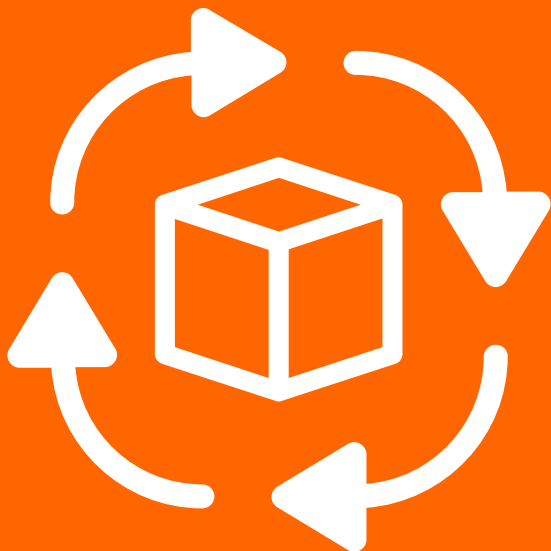


Guide to Addressing the Supply Chain Crisis



The latest on the global supply chain crisis

In early 2021, the Ever Given incident slowed down maritime commerce, as transit through one of the busiest water ways in the world, the Suez Canal, came to a grinding halt (See more about the Ever Given incident below). Months later, with global supply chains still not completely recovered, we face another crisis. Because of the confluence of forces creating this latest supply chain crisis, it promises to be much longer lasting, without a clear end in sight.

The Ever Given incident and its economic impact

Ever Given is among the vaunted one percent of large container ships. On its passage through the Suez Canal in March 2021, the ship got caught in a sandstorm, ran aground, turned sideways. For nearly a week, the ship was unable to free itself, blocking the entire Canal from passage on either side.

As the Canal remained blocked, a queue of hundreds of ships lined up to pass. Meanwhile, a painstaking process began to refloat the stuck ship. Eventually, the ship was freed; the Suez Canal reopened for passage.

Estimates of the broader cost of the incident vary. According to data from Lloyd's List, an estimated USD 400 million in goods idled every hour Ever Given was stuck. Some vessels had to be rerouted to avoid the Suez Canal entirely, often adding more than a week to their journey time. Data places the cumulative economic hit of the incident to somewhere in the range of USD 5.1 billion per day in westward traffic and USD 4.5 billion per day in eastward traffic.

The Suez Canal Authority, for its part, contends that it lost daily revenues of between USD 14 and 15 million; passage through the Suez Canal is also a key contributor to Egypt's overall GDP.

On the whole, some analysts suggest that the incident itself could have shaved off as much as 0.4 percent in annual trade growth, with the Wall Street Journal reporting a 47 per cent jump in the cost of renting some vessels to ship cargo to and from Asia.

What's going on?

For one, major ports are badly backed up. In August 2021, the Meishan terminal at the Ningbo-Zhoushan Port in eastern China closed temporarily after a positive COVID-19 caseⁱ.

The terminal, through which a quarter of the cargo coming in and out of the world's third busiest container port flows, opened back up two weeks later. By then, the damage had been done. According to a chief shipping analyst, the temporary closure "could take up to 60 days for operations at the port to return to normal as workers and maritime pilots return from quarantine. That means retailers around the world will face continued disruption as they race to stock up ahead of the vital holiday shopping season"ⁱⁱ.

Closures at Ningbo weren't the only instances of COVID-19 disrupting port operations at crucial hubs. A couple months earlier, the port of Yantian also had to close down due to COVID-19 infections among dock workersⁱⁱⁱ.

These closures in Chinese ports, coming so soon after the Ever Given incident, only exacerbated the escalating supply chain crisis. Ports in the western United States had been dealing with major congestion issues since November 2020. In February 2021, for instance, as many as 40 vessels waited for entry in the Los Angeles and Long Beach ports^{iv}.

Things haven't gotten much better since then. As of October 2021, around 200,000 shipping containers sat off the coast of Los Angeles amidst the ongoing gridlock^v.

