



Risk Report 2021

What We Can Learn From
The Year That Changed Everything:
Procurement & Supply Chain Lessons



Foreword

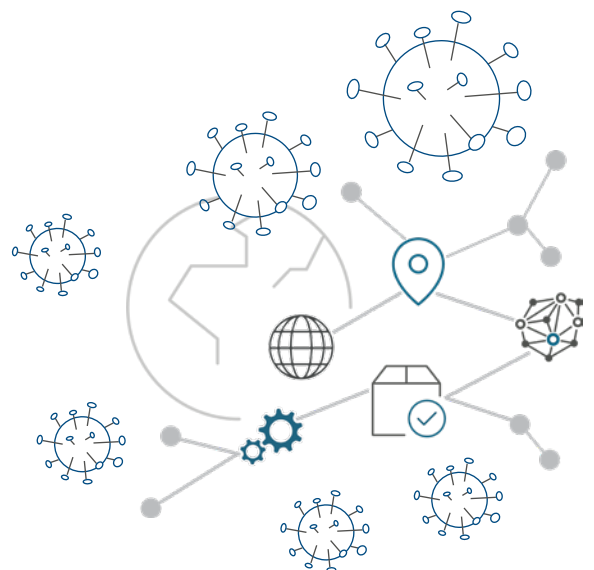
The year 2020 will be one for the history books. As the coronavirus pandemic spread, subsided, and spread again, the only constants were change and disruption. This dynamic shined a spotlight on supply chain management.

Everyone paid attention – executive boards, investors, the media, and even the general public. As organizations strive to become less vulnerable, the subject of supply chain risk has risen in management agendas.

It has become company-wide task that can't be ignored. Now, holistically managing supply chain risk is a must for both surviving and thriving.

Today, organizations must build resilient and risk-aware supply chains that protect against supplier failure, market volatility, political instability and more. It requires us all to embrace change. The COVID-19 pandemic ushered in a new era of risk – and the complexity is here to stay.

We at Sphera [formerly riskmethods] recommend managing supply chains, along with vendors and third parties, using a total view of risk, which empowers procurement and supply chain professionals to face the future with confidence, and competently master whatever challenge this new era brings.



Executive Summary

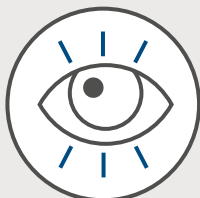
Supply chain risk is pervasive and constant. In recent years, dealing with natural disasters, trade wars, Brexit, economic uncertainty, cyberattacks, and political unrest became the norm for global organizations. But today, the term “new normal” has taken on a much different meaning. The pandemic completely dominated world events in 2020 and early 2021, and in the process, unleashed new threats and cascading risks across the global supply chain.

Yet, while pandemic threats rose by 50 times in 2020, they still accounted for only 4 % of total risk. This signals that despite the severity of the pandemic, procurement and supply chain professionals cannot afford to lose sight of the warning signs for the 96% of other risks in the market.

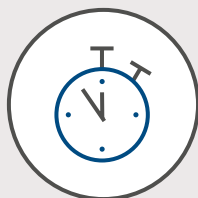
The data used in this report is based on **Sphera Risk Intelligence**, our real-time risk monitoring system that sends warnings of risk events for over 740,000 risk objects such as suppliers, locations, ports, enterprises’ own sites, and customer sites worldwide.

By looking at the top supply chain threats that affected organizations in 2020, and comparing these to 2019, this report will demonstrate how quickly risk management priorities can change. We draw insights from the shifts in various types of risk throughout the past year, and apply these for the future.

Our goal:
To show the complexity of supply chain risk and demonstrate the need for a strategic, agile, proactive, data-driven, total view of risk.



Be risk aware



React faster



Be proactive

Review 2020: The COVID-19 Crisis

Sphera [formerly riskmethods] has been tracking the impact of COVID-19 on global supply chains from the very start. In fact, **our first early warnings in January 2020 allowed customers to take action**, such as securing buffer stock, before the full effects of the pandemic hit their businesses. While supply chain threats and risks are not new, the scope, scale, and rapid pace of disruption in 2020 was unlike anything we've ever seen.

During the onset of the pandemic, efforts to contain the spread of the virus included:

- quarantine measures
- lockdowns
- border closures
- production stops

For commerce and industry, these measures resulted in:

- supply shortages
- labor shortages
- sourcing challenges
- logistics limitations

Further consequences included a dramatic change in consumer behavior. These factors made predicting or adapting to supply and demand even more complex. **From February to March, the overall number of risk alerts increased by 55 %**, and remained at a high level through April before slowly dropping during the summer months.

As we entered the second half of the year, many organizations had resumed or ramped up production. But with a second wave of lockdowns and closures looming, global supply chain issues remained. Organizations faced capacity limits, product shortages, and for many, a substantial decline in revenue and orders. The economic impact cascaded across the market, with many suppliers struggling financially well through the end of 2020.

In fact, financial risk represented nearly half (48 %) of all risk alerts, or warnings, sent out by Sphera [formerly riskmethods] in 2020.

In addition, several key indicators of supplier financial instability steadily increased during the second half of the year, including ownership structure (46 %), and field issues, which are problems with a product or service, such as product safety risks, also rose (46 %). Force majeure warnings increased (34 %).

What enterprises can learn from such statistics is that, compared to pre-pandemic conditions, a growing number of suppliers are facing financial instability.

