Mastering Disruption, From Planning Through Execution

Supply chain disruptions represent the new normal. Here are four imperatives for transforming volatility into a competitive advantage.

Welcome to the age of

Disruption.

The emergence of COVID-19 in early 2020 rocked the world's supply chains, prompting production shutdowns, a sudden shift to e-commerce channels and product scarcity. But that was only the beginning. Supply chain upheavals continued in the form of port closures, labor shortages, demand/supply imbalances,skyrocketing transportation costs and geopolitical events including the Russia-Ukraine conflict.

Every day, it seems more likely that supply chains will never return to "normal." In this uncertain environment, many companies are questioning the value and inherent risks of the traditional, geographically dispersed supply chain. And, while just about every company has some sort of strategy for managing volatility, 77% of CEOs believe their disruption-mitigation efforts are not effective.

Turn the unexpected into an advantage

In an environment where supply chain disruptions are expected to increase, what's the solution? This eBook outlines four imperatives for embracing and mastering volatility:

1 **Identify** disruptions in real time.

2 **Adjust** plans immediately, driven by data.

3 **Execute** with speed and minute-by-minute flexibility.

4 **Align** all decisions with top-level strategic goals.

These four strategies create greater resilience and minimize financial risk when supply chain plans inevitably are disrupted, creating a significant competitive edge over companies that are less adept at managing uncertainty.

Imperative 1

Sense supply chain conditions in real time.

In an age where disruptions are constant across the end-to-end supply chain, it is important to continuously sense real-time conditions and flag exceptions. Yet it's amazing how many companies lack the ability to do this. Enabled by artificial intelligence (AI) and machine learning (ML), digital control towers are readily available today to connect the entire supply chain and gather minute-by-minute data from every node.

By achieving real-time visibility across the entire supply-and-fulfillment network, organizations can create an early-warning system that enables an immediate response. Not only can the unexpected event be communicated to all trading partners, but the entire network can leverage predictive analytics to understand the impacts for service levels, costs and other key performance metrics — as well as long-term business goals.

Once the downstream and upstream effects of the disruption are clearly understood, trading partners can gather in digital situation rooms, evaluate what–if scenarios and weigh trade-offs as they search for an optimal resolution. Again, AI and ML can help. Because they exceed human cognition, they can analyze huge volumes of data and recommend corrective actions rapidly. Bringing all trading partners together in this disruption-management exercise ensures that the chosen response will be orchestrated and synchronized across the entire supply chain.

Imperative 2

Pivot plans quickly, but strategically.

Following disruptions and exceptions, supply and demand plans need to be re-aligned with one another to bring the network back on track. Resilient companies apply advanced analytics to identify risks — and are prepared for both best-case and worst-case outcomes as they re-plan.

Advanced technology makes this happen rapidly and precisely. Enabled by AI, planning optimization engines can identify backup suppliers, find additional manufacturing capacity and source new inventory — weighing the costs and benefits of each strategy. There may be an infinite number of resolutions to consider, but AI, heuristics and advanced solvers narrow the options to avoid endless analysis.

Too often, human planning teams focus on a single performance metric, such as cost or delivery speed, when responding to a disruption. Advanced decision engines instead consider multiple key performance indicators (KPIs) — from service levels to sustainability — and base their recommendations on real-time data. These fact-based, multi-faceted decisions have a much higher probability of optimizing strategic results than on-the-fly decisions made by humans.

As disruption resolutions are executed, results are fed back into long-term planning engines, enabling continuous improvement and a faster recovery from future disruptions. By blurring the historic lines between planning and execution, companies can improve their speed, responsiveness and resilience when faced with the unexpected.

Execute across channels with speed and agility.

Disruption management doesn't end when a resolution plan is created. Advanced digital solutions have transformed the warehouse and transportation network into living, breathing, real-time response mechanisms that continue to mitigate the effects of the exception across all channels. This Unified Logistics approach helps build resilience and drive a strategic advantage.

In the warehouse, labor management solutions, automation and tasking tools ensure that the resolution is enacted as quickly and cost-effectively as possible. The new strategy might entail smaller orders or more specialized tasks, which can be optimized by technology. Resources can be strategically and automatically re-assigned in real time as conditions continue to change.

