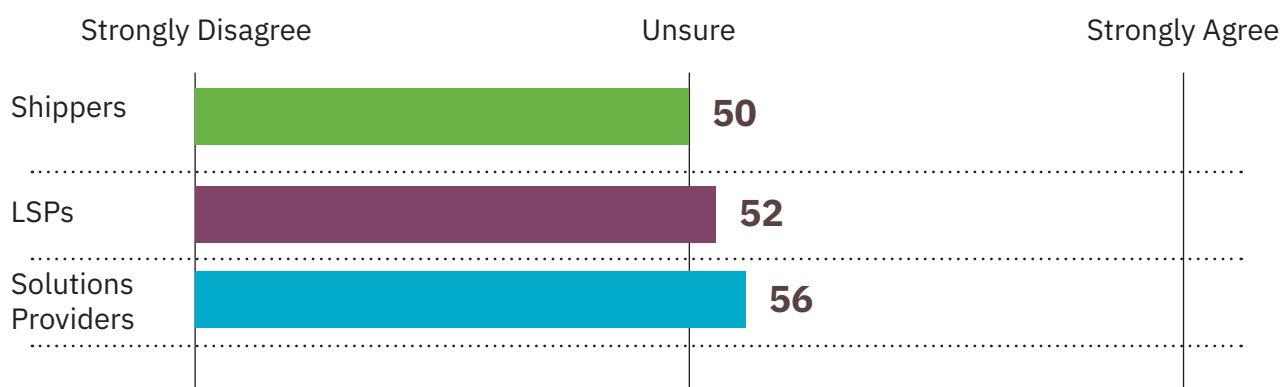
## Just-in-Time Inventory Management

Just in time (JIT) inventory management strategies are designed to increase efficiencies and reduce waste by scheduling the receipt of goods as they are needed in the production process, reducing overall inventory costs by operating on an as-needed basis.

Given the uncertainties developing around customer demand, inventory management has posed a significant challenge to shippers dealing with the pandemic. In recent years the supply-chain industry has been driven by a belief in streamlined approaches to inventory management, but recent fluctuations in customer demand have exposed the fragilities of this strategy.

To this extent, JIT inventories may now be seen to come at the cost of a properly robust supply chain. On the one hand, global shocks on the scale of COVID-19 are rare, so any suggestion that current events provide reliable insights into a companies ability to manage structural risk in their extended supply chains has yet to be demonstrated. On the other hand, COVID-19 has made visible potential failure or pressure points inherent in the JIT model, leading to unease around its viability going forward.

**We asked 202 shippers how well are your logistics partners coping during COVID-19 (out of a score of 100)?**



As the data shows, there is a great deal of uncertainty across the supply chain industry about the long-term viability of just-in-time management as an inventory strategy. Shippers were hesitant to say whether COVID-19 would result in the end of just-in-time practices, with an average of 50% confidence. A similar sentiment was shared by LSPs (52%) and other solutions providers (56%). It is abundantly clear is that just-in-time strategies are under scrutiny, and their utility post-pandemic still remains to be seen.

