

Throughput Improvement/ Capacity Increase and Cost Reduction via Improved Production and Warehousing Layout

Capacity and
Throughput Analysis

Success Story

Paper, Packaging,
Printing, Publishing

ProModel
Optimization Suite



SITUATION

A global provider of innovative packaging solutions and services had a four-building manufacturing and warehousing site in the U.S. The facility was dedicated to servicing just one of their customers. They had to improve the facility's ability to meet increasing customer demand while reducing operating costs and justifying capital requests.

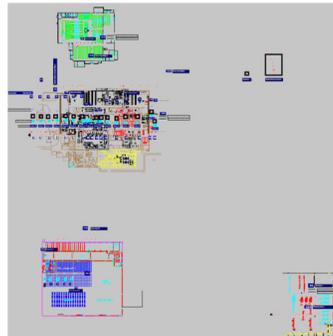
They packaged printer equipment at the facility. To meet the ever-increasing demands of the quickly changing technology markets, new products were continually being introduced along with the packaging to support them, while existing products also needed to be produced. It was a high mix, high volume environment.

The client's customer, who funded the facility operations demanded quantitative justification for any capital requests. To meet these demands, the client decided a process improvement initiative using discrete event simulation, seemed the best solution. It provided the data the customer required and a cost-effective approach for visualizing the multiple product scenarios. The client was considering moving from this four building location to another smaller one to reduce costs and wanted to make sure this was a feasible pursuit. They chose ProModel's solution to provide a way for them to visualize and analyze data towards this short-term goal while allowing them continued analysis for future optimization.

OBJECTIVES

The client's business objectives for the initiative were:

- Improve their ability to meet increasing customer demand
- Reduce operating costs
- Justify and illustrate the need for capital requests



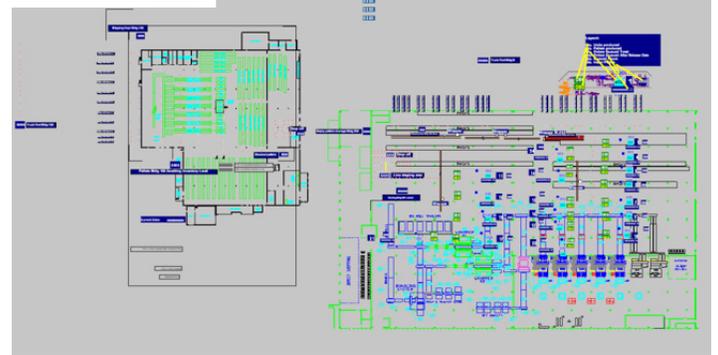
Four Separate
Buildings

Two Adjoining
Buildings

RESULTS

The output data that resulted from the simulation allowed them to determine the most effective facility operations parameters for:

- Square footage
- Appropriate racking
- Proper equipment placement
- Location of staged material
- SKU bin sizes
- Number of fork trucks



The upper model above shows the layout of the four facility site. The lower model above shows the improved flow that resulted from the two facility site and the analysis and visualization that resulted from the ProModel simulation solution. Estimated costs for facility relocation, new equipment purchases, and additional storage were all significantly reduced by using the simulation solution to plan for the new facilities. Implementing

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