UK & Ireland

The latest supply chain trends: Preventing disruptions and managing challenges

In supply chain, **disruption is the new normal**. To meet customer expectations, organisations must build operations with the right balance of resilience and efficiency. As the geopolitical landscape lurches from crisis to crisis, keeping the focus on the right topics can be a challenge.

At Efficio, we have identified six major trends and challenges shaping the supply chain landscape in the next 18 to 24 months:

1. Geopolitical tensions in the Red Sea region
2. Pressures on transport
3. Shifting attitudes towards reshoring and nearshoring
4. A dilemma around inventory management
5. Labour and material shortages
6. ESG challenges

In this viewpoint, we examine each of these supply chain pressures, offering strategies to help businesses adapt and thrive in a rapidly changing environment.

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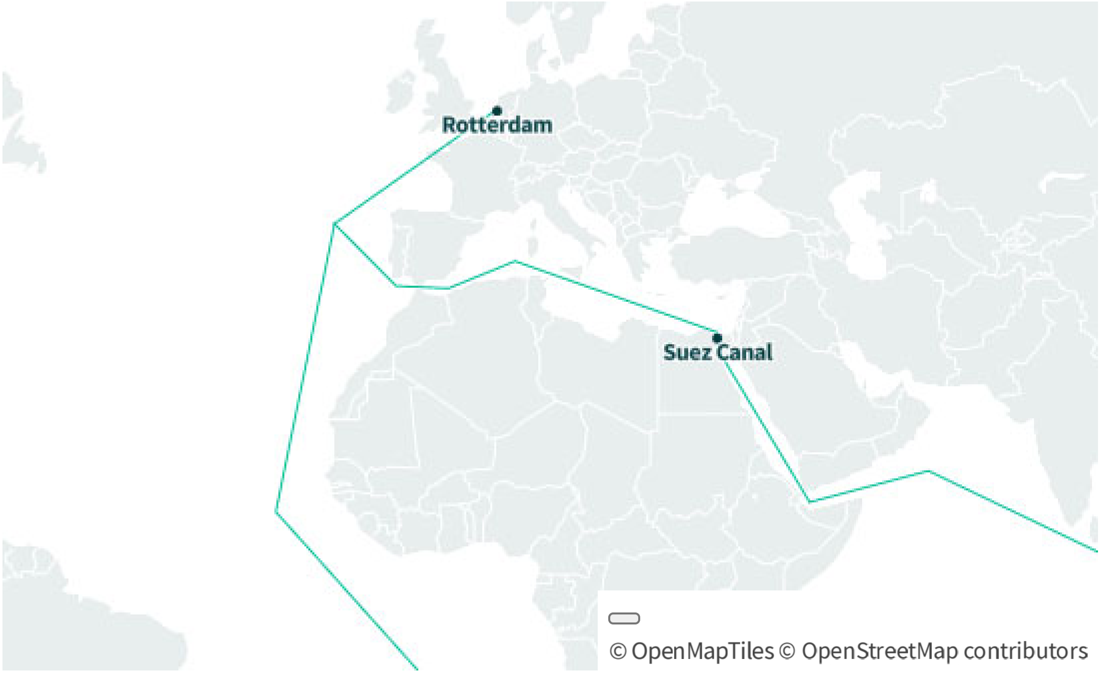
1. Geopolitical tension within the Red Sea region

The Houthi militant group's armed actions over recent months have put a halt to transits by major container shipping companies through critical waterways such as the Strait of Bab al-Mandab, the Suez Canal, and the Red Sea. An **S&P Global Market Intelligence analysis** indicates that these attacks are unlikely to abate, with vessels required vessels to acquire permits from the Houthi-controlled Maritime Affairs Authority before passing through Yemeni territorial waters.

