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6 Trends Transforming Global Supply Chains



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Supply chain professionals are accustomed to change. They have to be, if they want to keep their organizations running smoothly. "Expect the unexpected" is practically the supply chain family motto.

But what happens when the changes are too big, too fast, and too unpredictable? When the unexpected becomes: "Well, I guess that's how it's going to be now"? That's the fundamental shift that many supply chain professionals are facing today.

The pandemic significantly disrupted global supply chains and accelerated digitization. Businesses already using digital tools to manage their supply chains were able to adapt more quickly to the disruptions caused by the pandemic. Those that were not were left behind.

Even as the pandemic ebbed, the war in Ukraine, rising inflation, and other geopolitical stressors were all continuing factors in the instability of global supply chains. Businesses need to be more agile and responsive than ever before.

As we've talked to supply chain professionals in recent months, we've identified six key trends for the next 12-18 months:



01 Threats of Inflation (and Recession) Continue to Roil Markets

Economic concerns hound the headlines, causing both global and local fluctuations in purchasing power, consumer spending, and pricing. Recession and inflation are two significant macroeconomic factors that profoundly impact supply chain management.

On one side, the persistent threat of a recession can reduce demand for products and services. Lower demand can lead to decreased production, potential layoffs, and reduced investment in infrastructure, all of which disrupt the regular functioning of a supply chain. Companies might also face financial challenges that restrict their ability to invest in critical areas such as inventory management, technology upgrades, or quality control. And also lurking in the shadows, the specter of supplier insolvency becomes a greater risk, potentially leading to disruptions in the supply of critical components or materials.

And on the other side, a high inflation rate increases the cost of raw materials, labor, and energy, forcing companies to reconsider pricing strategies. Currency fluctuations can also affect the cost of imported goods or the value of goods sold abroad. High inflation can lead to uncertainty and volatility in the marketplace, making it hard to forecast demand accurately and plan operations accordingly.

KEY TACTICS FOR PREPARING FOR ECONOMIC PRESSURES ON SUPPLY CHAIN OPERATIONS:

1. Diversify supply sources to reduce reliance on a single supplier
2. Plan and implement cost-control measures
3. Develop flexible pricing strategies that can adjust to changing conditions
4. Invest in technology to further supply chain visibility and predictive analytics
5. Build long-term, collaborative relationships with suppliers

All of these tactics require close attention to the technology required to improve the visibility and efficiency of supply chain operations. And that isn't even counting communication with customers. Customers need to feel informed, and you need to understand their expectations and needs.

02 Whiplash Shifts in Consumer Behavior

Consumers have survived seismic technological shifts that have permanently altered purchasing habits and dealt with the economic uncertainties described above. The drive to omnichannel is moving faster than ever, but we're not there yet. The entire customer experience has to be rethought, from research and purchase to delivery and returns. Here are some additional tips for supply chain managers in response to changing consumer behavior:

Stay close to your customers. Communicate with your customers so you understand their needs and expectations. This will help in making informed decisions about supply chain operations.

Be flexible. Be prepared to make changes to your supply chain plans as needed. This could include changing suppliers, adjusting inventory levels, or altering pricing strategies. The dominance of e-commerce continues to shift shoppers away from the in-store experience and to the brand's site, app, or other virtual experience. This has pushed the supply chain to be ever-more responsive and agile to fulfill orders quickly and efficiently. This shift has also meant innovation in "last-mile" delivery solutions and AI and ML-related systems integration for better inventory management and more accurate demand forecasting.

Shopping through a screen also means consumers can have infinite variety and the perfect assortment. Ensuring this availability and variety requires supply chain managers to quickly switch between different product lines and scale production up or down based on fluctuating demand. This means improved visibility across the supply chain with enhanced coordination and adoption of flexible manufacturing strategies.

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Consumer awareness of environmental and ethical issues. The overall rise in awareness and advocacy for sustainable business practices has consumers wanting to know where and how products are made and how they make their way to their front door. Many companies are investing in this transparency and establishing more environmentally friendly and socially responsible manufacturing processes.

