

Consulting Firm Helps Gift Wrap Manufacturer Increase Sales by More Than \$1 Million

Arena[®]

Solutions

- Arena[®] simulation software was used to analyze the manufacturer's processes
- Over 20 different scenarios were able to be studied to determine the best recommendation for process improvement

Results

- The modeling scenarios defined more than five scenarios that could improve process improvement
- Cycle time was reduced from 5 weeks to 3 weeks
- Overtime and operating expenses were lowered
- On-time shipping performance increased to more than 95%
- The model helped the manufacturer increase sales by more than \$1 million



Background

A South Carolina-based consulting firm that applies the principles of synchronous back-office integration to customer forecast and actual demand aids one of the world's largest manufacturers of holiday wrapping paper—responsible for 30–40% of worldwide production.

The Challenges

The seasonal nature of gift wrap means that 90% of the manufacturer's business occurs in a 90-day window (September, October, November). Demand had been uneven, due mostly to a problematic supply chain. Production lead time was too short to generate enough volume to meet demand, overwhelming the process for on-time delivery. Meanwhile, the short shipping cycle (an 8-10 week window) caused bottlenecks, resulting in poor performance that cut into profits and caused the manufacturer's volume to slip. Among other potential penalties, the company faced the possibility of losing repeat customers, incurring fines and lost profit for each day of a slipped deadline, and having retailers demand compensation for lost margin.

LISTEN.
THINK.
SOLVE.

The manufacturer knew they had to commit to a firm delivery timeframe. In order to do that, they needed to simultaneously increase throughput, decrease inventory, decrease operating expenses and cycle time, do a better job of capacity planning, and gain access to accurate, timely information—the lack of which was another glaring bottleneck.

The Deliverables

In order to identify the critical problems in the manufacturer's process, the consultants put into place a business process analysis-and-repair initiative that included simulation. (Prior to simulation, the only analysis method was trial-and-error in an effort to meet customer demands.)

Arena® simulation software by Rockwell Software was selected because it quickly illustrated the performance of the entire process: entering new customer forecasts, building the product database, completing package design, and finalizing quality control information for the product.

The Results

The Arena model was used to evaluate over 20 implementation scenarios, defining more than five that could improve the system. The definitive scenario showed how to reduce cycle time from five weeks to three days; bring down overtime expenses, thus lowering operating expenses; and increase on-time shipping performance from 70% to more than 95%. The model also located and resolved many interrelated bottlenecks and identified how fluctuations in volume or demand timing would affect the system. The simulation model also identified the impact of "late" business on the manufacturing schedule, enabling the company to realize more than \$1 million in additional sales.

For More Information

To learn more about the Arena family of simulation products, visit www.arenasimulation.com. For more information about Rockwell Software, visit www.rockwellsoftware.com.

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