Significant trade route diversions

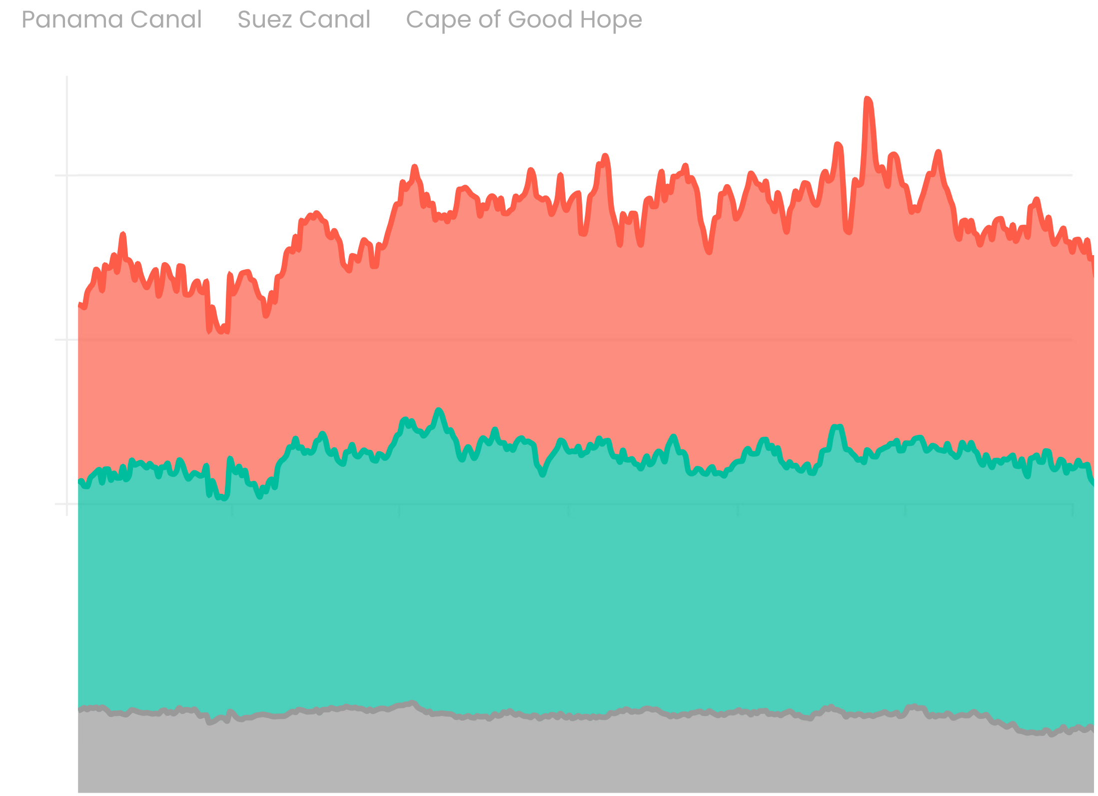
In response, major container shipping lines have diverted vessels from the traditional Suez Canal route to the longer Cape of Good Hope route, adding approximately 9,000 nautical miles, or 80%, to the distance sailed. Ocean Network Express Holdings Ltd. emphasised the need for additional capacity from the global fleet, potentially an increase of 7.1%, due to the longer voyages.



A typical shipping journey from Shangai to Rotterdam via the Cape of Good Hope takes up to two weeks longer than using the Suez Canal

The first two months of 2024 saw a 50% drop in Suez Canal trade compared to the previous year, according to **the IMF**. Meanwhile, a severe drought at the Panama Canal has reduced daily ship crossings, with trade through this route decreasing by 32%.

Daily transit trade volume
(million metric tons, 7-day moving average)



Source: UN Global Platform, IMF PortWatch

Global trade costs are going up – and staying high

Diverting container vessels away from the Red Sea has pushed up air freight costs as shippers endeavor to keep Asian-produced goods on shelves despite sea traffic delays. Logistics providers reported a **25-30% increase** in demand for mixed sea and air transport in January 2024. Consequently, the average cost to fly 1kg of cargo from the Middle East to Europe increased by 35% from December 2023 to January 2024. Economists warn that these disruptions could keep transport costs elevated for several months, potentially adding 0.3 to 0.4 percentage points to the eurozone's headline inflation measure later in the year.

Route diversions in marine shipping have major financial and environmental impacts. A shipper travelling between Asia and northern Europe via the Cape of Good Hope needs 16 ships for a weekly service instead of the usual 12, with ships travelling 10-15% faster to cut delays. Maritime technology firm **OceanScore** estimates that these diversions and increased speeds are tripling EU Allowances (EUAs) costs from €98,000 to €285,000 per voyage. These ongoing diversions present significant challenges for shipping companies, as they must balance higher emissions costs with crew and vessel safety.

