WHITE PAPER

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The Art of Consistent Perfect Order Delivery

Smart order fulfillment through orchestration

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Why so many orders fall short

Striving toward perfection

The COVID crisis has led to a surging interest in supply chain digitization and dynamic partner networking. Both initiatives reflect the growing need to better adapt to uncertainty and changing market landscapes by planning and executing smarter and gaining resiliency through more diverse and flexible partnering.

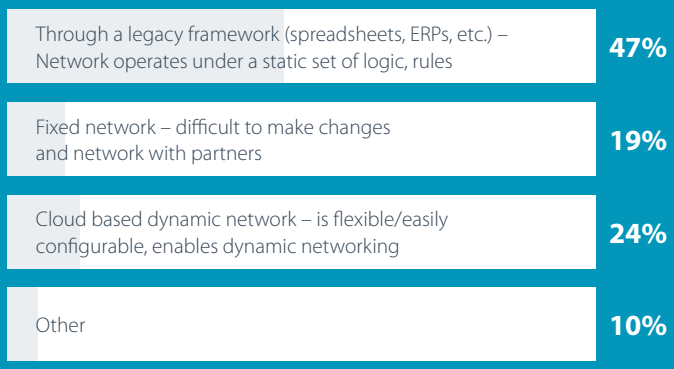
These efforts also come amid aggressive competition with the likes of Amazon. Brands are pressured to drive their own "Amazon effect" for fast and efficient service across multiple B2C, B2B, and D2C channels. In this race to win new markets and customers, and also deepen loyalty and trust and grow business among current customers, delivering on-time and in-full (OTIF) –at the lowest possible cost – is critical

However, a recent survey of supply chain stakeholders conducted by Supply Chain Dive's Brand Studio, 51% of the respondents claimed they did not have the technology necessary to achieve the perfect order.

Is the perfect order possible with the technology curently available to you?

Percentages rounded to nearest whole number

How are you operating your supply chain network?



