

INTELLIGENT CONTROL TOWERS FOR PHARMACEUTICAL AND MEDICAL DEVICE SUPPLY CHAINS

Maximize supply chain performance for manufacturers with network-wide visibility, collaboration, automation and prescriptive analytics





ESSENTIAL REQUIREMENTS FOR SUPPLY CHAIN TECHNOLOGIES

Resilience and agility are more important than ever in today's pharmaceutical and medical device supply chains. Yet the industry often operates with very limited access to shared digital data. This severely limits visibility and responsiveness, especially when operations have to rely on emails, spreadsheets, and siloed data repositories to make decisions. You may have dozens of ERP instances and a host of other systems that need to work together. But when these systems work as islands, instead of improving supply chain performance, they drain it.

These silos complicate workflows. They create blind spots. They increase information lead times. They make optimal decision-making much harder.

To maximize agility, optimization and resilience, you need to orchestrate processes across your entire supply network. From customers to suppliers. From your internal plants and contract manufacturers, to distributors and logistics providers across the globe.

It's a network problem, one that requires real-time information and a single version of the truth for all parties. The fact is, you can't solve a network problem with enterprise-centric thinking. You need a supply chain control tower purpose-built for networks.

INTRODUCING A PROVEN PLATFORM FOR DIGITAL TRANSFORMATION

The NEO Platform is One Network's unique multiparty network platform, that supports tens of thousands of organizations, from automotive, food, high tech, and defense, to healthcare and humanitarian aid organizations worldwide. It helps address one of the healthcare industry's biggest concerns: How to digitize and transform quickly, without starting from scratch, and without throwing away your enormous investment in your existing systems. The good news is that you don't have to.

With a network layer in place, you can begin moving business functions onto the network over time in a systematic way that matches your priorities -- and retains the best of your legacy systems. This unlocks enormous value as you eliminate time lags, lower costs, and slash inventory buffers across the network. You decide where to start moving onto the network, in a phased-way that lowers risk. Best of all, it's self-funding because you're capturing value at every step.

You and your partners connect only once to the platform, and then you can share data in real time to plan, execute, and collaborate. From ingredients and intermediates to "fill and finish", from raw material and parts to finished devices, you'll have real-time visibility to every order, every shipment, and all your inventories around the globe, with consolidated demand and a view into every point of supply. You can also have full traceability, telematics, cold-chain tracking and chain-of-custody for air, land, and sea. By eliminating information delays across your supply chain, a change in demand at one end will ripple quickly across your internal plants and contract manufacturers, and across every tier in your supply network. You'll be able to continuously match supply to demand in near real time. When demand shifts occur, you can respond immediately, and reallocate inventories optimally.

With intelligent NEO agents, you'll automate routine tasks to free up your expert staff to focus on the exceptions – where they can add the most value. NEO agents work 24/7 to predict problems, rank your options, and run optimizers. Then your team can use prescriptive analytics to find solutions sooner, when there are still many low-cost options. You'll have the visibility, the tools and Al-powered workbenches to optimize and manage your supply chain most effectively.

You and your contract manufacturers, your suppliers, packers, carriers, and customers can finally work in unison on the same platform, to share plans and forecasts, orders and shipments, inventories and ETAs.

The result? You'll see more reliable supply and streamlined production. You'll increase service levels with fewer expedites, and lower costs. In other words, you'll have greater agility, efficiency and resilience.

A collaborative network means you'll be better positioned to take advantage of new opportunities and mitigate risks. You'll be able to ramp quickly and engage your network to capitalize on new drug and device approvals. And you'll be more responsive to demand surges and more resilient to supply disruptions, both man-made and natural.