The holiday season looms, meaning a surge of consumer goods. The spike in demand, with frustrating shortages in the means of offloading those goods, has created a backlog at ports. Analysts are warning the issue will be hard to contain; as CNN reports:

The backlog at ports will have a ripple effect on jammed warehouses and stretched road and rail capacity. Logistics networks have been running at maximum capacity for months, thanks to stimulus-fueled demand led by US consumers and a pickup in manufacturing^{vi}.

Measures to relieve congestions have included the Biden Administration announcing around-the-clock operations at the Port of Los Angeles, in a so-called 90-day sprint to improve the supply chain^{vii}.

For their part, retailers, with their products idling offshore, are attempting to reach out to more ocean carriers and trying to use more ports to expedite their deliveries, as well^{viii}. There's even talk of sourcing products earlier in the cycle from more countries, also near-shoring production to Mexico and Brazil to avoid the snarl^{ix}.

Much of the damage has been done already. CNN reported that supply chains were discussed on nearly two-thirds of company earnings calls in July 2021.

What's worse, alleviating congestion at ports isn't the only effort needed. Air terminals are also overwhelmed. And once product passes through them, truck drivers are in short supply to take goods where they need to go.

The truck driver shortage

Indeed, the truck driver shortage is another facet of the roiling supply chain crisis. In the U.S. alone, trucks move nearly three quarters of the nation's freight by weight – everything from oil, food, clothing, paper products to vehicles themselves^x.

Only problem is truck drivers are in short supply. The industry has been aware of the problem for a while.

Already in 2015, an industry study found that 48,000 truck drivers would be needed to meet consumer demand^{xi}. The shortfall has only gotten worse.

The industry struggles with recruitment and retention. Now, many of its truckers, up to 25 per cent, are reaching retirement age, according to Lindsey Trent of the Next Generation in Trucking Association.

How bad is the problem? Industry analysts suggest that nearly 70,000 more drivers might be needed. Meanwhile, the industry is experiencing a major upswing in labour actions.

Not just truckers, either. A record number of American workers (4.3 million) quit their jobs in August 2021, according to the Department of Labor. The warehouse industry has a record 490 thousand-job openings. Big retailers such as Walmart, Target, and Amazon are even going so far as to offer free college tuition to entice potential warehouse workers, needed to move goods^{xii}.



What's not getting through

Things wouldn't be so bad if the products that need to get through weren't so important. Unfortunately, they are.

Long lines for more expensive gas in the U.K. and a generalised energy crunch across Europe are examples^{xiii}.

The production of computer chips is another. In our heavily computerised world, chips are crucial components, needed in cars, smart phones, and other important consumables. There aren't nearly enough of those component chips to meet demand.

The issue predates the pandemic, as well. The advent of 5G created demand spikes, according to analysts^{xiv}. The manufacturing equipment needed to produce some computer chips has also been in short supply^{xv}. The pandemic exacerbated these problems, with stockpiling and advance ordering.

Nor are chips produced everywhere – the U.S. share of worldwide semiconductor manufacturing, for instance, has dwindled to 12 per cent in 2021 from nearly 40 per cent in 1990^{xvi}. Because of the concentration in production, shutdowns in even a few factories, from severe weather (Texas), fires (Japan), COVID-19 (throughout southeast Asia), can have wide-ranging effects^{xvii}.

One high profile moment came when automaker GM temporarily closed production at most of its North American plants due to the chip shortage. The auto industry (as a whole) is forecasting lost sales of USD 210 billion^{xviii}.

The final products that manage to get through cost more than ever, too, causing severe inflationary pressures – price spikes on top of the increased cost of shipping. As the BBC reports, sending a single 40ft container from Asia to Europe currently costs USD 17,000, a greater than ten-fold increase compared to a year ago.

Ramping up chip production also takes time – lots of time. Chip makers promise to increase capacity. Analysts, though, warn consumers and businesses not to expect resolution in the short time: "That is not going to be solved by this Christmas and I find it hard to believe it will be solved by the next Black Friday [November 2022]", notes a Gartner analyst.

Governmental action, here, has been slow. The U.S. Senate has passed a USD 52 billion funding package to incentivise domestic semiconductor production and research. That bill, however, hasn't yet been taken up by the House.

The White House, for its part, has asked the industry to give the federal government more information about their intricate supply chains. This measure has been touted as a means to ensure that the government has visibility into potential bottlenecks.

