



# Transforming the Restaurant and Food Service Industry with Digital Business Networks

The industry operates under very challenging conditions. It is highly complex and comprised of decentralized supply chains, with many locations and trading partners. Restaurants and food service companies, along with your network of suppliers and logistics providers, work very hard every day to provide highest quality products and value to customers, while keeping supply chain operations as efficient as possible. But there's a way to do better...

## THE THREATS TO RESTAURANT AND FOOD SERVICE COMPANIES

The supply chain cost is high. Across segments that include Fine Dining, Fast-Casual, Casual, and Quick Service Restaurants (QSR), the industry faces these key supply chain challenges:

- **Inability to keep up with volatile customer demand** and deal with sudden environmental changes
  - Challenges in performing product volume planning both short term and long term at distributor and other upstream tiers
  - Inability to react to Limited Time Offers (LTO) that perform above or below expectations
  - Low level of resiliency to deal with sudden weather, carrier, supplier, and other issues
  - Stockouts and lower-than-desired customer service levels
- **Excess inventory** being carried, resulting in:
  - Increased costs
  - Reduction in product freshness
  - Increased waste
- **Higher administrative overhead costs** incurred due to a variety of manual order management and supply chain tasks, including frequent (unnecessary) manual inventory counts

In addition, the National Restaurant Association reports that softer same-location sales and a decline in foot traffic continues to hamper restaurant industry segments. Underlying these problems and exacerbating them are the following factors:

1. **Declining effectiveness of Limited Time Offers (LTOs)**, which tend to fizzle out with very little ROI
2. **Inability to capitalize on emerging customer trends** and other causal factors (such as weather, sport/music events, catering orders etc.)
3. **Skyrocketing product carrying costs**
4. **Bull-whip “nervousness” transmitted across supply networks** causing knee-jerk reactions from vendors & distributors

While the situation may look dire, there is a major opportunity for the industry to update the way it works with trading partners and upgrade its processes, in order to adopt best practice in ingredient management and supply chain management. This will enable companies to capitalize on

opportunities, and enable all trading partners to *maximize customer service levels, improve resilience, and gain efficiencies at every location and every moment in time.*

### ONE NETWORK SOLUTION BENEFITS FOR RESTAURANTS AND FOOD SERVICE COMPANIES:

- Forecast accuracy up to 95%
- Increased revenue due to fewer stockouts
- Order cycle time decreased by 75%
- Restaurant inventories decreased by 50-70%
- Supplier expediting cost down by 75-90%
- COGS decreased by 0.5%-1%
- Forecast accuracy to suppliers up by 80%
- Manual planning and execution effort decreased by 50%
- Waste reduction of about 40% with better inventory mobilization

### BENEFITS FOR NETWORK PARTNERS:

- Logistics utilization up by 2%-20% with lower costs
- Full chain of custody and traceability
- Item substitutions and alternate sourcing possible for food preparation partners
- Farmers & harvesters have a synchronized network with supply and demand planning

## ONLY A BUSINESS NETWORK CAN SOLVE A BUSINESS NETWORK PROBLEM

Gone are the days when you were limited by technology to myopically focus on either driving up top-line numbers or address bottom-line concerns to maximize ROI. With the advent of business network-based supply chain solutions, you can:

- Easily connect with all your trading partners
- Share information in real time
- Collaborate from planning through to execution
- Optimize and automate business processes

A multi-party network enables you to deliver exceptional service at the lowest possible cost. Most importantly, it engages every supply chain participant – suppliers, distribution centers, logistics providers, and every restaurant location – in a shared set of business processes, so that all parties are operating on a common “single version of

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the truth" platform. This means that partners need to only connect once to the network in order to connect with all participants.

