



Global Golf Equipment Supplier Drives Innovation with Web-Based Collaboration

Overview

Country or Region: United States

Industry: Manufacturing—Consumer goods

Customer Profile

Callaway Golf is a leading maker of golf clubs, golf balls, and golf accessories. The Carlsbad, California–based company has about 3,500 employees and sells its products in more than 110 countries.

Business Situation

Due to the increasing pace of product launches, Callaway needed to help its internal teams and external manufacturing partners communicate and exchange critical design documents more efficiently.

Solution

Callaway implemented UGS Teamcenter Community Collaboration, a product life-cycle management solution based on Microsoft® SharePoint® Products and Technologies.

Benefits

- Improves collaboration process
- Speeds data access for many departments
- Fosters innovation through faster communication

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John Loo, Senior Manager of Design Systems, Callaway Golf

Callaway Golf is known around the world as a leading supplier of golf clubs, balls, and accessories. The innovation that led to successful products like the Big Bertha driver is fueled by collaboration between internal and external teams, ranging from engineers at company headquarters in California to manufacturing partners in Asia. To overcome confusion and delays caused by version-control issues with critical documents moving between various teams, Callaway Golf implemented a Web-based portal using UGS Teamcenter Community Collaboration, a product life-cycle management solution that is based on Microsoft® SharePoint® Products and Technologies. Today, internal Callaway Golf personnel and overseas partners can share documents and collaborate quickly and effectively, which helps the company maintain its position in the golf business.

Situation

Callaway Golf is one of the best known brand names in the world of sports. Over the course of 25 years, the Carlsbad, California, company has built a loyal clientele who use its golf clubs, balls, and accessories on golf courses around the world. The company, which sells its products under the brand names of Callaway Golf, Odyssey, Top-Flite, and Ben Hogan, reported sales of approximately U.S.\$1 billion in 2006.

The success of Callaway Golf stems from constant product innovation, which results in popular golf equipment like the Big Bertha and FT Series drivers and the X Series woods and irons. In the company's early years, it launched a new product about twice a year. But in the past decade, as demand for its products grew and competition increased, Callaway Golf began introducing as many as seven or eight new products a year, with most having about an 18-month life cycle.

Designing and launching new products at this pace requires the tight coordination of efforts of many different teams, including designers, engineers, marketing department personnel, and lawyers working on patents for new designs. Most of these roles are performed at the company's California location. These teams, in turn, have to communicate with companies in China, Japan, Korea, Mexico, and Taiwan that manufacture the Callaway Golf product components, such as club heads and shafts.

Managing communications over a supply chain that spans continents and offices separated by tens of thousands of miles creates some tough challenges. As Callaway Golf grew during the 1990s, one of the biggest challenges that it faced was finding an effective way to exchange business-critical information, especially large files created with computer-aided design (CAD) and computer-aided manufacturing (CAM) software. Prob-

lems arose when the methods of sharing documents could not keep pace with the communications between teams in different locations.

"We used a wide variety of methods of managing communications between our manufacturing partners and various internal teams," says John Loo, Senior Manager of Design Systems at Callaway Golf. "This included e-mailing documents, using File Transfer Protocol to upload files, and shipping CDs when we had very large CAD files that were simply too big to manage in any other fashion.

"The process was kind of a mess," Loo continues. "Because of the transit times—especially when we were shipping CDs—communications would get out of sync. Sometimes, during the time it took for the CD to arrive at the manufacturing site, our engineers would make a slight change. The manufacturers would not be aware of the change that had been made, and we would have to start the whole process over again so that everyone was working from the same document."

The challenge for Callaway Golf, according to Loo, was to find a way to enable teams in different locations to work with a "single version of the truth."

Solution

To address the challenges of its geographically dispersed teams and partners, Callaway Golf decided to implement a solution based on Microsoft® SharePoint® Portal Server and SharePoint Team Services. Callaway Golf deployed Teamcenter Community Collaboration, a product life-cycle management solution from Microsoft Gold Certified Partner UGS, a subsidiary of Siemens.

Callaway Golf considered other product life-cycle management software, including

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Windchill from PTC and Enovia MatrixOne from Dassault Systèmes, but chose Teamcenter Community Collaboration because of its close integration with the UGS CAD and CAM software already in use at Callaway and because its core technology is based on SharePoint Products and Technologies.