# Impact

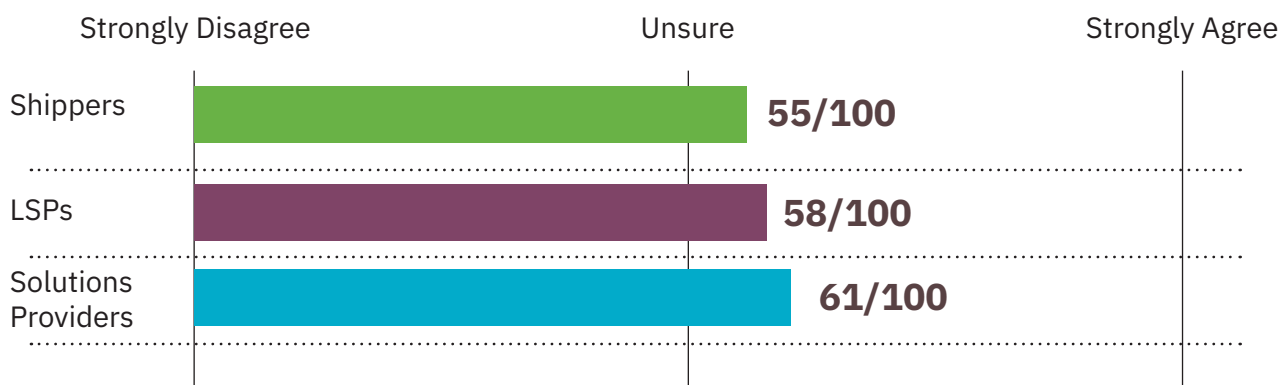
Inventory management is intimately connected with sourcing. During this crisis, a dependence upon single-supplier sourcing has exacerbated inventory issues for shippers. In particular, over-dependence upon low-cost Chinese manufacturing has greatly challenged companies during this crisis. Without proper visibility into alternatives or a previously validated and tested dynamic sourcing procedure, companies are left struggling and forced to shoulder potential quality risks as well as unexpected costs when switching suppliers or production locations.

*Just-in-time inventory is not going to go away. The challenge is who is going to be responsible for filling in the gap between just-in-time and just-in-case. Excess capacity for redundancy would be difficult for private enterprises to handle themselves. It needs to be a collaboration between public and private in order to respond to these types of surges in the future whether it be for personal protection equipment, pharmaceuticals, or other supplies. These are both policy and economic decisions.*



Abe Eshkenazi, CEO, ACSM

## Will COVID-19 fundamentally change where we source our products from?



Overall, respondents were unsure whether COVID-19 would move the needle on product sourcing, tending towards slight agreement. Similar to just-in-time inventory strategies, uncertainty around sourcing highlights the concern brewing in the industry as the pandemic forces companies to reconsider their sourcing strategies. What emerges as most necessary with respect to sourcing is the development of robust risk-assessment procedures. In the near-term companies can institute best practices in order to safeguard their supply chains against prolonged shocks.



# Impact

*Companies traditionally focused on optimizing inventory, leveraging off-shore sourcing and just-in-time processes to reduce costs. Not anymore. COVID-19 disruptions made it difficult for them to manage their supply chains. Moving forward they'll want more geographic diversity in sourcing even if it's expanding into more countries in Asia and perhaps Mexico.*



**Erik Caldwell, Divisional Chief Operations Officer, XPO Logistics - Supply Chain (Americas & Asia Pacific)**

Identifying suitable contingency plans such as geographically diverse sets of suppliers or dual sourcing of critical components will go a long way to ensure business continuity in times of disruption. Modelling future risk scenarios will also facilitate more productive communication amongst stakeholders in a time of crisis. The ability to give determinate plans based on possible scenarios helps to maintain clarity and focus, limiting exposure to economic disorder.

Considering decentralizing procurement at this stage can help to mitigate future risks from similar global shocks, especially as any plans to move will have a severe lag time. For instance, the Japanese government has pledged a \$2.2bn fund for businesses to move production back to Japan, and 23.5 billion yen for those moving to other countries, hoping to undo the consolidation of component sourcing in China.

Government initiatives such as these may help to provide a more attractive proposition for domestic and international manufacturers looking to be persuaded to partially transfer their production facilities. Similar trends to regionalize production are emerging in Europe, so LSPs and shippers alike will need to carefully monitor policy changes to ensure they stay ahead of the curve and take advantage of opportunities such as these.

*I don't agree with the statements around wide adoption of near shoring, we will see a few organizations changing supply base but nothing major in my opinion. Moving supply chain manufacturing is a complex process at large scale and many people underestimate that.*



**Nabil Malouli, VP, Global Ecommerce Lead, DHL Supply Chain**

# Future

*eCommerce has increased significantly as many organizations have had to shift sales channels to online. The rise of eCommerce is one of the major trends and I believe that this pandemic will accelerate the adoption of eCommerce significantly for the years to come in multiple product categories.*



