




 WHITE PAPER

Avoiding Supply Chain Uncertainty Through 2022

An aerial view of a city, likely Tokyo, with a dense grid of buildings and a major highway. Overlaid on the image are various digital and network-related icons, including a play button, Wi-Fi symbols, a magnifying glass, a padlock, and a location pin, connected by a network of lines and nodes. The overall theme is digital transformation and supply chain management.

Digital transformation for supply chain risk management is occurring in all industries.

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2021 has proven challenging for supply-chain professionals, with the instability unlikely to end soon. “For years, we had sort of taken logistics for granted,” Skrikant Datar, dean of Harvard Business School, told Bloomberg Businessweek. “The pandemic caused us to rethink it.”¹ Organizations continue to encounter unpredictability on all sides, and while the future remains unknowable, companies are discovering digital tools and platforms that are providing a confidence-boosting level of preparedness, especially for the turbulent state of global supply chains today.

Organizations like Walmart have taken notice. America’s biggest retailer increased its U.S. inventory by 20 percent in the second quarter of 2021 to sidestep product shortages during the holiday shopping season. Other companies, like mattress-maker Tempur Sealy and gadget king Apple, have warned of slower growth in the near term.²

So, to prepare your supply chain organization to better manage greater uncertainty, reassess the way you manage supply chain risk. Find digital platforms that not only improve your response to risks but help you predict challenges and potentially avoid them altogether. Digital transformation for supply chain risk management is occurring in all industries. Many companies are finding ways to turn supply-chain challenges into a competitive advantage that differentiates them in the marketplace.

What types of risk should supply chain professionals be wary of this year and into the next? How can organizations do a better job of predicting and managing supply chain risk?

¹Matthew Boyle. “Forget Finance. Supply Chain Management Is the Pandemic Era’s Must-Have MBA Degree.” Bloomberg Businessweek. 3 Sept. 2021. <https://www.bloomberg.com/news/articles/2021-09-03/business-school-mba-students-forgo-finance-for-supply-chain-management-degree?srnd=businessweek-v2>

²Thomas Gryta Theo Francis. “From Apple to Domino’s Pizza, U.S. companies are scrambling to meet surges in demand.” MarketWatch. 3 May 2021. <https://www.marketwatch.com/story/from-apple-to-dominos-pizza-u-s-companies-are-scrambling-to-meet-surges-in-demand-11620071873>



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How We Got Here

THE COVID-19 PANDEMIC EXPOSED WEAKNESSES

The Covid-19 pandemic created a sort of perfect storm for supply chains. Human resource constraints, closed ports and borders, and other unforeseen challenges revealed weaknesses in many long-established supply-chain resource management (SCRM) practices. Companies’ overreliance on “just-in-time” (JIT) manufacturing fell apart in a world where parts were no longer guaranteed to arrive within a six-hour window, if at all.

JIT worked well in a low-risk world, but depending on it made supply chains more fragile, especially as the world globalized and suppliers in low-wage and developing nations like China and India proliferated. “Just-in-time may be a well-meaning strategy to save money and avoid the stockpile, but it adds unnecessary pressure on every link in the chain to be perfect,” says Gabriel Smith, a pricing expert at Pricefx, producer of cloud-based pricing software. “When one part of the chain breaks, everyone downwind gets the blowback.”³

³“Just-In-Time Made the World Tardy: COVID-19 Revealed Manufacturing Cost Cutting Strategies May Have Gone Too Far, According to Pricefx.” BusinessWire. 28 June 2021. <https://www.businesswire.com/news/home/20210628005038/en/Just-In-Time-Made-the-World-Tardy-COVID-19-Revealed-Manufacturing-Cost-Cutting-Strategies-May-Have-Gone-Too-Far-According-to-Pricefx>



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EXTREME WEATHER EVENTS

Beyond the pandemic, supply chains are increasingly affected by severe weather events. Drought and wildfires have impacted Greece, Russia, and the American West and Upper Plains regions, while an unprecedented winter storm gripped much of the United States in 2021, with Texas, unused to such weather, particularly affected. Hurricanes, storms, and the flash floods that can accompany them have also wreaked havoc in Western Europe, China's Henan province, and sites in the United States from Tennessee and North Carolina to Louisiana and New York's tri-state area. "We see weather continuing to get worse, and it does not appear to be a phase," says Shehrina Kamal, vice president of intelligence solutions at Everstream Analytics, a supply-chain risk analytics firm.