The risk that such suppliers will fail, and disappear, remains high. Enterprises urgently need a proactive mitigation strategy to cover any losses and resulting shortfall in supply.



The Top 10

Risk Indicators 2020 versus 2019



In 2020, the top risk indicators were led by revenue and growth outlook (25 % of warnings overall), followed by ownership structure (15 %). Employee stability took the third spot on the list with 12 % of all warnings. Business partner fines (7 %) and risk and field issues (5 %) rounded out the top five.

Not surprisingly, pandemic disease outbreak broke into the top 10, accounting for 4 % of all warnings in 2020. Disasters at location, disasters at business partner sites and industrial disputes weighed down organizations, particularly in the automotive, chemicals, industrial manufacturing, electronics, and consumer goods spaces – which all rely upon large and tiered supply bases to produce the parts necessary for products.

Similarly, in 2019, Sphera [formerly riskmethods] data indicates that ownership structure (19 %), key employee stability (14 %) and revenue and growth outlook (11%) were the leading risks affecting global supply chains. Again, these were followed by business partner fines or penalties (9 %) and field issues (7 %).

As you can see, compared with 2019, the majority of the **top risk indicators**, specifically the top five lists, **remained relatively stable**. Financial health of suppliers remains a top risk concern. However, while the types of risks remained more or less consistent, the pandemic ushered in new and worsening threats across global supply chains.

The Top 10

Understanding Risk Indicators

When **supplier financial stability risk** increases, that potentially **impacts the buyer**, their ability to source the goods, materials, and services they need to successfully carry out business operations.

Financial risk indicators such as revenue and growth outlook, ownership structure, key employee stability, and business partner fines and penalties consistently top the list of threats affecting global supply chains. They **warn of potential supplier financial stability risk**:



Revenue and growth outlook relates to events relating to individual companies, such as missed revenue targets, or other indications for decreasing financial performance.



Ownership structure includes potentially destabilizing events such as an acquisition or sale of a supplier.



Key employee stability refers to C-level employee leaving the organization. Executive exits could signal a downward trend in the supplier's financial health.



Business partner fines and penalties contribute to an organization's regulatory and legal risk of non-compliance to relevant laws, or standards. Increasingly, enterprises are being held accountable for violations within their supply chains.

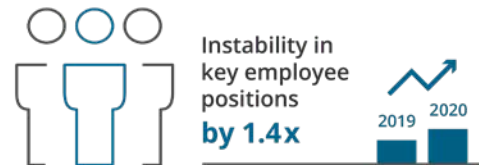
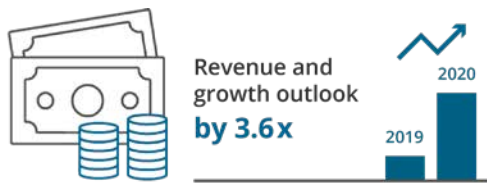


And of course in 2020, **pandemic-disease outbreak** inched its way up the list. This indicator refers to county-level threats like emergency declarations.

Our data is based on **Sphera Risk Intelligence**, our real-time monitoring system that creates warnings for risk events. Monitoring threats is critical for mastering supply chain risk. When talking about "risk indicators" we're referring to **factors or events that contribute to a certain type of business risk**.

They have the **potential to disrupt supply chains**, or belong to a series of events that can result in disruption. For example, risk indicators relate to specific incidents such as bankruptcy, or product release delays. Such incidents can indicate decreasing financial stability of a supplier.

INCREASE IN NUMBER OF EARLY WARNINGS FROM 2019 TO 2020



Sphera Supply Chain Risk Management [formerly riskmethods] sends warnings to customers to alert them of potential supply chain disruption.

Source: Sphera Risk Intelligence Jan 2019-Dec 2020 © Sphera 2023. All rights reserved.

While the top risk indicators from 2019 to 2020 remain consistent, the quantity of supply chain risks increased significantly.

Driven by the disruptive effects of COVID-19, the number of potential risk events identified by Sphera [formerly riskmethods] increased 57% compared to 2019, representing a significant increase in the threat of supply chain disruptions last year.

These shifts demonstrate the major toll the pandemic had economically and operationally on supply chains. The rise in cyber risk is particularly interesting to note.

While cyber risk accounted for just 1% of total risk in 2020, throughout the year it increased by nearly 150%. One factor is the shift to less secure networks as employees began working remotely, opening up organizations to new vulnerabilities.

At the same time, it's important to remember that non-pandemic related risks still exist. For example, natural hazards including flash floods made the top 10 list, while extratropical storms, and tropical cyclones made the top 20 list of risk indicators. More risk for your company will result in more disruption if you are not prepared to respond to and mitigate risk.

