

Managing Supply Chains Amid Global Flux

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As geopolitical fragmentation reshapes global trade, supply chains have shifted from a back-office concern to a boardroom priority. Companies must now balance efficiency with resilience, while navigating tariffs, sanctions and shifting trade corridors. They must build digital capabilities and strategic partnerships needed to thrive in an increasingly unpredictable world.

Global supply chains, once optimised for cost and efficiency, are being fundamentally re-engineered for resilience and sovereignty. In a world increasingly defined by geopolitical fragmentation and the gradual erosion of multilateral cooperation, corporations can no longer rely on the predictability of global trade norms.

Rising tariffs and protectionist policies are reshaping sourcing decisions and cost structures, while eroding the efficiency advantages that once defined globalisation. This “G-Zero” world, where no single

country or coalition leads the international order, has ushered in a new era of uncertainty, disruption and strategic recalibration.

As one of the world’s largest providers of air cargo handling services and Asia’s leading inflight caterer, SATS has experienced this change first-hand across its global network of over 225 stations in 27 countries.

Its recent experience of navigating tariff-induced trade redirections illustrates a broader principle:

In fragmented markets, geographic diversification and operational integration are no longer optional enhancements but essential capabilities for sustained performance.

Supply chains must remain agile and resilient where disruption is the norm. When US tariff changes disrupted China-US e-commerce flows, cargo volumes shifted to alternative corridors, with notable growth emerging in Europe, Middle East, Africa and Asia, while Trans-Pacific routes moderated. This pattern underscores how trade adapts rather than diminishes.

For corporate boards and executive leadership, supply chains are no longer a back-office function. They now sit at the intersection of enterprise risk, competitiveness and long-term resilience. The question is no longer if disruptions will occur, but how organisations can adapt to continue thriving amid volatility.

From globalisation to fragmentation

Globalisation, which once underpinned efficiency through scale and cross-border integration, is giving way to a more fragmented and regionalised model. The rise of reshoring and “friend-shoring” reflects a strategic shift by corporations seeking to reduce reliance on distant or politically unstable suppliers, driven by local and regional pressures.

Supply chain strategies are increasingly influenced by geopolitical and national security considerations, with trade corridors being redrawn as regional blocs such as ASEAN, the EU and US-Mexico-Canada gain prominence. These shifts are reinforced by new and revitalised connectivity initiatives, from the India-Middle East-Europe Economic Corridor and the East-West Economic Corridor in mainland Southeast Asia to upgraded cross-border rail and port linkages between China and ASEAN under the New International Land-Sea Trade Corridor.

Geopolitical tensions are also at the forefront of supply chain strategy and planning. The war in

Ukraine, conflict in the Middle East, and disruptions across the Red Sea and Panama Canal have underscored the vulnerability of global trade routes, leading to rerouted cargo flows, higher insurance premiums and elevated transport costs. Meanwhile, the tightening of *de minimis* import thresholds in major markets, such as the US, signals growing regulatory intervention in cross-border e-commerce, with implications for logistics models and cost structures worldwide.

From an operational standpoint, this fragmentation is compelling companies to:

- Reassess supplier concentration risks, especially in politically sensitive regions.
- Build redundancy into production networks, with alternative manufacturing sites and logistics routes.
- Restructure production networks to include multiple sourcing locations, reducing single-country dependencies.
- Increase inventory buffers for critical components, especially those sourced from high-risk areas.
- Shorten lead times through regional sourcing and faster transport modes.
- Strengthen trade compliance and visibility to navigate evolving sanctions and tariffs.

For Southeast Asia, and Singapore in particular, this presents both challenges and opportunities. Singapore’s stability, connectivity, efficiency and governance make it an ideal node in emerging regional trade networks. As a trusted logistics hub with world-class port and aviation infrastructure, its ecosystem of shipping lines, freight forwarders, cargo terminal operators and specialised service providers is well positioned to enable resilient, multimodal supply chains that integrate sea, air and land networks.

These capabilities are particularly relevant to high-value sectors such as pharmaceuticals and semiconductors, where traceability, speed and temperature control are key differentiators.

How should companies adapt their operations?

Sanctions and tariffs have become defining instruments of geopolitical competition. Measures such as sanctions on Russia, restrictions on exporting advanced semiconductors and chips to China, and retaliatory tariffs between major economies are reshaping global sourcing and trade flows.

