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Covid-19: The Future of Supply Chain



RESILIENCE360

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Foreword

The BCI Supply Chain Resilience Report 2020 is published at a time when global distribution networks have experienced an unprecedented degree of disruption. As the COVID-19 pandemic rolled around the globe during the first few months of 2020, it unleashed progressive waves of disorder. As countries locked down to contain the spread of the virus, their economies faltered. The international supply chains that connect continents were thrown into disarray as the appetite for many everyday goods collapsed, while demand for other unexpected products exploded leading to supply constraints and shortages.

During the pandemic, the BCI has conducted regular Coronavirus surveys with our members to measure the impact of COVID-19 and record their response. The BCI Supply Chain Resilience Report 2020 continues our focus on producing and sharing practical and relevant research. It builds on our Coronavirus surveys and provides even more detailed analysis of the impact of the pandemic on global supply chains and the actions taken by organizations to address the challenges thrown up by COVID-19.

While global supply chains have been severely disrupted by the pandemic, many of the responses in this report provide room for encouragement. Several of the results indicate signs of organizational and industry-level resilience coming from existing plans and arrangements, the innovative response that organizations have created in the midst of the chaos, or the ideas for future improvements.

Tim Janes, Hon FBCI
Chair, BCI

- Under half of organizations had a pandemic plan in place which they felt was adequate to cover supply chain issues during the pandemic. As a result, the majority of organizations will now make changes to their plans going forward. Just over half of organizations will write a pandemic-specific plan and include supply chain in more detail, while another third will alter their general continuity plans to strengthen supply chain specific elements.
- The survey responses provided some strong examples of “industry-level resilience”. Pharmaceutical companies worked together to acquire drug ingredients via a newly created consortium. The consortium is also working together in the search for a coronavirus vaccine, and the consensus is it has been so successful that it is likely to continue post-pandemic.
- Organizations will conduct more detailed due diligence in their supply chains post-COVID. Most respondents confirmed that already know the location of their critical tier 1, 2 and 3 suppliers – and many know the location of all suppliers. Nevertheless, the pandemic has exposed holes in this organizational knowledge and nearly two-thirds intend to do deeper due diligence in their supply chain once the pandemic subsides.

The BCI is delighted to partner with Resilience360 to produce the 2020 BCI Supply Chain Resilience report. I hope you find the insights and data contained in this 2020 global survey both enlightening and relevant, and that they might be put to good use to further enhance your own organization's supply chain resilience.



RESILIENCE360

Foreword

Thank you for reading this important and timely report.

The combination of the BCI's global reach and experience in business continuity benchmarking along with Resilience360's deep expertise in supply chain risk makes this one of the most complete surveys on the impact of COVID-19 on supply chains to date. It is a must-read for any executive with a physical supply chain and for all who manage sourcing, production and logistics.

The quick outbreak and continuing unpredictable spread of COVID-19 have changed the world in many ways. Supply chains have been driven to adapt to widespread disruption in both supply and demand. And, many of the changes that have been forced upon global supply chains will become permanent and emerging trends such as digitization and automation are being accelerated.

The more complex and lean a supply chain, the greater the impact of a disruption; however, COVID-19 has impacted all supply chains in some manner, irrespective of region and reach. This allows each industry an unprecedented opportunity to understand why some supply chains have performed better than others and how other companies are responding.

The following report uncovers valuable insights by looking at levels of pre-pandemic planning; the impact on supply versus demand; how sourcing and inventory management are changing; the growing use of digitization; and how logistics outsourcing is changing.

The report also underlines the growing importance of accurate and timely data. Companies with better and more dynamic visibility to their supply chains have had a significant advantage. The research highlights the acceleration of the adoption of solutions specifically designed to provide companies with visibility to their extended supply chains and the risks that may impact or are impacting these assets. COVID-19 has also demonstrated that logistics risk is equally as important as supplier risk and that the two must be assessed and monitored in an integrated manner.

The information we've collected provides valuable insights and benchmarks to support the necessary tactical and strategic changes that you are making or planning in your supply chain operations. We here at Resilience360 also acknowledge the terrible human toll that COVID-19 has taken, which cannot be wholly represented in a report such as this nor can our data reflect the courage of the many millions of front-line workers whose bravery has significantly reduced the human and economic toll of COVID-19, for which we will be ever thankful.



David Shillingford
Chairman, Resilience360

Covid-19: The Future of Supply Chain Executive Summary



Executive Summary

Most organizations were unprepared for the pandemic from a planning perspective:

Less than half of organizations (49.5%) reported having a plan in place that sufficiently covered them for the supply chain issues encountered during the pandemic. However, the difficulties that arose as a result of not having sufficient plans in place has prompted many organizations to change their documentation going forward: 53.2% plan to write a comprehensive pandemic plan, and a further 32.3% will adapt current plans to ensure they cover supply chain issues in enough depth.

Supply and demand were affected badly during the pandemic, but there were still some winners:

Nearly three quarters of organizations (73.0%) encountered some or significant detrimental effect on the supply side, with 64.8% reporting the same on the demand side. One in five organizations, however, reported an increased demand for their products and services. IT, telecommunications and pharmaceutical organizations, for example, noticed an increased demand, whereas other organizations launched new products and services geared to catering for differing customer needs during the pandemic.

The pandemic has caused many organizations to carry out due diligence deeper in their supply chains going forward:

Although organizations had largely carried out good levels of due diligence (such as determining suppliers' location and obtaining business continuity plans) amongst their tier 1 supplier base, such due diligence started to tail off beyond tier 2. The pandemic caused disruptions to many organizations' supply chains beyond tier 1: many European based manufacturers, for example, are heavily reliant on Asia for components which caused issues for many organizations' tier 1 suppliers. As a result, nearly two-thirds of organizations plan to perform deeper due diligence going forward. Good practice suggests that such due diligence should happen pre-contract phase so organizations can be aware of any potential issues (such as over-reliance on a particular geography) before engaging a supplier.

More organizations are using technology to help them perform the required due diligence:

There has been a discernible increase in the use of technology during the pandemic to help with supply chain planning and strategy: 57.1% of organizations are using their own internal systems and spreadsheets for supply chain mapping, whilst 13.5% are using specialist tools – a notable uptick on the 22.6% recorded in the BCI Supply Chain Resilience 2019 report. Furthermore, of those who are not currently using tools, a fifth are now considering purchasing a specialist tool.

More than half of organizations intend to diversify their supplier base post-pandemic, with the Far East set to become the biggest casualty:

57.2% of respondents are looking to diversify their supplier base post-COVID-19 and, for many organizations, this means reducing their reliance on the Far East. 29.9% will source less from the Far East, with a further 13.2% sourcing less from China.

Local sourcing will become more mainstream:

Two-thirds of organizations (66.2%) plan to source goods more locally post-pandemic, with a fifth (20.8%) reporting they will move a considerable number of suppliers more locally. Although a further fifth will be engaging in more stockpiling post-pandemic, many are using local sourcing as a more cost-effective way of ensuring goods can be acquired quickly and efficiently.

Third-party logistics is set to be a beneficiary of the COVID-19 crisis:

12.4% of organizations intend to increase their use of third-party logistics post-COVID-19. Third party logistics can help negate the need to employ large numbers of warehousing staff on payrolls which, during a pandemic, is more of a risk than an asset to many organizations. Using a third-party provider also helps to negate the need for an organization to build out its own supplier network at a significant cost.



Pandemic planning and COVID-19 readiness

COVID-19 caught some organizations by surprise and many found their plans were not sufficient to cover the supply chain issues that arose during COVID-19

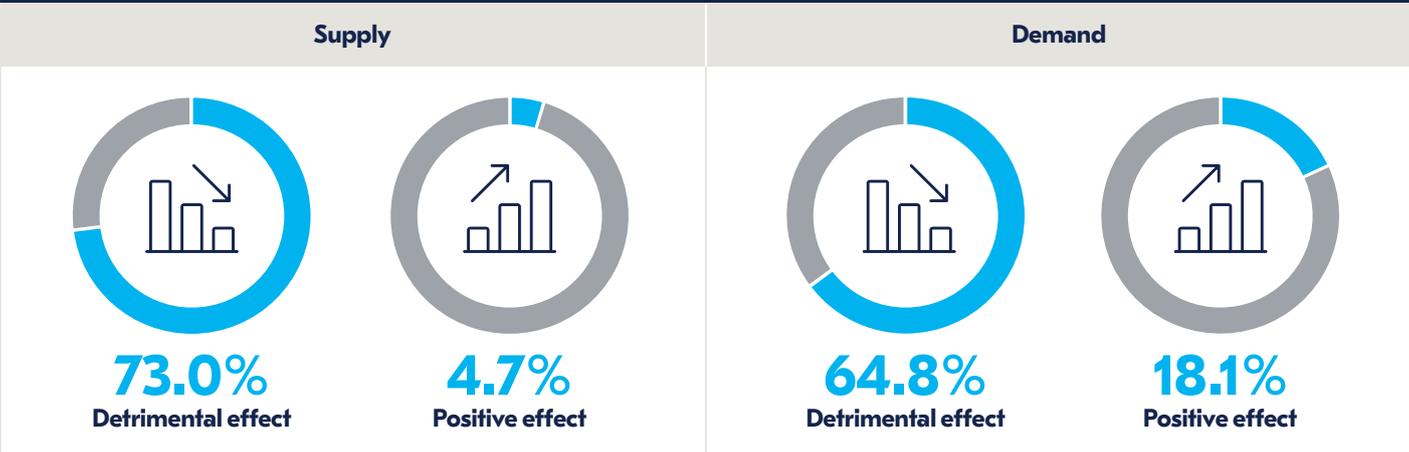
Was your plan sufficient to cover the supply chain issues that arose from COVID-19?



The issues encountered during COVID-19 has prompted most organizations to change the way their plans are constructed to be better prepared for future events



Organizations encountered more supply-side problems than demand-side during the pandemic, with one in five organizations seeing an increase in demand for their products and services.



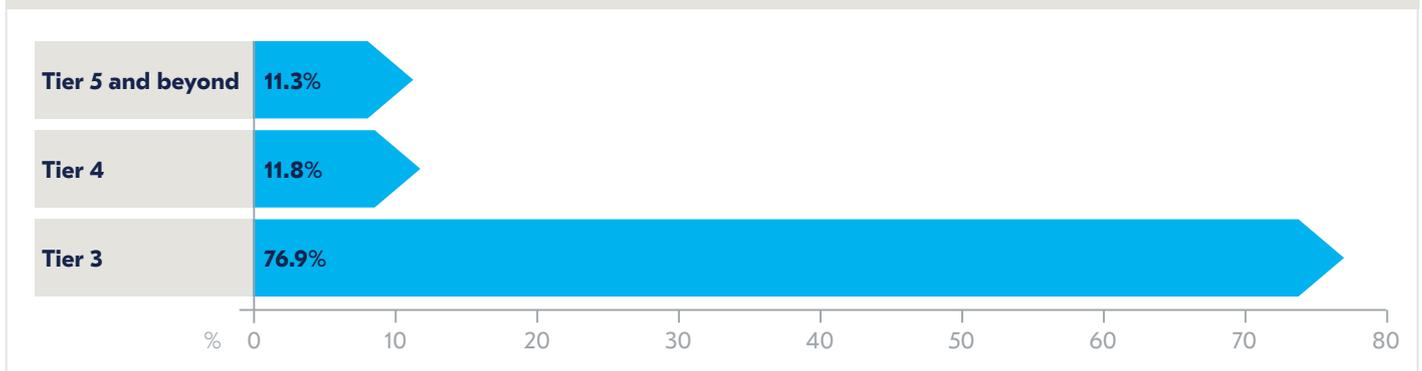
Supplier management and risk plans

Most organizations know the location of their tier 1 suppliers, although knowledge becomes less frequent beyond tier 2

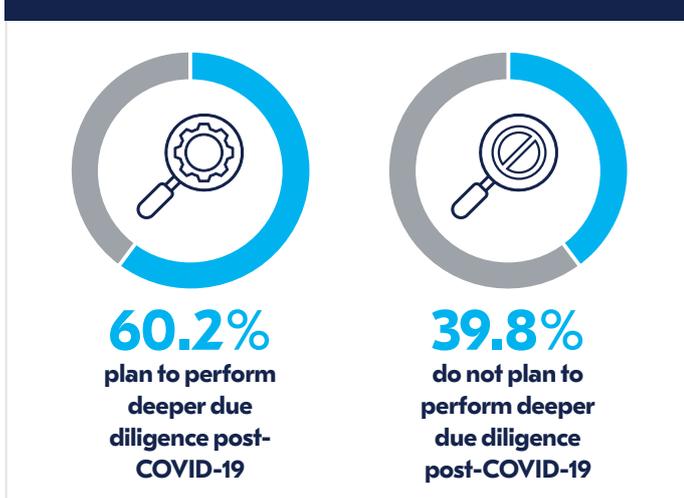


Most organizations do not have the time or resource to go beyond tier 3 in terms of supplier due diligence

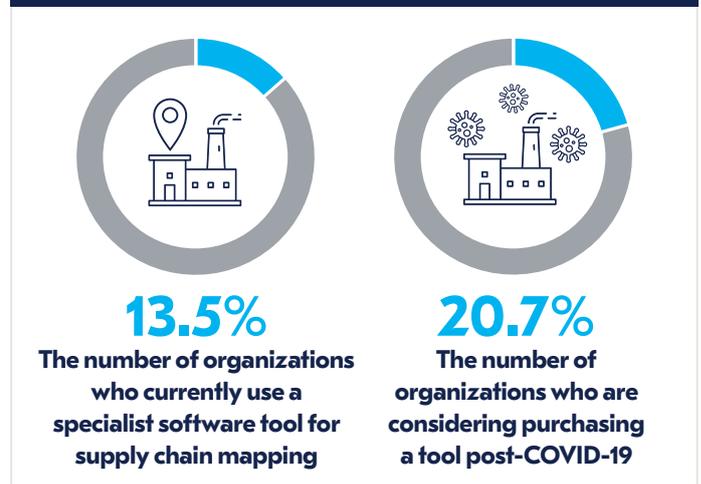
Percentage of respondents who go to tier 3, 4 and 5 and beyond with their due diligence



Two-thirds of organizations plan to perform deeper due diligence post-pandemic



The pandemic is causing a lot of organizations to consider purchasing a specific supply chain mapping tool

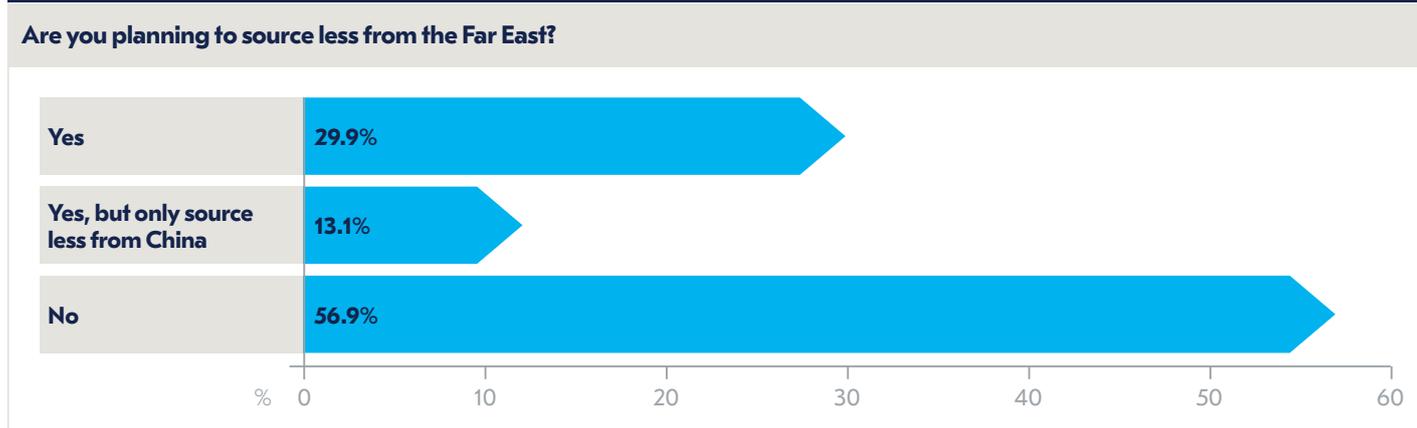


Operations management, logistics, and customer demand

Two-thirds of organizations will be looking to source more local suppliers post-pandemic



China and the Far East are set to become casualties of organizations' future supply chain strategies



One in five organizations plan to stockpile more post-pandemic

Methods taken to ensure continuity of goods



Preserving a healthy cash balance is a priority for many organizations during the pandemic, with two-thirds looking to defer capital expenditures

Methods taken to preserve cash



Third-party logistics is set to get a boost post-pandemic



Overview



Global supply chains have been tested more in the past six months than many will have experienced in a lifetime: just-in-time manufacturing models, popular since the 1960s, have failed due to sufficient stock cover for critical components, organizations have been unable to acquire stock from critical suppliers due to problems deep within their supply chains and the grounding of aircraft worldwide has seen organizations have to quickly — and radically — rethink how they can both acquire and ship stock.

