

Supply Chain, Inventory and Pricing Optimization Using Artificial Intelligence Technologies

Every company has a challenge of matching its supply volume to customer demand. How well a company manages this challenge has a major impact on its profitability. It includes optimization of product logistics and warehouse inventory. Xen.AI helps you solve these problems using Artificial Intelligence and Deep Learning techniques.

Industry

Supply Chain solutions can be applied in many industries require supply chain optimization, including Retail, Automotive, Oil and Gas, etc.

Business Needs

Main business needs are reduction of operation costs and demand satisfaction.

Benefits

- Increase the customer retention.
- Increase the company revenue.
- Increase the company's brand value.

The Challenge

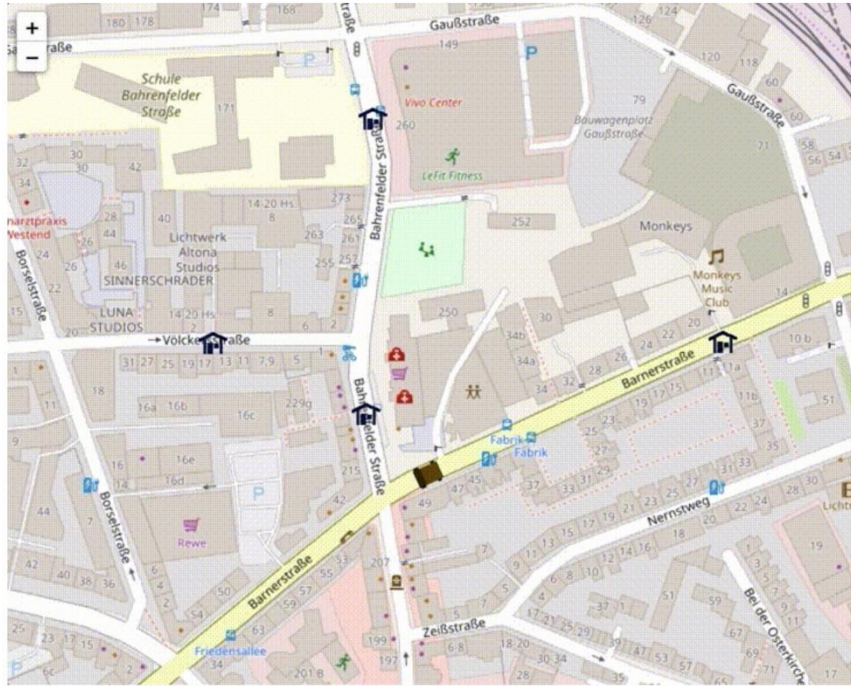
The typical cost of carrying inventory is at least 10% of the inventory value. So, the amount of inventory held has a major impact on available cash. It is important for companies to keep inventory levels as low possible and to sell inventory as quickly as possible. In many cases we deal with multi-echelon structure of supply chain with a few upstream and downstream facilities combined in a complex network structure. Modeling and optimization of multi-echelon supply chain systems is challenging as it requires a holistic approach that exploits interactions between echelons while accurately accounting for variability observed by these systems. Due its complex structure, a supply chain network requires sophisticated and quick algorithms to optimize logistics.

The Solution

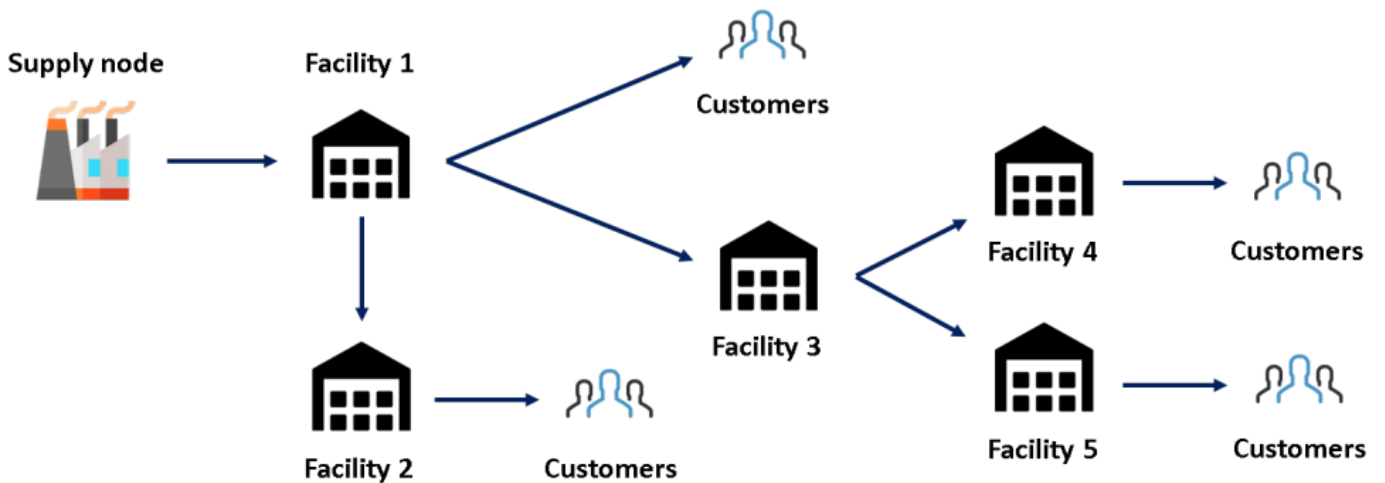
Steps - analyze the available data, operational regimes and problems that should be addressed. Determine the most influential factors per each problem.

Develop an AI based integrated solutions dynamically, step by step. Predict the optimal number of items to keep at a given stock to satisfy customer needs. Multi-echelon inventory optimization to minimize total system costs.

Solving multi-level transportation problems.



Multi-echelon supply chain optimization.



The Results

Xen.AI's Supply Chain, Inventory and Pricing optimization solutions can help to do:

- Demand forecasting for each item versus time.
- Optimized inventory policy
- Optimized logistical routes

Applications

Overall goal of supply chain management is to balance the supply and demand, so sales revenue opportunities are fully exploited in a timely manner and at the lowest possible cost. For this reason, it is needed for a wide variety of industries, related to product manufacturing and retail processes.

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