



MARSH

Advancing
pharmaceutical supply
chain resilience in 2026
and beyond

The current state of supply chains

Over the past decade, supply chains have evolved into highly intricate, global networks that span regions, industries, regulatory environments, and supplier tiers. This complexity, while enabling efficiency and scale, has introduced significant vulnerabilities, many of which remain invisible to organizations until disruption strikes.

Data from Marsh's dynamic supply chain risk management tool, **Sentrisk™**, highlights some stark realities:

>90%

of organizations have exposure to a high-risk geopolitical country or an active conflict zone.

65%

of organizations have at least one single point of failure hidden in their upstream supply chain.

Historically, companies have prioritized efficiency, often at the expense of resilience. Lean inventories, single-source suppliers, and just-in-time manufacturing have been the norm. However, the risk landscape has shifted dramatically.

Resilience is no longer a luxury; it is a critical enabler of business continuity and competitive advantage. Visibility into supply chain risks has moved from being a top priority to a baseline expectation — but visibility alone is not enough. Organizations need enriched, validated supplier data that empowers them to **map, model, and transfer** their risks more effectively.

Innovation in insurance solutions plays a pivotal role in this transformation. New tools enable companies to identify, quantify, and transfer risks that were previously unseen or unmanageable. At Marsh, we are committed to helping organizations navigate this evolving landscape by providing the insights and solutions necessary to maintain agile, responsive, and resilient supply chains.

As we look ahead, the ability to anticipate and manage supply chain disruption will define the leaders in every industry. It is our mission to equip you with the knowledge and resources to meet these challenges head-on.

Sincerely,

James Crask

Global Supply Chain Practice Leader,
Head of the Supply Chain Center of Excellence
Marsh

Critical factors influencing pharmaceutical supply chains



~60%

of the pharmaceutical industry outsource production of their products, complicating their supply chain visibility and control.

In the life sciences sector, supply chain resilience is paramount due to the critical nature of the products involved, where high reliability, safety, and quality are non-negotiable. Unlike other industries, insurance coverage, while important, cannot substitute for the ability to supply life-saving drugs and medical products to patients in need. This elevates the importance of rigorous vendor due diligence and continuous supplier performance monitoring to maintain adherence to agreed specifications.

Supplier audits play a vital role in maintaining quality and compliance, with numerous case studies highlighting the severe consequences of lapses in both life sciences and other sectors with a similar focus on safety, such as aviation. Maintaining safety stocks is a key resilience strategy, providing a buffer against potential disruptions and maintaining continuity of product supply in a sector where delays can have life-threatening implications.

The sector's heavy reliance on suppliers from China for pharmaceutical ingredients and India for medical instruments introduces additional geopolitical, natural hazard, and tariff risks. These dependencies require proactive risk management and contingency planning to mitigate potential supply chain interruptions.

By addressing these sector-specific challenges — stringent quality and safety requirements, critical supplier oversight, inventory management for resilience, and geopolitical exposures — pharmaceutical companies can better safeguard their supply chains and achieve uninterrupted delivery of essential healthcare products in an increasingly complex global environment.

An inside look at how Sentrisk revealed critical vulnerabilities in a major medical device manufacturer's supply chain



To effectively address the unique challenges faced by pharma supply chains, organizations need more than just visibility.

Marsh developed its dynamic, AI-powered supply chain risk management platform, Sentrisk, to provide a holistic approach to identifying and managing risks across your entire supply chain ecosystem, integrating multi-tier supplier data, risk scoring, and scenario analysis.

The process of enriching supplier data

The process includes the following steps:

1

Input your supplier data:

Our specialists input the names, addresses, and component data for the company's Tier 1 suppliers.

2

Map upstream supply chain:

We found significant risks by leveraging billions of shipping records including both customs data and relationships with global logistics firms.

3

Validate and enrich each site:

We used geospatial intelligence to verify, geocode, and enrich key characteristics of each site, such as a factory or headquarters.

4

Assess risk across the supply chain:

We helped conduct a risk assessment for each supplier site and for network risks.

5

Access the results easily:

These results became easily accessible on the platform.

6

Prioritize your risk:

The company could then identify and prioritize their riskiest sites, suppliers, components, and products using a proprietary risk score.

7

Model your risk:

The company could anticipate and mitigate the impact of geopolitical shifts, regulatory changes, tariffs, natural hazards, and other scenarios by leveraging Sentrisk insights alongside guidance from Marsh risk advisors.