**Nabil Malouli, VP, Global Ecommerce Lead, DHL Supply Chain**

With the global lockdown enforced in order to curtail the spread of the virus, consumers have turned to online retailers to meet their needs. US retailers have seen a year-on-year revenue growth comparable to holiday ‘peak’ season shopping in their online channels, growing from a high of 49% at the start of the year to 68% by mid-April.<sup>1</sup> According to a Fabric survey of US customers conducted in April 2020, 50% of consumers have purchased their groceries online as a result of COVID-19, with one-fifth of consumers registering as first time online shoppers.<sup>2</sup>

Whether this trend continues remains to be seen, as the fate of the physical store rests upon adequate vaccination, immunity and confidence in public health measures and guidelines. Nevertheless, many signs point towards a consistent upswing in eCommerce, as consumers plan to continue shopping online for the duration of the pandemic, and even into the future if cyclic lockdowns become a condition of re-opening the economy.<sup>3</sup>

*eCommerce is one of the fastest growing parts of the economy and the pandemic has exacerbated that. For a lot of retailers that have been focused on brick and mortar, we’re helping them make the shift to omni-channel and particularly eCommerce. That’s a big priority for us. eCommerce has been the biggest story in consumer for the past 15 years, and that’s only going to continue. That’s especially happening as consumers become more comfortable buying literally anything online, from heavy goods to groceries.*



**Erik Caldwell, Divisional Chief Operations Officer, XPO Logistics - Supply Chain (Americas & Asia Pacific)**

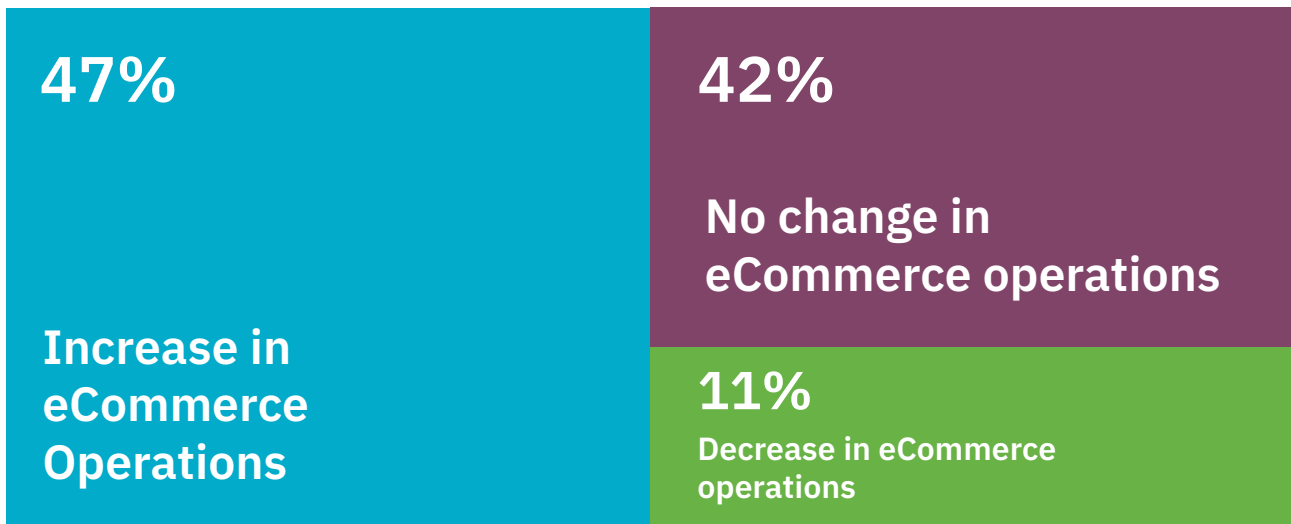
<sup>1</sup> <https://ccinsight.org/observations/us-retailers-see-online-growth-yoy-in-april-similar-to-re-cent-holiday-season/>

<sup>2</sup> Fabric LTD - The Impact of COVID-19 on Online Grocery, April 2020.

<sup>3</sup> <https://www.nytimes.com/2020/03/17/us/politics/trump-coronavirus-plan.html>

# Future

To what extent have you increased your eCommerce operations?