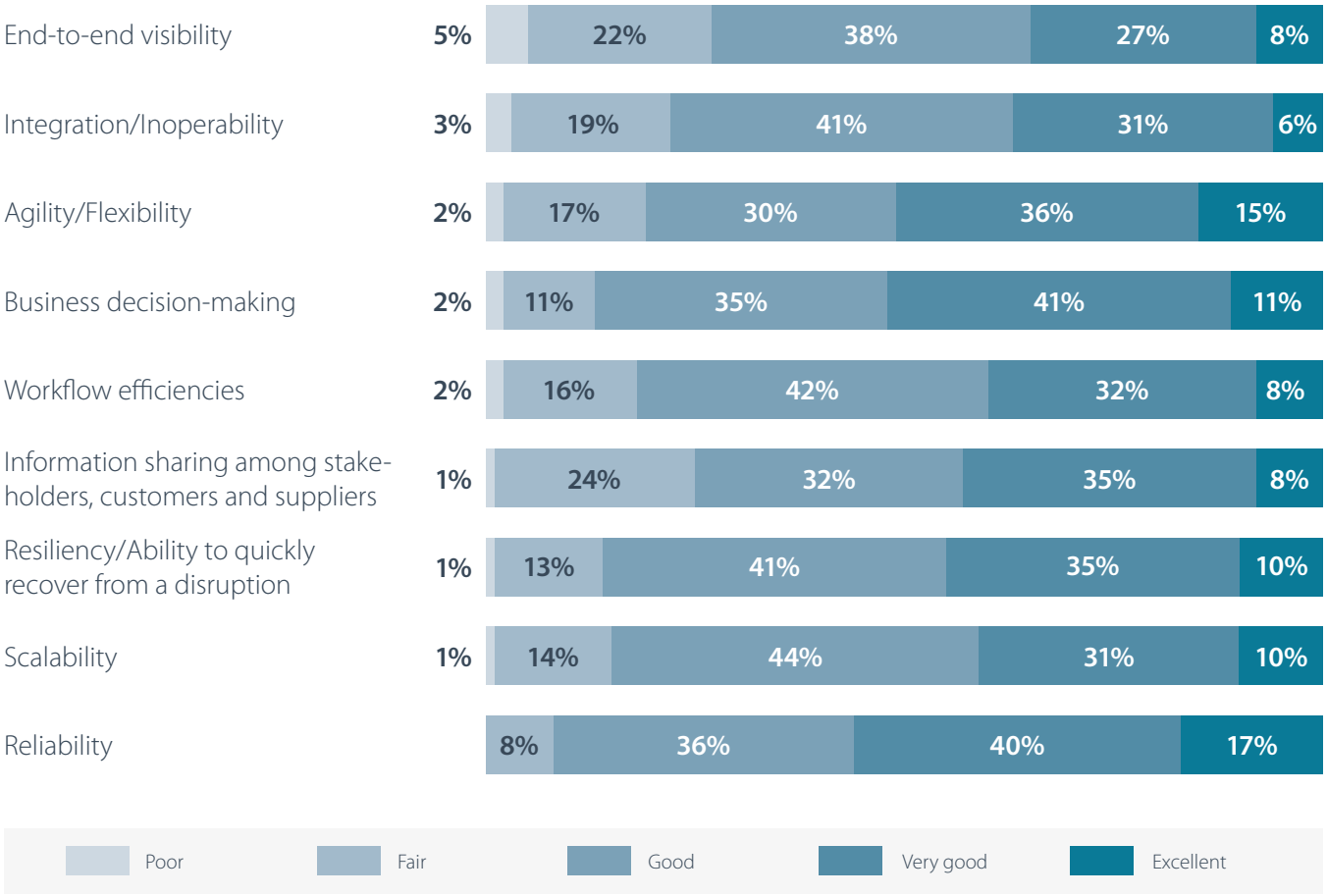
This fact was further reinforced by a subsequent survey conducted by Peerless Research Group which found that 47% of respondents were still using legacy frameworks and highly reliant on Excel spreadsheets and on-premise enterprise resource planning (ERP) programs. As a result, respondents said their network operations are under a static set of logic rules.

Moreover, even though 24% claim to operate their supply chain network via a cloud-based dynamic technology that is flexible and easily configurable, only 8% rated their end-to-end visibility as "excellent." Only 6% rated integration and interoperability as excellent.

As brands work to digitize and collaborate across dynamic networks, it's crucial to realize that cloud-based, dynamic, and flexible point solutions do not create dynamic, flexible, and resilient supply chains. In today's supply chain complexity, consisting of multi-flow, multi-party, multi-region supply chains, solutions must connect and optimize across the entire ecosystem to truly and consistently deliver on the perfect order.

On their own, point solutions and many solution suites are simply unable to see across, control, and optimize end-to-end challenges. Traditional systems, such as S&OP, ERP, WMS, and TMS, need a complementary platform for orchestrating end to end flows. This holistic, multi-enterprise business network technology is referred to as a supply chain orchestration platform.

In general, how would you rate your supply chain performance on...