Whether transportation is at the center of a disruption — such as a port closure — or charged with resolving an upstream disruption, digitalization is also key. Advanced transportation solutions connect and optimize routes according to multiple business goals the entire shipping network, including customers and carriers, in real time to drive greater speed and agility. To make possible a high-degree of supply chain resiliency, the logistics network digitally enables real-time access to the ecosystem and a market driven approach to consumption and provision of carrier and other logistics services

In today's volatile landscape, AI- and ML-enabled solutions are the only reasonable way to manage all the transportation function's complex moving parts, optimize resource and robotics planning in the warehouses and keep the overall supply chain on an optimal course.

Imperative 4

Ensure all decisions make strategic sense.

Lacking advanced tools, some businesses made disastrous decisions when faced with the incredible level of disruption of the past few years. They made delivery promises they couldn't keep, eroding customer loyalty. Or they kept promises by relying on expedited shipping, eroding profit margins.

Today's advanced decision tools ensure that all planning and execution decisions are aligned with top-level strategic goals, including revenue and margin targets, customer service levels and sustainability metrics. As they react to disruptive events, optimization engines simulate various scenarios and conduct hypothesis planning, all with the goal of making the best decisions for the overall business.

One key strategic metric is Operational Total Shareholder Return, or OTSR, which encompasses revenue growth, cost to serve and cash to serve. Companies can leverage the OTSR metric to create a repeatable, data-driven process for measuring their supply chain's real impact on top-level business objectives.

As the organization responds to disruptions, monitoring the OTSR ensures that these responses are driving real long-term business value. Instead of focusing on narrow functional KPIs, the company can use OTSR to foster a "good for the enterprise" perspective as it manages disruptive events across the extended supply chain.

Understanding risk
helps risk.

What do all four of these imperatives have in common?

They're all focused on gathering real-time data and creating a disruption response based on facts, not guesswork. Every response comes with some degree of risk. The key is to quantify and mitigate that risk.

For example, nearly every company has experienced labor shortages, transportation capacity and cost issues, and demand uncertainty recently. If profitability were no object, it would be simple to address these disruptions — by paying employees more than competitors, creating an internal transportation fleet or dropping prices across the board. But those actions have significant risk and cost associated with them.

To master disruption, companies need to have a firm sense of the risk exposure they're willing to tolerate. Then they need to leverage advanced capabilities like AI and ML to manage that risk level in real time, as conditions change. Often, that means defining innovative new strategies that balance risk with reward. For instance, instead of buying a new transportation fleet, organizations can implement a dynamic marketplace approach to securing capacity, or minimize freight needs via micro fulfillment centers.

These kinds of innovations, driven by intelligent risk management, integrated planning and execution and highly-intelligent control tower, will separate the leaders from the also-rans as disruption increases.

Learn from the leaders in disruption management.

While many companies have struggled to manage ongoing supply chain disruptions over the past few years, those that have embraced digitization have been able to fare much better. Consider these real-world examples:

With $4.0 billion in revenues, **Armada** is a supply chain solutions provider moving nearly 100 million cases and 450,000 truckloads annually. Armada combined its digital demand, fulfillment and warehouse management solutions with a central control tower to increase its resilience. Armada has seen early results in the form of 96% of disruptions being identified within one hour of occurrence, a 65% time reduction per order in resolving disruptions and a $1 million "quick win" savings in unplanned freight charges.

Mexico's largest logistics provider, **Traxion**, has grown 28-fold since it was founded in 2011. With a fleet of 8,000 vehicles and over 1,000 customers, today Traxion is three times the size of its nearest competitor. Traxion has gained advanced routing and container optimization based on real-time inventory, orders and resource availability.

The Spares Business Unit at **Mahindra and Mahindra** supports the world's largest Tractor Manufacturer and its automotive business working with over 100,000 SKUs and 21 global distribution center. Leveraging Luminate® Planning with a central control tower not only provided visibility but helped the company increase revenue by 10%, increase service levels by 10% while reducing inventory investment by 20% and customer response time by 40%

The Blue Yonder Advantage.