The speed the pandemic has spread around the world coupled with the effect of universal global lockdowns meant many organizations without sound business continuity plans found themselves in a state of confusion. Indeed, the BCI Horizon Scan Report 2020 — the survey for which closed on 31 December 2019 — showed just how few organizations considered a pandemic as a risk in 2020: “communicable disease” was listed second from bottom in the list of practitioners’ concerns of different risks occurring in the following twelve months.

As many organizations were caught unaware by the virus, the first edition of the BCI’s Coronavirus — Organizational Preparedness report (published on 19 March at the start of country lockdowns for many geographies), showed just 16% of organizations had changed suppliers in order to ensure continuity of goods¹. Within eight weeks, the figure had more than doubled to 36%².

As most organizations are now shifting towards recovery, the ability to be agile and innovative with supply chain strategies has meant many have been able to continue to operate with little or no disruption to supply chains. Through our research, we have seen many examples of innovative strategies: a group of big pharma organizations who, despite being in competition with each other, joined forces to ensure they could continue to get the raw materials they needed. We have seen local Government swiftly move to centralize procurement processes so supplies can be purchased and distributed in the most effective manner, and we have seen transport and logistics companies exploit their charter networks in order to aid the transportation of goods at a time when global airlines have been grounded.

1. BCI, The (2020). Coronavirus Organizational Preparedness Report; First Edition. Available at: www.thebci.org/resource/bci-coronavirus-organizational-preparedness-survey.html (Accessed 3 July 2020).

2. BCI, The (2020). Coronavirus Organizational Preparedness Report; Fifth Edition. Available at: www.thebci.org/resource/bci-coronavirus-organizational-preparedness-report---5th-edition-.html (Accessed 3 July 2020).

Other organizations spoken to as part of this research said they have already used the lessons learned in the pandemic to modify their supply chain strategies: some have started to geographically diversify their suppliers to reduce dependency on a single area (such as China), others have made plans to carry out deeper due diligence on their critical suppliers whilst some are seeking to carry out more stockpiling – at least in the short- to medium-term. Organizations are also set to benefit from wider scale initiatives by some nations and consortiums: Japan, for example, has launched a ¥23.5 billion (US\$220m) programme to financially assist organizations to construct production facilities within Japan or establish production facilities in ASEAN member countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam) to reduce dependency on China³. There are signs that the United States may also be looking at offering a similar system⁴.

However, whilst some organizations can source suppliers in alternative geographies, others are encountering difficulties finding alternative suppliers due to a limited supplier base for niche products. Although some can counter this by rationalising product lines or developing new products, others are still trying to locate alternative suppliers. There are clearly still challenges which must be overcome by some organizations in order to return to some degree of normality.

Many organizations are considering adopting the changes they have made to their increased level of supply chain due diligence over the past six months into their longer-term planning. Some of these changes can only be positive: the BCI Supply Chain Resilience 2019 report⁵ showed that disruption-causing incidents occurring with tier 2 and tier 3 suppliers were increasing and general reporting and analysing of supply chain disruptions still needed considerable attention. The lessons learnt from COVID-19 disruption should help to rectify some of these issues going forward.

Indeed, COVID-19 has certainly helped to magnify supply chain issues which had, until now, gone unnoticed within some organizations. This has forced them to make drastic changes to their supply chains in the past six months which would have otherwise taken many years; something which should be regarded as a positive step for the industry. Many have embraced technology such as AI and supply chain mapping software, whilst others have been able to use better communication channels to break down information silos within their own organizations, with others creating industry groups to work together to alleviate industry-specific supply chain issues (such as the transportation of raw materials for pharmaceutical products from China). The new measures will take some time to be embedded but the supply chain professionals we spoke to as part of our research were looking forward to adopting many of the supply chain innovation strategies adopted during the COVID-19 pandemic into their long term planning.

“We will be looking at geographical supply. However, the problem with moving or splitting your supply chain is that there’s not that many people who actually make the things that we need to use for our network. Some of it’s quite specific and there just aren’t that many suppliers to choose from. It’s something we will look at, but whether or not we’ll be able to change it is a bit of an unknown at the moment.”

Business Continuity Manager, Telecommunications, United Kingdom

3. Nakamura, K (2020). 'Japan to help shift manufacturing to ASEAN from China after virus disrupts supply chains'. Japan Times (5 May 2020). Available at: www.japantimes.co.jp/news/2020/05/05/business/japan-manufacturing-asean-china-coronavirus-supply-chains/ (Accessed 3 July 2020).

4. Rapoza, K (2020). 'Kudlow: 'Pay The Moving Costs' Of American Companies Leaving China'. Forbes (10 April 2020). Available at: www.forbes.com/sites/kenrapoza/2020/04/10/kudlow-pay-the-moving-costs-of-american-organizations-leaving-china/#19486f7c13c6 (Accessed 3 July 2020).

5. BCI, The (2019). Supply Chain Resilience Report. Available at: www.thebci.org/resource/bci-supply-chain-resilience-report-2019.html (Accessed 3 July 2020).

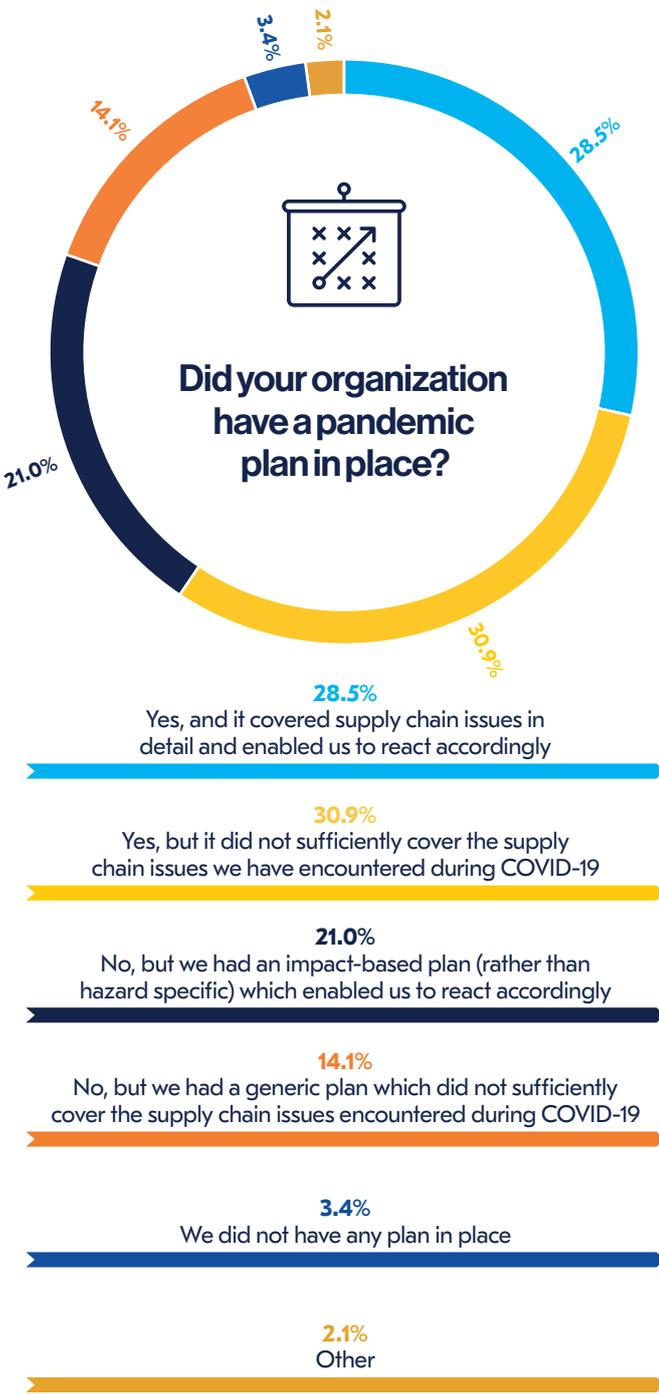
Pandemic Planning and COVID-19 Readiness





Pandemic Planning and COVID-19 Readiness

- The presence of a pandemic-specific plan did not guarantee organizations' supply chain plans were sturdy during the COVID-19 pandemic
- 85% of organizations who did not have a plan which covered the supply chain issues encountered in the survey plan to rewrite or restructure plans going forward
- Three-quarters of organizations reported supply side disruption, and two-thirds reported demand side disruption. There were, however, exceptions: some industries noticed an increase in customers during COVID, whilst others were able to offer new products and services which stimulated otherwise lacklustre demand.
- Increased communications with suppliers helped to alert organizations to potential issues during the early part of the response phase, although communications have lessened during recovery.



Question 1. Did your organization have a pandemic plan in place?

Less than half of organizations (49.5%) reported having a plan in place that sufficiently covered the supply chain issues encountered during the pandemic. For those that did have a plan, the presence of a pandemic-specific plan led to a more effective response than those who had plans which were purely impact-based (i.e. they only considered the issues such as all staff having to work remotely rather than having a plan written specifically for a pandemic): 48.0% of those who had a pandemic-specific plan reported it contained enough detail to cover the supply chain disruptions experienced during the COVID-19 pandemic compared to 40.1% who had an impact-based plan in place.

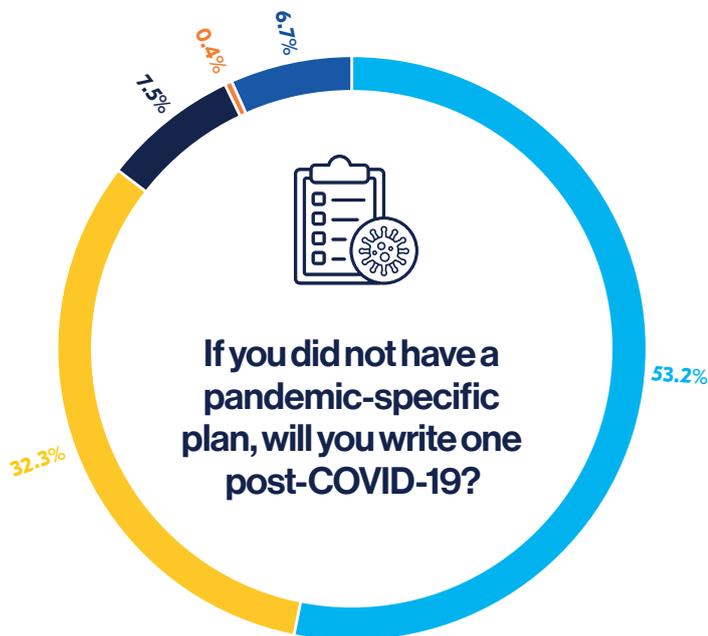
On top of this, given 3.4% organisations had no plan in place at all to deal with supply chain disruption, the research suggests most organizations were very unprepared from a planning perspective for supply chain disruptions.

One of the headline areas where organizations were least prepared was in the acquisition of PPE equipment. With some countries unable to acquire enough basic PPE equipment (such as facemasks), those organizations who had a pandemic plan which specifically considered a mask shortage, for example, found themselves ahead of their peers in terms of planning.

“We were not impacted by this sudden need to search for masks because as part of our pandemic plan we had a significant number of masks per employee available in every country. So when there were shortages on the mass distribution, we were on the safe side. We did donate some based on some specific requests but at the end of the day, we also had a duty of care to our associates.”

Global BCM Manager, Pharmaceuticals, Switzerland

Some of the organizations interviewed as part of this project reported building a “COVID-19 specific” plan in the early stages of the pandemic by monitoring how the virus was affecting different parts of the world or by using intelligence gained in other geographies of operation where the virus hit first (such as south-east Asia) as a blueprint for operations in the rest of the world.



53.2%
Yes, we will ensure we have a comprehensive pandemic plan going forward which includes substantive detail on supply chains

32.3%
No, we will keep our generic plan but will ensure it contains greater detail on supply chain aspects.

7.5%
No, we will keep our generic plan and will only make very limited changes

0.4%
No, we do not currently have any plans and we do not intend to make a plan post-COVID-19.

6.7%
Other

Question 2. If you did not have a pandemic-specific plan, will you write one post-COVID-19?

For those who did not have a pandemic-specific plan in place, COVID-19 has prompted many to change how they plan in future: over half of organizations (53.2%) who did not have a pandemic-specific plan in place intend to write one post-COVID-19, whilst a third (32.3%) will change their generic plans so they contain more supply chain specific aspects.

“Our plan was fairly generic but some elements were brought to the surface because of the pandemic. On some areas, we had to somehow decide and make recommendations almost on a day-by-day basis when this whole situation started. This is now something that our stakeholders want to include on a generic pandemic plan. Therefore we are looking at areas like traveling, how meetings and gatherings should take place and how meeting rooms and services can and should be used during a pandemic. We are making it a lot more detailed; it’s a work in progress.”

Global BCM Manager, Pharmaceuticals, Switzerland

“Yes, we could look specifically at a pandemic plan, but what you’re talking about is a reduction in people. What this pandemic showed, and this is because of the actions of governments globally, is there wasn’t very much in the way of reduction in people. In reality, what everyone does is they look around and see who’s turned up for work on any given day, and then allocate responsibilities accordingly. The key thing is to know what your higher priority activities are as that’s useful for planning to make sure you’ve got enough local systems and people trained to do those processes.”

Business Continuity Manager, Telecommunications, United Kingdom

Some organizations found that making plans for different parts of the business was the most effective way of ensuring plans were read, absorbed and acted upon. There were elements of each department's plan which could not be replicated across all business units and therefore would make elements of the plan obsolete. For others, using simplified plans meant they resonated more effectively with senior people within the organization and were therefore more readily consumed and applied.

"Because of the nature of what we do, the people in our organization are intelligent people, but people who do not like a lot of paperwork. Therefore, by reducing the volume of documentation and number of acronyms, we can get the whole organization – right the way up to top management level – bought into our planning."