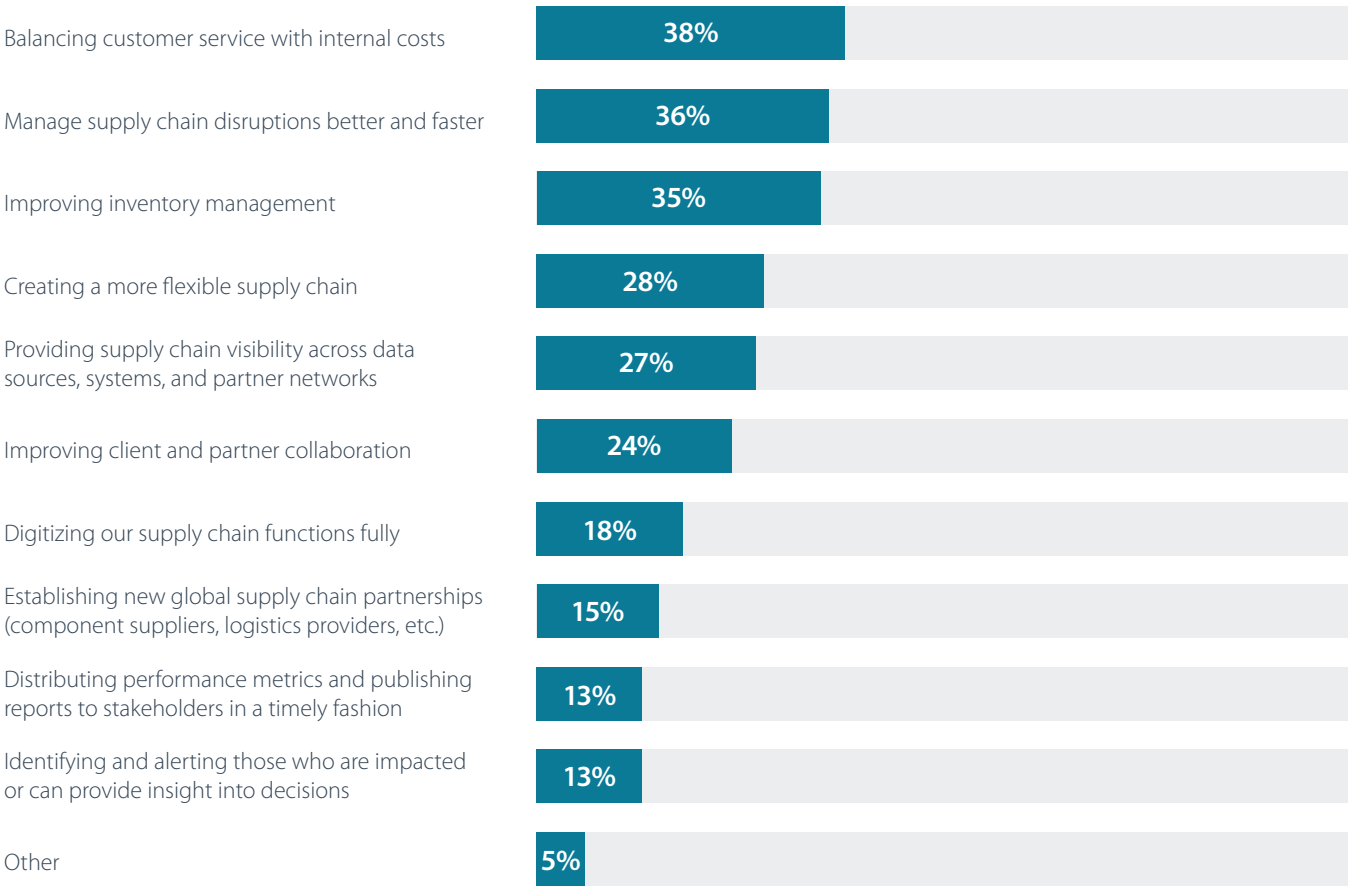
What is a perfect order?

Master both operational excellence and customer satisfaction and achieve your most ambitious goals

When Peerless Research Group asked stakeholders, which supply chain initiatives would be most important to their organizations over the next 12-18 months, it's no surprise that 'balancing customer service with internal costs' was the number one answer.

Supply chain practitioners, no matter the industry, aim for a common objective: Perfect order fulfillment. Achieving perfect orders entails not only delivering on-time and in-full (OTIF) to customers but doing so as consistently, conveniently, and cost effectively as possible. It means marrying apparent contradictions such as performing better, faster and more sustainably at lower costs and ensuring customers worldwide –including remote geographies – can seamlessly order from whenever, however, and to wherever they want, while enjoying a consistent brand experience.

Thinking about your company's business strategy, which initiatives would you say will be most important during the next 12 to 18 months?