Comparison: Business Risk in 2020 vs 2019

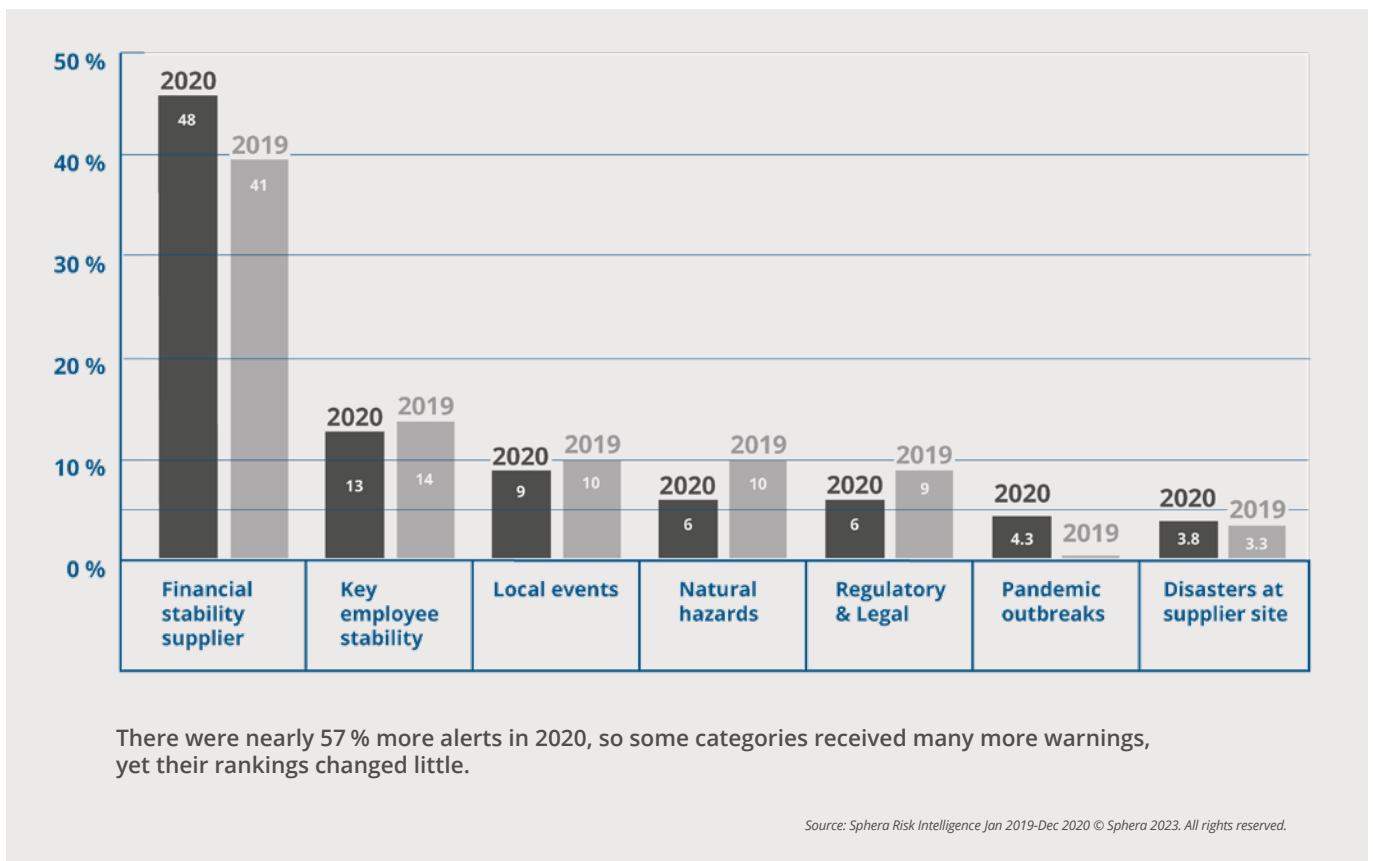
The above section analyzed the top 10 risk indicators that contributed to various business risks. This section will discuss the broader category of business risks.

In 2020, nearly half (48 %) of all warnings focused on indicators that contribute to supplier financial stability, followed by key employee stability (13 %) and local events (9 %). These local events include civil unrest, terrorist acts, man-made disaster at location such as fires or explosions, and power outages.

Similarly, in 2019, the top threats to organizations were related to supplier financial stability, (41 % of all risk) and key employee stability (14 %). Natural hazard and local event risks followed closely, both at 10 %.