Control Tower Operational Benefits

- A comprehensive supply chain and logistics model that represents all parties and processes, from planning through execution, using Al-enabled network-optimization
- A platform for digital transformation that reduces the need to manually manage and integrate data across internal systems and external partners
- Quickly identifies in real-time the issues impacting performance and resolves them quickly
- Advanced analytics, reporting and insight leverage a single version of the truth (SVOT) to drive improved performance across supply, logistics and fulfillment
- Early warning to potential issues eliminates knock-on effects
- Detailed tracking of transactional and resolution history for continuous improvement
- Detailed tracking and tracing of products ensures compliance so promises and commitments are met
- Enhances trust and efficiency across trading partners with real-time data and a single version of the truth
- Rapidly connect to alternate or new trading partners on the network, including suppliers, CMOs, packers, carriers, wholesalers, distributors and customers

Control Tower Financial Benefits

- 10-30% inventory reduction across healthcare, CPG, retail and industrial segments
- 12-50% reduction in manual planning, scheduling and execution management overhead
- 1-8% improvement in inbound delivery performance and outbound customer service levels
- 30-50% reduction in premium freight costs
- 10-40% reduction in overall annual transportation costs
- 2-10% increase in equipment utilization



"The NEO Platform is the industry's only solution with a fully integrated data model from the consumer to suppliers and everyone in between."





MEETING THE CHALLENGES IN THE PHARMACEUTICAL AND MEDICAL DEVICE SUPPLY CHAINS

Let's take a closer look at how a control tower on a network platform meets the challenges faced by the pharmaceutical and medical device supply chains. The NEO Platform helps address numerous challenges, including:

- Lack of (or ineffective) demand planning, collaboration and execution
- Inability to share timely information and collaborate with contract manufacturing organizations (CMOs) and multiple tiers of suppliers
- Lack of visibility to inbound supply, inventory and production and quality
- Difficulty in coordinating transportation between internal sites and external parties. For example, a highly manual effort is often required to coordinate supply to CMO sites and from CMO to own manufacturing sites.
- Lack of collaboration with suppliers, contract manufacturers and other partners, along with slow decision response times.
- Poor supplier on-time in-full (OTIF) performance.
- Difficulty in effectively orchestrating workflows between multiple parties.
- Multiple instances of ERP which are difficult to maintain and customize.
- A lack of a global master data management solution for the enterprise (and the supply chain) thus requiring master data be maintained at the ERP instance level.
- Increasing complexity and sensitivity of new materials, devices and drugs, that are more complex to manufacture, and require careful handling, raising the bar and the costs of manufacturing and shipping them.

- Meeting the track and trace requirement in the Drug Supply Chain Security Act (DSCSA) passed by in 2013: Although the FDA has postponed enforcement, it's only a matter of time before penalties will kick in.
- The threat of counterfeit and substandard drugs: A worldwide problem, the WHO reports that one in ten drugs in middle- and low-income countries are fake or substandard. And the Wall Street Journal recently reported that a counterfeit Pfizer vaccine was discovered in Mexico and Poland.
- Making effective use of big data in the supply chain, and effectively handing the high volumes of data that are produced for patient and drug testing, as well as managing inventory and the supply chain.

These challenges manifest in numerous ways in the day-today operations. Even in the best of times, many companies are often struggle to answer basic questions, such as:

- Where is my shipment?
- When will it arrive?
- What's causing the delay? What orders are impacted?
- Where have I got a problem? How do I solve it at lowest cost yet keep high service levels?
- How should I reallocate my supply to fulfill this demand?
- What will it cost, and who else will be impacted?
- What's my demand across all channels?
- How do I optimize my decisions across the region, when all my decisions are so interconnected?
- How can I offload routine chores, so I have more time to focus on what matters?
- What are my alternative sources of supply?
- How can I communicate with my suppliers and carriers more quickly when there's a disruption?
- How can I on-board new suppliers more quickly?

While these challenges can seem overwhelming, new technologies like multiparty network platforms and intelligent agents, have enabled new solutions that enable pharmaceutical and medical device companies to rapidly digitize and secure their supply chains, gaining better visibility, improved optimization and collaboration, better accountability, traceability, compliance and security.

Companies can now become demand-driven, using a realtime multiparty platform, powered by machine learning, to help synchronize supply to demand to improve customer service levels and optimize the flow of ingredients, drugs, parts and devices. And they can do it while lowering inventory levels, and reducing costs and waste throughout the supply chain.

WHAT MAKES ONE'S INTELLIGENT CONTROL TOWER DIFFERENT?

