

Pacific Cycle, Inc. outraces limits on innovation with CATIA V5



“Without CATIA V5, our products would be less sophisticated. Our Independent Bike Dealer product would take a major hit because we couldn’t build what we conceptualize in our minds.”

– Forrest Yelverton, Director of Engineering, Pacific Cycle, Inc.

Overview

- **Challenge** – *To find a design solution that did not limit the creativity of designers and could fully communicate design intent to the company’s manufacturing facilities overseas.*
- **Solution** – *Pacific Cycle chose PLM Express including CATIA V5 and SMARTEAM to empower its designers, reduce development times and improve communication with overseas suppliers.*
- **Benefits** – *Design innovation in high-performance lines has increased, and manufacturing errors and costs have declined due to improved communication with suppliers.*

CATIA V5 helps bicycle maker accelerate innovation

Pacific Cycle, Inc., which includes such high-performance brands as GT Bicycles and Mongoose as well as the household names Roadmaster and Schwinn, employs some of the industry’s most innovative design minds at three US sites in Wisconsin, Colorado and California. But finding a Product Lifecycle Management solution that enabled these designers to create without limits – and that facilitated the translation of their brainstorming into actual manufactured products – was a challenge.

“Other packages we used in the past never had the capabilities to take the designs to the limits of the designers’ imagination,” explained Forrest Yelverton, Director of Engineering and the company’s lead designer. “We were always limited not by our imaginations, but by the constraints of our tools.”

Freeing designers to create anything they could imagine was only half the challenge, however. Building what they imagined was the other half, and some of what they designed was so difficult to convey to the company’s overseas manufacturers that the mechanisms rarely worked without costly and time-consuming back-and-forth trial and error. “Our suppliers couldn’t see how it worked, so they couldn’t accurately envision how to build it,” Yelverton said.

Improved collaboration, smoother manufacturing

Since adopting CATIA V5 from Dassault Systèmes and IBM, both challenges have been eliminated. Pacific Cycle now has a PLM authoring system as limitless as the imaginations of its designers, plus the ability to animate its designs for the overseas factories that build them. The system also facilitates collaboration among the company's three dispersed design teams.

Yelverton, who designed the bicycles used by the 1996 US Olympic team, among others, particularly appreciates the fact that CATIA V5 allows designers to move effortlessly from wireframe to surfacing or solids. Because designers don't have to move in and out of their design to switch from one mode to another, their creative mental flow continues uninterrupted. The process also saves time. "CATIA V5 has that ability to operate in hybrid mode, which no other CAD package offered," he said. "It's extremely powerful."

The powerful animation capabilities in CATIA V5 Kinematics, a module that Pacific Cycle chose to add to its basic MD1 configuration, also helps the designers to clearly communicate their intent to the companies that manufacture the components and bicycles. The factories are located primarily in Asia Pacific.

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Fewer errors, better value

"It's extremely helpful that we can not only send them a model of the thing we want, but also our animations of how assemblies go together, of how things might be machined to lower the cost," Yelverton said. "Having them actually be able to see how things go together and function without having to explain all that makes it go a lot faster."

Being able to clearly communicate design intent and design motion also helps to eliminate costly errors, Yelverton said. "Because our suppliers clearly understand what we're going for, they can add their own expertise without worrying that they are destroying the functionality. That allows them to deliver the best value."

But the true power of CATIA V5, Yelverton believes, is its ability to remove the traditional bounds on innovation. "We can have something up and on the screen and working in a day, which gives us more time to innovate. Best of all, it allows us to design to the limits of our minds' abilities, rather than being constrained by the abilities of the tool."

Although Pacific Cycle has not made formal measurements, "it's apparent the investment has more than paid for itself," Yelverton said. "I know the bean counters are comfortable with the return because they have allowed us to continue to invest." The IBM PLM Express Portfolio is designed to be scalable, allowing companies to acquire advanced PLM functionality at a price they can afford and expand their capabilities as they grow.

For more information

Contact your IBM Marketing Representative, IBM Business Partner or visit the IBM PLM Express Web site at: ibm.com/solutions/plm/express



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