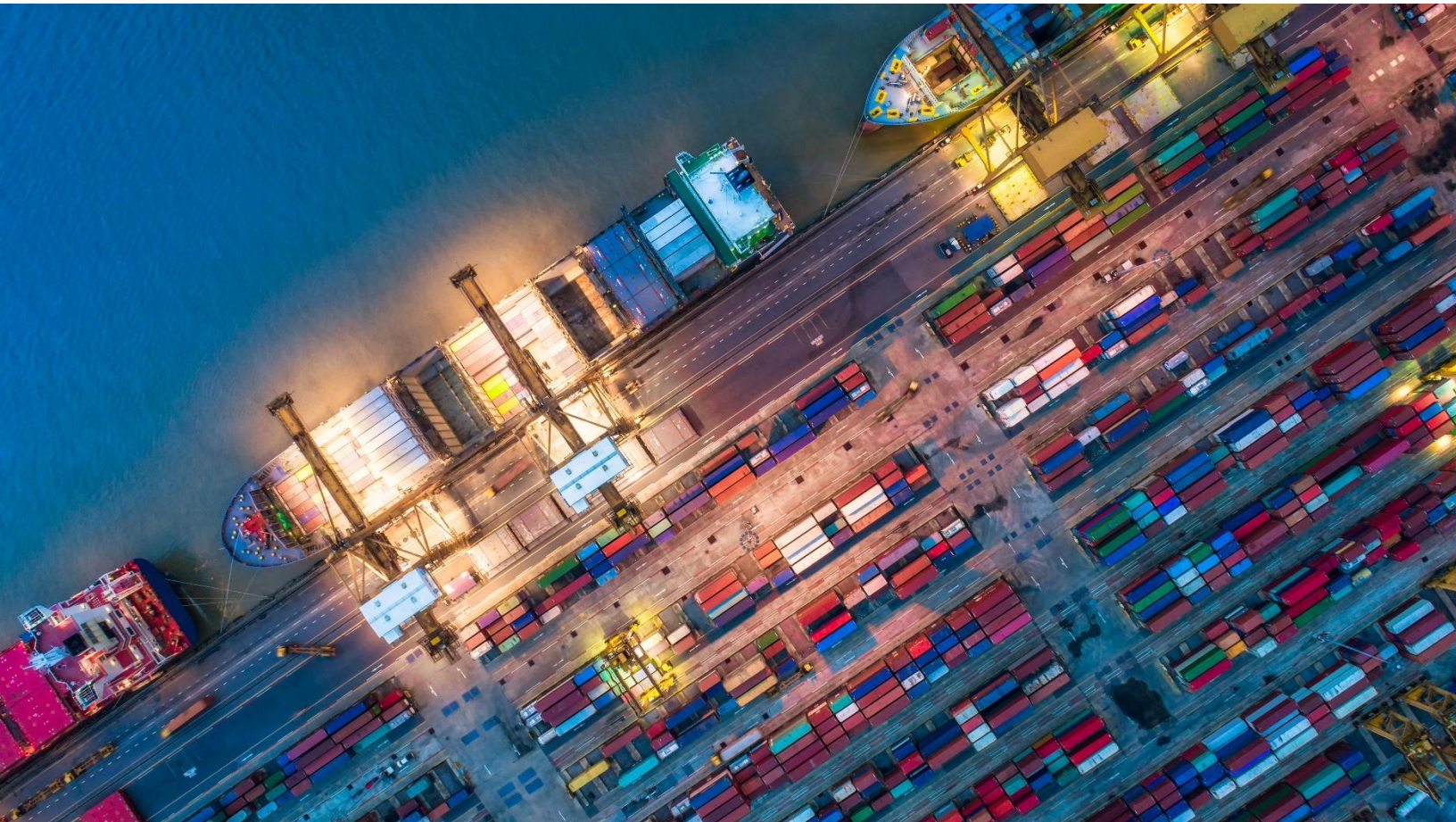


Navigating Supply Chain and Tariff Volatility for Engineered Products



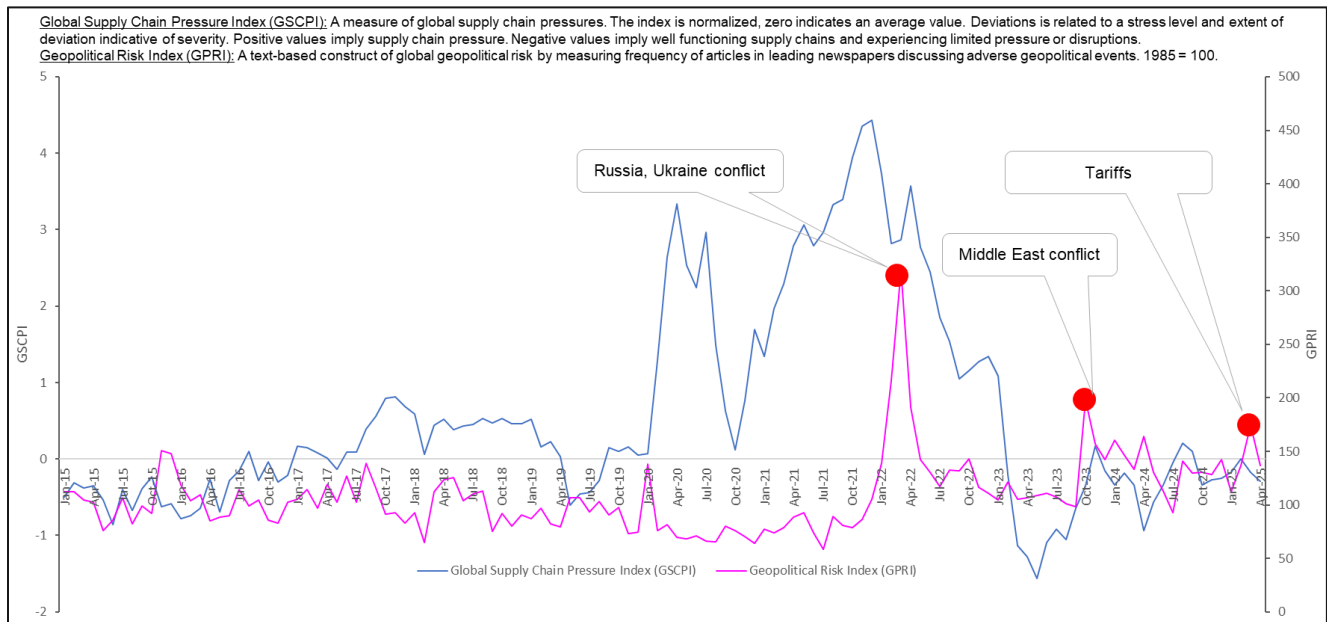
May 2025

Structural Cost Reduction Requires Integrated Action

Supply chain disruption, pressure and geopolitical tensions have been increasing over the last ten years

Global supply chains have been under sustained pressure over the last decade, driven by a convergence of geopolitical tensions, tariff escalations, regional conflicts, and rising economic uncertainty. Indicators such as the