Same-Day Delivery. Consumers have nearly impossible expectations for same-day delivery. This demand for speed and convenience requires supply chains to be highly efficient and adaptable, with sophisticated logistics operations capable of managing rapid delivery and reverse logistics for returns. Free last-mile delivery and returns were met during the pandemic, but this is not sustainable for most businesses. We need to find ways to meet this demand profitably.

These are just a few of the challenges that supply chain managers face in the face of changing consumer behavior. By staying close to their customers, being flexible, and investing in technology, supply chain managers can help their businesses adapt to these challenges and emerge stronger on the other side.



03 Planning for Geopolitical Turmoil and Volatility

Globalization has expanded operational footprints spanning numerous countries for sourcing, production, and distribution. These intertwined supply chains can sometimes become the subject of geopolitical disruptions. Such disruptions could include trade disputes, territorial conflicts, abrupt policy changes, or even socio-political turmoil within an individual country.

GEOPOLITICAL DISRUPTIONS CAN HAVE A WIDE RANGE OF IMPACTS ON SUPPLY CHAINS, INCLUDING:

- **Increased costs** as businesses must pay higher prices for raw materials, labor, or transportation.
- **Reduced availability of goods** when sourcing and transporting of goods is interrupted.
- **Additional delays** as analysts and operators scramble to find alternative suppliers or routes.
- **Reputation damage** as customers may be concerned about the reliability of a business's supply chain operations.

Mitigating the Risk of Geopolitical Volatility

There are several clear ways to mitigate the risk of geopolitical volatility, including:

1. **Diversify supply chains** by sourcing from multiple countries or regions, and businesses can reduce their reliance on any one supplier and help to protect them.
2. **Build relationships with suppliers** to understand their operations and risks better. This can help businesses to identify and mitigate potential disruptions before they occur.
3. **Deploy advanced technology** to track better and manage their supply chains. This can help businesses to identify and respond to potential disruptions more quickly.
4. **Develop contingency plans** specific to various cases of geopolitical disruption in the countries and regions in which they operate that identify and mitigate the impact of the disruption and related communication plans.

Technology also plays a crucial role in managing geopolitical volatility in supply chains. Companies can better anticipate and respond to potential disruptions with predictive analytics and real-time data. These tools can provide visibility into geopolitical risks, enabling companies to adapt their strategies when necessary quickly. AI and machine learning algorithms can analyze data from various sources to identify potential disruptions and suggest appropriate mitigation strategies. As the global landscape evolves, leveraging technology to navigate geopolitical risk will remain critical to effective supply chain management.

04 Workforce and Labor Market Disruptions

Workplace and labor market volatility can cause significant challenges to supply chain analysts and operators. As the demands of the modern workplace evolve and fluctuate, companies have had to constantly adapt to changes in labor availability, skill sets, regulations - and employee expectations. Labor strikes, policy shifts, or changes in workforce demographics can disrupt production and services.

In regions that see high labor market volatility, businesses may need help maintaining consistent operational efficiency, affecting the stability and reliability of their operations. Add in the emergence of remote work and the requisite digital transformation, and it's an additional layer of complexity to managing workplace volatility.

THE FUNDAMENTAL STRATEGY FOR MITIGATING THESE DISRUPTIONS:

1. Investing in workforce development and flexible labor models
2. Ensuring the workforce is skilled and adaptable
3. Provide ongoing training and development
4. Adopting flexible labor models like temporary staffing or gig economy workers

A more skilled and flexible workforce can help businesses quickly adjust their operations in response to supply chain disruptions.

And, of course, a technology component can also play a significant role in managing workplace and labor market volatility. Automation and AI can help businesses reduce dependence on human labor and improve operational efficiency, taking over repetitive, labor-intensive tasks and reducing possible disruptions due to labor shortages or strikes. Systems can also predict labor market trends and provide insights to guide workforce planning and strategy. But as always, these technologies must be balanced with considerations for job displacement and the ethical implications of workforce automation. A multifaceted approach that includes workforce development, flexible labor models, and strategic use of technology will be the best option in the long term.

05 Here Comes ESG

Environmental, Social, and Governance (ESG) factors and sustainability have become increasingly crucial in supply chain management. As the effects of climate change and societal issues become more apparent, companies are under pressure from consumers, regulators, and investors to demonstrate their commitment to sustainable and responsible practices.

