

# Is your Supply Chain Optimized for GST?



# Saddle POINTTechnologies

Optimizing Complex Supply Chains using Cloud Based Integrated  
Supply Chain Planning and Optimization Suite

Traditionally supply chains in India have been designed based on the prevailing fragmented tax structure that include federal, state level and cross border taxes with each state having its own set of taxes.

Implementation of GST will do away with the inefficient tax structure and will pave the way to reduce supply chain costs by rationalizing the existing supply networks.

By rationalizing the supply network that includes consolidation of existing warehouses, opening of new warehouses, re-mapping the warehouse-customer transportation lanes, reduced safety stock levels because of consolidation etc. companies have seen a 5% to 12% reduction in supply chain costs.

## How can we help?

Saddle Point has extensive experience in helping companies reduce their supply chain costs by optimizing various aspects of their supply chains. It has an integrated suite of cloud based supply chain planning and optimization products that uses advanced Operations Research Techniques. Some of the features of the suite are

- 16 integrated modules that optimizes planning processes across Sales, Distribution, Production and Procurement
- Caters to Strategic, Tactical and Operational levels of planning
- Extremely easy to use with spreadsheet like functionality
- KPI dashboard for industry standard Supply Chain metrics
- Cloud solution with a SaaS offering
- Integrated with leading ERP systems like SAP, Netsuite and Exact

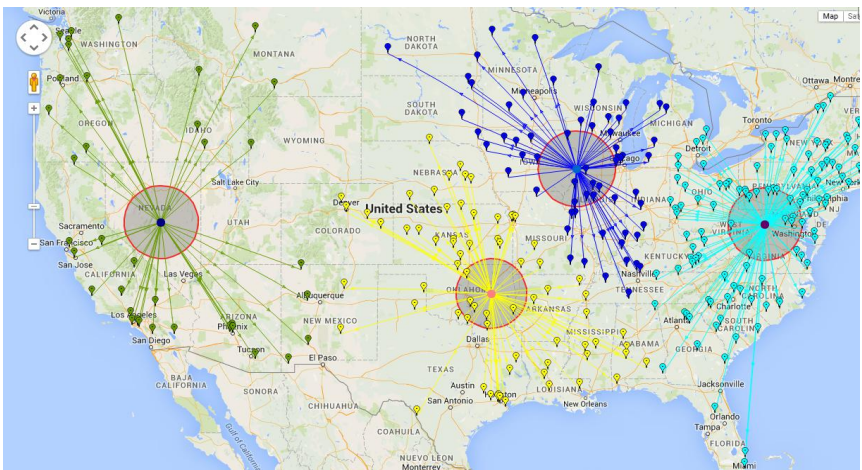
<p><b>SCP Cloud Suite</b></p>  <p>Cloud based end-to-end integrated Supply Chain Planning and Optimization Suite with a SaaS offering.</p>	<p><b>Demand Planner</b></p>  <p>Collaborative Demand Planning with Forecasting, Promotions Planning, NPI and Sentiment Analysis modules.</p>	<p><b>Supply Chain Optimizer</b></p>  <p>Generate a low cost fulfillment plan by reducing supply chain costs like production, transportation, inventory and procurement .</p>	<p><b>Inventory Optimizer</b></p>  <p>Reduce inventory cost by determining optimal inventory levels based on SLAs, lead time and demand and supply variability.</p>
<p><b>Procurement Optimizer</b></p>  <p>Minimize total procurement cost across all vendors by considering volume discount and constraints like Lot size, MOQ, Min-Max quota</p>	<p><b>Production Planner</b></p>  <p>Generate capacity and material feasible production plans (Rule based Heuristics) or optimal production plans (Optimizer based)</p>	<p><b>Transportation Optimizer</b></p>  <p>Minimize total transportation cost by using fleet capacity efficiently, consolidating loads and better rake/truck requirement planning.</p>	<p><b>Production Scheduler</b></p>  <p>Create constrained production schedule with make span minimization based on job shop, flow shop and hybrid layout.</p>
<p><b>Vehicle Route Planner</b></p>  <p>Generate feasible and optimal routes based on constraints like delivery time windows, pickup or delivery, vehicle capacity etc.</p>	<p><b>Workforce Optimizer</b></p>  <p>Allocate workforce optimally to multiple projects based on resource costs, skill-set levels, learning curve, transition cost.</p>	<p><b>Shift Scheduler</b></p>  <p>Generate a feasible shift schedule by adhering to shift assignment rules like maximum consecutive night shifts, forbidden shifts etc.</p>	<p><b>Facilities Planner</b></p>  <p>Find the best location for a new plant or warehouse from a list of candidate locations that optimizes the supply chain.</p>