These measures affect not only the availability of goods but also cost structures, compliance requirements and legal risks associated with cross-border transactions. Companies must now navigate a complex web of export restrictions, dual-use regulations, country-of-origin rules and shifting trade corridors. For corporations with physical products, this demands:

- Rigorous due diligence and screening of suppliers to ensure compliance with evolving trade laws.
- Dynamic procurement strategies to avoid sanctioned entities or regions.
- Scenario-based cost and budget analyses to account for sudden tariff changes.
- Active coordination between legal, compliance and operations teams to mitigate regulatory risks.
- Flexible logistics networks to reroute shipments when trade lanes are affected.
- Agile sourcing decisions to respond to sudden cost volatility or restrictions.
- Real-time visibility and control over the flow of goods to manage disruptions proactively.

Organisations should ensure that they have robust trade compliance frameworks that are sufficiently agile to respond to sudden policy shifts. In a G-Zero world, trade policy is increasingly unpredictable, and its impact on supply chains is both immediate and material.

Leveraging partnerships

Disruptions to maritime routes have renewed interest in multimodal logistics strategies – a trend that shows no signs of slowing. The choice between air and sea freight is no longer a simple equation of cost



Specialised cargo handling: Loading a disassembled helicopter fuselage at Charles de Gaulle Airport.

versus speed, but a strategic consideration involving resilience, emissions and the ability to meet customer commitments despite upstream or downstream delays.

While sea freight remains the backbone of global trade, air freight's agility offers a crucial hedge against uncertainty. The capability to switch rapidly from sea to air, or employ an integrated sea-air solution, supported by real-time data systems and strong partnerships, is emerging as a competitive advantage in an unpredictable world.

Collaboration among airlines, freight forwarders and cargo terminal operators has become increasingly vital to improving reliability in cargo lead times. Together, these stakeholders also enable seamless modal transitions and handling via temperature-controlled facilities and equipment for specialised and high-value cargo, including pharmaceuticals and electronics, even amid disruptions.

Digitalisation: Opportunities and risks

Digital transformation is no longer optional for supply chains; it is foundational to resilience and agility. Recent advances in artificial intelligence (AI), the Internet of Things (IoT), ambient sensing, edge computing and cloud platforms are converging to give firms far greater real-time insight and operational control over their networks.

Real-time and ambient IoT sensors now feed high-frequency data on location, temperature, humidity

and condition for individual units and pallets, allowing companies to detect deviations or delays almost instantly. AI and advanced analytics overlay predictive models on that data, including forecasting demand shifts, supplier risk, transportation bottlenecks, or maintenance needs before they manifest.

Some organisations are evolving toward “no-touch” or “low-touch” planning, where AI-enabled systems propose or even execute decisions across procurement and logistics with minimal human intervention.

However, digitalisation introduces growing vulnerabilities. Cyber attacks targeting supply chain systems, logistics platforms and sensor networks are rising in frequency and sophistication. Organisations must contend with the geopolitical dimensions of their digital architectures, including data sovereignty, cloud deployment choices and vendor trustworthiness.

To succeed, companies should ensure that digital supply chain initiatives are closely aligned with enterprise-wide cyber security, compliance and data governance strategies. System interoperability, resilience to attacks and the ability to operate under constrained connectivity should be built in from day one, not appended as an afterthought.

Board role in supply chain resilience

The global supply chain landscape is evolving rapidly, bringing new expectations of governance and accountability. Boards have a fiduciary duty to oversee not only financial performance but also operational resilience and strategic agility.

Key questions for board oversight include:

- Are our supply chains sufficiently diversified across geographies and suppliers?
- Do we understand the geopolitical and regulatory risks embedded in our sourcing decisions?
- How do we balance cost, speed, sustainability and resilience in our modal choices?



Supply chain operations require coordination and infrastructure; operational realities boards must understand when assessing resilience.

- Is our digital infrastructure secure, sovereign and future-ready?

Integrating supply chain oversight into board agendas requires data-driven insight, cross-functional collaboration and a forward-looking mindset. It also requires that directors stay informed about global trends and emerging risks.

Strategic adaptation in a G-Zero world

The G-Zero world is not a passing disruption but a structural realignment. Global trade is being rewritten around new axes of trust, technology and security. Corporations must therefore design supply chains that are not only efficient but also resilient, agile and geopolitically aware.

Singapore, positioned at the crossroads of global trade with world-class infrastructure, connectivity and governance, has a unique opportunity to lead in this new era. Its role as a trusted hub for aviation, maritime and digital connectivity makes it uniquely suited to anchor resilient regional ecosystems and multimodal logistics.

For boards and corporations, the strategic imperative is clear: elevate supply chain resilience and strategy to the highest levels of governance. In a world defined by uncertainty, the enterprises that plan for disruption and have the capacity to adapt quickly will be best positioned to convert volatility into advantage. ●