One Network is the industry's only solution with a fully integrated data model from the consumer to suppliers and all logistics partners, providing a network-wide, real-time single version of the truth. One Network's Control Tower is powered by the NEO Platform, and here are some of the unique features that this network platform makes possible.

Truly One Network, One Solution

One Network has been a technology leader for nearly 20 years, and the advance that has provided the greatest performance benefit for customers is the sharing of applications, data, and transactions on one common business network. Here the entire supply chain can be viewed, managed and optimized as one unified system, as opposed to many small, disparate parts. The platform's end-to-end capabilities have been conceived and built entirely by One Network to be network-based, using a single database, a single UI, for a single one integrated and intelligent set of network services. They are not a collection separately acquired, stitched-together systems. It is a completely unified network solution that is unique in the industry.

The Network Effect

Any new company joining the One Network community has immediate access to this established business network of organizations already on the network. This is the "Network Effect", which is particularly beneficial in the healthcare sector, because of the numerous parties involved, from suppliers, manufacturers, co-manufacturers, packers, logistics providers, distributors, and customers.

The total number of parties can be in the thousands. It's not a problem for the network, as companies only need to on-board once, and chances are good that many of your customers, suppliers, and logistics providers are already on the network, greatly accelerating projects and time-to-value.

A Single Version of the Truth

Having all business partners on one backbone lets information flow throughout the network seamlessly and in near real time. It synchronizes your ERP systems to the network. This means uncertainty and variability are minimized, reducing the "bullwhip effect," where order quantities are distorted and amplified upstream in the supply chain. It also means a problem anywhere in the network is quickly recognized and can be dealt with in a fraction of the time of traditional approaches. This reduces the "bullwhip effect" on disruptions, where a disruption in the supply chain gets amplified as it traverses upstream and affects the rest of the supply chain. The longer the time for the original disruption to be felt elsewhere in the network, the greater the amplification. Squelching small problems before they become large problems requires quick notice and action - one of the many benefits the Network approach.

A Complete Set of End-to-End Capabilities

One Network is the only solution that offers a seamless, integrated and comprehensive suite of solutions for pharmaceuticals and medical devices, across all supply chain functions. These enable planning, execution and optimization across all supply chain functions, to maximize results. This lets drug and device companies maximize efficiencies by coordinating their replenishment process with the logistics planning and execution process, thus optimizing service levels, inventories and operational costs concurrently. As Gartner recently stated (May 2020), "One Network's solutions cover processes across supply chain planning as well as supply chain execution with a single transaction backbone and master data management system. **Its ability to offer this supply chain convergence is leading among providers.**"

Rapid Partner On-Boarding Services

One Network uses a rapid onboarding and automatic quality assurance testing process, which enabled hundreds of suppliers, carriers, and freight forwarders to be onboarded in weeks instead of months, along with a service model for onboarding new partners, as well as facilitating the elimination of those no longer required.

Hub-to-Hub Optimized Execution – Concurrent and Across Tiers

With continuous and incremental supply-demand matching in real time, your business can ensure that inbound supply is truly demand-driven and matches the needs of your end customer at the other end of the value chain. While other solution providers may claim this at a high level, One Network enables this in real time at every level of granularity and time horizon - even at the item level, enabling discrete ordering with inventory min-max controls, delivering product just-intime for your production sequence, including daily and intraday if needed.

Truly Integrated Inventory, Logistics and Order Management

With One Network, system lead-times approach zero. With a real-time view into inbounds, inventories, and shifting demands you'll find information lags are minimized or eliminated, enabling you to increase service levels even as you dramatically reduce inventories. You'll eliminate excess inventory buffers and the costs that go along with them, as well as the problems of having too much of the wrong product at the wrong location. This minimizes waste and product obsolescence.

With One Network, shipment visibility goes much deeper and includes visibility into every order that makes up the shipment. And the inventory that makes up the shipment (even in the container) can be used for dynamic decisionmaking in real time and is available for dynamic reallocation to orders – just like any other inventory quantity in your warehouses, plants, or retail locations. This explains why One Network helps optimize business performance with automation and prescriptive analytics in ways that others can't - to drive extraordinary value.