Efficio recommendation

Craft resilient contingency plans, including scenario planning how various upstream and downstream disruptions can impact your supply chains. Mitigations could include multi-sourcing, planning alternative routes and modes of fulfilment, and holding strategic inventory on-shore and near-shore.

2. Mounting pressures on sea freight and truck transport

Beyond the Red Sea region, the broader landscape of global transportation also faces significant challenges.

Red Sea disruptions are overspilling into the Mediterranean

Mediterranean ports across Algeciras, Barcelona, and Tangier-Med, crucial nodes in the global logistics network, are grappling with unprecedented congestion as they experience a surge in traffic diverted from the Suez Canal. Barcelona, for instance, recorded a **17% rise** year-on-year in containers handled in February 2024. Overflowing storage yards and vessel berthing delays speak to the capacity constraints plaguing these critical hubs. Despite being better equipped than during the pandemic, carriers face operational challenges around adjusting schedules, adding vessels, and managing potential congestion and shortages to maintain container traffic flow.

A period of challenge and change for road freight

Current challenges around transportation also extend into road freight operations.

The US faces a severe shortage of truck drivers, with the American Trucking Association (ATA) estimating a deficit of more than **60,000 drivers** as of 2023. As an aging workforce and high turnover rates further aggravate the situation, there is an urgent need for skilled drivers in the logistics sector. This tightening capacity is expected to drive rates up. Disruptions at the US-Mexico border and in maritime corridors also pose additional challenges.

Another challenge surrounding road freight is tightening regulations requiring the adoption of electric and hydrogen fleets. For delivery companies, this means they will need to revamp their fleets and substitute standard trucks with electric vehicles to stay compliant. Major manufacturers like Daimler, Volvo, PACCAR, and Iveco are investing in electric and hydrogen trucks to meet emissions targets and are expanding battery production. In the US, heavy-duty truck sales grew by nearly 6% in 2023 despite supply chain challenges, with record truck sale figures anticipated for this year; much of this demand will need to be directed towards electric and hydrogen vehicles.

In Europe, truck registrations peaked in 2023 due to earlier orders. Although a **15% decline** is projected for 2024, sales of electric trucks are rising due to the introduction of subsidies and emission zones, although further infrastructure development is still needed.

For companies that rely on external partners for delivery, this may mean reevaluating current partners if their fleets are not fully compliant with the new carbon emissions regulations. In addition, during the transition to electric and hydrogen vehicles, companies should expect challenges in terms of efficiency and availability, particularly around delivery routes and lead times.

Efficio recommendation

Increase transparency across your end-to-end network by securing reliable and up-to-date data on your transport capacity and routes. Develop strategic relationships with multiple freight forwarders and shippers to secure logistics capacity, considering potential buffers to add flexibility and handle volatility.

3. Shifting risks and opportunities: Offshoring versus reshoring and nearshoring

The 20th century saw a rise in offshoring, with companies capitalising on lower production costs and expanded market access. However, recent years have seen companies reassessing the risks associated with offshore operations.