Given the above, it is no surprise that 47% of shippers told us that they have increased their eCommerce operations. This offers a substantial opportunity for both shippers and LSPs going forward. We see many established 3PLs in this space increase their focus on eCommerce.

With the pivot to eCommerce, retailers have found themselves in need of repurposing retail space. Many retailers with physical stores are finding themselves with excess space primed to move to storage-based models (storerooms for online delivery and depots for pickup and drop-off). Similarly, larger retailers such as Walmart are tuning their routing and capacity management systems for smaller baskets and shorter delivery windows in line with increased demand for groceries and household items. Small scale automation plays a big role in improving competitiveness in a post-pandemic society. As the online shopping sector matures further, expect to see a focus on high-density and low-space fulfilment centres distributed across business locations as retailers scale their eCommerce capacity.

*The direct-to-consumer model has fundamentally shaken up siloed supply chains in favor of transparency and interoperability. And in some cases, an agile architecture can make the difference in maintaining a share of the market.*

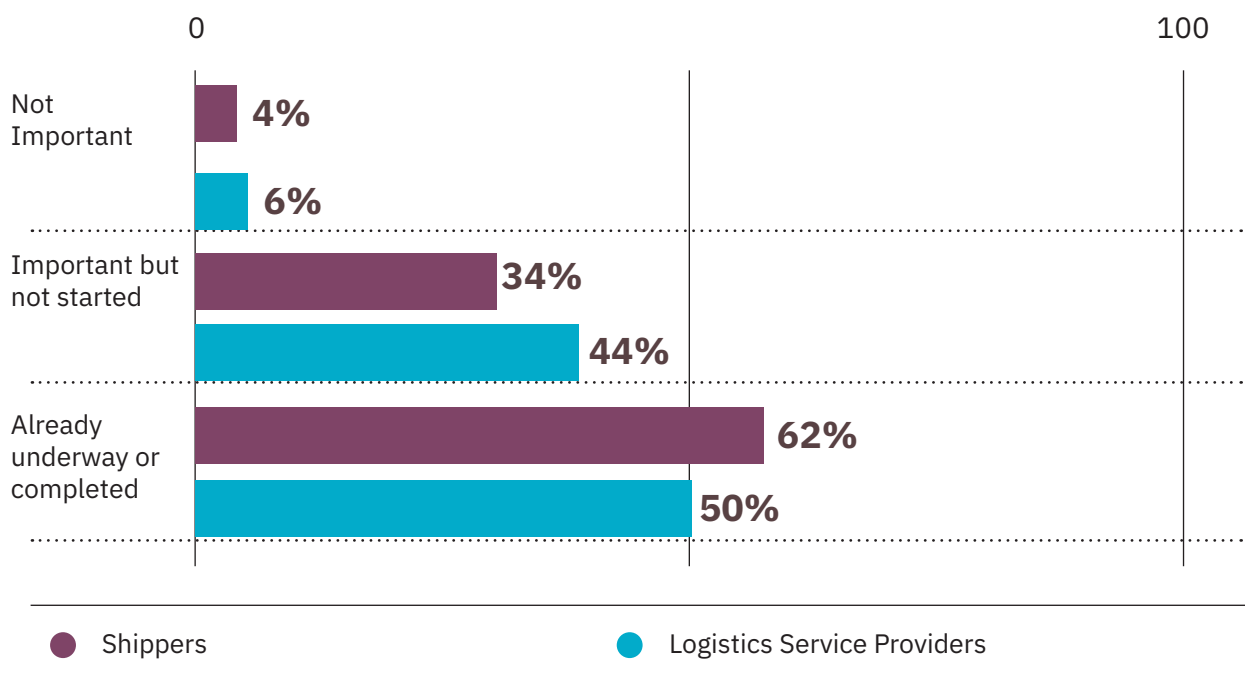


Jeff Newman, Vice President, Supply Chain Visibility Solution Sales, CalAmp

# Future

Developing a viable recovery strategy is a difficult procedure in the wake of COVID-19. At the time of writing, no vaccine is available and actionable information on the possibilities of re-infection and community viral spread is still to be established. The path to recovery is thus still unclear, increasing the uncertainty faced by businesses and forcing them to look for a degree of flexibility in post-COVID-19 planning. Furthermore, those adapting to remote work in this period will seek to develop more resilient business practices for the future, readying their organizations for the changing shape of labor.

