



Breaking News: Supply Chain Disruptions!

In 2019, who would have thought supply chain disruptions would make front page headlines in 2020?

But of course, they did. The COVID-19 pandemic was massively disruptive—perhaps the biggest Black Swan event since the epic financial meltdown of 2008. Bigger, in fact, because it was a global event, impacting everyone everywhere.

Manufacturers and businesses were locked down. Supply chains were stalled or halted because raw core materials could not be produced or distributed at previous levels. And spikes in demand for certain products caused shortages everywhere.

And it's still impacting us. Even as we've started to recover, we continue to feel its effects—such as shutdowns of major port terminals in China due to COVID-19 infections among workers.

We're still in the early stages, but so far, it's been a very disaggregated recovery for all constituents, from suppliers to manufacturers to distributors to retailers to governments... with many complexities involved.

Certainly, every industry was affected by the pandemic.

The health care industry, for example, had to meet the immediate mass demand for personal protective equipment. Safeguarding frontline medical staff, first responders and essential workers was challenging enough. But even after the vaccinations were developed, there were significant local regulatory issues and manufacturing challenges as well as global distribution hurdles to overcome.

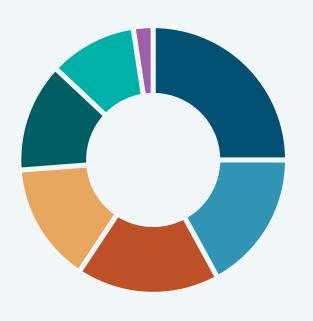
At the same time, mass hysteria about the imminent risk of essential home staples running out virtually cleared the shelves of every department and grocery store as people stockpiled everything from bathroom tissue to household bleach to bread flour. This forced manufacturers to find ways to step up production, while taking measures to ensure their workers were adequately protected against the COVID virus.

No question, the many supply chain challenges we all faced last year have raised some critical questions about how best to handle disruption. And while it's true that no one can predict the future, we can prepare for it. The question is how, and how much?





What external factor poses the biggest threat to your business in the next year?



25% Continued impact of COVID-19

17% International trade disputes (e.g., U.S.-China tariffs)

15% Geopolitics

14% Deglobalization

14% Climate change/environmental risk

12% Cyber risk

3% No external factor poses the biggest threat

Source: The Resilient Supply Chain: What Procurement Leaders Are Prioritizing in 2021 (Dun & Bradstreet Survey)

Continuous Monitoring of Supply Chain Data: An Essential Preventative Step

This eBook explores why, post pandemic, continuous monitoring of supply chain data is an essential tool for responding to and guarding against supply chain disruptions.

If nothing else, COVID taught us that there are events that we can't predict, but for which we can prepare nevertheless. By taking into consideration a broad array of fluid factors—the environment, economics, politics, individual company performance, and more—and continuously monitoring the data associated with those factors—it's possible to identify a potential problem early, and take action before it's too late.

What Is Continuous Monitoring?

When we refer to continuous monitoring, we're not speaking about a standalone product, feature, or solution in its own right. Rather, it's a tactic—part of a commitment to an overall data strategy that comprises a range of entities, processes, and technologies.

Aside from this, the simplest way to define continuous monitoring is that it answers two basic (but absolutely critical) questions about any product or service your company purchases:

- 1. Where does it come from?
- 2. What are its dependencies?

Continuous monitoring is about actively understanding how the world is changing, and how those changes — direct and indirect — are going to affect your supply chain and operations. So, continuous monitoring gives you the ability to ascertain current insights from your suppliers and the marketplace that are impacting or have the potential to impact your business. It's critical because it provides the most relevant data that are affecting your immediate, ongoing, and long-term needs.

The power of continuous monitoring is that it enables you to really understand why a previous decision has to change based on new facts. They're not just facts about your supplier—they're also external events affecting the marketplace that can impact your business.