TOP THREATS TO ORGANIZATIONS 2020 VS 2019

Percentage of warnings related to various business risk categories



A Closer Look at Financial Risk

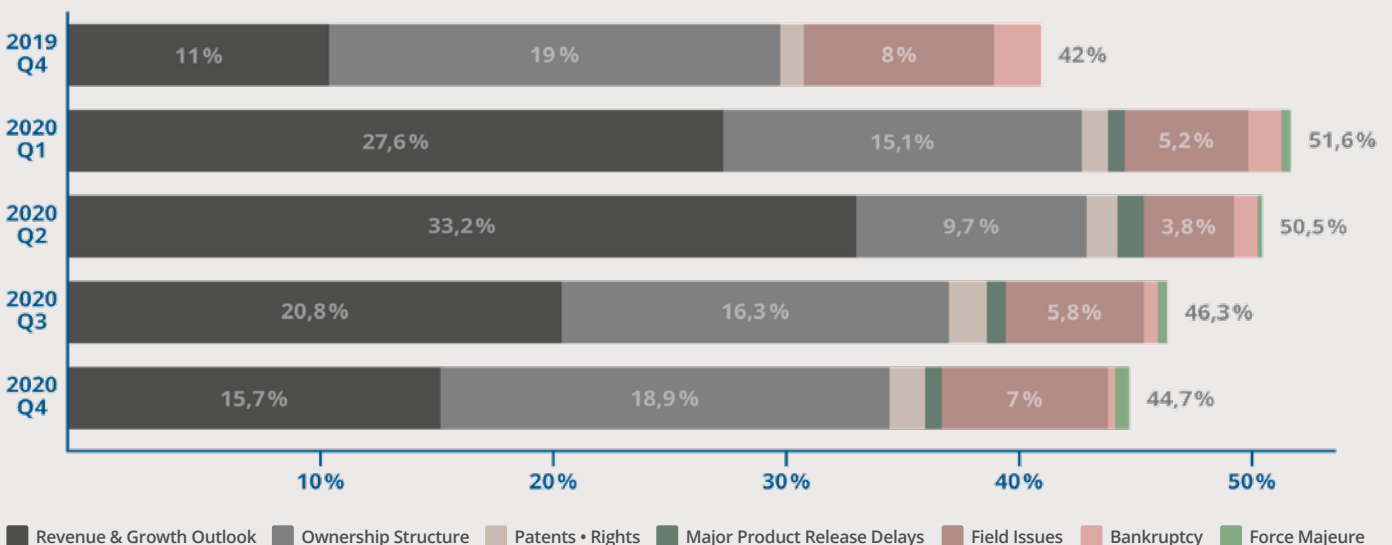
Financial stability of suppliers – the largest category of risk facing global supply chains – grew from 41 % of total risk in December 2019 to nearly 52 % during the peak of the pandemic in early 2020. **Financial risk indicators ended the year at a high 45 % of total risk.** This reveals the uncertain economic conditions caused by the pandemic. A consistently high and rising level of risk warnings show that monitoring the financial stability of suppliers is a key priority for supply chain and procurement professionals in 2021.

The financial stability category is comprised of seven **key indicators**:

-  **1.** Revenue and growth outlook
-  **2.** Ownership structure
-  **3.** Patents and rights
-  **4.** Major product release delays
-  **5.** Field issues
-  **6.** Bankruptcy
-  **7.** Force majeure

FINANCIAL STABILITY SUPPLIERS

Risk Significance in 2020 | Relative Change In Importance



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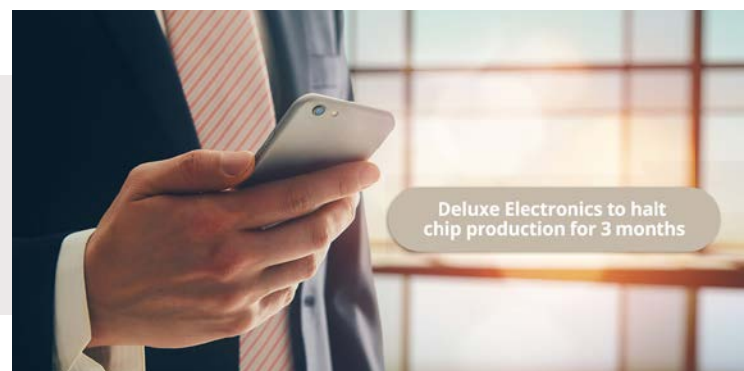
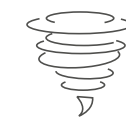
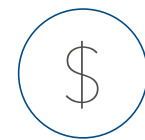
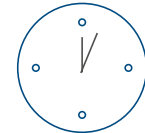
Of the financial risk indicators, the most warnings were sent for **revenue and growth outlook, which increased by 252 %** compared to 2019. As this indicator reflects future confidence, it is critical that enterprises continually monitor the financial health and stability of their suppliers.

Major product release delays increased by 302 %.

Here, the red flags of potential supply shortfalls demand that companies conduct a rapid impact analysis. A comprehensive mitigation strategy includes an overview of the entire category. Delays could also signal or trigger financial distress.

Overall, compared to 2019, instances of **bankruptcy decreased by 4 %** in 2020. However, this number conflicts with the high number of warnings on revenue and growth outlook. Government support given to many businesses has likely delayed consequences. Yet the situation is a ticking time bomb. In 2021, as support dwindles, we expect an increase in insolvencies and in the number of organizations filing for bankruptcy. As bankruptcy is the final curtain for suppliers, risk-aware enterprises develop proactive measures, such as qualifying alternative partners, before it is too late.

Force majeure is when businesses claim that forces beyond their control prevented them from fulfilling their contracts. Compared to 2019, **force majeure claims increased by 124 %**. With real-time data, you are able to determine whether events continue to affect overall operations.



Risk Development 2020 by the month

The amount and kind of risk events continued to change over time. When the coronavirus outbreak first started to take shape in December 2019, Sphera [formerly riskmethods] data showed an increase in lockdowns, quarantines, boarder closures, and other mandates that disrupted global commerce.

By January 2020 early warning signs of financial instability and distress of suppliers began to rise, corresponding with the first wave of COVID-19 outbreaks in Q1, and again during the second wave in the fall. Here, we follow some key indicators and categories as they shifted throughout the year.



Compliance

When it comes to compliance risk, Sphera [formerly riskmethods] saw a decrease during peak COVID-19 outbreaks, dropping from 13 % in January to 5 % in April. However, we then saw this steadily increase to reaching its highest level of 15 % in December. This could indicate that new suppliers were onboarded rapidly, with risk becoming apparent later.

Sphera Supply Chain Risk Management [formerly riskmethods] helps you ensure compliance, both when onboarding new suppliers and by providing continuous monitoring. The rising risk of compliance violations underlines the need for sophisticated risk strategies just to stay up to date with regulatory changes, particularly in industries such as healthcare, pharmaceuticals, aerospace and defense.



