KINAXIS®

The "Multi-Multi" Supply Chain Problem

That No One Is Talking About

The average organization is losing significant profits from supply chain disruptions.

We need to understand the deeper problem to change the outcome.

The Time to Act is Now

After the COVID shock of 2020, supply chain executives across multiple surveys indicated plans to invest in digital transformation. CEOs acknowledged broken supply chains and poorly managed IT networks and McKinsey & Company found that, over the course of a decade, the average organization was losing close to half of a year's profits from supply chain disruptions.

A couple of things are clear: The time to act is now and the end game is to achieve agility, flexibility, and resilience. What is less clear? How to get it done.

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The Multi-Multi Problem

Not only are we in state of constant disruption, but disruptions are here to stay. The cause of disruption may change; yesterday it may have been global health, today it may be political unrest, while tomorrow it may be trade related. Issues like inflation, material shortages, high performance pressures from customers, and capacity constraints will never be challenges businesses can overcome on their own – at least not complex or global businesses. It is an ecosystem problem, as issues can originate beyond the scope of one's own internal network of factories, warehouses, and distribution centers. Mitigating risk and impact, monitoring and controlling cost, and maintaining operational excellence under changing conditions have become a multi-tier endeavor. To be capable to promise, to preempt or else react fast to potential risks and constraints, requires fast and strategic orchestration across networks.

Actionable visibility into inventory, orders, logistics, and transport has to span beyond enterprise facilities, reaching across partners and even partners' partners, where problems often originate.
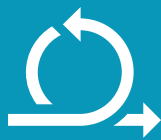
"Mitigating risk and impact, monitoring and controlling cost, and maintaining operational excellence under changing conditions have become a multitier endeavor."

There are many challenges to achieving this multi-tier, multi-level, and multi-service visibility and coordination. An audit of the ecosystem will likely reveal different partners at different stages of digital maturity. You will find multiple businesses (plants, warehouses, carriers) operating out of multiple geographies, using multiple currencies, requiring multiple modes of transport (using different systems for different modes), and leveraging multiple and varied systems (ERPs, WMSs, TMSs, OMSs, CRMs). This, in addition to an organization's own business operations that handles multiple purchase order flows and sales order flows and may span multiple sourcing and distribution channels and stores.

We call this the "multi-multi" problem, or the challenge of orchestrating across multiple parties, systems, and processes to drive a high-performance supply chains; supply chains able to fulfill on-time and in-full at the lowest possible cost, and to do so consistently, with resilience to changing demands and conditions.

The reality is, ecosystems are critical to driving value and meeting growing customer expectations. No one organization can do it alone. But networks have also become static monoliths of disparate systems and fixed processes that, without a proper digital framework in place to unify those elements and support efficient and effective integration and operation, can quickly become overly complex, unwieldy, and contribute to the constant propagation of risk and disruption. Part of the difficulty is establishing trust across multi-tier parties; the most significant challenge, however, is one of mindset.