The dual objectives of boosting both customer satisfaction and operational excellence are not actually at odds. The problem is that the current technology strategy is at odds with perfect order fulfillment. While supply chains have evolved into ecosystems, with brands investing in more online sales channels, like websites and webshops, and ever-richer multi-enterprise business partnerships with suppliers, distribution centers, and carriers, the systems architecture they leverage to orchestrate across these channels and networks weren't built to manage complex and dynamic ecosystems.

Consider the survey metrics mentioned earlier: a quarter of respondents claim to leverage state-of-the-art supply chain technology: cloud-based, reportedly dynamic, flexible, and easily configurable. These are all supremely significant and desirable traits. **So, why are so few experiencing excellence in their visibility, integration, and collaboration abilities?**

Today's point solutions, such as ERP, WMS, OMS, and TMS are high-performance – but taken the landscape as a whole, they're each still siloed. To solve this, many companies are purchasing solution suites; yet most suites are the product of mergers and acquisitions and are not natively unified. That is, they were not built from the ground up to provide visibility, actionability, and optimization across the whole ecosystem – spanning all orders and flows.

Most stand-alone systems and suites continue to only share insights within sectors and optimize within silos, so businesses lose critical opportunities to improve cross-functional costs and efficiencies wholesale. Despite a quarter of respondents leveraging the 'latest and greatest' cloud technology, a paltry few are actually getting the visibility and collaborative functionality they need to optimally fulfill orders.

Finally, when asked which supply chain solutions they plan to implement or upgrade over the next few months, 68% responded "Control Tower and Visibility." While it is essential to have such a solution, it's even more critical to obtain these capabilities as part of a supply chain orchestration platform if you want to boost your performance rating from good to excellent.

Achieving perfect orders within today's supply chain complexity requires a holistic view of the entire ecosystem and precise actionability or control across every node. Furthermore, itrequires smart, automated order planning andexecution that dynamically factors all flows andavailable resources against a rich offering of convenient fulfillment options and every order's service level requirements.

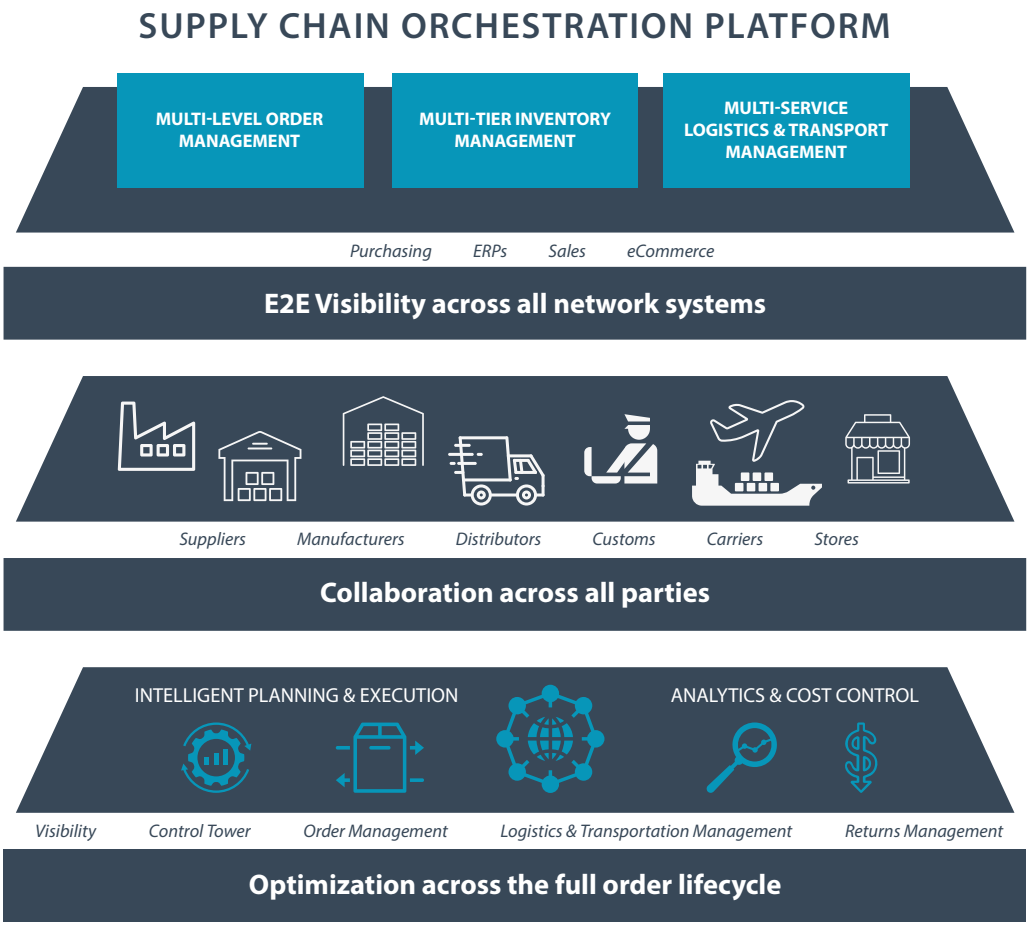
The key components of smart order fulfillment