## How important is it for your business to perform a COVID-19 recovery assessment?



The road out of the COVID-19 crisis will be a long one. Of the shippers we surveyed, 43% responded that they have already taken steps towards planning a recovery strategy, with a further 19% already completing their assessment. 34% have thought about it and acknowledged its importance and just 4% of firms surveyed believe that they are in no need of a recovery assessment. Amongst LSPs, the majority of businesses are in the initial stage, aware of the need to plan their assessment (32%) and beginning to take steps towards it (33%). Just 17% have already completed their assessment and 6% believe it to be unimportant. The industry was caught unawares at the start of this crisis, and many are determined not to let it happen again.



# Future

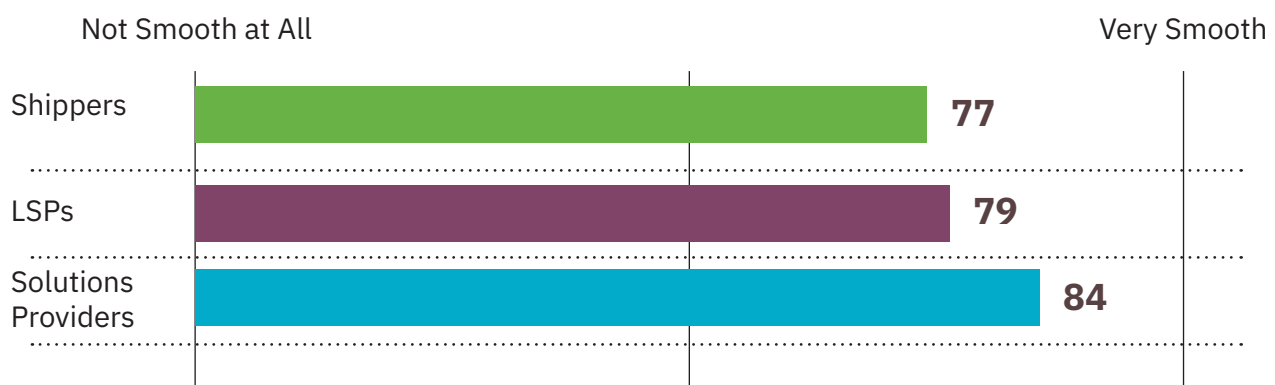
The move towards remote working has long been in the offing, with companies increasingly opting to create remote teams and foster global collaboration, especially within the burgeoning SaaS field. COVID-19, however, has accelerated this trend exponentially. Acting as a catalyst for every sector, the global crisis has forced companies to fundamentally reappraise traditional modes of working and turn their attention towards the digital office.

Replies to our survey ranged across organizations with no previous experience supporting remote workers to those with established remote systems in place. Despite the variance in experience both faced intersecting challenges in ensuring a smooth transition away from the physical office, one of which included ensuring constant and stable access to internal systems for all employees.

With entire organizations locked down at home, an unprecedented load was placed on internal virtual private networks (VPNs) with some companies growing continuous capacity from 20% to more than 80% of their employees in the space of weeks at the start of the pandemic.<sup>4</sup> Doing so whilst maintaining control and visibility over a secure digital environment has been a challenge for some, but this hurdle may be seen as an early stress test for the rapid scaling of a properly digital supply chain, which includes distributed working environments as the norm and an emphasis on real-time team communications.

However, despite initial teething issues, the overwhelming majority of those surveyed responded positively to their transition to a remote working environment. On a scale of 0-100, with 100 indicating an entirely smooth transition, the majority of shippers, Logistics Service Providers (LSPs) and other solutions providers noted a relatively painless shift to their new remote working conditions.