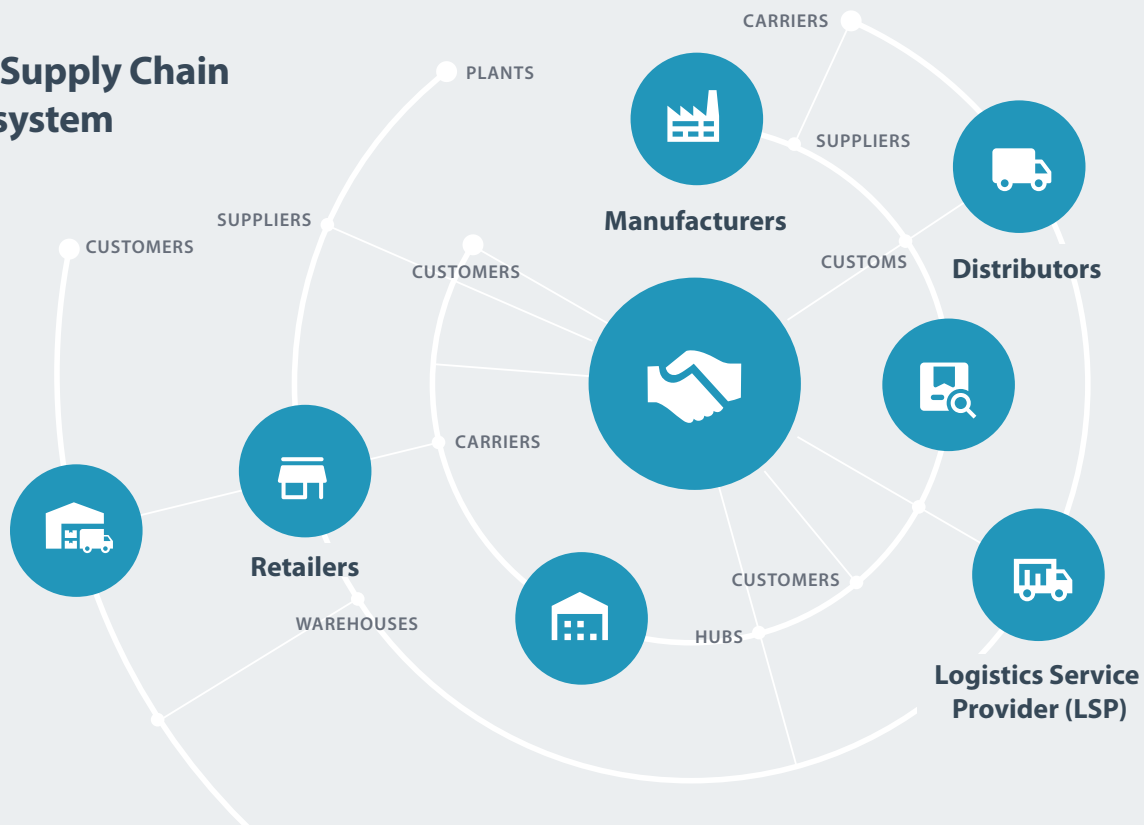## The Narrow Versus Future-Oriented Mindset and Technology Strategy

In today's world, "Risk" and "Disruption" are the "Big Bad." How do we counter these evils? With Flexibility, Agility, and Resilience – the Holy Trinity of nearly every digital transformation initiative. Jargon aside, what does this mean on a practical level?

As with the question What is supply chain visibility? It depends on who you ask. These terms can be broadly applied to many solutions, instances, and challenges. Transport visibility enables agile response to unexpected transport events; diversifying suppliers offers resiliency through the ability to switch partners as needed. Yet, within the context of the multi-multi problem, it's evident that these solutions are narrow against the greater picture. They make one or a few 'nodes' of the supply chain agile, flexible, and resilient. Such solutions temporarily alleviate one specific problem until another one crops up in a different node of the supply chain. Moreover, supply chain sectors don't work in isolation, they affect one another and the ability for organizations to optimize the ecosystem and each individual order.

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The Supply Chain Ecosystem

CARRIERS

PLANTS

Manufacturers

SUPPLIERS

SUPPLIERS

CUSTOMERS

CUSTOMERS

CUSTOMS

Distributors

CARRIERS

Retailers

WAREHOUSES

CUSTOMERS

HUBS

Logistics Service
Provider (LSP)

So, what might it mean to enable flexibility, agility, and resilience across the ecosystem?

An organization's mindset and technology strategy informs how they select and invest in supply chain software. Some organizations are driven to 'modernize', or update existing business processes, upgrade existing systems, and enhance systems and processes already in place. Whether driven to improve the status quo or by an urgency to solve a pain point, this approach represents a 'narrow mindset.' The initiative would be driven by a short-term solution to improve a silo or one particular pain point. This is not to say that these initiatives are frivolous – in fact they are important and necessary. It's critical to optimize inventory management, to drive efficiency and visibility across inbound flows, to digitize manual processes.

What's problematic is continuing to upgrade existing systems and accrue still more across multi-party networks without also considering what these investments do to impact the big picture.

A future-oriented mindset and technology strategy is one that favors digital transformation over modernization. Digital transformation is a journey of constant growth and evolution, and it must span the entire ecosystem. It solves immediate pain points while simultaneously laying the groundwork for holistic improvements, optimization, and growth.

Solving the Multi-Multi Problem

To drive a real digital transformation, it's important to ask: Which technologies or technology strategies temporarily modernize, and which promote durable transformation? Standalone technologies, such as a TMS, OMS, ERP, and so on, are built to solve pain points and modernize the discrete area of the supply chain they support (order management, inventory management, transportation management, particular modes, particular flows or order types).

Future-oriented technologies, such as multi-enterprise supply chain business network solutions, connect the fragmented systems and partner landscape. This unifying technology centralizes data, eliminates silos, and promotes integration across core supply chain processes. Because it spans the entire supply chain ecosystem, the solution acts as the foundation layer on which businesses can both solve immediate pain points (such as getting visibility to stock levels, improving OTIF through timely alerts about incidents and resolving issues immediately in the app), as well as tackle bigger goals like minimizing their carbon footprint, omnichannel, B2B, or B2C expansion, and supporting product and service expansion.