Natural hazards

While the individual environmental disturbances differ from year to year, overall they represent 5 % -10 % of all risk alerts. Flash floods made it into the top ten risk indicators. This category includes earthquakes, volcanos, river floods, tropical cyclones, wildfires, extratropical storms, hailstorms, storm surges, tornadoes, and tsunamis. In 2020, Sphera [formerly riskmethods] identified a 7 % increase in flash floods, a 7 % increase in tropical cyclone events, and a 2 % increase in wildfires. The key is to monitor this risk area, as individual events are difficult to predict, yet a single risk event has the potential to cut off entire industry sectors from supply. It could dismantle logistics hubs, or cripple infrastructure such as power grids from the affected region, and could affect your alternatives in the same geography.

The changing nature of threats means you have to be up to date on risk development, and have mitigation activities ready so you can respond quickly. Then, going from reactive to proactive risk mitigation helps move enterprises toward greater supply chain resilience.



Disaster at supplier site

This category refers primarily to man-made events such as fires or explosions. Overall, between 2019 and 2020, the number of warnings of such incidents increased 81 %. These risk incidents peaked in March 2020 at 5 % of all warnings, dropping to 1 % in October, and then back up to 4 % in December. Yet each individual event usually represents an enormous effort for the affected supplier and their partners. Effects can reverberate throughout various industries. For example, 2020 plant fires and explosions had significant consequences for semiconductor production, and were a factor in later global shortages.



Key employee stability

Interestingly, key employee stability risk reached an early peak of 16 % back in January 2020 and then dropped down to 8 % in April 2020, during the peak of COVID-19 outbreaks. We then saw a steady uptick, reaching 14 % in June, and continuing to rise through the end of the year. This is likely due to organizations looking to leadership to guide them at the onset of the crisis. As time went on, executives might exit as they recognize declining financial health. Business partners should be aware that a change in leadership could signal impending difficulties.



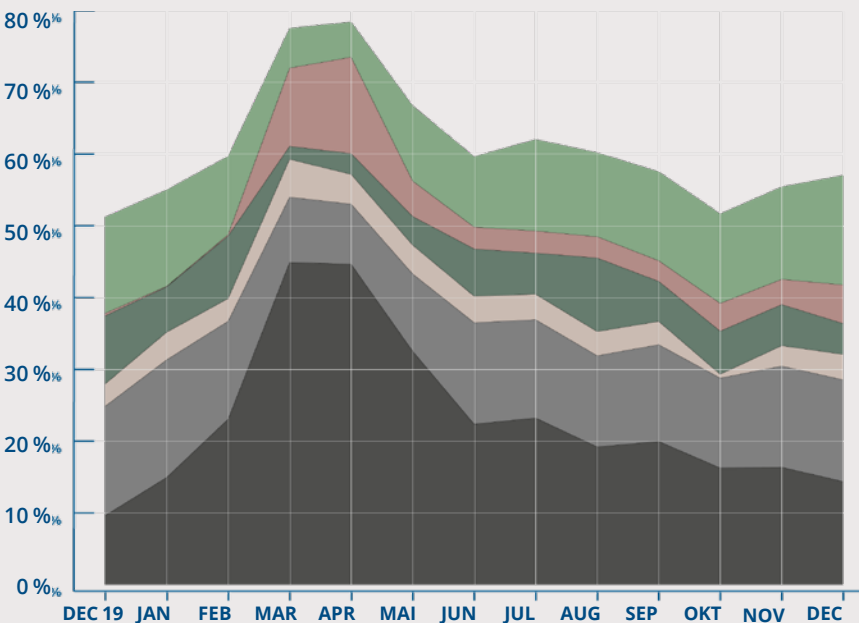
Revenue & growth outlook

Revenue and growth outlook, for example, jumped from 15 % of total risk in January to 23 % in February. In March and April, that indicator peaked at 45 % of total risk before steadily sliding back down to roughly 14 % in December 2020 – still significantly higher than the low of just under 10 % in December 2019. What is the significance? Even before insolvency, if financial performance is faltering, organizations might restructure, with shifts in investment or staff. This could lead to cascading events including factory closures, strikes, or discontinuation of product lines.

RISK DEVELOPMENT: CHANGE IN TYPES OF RISK

DEC 2019 – DEC 2020

Source: Sphera Risk Intelligence Jan 2019-Dec 2020 © Sphera 2023. All rights reserved.



During 2020, the amount and kinds of risk event changed. Some were highest in the spring, others rose toward the end of the year.