“We live or die by our CAD/CAM software, so the integration that UGS provided was crucial,” Loo says. “The SharePoint Products and Technologies gave us what we needed, and since we are very Microsoft-centric in terms of our desktop PCs, engineering applications, and development tools, we felt that it would be the best fit for our needs.”

Teamcenter Community Collaboration uses SharePoint Products and Technologies to provide a Web-based environment that helps the various Callaway Golf teams in a number of key areas. These include:

- **New product development.** All the people involved on various teams are able to post product content and receive communications, including e-mail messages and alerts, on the Teamcenter Community portal to streamline processes and product development.
- **Intellectual property management.** Callaway Golf lawyers use the portal to aggregate, access, and review design documents in preparation for evaluating or filing for patents.
- **Supply chain synchronization.** Manufacturing partners are given secure access to the portal for accessing design, specification, quality, and process files. The system is configured to send alerts when changes are made to files after they have been posted.

Given the different time zones of the various Callaway Golf teams and partners, the portal is in use every day of the week. On a typical day, up to 200 people will log on to access documents and collaborate with other people.

Callaway Golf plans to upgrade Teamcenter Community Collaboration in the latter part of 2007 when the product incorporates the enhanced technologies in Microsoft Office SharePoint Server 2007, part of the 2007 Microsoft Office system.

Benefits

By implementing the USG Teamcenter Community Collaboration solution based on Microsoft SharePoint Products and Technologies, Callaway Golf has streamlined workflow processes between highly dispersed teams of employees and manufacturers. The technology helps make the collaborative process of bringing new products to market much more efficient. It helps speed access to data and also fosters innovation through faster and clearer communication.

Improves Collaboration Process

The content management capability provided by Teamcenter Community Collaboration helps Callaway Golf control changes made to product content by providing document and version histories and e-mail alerts. “We have design teams in California and suppliers in Asia, but everyone is able to collaborate effectively by posting their product content on the portal and using it to keep track of what’s being done on specific projects,” says Loo. “The technology has allowed us to get away from the days of using e-mail to send thousands of files to hundreds of people, and reduces time, travel, and errors. People don’t end up with the wrong version of a file.”

Information residing on the Callaway Golf portal is accessible 24 hours a day, eliminating the barriers created in the past by time

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zones and physical boundaries. Loo notes that suppliers make heavy use of the alerts functionality provided by the SharePoint Products and Technologies. “Along with being able to access the necessary information and content exactly when they need it, the suppliers have established alerts so that if anything is changed in a file, the portal generates an e-mail to notify them of the change,” Loo says. “This helps to eliminate confusion that can lead to delays in development. That, in turn, helps us get products to market faster than we could in the past.”

Teamcenter Community Collaboration also includes functionality that allows Internet-based, real-time collaboration on complex CAD files and specification documents. “On several occasions, team members spent less than an hour resolving issues that in the past might have taken days of back-and-forth communication and file sharing,” Loo says. “This helps reduce our cycle times so we can get a product from concept to market faster.”

Speeds Data Access for Many Departments

Since the implementation of the Web portal, its use has progressed beyond engineering, design, and manufacturing teams to include other departments that are important in bringing new products to market. Now, program managers, marketing personnel, attorneys, and others have access to it as well.

“Extending the portal across the whole product commercialization process occurred almost on a grass-roots level,” Loo says. “A number of people outside of engineering immediately recognized it as a valuable tool for accessing critical product information.”

For example, the marketing department uses the portal to coordinate activities and content prior to a product launch. And the legal department spends a lot of time on the

portal, managing the large number of Callaway Golf patents—covering cosmetic issues like colors and finishes; physical attributes like face and groove shapes, moments of inertia, and center of gravity; and manufacturing processes such as casting and bonding technology.

“There is both art and science in creating a club that plays well. It’s what sets us apart in the industry, and helps differentiate our products,” Loo says. “There have been many cases of intellectual property issues arising over design features and claims made about products. So our lawyers need access to the design documents to be able to help our patent filings and defend our intellectual property.”

Encourages Innovation

Another group that relies on the collaboration portal is an advanced design team, which focuses on creating new golf club concepts and working with new combinations of materials. Although not all the work makes it into production, the group benefits directly from the features of the portal.

“The spark behind innovation comes from engineers and conceptual designers working together with customers as well as other employees,” Loo says. “With the collaborative functions available in our SharePoint-based portal, team members can work together more efficiently on design problems and refine concepts faster.”

For More Information

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