

Rethinking Global Operations for Flexibility and Resilience

Built for volatility. Designed for your reality.

CHORD[®]



Executive Summary

What was once stable is now fragile. Global supply chains, long optimised for efficiency, are buckling under volatility.

Sweden exports over 2,000 billion SEK in goods annually. With segments like road vehicles and industrial machinery tightly tied to global markets, even modest shocks, such as tariffs, geopolitical shifts, and logistics bottlenecks, can have outsized effects for actors in these segments.

Global trade disruptions have exposed just how brittle supply chains can be. The cracks show first in missed shipments, rising costs, or inflexible production. Avoiding these issues demands more than interim fixes—it takes true end-to-end visibility and scenario-ready supply networks.

At CHORD, we recognise that no single solution fits every business. Yet, our conviction is that every resilient supply chain must enhance two core capabilities: *predictability* and *flexibility*. For firms with robust data and sourcing options, we build digital twins for precision planning. For others, we lead resilience sprints to identify risks, develop and prioritise responses, and deliver clear, implementable roadmaps.

In a volatile environment, resilience must be embedded in the design of the value chain—from how scenarios are anticipated to how decisions are triggered. The organisations that navigate uncertainty best are not just aware of risk; they are structured to act on it.

That is where CHORD comes in.

Why This Matters Now



Recent volatility has exposed how vulnerable firms are to external shocks. Resilience now depends on predictability and flexibility.

Geopolitical instability, war, and economic fragmentation have become the norm. Now, renewed tariff-driven trade policy, such as the U.S. tariffs, is adding to the strain on global sourcing and export flows.

The implications for Swedish companies are substantial. In 2024, Sweden exported goods worth over 2,000 billion SEK—nearly 50% as much as the entire national budget, which stood at ~1,400 billion SEK. The U.S. alone accounted for ~9% of those exports, making it a critical market.

Thus, a shift toward protectionist U.S. trade policy would directly affect Swedish industrial exporters by introducing new cost layers, delaying shipments, and destabilising longestablished supply routes.

Beyond direct tariffs, the secondary effects, such as retaliatory EU trade responses, would cascade through global value chains. Companies with rigid, globally concentrated footprints are the most exposed. Regardless of how tariffs play out, one thing is clear: **the world is more volatile than before**. Trade, logistics, and regulatory conditions can shift faster than supply networks can respond.

For Swedish companies, **resilience now depends on predictability and flexibility**—building supply chains that can adapt under pressure rather than collapse under surprises.

TOP EXPORT PRODUCT SEGMENTS¹

Sweden exported goods worth more than 2,000 billion SEK in 2024. Just five product segments accounted for over half that total, indicating their reliance on global trade.



The End-to-End Perspective



True flexibility requires end-to-end visibility, coordinated design, and the ability to simulate and adapt before disruptions hit.

The increased volatility in global markets has exposed design flaws across many supply networks. Over the past decades, firms optimised supply chains for efficiency and cost often resulting in concentrated production footprints, single-source suppliers, and just-in-time inventories.

These choices yielded short-term gains in isolated areas, but left chains brittle. When conditions suddenly shift (e.g., a port closure, an energy crisis, or a new tariff), end-to-end weaknesses become apparent: a delay or disruption in one link cascades throughout the value chain.

Recent crises have revealed how siloed or *locally* optimised decisions (for instance, lowest-cost sourcing without regard to geopolitical risk) can undermine the *global* network's performance.

The lesson is clear: **companies must design supply chains holistically² for robustness**, not just efficiency. In response to the ongoing volatility, many firms are turning to familiar levers: dual sourcing, regionalised production, contingency planning, and cross-functional crisis teams.

While these actions can improve resilience, they are often implemented in isolation without a shared view of system-wide impact. This limits their effectiveness and can lead to reactive decisions based on assumptions rather than system-wide understanding.

END-TO-END SOLUTION

Digital twin simulation builds on these efforts by providing a virtual model of the entire supply network—from suppliers and factories to customers.

It enables companies to simulate disruptions, test different configurations, and coordinate levers like sourcing and footprint design in a more integrated, datadriven way to meet the organisation's acceptable risk exposure.

The result is not just resilience, but **adaptability by design**.



From data-rich digital twin simulations to actionable resilience sprints, we tailor supply chain resilience solutions to each company's reality.

At CHORD, we do not view supply chain shifts as one-off tweaks, but as part of a continuous strategic review of the footprint. CHORD's view is that companies should regularly reevaluate where they locate production and inventory, guided by scenario analysis and long-term trends.

However, there is no single solution that fits every company. Large, global firms often have rich datasets, multiple suppliers, and geographically distributed operations—making digital twin simulations particularly effective for testing trade-offs, rerouting flows, and exploring dual sourcing strategies.

In these cases, CHORD builds tailored **digital twins**, enabling companies to simulate end-to-end disruptions and stress-test their network design. These models capture each firm's specific supply chain footprint, enabling faster, data-driven decisions and stronger adaptability. For smaller firms, digital twins may offer limited value due to fewer sourcing options and less robust data. In such cases, we lead a **resilience sprint** tailored to your organisation, built for handover, and shaped by a systemwide view to avoid fragmented fixes.

CHORD'S RESILIENCE SPRINT

Based on customer-centric end-toend value chains, we:



Identify risk areas and define assessment scope



Assess risk exposure based on supplier base, manufacturing footprint, and customer base



Quantify business impact via scenario analyses

Develop and prioritise mitigation strategies



Design mitigation strategy implementation plan

The outcome is a clear, prioritised **roadmap** and, where needed, a practical, lightweight tool for ongoing risk tracking and scenario analysis.