COMPLIANCE

JAN 13 % • APR 5 % • DEC 15 %



PANDEMIC

JAN 0 % • APR 13 % • DEC 5 %



NATURAL HAZARDS

JAN 10 % • APR 3 % • DEC 4 %



DISASTER AT SUPPLIER SITE

JAN 3 % • APR 4 % • DEC 4 %



KEY EMPLOYEE STABILITY

JAN 16 % • APR 8 % • DEC 14 %



R&G OUTLOOK

JAN 13 % • APR 45 % • DEC 14 %

Top Risk Events of 2020

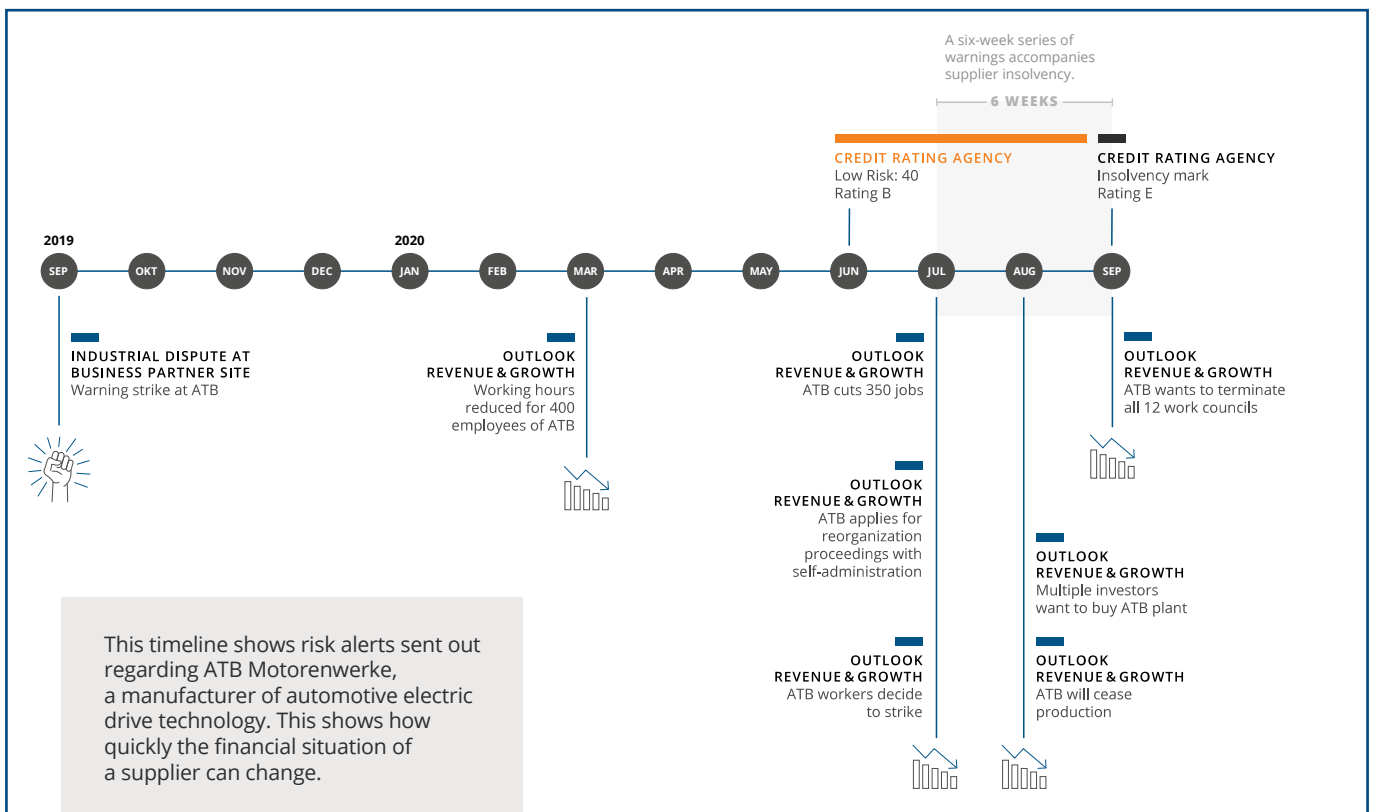
When analyzing examples of major disruption with serious consequences in 2020, it becomes clear that risk events do not happen in a vacuum. If you are aware of the warnings, you can avoid or mitigate the impact. Three examples of impending financial health risk include ATB Motorenwerke, Novares, and Swissport. We also look at the background to the global semiconductor shortage to illustrate that a range of different types of risk events can cause serious disruption to supply chains in various industries.

1. Revenue and Growth Outlook Risk

ATB Motorenwerke, a manufacturer of electrical drive technology, ceased production and filed for bankruptcy in September 2020. The first early warning sign occurred in September 2019, when employees at the facility went on strike. Then in March 2020, 400 employees of ATB were put on short-term work. That July, ATB cut 350 jobs, applied for reorganization proceedings, and workers went on strike again. In August, multiple investors sought to purchase the ATB plant, which had by then ceased production.

DISTRESS AND FINANCIAL DECLINE

ATB Motorenwerke



This timeline shows risk alerts sent out regarding ATB Motorenwerke, a manufacturer of automotive electric drive technology. This shows how quickly the financial situation of a supplier can change.

With **Sphera Supply Chain Risk Management [formerly riskmethods]** you can accompany such **changes in real time**, and make sound decisions in **your sourcing strategy**.

A German automotive manufacturer tracks financial health of its supplier base by using **Sphera Supply Chain Risk Management [formerly riskmethods]** along with regularly updated information from a credit ratings agency. In mid-2020, our solution **sent seven early warnings** of a supplier's financial distress in the **six weeks before the credit ratings agency changed the rating**. With advance warning, the automaker was given valuable time to start mitigation, as time is money.

Source: Sphera Risk Intelligence Jan 2019-Dec 2020 © Sphera 2023. All rights reserved.