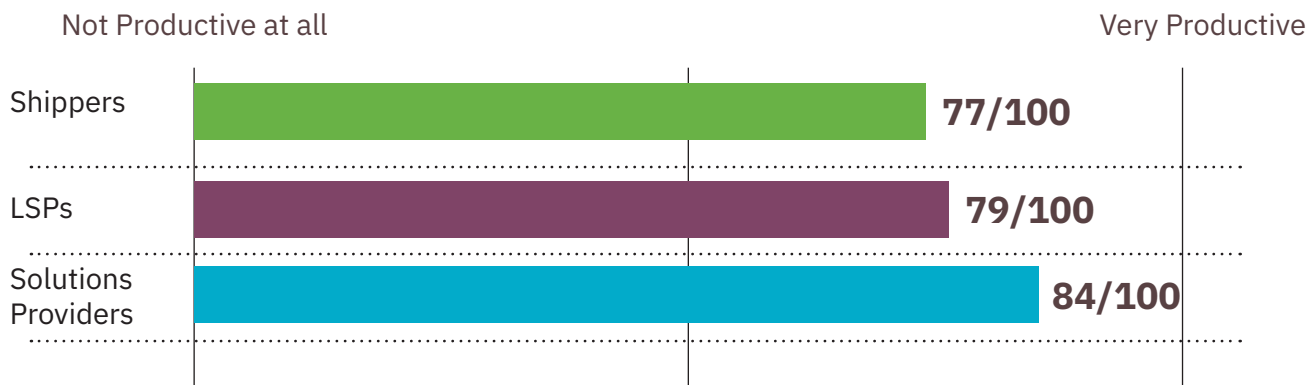
## How smooth was the transition to remote working at your company?



<sup>4</sup> <https://orangecyberdefense.com/be/blog/covid-19/technology-1-secure-remote-vpn-access/>

# Future

## How productive has your workforce been since COVID-19 on a scale of 0-100?



The physical office has traditionally been favored as a more easily managed and productive environment but support for the remote office has no doubt been bolstered by the productivity seen since the onset of COVID-19. Of our respondents, the overwhelming majority of shippers, LSPs and other solutions providers feel that productivity has been high amongst their workforce in recent months, convincing many that remote working is here to stay.

One worry in the medium-term will be the extent to which this level of productivity can be sustained. Productivity collapse may not be properly played out until the end of the year, when the short-term boost from home working is overtaken by lockdown fatigue. Employees isolated in improper working environments and faced with increased childcare duties as well as uncertain living arrangements will also be more likely to suffer from a decline in their mental health and productivity. Taking the time to build a digital office environment can be beneficial here. As remote work becomes the norm, instituting social practices in the digital office will play a pivotal role in fostering a strong team connection and tie together employees to achieve collective goals.

