



SOLVOYO



Reducing Costs with Concurrent Planning



This case study provides an overview of Solvoyo's engagement with one of the world's largest retailer with annual sales of more than \$50 billion USD (2013) and over 2,000 stores in the U.S., Canada and Mexico. The company sought Solvoyo's help in optimizing their supply chain operations by concurrently planning vendor orders and inbound transportation. By getting the right balance between transportation and inventory holding cost – the retailer sought to lower its overall cost of operations.

THE CHALLENGE

The retailer incurred hundreds of millions of dollars annually to move products from vendors to its stores using a mix of rapid deployment distribution centers (RDCs) and stocking distribution centers (SDCs). The retailer, prior to Solvoyo's involvement, primarily managed vendor orders based on static fixed order intervals and transportation plans based on rules designating modes, carriers, and cross-dock locations. The fixed order schedules and static transportation planning limited the retailer's ability to respond to seasonal or structural changes in sales, to changes in the product portfolio, or to new vendor capabilities.

THEIR GOAL

As a known innovator in supply chain operations, the retailer dedicated significant resources to supply chain efficiency and continually looked for innovative ways to reduce complexity and cost. Here the retailer's business objective was to reduce the total cost of its supply chain network supporting its purchasing and store fulfillment operations. The retailer needed to be able to concurrently evaluate all costs: inbound transportation, inter-facility logistics, handling, and inventory holding at stores and DCs. With transportation and inventory holding costs rising as a percent of sales, it was imperative to reduce the total cost while maintaining target service levels at the stores.

The retailer reached out to Solvoyo because of our platform's unique ability to concurrently plan inventory and transportation. Traditionally companies have used economic order quantity (EOQ), an inventory-related equation, to determine optimal order quantity for inventory given a set cost of production, demand rate, setup costs, and interest rates. While this is the approach used in most supply chain planning software, it unfortunately ignores the trade-offs between inventory holding and transportation costs.

THE SOLVOYO SOLUTION

Solvoyo delivered a supply chain planning model on its Elevation Platform to synchronize the company's procurement, transportation, and store replenishment. The retailer is now able to solve simultaneously – for each vendor – the optimal combination of order frequency, vendor pick-up location, and inbound/inter-facility transportation plan in order to handle more than 500,000 annual shipments from more than 800 vendors to more than 2,000 stores.

The company now leverages the optimized solution Solvoyo provided to determine when to order, and the best way to move that order through the network from the vendor to the ultimate consignee – the stores. By refreshing the analysis quarterly, the retailer is able to re-calculate order frequency and the best transportation modes to react to changing market conditions.

BOTTOM LINE IMPACT

Initially, the retailer implemented a proof of concept (POC) study covering 4 of its RDCs and approximately 75% of its vendors over a 4-month period. Based on the results of the POC, the retailer extrapolated the results and identified a potential \$25 million savings across their entire RDC operations annually. Based on that estimate, the retailer rolled out the platform across its RDC network.

To date, the company has realized more than \$100 million USD annual savings as a result of implementing Solvoyo's Elevation Platform, with \$52 million USD in savings realized within 7 months of go-live. Due to the success of the RDC initiative, the retailer has since expanded the study and potential implementation to its full network of SDCs and bulk distribution centers.

WIDER APPLICATION

While this case study features our experience with a large national retailer, a retailer of nearly any size can successfully reduce its inbound costs by using Elevation Platform to optimize the frequency of replenishment from a total cost perspective, not just inventory calculations.

While this case showcases the impact on inbound costs, consider the same theory applied to outbound transportation costs: Let's say your DC ships to the stores and you're evaluating whether it's better for your business to ship a full truck load once a week to each store, or one truck doing multiple stops covering several store locations every day. The traditional EOQ model would likely say less often is the answer but when transportation vs. inventory is taken into account, the answer can be very different. Getting the right balance between transport and inventory holding can have a significant impact on cost and, ultimately, profitability.

ABOUT SOLVOYO

Solvoyo is an enterprise software company based in Boston, MA, and Istanbul, Turkey. We bring your business significant value through the use of innovative supply chain optimization techniques that help you minimize costs while you maximize customer service and profit.

We offer the only platform that allows you to perform your strategic, tactical, and operational supply chain planning -- and with a common data model. We are unique in being able to plan inventory, orders, and transportation concurrently. By optimizing across your entire network, as opposed to individual silos, you get business results and benefits that are multiples of traditional solutions. Concurrent planning, combined with the speed of our models, allows us to implement Closed-Loop Operational Management Solutions.

We make it easy for you to get immediate benefits -- our Software-as-a-Service based Elevation platform is implemented very quickly. When combined with our pay-as-you-go business model, you get an extremely short time-to-benefit and at a minimum up-front cost. The Elevation platform is based on the latest technology and uses state-of-the-art operations research methods to provide you with a cloud-based offering that integrates seamlessly with existing operational management systems.

We have a Rapid Assessment methodology that will quickly identify your key issues and an economic model that will provide you with order-of-magnitude benefits. We have documented cases where our technology has solved complex, high-volume problems that competitors could not solve at all!

Challenge us -- see what we can do! Call us today and let us demonstrate how Closed-Loop Operational Management can work for you.

You can also obtain more information from our website: www.solvoyo.com