Agility, flexibility, and resilience for the supply chain ecosystem requires an end-to-end perspective.

- **It means** that when one team sets out to diversify suppliers, they have a flexible platform on which to quickly and seamlessly add and onboard new parties.

- **It means** that once they are onboarded, the logistics team will be able to leverage smart business rules and dynamically partner within their network, making the most optimal choices given all the conditions, service level requirements, and constraints.

- **It means** that capable to promise goals are easily achieved because every order planning and execution decision is informed by visibility into all inventory at all partner locations, as well as all ongoing order and transport flows.

- **It means** that over time, machine learning capabilities can be leveraged to anticipate risk, so that teams are not only reacting to disruption but becoming proactive in their decision-making.

A future-forward technology strategy, in essence, seeks supply chain software that supports more than the immediate pain point.

So, transportation management or order management or visibility capabilities that are part of a greater supply chain orchestration solution. Such a solution connects and encompasses the multi-tier, multi-level, multi-service reality of systems and partners. With such a solution, the critical capabilities and benefits you invest in can be leveraged wholesale, holistically, as needed, and balance immediate priorities with long-term plans, possibilities, partnerships, and innovations.

> **"FUTURE-ORIENTED TECHNOLOGIES ARE UNIFYING:**
> They centralize data, eliminate silos, and promote integration and intelligence across core supply chain processes."

Supply Chain Orchestration Technology

Analytics	**Planning**	**Execution**	**Finance**
• OTIF Performance	• All Order Types	• Order Visibility	• Order Revenues
• Sales Order Performance	• Channel Inventory	• Event Management	• Order Costs
• Predictive Analytics	• Planning & Optimization	• Transport Planning	• Order Rates
• Supplier Order Performance	• Available to Promise (ATP)	• Warehouse Capacity	• Order Margins
• Dynamic Reporting	• Order Brokering	• Carrier Connectivity	• Invoice Control
• Operational Performance	• Inventory Allocation	• Continuous Optimization	• Invoice Auditing
• KPI Scorecards	• High Volume Order	• Drop-Ship & Last Mile	• Supply Chain Landed Costs
• Financial Performance	• Inventory Planning	• Reverse Logistics	• Anomalies Detection

An Agile Approach to Ecosystem Resilience

The last few years have been unprecedented and chaotic to say the least. That said, there comes a point in which we must learn from the past and invest in solutions that prevent similar mistakes as well as enable resilience to new types of disruption. Many organizations are caught in a holding pattern – swinging from bold determination to transform back to a 'wait and see' reluctance whenever conditions change. There will never be a "perfect time" to invest, and the question of viability holds many back from implementing a solution that stands to offer incredible ROI, truly transformative improvement, and competitive advantage.

Given the dilemma, the option for agile implementation offers the most practical and streamlined path forward.

Agile implementation of a supply chain orchestration technology enables bold projects that are costeffective and provides quick ROI with break-even typically under a year. As a neutral, cloud-based technology, it supports real-time integration, so teams can typically begin enacting transformative change and generate value within 2-4-month increments. Showing frequent progress and meeting promised deliverables further helps to establish trust across the ecosystem, prove value, and maintain drive and enthusiasm for the initiative internally.

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A unifying technology helps create a standardized solution – whether you're beginning with a control tower or order management or logistics and transportation management – across multiple ERPs and WMSs running on different versions in different locations. In this way, it turns the multi-multi problem of chaos, clutter, blind spots, and disparate systems and processes, into a united powerhouse of infinite potential and possibility for risk management, visibility, collaboration, optimization, and innovation. Supply chain orchestration technology lays the groundwork for stealthily putting out supply chain fires today while building a more competitive value proposition for your customers tomorrow.

About Kinaxis

Everyday volatility and uncertainty demand quick action. Kinaxis® delivers the agility to make fast, confident decisions across endto- end planning and execution. People can plan better, live better and change the world. Trusted by innovative brands, we combine human intelligence with AI and concurrent planning and execution to help companies plan for any future, monitor risks, seize opportunities, and respond at the pace of change. Powered by an extensible, cloud-based platform, Kinaxis delivers industry-proven applications so everyone can know sooner, act faster and remove waste. Don't believe us? Ask us to prove it. Learn more at Kinaxis.com.

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