Global Supply Chain Pressure Index (GSCPI) and the Geopolitical Risk Index (GPRI) show a persistent pattern of disruption and volatility from 2015 through 2025.

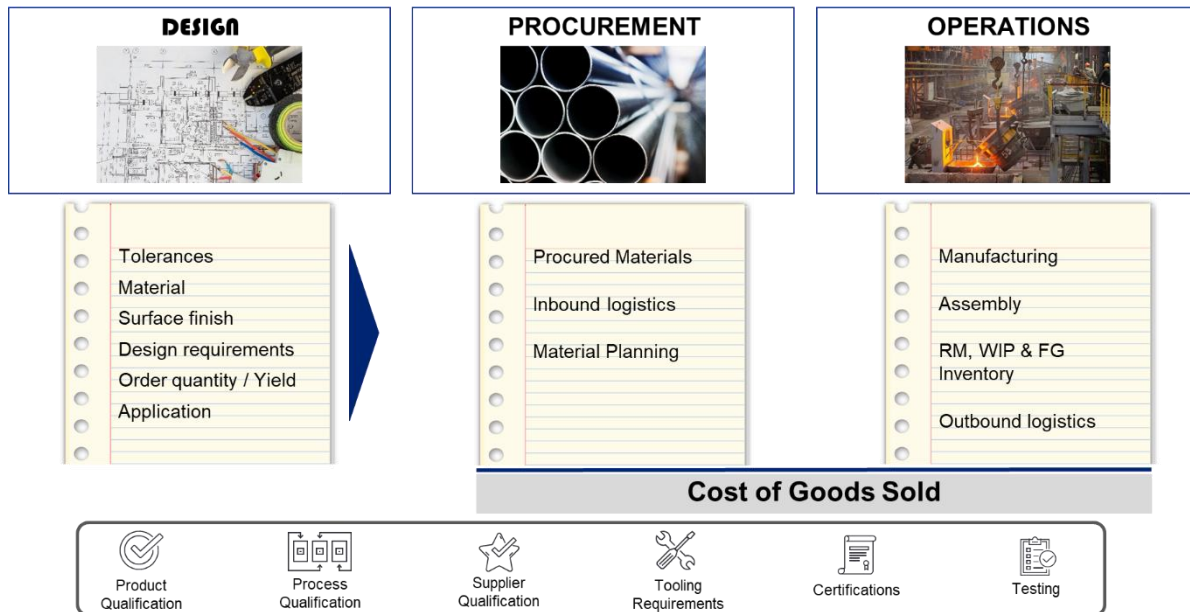
A key contributor to this volatility has been the roller coaster ride of U.S. tariff policy, particularly in the first half of 2025. Sharp and often unpredictable swings in tariff rates—such as China’s spike to 145% in April followed by a temporary rollback to 30% in May—have made it increasingly difficult for manufacturers to plan with confidence.