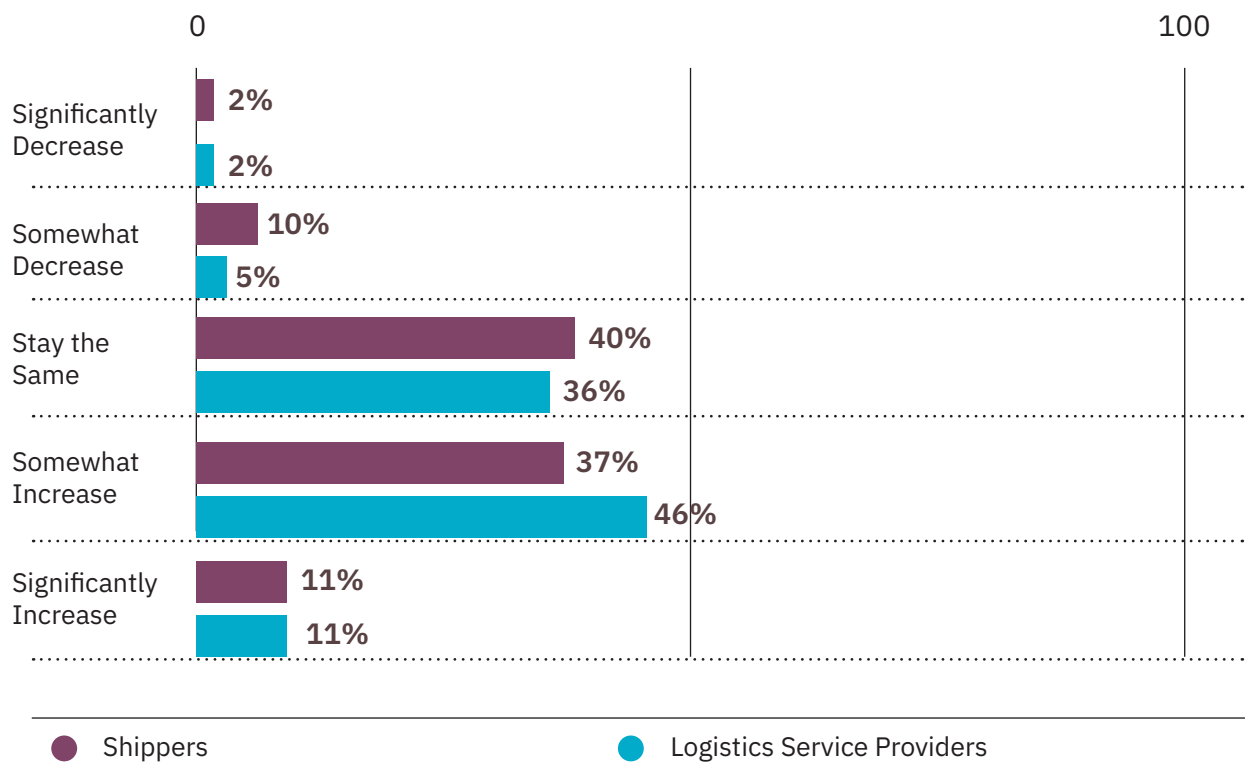
*Anyone that could work remotely did. Our tech team quickly pivoted to keep us productive as we work remotely, a huge undertaking given that they used to support dozens of offices, and now they're supporting tens of thousands of home offices.*



**Erik Caldwell**, Divisional Chief Operations Officer, XPO Logistics - Supply Chain (Americas & Asia Pacific)

# Future

## To what extent are you changing your technology spend?



57% of LSPs informed us that they were increasing their technology spend, 11% of whom would do so significantly. A similar story is told by shippers, with 48% of those we surveyed looking to spend more on technology, with 11% emphasizing that this would be a significant increase in spending.

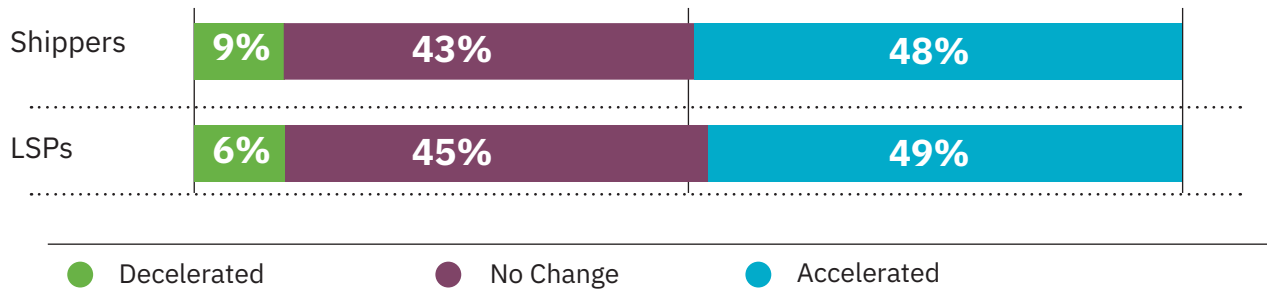
*Over the next 18-24 months, I expect to see a renewed push for digital transformations that are focused on improving the visibility into consumer demand, tier-1 and sub-tier supplier performance & risk, inventories, and forward/reverse logistics. The increased visibility will also make the supply chains nimble to enable faster business innovation.*