In July 2021, floods inundated homes and businesses in Belgium, Luxembourg, the Netherlands, Austria, Switzerland, and Germany, killing at least 199.⁴ The devastation "led to production halts at supplier locations and washed out transportation links, like roads and bridges," says Kamal. Indeed, late shipments in three of the hardest-hit countries rose between 26 percent and 32 percent, reports FourKites, a supply-chain visibility platform.⁵ Floods in China caused similar disruptions, with SAIC Motor and Nissan both experiencing slowdowns or stoppages at their factories.⁶

Although the events were unheard of, it's useful to pause and consider how organizations may have responded had they had early indications of the stress their supply chains were facing. Solutions offered by providers like Everbridge and Everstream Analytics offer ongoing review of data derived from private networks and open source information, machine learning models, industry insights, local news, and a human network of partners on the lookout for both tactical and strategic risks. Whether the issue is a temporary port closure due a typhoon or a looming shortage of raw materials due to long-term civil unrest, the earlier you learn of a risk, the more time you have to avoid disruption.

⁴Marlene Lenthang and Bill Hutchinson. "Death toll in catastrophic European flooding: At least 199 dead, nearly 300 unaccounted for." ABC News. 19 July 2021. <https://abcnews.go.com/International/europe-flood-death-toll-surpasses-150-latest-updates/story?id=78899752#:~:text=LOG%20IN-,Death%20toll%20in%20catastrophic%20European%20flooding%3A%20At%20least%20199%20dead,efforts%20continue%20in%20Western%20Europe>

⁵"Impact of European flooding mapped." Logistics Business. 22 July 2021. <https://www.logisticsbusiness.com/it-in-logistics/impact-european-flooding-mapped/>.

⁶Dominique Patton. "From coal to cars, Chinese floods tangle supply chains." Reuters. 22 July 2021. <https://www.reuters.com/business/sustainable-business/coal-cars-chinese-floods-tangle-supply-chains-2021-07-22/>.



Unprecedented challenges to workforce management make it difficult for businesses to plan because outbreaks don't occur in concert or on any particular timetable, and nations' responses are elastic.

WORKFORCE SHORTAGES

Supply chain organizations also have labor challenges that are being exacerbated by the extended pandemic. The United States, for instance, has a dearth of truck drivers, a critical issue because almost 71 percent of all freight in the country is hauled by truck. While the problem has been ongoing since 2018, the pandemic has only added pressure.⁷

The trucking industry isn't the only one experiencing a crunch. An equipment wholesaler in the States can't fill openings for warehouse workers, while another manufacturer in Arkansas is having trouble finding unskilled factory workers to hire.⁸ In some cases, outbreaks of Covid-19, such as those at meatpacking plants in Iowa in 2020, strained production as workers were hospitalized or quarantined.⁹

While the meatpacking plant incidents affected more than 1,600 workers, just one case of Covid-19 can halt shipping too. When a single worker at the Meishan terminal in China's Ningbo-Zhoushan port tested positive for the disease, for example, all inbound and outbound container services there were suspended. The country has a zero-tolerance policy towards the disease, but not all nations are as strict. Unprecedented challenges to workforce management make it difficult for businesses to plan because outbreaks don't occur in concert or on any particular timetable, and nations' responses are elastic.

Daniella Genovese. "Truck driver shortage affecting deliveries nationwide." Fox Business. 13 Apr. 2021. <https://www.foxbusiness.com/lifestyle/truck-drivers-shortage-2021>

Bill Conerly. "The Labor Shortage Is Why Supply Chains Are Disrupted." Forbes. 7 July 2021. <https://www.forbes.com/sites/billconerly/2021/07/07/the-labor-shortage-is-why-supply-chains-are-disrupted/>.

Tony Leys. "Coronavirus infects more than 1,600 workers at four Iowa meatpacking plants." Des Moines Register. 5 May 2020. <https://www.desmoinesregister.com/story/news/health/2020/05/05/coronavirus-infects-thousands-iowa-meatpacking-plant-workers-covid-19-waterloo-perry/5170796002/>.



THE CASE OF THE MISSING SHIPPING CONTAINERS

Timetables have been disrupted not just by shipping delays but by exorbitant freight costs due to scarce shipping containers — not a shortage, per se, but a misplacement. When China and neighboring countries went into lockdown at the end of 2019, cargo ships that had already left the region deposited hundreds of thousands of full shipping containers throughout the Americas. Pandemic restrictions prevented the ships from loading those containers with goods to export back to Asia, so the containers remained at ports and inland rail depots.

Then, when global supply chains revived at the start of 2021, those same ports found it difficult to quickly load and unload the containers in time for ships waiting just offshore. Already tardy due to port congestion, many ships simply left their empty containers behind instead of waiting days to load them back aboard.