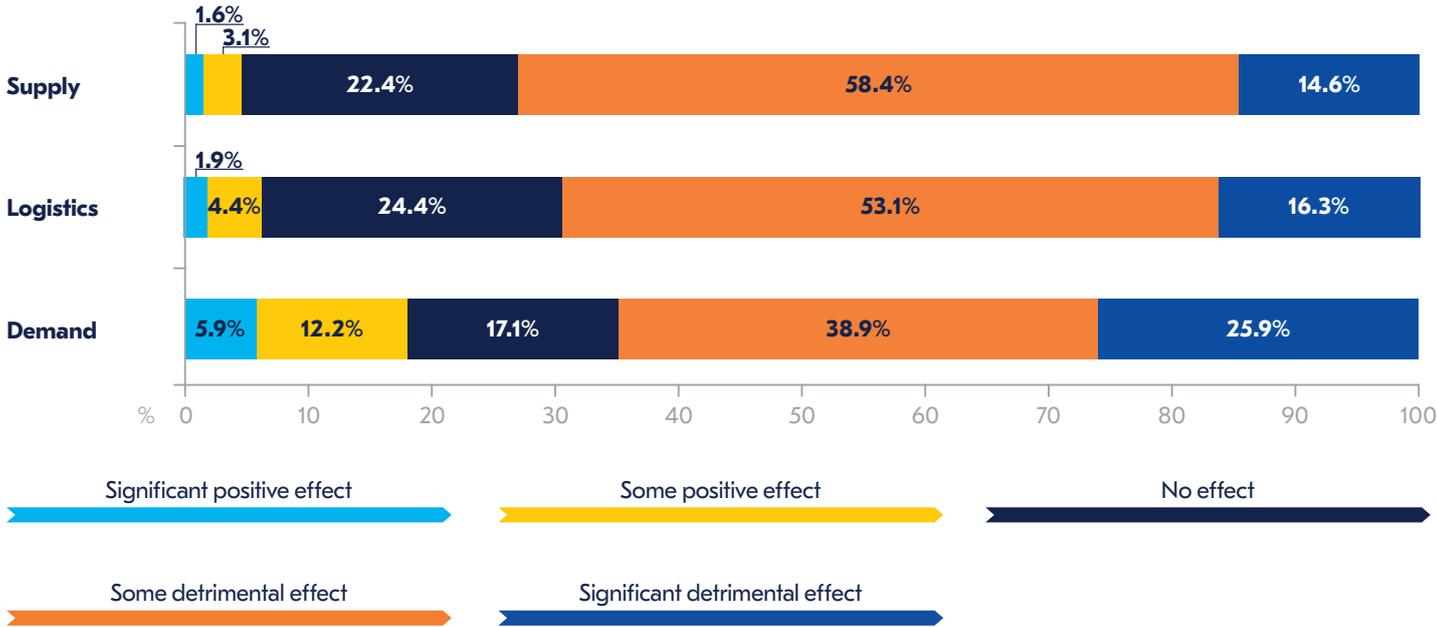
Business Continuity Manager,
Science & Technology,
United Kingdom

"We use incident action plans during operations. We have a detailed version that's about eight pages and then a 'Life', shorter version. We adopted a similar process to manage a disruption from COVID so each business area ended up with a business continuity plan "Life". We focused heavily on operations and managing single points of failure for people like scientific officers, whose roles are not easily replicated across the organisation, and developing specific response plans in addition to the pandemic plan. We realized when planning for COVID, that a lot of our continuity plans were written to manage sudden disruptive events and were not as suitable for a disruption over a long period. We are in the process of implementing a wider business resilience strategy which will build on these easier to use 'Life' plans. This will be our approach going forward."

Risk Manager, Fire and Emergency Services, Australia

Only 7.5% of organizations with a generic plan intend to make no or very limited changes. Over three-quarters of these responses (77.8%) were from respondents from smaller professional services, IT, financial services or educational organizations who, by the nature of their operations, were less affected by supply chain disruption than others.

How have the following aspects of your supply chain affected during the COVID-19 pandemic?



Question 3. How have the following aspects of your supply chain affected during the COVID-19 pandemic?

Supply and Demand

Respondents reported that supply chains have been affected at different levels in most organizations. Nearly three quarters of organizations (73.0%) have encountered some or significant detrimental effect on the supply side, whilst nearly two-thirds (64.8%) reported the same for the demand side. Such supply side disruptions were well documented by the media and affected some major corporations: even Apple, which is widely regarded as having the top ranked supply chain in the world, still struggled to source parts manufactured in Malaysia, Italy, Germany and the UK⁶.

The high number of organizations that have been affected on the demand side is also to be expected, although it should be highlighted that nearly one in five organizations (18.1%) reported demand was impacted positively during COVID-19. A third of IT and telecommunications organizations reported seeing increased demand and, interestingly, a quarter of manufacturing organizations reported the same. Transport and logistics organizations have also seen increased demand, particularly due to increased demand to transport medical supplies around the globe. This suggests that whilst some manufacturers had been impacted negatively on the supply side, some were able to continue to produce products or repurpose their facilities in order to produce products for where demand had been elevated during the pandemic (e.g. PPE equipment or hand sanitizer).

"We had one supplier who work in the sugarcane/ ethanol space. They were really quick to come up with some solutions to help us out. They turned what you would use for a gas bottle for barbecue, into a bottle of sanitizer with spray gun on the end. They then came up with sanitizer stations within weeks which could be put on public transport areas such as stations or busy bus stops. It was branded in the livery or the logos of the government and these big, refillable cartridges of sanitizer would last for a whole day."

Business Continuity Manager, Public Sector, Australia

"In terms of demand, of course, we have had increased demand from people asking for solutions to get protective gear from one country to another. This has not only been from existing customers, but also customers who we have targeted over the years are now finally coming to us for solutions to move their cargo. That's on the demand side. For us, there was no negative; normally we would have to hunt."

Security Manager, Transport and Logistics, Hong Kong



6. Gurman, A. & Wu, D (2020). 'Apple's Supply Chain Woes Linger Even as China Recovers'. Bloomberg (19 March 2020). Available at: www.bloomberg.com/news/articles/2020-03-19/apple-s-supply-chain-woes-linger-even-as-china-recovers (Accessed 3 July 2020).



Logistics: a problem or an opportunity?

Most organizations (69.4%) reported either significant detrimental effect or some detrimental effect to the logistics side of their supply chain activities. Interestingly, some 10.3% of transport and logistics companies reported a positive impact on logistics during the pandemic: transportation companies with their own charter network, for example, were able to provide services to customers who had been affected by the global reduction in flights. Given around 40% of freight is transported by passenger aircraft⁷, much of which had been grounded by the COVID-19 outbreak, charter freight transport became the only viable option for many organizations who required rapid transportation of goods. Other organizations readily resorted to stockpiling to overcome logistics issues.

The widespread disruption has led to some organizations becoming innovative in the way they deal with supply-side and logistics-based disruption. One example was in the pharmaceutical sector: a group of pharmaceutical organizations, who are typically in huge competition with each other due to the amount of resource required to create blockbuster drugs, joined together during the pandemic to ensure continuous supply of raw ingredients from China when air routes became disrupted.

“We have our own charter network, so COVID-19 has really helped to bring in money for that side of the business. We have five planes dedicated to us flying in the world. Normally you get peak times when charter flights are used such as Christmas or Black Friday or when a new product is launched for the mass market; this time of year is normally pretty quiet. Therefore when the pandemic hit, we were one of the first companies to make a move and immediately secured capacity between the US and China.”

Security Manager, Transport and Logistics,
Hong Kong

“We identified early on which of our critical products were likely to be impacted. The majority of them were actually from the Eastern States [of Australia]. Western Australia is quite isolated so, for us, it really was the logistics part. We organized early on to get shipments of our critical PPE sent to Western Australia and stockpiled it locally, but our demand didn’t actually change too much. We modified our internal ordering process for personnel so they could request the resources if they needed them. As we weren’t so impacted by COVID itself however, our demand didn’t actually change too much.”

Risk Manager, Fire and Emergency Services,
Australia

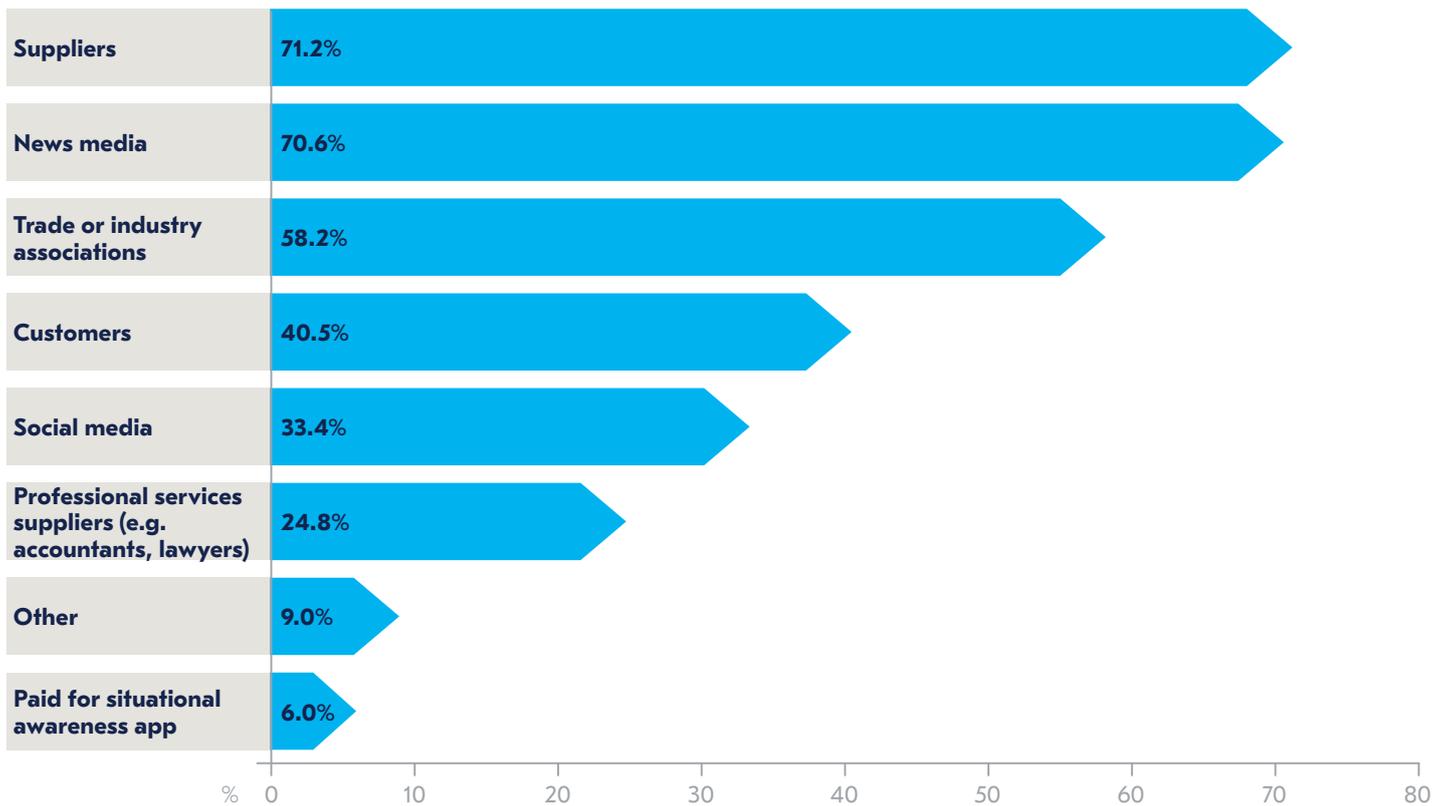
“One of the positive aspects of this crisis was the collaboration between different pharmaceutical companies. Apart from working together to find a COVID-19 cure, the other aspect was ensuring we have a continuous supply of drugs. This was actually the highest priority because from an ethical standpoint, we have a duty of care towards society.”

Global BCM Manager, Pharmaceuticals, Switzerland

7. Fenton, I (2020). ‘Coronavirus and aviation: Why is air cargo grounded when the world needs it most?’. World Economic Forum (30 April 2020). Available at: www.weforum.org/agenda/2020/04/coronavirus-aviation-why-is-air-cargo-grounded-when-the-world-needs-it-most/ (Accessed 3 July 2020).

Acquiring accurate information and keeping regular communications are vital

Where have you been getting news and intelligence relating to supply chain issues?

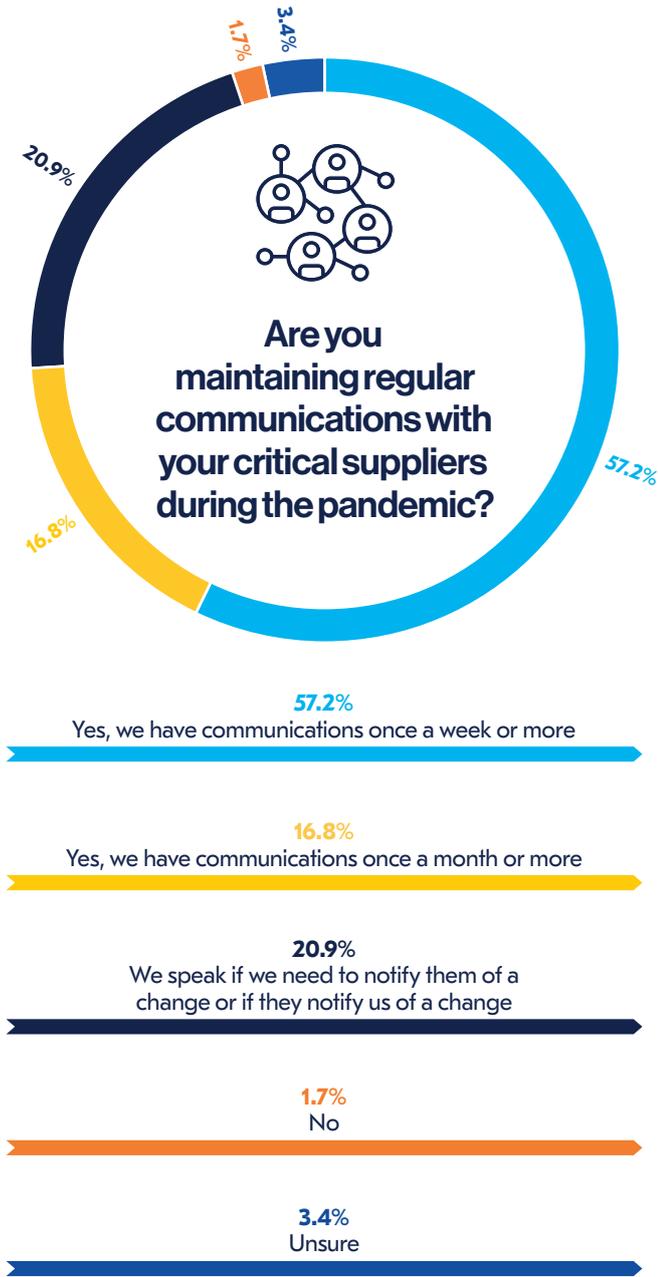


Question 4. Where have you been getting news and intelligence relating to supply chain issues? Tick all that apply.

When it comes to accessing news and intelligence relating to supply chain issues, the most popular source of information is from suppliers themselves, with nearly three-quarters (71.2%) citing suppliers as one of their primary information sources. A lesser number use the demand side for information, with 40.5% using customers as an information source. 70.6% use news media, with 58.2% using trade or industry associations for information demonstrating the desire for an authoritative information source. A third of organizations (33.4%) admit to using social media for news and intelligence: whilst social media has earned itself a reputation as a source of fake news, its use to uncover intelligence on an unfolding situation can be very useful to organizations. Any intelligence gained in this way should be correctly corroborated, of course.

For the upstream supply chain, the importance of keeping regular communications with suppliers is highlighted by the fact that 57.2% organizations have been in touch with their suppliers once a week or more. Given nearly three-quarters of organizations use their suppliers as a primary information source for supply chain issues, the high frequency of contact is something which many organizations have relied upon for early insight of potential supply chain issues. Of some concern is the one in five organizations (20.9%) who have passive communications with their suppliers with contact only being made if one or both parties needs to notify the other of a change. This relies on a degree of trust on both sides: some suppliers may be unwilling to alert a customer about potential difficulties in supply until it is too late to rectify.

The frequency of communications was, for most organizations, a temporary step during the initial response phase of the COVID-19 pandemic. Some organizations devoted even more time to go beyond just their critical suppliers and diligently contacted their entire supplier base to minimise disruption. However, as most organizations are now looking towards recovery, contact with suppliers has reduced with many interviewees admitting reducing communications to bi-monthly or even monthly.



Question 5. Are you maintaining regular communications with your critical suppliers during the pandemic?



Question 6. Have you contacted suppliers who are no longer required?

“Our level of communications with suppliers was definitely an increase in what we would have done normally. The strategic procurement team spent a solid week going through each contract looking at every item of equipment, product or service provided and made contact with them. We set up a designated email address for both internal and external communications for COVID related enquiries so they could contact us and we could contact them. Initially, for priority suppliers, we were making communications around once a week, but now we are only making contact once a month or so.”

Risk Manager, Fire and Emergency Services,
Australia

For some organizations, regular contact was considered business as usual with COVID-19 having little or no effect on the level of communications made with suppliers. Although most organizations will not have the resource – or even the need – to keep up such diligent levels of communication, the pandemic has demonstrated that frequent communications can alleviate supply chain problems and many survey respondents report that they plan to elevate the frequency of supplier communication going forward.

“[Once a week or more] is absolutely normal. COVID-19 is just BAU to us. We can’t rely on anyone in our industry as we are the last port of call; we’ve got to be completely self-sufficient and the same with all the other providers are doing that in the same position as us. We constantly have these commercial escalation pathways and technical escalation pathways and it just becomes business as usual. It’s BAU and people are doing that a couple of times a week anyway.”