Mastering the 'multiverse' of supply chain complexity

A supply chain orchestration platform supports consistent perfect orders by plugging into and connecting a company's fragmented systems landscape then leveraging smart order fulfillment capabilities that place the order at the center of all supply chain activities.

A customer order journey, whether a sales, purchase, or return order, typically involves multiple stages or levels (sourcing, storing, shipping, last mile delivery, etc.), across multiple parties, modes, legs, and touch points. A siloed systems architecture fragments visibility and control over the order journey by having a separate system handle each discrete step. Conversely, an Orchestration platform converges orders, inventory, and logistics and transport functions, thereby allowing stakeholders and users to access both global and granular views of the order journey.

To enhance interoperability and truly optimize every flow, the platform's smart order fulfillment functionality offers multi-level order management, multi-tier inventory management, and multi-service logistics and transportation management across all inbound, outbound, and return flows. This allows brands to drive supply chain operations in real-time at every stage of planning and execution, for every order.



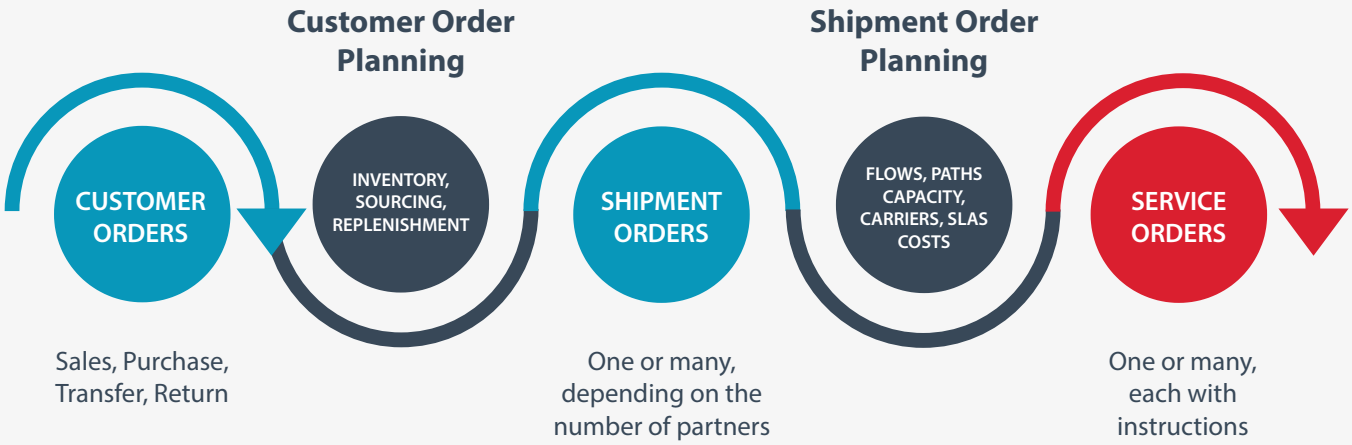
Multi-level order management

Customer order, shipment order, & serice order planning

As part of the intelligent order planning stage, this capability ensures that no matter what sales channel an order comes from – and no matterwhat type of order it is – businesses will always source from the best possible location and choose the best possible multi-leg, multi-mode routes to take via the best possible carriers. Moreover, it's a real-time, continuous process. If conditions or requirements change, the platform immediatelyadapts and re-optimizes the flow.

