

# Stabilizing your supply chain in times of global volatility

## Executive summary

In an increasingly complex global landscape, pharmaceutical companies face heightened risks in their supply chains due to natural disasters, geopolitical tensions, and regulatory changes. This whitepaper examines the evolution of these risks over the past 15 years and offers insights into proactive strategies for mitigating supply chain vulnerabilities.

Drawing on industry trends and best practices, this whitepaper offers valuable guidance on safeguarding supply chain integrity while seizing new opportunities.

Key insights include:

- How recent global events have exposed vulnerabilities in pharmaceutical supply chains and sourcing strategies
- Key practices for strategic sourcing and supplier risk management that enhance resilience
- The importance of building and maintaining strategic partnerships for long-term supply chain stability
- Practical steps to proactively monitor and mitigate risks in an unpredictable market environment

## Assessing the ripple effects of global events on pharma supply chains

Over the past 15 years, a series of global events has exposed critical vulnerabilities in the pharmaceutical industry's traditional sourcing and supply strategies. The 2011 Fukushima nuclear disaster marked a pivotal moment, prompting the industry to scrutinize the origins of essential raw materials and the components necessary for manufacturing pharmaceuticals.

The COVID-19 pandemic further underscored these vulnerabilities, revealing how regional disruptions can severely impact the availability of materials crucial for producing not only pharmaceuticals but also diagnostic kits and related healthcare products. The Defense Production Act, enacted during the pandemic, allowed specified companies to redirect shipments, compounding these challenges.

Recent geopolitical conflicts have necessitated a deeper examination of supply chains, tracing them back to the primary sources of basic materials. This scrutiny has been partly driven by legislative measures, such as the proposed U.S. BIOSECURE Act,<sup>1</sup> which proposes to ban biotech companies based in the People's Republic of China from operating in the United States, as well as any others that are in future deemed to be related to the Chinese government. The Act is intended to prevent the Chinese government from gaining access to U.S. intellectual property and Americans' genomic data. It has failed to pass so far, but there is a possibility it could become law by the end of 2024.<sup>2</sup> Pharmaceutical companies working with contract manufacturers and other suppliers named in the act should therefore keep abreast of the situation and the potential impact passage of the act could have on their supply chains.

Additionally, the increasing frequency and intensity of hurricanes pose further risks, emphasizing the need for robust supply chain risk management strategies. While the industry has seen some recovery with shorter lead times in recent years, upcoming pharmaceutical launches, such as recently approved weight-loss drugs expected to launch by late 2024, threaten to strain resources further.

The strategic responses of large companies to these launches will likely influence the entire sector's approach to managing supply chain demands, given that overall demand for raw materials and other components for these drugs will likely impact other products that rely on them as well.

### **Strategic sourcing as a foundation for risk mitigation**

Effective risk mitigation in pharmaceutical supply chains begins with the strategic sourcing of raw materials and components. Quality audits and the execution of quality agreements are fundamental, yet they are just the beginning of a comprehensive risk management strategy. A thorough assessment of a supplier's capabilities is crucial to determining their ability to meet demand and respond to crises swiftly. This assessment helps identify potential risks and the strategies to mitigate them, including evaluating the financial stability of the supplier to ensure long-term reliability.

For existing suppliers, a review of their track record in delivering materials on time, in full, and with the requisite quality is essential. The nature of the relationship, whether tactical or strategic, and the depth of interaction, particularly with senior management, can significantly influence risk mitigation. Strong, strategic partnerships with access to key decision-makers are invaluable for navigating challenges effectively.

Moreover, it is vital to verify whether a supplier's supply base is optimized and whether raw materials are genuinely multi-sourced or simply procured through different distributors from the same source. A deep understanding of the entire supply chain, from the extraction of raw materials to final delivery, is necessary. This includes the roles of distributors and agents, as their influence can determine the availability and timeliness of the materials required.

By adopting these practices, pharmaceutical companies can address risks proactively rather than reactively.

Implementing dual sourcing strategies, for instance, often provides more flexibility and security than relying on multiple suppliers who may face the same supply constraints. Collaborating with a contract development and manufacturing organization (CDMO) that not only has a robust track record and global network but also appreciates the nuances of supplier selection and dual sourcing can further enhance supply chain resilience, ensuring timely deliveries even during disruptions caused by human or natural events.

### **Building and leveraging strategic partnerships in supply chain management**

Cultivating robust, partnership-based relationships with suppliers and customers requires effort but is essential for effective supply chain management. The optimal time to forge these relationships is during periods of stability, well before any crises arise. This proactive approach allows relationships to be thoroughly established and tested under less stressful conditions, ensuring they can withstand future challenges.