Data from Federal Reserve Bank of New York, Economic Policy Uncertainty
Kian Solutions Analysis

It is Not Just a Procurement Problem

This uncertainty has placed engineered product companies, which depend on globally sourced parts, sub-systems, and materials, in a precarious position. Traditional procurement approaches are insufficient when tariffs can shift dramatically in a matter of days and weeks. What’s needed is a more resilient, cross-functional strategy that links product design, sourcing, and operations to manage cost and risk in real time.



Responding effectively requires a dual focus - taking swift action to contain short-term risks while laying the foundation for long-term resilience

Short Term (0-6 Months) <i>Quick mitigation, tactical cost containment, and continuity</i>	Mid-to-Long Term (6+ Months) <i>Structural cost reduction, strategic sourcing, and operational resilience</i>
<ul style="list-style-type: none"> ▪ Evaluate Total Landed Cost <ul style="list-style-type: none"> – Quantify tariff impact by part/component using should-cost models. – Adjust customer pricing or terms to recover part of the cost impact. ▪ “Tariff Engineering” and Product Reconfiguration <ul style="list-style-type: none"> – Modify designs to enable favorable HTS codes. – Reconfigure products, “de-feature” (where feasible) or adjust value-added content to reduce cost and tariff exposure. ▪ Short Term Supplier Operations Support <ul style="list-style-type: none"> – Conduct on-site rapid assessments with key suppliers stabilize throughput and achieve rapid unit cost reduction. ▪ Launch Supplier Collaboration for Immediate Cost Takeout <ul style="list-style-type: none"> – Engage top suppliers in VAVE workshops focused on material or design-driven cost savings. ▪ Internal Process Blitz to Reduce Cost Per Unit <ul style="list-style-type: none"> – Rapid lean events in internal manufacturing to reduce product cost per unit. ▪ Tactical Sourcing Shifts <ul style="list-style-type: none"> – Reallocate volumes for select components to existing suppliers in low tariff regions – Utilize alternate suppliers (dual sourcing from low/non-tariff facilities). 	<ul style="list-style-type: none"> ▪ Product Redesign for Cost and “Right Shore” Sourcing <ul style="list-style-type: none"> – Modularize designs to isolate high-tariff components. – Platform strategy to enable part interchangeability for greater flexibility. ▪ Strategic Supplier Partnerships and Co-Investments <ul style="list-style-type: none"> – Develop LTAs with performance incentives and co-invest in capacity, tooling, or automation with key suppliers. – Joint efforts to improve supplier manufacturing operations to lower cost per unit. – Pre-qualify secondary suppliers for rapid volume ramp-up or production shifting ▪ Regionalize Final Assembly and Value-Add <ul style="list-style-type: none"> – Shift final subassembly, testing, value-add processes to U.S./nearshore sites to reduce tariff exposure, lead times and improve responsiveness. ▪ Manufacturing Operating System and Automation <ul style="list-style-type: none"> – Deploy structured lean operating systems internally and at supplier sites – Invest in automation and flexible production systems. ▪ Integrated SLOP and Footprint Optimization <ul style="list-style-type: none"> – Align planning across engineering, sourcing, and operations to optimize production volumes, supply location, and risk exposure.

Turning Volatility into Competitive Advantage

In today’s volatile tariff and geopolitical environment, organizations that act decisively – aligning product design, procurement, and operations can turn supply chain risk into competitive advantage. An integrated cross-functional approach can help companies not just respond to volatility, but *thrive* by building more resilient and more cost-effective supply chains.

For more information, please reach out to:

Ashim Talukder
Managing Director
atalukder@kiansolutions.com

Kian Solutions at a glance

Kian Solutions is a premier Operations Consulting firm composed of seasoned industry professionals with deep expertise across Product Development, Manufacturing Operations and Procurement. We specialize in driving measurable Performance Improvement and helping companies navigate the operational complexities of Mergers & Acquisitions (M&A), Integrations and Divestitures. With our hands-on approach and continuous focus on delivering tangible results, we partner with organizations to achieve operational excellence, enhanced productivity, and sustainable long-term growth.

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