Here's what one life sciences company found: over 14,000 sites were at risk of natural hazards



Concentration risks:

- **355 clusters of sites** producing medical instruments, with the largest cluster comprising **830 sites located in China**
- A severe physical risk event impacting this largest cluster **could disrupt over 800 sites** simultaneously
- Such disruption may cause significant upstream delays and limit the availability of essential medical instruments for healthcare providers

Bottleneck risks:

- **14 Tier 1 sites** were exposed to significant bottleneck risk
- One supplier is a single choke point: it supplies many smaller sites, and those sites then feed three main sites.
- Over-reliance makes it difficult to quickly find alternative suppliers during disruptions

Natural hazard risks:

- A total of **14,180 sites** are at risk of natural hazards, with coastal flooding identified as the hazard with the highest potential impact
- Multiple Tier 1, 2, and 3 suppliers face exposure to natural hazard risks, which could cause delays or stoppages in shipments and production
- A severe coastal flood event could affect the availability of essential care equipment if critical suppliers are impacted

Potential mitigation actions enabled by Sentrisk:

- Use supply chain risk insights to help validate safety stock holdings at each step of the value chain
- Investigate contingent business interruption (CBI) insurance options for key Tier 2 suppliers, including coverage for high-risk Tier 1 suppliers in business interruption policies
- Search for alternative Tier 1 suppliers with less geographic concentration to reduce risk exposure
- Identify alternative suppliers for top bottlenecks and conduct scenario planning to prepare for potential disruption events
- Implement thorough due diligence to screen out high-risk entities within the supplier network
- Monitor lower-tier suppliers proactively to identify reputational risks early and mitigate potential impacts

These insights demonstrate how Sentrisk's comprehensive supply chain mapping and risk assessment capabilities help identify critical concentration points, bottlenecks, and natural hazard exposures. This enables the life sciences company to take targeted mitigation actions to enhance supply chain resilience, reduce disruption risk, and protect the availability of vital medical devices and equipment.

Align coverage precisely with your risk

A key feature of Sentrisk is the ability to generate Supplier+ and Snapshot reports to uncover more detailed, validated, and up-to-date supplier data. This enriched data can support:

- More detailed, accurate submissions to underwriters
- Potentially higher limits for property, CBI, and property damage business interruption (PDBI)
- Digital preparation of supplier schedules for insurance submissions
- More accurate and timely claims processing
- Enhanced annual risk reporting and insurance program reviews

Supply chain risk resilience must go beyond visibility

To strengthen supply chain robustness and support uninterrupted delivery of essential drugs and medical equipment, organizations should adopt a comprehensive, data-driven approach that includes:

- **Comprehensive supply chain mapping:** Gain deeper visibility into multi-tier supplier networks to identify hidden vulnerabilities such as geographic concentration, bottlenecks, and exposure to natural hazards or geopolitical risks.
- **Risk assessment and prioritization:** Use detailed risk scoring and scenario analysis to evaluate the likelihood and impact of potential disruptions, enabling focused mitigation on the most critical risks.
- **Supplier diversification:** Develop alternative sourcing strategies to reduce dependency on single suppliers or regions, minimizing the risk of supply interruptions.
- **Proactive contingency planning:** Implement scenario-based disruption planning and real-time monitoring to anticipate and respond swiftly to emerging threats.
- **Enhanced insurance solutions:** Secure tailored coverage informed by up-to-date supplier risk data to protect against financial losses from supply chain disruptions.
- **Ongoing due diligence:** Continuously monitor supplier performance and reputational risks, especially among lower-tier suppliers, to maintain supply chain integrity.

By integrating these strategies, life sciences organizations can build more resilient supply chains that ensure the steady availability of critical products, safeguard patient care, and maintain operational continuity in an increasingly volatile global environment.



To learn more, contact your Marsh representative and request a Sentrisk demo.

About Marsh Risk

Marsh Risk is a business of Marsh (NYSE: MRSB), a global leader in risk, reinsurance and capital, people and investments, and management consulting, advising clients in 130 countries. With annual revenue of \$27 billion and more than 95,000 colleagues, Marsh helps build the confidence to thrive through the power of perspective. For more information about Marsh Risk, visit marsh.com, or follow us on LinkedIn and X.

This document and any recommendations, analysis, or advice provided by Marsh (collectively, the "Marsh Analysis") are not intended to be taken as advice regarding any individual situation and should not be relied upon as such. The information contained herein is based on sources we believe reliable, but we make no representation or warranty as to its accuracy. Marsh shall have no obligation to update the Marsh Analysis and shall have no liability to you or any other party arising out of this publication or any matter contained herein. Any statements concerning actuarial, tax, accounting, or legal matters are based solely on our experience as insurance brokers and risk consultants and are not to be relied upon as actuarial, tax, accounting, or legal advice, for which you should consult your own professional advisors. Any modeling, analytics, or projections are subject to inherent uncertainty, and the Marsh Analysis could be materially affected if any underlying assumptions, conditions, information, or factors are inaccurate or incomplete or should change. Marsh makes no representation or warranty concerning the application of policy wording or the financial condition or solvency of insurers or reinsurers. Marsh makes no assurances regarding the availability, cost, or terms of insurance coverage. Although Marsh may provide advice and recommendations, all decisions regarding the amount, type or terms of coverage are the ultimate responsibility of the insurance purchaser, who must decide on the specific coverage that is appropriate to its particular circumstances and financial position.

1166 Avenue of the Americas, New York 10036