With thousands of customers worldwide, no one knows the supply chain better than Blue Yonder. And no other provider offers Blue Yonder's range of best-in-class capabilities. Blue Yonder is the only company to be **named a leader in three Gartner Magic Quadrants** covering supply chain planning, transportation management systems and warehouse management systems. Blue Yonder has also been positioned as a Leader in the **Nucleus Research Supply Chain Planning Value Matrix 2022.**

Enabled by advanced AI and ML, Blue Yonder's integrated planning and execution supports profitable disruption management and significant customer service level improvements. As they pivot and re-plan, and fine-tune execution, companies can make strategic sourcing decisions, optimize warehouse space and labor, maximize transportation assets and minimize costs. Upstream sensing intelligence proactively identifies demand shifts and other exceptions, then recommends resolutions to eliminate risk before it impacts customer service. Warehouse and transportation solutions execute the pivot with minimal labor costs and maximum efficiency while completing the feedback loop. Blue Yonder's approach is based on mastering disruption and capitalizing on it as a competitive edge.
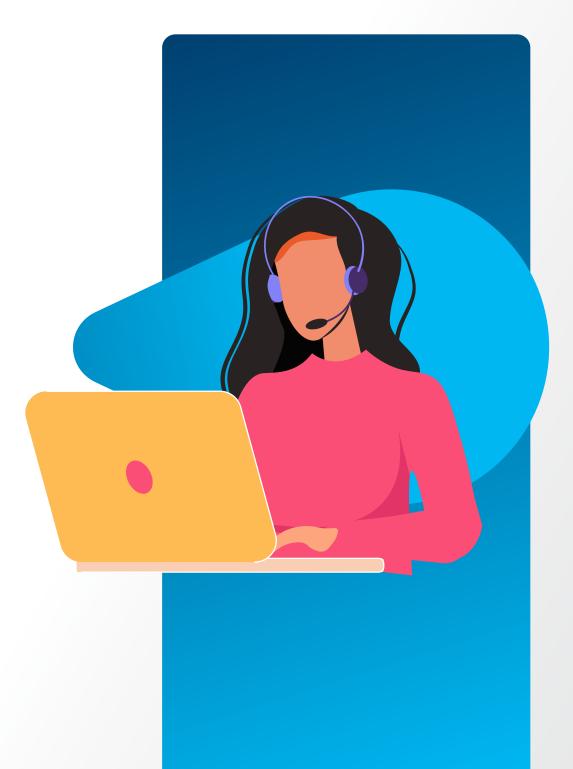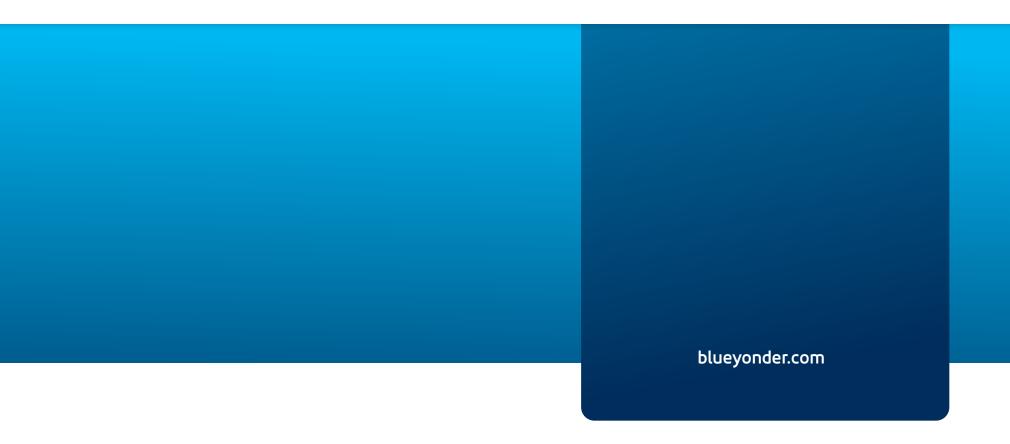
Gartner   **NUCLEUS RESEARCH**

The Blue Yonder Advantage.

A recent report published by Forrester Consulting and commissioned by Blue Yonder concludes that a $10 billion company can expect to realize a 394% return on its investment in Blue Yonder solutions over a three-year period, $59.79 million in net present value over that same period, and a full return on its software implementation expense in less than six months.

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