Reshoring and nearshoring in Europe and the US

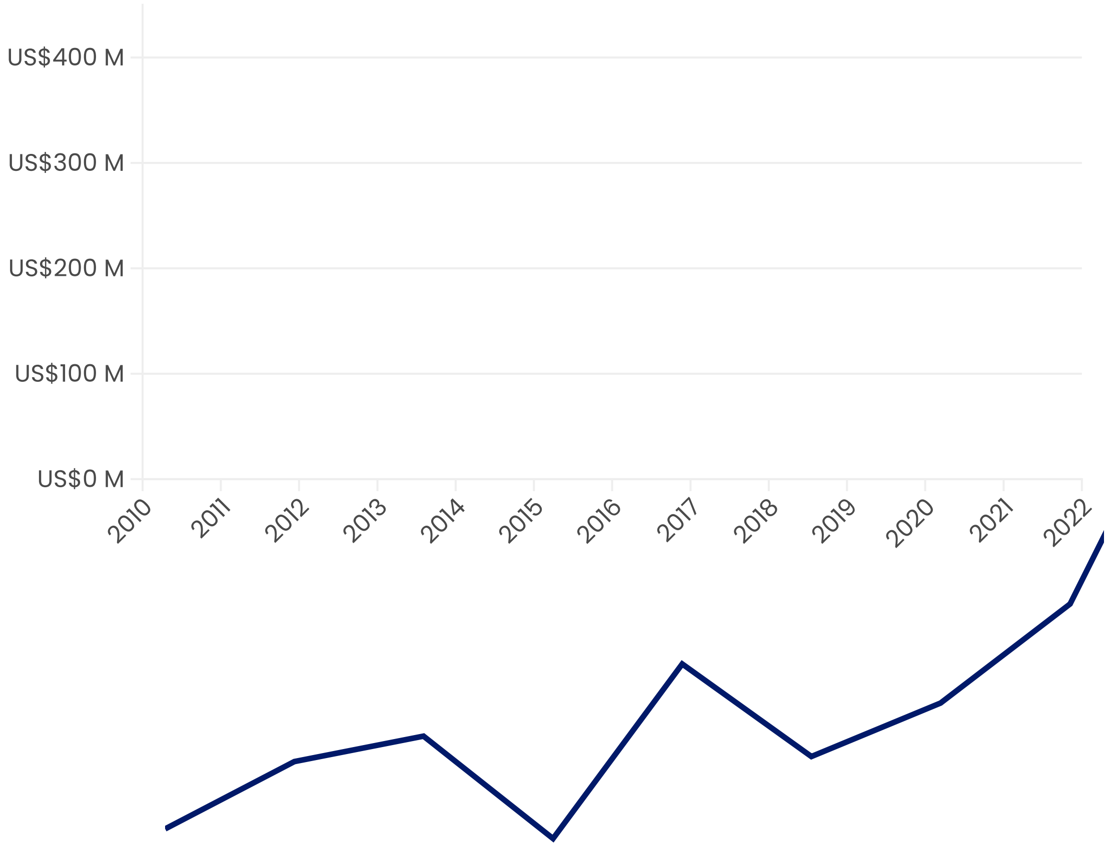
Shifting economic and geopolitical dynamics, such as pandemic-driven disruptions and US-China trade tensions, combined with increasing wages in traditionally low-cost countries, have prompted many firms to reconsider their global footprint.

As a result, reshoring has gained momentum. 2020 and 2021 in particular saw a significant increase in reshoring activities, as companies sought to mitigate risks and bolster domestic manufacturing capacities. Europe saw a **29% increase** in industrial space acquisition or leasing in 2023 compared to 2021, indicating an increase in reshoring and nearshoring trends.

Nearshoring has also emerged as a viable strategy, especially in regions like Eastern Europe. Poland, for instance, is experiencing increased investments from the private sector, positioning itself as a logistics gateway.

