

Demand Planning and Replenishment on the One Network Platform

How to gain competitive advantage in eCommerce, home deliveries and in the store

The typical supply chain may have thousands of locations and even more supply chain professionals and partners, delivering many SKUs to millions of customers, across countries around the world. Efficiently managing this network is a major challenge. Operational challenges include:

- Keeping On-time in full (OTIF) level high while controlling supply chain cost
- Placing inventory at the right place to avoid stock-out and lost sales (promotions included)
- Performing replenish planning and re-planning especially for out-of-stock items in hours not days

To effectively compete with ecommerce giants, organizations are adopting digital initiatives to improve competitiveness and business performance, but are faced with some serious system challenges:

- Current systems cannot keep up with the “Now” paradigm: eCommerce and real-time responsiveness and collaboration
- Being consumer-driven requires going beyond mere point-of-sales (POS) data
- Data harmonization of forecasts from all the channels and partners
- Similarly, synchronously aligning supply pipelines to all channels is difficult for current systems
- Achieving a common data set and business view across multiple enterprise systems, including ERP, SCM and SRM systems
- Sharing of executional data to coordinate operations both internally and across many service providers and suppliers is resource intensive and hard to scale
- Lengthy and costly data harmonization and ERP projects make deployment of new processes and business models difficult or even impossible

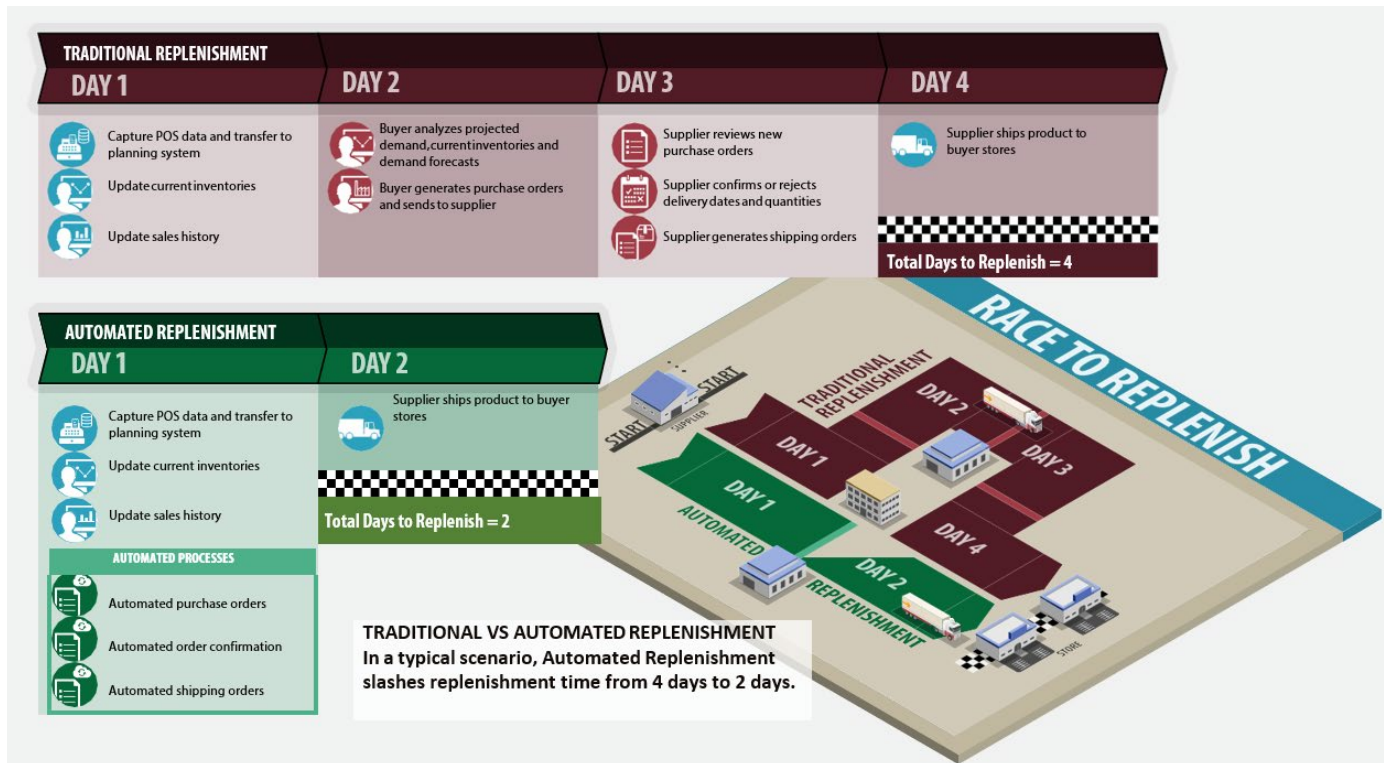
These questions and others are why leading companies are seeking to respond more quickly while gaining visibility throughout the supply chain. And increasingly, they are choosing a new kind of technology—the cloud-based, multi-party network platform.