Business Continuity Manager,
Technology, United Kingdom



Supplier management and risk plans





Supplier management and risk plans

- Most organizations perform high levels of due diligence on their tier 1 and tier 2 suppliers, although only a third knew the location of their critical tier 3 suppliers.
- Nearly two-thirds of organizations plan to perform deeper analysis of their supply chains post-pandemic.
- Nearly two-thirds of organizations are using technology to help map their supply chains and, of those who currently do not, one in five organizations plan to post-pandemic.
- Cross-functional risk teams have helped different departments to communicate more effectively throughout the pandemic.
- 16% of organizations created a cross functional team specifically for the pandemic, and many plan to continue it post-pandemic.

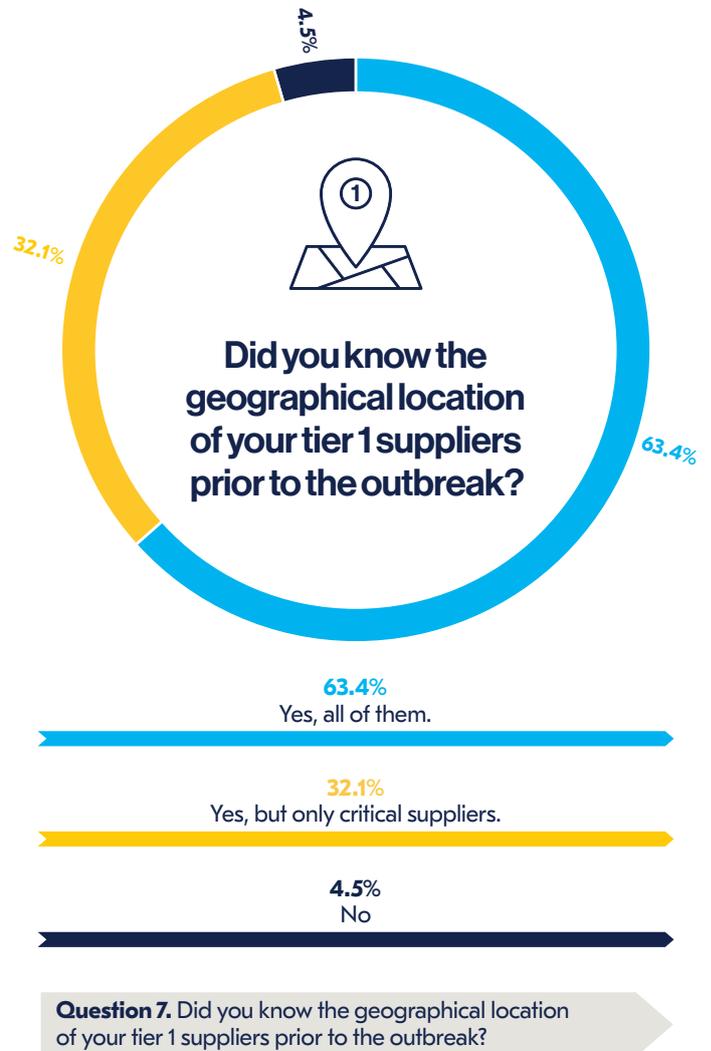


The BCI Supply Chain Resilience Report 2019 showed that most supply chain incidents are caused by disruptions in organizations' tier 2 and tier 3 supplier base. BCI research has shown that the levels of due diligence organizations have been performing on tier 1 suppliers has increased year-on-year: in 2012, some 70.1% of disruptions occurred amongst tier 1 suppliers. By 2019, this figure had reduced to under half (48.9%).

The importance of performing supplier due diligence has come to the surface during the COVID-19 pandemic. With widespread global shutdowns, knowing the geographical location of suppliers is crucial: over half the Fortune 500 have manufacturing facilities located in Wuhan, for example⁸, whilst other organizations are encountering difficulties in the more contemporary stages of the pandemic as the epicentre of the virus moves to areas such as South America: Samsung shut down its Brazilian manufacturing facility⁹ whilst many manufacturing facilities in Brazil remain closed until further notice¹⁰.

Encouragingly, those responding to the survey appeared to have done the necessary research to ensure they knew the location of their tier 1 suppliers: 95.5% knew the location of either their critical or non-critical tier 1 suppliers, with two-thirds (63.4%) knowing the location of all of them.

Lower levels of due diligence were also evident beyond tier 1, with 36.0% knowing the location of all their tier 2 suppliers, and 47.4% knowing the location of critical tier 2 suppliers.



8. Savills (2018). 'City lowdown: Wuhan'. Savills (7 December 2018). Available at: www.savills.com/prospects/cities-lowdown-wuhan.html (Last accessed: 3 July 2020).

9. Yoo-chul, K (2020). 'Samsung, LG shut down plants in Brazil, US'. The Korea Times (27 March 2020). Available at: www.koreatimes.co.kr/www/tech/2020/04/133_286931.html (Last accessed: 3 July 2020).

10. Saad Filho, A (2020). 'Coronavirus: how Brazil became the second worst affected country in the world'. The Conversation (29 June 2020). Available at: theconversation.com/coronavirus-how-brazil-became-the-second-worst-affected-country-in-the-world-141102 (Last accessed: 3 July 2020).



36.0%
Yes, all of them.

47.4%
Yes, but only critical suppliers.

16.6%
No

Question 8. Do you know the geographical location of your tier 2 suppliers?

Tier 3 is, however, as far as most organizations are prepared to go in terms of due diligence: the BCI Supply Chain Resilience report¹¹ revealed that lack of people and lack of financial resource is the primary reason for this. However, the report did reveal that 11.8% of organizations perform due diligence as deep as tier 4, and a further 11.3% go to tier 5 and beyond.

**Do you do due diligence of your critical suppliers beyond tier 2?
Please indicate how deep in your supply chain you do this due diligence:**

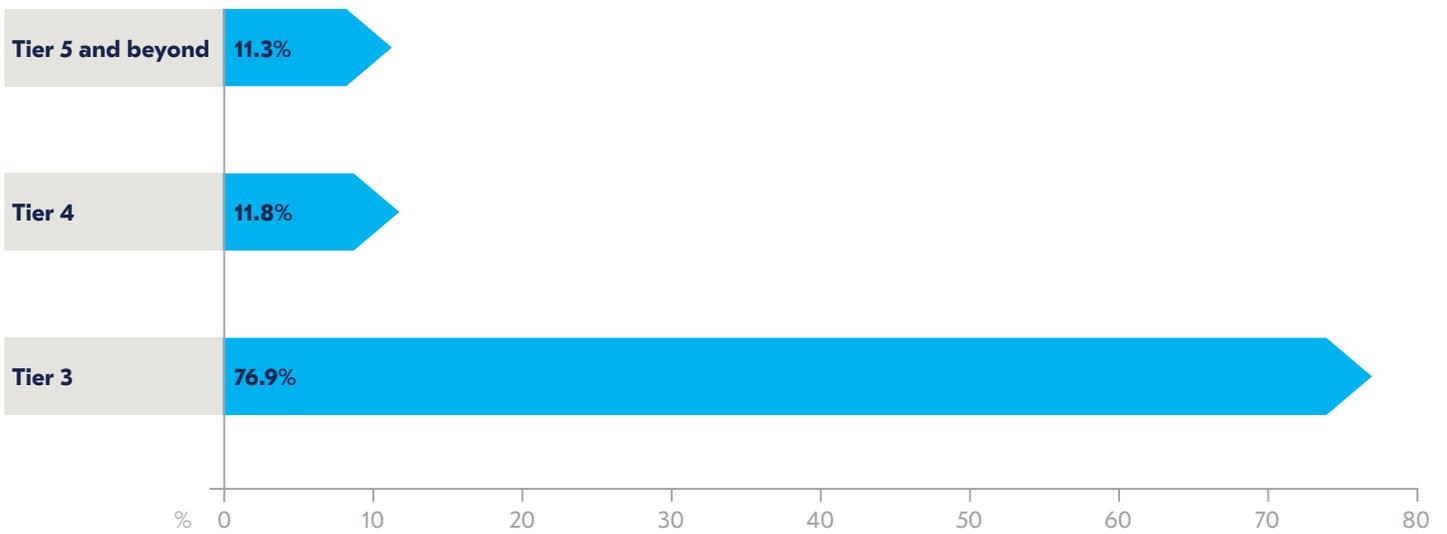


Figure 9. Do you do due diligence of your critical suppliers beyond tier 2?
Please indicate how deep in your supply chain you do this due diligence:

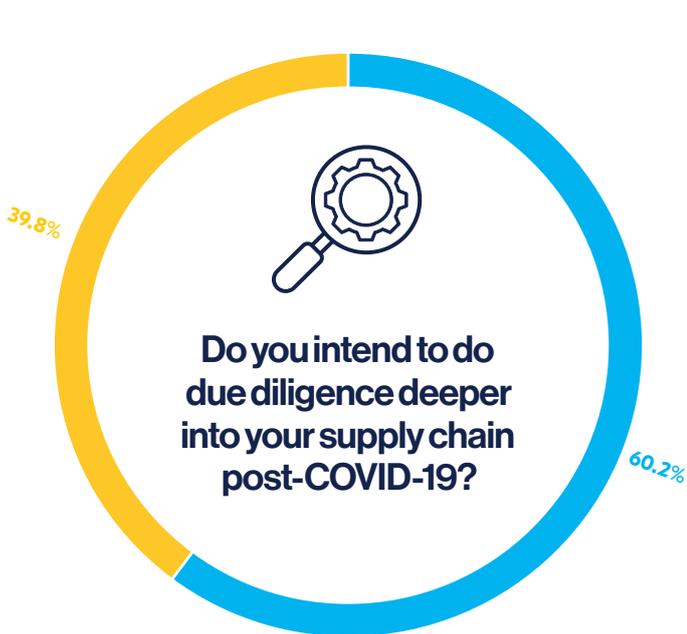
It appears that COVID-19 has caused organizations to become more aware of the problems that can arise from failing to know the location of suppliers, with nearly two-thirds of organizations (60.0%) intending to do deeper analysis of their supply chains as a business-as-usual practice post-pandemic. Furthermore, nearly half (45.3%) of organizations intend to determine the location of all their tier 2 suppliers compared to the 36.0% who do so currently.

It is not just about determining the visibility of suppliers for some organizations, however. Knowing if a supplier has a business continuity plan in place is not enough to ensure that supplier will be able to deliver through a disruption such as a major pandemic and many organizations now actively seek to determine how effective plans are by scrutinising documents and rehearsing plans.

“We were already planning to carry out further due diligence of our supply chain before COVID-19 in the year plan. However, although we have not been directly impacted by a supply chain issue during the crisis it is felt that we need to strengthen what we do so we are better prepared for many eventualities including supplier resilience.”

Business Continuity Manager, Science & Technology, United Kingdom

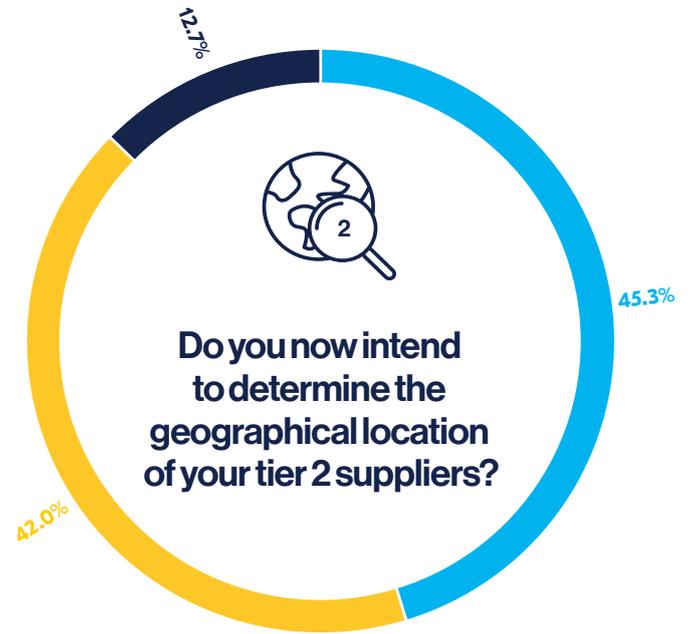
11. Supply Chain Resilience Report



60.2%
Yes

39.8%
No

Question 10. Do you intend to do due diligence deeper into your supply chain post-COVID-19?



45.3%
Yes, all of them.

42.0%
Yes, but only critical suppliers.

12.7%
No

Question 11. Do you now intend to determine the geographical location of your tier 2 suppliers?

“We will be introducing elements for examining the BIA [of a supplier] in more depth. If a supplier says they are going to deliver us a service and then tell us they are going to do all these rehearsals and have these strategies and policies in place, we will go and audit them; we’ll check them and make sure they are doing what they say. We also check their traders and their suppliers that are supplying them will do the same for them. We will get full end-to-end analysis through the chain.”

Business Continuity Manager, Technology, United Kingdom



13.5%
Yes, we use a software tool

47.1%
Yes, we use our internal systems and/or spreadsheets

39.3%
No

Question 12. Do you undertake supply chain mapping to help understand the location of your suppliers?



20.7%
Yes, we will consider using a specialist software tool

49.8%
Yes, we use our internal systems and/or spreadsheets

29.5%
No, we have no plans to do this

Question 13. If you do not use supply chain mapping, do you intend to post COVID-19?

Other respondents have found that it is sometimes assumed that a supply chain is sound from a geographical perspective just because a tier 1 supplier was known to be located in a “safe” region. An interviewee noted that a supplier only realised their supplier’s supplier sourced parts from China after detailed interrogation:

“We have a reliance on some Chinese manufacturers. Very early on in the process, I spoke to the guy who looks after supply chain for our network, and he reported that we were fine. He said that we used a lot of European manufactured products in our network, and always had done. Because of this, he thought their products were manufactured in Europe so there was no issue. It was only when I questioned where the components which made up those products came from that we looked into it further. It turned out they were sourced from China. We did have backup as we had a number of months of supply, but it did help to highlight the importance of knowing where your suppliers’ suppliers are located.”

Business Continuity Manager, Telecommunications, United Kingdom



Technology is helping organizations to make vital supply chain decisions

Good visibility and depth of the supply chain is pivotal to developing a resilient supply chain, although determining information concerning suppliers deep within the supply chain is difficult. Many organizations are turning to technology to help them with tasks such as visibility of supply chain: supply chain mapping is a popular method organizations use to establish the location of their supplier base. The BCI Supply Chain Resilience 2019 report showed that 22.6% of organizations were using technology to map their supply chains, with several organizations saying they intended to do so in follow-up interviews. The survey for this report reveals that nearly two-thirds of organizations are now using technology to some degree to determine the physical location of their suppliers: 47.1% are using their own internal systems and/or spreadsheets, whilst 13.5% are using specialist tools. Furthermore, of the 39.3% who are currently not using tools, a fifth (20.7%) are considering using a specialist software tool post-COVID-19, with nearly half (49.8%) reporting they will use their own internal systems and/or spreadsheets.

In addition to supply chain mapping, technology has aided supply chain issues in innovative ways during the pandemic. 3D printing, for example, has helped provide medical products quickly to intensive care units where parts would otherwise have been difficult to source in the current environment. Engineers at the University of Manchester, for example, developed, validated and delivered a brand-new component for non-invasive ventilator machines in just two weeks after a call from NHS medics at the Wythenshawe Hospital¹². Elsewhere, artificial intelligence (AI) is being used to help process supply chain information and allow people to focus more on decision making¹³ whilst DHL Supply Chain is using artificial intelligence software to assign robots to carry out specific tasks at its depot in Wisconsin, helping to alleviate the problem of social distancing within warehouses¹⁴.

12. University of Manchester (2020). 'Manchester taskforce answered NHS call for 3D printed parts for COVID-19 ventilators'. University of Manchester (17 June 2020). Available at: www.manchester.ac.uk/discover/news/manchester-taskforce-answered-nhs-call-for-3d-printed-parts-for-covid-19-ventilators/ (Last accessed: 3 July 2020).

13. Rudolph, N (2020). 'The importance of the supply chain during the COVID-19 crisis'. SAS Blogs (29 April 2020). Available at: blogs.sas.com/content/sascom/2020/04/29/the-importance-of-the-supply-chain-during-the-covid-19-crisis/ (Last accessed: 3 July 2020).

14. McSweeney, E (2020). 'Anti-social robots help to increase coronavirus social distancing'. Financial Times (1 July 2020). Available at: www.ft.com/content/f7b16d2e-907a-11ea-bc44-dbf6756c871a (Last accessed: 3 July 2020).