2. Staff Disputes and Pandemic Outbreak

Based in France, automotive plastic parts supplier Novares closed a subsidiary (Forplast) in mid-2019. Employees at a Novares plant went on strike in January 2020 following a failed merger. As the coronavirus spread, Novares shut down sites in Wuhan and declared force majeure. In March, with rising shipping costs and logistics delays from China to Europe, the company opened a receivership procedure. Following a cash injection in May, it exited pre-receivership. Fast forward to fall, when the company experienced recurring industrial disputes. Then in November 2020, a fire at a US-based facility caused \$300,000 damage.

3. Financial Distress and Pandemic Outbreak

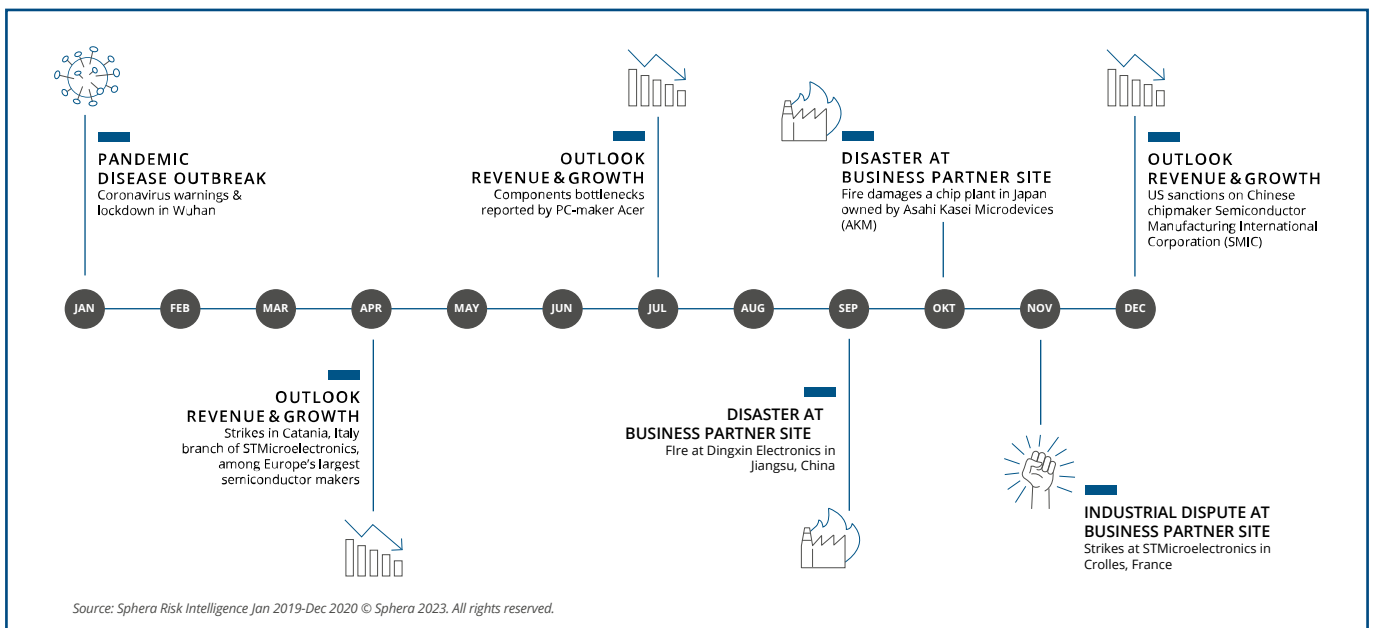
Back in February 2020, Swissport, one of the world’s largest ground handling companies was on the verge of being sold by Chinese conglomerate HNA for a big discount. Then in March 2020, after being hit hard by the onset of the pandemic, the company filed for financial aid with the Swiss government. In April, with airport operations still at risk due to COVID-19, Swissport threatened bankruptcy. In November, Swissport cut 3,200 jobs in the UK. In December, Swissport completed a financial restructuring and ownership transfer from HNA Group to new shareholders.

4. Multiple Forces Contribute to a Global Semiconductor Shortage

Throughout 2020, a worldwide shortage of semiconductors began causing consumer-electronics product launch delays. Then many carmakers were forced to halt or slow production due to a lack of components. The shortage was caused by seemingly unrelated events such as pandemic lockdowns, tightened US sanctions of China, labor unrest, and fires at supplier and sub-supplier sites. The shortage continued to cripple automotive and electronics production into 2021.

DRIVERS OF THE SEMICONDUCTOR SHORTAGE

Excerpts from 2020 risk warnings timeline



Sphera Supply Chain Risk Management [formerly riskmethods] helps you understand risk patterns, along with the potential impact of threats, so you can make better decisions and proactively begin mitigation.

Watching for Aftershock Effects on Risk

As organizations and countries continue to recover from the pandemic, Sphera [formerly riskmethods] nonetheless expects continued COVID-19 aftershocks related to economic uncertainty and financial stability. We may see a shift in risk areas that figure prominently, arising from the changing conditions of 2020. That's why you need relevant insights that enable you to adhere to new requirements, such as new supply chain initiatives and stronger regulation of supply chains.

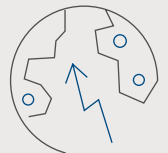
→ Compliance

Societies and economies are increasingly focusing on compliance risk in their supply chains. European countries, most recently Germany and France, are set to require companies to be more vigilant in identifying risks of human rights, health, security or environmental violations in their supply chains. The UK is strengthening its Modern Slavery Act's transparency legislation. In the US, a broad review of supply chains evaluates their resilience and ability to secure vital goods such as medicines, hospital supplies, large-capacity batteries, critical minerals, and semiconductors.



