

# Inventory Optimization Reduces Time for Inventory Planning by 25% & Inventory by 5%



## SITUATION

Customer has a large number of SKUs with different demand patterns. Different business units across region were using different ways of calculating safety stock.

## IMPACT

The client was unable to refresh their safety stock norms frequently, as the manual process was time consuming.

## RESOLUTION

ITC Infotech helped the client run Inventory Optimization and simulation using LLamasoft SCG and VBA based automation by including all parameters which affect Inventory Optimization.

## The Customer

The customer is a US based leading pressure sensitive adhesives manufacturing company. The company's products include pressure-sensitive materials for labels and graphic applications; tapes and other bonding solutions for industrial, medical and retail applications; tags, labels and embellishments for apparel; and radio frequency identification (RFID) solutions.

The products find wide use in the manufacture of adhesive tapes, labels, decals, graphics, laminations and holograms. The company also manufactures rubber and acrylic solvent based adhesives, specially formulated to the individual requirements of the converting industry.

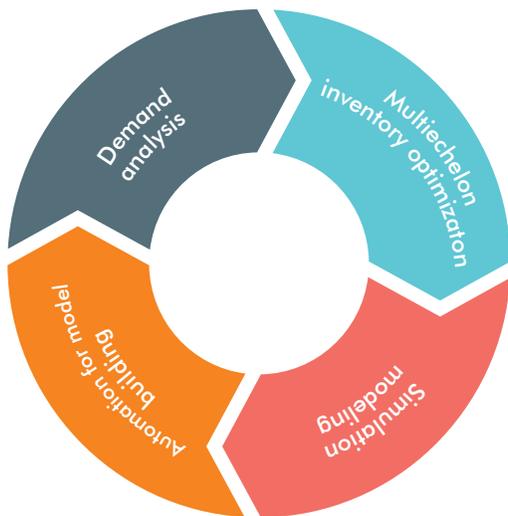


## The Need

The customer's Asia Pacific business wanted to prepare an inventory optimization and simulation model built using LLamasoft Supply Chain Guru for their finished goods and raw materials. They wanted to develop an automation engine to aid the planner in quick refresh of model data. The customer also needed training and institutionalizing of the solution for continuous use.

## The Solution

The business has multiple echelons with stocking options at either the plant, DC (distributor center) or both. To solve this problem, a multi echelon inventory optimization model was built to optimize the location and quantum of inventory holding. The overall approach followed by ITC Infotech can be summarized as follows:



One of the issues with elementary inventory optimization is the assumption of normal distribution for all products. This is seldom the case. We have used the demand analysis capability which classifies different products based on their demand pattern into different categories. For each category, a suitable inventory policy and statistical distribution is selected which helps in realistic safety stock calculation

A multi echelon model optimizes inventory at the aggregate level rather than calculate it at each node. The advantage is that it looks at the whole network and the customer service level needed and arrives at the least inventory to achieve it. Various parameters like aggregation level, demand and lead time standard deviation, total exposure time, etc were carefully evaluated and their calculation methodology meticulously designed basis the business processes.

Arriving at the optimum inventory is hardly the last step in inventory optimization. A planner would need proof that the suggested norms will work for him/her business. A simulation model was built to overcome this need which also considered the production capacity constraint. Basis the simulation results, a few input parameters were revised to suit the exact behavior to arrive at final inventory norms and policies

As inventory optimization is not a one time activity and the planner would want to revise the norms frequently, we developed an excel based automation of creation of the LLamasoft SCG model based on some data from their ERP and some manually maintained masters. This aided them to make this process fast and repeatable

## Business Benefits

- Reduced inventory by 5% and OTIF improvement in OTIF (on-time and in-full delivery) from 88% to 93%
- Equipped business to handle OOS (out of stock) situation with better capability of exception planning
- Reduced time for inventory planning from 2 days to half a day including the simulation modeling
- Standardized, person-independent way of setting inventory norms

### 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.

For more information, please write to:

[contact.us@itcinfotech.com](mailto:contact.us@itcinfotech.com)

[www.itcinfotech.com](http://www.itcinfotech.com)