




Operated In The Cloud,  
Delivered As A Software  
As A Service

Problem Statement


On the strategic and tactical fronts, traditional methods and tools fail to lend analytical insight into the network structure of an omni-channel retailer. The scale is huge: large number of orders, large number of SKUs, different channel expectations on response time and service level, multiple transportation options, multiple inventory deployment options, shared and reserved inventory, multiple supplier locations, supplier capacity, supplier lead-time constraints. On the operational front, a simple rule-based approach may provide a feasible order-to-inventory assignment, but it will definitely fail to consider the full set of revenue, cost, service and product availability dimensions needed for an optimal fulfillment decision.

**Optimized supply & distribution networks**




- Efficient, multi purpose distribution facilities
- Multi-mode outbound transportation
- Seasonally optimized product flow
- Multi-objective, multi-echelon scenario modeling

**Optimized inventory planning**



- Channel x Product segmentation
- Demand planning at Channel x Region and Product level
- Optimized order frequencies

**Omni channel fulfillment**



- Optimized matching of open orders from multiple channels to network inventory
- Multi-objective prioritized allocation
- Frictionless product return

Selected Case Studies:

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A101

For a \$70B+ North American home improvement retailer, Solvoyo optimizes Total Cost to Serve by determining the best vendor location, order frequency and inbound transportation mode while meeting service level commitments at the stores. The retailer targeted annual savings potential of \$105M, of which they realized \$52M in 6 months.

For a \$1.5B Turkish supermarket chain with 2,700 stores, Solvoyo optimizes both store allocation and warehouse replenishments. A101 realized annual recurring savings of \$3M while improving shelf availability from 90% to a sustainable 97%.

For a \$100M home fashion retailer with 168 stores, Solvoyo optimizes store fulfillment/allocation and replenishment, and creates vendor purchase orders. The retailer increased shelf availability from 55% to 85% within one year, while simultaneously achieving sustainable inventory savings of \$1M annually.

For a US-based department store retailer with 2 e-tail warehouses and 19 stores designated for online order fulfillment, Solvoyo developed an fulfillment optimization solution that identified 10% cost savings, balanced work-load and improved margins.

ENGLISH HOME

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Optimize  
Your Omni-channel  
Fulfillment!

## Optimize Your Omni-channel Fulfillment!

To compete with the massive online retailers, traditional retailers must be able to fulfill demand when and where it exists. This means that traditional walk-in store sales must be supplemented with hybrid systems to fulfill demand immediately. In addition to serving shoppers in the store, retailers must support online ordering with either pick-up at the store or with shipment from a distribution center or, in some cases, from a store.

This “Omni-channel” fulfillment network poses challenges for traditional retail systems and processes. To implement it successfully, you must first assess the ability of your current network to support the various methods of order taking and order fulfillment.

In order to minimize your cost-to-serve your customers, you must also analyze your inventory deployment across the multiple echelons of your fulfillment network to ensure the right goods are in the right places at the right time, plan your replenishment to ensure you have the inventory for sale, and then optimize your fulfillment and allocation strategies to minimize costs and maximize service.

## Business Environment

With consumers now expecting to be able to buy, receive and return products anywhere, supply chain managers can no longer rely on a standard set of simple order-flow rules to move products from the source of supply to the consumer. Omni-channel retailing has introduced a new level of complexity to the order fulfillment dynamic. In order to appeal to an increasingly empowered consumer, an omni-channel retailer needs to merge web, mobile and brick & mortar channels seamlessly and provide a consistent channel view for customers. Your challenge is to determine the appropriate network infrastructure, internally consistent processes and broad systems capabilities to execute omni-channel fulfillment daily.

## Solution

Solvoyo supports your deployment of omni-channel fulfillment with a scalable planning solution, ensuring that every order is filled by the best source while minimizing cost-to-serve and maximizing profit. Specifically, Solvoyo can help a retailer with the following:

### 1. Omni-channel Fulfillment across a Network - DAILY/HOURLY - Operational

- Match open orders to network inventory (allocation) across multiple channels using business rules as well as measurable objectives
- Plan transportation and detailed multi-stop routing
- Integrate with WMS and TMS systems to specify order pick lists and transportation modes

### 2. Sales-driven Replenishment Planning - WEEKLY/DAILY - Operational

- Generate best-pick forecasts at different aggregation dimensions
- Optimize inventory for each SKU across a multi-echelon network based on channel service requirements
- Recommend intra-company (DC to DC or Store to Store) transfers
- Recommend purchase order quantity and timing based on vendor constraints
- Optimize multi-mode freight consolidation on inbound

### 3. Parameter Optimization - SEASONALLY - Tactical/Strategic

- Optimize vendor order frequency, balancing transportation cost and inventory investment
- Select vendor source location (when there are multiple sources for a vendor)
- Optimize end-to-end flow path for the upcoming season
- Perform multi-objective what-if scenario analyses

### 4. Supply Chain Network Design - PERIODICALLY - Strategic

- Determine the role and capacity of each DC and fulfillment location
- Assign service territories and backups for each fulfillment location
- Perform multi-objective what-if scenario analyses

The Solvoyo platform operates hand-in-hand with your existing retail technology and can be integrated seamlessly into the enterprise IT systems. Solvoyo applications utilize secure, scalable, flexible and dependable cloud infrastructure, or can be deployed in your private cloud and behind your own firewall.

Through its proven Agile Implementation Methodology, Solvoyo deploys an omni-channel fulfillment solution in a matter of weeks rather than months or years:

- **Experienced professional implementation resources who understand the retail sector**
- **Iteration sprints of short design-build-validation steps in order to ensure acceptance by IT and the key users**
- **Efficient modeling through sector-specific templates: grocery, fashion retailer, and hard goods**