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How can you better manage your supply chain and people risks?

June 2024

“With new AI technology tools, insurers and brokers can combine countless data points, stories, and insights to create game-changing perspectives and impact for their clients.

Turn supply chain exposure into business opportunity through data

How trusted data and insights can drive business growth and resilience.

For businesses the world over, relying on a complex global supply chain can unwittingly be sailing close to an iceberg. Icebergs are a known source of risk and uncertainty, but it can seem impossible to fully understand or map them. Now, the confluence of data availability and technical capabilities is changing the supply chain risk management game. And learning the new rules can open up extraordinary opportunities.

Why does innovation happen? Often, breakthroughs are the result of a "perfect storm": A combination of external pressures causing a crisis, technology and human ingenuity coming together at the right time to present a solution. The development of the catalytic converter in the automotive industry is a clear illustration of this. Innovation is crucial as we navigate the complex and increasingly pressing challenges of our changing world. We are on the verge of innovation of similar scale and significance in the insurance industry. A paradigm shift is coming.

In today's global economy, that complexity is embodied in increasingly complex supply chains. Since 2020, the global supply chain management market has grown from $15.58 billion to $24.6 billion, and experts expect the global market to be worth $30.91 billion by 2026. This global trend percolates down into specific industries, too. The average auto manufacturer has a staggering 18,000 suppliers across their full value chain. These multitiered, interconnected ecosystems represent a confluence of many types of risk — from geopolitical and environmental challenges, to financial and digital disruptions, to structural risks associated with single points of failure or geographical concentration. In 2011, for example, floods in Thailand coincided with the aftermath of a catastrophic earthquake and tsunami in Japan. This crippled much of the automotive supply chain and caused disruption on a global scale.

For business leaders, these external pressures are an ever-present concern. Mapping complex supply chains and trying to predict where a crisis might occur is a constant challenge, and one which has often

been labelled as simply 'too difficult' or 'too costly' to solve.

Some companies rely on supply chains so opaque that they don't know a shipment will be missed until it has already happened. Others are under pressure from regulators to show they are compliant across their operations — but a lack of visibility means they can't undertake proper due diligence and move to a more proactive posture that anticipates disruption and manages it before impacts are felt. This also makes educated foresight nearly impossible. A business that can't fully map and understand its value chain is unable to take a proactive and considered approach to enhancing its resilience.

But the game has changed. New artificial intelligence (AI) tools are reshaping the way we identify and assess risk. AI is often touted as a silver bullet to solve all kinds of complex problems including supply chain risk. The truth is that it is just a tool, but an exceptionally powerful one. Knowing how to put the right tool to work on the right problems, and understanding how to extract and create meaning from the output is what creates the breakthrough. Putting these tools in the hands of trained, experienced experts and directly embedding their thought process into the risk management systems organizations will create a real breakthrough.

The need for innovation

Supply chain mapping traditionally tends to involve a manual process, with organizations approaching their immediate suppliers and asking them who, in turn, supplies them. This laborious approach comes with no assurance that the information provided would be complete, accurate, supplied in good time — or indeed would be supplied at all. What's more, there is a good chance that, by the time it is provided, the information is already out of date.

Until now, this was the best available approach — even as supply chains became infinitely more complex. For many business leaders, however, the problem of unseen — and therefore hard to mitigate — risk compounded itself year-on-year as current loss statistics didn't pick up on it. Many of today's risks can be insured against — as long as there is visibility of exposures and how these aggregate at different levels across an organization's ecosystem.

This is where AI-based innovations are changing the supply chain risk management game. Take for example, a manufacturing company that used innovative AI tools to map its supply chain. Where previously it only had a limited view of its second and third tier suppliers, it uncovered an additional 900 sites, including over 300 upstream, in under 48 hours. What's more, this company could determine with accuracy when the last shipment took place and what type of goods were exchanged. Crucially, these sites were identified based on observed relationships, not supplier reporting. All insights were up-to-date and stored in a single, centralized repository that identified connections at the product and portfolio level.

As a result, this company became aware of previously unknown suppliers in Asia and, most importantly, of a geographic concentration in Vietnam. In fact, 50% of its suppliers around Hanoi were exposed to the same river flood risk. This made the company vulnerable to disruption in the manufacturing of four key components across two major product lines. Higher up the supply chain, it also uncovered a significant bottleneck in Mexico. None of this was previously known to this company in its mainly Europe-centric view of supply chain risk.

