

Global Leader in the Beauty Industry Saves over \$400,000 with Optimized Warehouse Operations

Beauty Industry
Success Story
Consumer Goods
ProModel



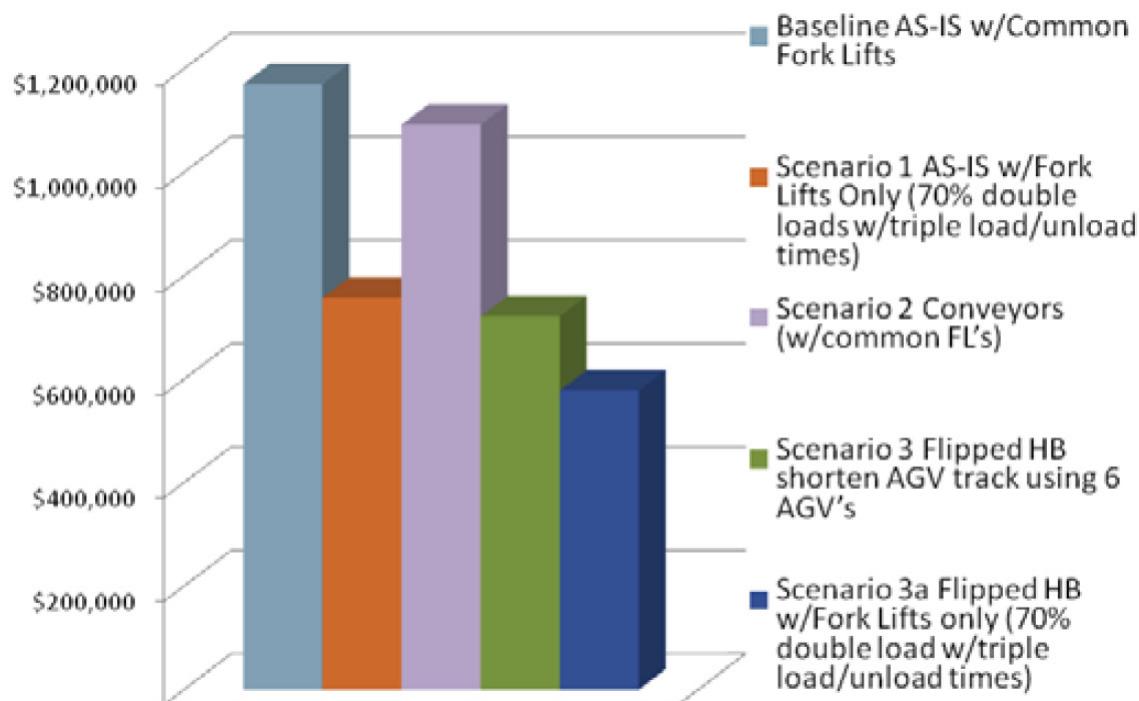
CHALLENGES

What is the most efficient way to redesign a warehouse facility built in the 70's that depends upon an aging fleet of Automatic Guided Vehicles (AGVs) and a high bay racking system that is 20 years old, bulky and requires additional maintenance and unnecessary movement? When your New York based corporate headquarters mandates lean improvements and more efficient operations ASAP, you turn to ProModel simulation to help. The customer, a subsidiary of one of the global leaders in the beauty industry with over 17 billion in annual revenue, needed to improve the efficiency of and revitalize its aging warehouse operations in Little Rock, Arkansas. The current Engineering Director had worked successfully with ProModel before.