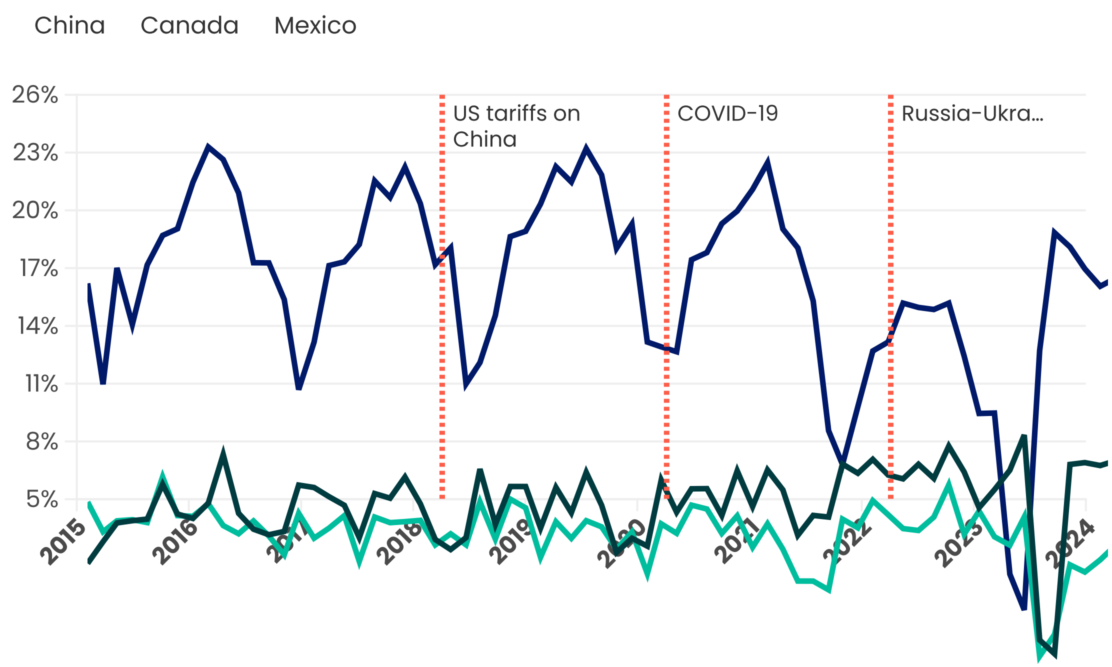
For the United States, recent trends indicate a decline in US imports from China. Instead, Mexico has become a focal point for nearshoring due to its geographical proximity, its low-cost and skilled workforce, and the benefits of free trade agreements like the new United States-Mexico-Canada Agreement (USMCA). Moreover, China has been increasing direct investment in Mexico since 2016, further boosting the growing appeal of nearshoring for the US.

Pace of China's foreign direct investment in Mexico increases after 2016



Source: Secretaria de Economia (Secreteriate of the Economy); Bureau of Labor Statistics; adjustments by the Federal Reserve Bank of Dallas

Share of US imports by country of origin



Source: United States Census Bureau
The figures in the chart have been seasonally adjusted

Reshoring and nearshoring offer strong benefits, but they're not without their challenges

The advantages of nearshoring are manifold. In the short term, it reduces transportation costs and enhances supply chain efficiency. Long-term benefits include heightened competitiveness and profitability. Moreover, data indicates potential social and environmental sustainability improvements, with shorter supply chains contributing to a reduced carbon footprint and energy consumption.

However, reshoring and nearshoring present substantial challenges beyond simple relocation. Labour availability is a critical hurdle, particularly in tight labour markets like the United States, where elevated labour costs can significantly impact operational economics. Moreover, moving operations closer necessitates substantial investments in new infrastructure, including factories and warehouses, alongside strategic updates to existing distribution networks. Navigating regulatory compliance emerges as another significant challenge, requiring adjustments to meet local standards and practices which can vary markedly from those in previous locations. Companies must also ensure quality consistency during the transition, which often requires adjustments in production processes and quality control measures. Despite the proximity gained through reshoring or nearshoring, robust contingency plans, including buffers for potential disruptions, are essential for maintaining supply chain resilience, especially when sourcing raw materials from distant regions.

Efficio recommendation

Evaluate your exposure to risk across labour, raw materials, and third-party services within your end-to-end supply chain. It may make sense to nearshore elements for which you have viable local alternatives and can build solid contingencies, like stock buffers. Businesses will need to analytically assess the trade-off between the financial cost advantages of offshoring with the benefits of nearshoring: for example, improved product quality or faster lead times for customers, both of which could drive increased sales.

