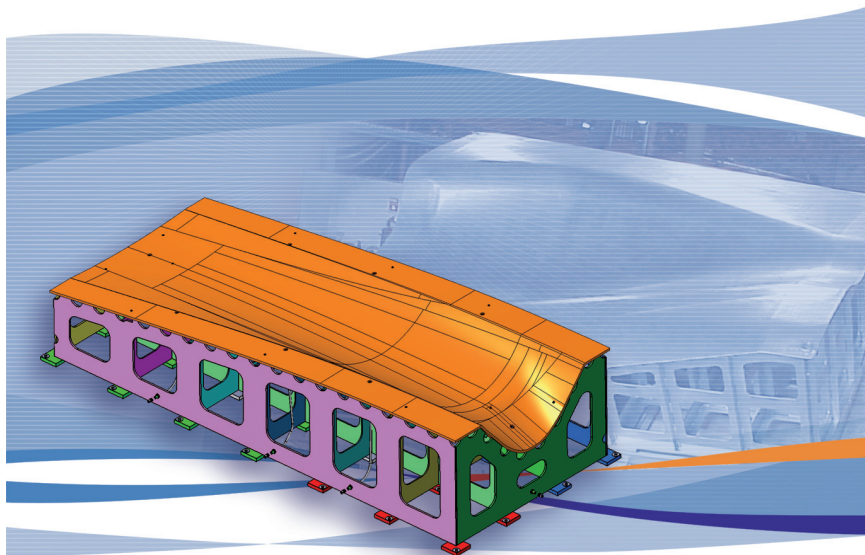


# Coast Composites Inc. gains competitive advantage with CATIA V5 and SMARTEAM's Generative Mechanical Design (GMD) approach



*“We wouldn’t be where we are without CATIA V5 and SMARTEAM. In particular, GMD Knowledgeware is a huge benefit to our company. It gives us the competitive advantage.”*

– Jerry Anthony, President, Coast Composites, Inc.

## Meeting the challenge

Coast Composites, a tooling systems supplier to the commercial and military aerospace industry, like its competitors, is under constant pressure from its OEM customers to deliver faster and at lower cost. But unlike most of its competitors, Coast believes being on the cutting edge of technology is the key to gaining competitive advantage.

Coast’s president, Jerry Anthony, has pushed this company of less than 115 employees to remain small on headcount, but strong on technology investments. Anthony believes that adopting paperless, automated processes guarantees Coast’s ability to remain agile and at the top of its game.

## Overview

### ■ The Challenge

*Under constant pressure from OEMs to deliver faster and at lower cost, Coast Composites wanted to streamline development by improving collaboration and automating repetitive tasks.*

### ■ The Solution

*Coast Composites chose CATIA V5 for use in its design and manufacturing processes and SMARTEAM to manage product changes and workflow from development to manufacturing.*

### ■ The Benefit

*Coast Composites has reduced design time and automated communication, allowing it to improve response times, take on more projects, reduce delivery times and gain competitive advantage.*

Coast knew it needed to improve communication of complex design and development data throughout its workforce and to automate repetitive tasks. And in a business where change is a constant, Coast understood that it also needed to effectively manage and control changes to reduce errors and design time.

### **CATIA V5 and SMARTEAM – a winning combination for Coast**

To meet these challenges, Coast knew it needed to achieve consistency and compatibility with its key customers. So it selected CATIA V5 as its design application platform in order to operate in the same environment as its OEM customers.

*“We now market the fact that we can use the GMD approach to create design concepts and NC programming and we’re actively telling our customers about how we can reduce our development time on key projects by 30-50 percent with Knowledgeware. That has really opened doors for us that we didn’t have before.”*

– Jerry Anthony, President,  
Coast Composites, Inc.

“With CATIA V5, it’s much easier for us to communicate with our customers and when the product’s lifecycle can be embedded in CATIA it’s easy to see why one would want to gravitate that way,” Anthony says.

To effectively manage changes and improve collaboration and communication throughout its busy workforce, it chose SMARTEAM, which embeds nicely within its existing CATIA environment.

