

Mercury Marine Transforms Business Through PLM



Few characteristics serve a business enterprise worse than complacency and immobility. Market shifts, changes in customer demand, and the near-constant evolution of technology forces companies to consider new and innovative ways of doing business.

No one has to explain this to Mercury Marine, a nationwide manufacturer of recreational marine propulsion engines. Faced with a major market shift in the early part of the last decade, the company chose to make a switch to four-stroke engines in an effort to better satisfy customer demands. It was a major endeavor, one which required Mercury Marine to launch 48 engine products in 60 months.

“The company had to transform the way it did business,” says John Bayless, Program & Strategy Director, Mercury Marine “That business transformation started with enterprise alignment. That was the very first step.”

The company, which has manufacturing/supplier facilities in 11 countries and engineering activities in six countries, undertook its product lifecycle management implementation in 2003. The Mercury Marine program team broke down its Siemens Teamcenter PLM software implementation into three steps:

- Collaborate with the company’s presidents and vice-presidents to determine goals, opportunities, and key metrics.
- Determine what the transition will be like when the company implements PLM systems, so as to maintain the pace of the overall vision and create the

products customers require in the proper time frame.

- Map the process to the technology so employees, processes, and systems will all be integrated together.

Teamcenter Unified

“Based on the requirements in the tiered approach, the disparate data sources are all pulled together into Teamcenter Unified – one by one, working things in to realize the vision of the PLM,” said Bayless.

The company created a standard data structure – or an assembly management. It served to create a common template for quickly structuring products and improved the downstream ability to locate parts. It also creates a consistent structure for user interaction.

“The value of PLM at Mercury Marine is saving time,” says Bayless. “It’s the time that some of the individuals spend not only locating and getting data, but once the data is structured in the way we can understand it, it makes it that much easier to make strategic decisions.”

Another value of the PLM implementation was found in what is known as change management. At Mercury Marine, this was a difficult process which took 56 days for an engineering change to get all the way through a process.

“When the products and the processes started working across all those different facilities, it made it very difficult to make sure changes were going from one to the other,” says Bayless.

So the solution was to create a program management-led, cross-functional changeboard using a common process and workflow and data managed inside of Teamcenter. By doing so, it brought the average change time down from 56 days to around 22 days.

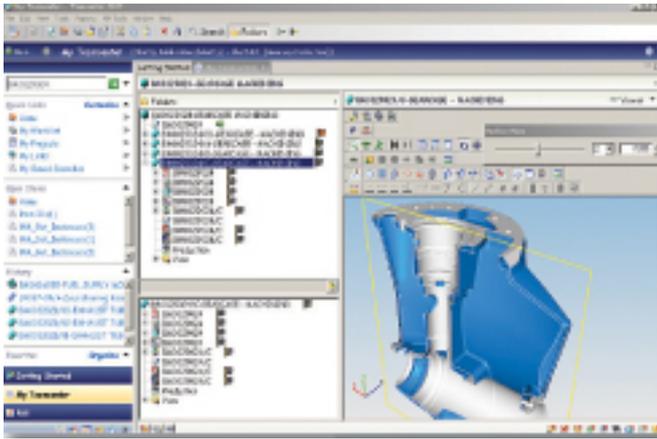
Another third benefit achieved from the PLM implementation involved traceability.

“At Mercury, when we’re building an engine, we’re going from a concept to design validation, then to process validation, before going into production,” says Bayless.

“As we run that building material through the process, different parts will be tooled at different places and times,” he continues. “When you get into the retrospective of the data and want to know what it was (you were) building, you like to know what material it is you released to the supplier.”

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Design For Competitiveness

A fourth benefit of the PLM implementation revolved around designing parts. The company created a central searchable location for managing those common parts, which resulted in reduced engineering and validation time.

“This is big bucks,” says Bayless. “If I don’t have to design parts, I’m saving a lot of money. Maybe even more importantly, I get done with that project and I’m on to the next one.”

Mercury Marine competes against Yamaha, Honda, Suzuki, and Volvo, among others, on a daily basis. The company only manufactures marine engines, and does not compete in other engine markets.

“We take (our competitors) head on in marine and we can do it by keeping up with the pace of innovation and making sure our data is organized,” says Bayless.

The company has been able to launch a new product every six weeks. It managed to hang on in the two-stroke to four-stroke conversion, but had no idea its market and its revenue would be cut in half during the infamous “Great Recession.”

“Nevertheless, we knew we had to keep up with the innovation,” says Bayless. “Our competitors were. We have to save time in the product development and we have to create innovative products.”

“By having the PLM implementation done prior to this downturn, my feeling is that it really helped us stay competitive during this recession,” says Bayless.

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