## A solution based on Operations Research driven approach

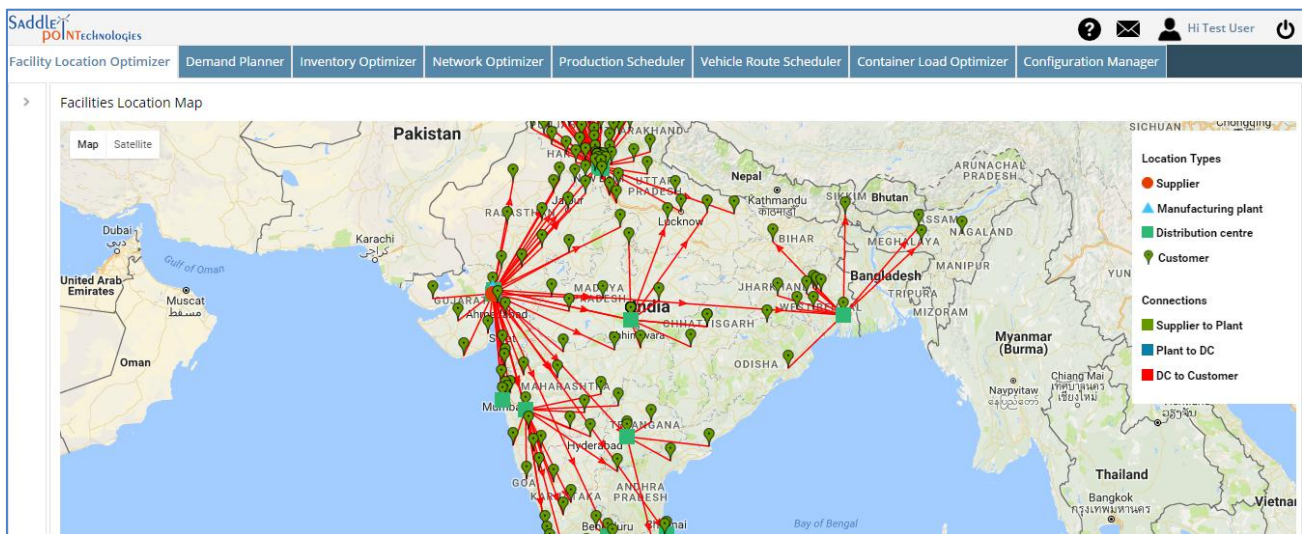
Facility location optimizer is used to find the best location for plants and warehouses so that the total supply chain costs are minimized and a low cost supply network is designed.

Existing facilities can also be rationalized based on demand shifts and changes in cost structure.

A special feature called candidate simulator simplifies the selection of candidate locations based on practical aspects.



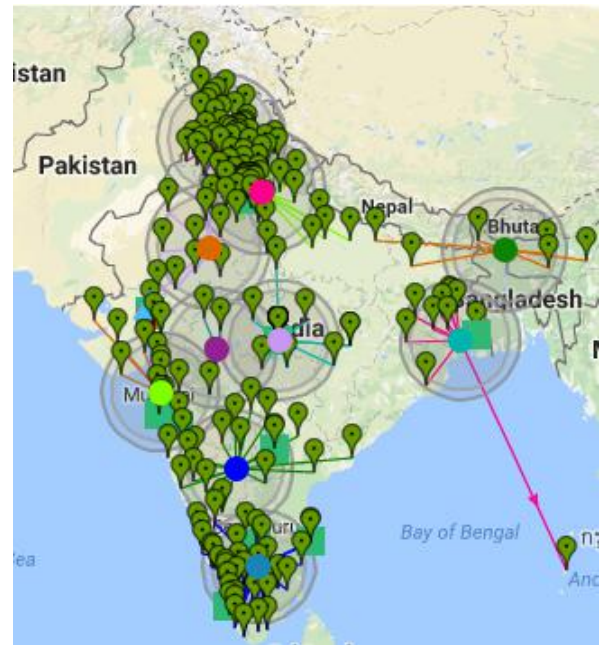
Analytical reports like the marginal cost analysis report gives a detailed analysis of cost savings in the supply network.





## Features:

- The entire network like Suppliers, Plants, Distribution Centers and Customer locations are considered for planning
- Location of both manufacturing plants and distribution centers can be optimized
- Simulation of candidate location based on statistical analysis and clustering analysis
- Various cost elements like setup costs, fixed and variable costs and proceedings are considered
- Delivery service levels and transportation lead times are considered
- Integrated with maps, optimization and analytical framework
- Marginal cost analysis can be done for the network



**An SLA based approach for Network Optimization**

## A case study : Optimizing the network of India operations of a global leader in the frozen food space.

Saddle Point Technologies was called in to analyze and rationalize the existing supply network based on a Pre-GST/Post-GST analytical framework. Our supply chain experts assessed the delivery performance, service levels and distribution costs incurred in the pre-GST scenario considering transportation/warehousing contracts and Local/Central Tax implications.

Using advanced Operations Research techniques called MIP formulation, the team executed and analyzed multiple scenarios based on SLA and costs parameters and designed a new distribution structure considering 5 years forward looking demand pattern, favorable warehousing locations, cost of opening new & closing old warehouses and possible new transportation contracts.

The customer is now in the process of re-configuring its supply network based on our recommendation and looking forward to realize a 6.6% supply chain cost reduction.