OBJECTIVES

The customer needed to quickly:

- Identify and analyze solutions and scenarios for reducing movement and handling of pallets between the factory and high bay storage area
- Compile a savings matrix, evaluate several recommendations and implement the best options

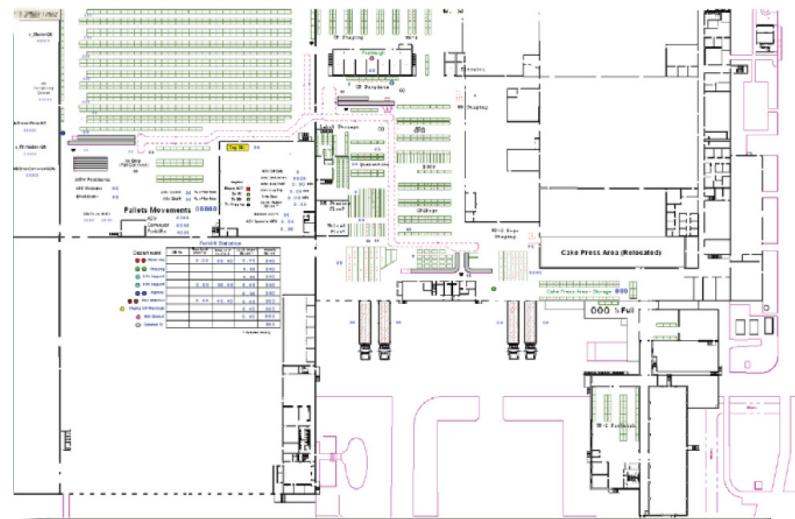


SOLUTION

The ProModel consultant and a warehouse team, using ProModel Simulation, pulled CAD diagrams of the current warehouse layout into a model. They next performed a complete analysis of the warehouse and worked together to look at all of the warehouse processes and associated resources. Based on their analysis, the following four scenarios (virtual kaizans) were built in the model:

1. Use the current facility layout, eliminate all AGVs and use forklifts
2. Use the current facility layout, eliminate all AGVs and use conveyors instead of forklifts
3. Relocate the high bay area closer to receiving and continue using AGVs
4. Relocate the high bay area closer to receiving, eliminate AGVs and use forklifts

The Maintenance and labor costs for the different equipment options being evaluated, AGVs, forklifts and conveyors, were determined, as well as the cost of each employee. Instead of spending the time and money to try each of these solutions out in the actual warehouse, which would be a costly and time consuming endeavor, the client was able to simulate them via two versions of the warehouse. By using simulation to analyze the processes the client was also able to clearly see wasted movement, non-value added activity and inefficiency.

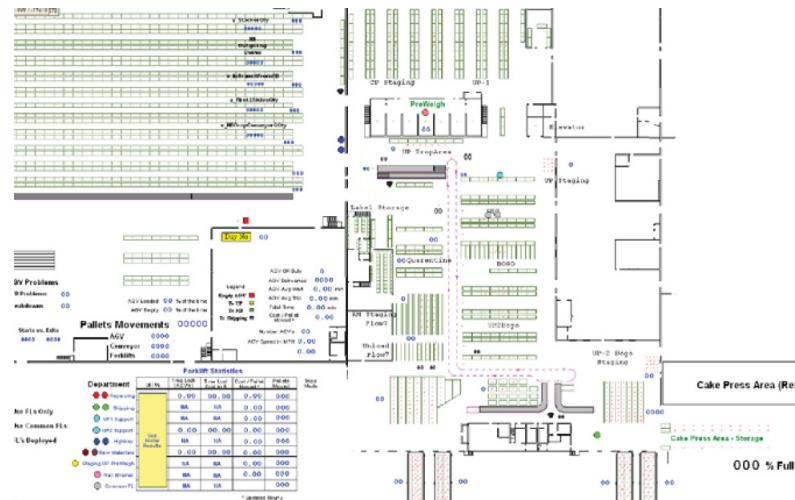


Original Facility Layout

VALUE PROVIDED

The client and ProModel ran each scenario simulation for the month of June. Based on the data from each scenario, they came to the following conclusions. The best short term solution was to implement Scenario 1 and begin capturing savings immediately. This low cost solution can be implemented rapidly and yields an estimated savings of \$413,000 per year.

A phase two solution will be to implement Scenario 3 which offers the highest annual cost savings, an estimated \$593,000 per year. In order to reverse the High bay to accommodate this change, the client will tear down the high bay racks to make them lower with more aisle width for conventional fork-truck use because the racks will have to be moved, it was decided Scenario 3 changes will be made at a later time.



Revised Facility Layout

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