Cross-functional risk teams have helped to create cross-departmental resilience



61.9%
Yes, we had one before the COVID-19 outbreak

16.0%
Yes, we established it during the COVID-19 outbreak

10.7%
No, but we are planning to have one

10.3%
No, we do not have one and are not planning to have one

1.2%
Unsure

Question 14. Do you have a cross-functional risk team or Emergency Management Center?

Whilst the COVID-19 pandemic may have resulted in organizations forging closer relationships with their suppliers, it has also seen organizations taking steps to centralize their resources and enhance their own organizational resilience. Whilst 61.9% of organizations had a cross-functional risk team or Emergency Management Center pre-pandemic, a further 16.0% created such a function during the outbreak with a further 10.7% intending to do so. Just 10.2% of organizations do not have one and have no plans too, but these are primarily smaller organizations who have no need to create one.

“The COVID-19 outbreak spreading outside of China showed an evident need to have a regional and global control and oversight framework. The nature of the crisis demanded for an interdisciplinary approach including BCM, Technology, Supply Chain Management, Health & Safety, Human Resources and more, including, obviously, business lines. This was something we had not done before within our organization... Specific to the supply chain, demand planning worked in line with our Procurement teams and where needed regional or global relationships with critical suppliers were used when operational disruption required escalation. We worked together with our critical suppliers to overcome the disrupted manufacturing and logistics processes in China as well as to find creative ways on local markets, to ensure products and services we needed were procured.

We intend to keep this going forward: one of the lessons learnt is to maintain regional and global crisis/incident management structures and to maintain its operational capability (e.g. through trainings and exercising). Embedding this into organizational culture and being interdisciplinary in their structure, they can be effective to deal with not only major, global events, but also day-to-day operational disruptions we encounter outside of COVID.”

Global BCM Lead, Real Estate Industry, Poland

For some organizations, the development of cross functional teams also includes board or executive team level members which helps to ensure plans, processes and procedures are heard by an organization's senior leaders and get the support required to quickly take decisions on supply chain related issues. For others, the creation of a centralized team helps to bring spending into a centralized category and effectively stop different departments competing against each other to access supplies.

"We're represented in every internal forum and are obviously very, very closely aligned with the executive committees of the company. We therefore have our main framework which contains the operational part and the command part. The command side contains a number of executive committee members, so we have a lot of input on the strategic side as well as the operational."

Global BCM Manager, Pharmaceuticals, Switzerland



"Part of what I've been working on since the COVID pandemic really hit off in Australia towards the end of March is within our State's Emergency Operations Centre. A part of the role of the team is coordinating the centralized procurement and dispatch of PPE equipment. Therefore, instead of having all the government agencies go out and source PPE and essentially compete against one another, we decided to bring that into one centralized category of spend and then have one agency, to manage the procurement of all that PPE under a special budget appropriation and we would then farm that out to the agencies as we got it."

Business Continuity Manager, Public Sector, Australia

Operations management, logistics, and customer demand



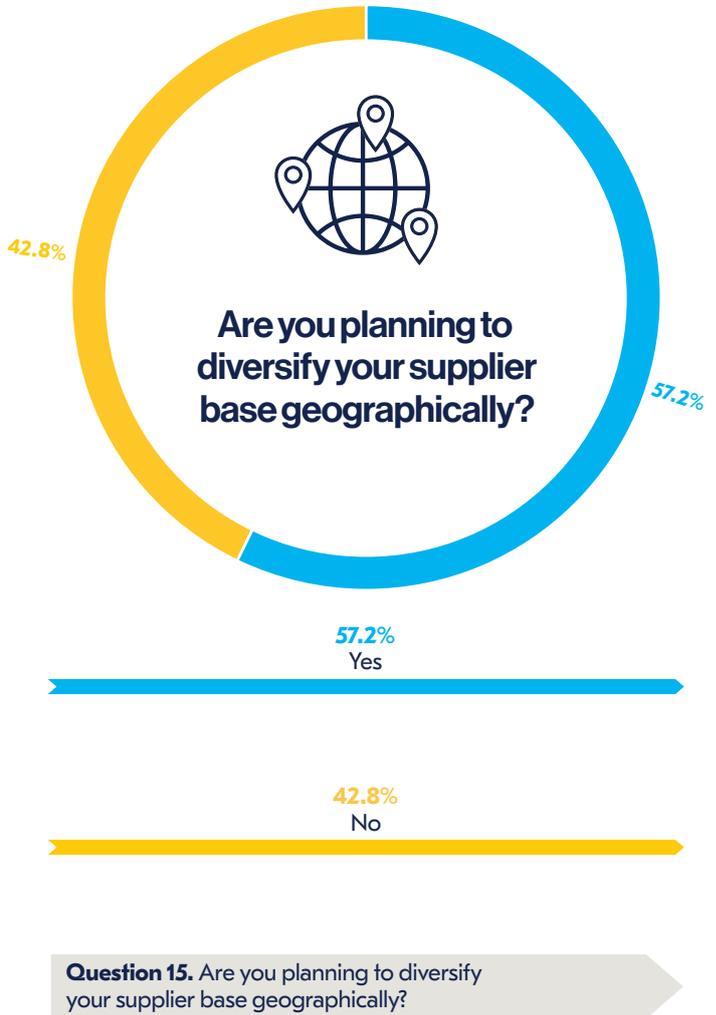


Operations management, logistics, and customer demand

- More than half of organizations intend to diversify their supplier base post-pandemic, with the Far East set to become the biggest casualty.
- Many organizations are looking to reshore manufacturing facilities to mitigate against global supply chain disruption, with some countries offering incentives for domestic organizations to do this.
- Just one in five organizations plan to stockpile more post-pandemic, although many will be reviewing their supplier base to allow them to acquire goods more efficiently.
- Two-thirds of organizations are looking at deferring capital expenditure during the pandemic, whilst nearly half report suppliers are giving extended trade credit agreements.
- Third-party logistics is set to see a rise in popularity post-pandemic as organizations seek to revolutionise warehousing processes and negate the need to build out their own transport networks.

Globalisation brings both opportunities and challenges to supply chains. Although there were already signs that organizations were looking to shorten their supply chains pre-COVID-19¹⁵, organizations were still using favouring just-in-time (JiT) manufacturing techniques and many remained heavily reliant on the Far East for sourcing whilst others were looking towards on-demand fulfilment¹⁶ - both of which require smooth functioning of supply chains. However, COVID-19 has forced many organizations to rethink how their supply chain works: some are looking to rewrite their fulfilment strategies, others are considering augmenting their supplier base and reducing reliance on China whereas others are contemplating more stockpiling of goods.

Many supply chain decisions have been made during COVID-19 due to the requirement for shipment timeliness: many organizations faced delayed arrival times due to the location of suppliers, firstly in the Far East, then in Europe and now in regions of South America. As a result, more than half of respondents (57.2%) reported that their organization will seek to diversify its supplier base post-COVID-19. The Far East looks set to become the biggest casualty of this diversification: of those who already source goods from the Far East, nearly a third (29.9%) intend to source less from the Far East, whilst a further 13.2% expect to source less from China. With other countries already launching initiatives to encourage organizations to reshore manufacturing facilities, the future for China is uncertain: although domestic demand helped to provide a positive picture for manufacturing in June, weak international demand is weighing on the country's manufacturers.¹⁷



“From a geographical standpoint, what has come out from this pandemic is that [we] had too much dependency not only from China, but also from a few other countries. I would therefore expect to see a trend of often for having key providers from different areas of the globe such as North America, South America, and even within Europe.”

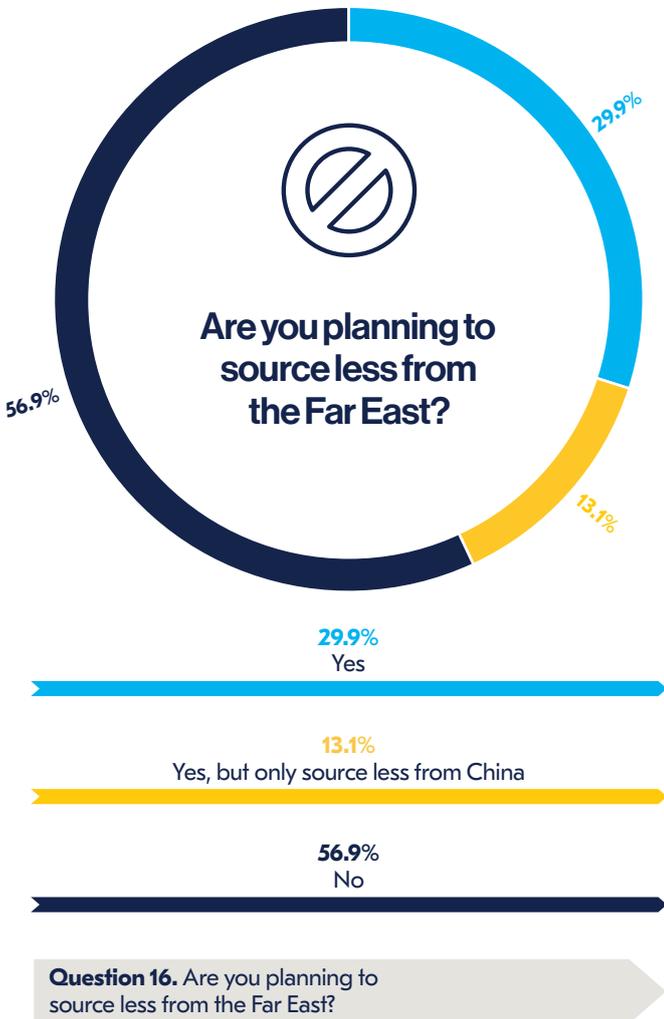
Global BCM Manager, Pharmaceuticals, Switzerland



15. Ryan, P (2019). 'Multinational companies are adjusting to shorter supply chains'. The Economist (11 July 2019). Available at: www.economist.com/special-report/2019/07/11/multinational-companies-are-adjusting-to-shorter-supply-chains (Last accessed: 3 July 2020).

16. Vekich Waldron, P (2019). 'Will 2020 be the year retailers digitally transform their supply chain ops?'. RetailWire (27 November 2019). Available at: retailwire.com/discussion/will-2020-be-the-year-retailers-digitally-transform-their-supply-chain-ops/ (Last accessed: 3 July 2020).

17. Pearl, H (2020). 'China's small factory activity continued to strengthen in June, but foreign demand remained subdued'. South China Morning Post (1 July 2020). Available at: www.scmp.com/economy/china-economy/article/3091298/chinas-small-factory-activity-continued-strengthen-june (Last accessed: 3 July 2020).



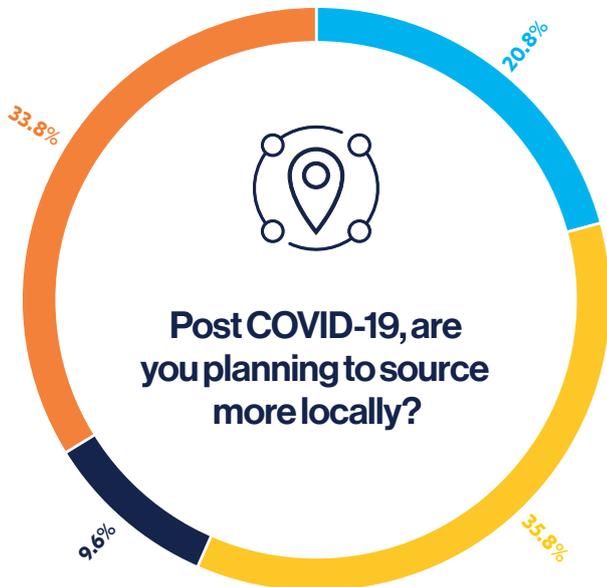
Organizations moving to local sourcing of goods has been a trend noted throughout the pandemic. In the middle of March, BCI's first edition of the Coronavirus Preparedness Report¹⁸ revealed that 16.3% of organizations had already moved to source some or all goods more locally. Within two months, the fortnightly report revealed that more local sourcing was something that over a third of organizations (36.4%) of organizations were now doing. Interviews revealed that many organizations were intending to keep this local sourcing going forward: whilst it can help with the complexity of global supply chains, it also has the secondary benefit of helping organizations reach their carbon emissions targets.

"There's a realization that has happened with the pandemic and that is the need to invest in local manufacturing in the state. That's why we brought out trained investment team, which are tasked to look at opportunities for overseas manufacturers to come to Australia as well as New South Wales in particular, to promote our local manufacturers for export. When the new Western Sydney airport starts to come online from 2026 and onwards, there's a huge push in that aerotropolis area to create manufacturing and logistics hub. The pandemic has created new opportunities to accelerate these opportunities."

Business Continuity Manager, Public Sector, Australia



18. BCI, The (2020). Coronavirus Organizational Preparedness Report; First Edition. Available at: www.thebci.org/resource/bci-coronavirus-organizational-preparedness-survey.html (Accessed 3 July 2020).



20.8%
Yes, we will be moving a considerable number of suppliers more locally

35.8%
Yes, we will be moving some suppliers more locally

9.6%
Yes, we will be moving one or two suppliers more locally

33.8%
No, we do not intend to source more locally

Question 17. Post COVID-19, are you planning to source more locally?

Local sourcing is something which will not just help to alleviate supply chain issues for individual organizations, but is also set to reshape entire industries. Toshiharu Sato, the General Director of Sumida Electrical Vietnam, was recently quoted as saying he believes the entire automotive industry will prioritise developing local supply chains after the lessons learnt from the COVID-19 crisis. Sato surmised that the industry would move away from JiT manufacturing to a logistics system where local warehouses would be used to stockpile essential equipment. He also believes there will be more sweeping changes in the industry to reduce the number of parts required: he anticipates automobile manufacturers offering fewer model variants to reduce the number of components required¹⁹.



19. Moore, S (2020). 'Auto Industry in Post-COVID-19 Era — Shorter Supply Chains and More Local Procurement'. Design News (9 June 2020). Available at: www.designnews.com/covid-19/auto-industry-post-covid-19-era-shorter-supply-chains-and-more-local-procurement (Last accessed: 3 July 2020).

Stockpiling is a solution to many companies to ensure continuity of supply

One of the most significant questions supply chain professionals ask themselves is "how many and when should we order?". With global supply chains now facing severe disruption and increased demand uncertainty due to COVID-19, the question is arguably more crucial than ever.

One in five organizations (19.6%) plan to have more inventory post-COVID-19. For many respondents, particularly within the public administration or emergency services areas, this means ensuring they have sufficient supplies of PPE and other health and safety equipment. For other organizations, this equates to stockpiling essential products and supplies to ensure they can continue to deliver to their customers in a further case of widespread disruption.

"If you take a normal year's worth of PPE, we were trying to source around 20 times than we normally would. This meant we needed to come up with some really interesting solutions around sourcing that PPE. Could we get them from local manufacturing? Did we need to find new supply chains? How do we go about finding those supply chains? How do we get these frameworks in place really quickly, and how do we do the right amount of due diligence with such huge orders? A lot of orders are going to be with suppliers that we've never really worked with before, and when they're asking for 50% pre-payment it really elevated our levels of concern. Compared to a normal procurement exercise and how we run a sourcing event, it was very, very different."

Business Continuity Manager,
Public Sector, Australia

"We use equipment which is manufactured in Europe. However, if lockdown continues, the European manufacturers will definitely run out of components from China. Then again, with potential border lockdowns, could they actually transport the kit even if they can manufacture them? Thankfully we have a large number of months' worth of network supply. We probably over-egged it, but we're glad that we did. That was the plan that we put in place, and that was what we did. And it's worked very well for us. So you could argue, we don't need to change our suppliers, and we don't need to go into the manufacturing base, as long as we have enough of that kit available to us to tide us over until such time as we can change direction if needed."

Business Continuity Manager,
Telecommunications, United Kingdom

A recent report by the real estate company CBRE supports the findings of the survey. It reports that the UK logistics market has just reported its highest quarterly take-up figure on record: businesses took 12.78m sq ft of space in Q2 2020 compared to 7.83m sq ft in Q2 2019. Furthermore, the average unit size taken up was 355,133 sq ft compared to 278,658 sq ft in Q2 2019. The elevated figures, which are being reported across the UK, continues to be driven by online retailers although many national occupiers are now reshaping their operations due to shifting shopping habits. Furthermore, this is increased demand for warehousing space for organizations who are looking to stockpile to counter supply chain issues²⁰. It would be reasonable to assume similar patterns are being encountered elsewhere in the world.