As the global business landscape becomes more unpredictable, access to trusted data that empowers organizations to cut through the noise and actionable insights will be key. Companies navigating choppy waters with complex value chains will need full visibility of their organization's network so they can understand where risk exists, how it flows through their processes, and whether it is absorbed or compounded. This information will reveal patterns, potential blind spots and trouble areas, and allow stress testing to be undertaken using a range of plausible 'what if' scenarios.

The business case is clear. Oversight of this depth and breadth, powered by AI innovations, could help minimize losses, prevent downtime, free up capital, and generally boost productivity and efficiency across the entire supply chain.

Collaborating to action

Obtaining this kind of information is only half the battle, however. How can organizations move from insight to action?

Although having a full understanding of the lay of the land can be a revelation, companies must use this visibility to arm a new data-driven risk management process. This must become an integrated part of a company's technology landscape.

Perhaps most importantly, this visibility brings up data insights that empowers insurance and risk experts to focus on what really matters. In turn, collaborating closely with these experts will enable decision makers to unlock a whole new level of value for their business. That is because, by deriving meaning from the data, they can answer business-critical questions that are long overdue: Where do we need to put in place contingency planning? Which of our suppliers requires a different approach?

The combination of actionable data and expert guidance enables companies worldwide to become more nimble, adaptable, and resilient. With new AI technology tools, insurers and brokers can combine countless data points, stories, and insights to create game-changing perspectives and impact for their clients. By harnessing this new data on supply chain risk and pairing it with expert interpretation, companies can replace exposure and vulnerability with resilience.

Read this article online here.

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Could AI be the solution to companies' supply chain conundrum?

A major theme of the *Global Risks Report 2024*, published by the World Economic Forum in collaboration with *Marsh McLennan*, is the need for businesses to get used to a more unstable and volatile world.

Nowhere is that more evident than in their supply chains; the lifeblood that allows businesses and our economies to function, and which have been stretched to breaking point by COVID-19, war, and global disruption caused by extreme weather, blockage of the Suez canal, piracy, and terror attacks.

The global economy has never been more interconnected, with companies sourcing their materials and parts from all corners of the world. As such, it's important for companies to get to grips with their supply chain risks.

Up until now it's been difficult to quantify or manage these exposures, because organizations may generally only know their first-tier suppliers, essentially those companies who invoice them for their work and with whom they are in more regular contact. Many will have little idea of who supplies their suppliers — and who supplies their supplier's suppliers, and so on — or the threats those suppliers face in the locations they operate and the logistics routes they use. Often, management will discover its company's vulnerability only when something happens that threatens to disrupt its own operations, or even its very existence.

New dawn in managing supply chain risks

Traditional approaches to mapping supply chains and quantifying risk have been highly labor intensive, and often reliant on tier-1 suppliers being willing to provide data on who supplies them. It seems we're on the verge of a new era, in which we will see a rapid acceleration in our ability to map supply chains and quantify risk. Advances in data science now allow us to analyze vast quantities of trade data to build a rapid assessment of an organization's supply chain. Not only will these insights enable companies to manage the longer-term volatility highlighted in the *Global Risks Report 2024*, but will also help companies to deal with the growing critical risk of misinformation that businesses now face.

These rapid advances in technology, including AI, have enabled companies to produce detailed maps of the precise origins of their materials and components. We've been working with clients to help them piece together the many links in their supply chain, which have previously been completely invisible to them. And with this mapping complete, organizations have then been able to quantify their risk exposures from climate change, geopolitical risks and other threats and move towards being more proactive in responding to risks before they materialize as a disruption.

The processing power of today's data analysis systems is impressive. An indication of that is that a couple of years back the supply-chain mapping work that took one major global manufacturer six years to complete, with a large team working full time to gather and collate the information, can now be completed in around 72 hours.

We can now use AI to trawl through billions of shipping, logistics, and customs records to discover who supplies a client's suppliers and with what, then use geospatial intelligence and remote sensing to verify their locations. Then, by overlaying a global risks map with insurance grade analytics, we can help a company quantify what the precise risk is to each of its suppliers' locations, if it's vulnerable to hurricanes, typhoons or floods, a militia attack, or a riot or strike.

Measuring and managing supply chain risk

The ability to gain visibility enables accurate measurement, and with accurate measurement comes the capability to efficiently manage their risks. The detailed picture that companies can now draw of their suppliers means that the related exposures should be easier to insure. With good quality, reliable data we should see an increase in the ability of insurers to accurately quantify risk and price their exposure. Thanks to AI, this information is available now, which is very exciting.