In particular, One Network's AI-powered Integrated Demand and Supply Planning Solution can autonomously monitor demand, and optimize and manage supply planning, leaving you and your staff free to focus on more important business. The Integrated Demand and Supply Planning Solution is behind the unprecedented results of the \$4B restaurant company that:

- Increased freshness by reducing days of inventory at restaurants or cafeteria locations by about 3-4 days on average
- Increased forecast accuracy to 95-97% (previously: 50-60%)
- Reduced in days of inventory by over 50%
- Improved long term Order forecasts accuracy to 85-88%

## THE NETWORK EFFECT

There is an opportunity for the industry to update the way it works with trading partners and upgrade its processes, in order to adopt best practices in ingredient management and autonomous supply chain management. The traditional approach to planning limits the scope of plan creation strictly to sites owned by Food Service companies. The pitfall with this approach is supply chain nervousness transmitted up the chain. Legacy ERP solutions in the market are not able to solve this problem, because they are limited by the batching planning paradigm which causes delays in actions and re-planning -- and does not minimize 'bull-whip effects' entirely. In contrast, One Network's Real-Time Value Network™ (RTVN™) solution has the ability to model the end-to-end value chain (i.e. from restaurants to DCs all the way to n-tier suppliers). Supply Chain practitioners no longer have to fight the 'bull whip effect'. One Network's intelligent autonomous agents, called NEO, continuously monitor the Network for any changes. Once changes are detected, intelligent NEO agents autonomously propagate applicable changes both upstream and downstream to balance the Demand-Supply equation.

## INTELLIGENT NEO AGENTS AND THE AUTONOMOUS SUPPLY CHAIN

With a constant focus on Demand-Supply balancing across all nodes in the supply chain network, intelligent NEO agents are capable of running an autonomous supply chain with decision-making algorithms that create proactive solutions to pending problems, such as expediting orders to alleviate out-of-stock problems at distribution centers.

Armed with an ever-growing library of autonomous algorithms, NEO agents have a comprehensive ability to sense, respond, and create smart solutions to supply chain planning and execution problems. The true power of NEO is to act incrementally on the affected SKU and site, decreasing the response time to supply chain problems dramatically. NEO agents can autonomously execute these smart-decisions leveraging a real-time Single Version of the Truth (SVOT) that comes with the One Network platform – where every supply chain participant works from the same, consistent set of business data. This helps customers move rapidly from a primitive Decision-Support based supply chain to state-of-the-art "fully autonomous and continuous optimization" across the whole value chain.

## THE SECRET TO INDUSTRY-LEADING RESULTS

An effective demand planning solution needs to be agile and hyper-responsive to emerging trends and causal factors. Undisputedly, the best signal available to understand consumer patterns is the Point of Sale (POS) data at the restaurants. This information has the potential to dramatically improve forecast accuracy and also allow an AI-driven intelligent solution to exploit a demand sensing capability that is virtually unknown in the industry. Thanks to NEO intelligent agents, all of these options are within your reach to achieve supply chain excellence. Here is what One Network's solution provides.



## DEMAND SENSING AND AUTONOMOUS FORECASTING

One Network uses restaurant level Point of Sale data or cafeteria location specific consumption data to create ***an item and distribution center level forecast*** as often as needed. The results are then exploded back to the restaurant level based on a smart pattern recognition agent that apportions forecast values according to the sales profile registered in the POS data for that restaurant.

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

## MENU FORECASTS: AUTO TRANSLATION INTO INGREDIENT REQUIREMENTS

One Network generates Ingredients (raw materials) requirements from Menu Item Demand Forecasts by using recipe proportions. NEO agents can easily adapt to ***dynamically changing recipe proportions*** and account for any yield changes that happen during recipe preparation or stock transfers, not just at a global level but also at the product-restaurant intersection. Ingredient level (raw material) forecasts can be shared in ***real-time across all levels of the supply chain*** so that a change in forecast immediately propagates to the actual supplier(s).

If a LTO performance varies from the plan, the One Network Platform automatically adjusts the forecast through Autonomous Forecasting and translates the demand change into replenishment order forecasts for each node in the supply chain on an hourly or daily basis.

