

# Supply Chain Analysis

**Vertical**

Manufacturing | Pharmaceutical | Healthcare | Portfolio | Logistics | Financial | Government | Business

**Genre**

Case Study

Project Review:

White Paper

Technology Overview

**Client**

**Situation**

The company produces specialty papers, primarily make-to-order items with some make-to-stock items. They have approximately 30 clients in North America (40 destinations). One key client is a leading sports magazine, with a volume of 30k tons/year for special paper inserts in the magazine. They have many ports throughout the country with NYC and Philadelphia ports serving approximately 50% of product volume. They ship directly to customers from ports, with no distribution centers or warehouses.

Their continually increasing logistics costs had reached an unacceptable level so they decided an objective analysis capability was needed in order to improve operations and reduce costs. By expressing their cost concerns, their logistics company which provides them with trucking transportation recommended exploring simulation modeling in an effort to see if it could provide analytic capability and cost saving measures for them as well as for their other customers.



The two companies engaged ProModel to develop a simulation solution to identify their opportunities for logistical efficiency gain and system wide cost savings.

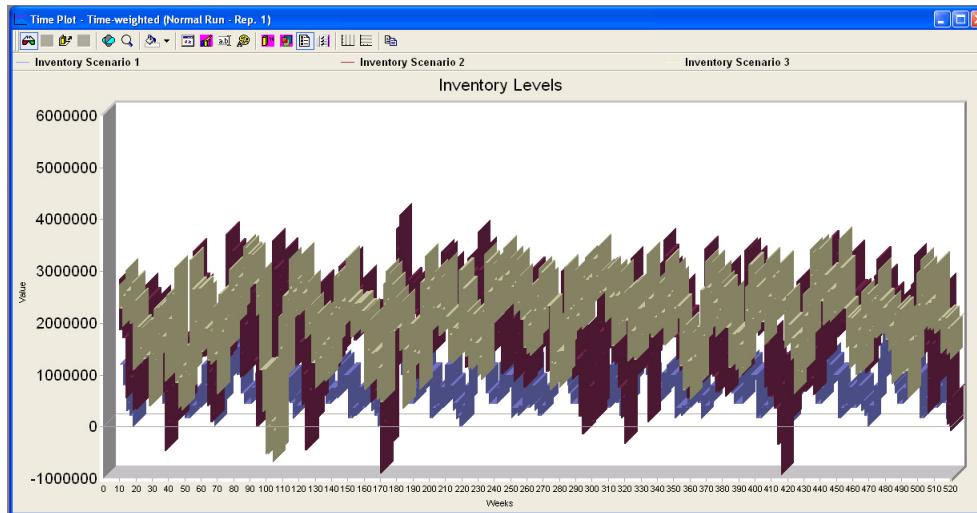
**Objective**

- Calculate the most cost effective port and transportation method to use for each customer location.
- Decide if inventory levels can be safely decreased and how much savings are possible.
- Develop a tool that can be used for ongoing logistics and supply chain analysis.

**Results**

The solution provided the following to our client:

- Optimized low risk plan of action which would result in significant cost savings while simultaneously maintaining or improving service levels
- Customizable simulation tool for on-going analysis and future cost saving opportunities



## Solution

A ProModel solution was developed which modeled the paper mill/trucking supply chain in order to identify opportunities for logistical efficiency gain and system-wide cost savings. The model included the following scenarios for analysis:

- Consolidate ports from where end-customers are serviced in an optimized manner.
- Reduced lead times given to customers to increase market share.
- Reduced inventory levels of make to stock items, yet maintain service levels.

The analysis showed the following:

- A large reduction in inventory for their key client could be a way for the company to create significant savings.
- However, this could create problems for their service level as the client has significant and random spikes in production needs throughout the year.

They then focused on using the model to identify other ways to reduce costs. After the model revealed the total actual outbound transportation rates for each mode of transportation that they used for shipping, it became apparent that an increase in railroad transportation and a drastic decrease in trucking would be the most cost effective approach. Testing this approach in the model proved that it would also work from a service level standpoint and in fact actually allowed them to increase their service level to their key client.

By using a ProModel solution, they gained a solid and verifiable alternative supply chain option in order to save a substantial amount on planned costs, where there was previously no way to test and verify options. The analysis of the model led them to make transportation mode changes which directly reduced their annual logistics costs. These logistical improvements also allowed them to significantly increase service levels to their key client, making the ROI for their simulation solution highly valuable.