To drive sustainable growth, UK organizations will need a pragmatic approach to managing supply chain risk in 2024 and beyond. To learn more, watch our specialists talk about key trends in a converging risk landscape.

Read this article online here.

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The five pillars of people risk

Investing in your people, protecting your business.

When risk and HR professionals collaborate and think innovatively, your people, and your business can thrive. The *People Risks 2024* report outlines key workforce threats facing employers worldwide. Below are some of the findings.

Technological change and disruption

- The cybersecurity workforce gap has reached a record high, with 4 million professionals needed to adequately safeguard digital assets.
- One in two executives believe AI will fundamentally change their business model but mismanagement of AI is only ranked 18th as a people risk by risk and HR.

Technology is forging new jobs, delivery channels, and products, but it is also introducing new risks and deepening existing ones.

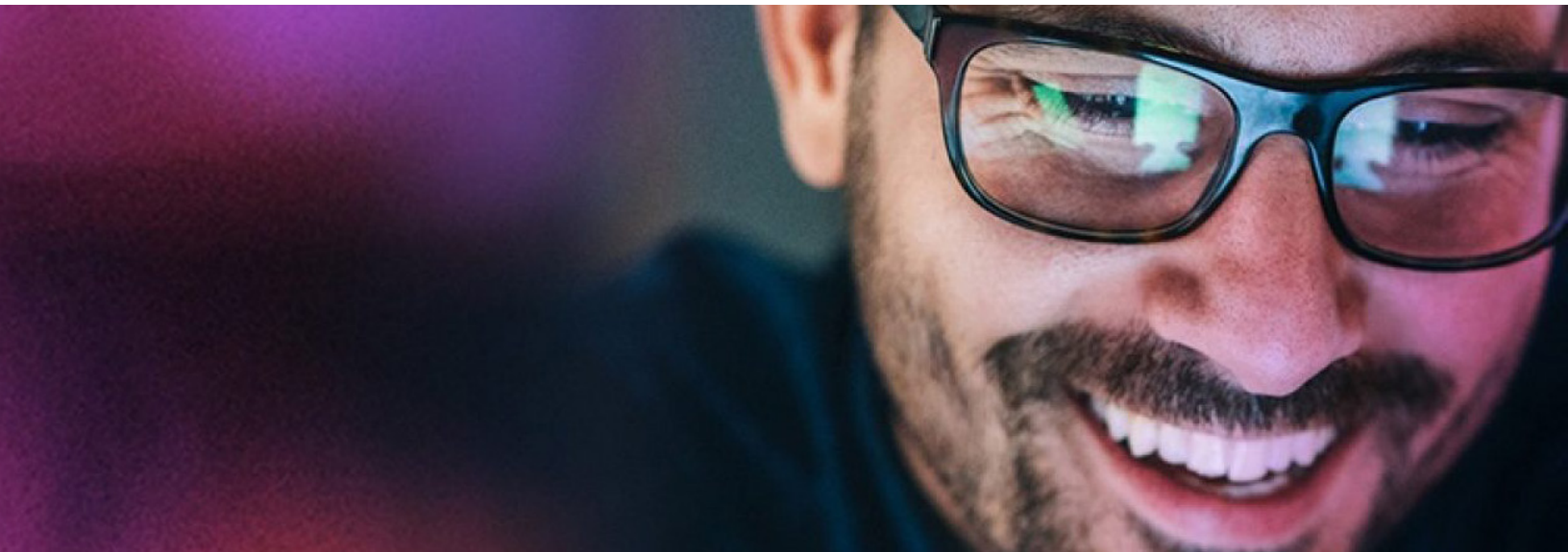
Managing these risks means creating a culture that is committed to protecting the organization from cyber threats, data breaches, and intellectual property theft, as well as one that is genuinely addressing AI and other disruptive technologies both as an opportunity and a threat.

Talent, leadership and workforce practices

- 70% of companies report not having an effective employee value proposition in place today.
- One in three HR/risk professionals are concerned about senior leadership's lack of expertise in crisis management.

Organizations can only remain competitive if they can recruit and develop the right skills, talent, and leadership. However, equally as important is ensuring employees' needs are met in order to help them thrive and aid productivity.

Leadership needs to be able to recognize employee needs, inspire engagement and loyalty, and take action on supporting their people through critical moments in their lives and in moments of company crises. These actions engender trust and are critical in supporting a culture of risk management.



Health, well-being, and safety

- One in two risk/HR professionals are concerned about productivity losses associated with employees spending time and energy on sourcing, navigating, and/or traveling for health care.
- 46% of employees said they would give up a 10% pay increase for more well-being benefits, an increase from 32% in 2022.