Companies understand that demand is highly variable and sometimes erratic. Forecasting information from channels is rarely reliable. **Investing efforts to reduce cycle time and variability can have a greater impact than attempts to improve accuracy.**

For example: If the notification of point-of-sales (POS) transactions and updated inventory positions occurs at the end of each day (let’s call that Day 0), it takes a day to analyze and generate new purchase orders. The vendor receives the PO, analyzes, and then commits to a ship date based upon available supply (that’s Day 2). Let’s assume the vendor has plenty of stock available. The order is shipped from vendor distribution center (DC) to retailer DC on Day 3. Then on Day 4 the order is shipped from retailer DC to store. This is pretty fast for a system where each node analyzes and acts within 24 hours. But what if it can be faster? What if the informational lead time can be cut from 4 to 2 days? What if information could flow between trading partners within the same network? And what if we could remove the “analyze” steps through automation? Now that would be something!

HOW ONE CAN HELP

Companies leverage the One Network (ONE) Real Time Value Network™ (RTVN™), to rapidly achieve accurate real-time information, optimization, and collaboration across a diverse set of trading partners and their systems to improve on-time, in-full, delivery performance. There’s no waiting for the nightly refresh.



The Network maintains a single version of the truth across all systems and business partners. Data is controlled and securely shared among relevant trading partners using a permissions framework that gives you complete control over which attributes your partners can see and interact with.

This eliminates the traditional divide between planning and execution and enables visibility and data flow across the entire supply network of trading partners in real time. ONE also offers developer tools that allow organizations to adapt and extend ONE's modules to fit their specific needs.

Intelligent NEO Agents and Autonomous Supply Chain: One Network has the ability to model the end-to-end value chain (i.e. from stores to DCs to factories and all the way to n-tier suppliers). Supply chain practitioners no longer have to fight the "bullwhip effect". NEO is continuously monitoring the network for any changes, and when detected, autonomously propagates applicable changes both upstream and downstream to balance the demand-supply equation.

The Network is powered by One Network's machine learning and intelligent agent technology called NEO.

NEO continuously monitors your network, alerts you to potential problems, recommend solutions, and even execute them autonomously.

With the Real Time Value Network, the NEO platform and its tools at your fingertips, you will plan and execute more efficiently, your service levels will be higher, and your network will run more smoothly than you thought possible.

For example, because ONE's global community includes thousands of carriers, logistics providers and suppliers, shippers on the Network today, eliminate transportation limitations by letting NEO autonomously match shipper demand with carrier capacity in real time.

The true power of NEO is to act quickly and incrementally on the affected SKU and site, thereby dramatically reducing the response times and costs of fixing supply chain problems. NEO can autonomously execute these decisions thanks to the Network's real-time SVOT, across all systems and parties. This helps customers rapidly adopt state of the art "fully autonomous and continuous optimization" technology across the whole value chain.

Demand Sensing and Autonomous Forecasting: One Network utilizes daily or even hourly Point of Sale (POS) data to create an item and distribution center-level forecast as often as needed. The results are then “exploded” back to location level based on a smart pattern recognition agent that apportions forecast values based on the sales profile registered in the POS data for that location.

Autonomous Forecasting determines where inventory should be moved and generates orders for replenishment. The Network thus eliminates two days from the replenishment cycle time.

NEO agents have the unique ability to automatically monitor the demand signal (POS) for any anomalies, and they continuously make autonomous demand and supply adjustments on an hourly or daily basis to ensure customer service levels are met.

Perpetual Inventory and Continuous Planning to Minimize Stock-outs: If there’s nothing on the shelf or if items are unavailable, consumers cannot buy and factories cannot run. Unlike most traditional planning systems, which rely on external data sources to update stock counts, the solution can automatically keep count of stock on-hand for all current products. This is vital for computing replenishment needs at different locations. Companies configure the presets once and the system monitors inventory levels (count increments and decrements) across millions of product-location combinations.

