



Replacing Inventory with Information at 3M Canada

Through its implementation of i2 solutions, 3M Canada can better predict future requirements, the impact of market fluctuations, and the results of new promotions. These improvements have led to sales growth, an improved bottom line, and increased cash flow.

As with most businesses, the consumer packaged goods industry revolves around three major goals: growing the business, keeping the company profitable, and freeing up as much capital as possible.

Those three goals were primary business drivers for 3M Canada. The adhesives and sealants manufacturer had implemented a materials resource planning (MRP) system in the early 1980s. But that tool was limited and could not provide the constraint-based planning and scheduling the company required to be successful.

"As we evolved and mathematically sound tools became available, we felt we could optimize our enterprise better by focusing on the entire value chain," said Ravi Samuel, 3M Canada's Quality Manager for Manufacturing.

By targeting improvement across the value chain, 3M Canada could address all of its primary business drivers and, in the process, transform the company.

"By improving our customer service, we can grow the top line," Samuel said. "By improving the efficiency with which we run the supply chain, we can improve our profitability. And by reducing the inventory in the supply chain, we can improve our cash flow."



3M

Challenges

- Establish a constraint-based planning and scheduling system
- Improve supply chain efficiency
- Maintain profitability while freeing up capital

Solutions

- Replan every day based on data from previous shifts and new orders
- Plan considering such constraints as machine capacity materials availability
- Seamlessly transmit data to shop floor

Results

- Improved planning and scheduling productivity by 20%
- Increased customer service levels from 92% to 98%
- Reduced inventory by 23%

Company Description

3M Canada, a US\$654 million subsidiary of 3M Corp., manufactures and markets more than 50,000 products, including adhesives and sealants, serving industrial, commercial, and consumer markets.

“i2 allows us to look at more things simultaneously. We can look at demand, machine capacities, and constraints. We couldn’t look at all of those factors in the past. But i2 allows more business factors to be used in decision-making. That is enabling us to use information to replace inventory.”

***— Ravi Samuel
Quality Manager for Manufacturing
3M Canada***



Why i2?

To help optimize all aspects of its value chain, 3M Canada’s parent company, 3M, chose the solutions from i2, the leader in value chain management. Through its solutions, i2 delivers innovative ways to increase efficiency and velocity within the enterprise and across all of its suppliers, partners, and customers.

Specifically, 3M Canada focused on i2 Supply Chain Management™ (SCM). i2 SCM integrates collaborative forecasting, planning, and execution capabilities with complete visibility across the supply chain. i2 provides software and services that help businesses make a lasting positive impact on their profitability.

i2’s Contribution

In implementing the i2 Supply Chain Management solution set, 3M Canada chose two powerful applications, i2 Factory Planner™ and i2 Supply Chain Planner.™ Factory Planner has been implemented in all eight plants across Canada, while Supply Chain Planner is still being deployed.

“As a result of implementing i2’s technology, we have improved the whole front end of our process,” Samuel said. “That allows us to better predict future requirements, the impact of changes in the market, and the impact of new promotions that we have. Building all those factors into the demand plan tells us what we need to do to meet customer demands.”

Using i2 solutions, 3M Canada planners replan every day based on data from previous shifts and new orders. Factory Planner and Supply Chain Planner create optimized purchase requirements and manufacturing orders. The company’s MRP system could only plan based on material availability. But Factory Planner and Supply Chain Planner also consider machine capacity and the availability of other manufacturing resources.

“Depending on specific requirements, i2 solutions will alter existing schedules,” Samuel said. “We also incorporate shop floor information into those requirements. Factory Planner then passes an optimized production schedule back to the shop floor. i2 solutions allow us to look at all of those things simultaneously. It’s a much easier solution to use than the previous tools we’ve had.”

3M Canada’s Results

Since implementing Factory Planner and Supply Chain Planner, 3M Canada has achieved several significant results. i2 solutions have improved 3M Canada’s planning and scheduling productivity by 20 percent.

Filling orders is critical for a make-to-stock manufacturer like 3M Canada. By ensuring that the company is producing the right products at the right time, i2 solutions have increased 3M Canada’s customer service levels from 92 percent to 98 percent.

At the same time, Factory Planner and Supply Chain Planner have enabled 3M to reduce its inventory by 23 percent.

“That’s what the whole goal of the company is—to grow sales, to improve the bottom line, and to improve cash flow,” Samuel said. “i2 is one of the few tool sets that impacts all three of those critical drivers.

“i2 allows us to look at more things simultaneously,” Samuel said. “We can look at demand, machine capacities, and constraints. We couldn’t look at all of those factors in the past. But i2 allows more business factors to be used in decision-making. That is enabling us to use information to replace inventory.”

Reducing inventory is not only important from a capital perspective, but also because of the danger of material obsolescence. As a result of reduced inventory, 3M Canada’s obsolescence rates have decreased.

i2 CUSTOMER SUCCESS STORY

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And when those customer demands change, the company is able to react much faster than before, thanks to the functionality delivered by i2 solutions.

"That's very important because business conditions are changing all the time," Samuel said. "Because we can now replan intelligently on the fly with i2 solutions, we can better respond to changes in demand."



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