Some organizations are already thinking about the increased drive to more local sourcing and how it can continue post-pandemic. One interview respondent suggested paying local manufacturers a retainer and providing them with the IP and equipment required to rapidly start production if required.

“What’s happened now is that, post-pandemic, there is a real drive get back to local manufacturing. It’ll be interesting to see if it continues post-pandemic. And there are ways we can encourage resiliency in the supply chain through using local suppliers. It could even be a form of local manufacturing where we essentially pay a retainer to local manufacturers to have the IP and have the equipment to do a rapid start up, if there was ever the need.”

Business Continuity Manager,
Public Sector, Australia

Despite the widespread disruption encountered during the COVID-19 outbreak, some 46.1% of respondents report that they would keep the same inventory level as usual. However, of those, more than half (58.1%) plan to change their supplier base to allow for more effective on-time product delivery. For many organizations, overstocking can also become a problem to the company, especially for retailers and small- to mid-sized organizations due to the limited lifetime of products. Furthermore, many have inadequate funds to acquire stock or a lack of physical storage availability to be able to stockpile. Nevertheless, good practice suggests a proper measurement of safety stock can be beneficial to organizations in periods such as the one we find ourselves in. If an organization maintains the same inventory level but also ensures a regular review of safety stock it can be better prepared for supplier disruption and a rapid increase on demand²¹.

20. London Loves Business (2020). ‘Highest quarterly take-up figures on record for the UK Logistics’. London Loves Business (2 July 2020). Available at: londonlovesbusiness.com/highest-quarterly-take-up-figures-on-record-for-the-uk-logistics/ (Last accessed: 3 July 2020).



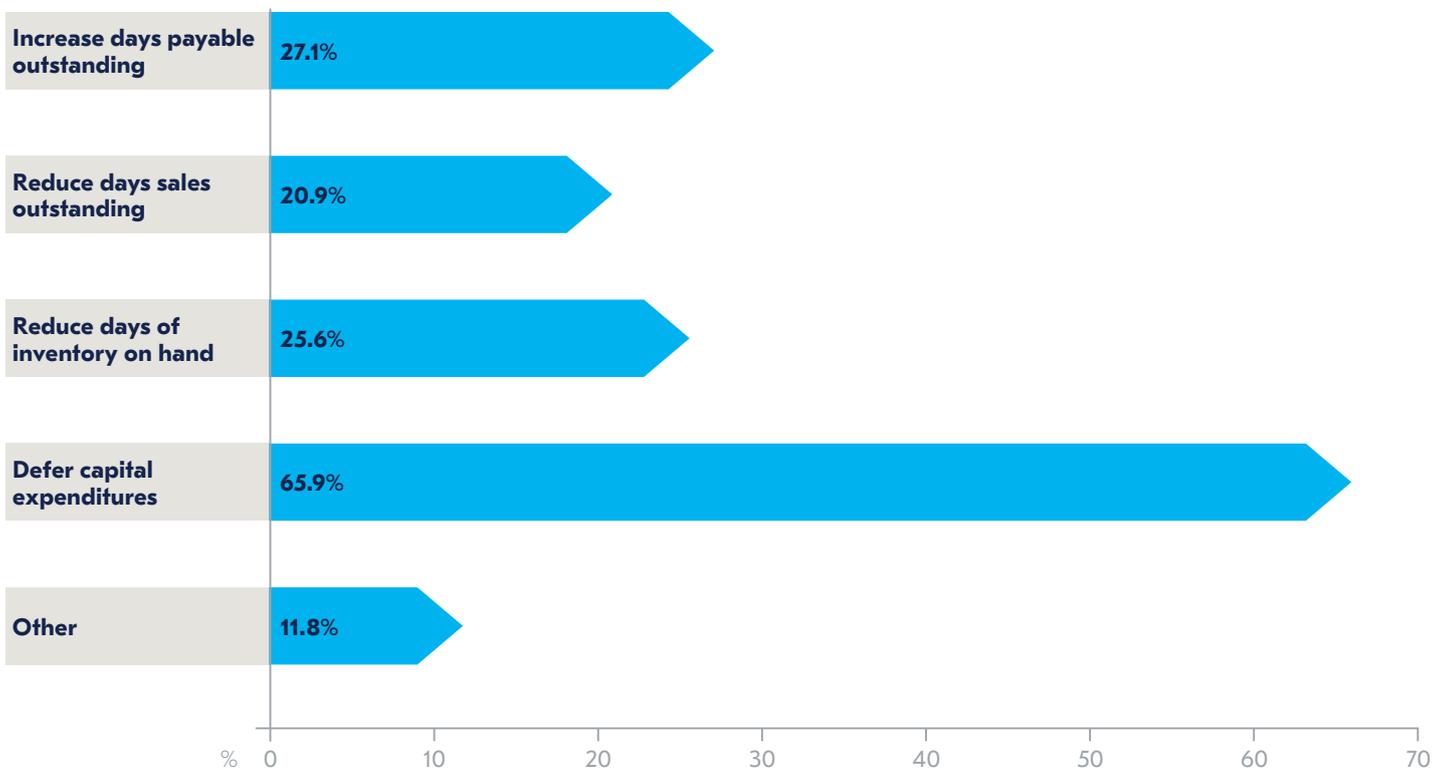
Question 18. What approach are you planning to take to inventory post-COVID-19?

Maintaining a healthy cash flow

Maintaining a healthy cash flow during the pandemic is one of the major tasks facing boardrooms throughout the world. Of those that do have visibility of the financial processes within their organizations (45.6% said they did not), two-thirds (65.9%) have sought to defer capital expenditure during the pandemic, a measure which has been openly adopted by many organizations during the pandemic: EasyJet recently announced that it had deferred 24 on order aircraft²², whilst Smithfield Food Inc has promised shareholders it will reduce/defer capital spending in 2020 to the tune of \$350m-\$450m²³.

At an operational level, other methods to preserve cash include keeping lower inventory levels (25.6%) and increasing days payable outstanding (20.9%). Whilst these actions may help to shield organisations from sudden breaks in cash flow, it could have the negative effect of slowing down an organization's supply chain so any cash flow measures should be adopted with care.

Which measures are you taking to preserve cash?



Question 19. Which measures are you taking to preserve cash?

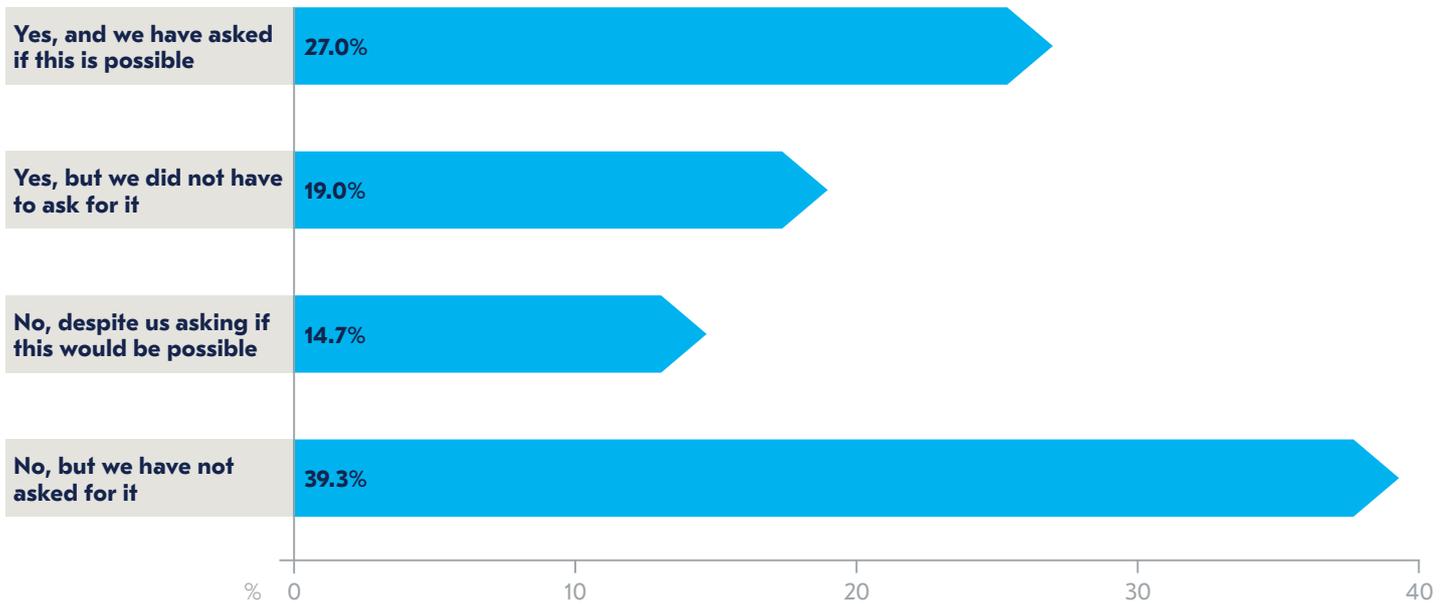
21. Britt, H (2020). 'What is Safety Stock and How Can Businesses Use it to Ensure Continuity?'. Thomas Net (8 April 2020). Available at: www.thomasnet.com/insights/what-is-safety-stock/ (Last accessed: 3 July 2020).

22. Cirium (2020). 'Covid-19 to hit per-passenger emission reductions: HSBC'. Flight Global (29 June 2020). Available at: www.flightglobal.com/airlines/covid-19-to-hit-per-passenger-emission-reductions-hsbc/139042.article (Last accessed: 3 July 2020).

23. Fitch Ratings (2020). 'Fitch Affirms Smithfield Foods, Inc.'s IDR at 'BBB'; Outlook Stable'. Fitch Ratings (29 June 2020). Available at: www.fitchratings.com/research/corporate-finance/fitch-affirms-smithfield-foods-inc-idr-at-bbb-outlook-stable-29-06-2020 (Last accessed: 7 July 2020)

Another method organizations are considering to keep balance sheets healthy is seeking longer trade credit periods. Of those who are aware of how finances are being managed within their organizations, nearly half (46.0%) report suppliers are offering longer trade periods. 27.0% of respondents had to ask for such an agreement to be made, whilst 19.0% report such a facility was offered without needing to ask for it. 14.7% claim a request for a longer trade credit period was rejected by their supplier, highlighting the precarious financial situation organizations are facing across all levels of the supply chain.

Are your suppliers offering longer trade credit periods owing to COVID-19?



Question 20. Are your suppliers offering longer trade credit periods owing to COVID-19?

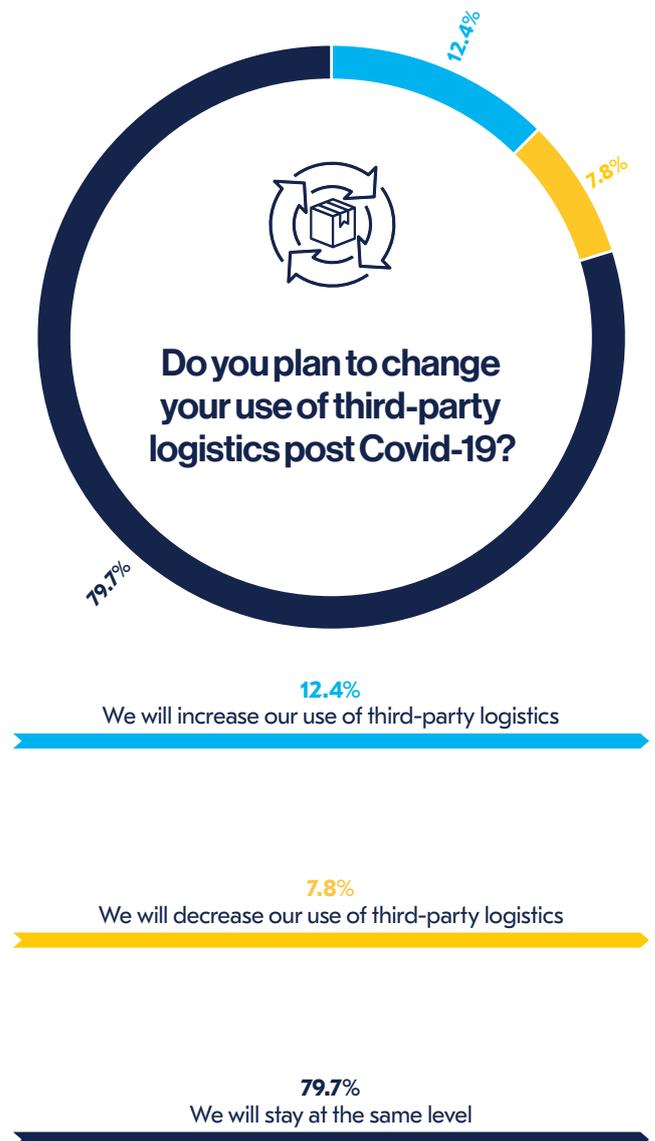
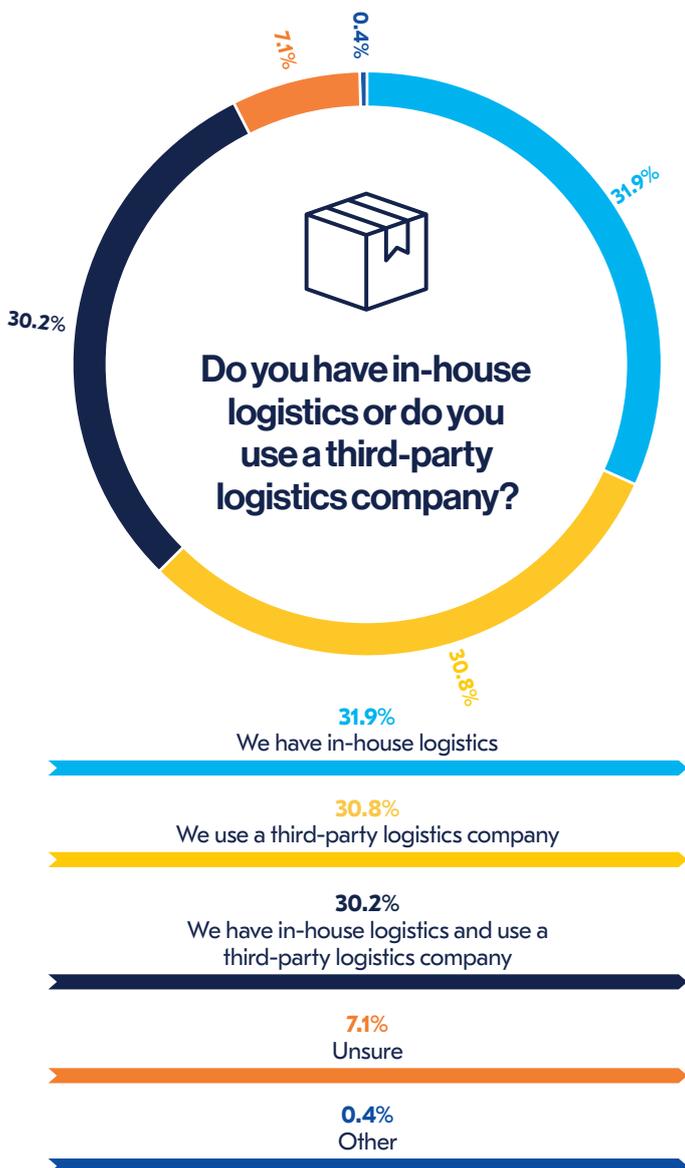


24. Adams, K (2020). '12 ways the coronavirus will change warehousing'. SHD Logistics (5 June 2020). Available at: www.shdlogistics.com/covid-19/12-ways-coronavirus-will-change-warehousing (Last accessed: 3 July 2020).

Third-party logistics set to be a beneficiary of COVID-19

When it comes to logistics, around a fifth of organizations (21.2%) do not use any dedicated logistics services. The majority of these are either small organizations or those from the services sectors. When considering the type of solutions organizations use, the answers are split three ways: a third (31.9%) have their own in-house logistics, a third (30.8%) use a third-party logistics company and a further third (30.2%) use a mixture of in-house and third party logistics.