Multi-Party Collaboration Across 3PLs, 4PLs, Forwarders, Corporate and Suppliers

With Global Demand-Supply Matching and process orchestration across business partners, One Network enables you to identify supply chain exceptions in real time and resolve them optimally at the network level through multi-party collaborative workbenches with intelligent algorithms and the latest in artificial intelligence and machine learning (AI/ML) technology for automated or prescriptive decision-making. We call that global real-time visibility with actionability.

Embrace and Even Replace

With 110 pharma companies merging to 30 in the last three decades, the high rate of mergers and acquisitions has led to a proliferation of technology platforms. These need to interoperate for maximum efficiency, effective decision-making, and optimization, and some need to rationalized or eliminated. The NEO Platform connects to virtually any system, and incorporates existing systems of record into the network. It's unique "tunable system of control" enables any process (or step in a process) to be delegated to an external system, such as ERP, while the platform synchronizes all data to maintain a single version of truth, and orchestrates the end-to-end process. This enables a clear path to digital transformation, and a way to rationalize platforms – even as you improve supply chain performance.

A DevNet-Enabled Modular Architecture Enables Extensibility

Let's face it – no solution will fully match your needs out-ofthe-box. That's where the One Network platform is designed to be highly extensible and enables swap-ability of core modules. This enables you to assemble a solution from existing modules, customize and extend them if needed, so that it fits your requirements as if built to purpose, yet is fully supported during its lifecycle with One Network's "never legacy" approach. It also helps provide rapid deployments implemented through a "value first" agile methodology for a self-funding strategy where value is realized each step of the way. You get high value return quickly, with minimal disruption to operations and virtually no risk.

"With a network-based control tower, optimization and decisionmaking consider capacities and constraints across the network to ensure the highest service levels at the lowest landed cost."





"We are better able to implement transformative changes. By that I mean five- or ten time improvements instead of 5% or 10% improvements."

CHIEF INFORMATION OFFICER, PARTNERSHIP FOR SUPPLY CHAIN MANAGEMENT



"With full visibility to all points of demand, as well as all inventory and actual lead times, companies can respond more efficiently and still meet customer service levels."

INTELLIGENT CONTROL TOWERS FOR PHARMACEUTICALS AND MEDICAL DEVICES

What is the One Network Control Tower? One Network's Control Tower runs on the NEO Platform and is a complete supply chain management system embodying real-time visibility, decision making, and execution capabilities across the end-to-end supply chain. It enables views and actions on orders and shipments down to individual items, and enables collaboration across all participants, including raw material, ingredient, API and parts suppliers, contract manufacturing organizations, packers, logistics and wholesalers and distributors, and healthcare providers.

The Control Tower runs on real-time data in a single shared database, and can be implemented and used by all trading partners in the supply chain. Providing much more than basic visibility, it provides predictive and prescriptive analytics for advanced problem solving and optimization at the network level. One Network's Control Tower includes extensive machine learning capabilities that predict potential problems and help users resolve them. The system also automates routine tasks, empowering users to be far more productive, and enables them to focus on the highest value decision making.

With a network-based control tower, optimization and decision-making take into account capacities and constraints across the network to ensure the highest service levels at the

lowest landed cost. This network-level view delivers superior value compared to optimizing one-enterprise-at-a-time, because this approach considers the complex cost and service level tradeoffs for situations with hundreds or thousands of orders for businesses with potentially tens of thousands of SKUs.

This is why an effective Control Tower needs to be a network application spanning the end-to-end supply chain, that includes all trading partners from the source of supply to the point of consumption.

As explained in Chainlink Research's report, <u>Understanding</u>. <u>Supply Chain Network Technology</u>: "The new Networked Enterprise Model of the 21st century requires implementing a supply chain trading partner operating model that supports the networked enterprise, providing interoperability and visibility with reduced complexity. The supply chain trading partner operating model is a codification and automation of the key processes, policies, performance metrics and technology that govern your supply chain partner relationships."

A real-time, multiparty network realizes this networked model. It enables a Control Tower with deep functionality across your full network of trading partners. It provides both visibility and actionability. You can both plan and execute across all functions, trading partners, and time horizons.