4. Balancing efficiency with safety in inventory management

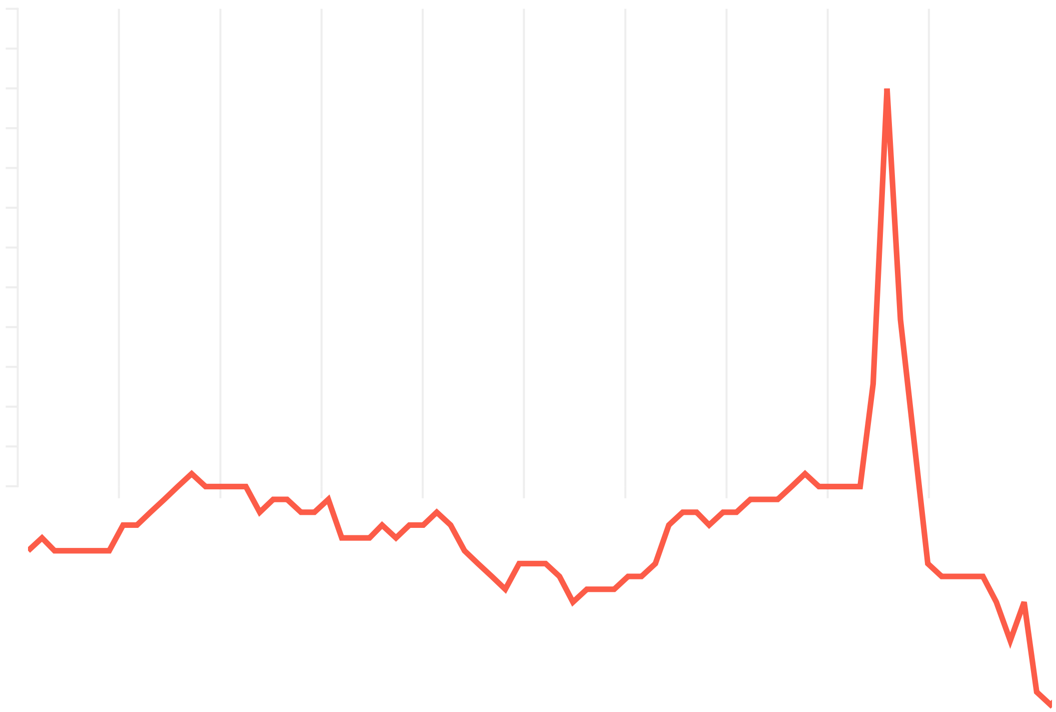
Prior to the COVID-19 pandemic, Just-In-Time (JIT) inventory management was seen as a cornerstone of efficient supply chain practices, preferred for its ability to help minimise working capital, enhance flexibility, and optimise cash flow.

Wavering between preparing for disruption and opening up cash flow

The pandemic revealed the vulnerabilities of a JIT approach, with a reliance on minimal buffer stock levels leading to widespread supply chain disruptions. Post-pandemic, inventory management practices shifted, with many enterprises proactively diversifying their supplier bases, bolstering operational flexibility, and fortifying resilience in preparation for future uncertainties.

However, the current convergence of high interest rates and escalating supply risks presents a dilemma for businesses. Even as they grapple with replenishing inventories amid disruptions, the need to open up operating cash flow is drawing them back into a JIT approach.

Total Business Inventories / Sales Ratios: 2015 to 2024



Source: U.S. Census Bureau, Manufacturing and Trade Inventories and Sales, June 18, 2024
(Data adjusted for seasonal, holiday and trading day differences but not for price changes)

Nevertheless, supply chain flexibility and resilience remain paramount. The persistence of unidentified risks, spanning geopolitical conflicts, climate change-induced disruptions, and labour shortages, underscores the ongoing imperative for adaptive strategies that foster resilience and safeguard supply chain integrity. The manufacturing industry, for instance, is forging ahead with precautionary inventory accumulation to mitigate risk and sustain operational continuity.

Efficio recommendation

> Companies must find the right balance between cash availability and stock buffers by prioritising strategic inventory levels for the appropriate products in optimal locations. Leveraging dynamic portfolio segmentation and predictive replenishment

strategies can help organisations shift from reactive to proactive inventory management approaches to ensure optimal stock levels while minimising risks and protecting cash.