To do this effectively, the system would translate customer order requirements into executable and manageable plans and directives for partners to carry out in the form of shipment orders and service orders that accommodate the one-to-many and many-to-many relationship between order types. For instance, if you need to source a sales order from two different locations, the system enables you to relate or "decompose" that sales order into two shipment orders. Similarly, many sales orders can be decomposed into many shipment orders and each shipment order can be decomposed into one or more service orders, which outline the actions each party must perform.

For full and silo-free visibility, each customer order flow has easy, drill-down views of its respective shipment, and service orders allowing the brands to manage the full order lifecycle on a single platform without having to toggle between systems.



Multi-tier inventory management

Inventory availability & optimal allocation

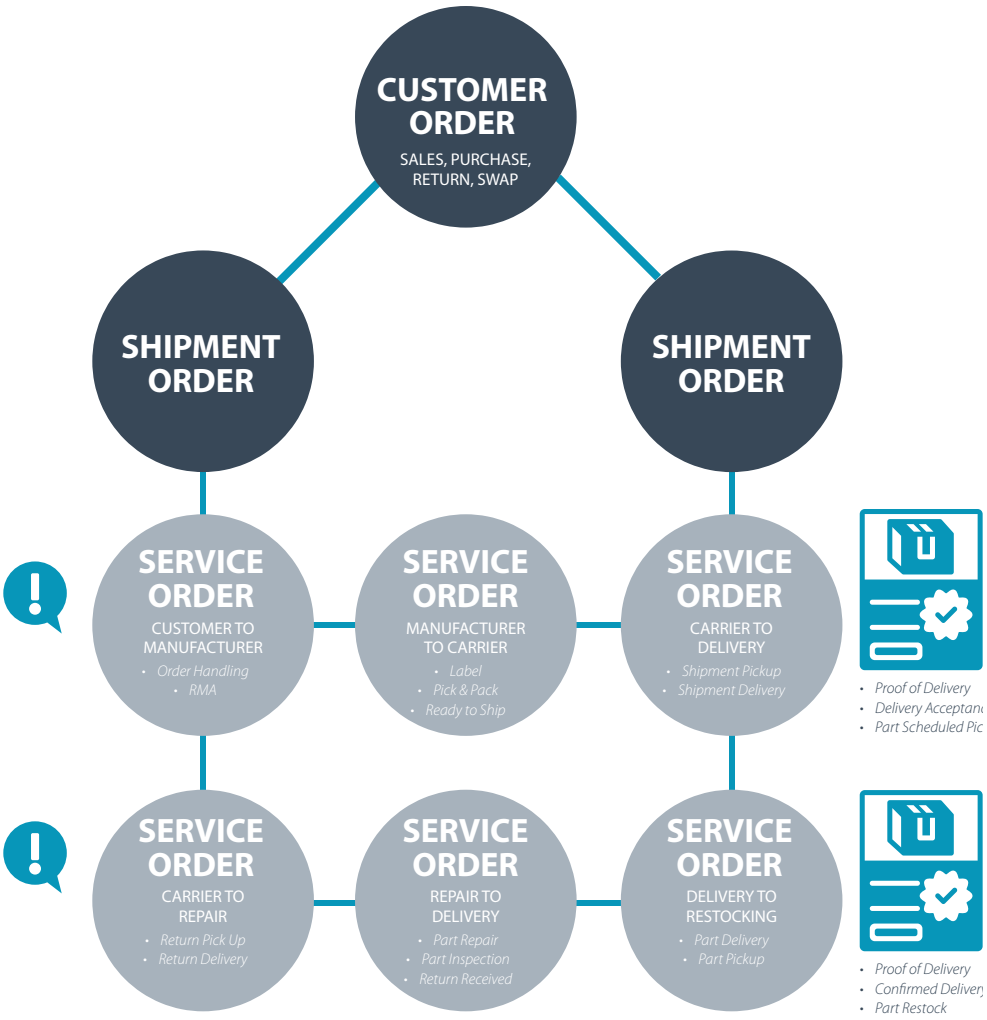
Leveraging this capability, brands can plan customer orders against resources by taking into account currently available stock and future inventory levels, as well as customer service level agreements (SLAs), total fulfillment costs, and available time windows with the parties in their network. In addition to a brand's own company site, inventory visibility spans multiple sites, WMSs, ERP systems, parties, and suppliers. Smart business rules enable dynamic sourcing that automates choosing the ideal location to forecast or source an order from. As a demand-driven system, the intelligent platform is also aware of current and future inventory levels and can automate purchase orders to replenish stock in time at specific locations.