→ Geopolitical

Even before the outbreak began, increased taxes and tariffs on goods from China, and the potential brand impact of sourcing overseas, sparked a shift toward regional sourcing. In addition, some industries – particularly in aerospace and defense, pharmaceuticals, as well as medical devices – are mandated to source and produce a certain percentage of output regionally. However, with additional suppliers comes more complexity, more possibilities for disruptions, and more options for procurement and supply chain leaders, which makes factoring in the total cost of risk is all the more important.



→ Cyber

Cyber risk is likely to move up in priority in 2021. With more employees in less secure home environments, vulnerability of supply chain information systems will increase. Another factor is the increasing digitalization of processes within and between enterprises. Often, the cyber susceptibility of your suppliers directly compromises your own security, as threat actors seek the weakest link in the chain, then move laterally to attack your infrastructure.



→ Environment

As conditions stabilize, expect to see more organizations prioritize sustainability, environmental, and corporate social responsibility (CSR) risk in 2021. Climate change issues were rising in importance before COVID-19, but took a back seat to the pandemic. In view of natural hazards and their potential for disruption, including knocking out essential infrastructure, climate-change risk is set to make a comeback in awareness.



Supply Chain Risk Management: What You Need To Know

If there are two risk management lessons that organizations can learn from the coronavirus crisis, it's that risk can strike at any time and that most organizations were underprepared to handle a crisis of this magnitude. It is critical to optimize the strategic composition of the supply chain to manage future uncertainty and become more resilient.

This requires organizations to put greater emphasis on diversifying suppliers and achieving a total view of risk – and overall, moving from being reactive to risk aware and prepared. **A risk-aware organization factors in the cost of risk with every decision**, is equipped to stay on top of all the potential threats to the supply chain, and remains positioned to quickly enact contingency plans when crisis strikes.

For crisis recovery and supply chain continuity, Sphera [formerly riskmethods] has built an **effective response framework** built on four pillars as enterprises move toward **greater resilience**:

1. Secure supply
2. Evolve your sourcing paradigm
3. Enhance supply network management
4. Become a risk aware enterprise

Achieving Supply Chain Resilience

Framework for Recovery and Continuity

Framework for Recovery and Supply Chain Continuity	▶ Crisis short-term	▶ Recovery mid-term	▶ New Normal long-term
<p>Secure Supply Ensure that your existing supply chain is not impacting your ability to meet customer commitments.</p>	React to events	Expand threat detection and effectiveness of your response	Risk preparedness through comprehensive identification & remediation planning
<p>Evolve Your Sourcing Paradigm Enhance your sourcing program to be better equipped to expand and manage supplier relationships.</p>	Seek alternative suppliers ad hoc	Ensure new sourcing decisions are both rapid and considerate of risk	All aspects of supplier relationship management now prioritize risk, especially awarding business
<p>Enhance Supply Network Management Extend your ability to understand dependence and collaborate with your supply network.</p>	Establish criticality of supply as disruption occurs	Determine critical supply dependencies and conduct priority sub-tier visibility efforts	Strive for end-to-end visibility in combination with collaborative risk management
<p>Become a Risk-Aware Enterprise Transform your supply chain risk management processes to survive and thrive.</p>	Dedicate additional resources to risk management	Expand the importance of risk in decisionmaking while formulating broader process improvement	Risk preparedness is must-have discipline that unites stakeholders and translates into business success

Source: Sphera Achieving Supply Chain Continuity © Sphera 2023. All rights reserved.

Conclusion

The COVID-19 pandemic took center stage and eclipsed all other risk events in 2020. However, other forms of risk – including financial health, cyber, compliance, man-made, and natural hazards risk – remain. Not only that, many of these risks influence and affect each other, like dominos falling. In this way, they increase the overall risk exposure.

You could say that many, perhaps most of, the other risks have been triggered by or are an aftereffect of the pandemic. If there were no shutdowns, there would not be production delays, no field issues, no strikes protesting insufficient health protection. These factors all belong together, as became apparent, for example, in the global semiconductor shortage. Such widespread disruption shows how events are connected and do not happen in a void. Effects are felt down the line.

And while enterprises may not be able to predict the next crisis, they can be prepared for it. This requires a strategic shift in the way organizations manage risk. By watching warning signs – whatever they might be – and collaborating with suppliers through the sub-tiers of their supply network, organizations can react faster to mitigate disruptions, and be proactive in their risk management strategy, all of which serve to increase supply chain resilience.



**Sphera was acquired by Sphera in October 2022. This content originally appeared on the Sphera website and was slightly modified for sphera.com.*

About Sphera

Sphera is the leading provider of Environmental, Social and Governance (ESG) performance and risk management software, data and consulting services focusing on Environment, Health, Safety & Sustainability (EHS&S), Operational Risk Management (ORM), Product Stewardship and Supply Chain Risk Management (SCRM). For more than 30 years, we have served over 6,700 customers and a million-plus users in 80 countries to help companies keep their people safe, their products sustainable and their operations productive.



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Contact us to learn more about how Sphera can help your business meet its safety, sustainability and productivity goals.