Acknowledging the importance of supply chain resilience, the Australian Government added supply chains (alongside physical, cyber, and personnel security) to its list of key threat vectors to be measured in updated security of critical infrastructure legislation.

Short-term relief is unlikely, though; Moody's analytics forecasts that "[things] will likely get worse before they get better". Continuing: "As the global economic recovery continues to gather steam, what is increasingly apparent is how it will be stymied by supply-chain disruptions that are now showing up at every corner"^{xix}.

Which casts a pall on the outlook for global economic growth coming out of the COVID-19 pandemic. The International Monetary Fund downgraded its growth projections for the U.S. economy by one percentage point, the largest such reduction in the G7.

Border controls and other restrictions on mobility also imperil the growth picture, as does the inability to harmonise the rules by which transport workers operate and the lack of a concerted, global effort to improve worldwide logistics^{xx}.

An issue long in waiting

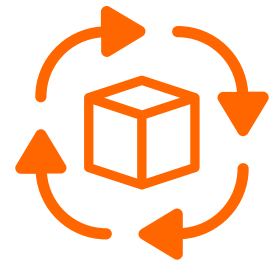
Of course, this latest supply chain challenge, following so soon after the Ever Given incident, COVID-19, and Brexit, again lays bare the risks inherent in the proliferation of just-in-time networks. Indeed, companies have sought to increase inventory efficiency, eliminate waste, and lower costs by receiving goods only as needed for production. What they've sacrificed in the process, however, is a large measure of visibility.

For context, surveys from the years just before COVID-19 found that only six percent of companies had complete visibility over their supply chains^{xxi}. On the other hand, seven in ten companies admitted that their supply chains were either very or extremely complex^{xxii}.

When the pandemic first came, the business risk bore fruit. Just-in-time producers simply didn't hold sufficient inventory to absorb the kind of supply shocks that the pandemic produced, leaving everyone in the chain, especially smaller companies upstream, highly vulnerable to going under.

The same was true of stocks of personal protective equipment (PPE) in healthcare facilities. When the crisis hit the advanced west, media accounts of severe shortages of PPE (e.g., gloves, medical masks, goggles, face shields, gowns, and N95 respirators) needed by healthcare workers treating COVID-19 infected patients proliferated.

Surveys taken in May 2020 revealed that as much as 87 per cent of nurses in the U.S. (alone) reported having to reuse single-use disposable masks or N95 respirators. Over a quarter of nurses reported that they had been exposed to confirmed COVID-19 patients without wearing appropriate PPE.



Measures to improve supply-chain resilience

How can this change, and companies achieve visibility over their complex supply chains? The following measures should help to improve supply-chain resilience:



Commit to building a crisis scenario for supply chain disruptions. The best place to start is to develop a crisis management playbook for the supply chain disruption scenario. But aren't these crisis scenarios reserved for risks that are likely to develop into incidents? We'd say that by now supply chain disruptions meet that threshold – and then some.

So, why start now? Well, it's best to start when the incident is still top of mind. For context, supply chain volatility didn't just begin with the COVID-19 crisis – there was ample evidence of supply chain risk beforehand, going back at least to the SARS crisis in the early 2000s. However, going into the COVID-19 crisis, a mere 28.5 per cent of companies had plans that covered supply chain issues, according to BCI^{xxiii}.



Perform due diligence on your supply chain.

What, then, should the effort look like? The short answer is it depends on a number of factors: your location and type of business, its exposure to global trading trends, etc. The best way to go about determining what your supply chain risk looks like is performing regular due diligence exercises (i.e., quarterly, semi-annually, or annually depending on risk factors) on your entire supply chain; those findings will get fed into the supply chain disruption scenario, which will also be updated as risk changes.



Don't fall into this due diligence pitfall. These exercises, however, aren't a cure-all, especially since businesses fall into one common pitfall. The interconnectedness of modern supply chains, a fact of largescale globalisation patterns, means you can't just limit your supply chain assessment to tier-one, or "critical", suppliers, though these are the suppliers with whom you should be developing your supply chain disruption scenario. After all, these suppliers are themselves at the mercy of their "critical" suppliers, i.e., your tier-two suppliers and beyond.



