

# Inventory Optimization at Leading eCommerce Company Achieves 12% Reduction in Inventory



## SITUATION

The customer was faced with rapid growth in customer demand, bringing in a high service requirement. Cost optimization is important for reducing the supply chain costs and meeting the ever-increasing customer needs, but it made cost optimization a very complex exercise.

## IMPACT

The existing network was sub optimal and not able to handle the requirements. The sub-optimal inventory holding led to high working capital and reduced service levels.

## RESOLUTION

ITC Infotech implemented the project with an optimization model with various service constraints and all the costs incurred by the organization. It arrived at the best model of operation and implemented the project in two phases with a differentiated service level and the multi echelon inventory optimization that helped in arriving at the right quantity of inventory to be held at different nodes in the distribution network.

## The Customer

The customer is a leader in the e-commerce industry in India with over 8 million shipments a month across more than 70 categories



## The Need

The customer realized that the current business scenario demanded that they relook at the business operations. They wanted to achieve rapid growth in a constantly evolving business scenario. The customer wanted to expand into new geographies, but the existing network was sub optimal. The company realized that it had sub optimal inventory holding leading to high working capital and reduced service level

**The customer wanted a solution that would;**

- Identify greenfield locations for a multi level supply chain such as Delivery hubs, Mother hubs, Fulfillment centers (FC) and Pick up Hubs based on service constraints defined between the nodes
- Establish consolidation points for LTL (Less than truck-load shipping) in order to meet the service requirements at optimal transportation cost
- Define the right inventory norms and Inventory policies to avoid stock outs at desired service level
- Validate the same using network simulation

## The Solution

**ITC Infotech was selected to implement the project that was split into two phases:**

The first phase focused on identifying the optimum number and location of various distribution nodes in the supply chain. This was carried out in two steps with the first being the greenfield analysis to identify potential locations. The greenfield model for each echelon starting from the customer end was used since the company operates multi echelon distribution network and each level had varying service constraints. Following this they built an optimization model considering the service constraints and various costs in the system. They analyzed a large number of alternate scenarios before finalizing the locations and their role in the supply chain.

In the second phase inventory optimization was taken up. This involved product characteristics based segmentation to devise differential service levels for each segment and this ensured the designed service level as well as the optimum levels of inventory. The differentiated service level and the multi echelon inventory optimization helped in arriving at the right quantity of inventory to be held at different nodes in the distribution network.

## Business Benefits

**Following the solution implementation, the customer achieved the following benefits:**

- Reduction in Inventory by 12% as per 95% service levels
- Optimal Inventory policy norms
- Recommendation for transition plan from existing to proposed facility locations basis facility utilization and capital investment
- Minimum number of cross docking points enabled meeting the required SLA for within the zone/outside the zone
- Recommendation for lowest landed cost for sourcing considering VAT and transportation cost

### ITC Infotech's Business Consulting Practice

The Business Consulting Group (BCG) at ITC Infotech is a converging point for business & IT solutions. We aim to transform business performance, bringing a strategic perspective on process improvement and IT enablement. Our team blends domain experts and consultants, bringing unique capabilities to discover and resolve business concerns of the day.

Our expertise spans Consumer Goods, Retail, Process Industry, Logistics & Transportation, across key business functions such as product development, production, supply chain management, sales and marketing management, field force management, and customer relationship management.

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