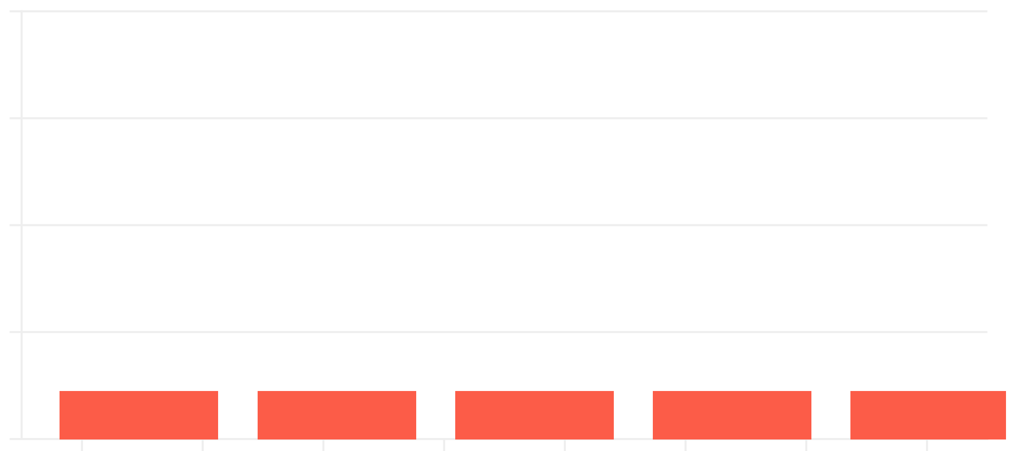
5. Global shortages across labour, raw materials, and shipping equipment

The combined disruptions of the COVID-19 pandemic, political tensions, and extreme weather events have significantly reduced material and labour availability across various industries' supply chains.

Demographic shifts, including aging populations, and changes in immigration policies and workforce preferences have created labour shortages. **By 2050**, developing nations may lose approximately 92 million working-age individuals and gain over 100 million elderly people. In the US, labour shortages are expected to hit sectors such as healthcare, construction, and food as early as 2028. In addition, evolving regulatory frameworks, such as the EU Corporate Sustainability Due Diligence Directive, will require comprehensive assessments of workers' welfare throughout the value chain, potentially shrinking the supplier pool as entities struggle to meet stricter standards.

Meanwhile, climate change has led to raw material shortages, particularly affecting agriculture due to severe weather conditions like flooding and droughts. The concentration of food production in a few countries has heightened global food supply chain vulnerabilities. El Niño, for instance, is expected to cause warm and dry conditions in California and increased flooding risks in Peru and Bolivia in 2024. A 1°C temperature rise could reduce food production by approximately 7%; this will impact feedstock commodities like corn, where yields are projected to decline by 20-40% between 2045 and 2055, therefore disrupting the meat supply chain. The textile industry also faces challenges with volatility in cotton production, particularly in regions like China and India, due to water shortages and climate change.

Estimated Changes in World Production of Cotton, 2023/24 compared with 2022/23



Source: USDA "Cotton Outlook", February 2024

Disrupted global trade routes have led to delays and shortages of empty containers. This has exacerbated cargo flow pressures, hitting countries like India particularly hard.

These labour, raw materials, and shipping equipment disruptions are leading to increased costs, extended lead times, and potential declines in product quality. While companies may seek alternative suppliers to mitigate these shortages, this could impact the quality and consistency of the final products.

Efficio recommendation

Prioritise your supply continuity through strategic inventory and planning measures. Conduct comprehensive impact assessments to understand broader risks and dependencies. Explore diversification options like seeking alternative suppliers or evaluating new locations to mitigate exposure to disruptions. Embrace the change as an opportunity to optimise processes, rationalise operations, reduce waste, and foster innovation within your supply chain.

6. ESG: Taking on Scope 3 emissions

As regulatory and consumer pressures around sustainability intensify, indicators such as the **Financial Times' Europe's Climate Leaders 2024 list** show progress towards reducing direct emissions (Scope 1) and indirect emissions from purchased energy (Scope 2). However, a critical area remains that demands attention: Scope 3 emissions.

Scope 3 emissions: An area of significant opportunity, but also of significant challenges

Scope 3 emissions, which encompass emissions from upstream and downstream activities in an organisation's value chain, often make up a substantial portion of a company's total emissions profile; estimations suggest they may account for up to 70% of its overall environmental footprint. Consequently, Scope 3 emissions should be a focal point for emission reduction strategies.