Employee health and safety is a staple of any people risk agenda, but organizations must broaden the scope of how they define well-being at work.

As suicide, conflict, and burnout trend in the wrong direction, psychological health and emotional well-being now demand equal recognition with physical safety in terms of risk mitigation.

Employers have a unique opportunity to advance health support for their employees and fill gaps within traditional systems of healthcare.

Governance, compliance, and financial

- Increasing health and benefit costs is the highest-ranking people risk, driven by its high likelihood.
- Changing legislation and heightened scrutiny has jumped from the 12th to the 5th most highly ranked risk due to an explosion in regulation impacting rewards to investments to the use of AI.

As inflationary pressures on benefit costs persist, organizations must plan for changes to their benefit programs now. Managing underlying risks and keeping focus on ensuring employees remain well can help to manage claims costs.

As it relates to people risks more broadly, increasing stakeholder scrutiny, litigation and legislative activity across different regions means that identifying and getting ahead of emerging governance gaps is crucial.

Environment, sustainability, and protection

- 38% of HR/risk professionals are concerned about lack of benefits to cover climate-related health conditions.
- The rising cost of living is impacting employees and organizations, with around six work hours per month lost to employee money worries. Ensuring that people can live decently is critical with only 35% of executives reporting a living wage for all workers.

Environmental risks have traditionally been interpreted as related to property, but the potentially catastrophic impact of extreme weather events and natural disasters on the health and well-being of employees and their families is an imminent threat.

Issues such as the cost-of-living crisis have compounded hardships for many employees over this decade. Widening disparities between executive and worker rewards as well as values are now having an impact on workplace dynamics as well as labor relations.

To learn more, click here.

A new approach for supply management teams

How companies can move to proactive coverage monitoring.

The global COVID-19 pandemic may have ended, but the supply chain problems that came with it have not. Every day, many supply management teams are contending with resource shortages, supplier lead time changes, and new difficulties like the semiconductor crisis and overseas transport issues. The situation leaves them in constant firefighting mode, while also facing increased raw material stock levels. To reconcile the competing needs for inventory reduction and production stability, manufacturers have launched initiatives to move from a reactive "missing parts chasing" approach to a proactive coverage monitoring strategy.

Making such a transition is easier said than done, however. Whether companies produce high-volume consumer goods or complex, low-volume products like trains and aircraft, they often struggle to embed coverage monitoring within their organization and supply chain teams, so that they can frequently review coverage for individual parts and engage early with suppliers.

The difficulty stems, first, from the lack of a sophisticated tool to calculate optimal coverage for every part number based on factors such as supplier delivery performance, damages during production, and demand volatility. Second, organizations may underestimate the effort they need to reach full adaptation of the new tool and related processes. We often see limited trust in the proposals to implement changes, as calculation rules are poorly communicated, guidelines are inadequately defined, and the impact of false safety parameters remains unknown.

How shifting operational modes can yield big results

For most original equipment manufacturers (OEMs), 40% of missing parts are caused by suppliers with occasional issues that could be avoided through early anticipation. Our work with clients has demonstrated how properly adopting a new coverage tool — complemented with an adjusted governance model and a shift in management and working level mindset — can address that issue, significantly enhancing supply chain resilience and reducing costs.

In one recent project, for example, a leading manufacturer of protective paints and coatings reduced inventory by more than 15% and improved fill rate to 95% from 85% within six months. The company projects an additional 15% inventory reduction, as well as reaching their fulfilment target of 98.5%, within a year of the start of the engagement.

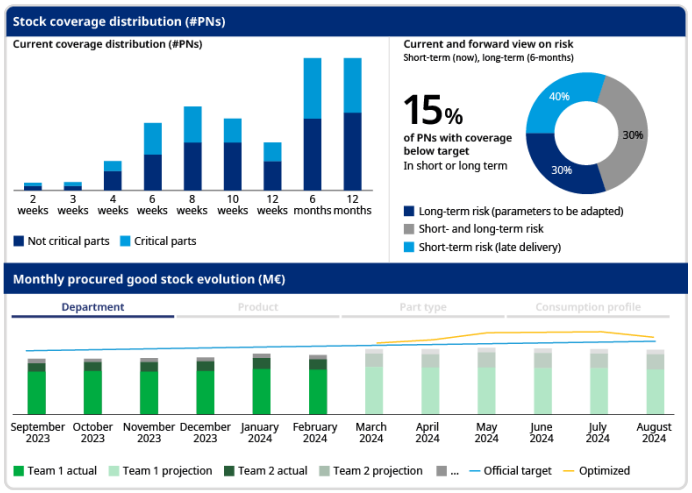
Implementing the optimal tool for supply chain resilience

Again, such a move to a proactive resilient coverage management approach won't happen overnight, and any organization that hopes to pull it off successfully will need a serious kick-start. The foundation is the deployment of a tool that projects stock needs based on collected data, with a concentration on parts at risk. It must be simple to understand and relatable for the operational teams; for example, they need to have the same figures available in their enterprise resource planning (ERP) system and easily recognize risks identified by the tool like demand volatility and forecast accuracy.