Obtain valuable supplier information for the entire chain. During the COVID-19 pandemic, for instance, supply chain disruptions were exacerbated by a lack of visibility into a given company's wider supply chain. In other words, numerous organisations couldn't determine the locations of their tier-two suppliers and beyond; nor had they obtained or shared updated business continuity plans. As such, primary organisations didn't know how the critical suppliers they relied on would act in the event of a supply chain disruption incident.

For improved situational awareness, those valuable pieces of information should be stored in the crisis management and business continuity technologies, such as Noggin's critical event management solutions, your company will be using during the supply chain disruption; so, too, should the results of your regular supply-chain risk assessments.



Improve critical crisis communications modalities with suppliers. Getting into the formalised habit of reaching out to multiple tiers of suppliers will also have the effect of improving communications during an actual crisis.

Why it matters? Another supply-chain crisis learning was the overall paucity of communication with suppliers, especially at the beginning of the COVID-19 pandemic. Necessarily, the lack of communication reduced situational awareness, which only improved as the pandemic lengthened in duration.

This waxing and waning of communication, though, suggests an ad-hoc approach to keeping in touch with suppliers, which companies should seek to remedy. How to start: begin by pushing for regular meetings with critical suppliers as part of the broader supply-chain resilience effort.



Invest in the appropriate crisis management and business continuity technologies. Of course, these efforts will amount to little if there's poor integration with the digital technologies you will be using to respond to the supply chain disruption in the first place. These technologies should be working towards the same overarching goal of improving supply-chain visibility and expediting informed-decision making during a crisis. Here, some capabilities that matter are the ability to feed in news concerning potential supply-chain issues into the app itself.

Secondly, going through the effort of developing and updating your supply chain disruption scenario doesn't make much sense if your crisis management and business continuity solution doesn't enable digitisation of that scenario so that it is readily available to decision makers when disruption happens.

Add to that, those digitised playbooks should also have provisions for mobilising decision makers and crisis responders, and the app itself should have the capability to activate those actors, disseminate further disruption-related tasks, as well as track disruption-related decisions. In other words, the apps must act as a virtual nerve centre, especially while restrictions on in-person meeting still apply. Other relevant capabilities include:



Identify, assess, and manage the risks of disruption caused by the relevant disruption to products and suppliers



Track supply chain and supplier dependencies



Track parts or materials at risk of supply disruption



Record and manage actions and decisions made in response to those risks, to address or prevent blockages

Modern supply chains are complex and intricate. With points of failure existing everywhere, some might call them brittle. Many organisations, however, have made the financial decision to throw caution to the wind, prioritising efficiency.

But overly financialised decisions have costs of their own. The price, here, is reduced transparency, visibility, and agility.

Businesses don't have to keep paying that price, sailing blind into the inevitable, next supply-chain crisis. Instead, committing to visibility-promoting strategies, such as scenario planning, due-diligence exercises, coordinated partner communication, and appropriate critical event management technology, like Noggin, can help you reduce the risk of disruption, while achieving supply chain (and overall business) resilience.

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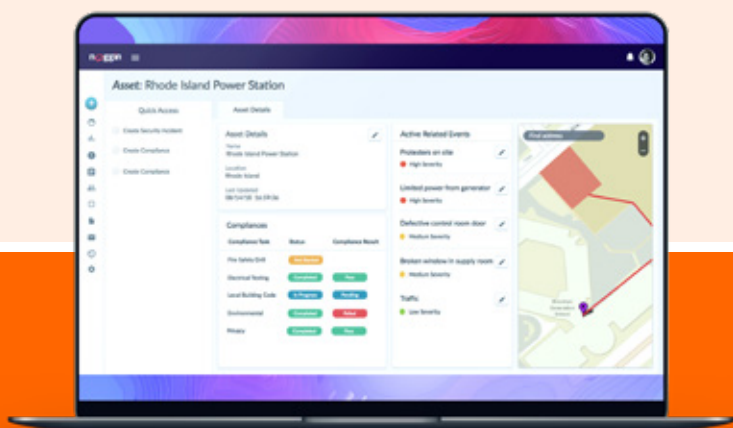
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