However, organisations face significant challenges when attempting to tackle Scope 3 emissions:

1. **Supply chain complexity and visibility:** The convoluted nature of supply chains, with multiple tiers and outsourced operations, makes tracking and managing emissions difficult. Limited end-to-end visibility hampers efforts to monitor and reduce upstream indirect emissions.
2. **Data collection and reporting:** Obtaining accurate and standardised emissions data from suppliers is challenging. Many companies struggle to collect accurate and standardised data for the three emissions scopes, particularly for Scope 3, making effective reporting and solid baselining difficult.
3. **Regulatory compliance and standards:** Global supply chains operating across multiple borders face various regulatory requirements. For example, the European Parliament's Corporate Sustainability Due Diligence Directive (CSDDD) and the Uyghur Forced Labor Prevention Act (UFLPA) put strict environmental and human rights standards in place. Compliance with these regulations can be costly and complex, necessitating thorough due diligence and strong transparency, which can be difficult to achieve.
4. **Stakeholder engagement:** Managing stakeholder interests and priorities is crucial for achieving Scope 3 net zero targets. Conflicting interests, resistance to change, and the resource-intensive nature of sustainability

initiatives can hinder progress. Effective stakeholder management is essential to drive collective action towards sustainability goals.

Efficio recommendation

As the interface with the supply chain, Procurement should be a key player in the push to reduce Scope 3 emissions. Make sure your procurement team is equipped with the right digital tools, well-defined processes, and appropriate skillsets to monitor and measure suppliers' sustainability performance. Embed sustainability as an imperative metric in your day-to-day operations to drive long-term value creation and resilience. Focus on delivering measurable impact: prioritise initiatives with the biggest potential for impact and deliver targeted action. Promote circularity from life span reviews, take-back schemes, recyclable materials, and low-emission distributions.

INSIGHTS

Scope 3 emissions: The key to tackling your organisation's sustainability targets

For more detailed insights, check out our viewpoint on how organisations can leverage Procurement for Scope 3 emissions reduction to make progress against their corporate sustainability goals.

READ THE ARTICLE

Navigating supply chain challenges and opportunities

In the face of the above supply chain trends and challenges, below are six key agenda points we believe supply chain leaders should prioritise:

01

Data transparency and visibility

To effectively navigate an interconnected supply chain ecosystem, organisations must establish a robust foundation of transparent and accessible data. Leaders must prioritise rectifying foundational issues within master

02

Scenario planning

As supply chain dynamics become more complex, traditional planning methodologies are no longer adequate. Leaders need to invest in advanced scenario modelling capabilities to assess the impacts of possible scenarios across the

03

Diversification and resilience

Building resilience through diversification is a strategic imperative for supply chain leaders. Beyond being a traditional investment strategy, diversification is essential to mitigate disruptions effectively.

data, ensuring data integrity, and optimising system architecture for seamless data flows. Enhance visibility and mobilise near-real-time information sharing to detect trends at an early stage and make informed, agile decisions.

supply chain. Adopt the right planning tools and integrate inputs from business-wide functions to build comprehensive plans that balance capacity, risks, customer demands, and financial goals.

Organisations must cultivate a diversified network of suppliers, warehouses, co-manufacturers, and distributors capable of swiftly adapting to unforeseen disruptions and shocks.

04

A balanced approach to inventory management

Strategically deploy buffers for the right products in optimal locations. Leveraging dynamic portfolio segmentation and predictive replenishment strategies can help businesses shift from a reactive to proactive inventory management approach, maintaining optimal

05

Strategic partnerships and collaboration

Strategic partnerships and collaboration are crucial for success in an interconnected global marketplace. Supply chain leaders must collaborate closely with logistics providers, suppliers, and stakeholders to create a network of trusted partners. Sharing resources, information, and best practices can help

06

Circularity and sustainability

Supply chain leaders must embrace ESG principles. Sustainability should permeate every aspect of operations, from product design to end-of-life management. Promote circularity by reviewing product lifespans, implementing take-back schemes, exploring recyclable materials, and adopting lowstock levels while minimizing risks and protecting cash.

organisations to enhance their resilience, responsiveness, and overall quality of products and services throughout the supply chain.

emission distribution channels. By assessing their carbon footprint and building tailored improvement strategies, organisations can integrate sustainability into the very fabric of their operations, paving the way for long-term value creation and resilience.

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