The recent microchip disruption that stopped production for automotive manufacturers in the United States is a good example. The effect was a microchip shortage for a specific sector—but the cause wasn't because microchips had stopped being manufactured. Instead, it was because they were reallocated to other buyers when GM, Ford and Chrysler went offline to make respirators in response to the pandemic crisis (and in compliance with the U.S. government's Defense Act). The microchip manufacturers had to find other buyers to continue to survive.

Another way to look at it? Continuous monitoring shows the effect of the cause. It's about paying attention to everything that's going on—even if the events seem to be disconnected—and how they can have an impact on your supply chain.



What are your priorities for your procurement function in the next six months?

35%

Better ability to monitor supplier performance

33%

Better visibility into supplier spend

30%

Mitigating/decreasing third-party risk

29%

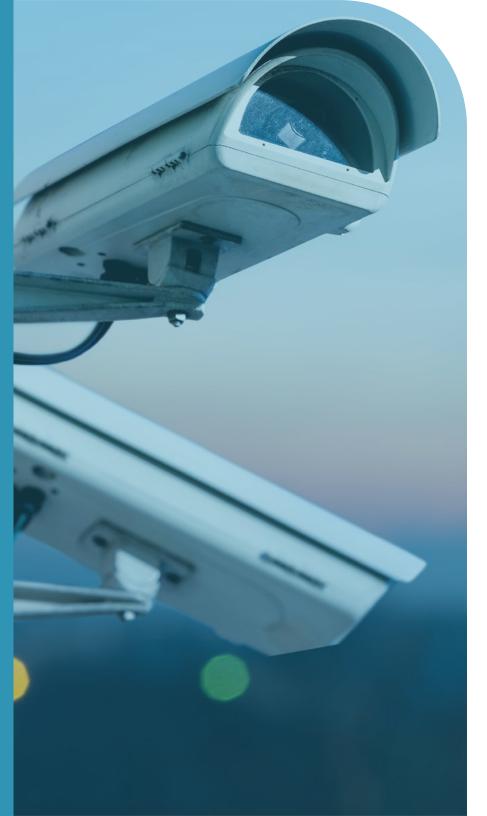
Reduced reliance on key suppliers

29%

Lower costs

(Respondents could select multiple answers)

Source: The Resilient Supply Chain: What Procurement Leaders Are Prioritizing in 2021 (Dun & Bradstreet Survey)



Five Categories of Continuous Monitoring for Suppliers

Where does it come from? What are its dependencies? All five categories of continuous monitoring answer these two basic questions about your supply chain, but with much more detail. Addressing each of these five categories will help ensure you have a comprehensive view of virtually everything that could potentially disrupt your supply chain, to help you take action before it happens.

> Continuous monitoring is not a snapshot—it's more like a video. It captures the real-time dynamics of the marketplace every day, hour, minute, and second, to give you the most accurate view possible.

ONE:

Identity

Is your supplier still who they said they were when you first engaged them?

The nature of any company is that it changes over time. It opens new locations and closes others. Hires and fires employees. Divests assets and acquires others. Modifies its product and service offerings, and changes its production processes.

If it's your supplier, any of these changes have the potential to adversely affect your operations by disrupting your supply chain. Are they still capable of meeting demand? What about quality control? International shipping? Cost control? Regulatory compliance? Environmental standards?



TWO:

Ownership

Is the ownership of your supplier still the same?

Of course, a company can change ownership, too. It goes public. Or it goes private. The company may well be supplying a good product, but if its money is being used to fund a terrorist organization (to use an extreme example), or they're flouting environmental regulations, or are undertaking any other unscrupulous business practices, it's obviously going to be problematic.

To help ensure you are doing business with owners who are reputable, it's critical to stay up to date on ownership. By continuously monitoring this aspect of the supplier, it's easy to do.



THREE:

Stability

Is your supplier as financially stable as they said they were?

The financial situation of any company is in a constant state of flux. A supplier's buying power can change over time. If it gets better, you can negotiate a better price. If it gets worse, you could be spending more than you need to.

Either scenario will affect profitability—positively or negatively—making it essential to monitor exactly where the supplier stands financially at any given time.