“We’re always dealing with new designs and data for new products, because we’re helping to build plane number one of a new line, not number 1,001,” says Anthony. “When we’re working on any new military or commercial airplane program, for instance, a mold tool can change ten or 20 times throughout the design and build processes. In this situation, change control is huge.”

“SMARTEAM is a way for us to manage change control and it does a very effective job of that,” Anthony adds.

From a stability standpoint, Anthony says he has confidence in Dassault Systèmes and IBM Business Partner RAND North America to ‘be there’ for Coast for the long term. “That’s a big issue and driver for us now,” he says.

Anthony goes on to say “RAND, really led us to this technology and they’ve been a tremendous help in both the transition all of our legacy data and in getting Coast’s users trained” furthermore he credits their support for smooth implementations of CATIA V5 and SMARTEAM.

### **Bottom line benefits**

Anthony and his colleagues are experiencing many benefits from the Generative Mechanical Design (GMD) approach based on SMARTEAM and CATIA V5.

The GMD approach creates intelligent features that encapsulate the design intent, manufacturing processes, analysis and optimisation models, along with expert system rules, in one 3D entity. The GMD design features then react to customers’ inputs, based on embedded rules, and automatically update all downstream processes and models.

The powerful combination of the GMD design methodology with its collaboration capabilities is allowing Coast to automate communication and workflows, reuse existing know-how and designs, respond to customers more quickly and reduce design/NC programming cycle times on key projects by 30 to 50 percent.

GMD Knowledgeware has become a particularly powerful tool for Coast. The company is using the technology to expedite its design and manufacturing processes. Darrell Brooks, CAE Automation Manager, at Coast, says the company has been able to reduce the design cycle on tools that have repetitive tasks by 40 percent.



Knowledgeware features allow Coast to do repetitive tasks quickly, letting one designer do the work of two and allowing the company to schedule more projects in the same time frame, Brooks says.

“To say it’s a huge advantage is an understatement,” he adds.

And Coast uses the advantages it’s gained with Knowledgeware in its customer development.

“We now market the fact that we can use the GMD approach to create design concepts and NC programming and we’re actively telling our customers about how we can reduce our development time by 30-50 percent with Knowledgeware,” Anthony says. “That has really opened doors for us that we didn’t have before.”

And, Anthony explains, because Dassault Systèmes provides all of the necessary programming infrastructure for the automation, which gets automatically updated, Coast is freed from burdening its own staff with managing upgrades and software maintenance.

“Knowledgeware is an astronomical benefit to our company,” Anthony adds. “It gives us the competitive advantage. It’s huge.”

Anthony has used technology to grow Coast’s business without growing its workforce. He quickly points out that software, hardware and automation have been critical to the company’s success and will remain so for its future.

“We wouldn’t be where we are without CATIA V5 and SMARTEAM,” Anthony says. “And we’re looking at growing, especially the design and NC programming side of our business at a rapid pace.”

GMD based on CATIA V5 and SMARTEAM will play a critical role, he says. For instance, Coast will be using the GMD approach to automate more of its inspections processes.

“Approximately 40 percent of the revenue generating capability at Coast is based on the advantages of using CATIA and embedded products, like SMARTEAM and Knowledgeware,” Anthony says. “The potential is just unlimited as far as we can see.”

### **Generative Mechanical Design (GMD) a ‘must have’ for SMBs**

GMD, based on CATIA V5 and SMARTEAM, provides an environment that promotes innovation by leveraging know-how, standardising functions and components and deploying business rules that enable SMBs to get a head start at the design stage of a product, freeing up valuable resources to increase productivity.

GMD integrates a logical layer above the parametric setting of the design data, a true differentiator from other tools currently on the market. By optimising design processes, enhancing flexibility and collaboration and automating lifecycle management, GMD allows SMBs to reduce time and costs while improving quality.

SMBs deploying the GMD approach have measured gains of more than 50

percent in the design stage through the ability to:

- *Integrate ‘design rules’ into design activities, avoiding repetition of tasks and duplication of errors*
- *Reapply know-how within new contexts*
- *Focus on innovation*
- *Improve communication among project partners*
- *Give reliable and accurate quotations.*

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