## PERPETUAL INVENTORY

Unlike most traditional planning systems which look to other data sources to update stock counts, the One Network solution ***automatically keeps count of stock on-hand for all current products***. This is vital for accurately computing replenishment needs at the restaurant level. Presets are configured once and One Network monitors inventory levels (count increments and decrements) ***across millions of product-restaurant combinations***.

## AUTOMATED RESTAURANT ORDERS GENERATION

Because the One Network Platform has the most accurate product requirements and current inventory positions (on-hand & on-order), it can accurately compute and generate your restaurant orders. This ***autonomous Restaurant Demand and Supply Management*** automates routine tasks, giving restaurant managers and operators much more time to tackle non-supply chain related issues, like managing their business and taking care of customers.

## BACKWARD PROPAGATION OF DEMAND TO UPSTREAM TIERS

One Network's RTVN™ solution, powered by NEO, is built on a real-time network incorporating the complete end-to-end supply chain. This unique foundation enables it to **effectively propagate demand from the restaurants all the way back to n-level vendor tier in near real-time**. In each step of the process, the system can precisely compute net requirements based on stock on-hand, on-orders and generate accurate order forecasts (i.e. inbound supply requirements).

This offers distributors and vendors the ability to **view and operate with accurate long-term forecasts** so that they can plan their production and distribution accordingly. This also enables them to anticipate and meet demand more efficiently. In traditional ERP software, this is typically based on historical data, which produces incorrect forecasts and creates confusion, often excess inventory or shortages.

## ONE NETWORK SOLUTION BENEFITS

- Attain Industry-leading forecast accuracy of greater than 95%
- Dramatically reduce days of inventory carried across the supply chain
- Boost restaurant revenues and customer service with many fewer stockouts
- Quickly and efficiently handle product recalls to ensure safety for the general public
- Standardize a demand and supply planning process that can be easily implemented across all restaurants
- Gain staff efficiency with autonomous restaurant supply management
- Dramatically reduce expediting, restaurant transfers, and unscheduled buys - reducing costs and waste
- Create greater trust in collaboration between the restaurant owning entity and its business partners (distributors, vendors) owing to more accurate and reliable short-term and long-term forecasts
- Reduce waste with better planning and inventory mobilization
- Create a smoother supply flow, reducing resource and carrier spikes that drive up network costs

Let's look in more detail at how One Network's solution transforms key elements of restaurant management, such as Limited Time Offers and Inventory Management.

## HOW TO GET THE MOST OUT OF YOUR LTOS

Of all challenges that restaurant segments are facing these days, ensuring organic growth (same restaurant sales) is a top priority. So how do you go about tackling this problem? There are few approaches you can use:

1. Have more people visiting the restaurants
2. Maximize customer satisfaction by ensuring availability of every menu item that they crave
3. Maybe most importantly, incite excitement on every visit with appealing LTOs which attract new customers, drive repeat business, and can be more profitable per plate.

LTO planning can potentially have the biggest impact in driving more traffic into the restaurants, and it can have a major influence on customer satisfaction, as well as improving margins. Typically, your company may also be spending significant dollars on consumer marketing & advertising as part of an LTO campaign – so your supply chain management approach better be ready to support it. But achieving this requires a sophisticated and powerful network-based supply chain planning solution with which to plan, execute, and monitor the effectiveness of your LTO concepts.

Traditional legacy supply chain management software will simply not cut it and wasn't designed to handle LTOs. Typical solutions do not have the advanced capabilities required for managing LTOs, which need to:

1. **Model Scenarios** around LTOs and promotions.
2. **Perform What-ifs** before positioning an LTO campaign.
3. **Translate LTO Forecasts into Ingredient Items** with ever changing recipe proportions and waste factors.
4. **Back Propagate Forecasts for Ingredient Items** to upstream suppliers who can commit to product supply ensuring successful LTO campaigns.
5. **Account for Emerging Customer Patterns** (increases or decreases to foot traffic) and other causal factors like weather or road closures.