Multi-service logistics & transportation management

Planning, execution & exceptions management

Multi-service logistics and transportation focuses on planning and executing the logistics and transport segments of the order flow. Once optimally planned, every customer order is decomposed into one or many shipment orders, which are further broken down into multiple service orders spanning single leg or multi-leg and multi-mode transportation. Businesses also gain visibility and control over activities beyond transportation, such as cross-docking, sorting, customs declaration, and warehouse coordination activities, like receiving packing details from a WMS and informing it when to pick, pack and dispatch orders.

As orders are executed by multiple parties, each can update their progress in real-time, sending "events" cascading down the order hierarchy, immediately updating the shipment and customer order data. Should issues arise, the platform smartly reroutes, replans, and re-executes, splitting and consolidating orders as needed – to ensure optimal, OTIF delivery.



Every order continuously optimized

A micro supply chain for each customer order

According to Gartner, "Cost optimization seeks to balance service delivery with the best customer experience, at the right level of cost." Supply chain leaders who focus on optimization consider priorities other than cost, especially as they occur across the supply chain.

That's because the cheapest options are not always the best options, and beneficial actions in one business unit may harm another – that's why optimizing within silos is not really optimization. Siloed systems can't optimize across the entire value chain. An order management system (OMS) might select the "best" inventory and location to fulfill from, but without end-to-end visibility over both order and logistics management, the data it leverages is limited and therefor suboptimal. Without proper TMS integration, the OMS will estimate costs – which is not really optimizing.

The global view into orders, inventory, and logistics and transportation that a supply chain orchestration platform provides ensures businesses are not only working to reduce supply chain costs within sectors, such as freight and logistics spend and buffer stock, but that, in the grand scheme of things, every sector's effort results in greater customer satisfaction, revenue growth, and improved efficiencies overall. That means controlling costs by optimizing across the entire ecosystem, at every single touchpoint from sourcing to execution.

The visibility paradigm also extends to networking. Businesses rely on a network of enterprises for sourcing and fulfillment, but no one supply chain (or definitive set of partnerships) is ideal for all customer requirements and circumstances. Having insight into each stage of supply chain planning and execution that businesses can immediately act on from directly within the application, empowers those brands to dynamically model their networkson all the given needs and constraints, such as service levels, inventory, transportation, and costs,to create an optimized "micro supply chain" for every order.