ADVANTAGES FOR PHARMACEUTICAL AND MEDICAL DEVICE BUSINESSES

Many technology providers claim to have networks, but in reality offer separate applications connected together, interconnected silos, or hub-and-spoke models, which are very different from true multiparty networks. Only a real-time "single version of the truth" network provides the instant connectivity and data-sharing that are necessary for accurate and timely Control Tower functionality. A network-based Control Tower supports and enables the complex multiparty processes that a supply chain involves, with:

- One data model for all network participants, as well as one master data management system (MDM), one database, one UI for all functions, both planning and execution, and all enterprises. This provides a real-time, single version of the truth for all parties, enabling better optimization and decision-making.
- Orchestrated multi-party decision making with awareness of real-time constraints and execution status of each party involved.
- Network-level optimization of planning and operations across all customers - not just for one customer's Control Tower goals.
- Autonomous execution across multiple parties not just one enterprise.
- Shared end-to-end supply chain services for network participants on a SVOT platform to align operations with overall network goals.
- Instant virtual connections for new partners and network participants, enabling agile trading communities that can serve demand better by quickly pulling in new suppliers/ partners, and disabling obsolete connections.
- The ability to develop new capabilities on the network while retaining IP ownership and no technical debt incurred with customizations.

NETWORK-BASED CONTROL TOWERS SPAN ALL LEVELS OF CONTROL TOWER MATURITY

1. End-to-End and Real-Time Visibility

Bringing together parties, facilities and transportation into a single network view. You have visibility to all events and milestones that you want to track.

To successfully represent the complete logistics lifecycle across the network of participants in the pharmaceutical and device supply chain (warehouses, plants, DCs, carriers, LSPs, customers, contract manufacturers, and suppliers), the Intelligent Control Tower solution serves as a system of engagement, integrating and harmonizing data across internal and external players. It also operates with the capability to embrace many systems and to assume control of any point in the shipment execution lifecycle as needed, possibly even serving to replace legacy or redundant systems.

By integrating transaction information across all parties, the Control Tower solution enables real time visibility of the entire logistics lifecycle from purchase order to shipment order, shipment execution, track and trace, and to financial settlement.

With global visibility of inventory and in-transit shipments across suppliers, CMOs, and all internal sites, pharmaceutical and medical device companies no longer need to react in an inefficient way -- what Gartner calls a "quick twitch" fulfillment response. With full visibility to all points of demand, as well as all inventory and actual lead times, companies can respond more efficiently and still meet customer service levels.

The platform is architected to handle items and up (lots, shipments, containers), so you get item and order visibility, not just visibility into shipments. This means that out-of-the-box the platform supports direct-to-pharmacy, direct-to-distributor, and direct-to-consumer. This also enables highly targeted recalls, so compromised product can be quickly identified and extracted from the supply chain, with minimum disruption to operations and customers.

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Global Supply Chain

1 ----

BASIC VISIBILITY

Visibility to all the milestones and events you want to track across the entire network.



ALERTS

Receive alerts based on the SLA and lead times tagged to all events and milestones. Collaborate in real time to resolve them.



DECISION SUPPORT

Planning with Execution within the control tower. Users make decisions based on recommendations from intelligent agents.



AUTONOMOUS

The intelligent agents embedded within the execution layer run the supply network without human intervention.

ONLY ONE NETWORK

2. Performance Measurement, Predictive Analytics and Alerts

End-to-end visibility is further supported by a robust permissions and dashboarding configuration that allows all participants to view and analyze only the data relevant to their organization and user role.

- Operational dashboards are configurable at the user level and include all the tasks and alerts relevant to each specific role. Using these operational dashboards, users can drill into each task and alert to quickly resolve any issues.
- Command and control monitoring provides a management overview of the health of the network configurable to their unique perspective.
- Operational data views provide real-time visibility of transactions where users can build customized reports, leverage reporting templates and create data cubes or pivot tables.
- Enterprise slicing allows users to easily import data into other operational or reporting tools.

Advanced Reporting

One Network provides a suite of pre-built reporting templates to support standard performance analysis on customers, lanes, carriers and vendors (on-time and in-full) as well as any exceptions and root causes. The network-supported reporting mechanisms provide unmatched opportunities to improve cost and service within the organization and across the network.