This is precisely what One Network's solution successfully achieved for a \$4B company in the Restaurant Industry. This platform for autonomous supply chain management helped them achieve an unprecedented forecast accuracy of greater than 90% for their protein items (industry average being 60%) and achieve LTO forecast accuracies of greater than 85%. In addition, the One Network solution drives tremendous value to their top line revenue numbers through the use of

Autonomous Forecasting (AF) intelligent NEO agents to sense changes to demand and perform corrective actions when needed - establishing a ***state-of-the-art decision-making system*** for their business.

## RESTAURANT INVENTORY RECONCILIATION MADE EASY AND EFFECTIVE

Inventory accounting and management is at the heart of any successful business. In the case of restaurant industry, poor inventory management can have a devastating effect on the customer experience. For example, consider the scenario where a restaurant constantly runs out of ingredient items to prepare the plate. This forces the customer to either select from the available list of alternate options resulting in lower customer satisfaction, or worse, forces them out of their establishment, never to return in some cases. On the other hand, when the restaurant mitigates stockouts by increasing inventory, they are dealing with the problems of higher costs and soon-to-expire ingredient items. So, which problem would you rather have?

**Today you don't have to choose:** Thanks to network-based supply chain solutions, you can truly achieve optimal levels of inventory that neither compromise customer service levels nor overflow your storage capacity, incurring massive costs. Imagine the power of carrying an accurate inventory count by accounting for every consumption recorded at the restaurant and all product inflows. By letting the network-based autonomous planning system create net orders which truly represent the delta quantity needed in an *agile just-in-time* manner, you can take the manual labor and guesswork out of inventory management and eliminate excess inventory.

One Network's solution deployed at a \$4B Food Service company demonstrates how perpetual inventory management works in perfect harmony with Autonomous Forecasting (AF) for more than 1,400 restaurants across 20 countries, allowing the company to rest easy when it comes to managing stock levels. In addition, the autonomous agents work around the clock to ensure net orders are automatically and immediately generated when needed, and passed along to hundreds of upstream suppliers for handling. For more information on this robust AI-based multi-tier Integrated Demand and Supply planning solution, please visit <https://go.onenetwork.com/recipe-for-success-lp>.

## THE PATH FORWARD WITH A DUAL PLATFORM STRATEGY

One Network's platform is a unique "Tunable System of Control" for business planning and execution across multiple parties and systems, leveraging new network technology while empowering legacy systems, to deliver optimal results fast. This enables your team to assign system-of-record responsibility to each state and action in the Network process — either to the ONE business network platform or a legacy application. It's your choice, and the ONE platform enables you to manage end-to-end processes, even as designated steps are still processed by your legacy systems.

**We call this a "Dual Platform Strategy", where your business network platform actually becomes the primary platform for planning and operations, and the old ERP monoliths become bolt-ons to the Network for financial processing.**

With One Network, the financially related inputs and outputs of trading transactions easily flow from the cloud to the financial modules of your legacy ERP systems. Whether you are working to eliminate technology silos or collaborate more closely with suppliers, the Dual Platform approach ensures that your daily, weekly, and monthly effort is focused on your organization's most important execution objectives, and is done in the most efficient way. Thus, the Dual Platform approach solves 4 major problems:

- How to eliminate the tremendous costs of maintaining and migrating the current legacy system landscape
- How to achieve advanced business network performance across multiple enterprise-centric ERP silos
- How to gain the flexibility required to take full advantage of new market opportunities and promotions/LTOs
- How to gain competitive advantage in today's marketplace

In summary, a dual platform strategy enables you to leverage legacy systems without wasting prior investments — while dramatically advancing your capabilities and decision-making with a business network platform.



## ABOUT ONE NETWORK

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](http://www.onenetwork.com).



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