This criticism includes their supply chains, from the extraction of raw materials to manufacturing, transportation, and the eventual disposal of products. Supply chains can contribute to carbon emissions, deforestation, waste, and human rights abuses. Focusing on ESG and sustainability in supply chain management mitigates these impacts and enhances a company's reputation, reduces risks, and provides a competitive advantage.

TO INTEGRATE ESG AND SUSTAINABILITY INTO SUPPLY CHAINS, BUSINESSES ARE ADOPTING VARIOUS STRATEGIES:

Incorporate ESG supplier criteria during the selection and evaluation processes, recognize suppliers' environmental impacts, labor practices, and governance structures, and prioritize suppliers that meet specific ESG standards.

Invest in cleaner and more efficient production and transportation methods, implement waste reduction and recycling programs, and ensure fair labor practices throughout the supply chain.

Demonstrate public commitment to sustainability by achieving compliance, certifications, and standards like Fair Trade or Rainforest Alliance.

Operators and analysts can identify areas of high environmental impact, inefficiency, or risk and suggest potential improvements. Data from devices can monitor and optimize resource use throughout the lifecycle. Digital platforms can also facilitate collaboration and information sharing among supply chain partners, helping to align ESG goals and strategies. As businesses navigate modern supply chain complexities, a commitment to ESG and sustainability will be crucial for long-term success and resilience.



06 Supply Chain Resilience is Key Stay Ready.

Supply chain resilience is quickly becoming critical to enable supply chains to withstand and recover from all the disruptions we've outlined. A resilient supply chain is robust and capable of enduring stress without breaking; it is agile and can adapt quickly to unexpected changes.

A well-crafted supply chain resilience strategy involves a comprehensive understanding of potential vulnerabilities, the steps and conditions to implement contingency plans, and the ability to return to normal operations quickly after a disruption has passed. Resilience also entails learning from these disruptions to

improve future responses. As businesses operate in an increasingly uncertain and volatile environment, the importance of supply chain resilience cannot be overstated.

Diversification is one of the critical elements of supply chain resilience.


Diversification involves sourcing materials from various geographical locations and suppliers, manufacturing in multiple locations, and using different modes of transport to mitigate risks. Diversification minimizes reliance on a single point of failure.

Visibility is also crucial since it allows a company to track and trace components and products through the supply chain as it happens. Enhanced visibility and alerting can provide early warnings about potential disruptions, enabling a quick response.

Flexibility is another pillar of resilience, referring to the ability of a supply chain to adapt to disruptions by altering its structure and operations.

And as outlined with the other five trends above, **technology** is a critical enabler of supply chain resilience.

Advanced data analytics and AI can help identify vulnerabilities and predict potential disruptions, providing companies with valuable insights to develop effective mitigation strategies. Digital twins, virtual replicas of physical supply chain systems, can be used to simulate different scenarios and optimize response strategies. Meanwhile, cloud-based supply chain management systems can ensure continuous access to critical information even during a disruption. As businesses strive to improve their supply chain resilience, these technological tools will continue to play a central role.



Get Ready. Stay Ready.

Supply chain operations are experiencing a fundamental shift in the face of unprecedented challenges. The pandemic has disrupted global supply chains and accelerated the need for digitization. The rise of e-commerce and the demand for sustainability have created new opportunities for businesses to upgrade their supply chains. However, supply chain professionals must also navigate through labor shortages, rising costs, geopolitical uncertainty, economic pressures, changing consumer behavior, and the need for supply chain resilience.

In this ever-changing landscape, supply chain professionals must continue to expect the unexpected and be agile and responsive to meet the evolving demands of the market. By embracing these trends and implementing the necessary strategies and technologies, businesses can not only navigate the challenges but also thrive and emerge stronger on the other side. Supply chain resilience, combined with a focus on customer needs, sustainability, and effective risk management, will be key to success in the post-pandemic world.

Gemini Explore for Supply Chains

connects to ERP, OMS, PDM, and other systems and data sources so supply chain professionals can easily visualize and analyze opportunities to eliminate bottlenecks, streamline operations, and respond as conditions change.

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