**Jeff Newman, Vice President, Supply Chain Visibility Solution Sales, CalAmp**

# Future

## To what extent has COVID-19 changed your technology roadmap?



48% of shippers and 49% of LSPs are accelerating their technology roadmap. Coupled with the increase in spending, it is clear that this pandemic has had a direct impact on technology budgets and implementation. As illustrated throughout this report, an inadequate utilization of technical solutions (such as demand-planning software) have meant that some companies have been ill-equipped to navigate this crisis. These statistics thus demonstrate a clear intent to reprioritize investment. A continued emphasis on digital technologies is required to ensure that businesses can emerge from the crisis stronger than before. However, as Jeff Newman of CalAmp notes, it is ultimately up to employees to realize the potential of this increased investment. Strong communication of your business vision will help to articulate team goals and ensure a successful recovery.

*Employees will have greater peace of mind with adequate avenues to mitigate daily decision-making as well as oversight to avoid breaches of data or other compromising information. While breakthroughs in sensor tech, location tracking and analytics may be able to help you contain costs, it is up to your team to realize that return.*



**Jeff Newman, Vice President, Supply Chain Visibility Solution Sales, CalAmp**



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# CalAmp Closing Remarks

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Risk management, visibility, and targeted technological investment are the three key areas for businesses to focus on as we emerge from the COVID-19 pandemic. A lack of preparedness hindered many in the initial stages of global lockdown, with many scrambling to establish long overdue digital ways of working. Business continuity requires careful planning and attentiveness to growing eCommerce trends as well as diversifying your supply chain, both with respect to sourcing and technical infrastructure. We suggest targeting four key areas in order to ensure business continuity.

## 1 Embrace Visibility

Managing route changes as well as maintaining visibility from point of pack to final destination across multiple transportation modes (air, land, sea) can help drive supply chain efficiencies and maintain just-in-time inventories as a viable production strategy.

## 2 Diversify Supply and Build Resilience

Risk management rather than cost mitigation will play a bigger role in developing supply chain resilience in the coming years. In the future, some countries may encourage near shoring operations to reduce reliance on China, but still stay within Asia to ensure access to specialised components technology and knowledge. Rooting out blind-spots in both tier-1 and sub-tier suppliers will help shippers to deal with problems in real time to minimize the impact on their supply chains.

## 3 Take Advantage of the eCommerce Boom

eCommerce is here to stay. Physical shopping has not had its day, but consumers are waking up to the speed and potential of a seamless online experience. Managing demand through robust software solutions will make sure your business maximizes the opportunities emerging in this space.

## 4 Achieve Digital Excellence

The supply chain industry has long been reticent to embrace digital technologies. In recent years greater emphasis has been placed on automation, edge computing and cloud-based supply chain visibility technologies, allowing some to leverage real-time data down to the product level from the point of pack to the final destination. Integrating these data-based insights into decision-making and recovery planning will allow you to make better business decisions and better manage deviations resulting from any supply chain disruption, be it a pandemic, natural disaster or anything else.

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# CalAmp Closing Remarks

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## Jeff Newman

Vice President, *Supply Chain Visibility Solution Sales*, CalAmp

As a recognized industry leader in the wireless IoT/M2M market, Jeff Newman has over two decades of experience as an early pioneer within the M2M wireless industry. Newman is currently the vice president of supply chain visibility solution sales for CalAmp. In his current position, he works with key partners and enterprise executives in the areas of Supply Chain Integrity, Connected Vehicle Telematics, Industrial IoT applications and Insurance Telematics, helping companies derive new sources of revenue and improve operational efficiencies on a global basis.

Prior to joining CalAmp, Newman held numerous positions within the M2M/IoT value chain. He served as senior vice president of business development for Numerex and chief strategy officer and senior vice president of business development for Enfora where he was responsible for driving global business opportunities in a wide variety of IoT vertical market segments including, security, telematics, home automation, asset management and remote monitoring. Newman has also previously held senior management positions within Intel, Texas Instruments and T-Mobile.

He holds a Bachelor of Science in Electrical Engineering from the University of Arizona and an MBA in Technology Management from the University of Phoenix and has been successfully involved in a number of start-up companies throughout his career.