In a post-COVID-19 environment, four out of five organizations (79.7%) intend to retain the same use of third-party logistics. However, a significant minority (12.4%) intend to increase their use of third-party logistics, whilst 7.8% intend to reduce their level of third-party logistics. An overall increase in third-party logistics is one which is also echoed in research: Professor John Manners-Bell, CEO of Transport Intelligence, believes one of the primary drivers to moving to third-party logistics is the need to reduce the number of warehousing staff on payrolls: during a pandemic, such employees are likely to be considered more of a risk than an asset. Furthermore, the volume of existing networks of facilities that third-party logistics organizations have worldwide helps to negate the need for organizations to build their own networks at significant cost²⁴.



Question 21. Do you have in-house logistics or do you use a third-party logistics company?

Question 22. Do you plan to change your use of third-party logistics post Covid-19?



Air and sea transportation have seen the greatest negative effect post-pandemic

Air transportation is the area where organizations have seen the most adverse effect in terms of transportation: for those that use aircraft transportation, over half (54.1%) reported a significant detrimental effect, with a further 22.3% reporting it had been somewhat affected. Just 7.4% reported that their air transportation saw no adverse effect because of COVID-19. With airports only allowing minimal traffic or shutting down completely, many air traffic routes were closed entirely. Although this proved to be a boost for the charter industry, many were unable to use their normal channels to transport goods via air. With The International Air Transport Association reporting global air cargo freight capacity is down by 35% and only 20% of belly cargo is still flying²⁵, the difficulties encountered by respondents are understandable.

Although respondents noted less disruption for sea transportation, the difficulties encountered were still severe with a quarter (25.6%) reporting severe disruption with this form of transport. Some ships have had to become “floating quarantine zones” as countries prevent them from docking until all crew can be confirmed as virus free.

Furthermore, ships are also subject to port restrictions, particularly if a vessel has docked in a high risk country and, with 120 out of 126 countries implementing restrictions on crew changes (which is a vital process to comply with work contracts and labour laws), shipping has its own challenges²⁶.

Heavy goods transportation and rail saw lesser effects, although border restrictions and delays at hubs — some brought about by fairly basic issues such as the requirement to deep clean vehicles — has still been enough to see the heavy goods transportation and rail suffer negatively. For some freight forwarding companies, they have encountered driver shortages as staff were unable to leave their cities.

The mode of transport that has encountered the least difficulty is, as would be expected, light goods transportation. Only 10.7% of organizations noted significant disruption with this form of transport. Light goods transport typically makes shorter journeys and, with the increase in home deliveries during COVID-19, it is the area that has stabilised the business for many global logistics and freight forwarding organizations²⁷.

25. Zubkov, V (2020). 'How is the air cargo industry reacting and responding to the COVID-19 pandemic?'. International Airport Review (1 May 2020). Available at: www.internationalairportreview.com/article/115426/air-cargo-industry-reacting-responding-covid-19/ (Last accessed: 3 July 2020).

26. Heiland, I & Ulltveit-Moe, K (2020). 'An unintended crisis: COVID-19 restrictions hit sea transportation'. VOX EU (17 May 2020). Available at: voxeu.org/article/covid-19-restrictions-hit-sea-transportation (Last accessed: 3 July 2020).

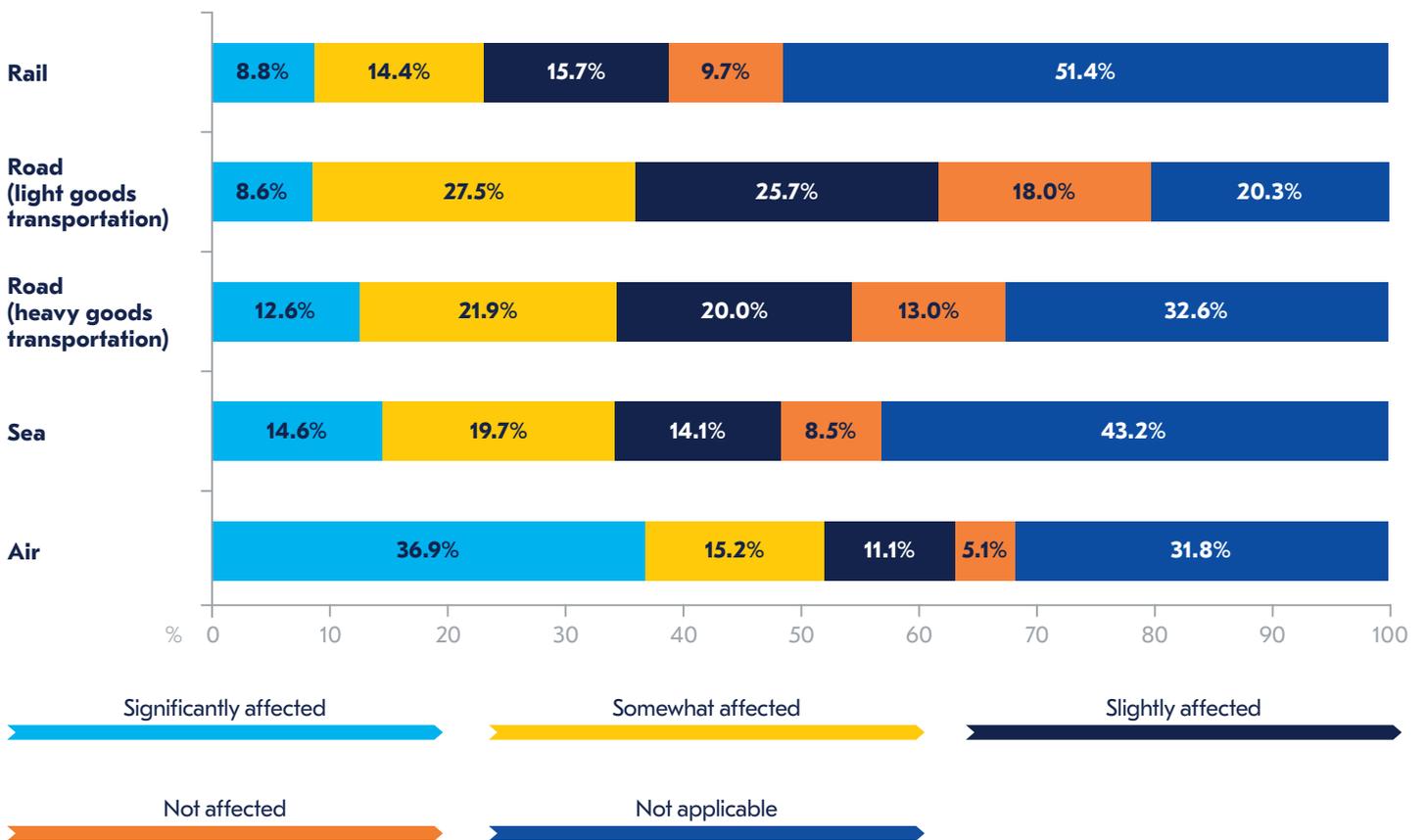
27. Badkar, M (2020). 'Coronavirus: FedEx results top view boosted by home deliveries'. FT (30 June 2020). Available at: www.ft.com/content/80c670ee-78eb-3d9a-8ebf-a7408a959bda (accessed 3 July 2020).



“When China started to open up a little bit more and the worst was over in Wuhan, or when the peak started to flatten and more flights were allowed, we still had the problem that a lot of people were still stuck in their hometown, particularly given the Chinese New Year, for a significant period of time. A lot of people can’t travel to and from their hometowns, which includes truck drivers, so there was a massive shortage of truck drivers. You could get your cargo uplifted from an airport or loaded onto a vessel from the sea port, but there was nobody who could bring it from the port. That was another big challenge we had there.”

Security Manager, Transport and Logistics, Hong Kong

Which form of transport do you use for your logistics and has it been adversely affected by COVID-19?

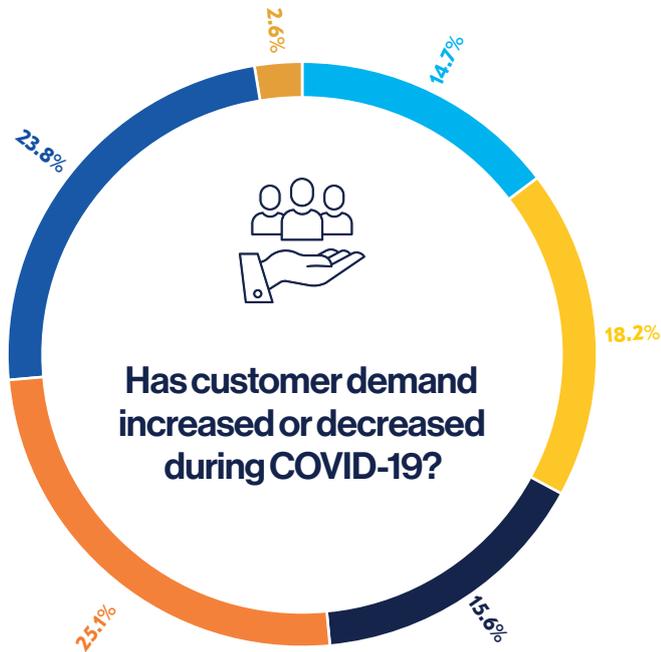


Question 23. Which form of transport do you use for your logistics and has it been adversely affected by COVID-19?

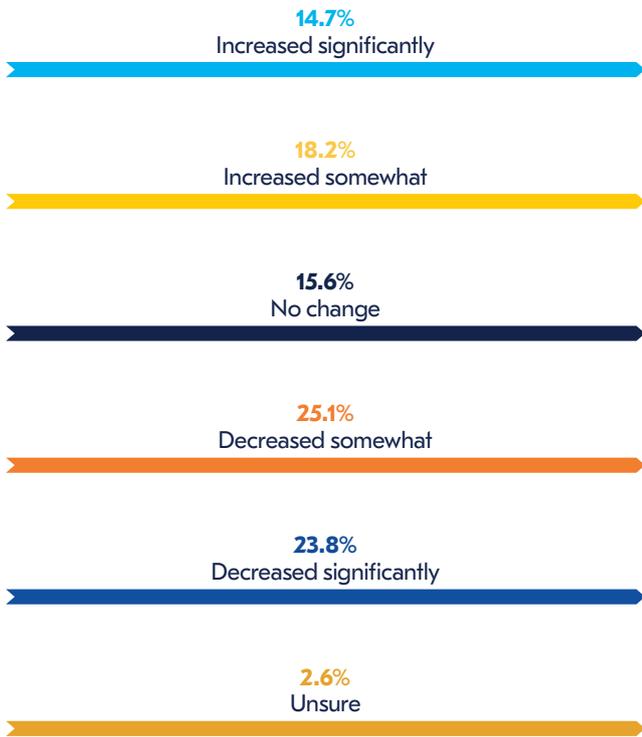
Customer demand has been hit by the pandemic

Supply chains are driven by customer demand and with many countries currently in some degree of lockdown, demand is affected. Nearly half of organizations (48.9%) reported customer demand had decreased, with a quarter (23.8%) reporting a significant decrease. However, some organizations reported demand had actually increased during the pandemic: 18.2% said demand had somewhat increased, whilst 14.7% had seen a significant increase. Although some industries (such as the airline industry) have seen understandable drops in customer demand, other industries have seen a massive increase in customer demand: the videoconferencing company Zoom, for example, noted a revenue increase of 169% in the three months to April 2020 with its share price rising 152% in the past year. Meanwhile Novacyt plc, which manufactures the Primedesign diagnostic kit, has received 30,000 orders for its test since February. With people no longer able to visit restaurants or bars, the supermarket and takeaway industry has also been a major beneficiary as well.





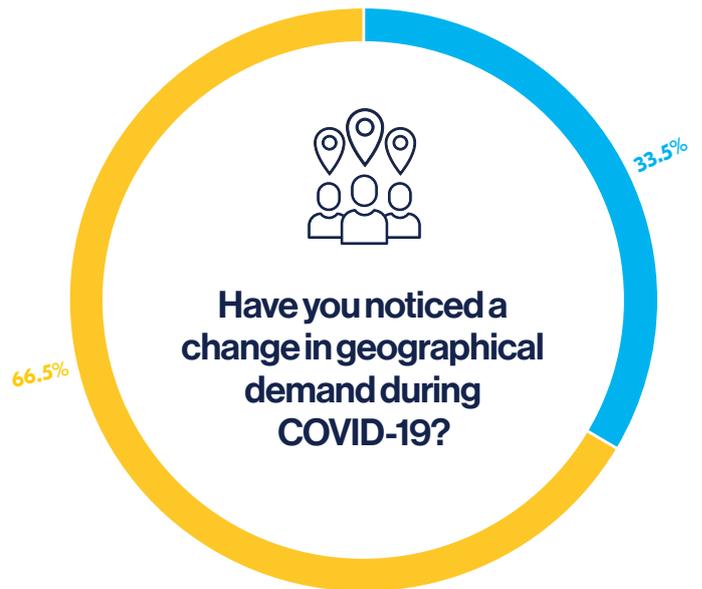
Has customer demand increased or decreased during COVID-19?



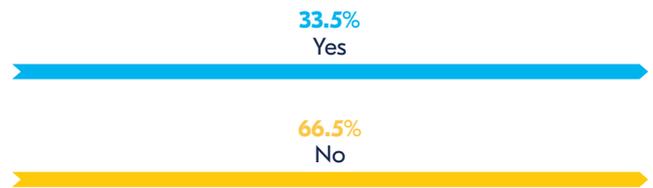
Question 24. Has customer demand increased or decreased during COVID-19?

“There was a massive increase in voice usage at the start of lockdown. I think we saw 10 years’ worth of growth in voice in about three days.”
 Business Continuity Manager,
 Telecommunications, United Kingdom

A third (33.5%) of organizations have noted a change in geographical demand during the pandemic. With some organizations shifting manufacturing plants, others sourcing from alternative suppliers and some seeing new demand from customers when they have been unable to acquire a product from their normal supplier, the change in geographical demand is not surprising.



Have you noticed a change in geographical demand during COVID-19?



Question 25. Have you noticed a change in geographical demand during COVID-19?

28. Hajra, Lisa (2020). '73% of Retailers Believe Artificial Intelligence Can Add Significant Value to Their Demand Forecasting'. Business Wire (25 June 2020). Available at: <https://www.businesswire.com/news/home/20200625005480/en/73-Retailers-Artificial-Intelligence-Add-Significant-Demand> (accessed 7 July 2020).

Many organizations are now looking towards demand forecasting

To cope with future demand issues, many organizations are looking to use demand forecasting in future. 43.7% of organizations already use demand forecasting, although a further 26.8% of organizations are either going to adopt it or are considering adopting it post-COVID-19. Furthermore, some 38.2% of organizations will be looking to add different inputs into their demand forecasting going forward. New techniques such as AI can help organizations to mine data from multiple inputs more effectively. This is something the retail sector agrees with: research from Llamasoft shows that 73% of retailers believe that AI and machine learning can add significant value to their demand forecasting processes.²⁸



Will you be using demand forecasting for the future?

43.7%

Yes, although we already use it

7.8%

Yes, and we have not used it previously

19.1%

We may consider it

8.7%

No

12.1%
Unsure

8.7%

Not applicable

Question 26. Will you be using demand forecasting for the future?



Will you be looking to use different inputs to your demand forecasting?

38.2%

Yes

13.2%

No

35.1%

Unsure

13.6%

Not applicable

Question 27. Will you be looking to use different inputs to your demand forecasting?