Intelligent Supply Chain Management

Intelligent NEO agents are built into the NEO Platform and run on top of the execution data, combining other streaming data sources (such as cold chain temperature data) that compare the plan in real-time and predict ETAs and other events. Exceptions are managed though a case management capability that drives root-cause analytics and derives intelligent performance and predicted service insights.

3. Decision Support, Recommendations, Case Management and Prescriptive Workflows

The system continuously compares planned activities to actuals, determines the likely impact, alerts relevant parties of deviations, and recommends solutions so that exceptions can be managed quickly and optimally.

A network-enabled Control Tower goes beyond what traditional supply chain and TMS solutions can accomplish by allowing network participants to collaborate on time-sensitive issues in real time. With a full suite of case management capabilities, all partners can manage exceptions that occur during the execution process and optimize responses. With real-time end-to-end visibility and actionability across demand channels, supply sources, and all modes of transportation, the system can determine the likely impact, alert relevant parties of deviations, and provide recommended solutions, so that exceptions can be managed quickly and effectively.

These features also include:

- An issue state machine to monitor open, in progress, cancelled, resolved and closed issues
- Root cause analytics with reason and resolution codes
- User collaboration allows users to assign ownership and chat in real-time, with chat history recorded within transactions for auditing purposes
- Audit and reporting to summarize issue history within transactional context

Prescriptive Analytics and Guided Resolutions

Prescriptive workflows go even further to seamlessly incorporate all facilities, such as plants, warehouses, yard and dock scheduling operations, into the end-to-end workflow. Processes that are frequently managed across separate systems or via manual communication between Shipper, 3PL and Carrier, can now be streamlined across all parties where specific roles, activities and performance metrics can be established for optimized operations.

Examples. Let's look at what types of problems and solutions are possible with prescriptive analytics on the NEO platform:

Supply Not On-Time - An order planned for a container is delayed. NEO Recommended Resolutions:

 Reschedule container to next possible vessel schedule.
Requires Projected Inventory View at Import DC to identify the impacts of delaying the container.

- Re-plan container to swap different order with delayed order. Requires order and corresponding inventory prioritization and the transit lead times to effectively guide User to select right set of orders.
- Need rapid collaboration among LLP, Corporate Buyer, and Suppliers.

Execution Delays - In-transit delays, customs hold, or carrier not found for first or last legs. NEO Recommended Resolutions:

- Alternate sourcing from nearby DC to serve the immediate demand. Requires access to inventory visibility at those DCs and warehouse capacity to perform the operations.
- Adjust the outbound orders from import DCs with updated ETA for inbound supply to avoid the projected stock outs. Requires outbound demand view at import DC.
- Need rapid collaboration among Last Leg Carriers, Warehouse Manager, Transportation Team/3PL, Wholesaler and Corporate Buyer.

Demand Shift and Demand Changes - Downstream demand changes cause potential loss in sales. NEO Recommended Resolutions:

- Expedite the container operations at port with priority Items. Requires container visibility along with inventory information carried to perform the operations.
- Perform Last Minute Allocation from import DC to reallocate supply to nodes having the demand.
- Need rapid collaboration among Corporate DC, Warehouse, Buyers and Transportation Team/3PL.





"Control Towers on this multiparty network not only expose many more problems sooner (while there's still time to fix them), they also provide many more ways to solve a problem."

4. Autonomous Network Control

Intelligent autonomous agents propose solutions, identify the best option, and execute it.

At this level of Control Tower Maturity, many suggested resolutions and user-managed actions can be gradually converted to automated network actions. The Intelligent Control Tower goes beyond detecting trends and automating issue resolution, and can propose optimal solutions at the network level to improve operational efficiencies and maximize service levels.

A Control Tower on a real-time demand and supply network surfaces many more problems than you've ever been able to handle in the past. You can define limits and boundaries for automated decision-making (decision "guardrails") and automate decision-making to resolve problems that are within those "guardrails" as a normal course of business. The autonomous NEO agents include advanced planning and optimization algorithms that can autonomously make and execute decisions within your guardrails. Agents can do things like adjust and create orders, modify or change inventory policies, forecast transport capacity, perform transport optimization for dedicated and common carrier equipment, as well as the advanced scheduling of DC appointments.