Another consideration: Suppliers can try to control their costs by changing the quality of their products. But their efforts to save money could be detrimental to the level of quality you require. If they choose to do a little less, deliver a little later, or change their own partners to save a dollar, this could have a negative impact on your business.

Ultimately, more information means more negotiation power for you.



FOUR:

Employment

Does your supplier have a consistent employment base?

There are several ways to monitor a supplier's employment situation. Do they have about the same number of employees as they did when you first engaged them? Are they still hiring? What are their retention rates? Employee satisfaction scores? What about experience levels, skill levels, certifications? And what are their practices concerning health, safety, well-being and the environment?

Answers to these key questions provide insight into how well the supplier can provide its products or services, and whether there are any immediate or long-term risks in continuing the relationship.



FIVE:

Adaptability

Is your supplier adequately prepared for external challenges?

It could be a natural disaster like a hurricane or earthquake or wildfire. It could be civil unrest, terrorism, or war. Or it could be a cyberattack. Whatever the threat, whether it's already happened or is imminent, a company needs to be prepared.

Does it have a response plan that's feasible? What are its specific plans for business continuity? Does it have the ability to recover quickly, and can you depend on it to continue to provide product to you?

After the horrific tsunami and earthquake hit northeastern Japan in March 2011, Toyota stopped all production of its cars—not because its plant was located near the disaster, but because the supplier of its unique pearl paint was. Suddenly, a competitive selling feature became a major operational liability.





Three key steps to prepare for disruption

"By failing to prepare, you're preparing to fail." It's an old adage, but it couldn't be more current, given the frequency of disruptions—natural and human-made—that have been occurring in recent years.

The COVID pandemic has been a wake-up call, making all of us recognize the necessity of anticipating disruption and preparing for it. But how? Where do you begin?

By taking these three steps, you can be better prepared for any disruption, whatever it may be.

> The more deeply you can monitor your network, the further you can see into it, and that gives you more competitive advantage.

ONE:

Set up a data surveillance network

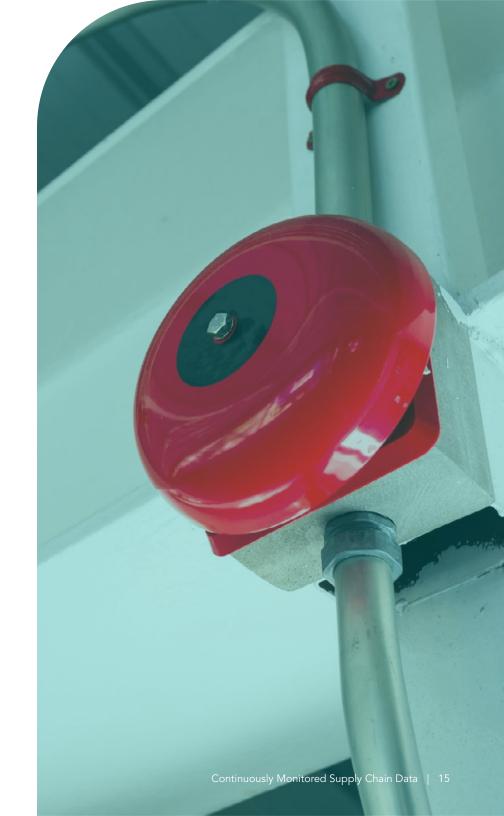
KNOW WHAT TO IDENTIFY, THEN OPERATIONALIZE IT

Think of this first step like putting a smoke alarm in your house. In one sense, it doesn't matter what the source of the fire is—kitchen, garage, bedroom—the point is, you can react immediately to the smoke, and then take action.

A data surveillance network is no different. It allows you to know when key changes are occurring, but not the specific change. You may not know, for example, that it's a hurricane or tsunami or flood or cyberattack — but you will know there has been some kind of operational disruption.