Annex



353

Respondents

77

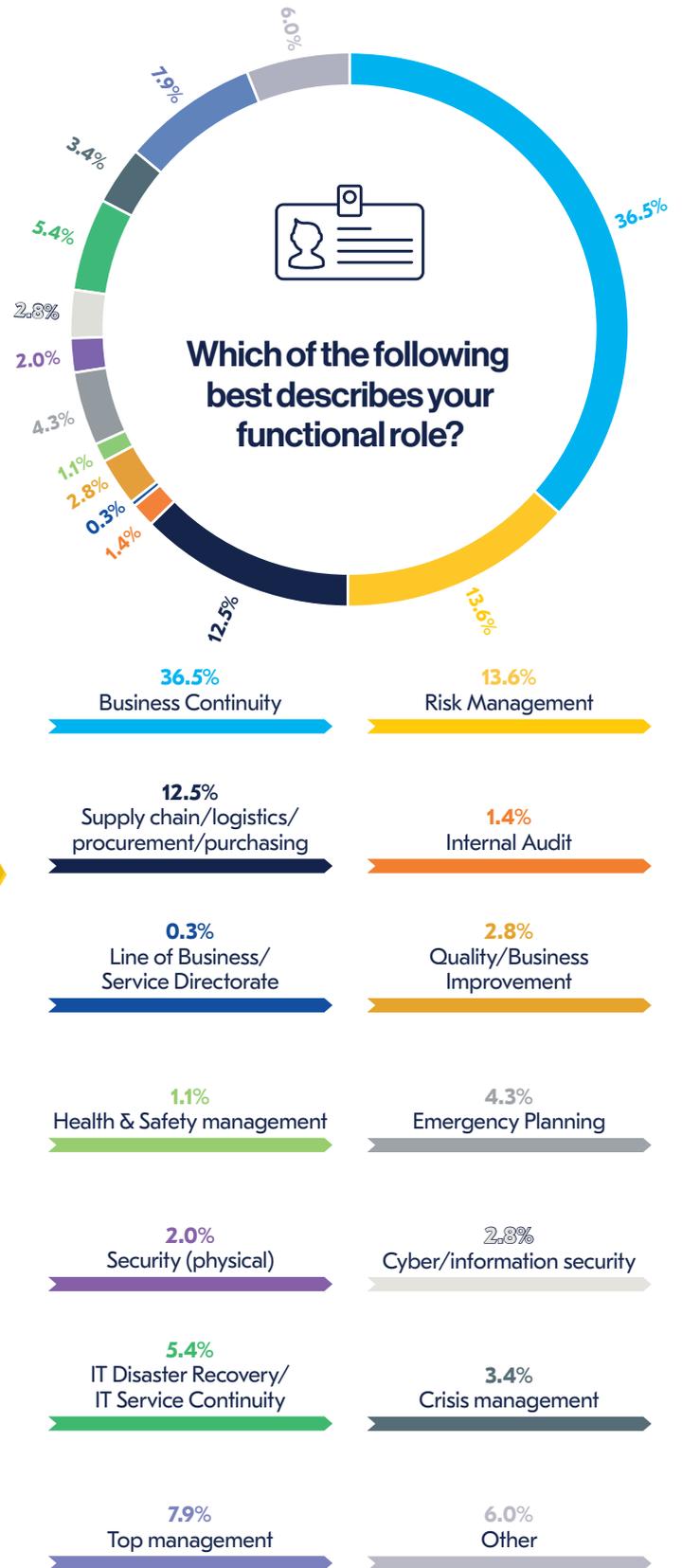
Countries

19

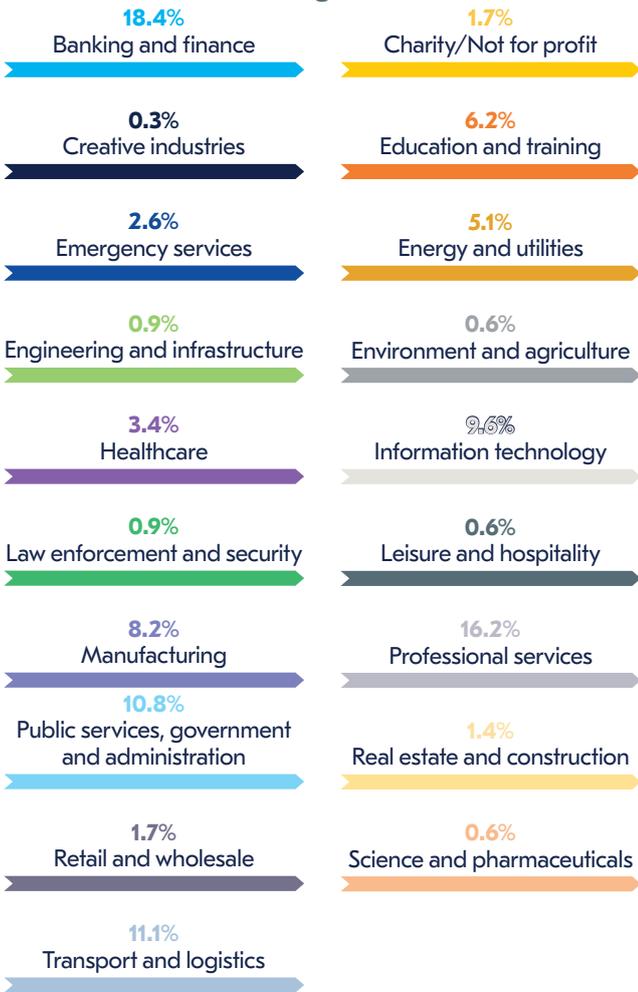
Sectors

9

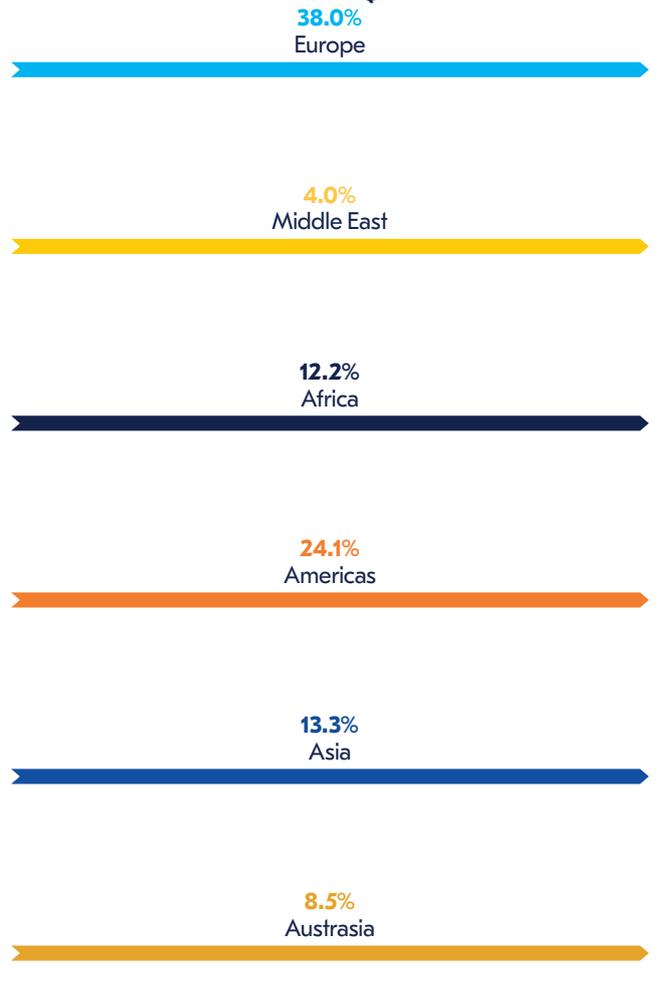
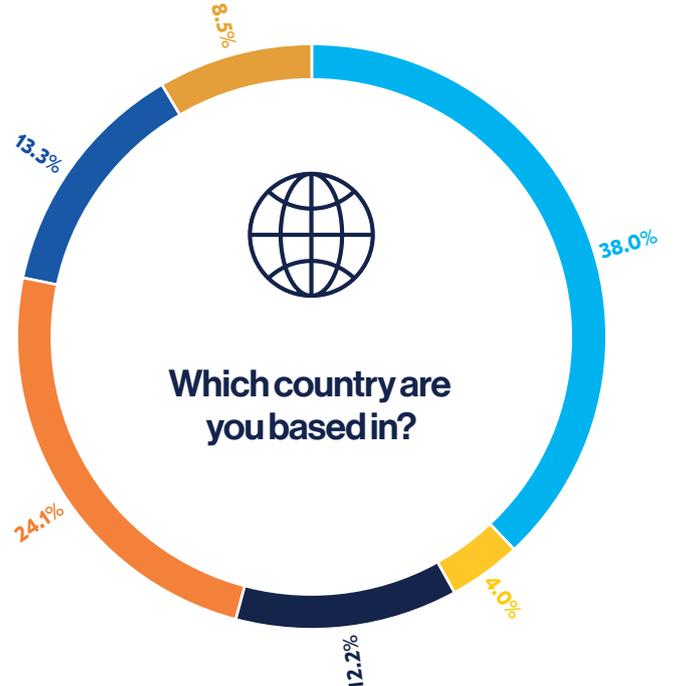
Respondent Interviews



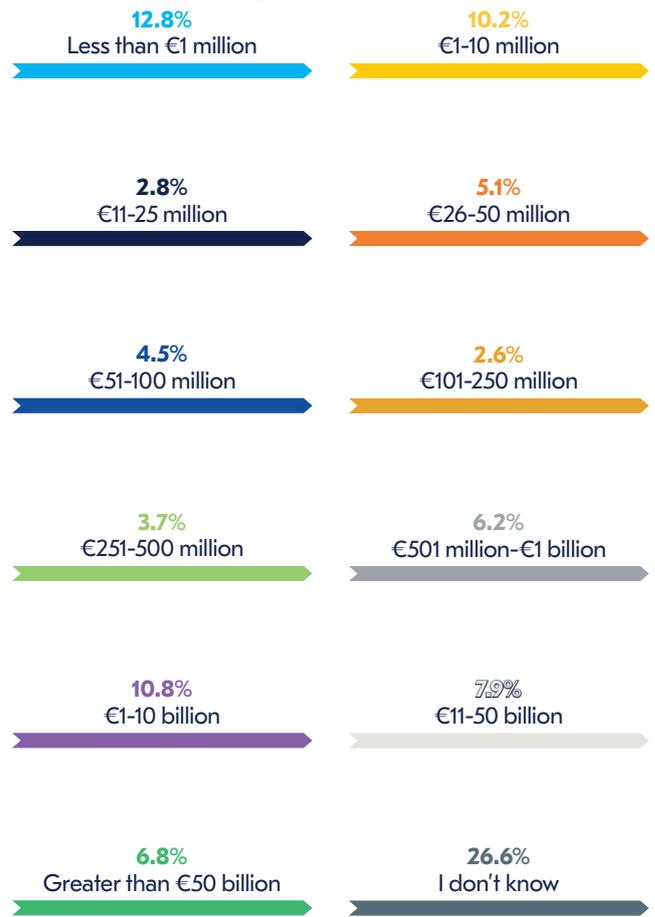
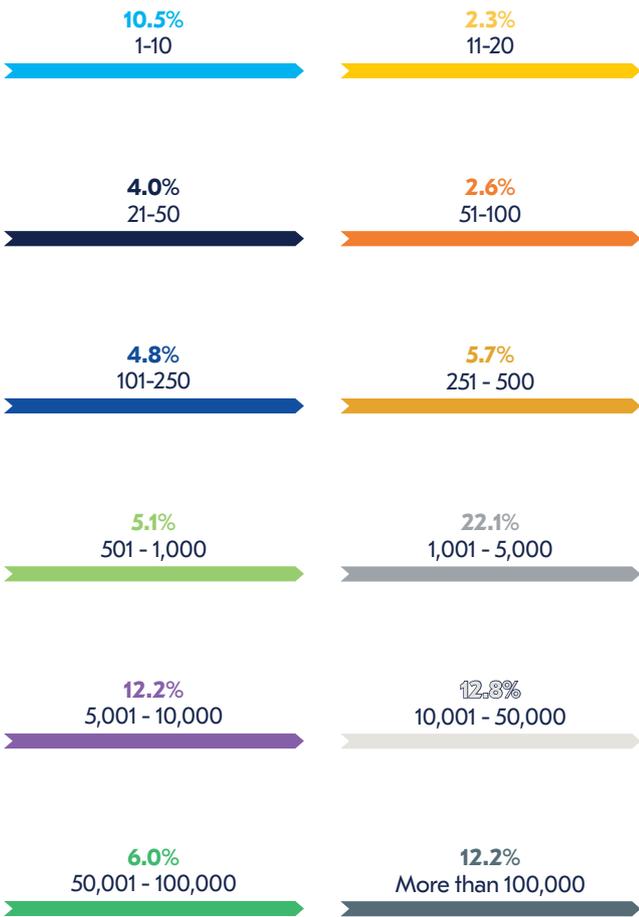
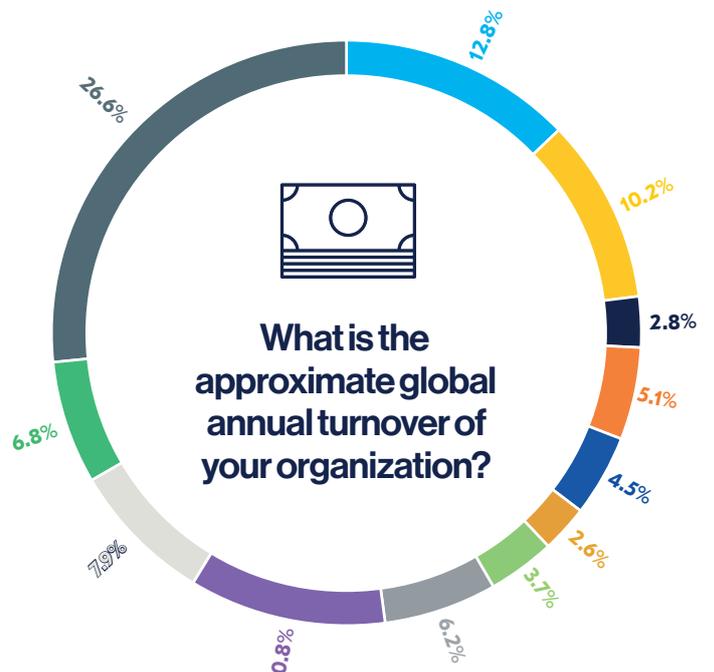
Question 28. Which of the following best describes your functional role?



Question 29. What sector does your company belong to?



Question 30. Which country are you based in?



Question 31. Approximately how many employees are there in your organization globally?

Question 32. What is the approximate global annual turnover of your organization?



About the Author

Rachael Elliott (Head of Thought Leadership)

Rachael has twenty years' experience leading commercial research within organizations such as HSBC, BDO LLP, Marakon Associates, CBRE and BCMS. She has particular expertise in the technology & telecoms, retail, manufacturing and real estate sectors. Her research has been used in Parliament to help develop government industrial strategy and the BDO High Street Sales Tracker, which Rachael was instrumental in developing, is still the UK's primary barometer for tracking high street sales performance. She maintains a keen interest in competitive intelligence and investigative research techniques.

She can be contacted at rachael.elliott@thebci.org



About the BCI

Founded in 1994 with the aim of promoting a more resilient world, the Business Continuity Institute BCI has established itself as the world's leading Institute for Business Continuity and Resilience. The BCI has become the membership and certifying organization of choice for Business Continuity and Resilience professionals globally with over 9,000 members in more than 100 countries, working in an estimated 3,000 organizations in the private, public and third sectors. The vast experience of the Institute's broad membership and partner network is built into its world class education, continuing professional development and networking activities. Every year, more than 1,500 people choose BCI training, with options ranging from short awareness raising tools to a full academic qualification, available online and in a classroom. The Institute stands for excellence in the Resilience profession and its globally recognised Certified grades provide assurance of technical and professional competency. The BCI offers a wide range of resources for professionals seeking to raise their organization's level of Resilience, and its extensive thought leadership and research programme helps drive the industry forward. With approximately 120 Partners worldwide, the BCI Partnership offers organizations the opportunity to work with the BCI in promoting best practice in Business Continuity and Resilience.

The BCI welcomes everyone with an interest in building resilient organizations from newcomers, experienced professionals and organizations. Further information about the BCI is available at www.thebci.org.

Contact the BCI

+44 118 947 8215 | bci@thebci.org | 10-11 Southview Park, Marsack Street, Caversham, RG4 5AF, United Kingdom.



About Resilience360

Resilience360 enables companies to visualize, track, and mitigate risks in their supply chain. The Resilience360 suite of solutions enables intuitive visualization of supplier networks, tracks shipments across different modes and lanes, and permits near real-time monitoring of incidents capable of disrupting supply chains. Resilience360 provides companies a first mover advantage in detecting and verifying risks using both Artificial Intelligence and a human network of DHL employees in 220 countries and territories. Customers trust Resilience360 to ensure business continuity, identify critical hotspots to mitigate risks, and turn potential disruptions into a competitive advantage.

For more information, go to www.resilience360.com

BCI 10-11 Southview Park, Marsack Street,
Caversham, Berkshire, UK, RG4 5AF

bci@thebci.org / www.thebci.org

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