This is an evolution of capabilities, not an all-or-nothing proposition. It involves experimentation, evolution, trust in automation results, and human supervision, until agents are surpassing expectations and then can run autonomously. Your staff can gradually cede autonomy to intelligent agents where it makes sense, and then only within certain products and parameters. As the system learns, improves and proves itself, it can be given more and more autonomy. Ultimately, the intelligent agents embedded within the execution layer can run the supply network with minimal human intervention.

Find Problems Faster, Solve Them with Better Solutions

Control Towers on this multiparty network not only expose many more problems sooner (while there's still time to fix them), they also provide many more ways to solve a problem. When the architecture treats all variables in the system as dependent and being driven by the desired outcome, then the Control Tower offers a wide range of solutions for each and every problem in the network.

A multi-echelon supply network problem can be solved in many different ways, for example, by adding shifts, expediting, allocations, postponement, etc. In fact, certain problems can have four or five different solutions involving many different parts of the supply network, each having a different business effect on the network outcome. The Al engine can rank these choices based on setting various business strategies for market share vs revenue vs margin generation vs customer service vs resiliency, etc.

Workbenches with Predictive and Prescriptive Analytics

Problems that fall within your guardrails can be resolved autonomously. Those that fall outside that safety zone are elevated to optimization workbenches in the Control Tower for staff to review and resolve. There, planners, schedulers, distributors, shippers, operators, manufacturers, etc., can review all the factors, explore system recommendations, and collaborate with partners to explore other options, before executing a solution.

Workbenches support all functions across the supply chain, and includes the following workbenches:

- Logistics Planner Workbench
- Order Expedite Workbench
- Supply Planner Workbench
- Vendor CSR Workbench
- Global Demand-Supply Match Workbench
- Demand Planner Workbench
- Inventory Planner Workbench
- Warehouse Manager Workbench
- Production Planner Workbench

The autonomous level offers significant advantages detecting more issues, earlier, and resolving them faster, cheaper and more optimally. Through increased automation, businesses will be able to reduce the high manual overhead associated with many supply chain tasks, including order generation, inventory optimization, tracking, issue resolution, optimal demand-supply matching, and support. You will be able to offer greater levels of service and value to your end customers at the lowest possible cost.

IN SUMMARY

As a recognized Leader in Control Towers for the fifth consecutive year (Nucleus Research, 2020), One Network Enterprises will help your business successfully make the transition from siloed legacy systems to a collaborative, realtime digital business network.

From visibility and alerting to prescriptive decision support to full AI-based automation, One Network's Control Tower technology is a highly differentiated offering that will enable optimized supply chain performance that is unattainable via any other platform.

Our aim is to help you achieve the highest possible service levels at the lowest possible cost. Moving well beyond basic supply chain visibility, One Network's Supply Chain Control Tower Solution on the NEO Platform provides predictive and prescriptive analytics for advanced problem solving and optimization at the network level.

It also includes extensive capabilities for automation and the resolution of routine tasks, freeing your supply chain experts to focus on the highest value decision making and orchestration of your end-to-end process.







ABOUT ONE NETWORK ENTERPRISES

One Network is the leader in intelligent control towers for autonomous supply chain management. From inbound supply to outbound order fulfillment and logistics, this multi-tier, multiparty digital platform helps optimize and automate planning and execution across the entire supply network and every trading partner. Powered by NEO, One Network's machine learning and intelligent agent technology, real time predictive and prescriptive analytics enable industry-leading performance for the highest services levels and product quality at the lowest possible cost. It's the industry's only solution with a fully integrated data model from the consumer to suppliers and all logistics partners, providing a network-wide, real-time single version of the truth. Leading global organizations have joined One Network, transforming industries like Retail, Food Service, Consumer Goods, Automotive, Healthcare, Public Sector, Telecom, Defense, and Logistics. Headquartered in Dallas, One Network has offices across the Americas, Europe, and APAC. Learn more at <u>www.onenetwork.com</u>.



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