A PwC survey found that optimized supply chains usually see **15% lower overall costs, less than 50% inventory holdings, and about a 3x faster cash-to-cash cycle**. Achieving those results require a shift in perspective. Especially in today's disruptive,competitive, and highly demanding climate, achieving perfect orders requires connecting fragmented systems and functions to begin seeing and acting within the bigger picture.

What is a "Micro Supply Chain"?

"Micro supply chain" refers to the ability for real-time, continuous control over the flow of supply chain activities, optimizing for every order (sales, purchase, return, etc.) against service levels, inventory, transportation, and costs.

In contrast to a 'one-size-fits all' supply chain that uses a fixed set of business network partners (i.e. suppliers, carriers, etc.) to fulfill every order, a "micro supply chain" dynamically leverages its business network partners to optimally fulfill a given order. The platform uses smart business rules to factor the exact requirements, features, and constraints related to any given order to smartly plan and execute a flow of supply chain activities across those network partners,which can dynamically change in real-time as conditions or needs change.

To better understand how the "micro supply chain" works, consider a hypothetical company: "Sienna Corporation." Sienna has 3 outsourced warehouses and 2 in-house warehouses, procures from 25 active suppliers, and works with 10 logistics service providers and carriers across the Americas, EMEA, and APAC. Suppose Sienna receives a customer order for 3 line items, one of which is a hot swap item to be delivered to a customer location in the Netherlands, while the rest go to a customer location in Tennessee. Here's how the system might ensure continuous optimization for each order.

Optimal allocation

Based on inventory availability across Sienna's supply chain network, customer order requirements, and costs, the system determines that allocating stock from a warehouse in Nevada is ideal for the two line items going to Tenesse, while the warehouse in Germany is more cost-effective for the hot swap.

Intelligent routing

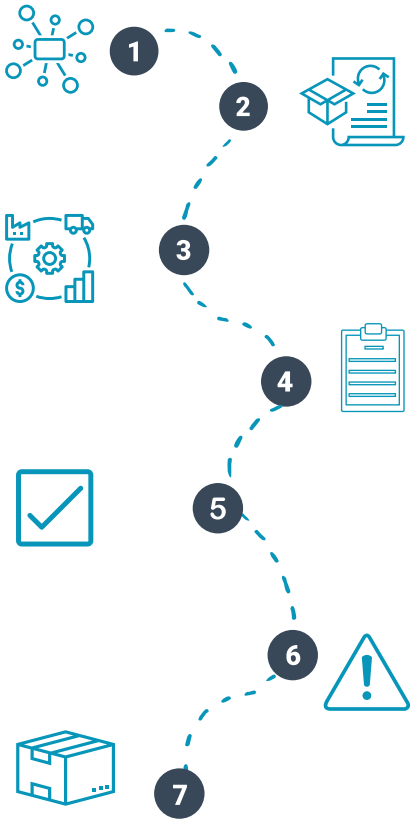
The system, having data on all ongoing flows, routes, carriers, capacities, rates, and service level agreements, intelligently determines that the optimal route from Nevada is via an LTL carrier.The hot swap from Germany is optimally fulfilled via overnight parcel.

Event notifications

As the warehouses pick, pack, and ship, and as the carriers pick up and deliver, Sienna receives real-time alerts for each milestone.

OTIF delivery

Sienna receives proof of delivery from the carrier, as well as the customer receipt of the items -which are duly marked in the customer order. The customer order is then marked as delivered.



The system plans two shipment orders

One shipment order is for fulfillment from Nevada to Tennessee; the second is for fulfillment from Germany to the Netherlands.

The system generates four service orders

Each warehouse receives independent service orders for pick, pack, and ship, including label printing. The remaining two service orders are for each respective carrier, and contain pick up and delivery instructions.

Exceptions management

Sienna receives an alert from the carrier about a pick up delay in Nevada. Sienna proactively calls the customer and proposes an expedite due to the urgent need. Sienna splits the order from the consolidated shipment by creating a new shipment order via an alternate LTL carrier- all within minutes from directly within the app.

About Kinaxis

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