The number of containers at major import hubs grew and grew, while their supply at major export centers shrank. The problem compounded when the cargo ship Ever Given, which carried 20,000 containers, got stuck for six days in the Suez Canal, a primary channel in the flow of goods between Europe and Asia.



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How Businesses Can Surmount Today's Supply-Chain Hurdles

The many factors impeding supply chains today can seem overwhelming, but these disruptions are now board-level issues, with company leaders taking a hard look at the resiliency of their supply chains. Executives are open to transforming business practices to improve operations during this trying time. Risk managers are "starting to partner with their supply-chain companies to create true value and differentiation for their company," says David Shillingford, chief strategy officer at Everstream Analytics.

So, what commonalities do resilient and nimble businesses share? According to Shillingford, leading organizations confront supply-chain challenges when they:

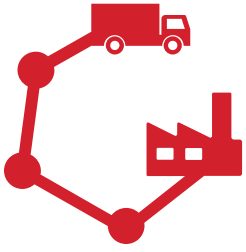
1. Evaluate all risks. Forecasting and monitoring any risk that could impact the supply chain is key. "Companies have to map out their supply chains not just to their suppliers but through the tier two, tier three suppliers," he says. "That necessitates an understanding of where their suppliers get their materials from."
2. Conduct an end-to-end evaluation of your supply chain. Understand your sub-tier supplier base and logistics network. What disruptions there would affect you? Know in advance who can provide alternative resources and reserve those before your competition can. Then, study your own ability to produce the goods, materials, or services. How resilient are your systems and processes?
3. Review risks in real time. Supply-chain management platforms that incorporate risk data in real time give decision-makers access to the most up-to-date information in dynamic situations. Knowing which ports are still congested, for example, can allow firms to plan a different route before departure and to share any new ETAs in case of delays with partners or customers. Leadership is empowered to react more effectively rather than sticking to prescribed responses that don't fit present circumstances. Companies gain significant visibility into their supply chains and a leg up on the competition.
4. Apply predictive analytics. Charting a course of action is easier when predictive models and analytics can illustrate potential outcomes. What freight routes are best in the face of an impending hurricane, for instance? Or, considering costs, predictive analytics can push organizations to expedite supplier deliveries when geopolitical events suggest higher prices on the horizon.

The Critical Role of Supportive Technologies

Paper maps dotted with pins marking the location of key suppliers and routes just isn't effective SCRM. Businesses need an incident-response solution like Everbridge's unified critical event management (CEM) platform that can alert customers of possible risks and the assets that may be affected. Instead of sifting through various, sometimes redundant systems, users can rely on an all-in-one CEM platform that provides a common operating picture. One comprehensive system can integrate the data that matters most to your organization, whether that's information about your suppliers, distribution centers and warehouses, shipping routes, or high value cargo — even vulnerabilities related to the pandemic.

For example, the Everbridge CEM platform tracks Covid-19 data like local guidance on lockdowns, mask requirements, and current infection rates. So, although localities have different public health approaches, your team can have a uniform view of the regulations and Covid-19 cases that may impact the organization's operations. Working from the same platform, decision-makers and formerly siloed teammates can more easily understand the potential effects and respond appropriately.





Ensure that your business has the tools and systems in place to meet any supply-chain crisis today and in the years ahead.

This common operating picture gives teams everything they need to respond: agreed-upon action plans, secure communications, situational awareness, and the capacity to enact a coordinated response across departments and locations, whether that involves a handful of teams or thousands of staff worldwide. Everbridge solutions also provide executives with custom dashboards that surface the information relevant to them. This information rolls directly up from tools for first responders or frontline workers, such as a mobile app for driver safety. “Drivers can check in, receive communications, and request help in an emergency,” explains Greg Mummah, solutions director at Everbridge. “Executives have a dashboard view that may include the driver’s situation or other relevant information for an incident.”

Once the incident has been resolved, a platform like Everbridge provides an audit log that lists all the actions performed. Teams receive a complete report of what happened and where bottlenecks arose, which they can then use for planning and tabletop exercises to mitigate future risks. “It’s much easier to develop a tabletop exercise that will address response shortcomings when you know exactly what those shortcomings are,” says Mummah. “Audit logs can help uncover that.”

Ensure that your business has the tools and systems in place to meet any supply-chain crisis today and in the years ahead. The current challenges are, by all accounts, unlikely to abate for another six to twelve months, so strengthening your ability to address issues now will only yield benefits in the future.

Grow your organization’s resiliency and agility today.

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Let's Talk

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About Everbridge

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