



Reducing WIP Inventory at Mitsubishi Caterpillar Forklift America Inc.

After completing benchmarking studies of their competition, executives at Mitsubishi Caterpillar Forklift America Inc. realized that they needed to update their supply chain processes to stay competitive in a down economy. Identifying i2 as the best solutions provider to help it reinvent its supply chain, Mitsubishi Caterpillar Forklift America Inc. reduced inventory, increased throughput, and cut costs through its supply chain transformation.

In a down economy, staying competitive is more vital than ever. While many companies might be inclined to reduce expenditures during economic decline, executives at Mitsubishi Caterpillar Forklift America Inc. (MCFA) recognized that they needed to invest in the company's future as they faced the fiscal reality of a post-September 11 economy.

"Rather than retrench and pull back investments, we decided to invest in and create a foundation for our supply chain," said Jim Jankovic, MCFA's Director of Materials. "We had studied and benchmarked the processes, strengths, and weaknesses of the competition. We found that we needed to make progress—and make it fast."

Setting goals to manufacture and distribute its forklifts faster, with high quality and lower costs, MCFA began looking for a solutions provider to help it overhaul its supply chain.



Challenges

- Create solid foundation for supply chain initiative
- Overhaul supply chain processes to maintain competitiveness
- Manufacture and distribute forklifts faster, with high quality and lower costs

Solutions

- Create model that generates gross requirements
- Send forecasts to suppliers
- Increase visibility into material constraints

Results

- Decreased WIP trucks by 70%
- Reduced component inventory by 30%–40%
- Reduced time to get truck through assembly process by 50%

Company Description

Mitsubishi Caterpillar Forklift America Inc., a privately held joint-venture company between Mitsubishi Heavy Industries, Ltd. and Caterpillar Industrial, Inc., manufactures and distributes material handling equipment and parts. Headquartered in Houston, MCFA employs more than 800 people and provides a full line of forklifts through dealer locations in the United States, Canada, Mexico, and Latin America.

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*— Jim Jankovic
Director of Materials
Mitsubishi Caterpillar Forklift America Inc.*



Why i2?

After looking at several solutions providers, MCFA found that i2 best met the needs of its supply chain initiative.

“It really didn’t make sense to go anywhere else,” Jankovic said. “One of the big contributing factors was the professionalism of the staff that supported us. Also, we believed in the timed-phase approach of implementing projects—little by little making progress rather than one big jump.”

i2’s Contribution

Following i2’s business release methodology, MCFA implemented i2 Factory Planner™ as its first release, focusing on material planning. Factory Planner manages material and capacity constraints to develop feasible operating plans for plants, departments, production lines, and work centers.

MCFA has also used Factory Planner to create a model that generates gross requirements so that it can send forecasts out to its suppliers.

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“Initially, we had three different models for supplier collaboration,” Jankovic said. “i2 worked with us to rationalize that down to one model. That decreased our time to run the models from over an hour to just 20 minutes. Now we are at the next step, Business Release 2, which looks at capacity planning in our factory, whether it is on the assembly side or the fabrication side.”

Mitsubishi Caterpillar Forklift America’s Results

Before its implementation of i2 solutions, MCFA maintained a significant amount of work-in-process (WIP) inventory.

“Prior to implementing Factory Planner, we had many trucks in WIP for a variety of reasons,” Jankovic said. “We have reduced WIP by about 70 percent—a tremendous drop.”

In addition to freeing up capital by reducing WIP, MCFA has also reduced costs by reducing non-value-added labor costs.

“Before we implemented i2 solutions and other manufacturing improvements under the umbrella of the ‘Mitsubishi Caterpillar Production System’ [MCPS] philosophy, we were not as efficient as we are now at the same volume,” Jankovic said. “We’ve also been able to reduce the number of temporary employees because MCPS and i2 solutions have helped us in our concentrated effort to lean out the factory, to value-stream map the processes, and to reduce waste.”

These improvements have enhanced Mitsubishi Caterpillar’s competitive position—which is critical in tough economic times.

“We’ve increased speed to our dealers by setting the foundation where we could build to order rather than build to stock,” Jankovic said. “We’ve accomplished that while reducing our investment in inventory—our component inventory has dropped by about 30 to 40 percent since our implementation of i2 solutions.

We are talking large dollar savings through inventory reduction, and, as a result, we've also reduced our need for storage space. In Texas, you have to pay a 3 percent tax on inventory, so that is another direct savings."

i2 solutions have also given MCFA the ability to make smarter business decisions.

"i2 solutions have helped us by providing more visibility into material constraints and, soon, visibility into capacity constraints, so we can plan our business and our production more efficiently," Jankovic said.

That improved visibility has also translated into increased velocity for MCFA.

"Before our implementation of i2 solutions, it would take twice as long to get the average truck from start to finish through the assembly process alone," Jankovic said. "Right now, we're at about a 50 percent improvement in throughput time."

And the increased throughput means that MCFA is better equipped to meet the needs of its customers.

"We can be competitive to our customers by reducing costs, because we have less cost of carried WIP," Jankovic said. "The potential for damage or paint mutilation through the process is reduced, and our customers can get their trucks that much faster. Throughput, velocity, quality—all of those things tie together under the umbrella of the 'Mitsubishi Caterpillar Production System.'"



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