From the outset, efforts should be made to connect with key personnel up and down the chain of command, starting with initial interactions with a new supplier. Conducting site visits and engaging directly with plant managers, quality control, and procurement officials are critical steps in building a network of reliable contacts who can be called upon when issues emerge.

Moreover, relationship-building is an ongoing process. Maintaining and reinforcing connections with suppliers and customers is crucial. A simple gesture of gratitude following a crisis, for example, can significantly bolster goodwill and strengthen long-term partnerships. Additionally, diverse viewpoints from various stakeholders are invaluable for gaining a holistic understanding of market dynamics. Strong relationships with both suppliers and customers provide a strategic advantage by offering comprehensive insights that enhance competitive positioning in the market.

## Proactively monitor supplier risk

To maintain a resilient supply chain, proactive risk management is crucial. An effective strategy integrates strong partnerships with suppliers and customers and leverages advanced risk management platforms. Utilizing a comprehensive environmental and sustainability platform, like Ecovadis, facilitates the ongoing assessment of suppliers' adherence to environmental standards and regulatory requirements.

It is vital that suppliers not only maintain but also enhance their standing within their local communities by meeting — if not exceeding — environmental and sustainability expectations. This commitment helps ensure that the supply chain is not only compliant but also contributes positively to social and environmental objectives.

Additionally, understanding perspectives from both suppliers and customers enriches risk monitoring processes. It enables a broader view of the market, helping to anticipate and react to shifts that might affect the availability of raw materials and components. This holistic approach to monitoring not only safeguards the supply chain but also ensures that it adapts to dynamic market conditions and emerging challenges.

## Leveraging market shifts and uncertainty

Despite implementing comprehensive risk management programs, the pharmaceutical industry cannot entirely eliminate uncertainty in drug manufacturing. The repercussions of insufficient drug supply are significant, leading to missed sales opportunities and potential loss of market share. Factors such as natural disasters, geopolitical tensions, and pandemics add layers of unpredictability, each capable of escalating rapidly with little to no warning.

Market dynamics within the pharmaceutical sector can also be complex and challenging to predict. For example, the market for injectable weight-loss drugs is

experiencing a surge, with numerous new drugs poised for approval that could further stimulate sector growth. Many pharmaceutical companies and CDMOs are actively investing in this pipeline.

Changes in the CDMO landscape, including mergers and acquisitions, can introduce uncertainties that may prompt companies to reassess their manufacturing partnerships. Such shifts highlight the importance of staying informed about market dynamics to effectively manage risks and seize potential opportunities for more stable collaborations.

## Strategic supply chain management at Thermo Fisher Scientific

Thermo Fisher Scientific has developed a comprehensive strategy to manage and mitigate the impact of unexpected supply chain disruptions. The company maintains a strategic inventory of pre-qualified components and raw materials, ready for deployment in standard manufacturing processes. To further bolster supply chain resilience, Thermo Fisher has implemented safety stock levels and automated reordering systems for materials used across multiple processes, ensuring continuity even when initial supplies are disrupted.

In response to potential shortages, Thermo Fisher identifies like-for-like alternatives, ensuring that production can continue without significant delays. The company places a strong emphasis on developing accurate demand forecasts and actively monitors both direct market dynamics and those of adjacent markets that might influence supply chain stability.

Teamwork is central to Thermo Fisher's approach, involving close collaboration within the company as well as with vendors and customers. The organization also benefits from its diverse internal business groups, including a division that supplies up to 80% of the single-use equipment and components used in its contract manufacturing operations. This not only ensures quality and consistency but also reduces dependency on external suppliers.

The remaining 20% is sourced externally to maintain supply redundancy. Primary pharmaceutical ingredients are sourced from four established suppliers, enhancing supply reliability.

Thermo Fisher's agility and adaptability, combined with its strong business acumen and customer-centric approach, positions it as a reliable and versatile partner in the CDMO sector. Its extensive global network allows it to offer varied solutions, catering to specific client needs. These strategic initiatives and adaptive measures ensure that Thermo Fisher Scientific remains a stable and dependable link in the global pharmaceutical supply chain.

 **Find your missing element  
with Thermo Fisher Scientific.**

1. H.R. 7085 – BIOSECURE Act. 118th U.S. Congress. 25 Jan. 2024.
2. Borden, Michael E. and Andrew W. Shoyer. "[How, When, and If the U.S. BIOSECURE Act Is Likely to Become Law.](#)" GoodLifeSci. 19 Aug. 2024.