Fluctuations in demand are automatically transmitted upstream, and trigger autonomous replenishment planning up the supply chain. NEO agents will constantly adjust for all item/site combinations. In pro-active mode, NEO agents intervene and/or alert users when there is a projected out-of-stock situation pending.

Reduced Planning Effort: What effect do intelligent agents have on planning workload? Since intelligent agents are analyzing demand, generating store orders and communicating those to your vendors, it saves an enormous amount of time and human resources. Supply chain planners and managers can focus on oversight and exceptions management rather than tedious tasks like order placement and management. Further, with reduced replenishment cycle times, companies find that there are far fewer stock-out fires to fight.

Events: What about promotional events? The NEO platform supports event planning so you can plan for significant increases in sales. Users may define future events, which items or groups of items will be impacted, and by how much. Additionally, NEO agents look for patterns in historical event periods and generate future planned promotional lifts.

Attach Rate Forecasting: What about forecasting for accessories and other related products? The platform enables the set-up of attach rates and their sales trends for secondary items. Then the Attach Ratio Engine calculates the attach rate between the primary and secondary items using historical sales data analysis so that their forecast can be generated simultaneously.

Backward Propagation of Demand to Upstream Tiers: How about propagating demand from stores or customers, all the way back to the n-level vendor tier in near real-time? NEO agents precisely compute net requirements based on stock on-hand and on-order to generate accurate order forecasts (i.e. supply inbound requirements). The platform offers distributors and vendors the ability to view and operate with accurate long-term forecasts so they can plan production and distribution accordingly.

Data Size: How can we handle the massive amounts of data involved? A massively scalable cloud-based architecture is absolutely necessary given the large number of SKUs in play across the multiple stocking locations within the typical supply network. ONE’s customers have been using the NEO platform to manage POS transactions across thousands of item-store level combinations, in daily, weekly or monthly buckets. One Network has been helping companies solve this and similar problems, across a wide range of industries, including Manufacturing, Consumer Goods, Retail, Food Service, Automotive, Healthcare, Pharmaceutical, High Tech, Aerospace, Logistics and Government.

Multi-Enterprise Master Data Management (MDM): What about the expensive and time-consuming master data problem when connecting with customers, suppliers, logistics providers and other partners? The NEO platform provides the capability to keep your master data harmonized both internally and externally. Data cleaning services are available to rationalize, not only all internal master data, but also community master data.



After trading partners have been on-boarded to the network once, the master data is automatically provided by the network to the enterprise with the simple checking of a box. A “request assistance” capability allows organizations to manage requests to modify key master data attributes like an item number or new vendor through an administrative service. This service provides workflows for approval and other associated requirements. The system manages and monitors the transfer of master data between internal and external systems and data consumers. The network alerts users to any issues that require resolution.




Integrated Business Planning (IBP): How does demand planning contribute to the bigger picture? One Network’s IBP solution coordinates and synchronizes end-customer demand across all internal operations and key trading partners, including contract manufacturers, suppliers, logistics providers, and retailers. IBP includes services for Sales & Operations Planning, Business Continuity and Risk Management, and Sustainability. It enables planners and executives to see the potential impact of specific changes. As a result, organizations can plan more effectively for profitability, variability, and continuity, both tactically and strategically.

It’s a real time world. Shouldn’t your technology be too? One Network’s Demand Planning and Replenishment solution running on the Real Time Value Network and powered by NEO, enables you to plan and execute more effectively, to simultaneously improve customer service while lowering cost.

ABOUT ONE NETWORK ENTERPRISES

One Network is the intelligent business platform for autonomous supply chain management. Powered by NEO, One Network’s machine learning and intelligent agent technology, this multi-party digital platform delivers rapid results at a fraction of the cost of legacy solutions. The platform includes modular, adaptable industry solutions for multi-party business that help companies lower costs, improve service levels and run more efficiently, with less waste. This SaaS and aPaaS platform enables leading global organizations to achieve dramatic supply chain network benefits and efficiencies across their ecosystem of business partners. One Network offers developer tools that allow organizations to design, build and run multi-party applications. Leading global organizations have joined One Network, helping to transform industries like Retail, Food Service, Consumer Goods, Automotive, Healthcare, Public Sector, Defense and Logistics. To date, more than 75,000 companies have joined One Network’s Real Time Value Network™ (RTVN™). Headquartered in Dallas, One Network also has offices in Japan, Europe, and India. For more information, please visit www.onenetwork.com.

To learn more about One Network Enterprises’ Demand Planning and Replenishment solutions, contact us:

-  +1 866 302 1936
-  inquiries@onenetwork.com
-  www.onenetwork.com