Knowing the root cause may be interesting, but from an operational point of view, it's not necessary. The network does not have to be that extensive because for the purposes of surveillance, the effect is more important than the cause. To operationalize it efficiently, you don't need to know why the supply chain got disrupted, only that it now has some vulnerability.

You just need to be able to read the signals. Only then can you take action.



TWO:

Integrate it

TURN THE SURVEILLANCE NETWORK INTO A DISCIPLINE

Establishing the data surveillance network is the critical first step. The second step is to ensure you have an external or internal team that's actively overseeing the monitoring and will alert you when an anomaly is identified.

Having a dedicated monitoring team (or individual) enables you to focus on day-to-day business operations with the confidence that potential risks can be easily and immediately identified, helping to ensure you maintain business continuity.



THREE:

Have a response network

HAVE AN ACTION PLAN IN PLACE

Moreover, you need to have a response strategy—specifically, a list of go-to alternative suppliers that can be immediately engaged to adequately deal with the event.

Unfortunately, this is where many businesses fall down. If, for example, the selection criteria for the alternative suppliers are too strict, or the RFP and negotiation processes too stringent, it's likely that those alternative selections will not be made until, of course, it's too late. The idea is to have the capability in advance to initiate a backup response—the "bench strength" to help ensure business continuity.

When you have a reserve of pre-approved vendors you can switch to, combined with a streamlined onboarding and engagement process, it's far easier to respond successfully and maintain workflows.



COVID was not the only disruptive event in recent years

BUT IT HAS TAUGHT US TO BE BETTER PREPARED

If anything good came out of the tragedy of the pandemic, it would be that we are all more aware than ever of the potential harm that unforeseen disruptions can have on societies, governments, markets, and business operations.

It has made us all the more vigilant about a wide array of outside forces—economic, social, political—that are beyond any single organization's immediate control.

The recent **tariff wars** between China and the United States, for example, had a huge impact on the supply chains of the microelectronics, hardwood, and agricultural industries.

The groundswell of support for **environmental stewardship** and resulting corporate policy changes shone a brighter light on regulatory compliance and procurement practices. And the recent Black Lives Matter movement, too, has raised more awareness about inclusive and equitable employment practices.

And there are other disruptive forces—climate change being the most prominent. Coastal flooding, extreme cold, extreme heat, and drought are all occurring with greater frequency around the world—all of which are affecting supply chains.

The power of continuous data monitoring

MANAGING RISK BY MAKING SENSE OF DATA

One of the most powerful and influential forces in recent years (and the one over which we can have the most control) is technological innovation. As technological complexity continues to accelerate, continuous monitoring can play a more significant role in terms of performing risk evaluations, examining financial ratings, or determining cyberrisk ratings.

Continuous monitoring is a prism of advanced data analytics, machine learning, and artificial intelligence technologies, all working together a multi-sided, comprehensive set of outside-in windows into virtually every aspect of a supplier ecosystem. Depending on the complexity of the supply chain being monitored, analytic models can be as universal or as granular as a user needs them to be, providing real-time macro and micro insights in the form of core predictors, scores and ratings.

Suppliers, for example, can be rated based on the statistical probability they will cease operations, file for bankruptcy, or become inactive. They can be assessed based on potential vulnerabilities to cyber threats, legal challenges or financial issues. They can be analyzed according to country and location, with detailed assessments of the country's political, commercial, economic and sovereign risks.

Just about any indicator can be identified and used as a trigger to alert the monitoring team that a potential risk is imminent. Ultimately, the goal is to absolutely avoid any disruption in the supply chain by having advance notice, and taking control of it.

1

Next steps

QUESTIONS YOU SHOULD ASK ABOUT CONTINUOUS MONITORING

"What is our present level of visibility into our current suppliers?"

Are you confident that you know—really know—your supply network? Consider scoring your visibility into how individual suppliers operate and perform on a scale of 1 to 10. Where do you have missing data? Some criteria may include:

- the last time supplier addresses were updated or validated;
- confirmation of the correct ownership;
- validation of total spend with each critical supplier (including all subsidiaries);
- knowledge of all suppliers supporting your highest-value product lines, infrastructure, and/or core technologies; and
- how your suppliers are performing around ESG (environmental, social, and governance) themes.

