

# Cooper Tire Rolls Out New Systems

For more than nine decades, the Cooper Tire and Rubber Company has provided the world's motorists with a full line of tires and rubber products. The company has maintained a simple distribution goal: positioning the right product in the right place, at the right time, at the lowest possible cost. But achieving that goal wasn't so simple, given that Cooper's 25-year-old legacy replenishment mainframe system ran just once a week. Every Monday morning, inventory planners would receive a new report that reflected customer orders and available inventory.

"You could see that there was a problem with generating reports only on a weekly basis," says Bob Sager, Cooper's manager of supply chain research and design. "If we received a customer order on Monday, and the customer service representative did not come over to the replenishment area to inform our planners of the order, they were unaware of it until the next week."

In addition, Cooper faced increasing complexity in its product offering. The company was constantly adding more SKUs, and warehousing more SKUs in additional locations. As that complexity grew, many believed that to provide the same level of customer service, higher levels of inventory would be required. It was evident that new processes and tools were needed to remedy the situation.

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## Distribution and replenishment planning

With several i2 solutions already implemented, including those that addressed transportation management and advanced planning and scheduling, Cooper Tire was confident that i2 had both the solution and the resources necessary to help the company achieve its goals for distribution and replenishment planning.

"The world that we were moving into was one that I dreamed of, but had never experienced," says Tim Rupright, Cooper's inventory planning administrator. "The i2 consultants really had the ability to understand our business, to communicate what we needed to do, and to train us on what the system was capable of doing."

Today, i2 Distribution and Replenishment Planner (DRP) serves as Cooper's daily execution system, executing



replanning functions every night. The solution is used to plan the movement of inventory across the company's entire North American distribution network.

After using this system for approximately six months, the Cooper/i2 team took a hard look at what was and wasn't working. The team began a continuous improvement project aimed at fine-tuning the system, evaluating the utilization of existing tools and processes, identifying 15 areas of improvement and developing an action plan for those improvements, all of which focused on improving fill rates and inventory turns. Cooper has realized a sizable reduction in finished-goods inventory and outside storage costs with the system.

"The management at Cooper views DRP as a competitive weapon," Sager says. "The whole idea around the daily rebalance of supply to demand makes us more competitive because we can handle complexity and be more responsive to customer demand. In the past, if something happened yesterday, we weren't able to respond to it today. We can now."

# for Better Demand Fulfillment

## Master data management

Shortly after deciding to implement DRP, Cooper also realized it needed a better mechanism for maintaining its legacy mainframe information, as well as the new information that was required for the new i2 planning systems.

“We had a choice to build our own infrastructure, or to go with i2 Master Data Management, and we chose i2 MDM,” Sager says. “We use i2 MDM to store, maintain and clean the data that we send out to our planning systems.”

In the past, making adjustments to the replenishment-system data required users to go to many sources, and changes were often manual and done by the information technology department. i2 MDM serves as a single source across multiple systems, where changes can be made at any scale by the user. It enables Cooper’s planners to manipulate criteria to change behavior in DRP based on business needs.

“I have difficulty envisioning DRP functioning without MDM,” says Rupright. “We can use MDM to make adjustments to the replenishment system, and the results are visible the next day. It’s an iterative process that is pretty amazing.”

## Distributed inventory management

In addition to having redundant versions of its master data, Cooper also maintained five versions of inventory on its mainframe (which corresponded to the systems that used inventory). As a result, the company faced challenges in achieving one accurate picture of inventory. This situation was exacerbated by the fact that inventory was also valued in differing units of measure—by the pound or by the unit.

“The mainframe lost its transaction detail after two weeks, and this made it very difficult to go back and determine why an issue happened without having detailed data,” says Craig Durliat, Cooper’s manager of operation accounting. “In addition, the system was very North American-focused, and, as we started growing, we needed a more global footprint of the inventory.”

To tackle these challenges, Cooper Tire implemented i2 Distributed Inventory Management (IMx) to help get its inventory system off the 30-year-old legacy inventory mainframe and assimilate into IMx all of its ties to order

management, finance and the other integrated supply chain processes. IBM served as Cooper’s systems integrator on this project.

“The IBM team came on board and really helped manage the inventory management project—not just the implementation of the IMx software. All inventory processes were looked at and either redesigned or redeveloped,” Durliat says. “And that part of the IBM partnership, plus the experience of i2’s resources on the supply chain side, were critical to the success of the project.”

Cooper Tire uses IMx to post inventory, sales and production activity every day. The system enables the company not just to look at units, but also to validate the dollar value of those units.

“That ability helps us determine whether we have good control over our inventory, from a unit standpoint and a trend standpoint, as well as from a financial perspective, which is very important in this world of Sarbanes-Oxley,” Durliat says.

## End-to-end visibility

Through its IMx implementation, Cooper not only has a single, real time, accurate view of actual inventory today, but also a projected inventory view—positioning the company to support demand fulfillment. Increased visibility into inventory enables Cooper to quickly determine the cause of inventory problems and to implement processes that can prevent the same problems from occurring again.

By integrating all instances of inventory onto the IMx system, Cooper has removed approximately 400 programs and 100 jobs from its mainframe, and it has reduced the number of inventory reports from 140 to 50.

“As users, we are much more self-sufficient with inventory transactions through IMx,” Durliat says. “It’s easy to access the data, the detailed transactions are there and analysis is simplified.”

Having an integrated and flexible supply chain has allowed Cooper to improve its response to demand—ultimately better serving the end consumer and improving the company’s bottom line. “The initial implementations got us part way there, but it was the continuous-improvement activities and increased planner experience that produced the biggest returns and allowed us to achieve our stated goals,” Sager says.

— Lauren Bossers