With the tool in place, companies can set targets that prioritize supply chain stability and resilience. They can also provide guidance on the minimum coverage required to withstand supply chain risks, particularly for critical parts (for example, no parts should have less than two weeks of coverage, and no more than 15% of parts should have coverage exceeding six months).

Essential organizational changes manufacturers must make

Broader changes within the organization are also crucial. Management must foster a proactive culture that values risk mitigation over firefighting, for instance, motivating working teams to reach out to suppliers to ensure purchase order delivery dates will be met even for less-critical parts. It also must develop hands-on training initiatives with real, relatable examples to equip employees with the necessary skills and knowledge to effectively understand, manage, and adapt to the resistance approach. With the proper execution, the new strategy will eventually become an integral part of the organizational structure and yield the promised results.



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Managing climate vulnerabilities in your supply chain

The supply chains that underpin the global economy are facing escalating challenges from labor shortages, inflation, geopolitical tensions, and, ever-increasingly, climate change.

As a result, supply chain issues are rising up the boardroom agenda in many industries, with business leaders wanting to better understand evolving risks and how those risks can be better mitigated and managed.

Although indicators like the Federal Reserve Bank of New York's *Global Supply Chain Pressure Index* show transportation and manufacturing KPIs closer to historical levels, critical vulnerabilities and disruptions remain.

Climate change as an accelerating risk

A growing risk for many organizations is climate-related supply chain disruptions, as the frequency and severity of extreme weather events accelerates. The World Economic Forum's *Global Risks Report* names natural disasters and extreme weather events as the second-most severe risk over the next two years and third most severe over the next 10 years. As events become more frequent and widespread, the potential downtime and cost to businesses from supply chain interruption is increasing.

Extreme weather can cause physical damage and operational disruptions, low rainfall and droughts can prevent commodities and products from being transported on rivers and waterways, and water scarcity has the potential to impact most manufacturing processes.

Sinking water levels in the Rhine, extensive wildfires in Canada, and the 2021 Texas freeze highlight the climate-related supply chain vulnerabilities facing businesses. And all of these issues that impact assets and operations can also severely impact people and the communities in which they live.

In this new normal, many companies, especially those in industries with high supply chain risk exposures, are prioritizing climate risk management and building supply chain resilience.

What supply chain professionals and risk managers can do

Some organizations are adapting to climate change by boosting their inventory to buffer against shocks, while also working to alter the layouts of their networks to address vulnerabilities. Changes to global supply chain structures, however, are still in the early stages.

For risk management professionals, risk quantification and scenario analyses need to happen cross-business and between teams, as they frame the conversation in shared terms. This is particularly important with regards to large-scale disruptions, where there may not be one sole response to an event and the impacts could be enterprise-wide.

In a recent report, Marsh McLennan specialists recommended five steps for companies to strengthen supply chains:

- **Create a transparent supply chain:** Few organizations see beyond their first tier of suppliers, yet the biggest disruption risks often reside in the second and third tiers.
- **Uncover hidden vulnerabilities by asking "what if?":** Deep-dive evaluations can identify the nodes on which revenue continuity most depends.
- **Use the right tools to assess risks:** Converting different risk data into a common currency, such as a standardized score or financial metric, can support decision-making and simplify risk management.
- **Preempt and mitigate risks:** Businesses that proactively manage supply chain risks suffer less disruption, are quicker to recover, and hold a competitive advantage.
- **Transfer risks where possible:** In addition to contingent business interruption, parametric insurance can be designed to protect companies against specific supply chain risks.

The success of these steps rests upon effective collaboration across business functions, including risk management, supply chain, sustainability, strategy, and people. A unified view of a supply chain — who is involved, where they are located, what pre-event exposure assessments and exercises are in place, how to share tools — is fundamental to establishing best practices and building short- and long-term supply chain resilience.

Read this article online here.

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About Marsh

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