2

Next steps

QUESTIONS YOU SHOULD ASK ABOUT CONTINUOUS MONITORING

"What are the key criteria we should use in our monitoring efforts?"

Consider what is most important to maintaining your supply chain. Which areas are most critical to ensuring business continuity and performance? Are there legal, environmental, financial, ethical sourcing, or employment standards that need to be followed? When is the last time you fully reviewed your suppliers' levels of compliance with these standards?

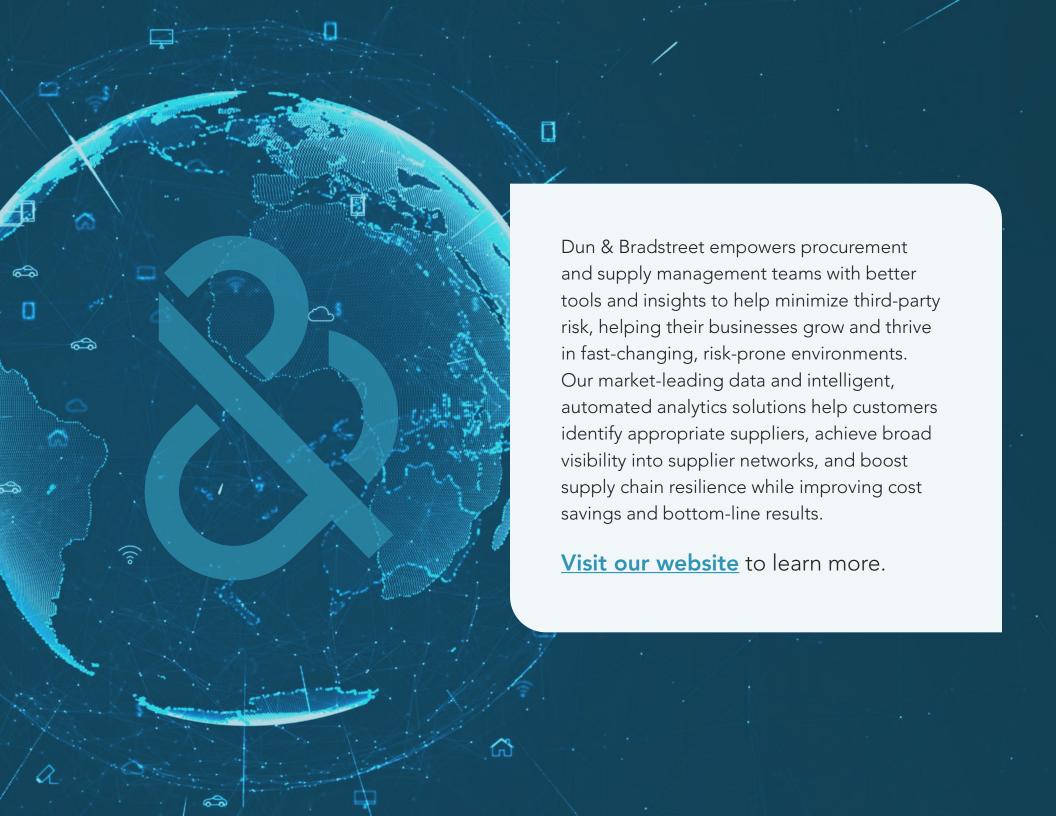
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Next steps

QUESTIONS YOU SHOULD ASK ABOUT CONTINUOUS MONITORING

"What are the criteria for selecting a dedicated supplier monitoring team?"

Do you have the internal expertise to establish, manage and maintain a continuous monitoring initiative? Make an assessment of the people, processes and technologies required to help ensure you have greater visibility into your suppliers. Who is going to be notified when a monitoring alarm is triggered? How do they drill down to the specific supplier that triggered the alarm? What tools will they have to investigate, capture feedback, and take appropriate mitigating actions?



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