Jayco Accelerates RV Manufacturing with IMAGiNiT Technologies and Autodesk
3D CAD Platform Boosts Productivity by Up to 70 Percent

The Organization

From its headquarters in rural Middlebury, Indiana, Jayco, Inc. combines Old World craftsmanship with innovative technology to create a full range of recreational vehicles. Attention to detail has made the company, which employs approximately 1,600 employees, the largest family-owned and operated RV manufacturer in the United States.

The Challenge

However, becoming one of the largest RV manufacturers in the nation can pose a number of unique manufacturing process challenges. One substantial growing pain was collaboration, both internally and with external suppliers and vendors. For a number of years, Jayco used a non-Autodesk two-dimensional computer-aided design software (2D CAD) for prototyping and product lifecycle management (PLM). Yet the software utilized by Jayco was not optimized for collaboration between multiple parties, which slowed down its product development.

As many of Jayco’s vendors were accustomed to working with Autodesk file formats, switching to an open CAD system was seen as a clear advantage that would enable Jayco to expedite and ease collaboration. “Maximizing our partner relationships is critical in speeding our time to market,” says Jason Bontrager, project leader at Jayco. “We needed a faster, open solution that could support dialog between our suppliers and our vendors.”

“By working closely with customers like Jayco, IMAGiNiT Technologies helps implement Autodesk solutions successfully for the customers but they also give the customers the productivity they’re looking to gain from their technology investment.”

— Bill Griffin
VP of Worldwide Sales
Autodesk

The Solution

3D Digital Prototypes Streamline Product Development

To solve the collaboration challenge, the Jayco team reviewed a number of CAD solutions from SolidWorks, PTC and Autodesk. On-site presentations and a proof of concept from value-added partner IMAGiNiT Technologies convinced Jayco that selecting an Autodesk 3D CAD platform would be the best course of action. The Autodesk products selected could allow Jayco to satisfy not only its immediate design and manufacturing process challenges, but also help boost productivity while pursuing new Web marketing initiatives based on visually compelling 3D imagery.

To explore new workflow efficiency throughout its various departments, Jayco adopted a suite of Autodesk products to form a comprehensive 3D CAD platform solution. Components of the solution consisted of Autodesk Product Design Suite software, Autodesk Vault Collaboration software and Autodesk Simulation Mechanical software. In addition, Jayco embarked on a pilot program—scheduled for completion in April, 2013—with Autodesk PLM 360 to implement better product lifecycle management.
3D Digital Prototypes Streamline Product Development

“With Autodesk Inventor software in place as part of our Autodesk Product Design Suite, Jayco has eliminated many of the costs and complexities that accompany building physical product prototypes, which results in a huge time savings,” says Bontrager. “Being able to do finite element analysis (FEA) on weight ratios and axles virtually means that we will spend less money in the early development stages of a new product or RV floor plan as a result of using Autodesk Inventor in the design process,” he says.

Moving to a 3D platform not only enables the company to streamline activities across every department, but has also provided the company with a unique niche in the marketplace. “Jayco is currently the only RV manufacturer that has made the complete transition to a 3D CAD design and simulation environment, and that gives us a significant competitive advantage,” says Bontrager. “We’ve had great consulting support from IMAGINiT, as well as the opportunity to attend Autodesk University, which has allowed us to explore these new capabilities and various ways Autodesk products can make us more creative and efficient.”

For example, Jayco has been implementing Autodesk Vault Collaboration with product data management software to centralize files and track usage and metadata, which allows different departments to easily check files in and out and assess progress before the final design file is handed off to manufacturing. Autodesk PLM 360 adds automation around that process to help further streamline Jayco’s cross-department collaboration. “Now that our creativity no longer has to be limited by the old 2D technology, we’re in the unique position of being able to build just about any RV or mobile product a customer could imagine—and do it on time and on budget,” says Bontrager.

Results

Jayco Discovers Immediate Productivity Gains of Up to 70 Percent

Like the RVs it manufactures, Jayco’s business is a series of many moving parts. Getting them to all work together with Autodesk products has revitalized collaboration among departments and set the stage for faster time to market—and far greater efficiency. Immediate productivity gains cover the way Jayco now transfers design files into the new system and for product change requests (PCRs). “Even at this early stage in the migration, we’ve seen a 20 to 30 percent productivity gain on workflow,” says Bontrager. “And for our mill room, it’s between a 50 to 70 percent gain in productivity, due to the fact we can now export DXF design files directly from our Autodesk Inventor data into that department’s software, which accelerates the cutting of wood parts.”

Comprehensive Deployment Services Speed Process Automation and Workflow

As an Autodesk value-added reseller (VAR), IMAGINiT was instrumental in providing the consulting and implementation support for the improved collaboration and productivity that Jayco is enjoying. “IMAGINiT has been a superb partner and is always giving us perspectives on new ways to do things,” Bontrager says. “IMAGINiT has gone above and beyond to deploy all of the Autodesk products and train us on what these products can do.”

IMAGINiT used its process automation and consulting experience to simplify implementation, along with customized training and online learning resources for Jayco employees. “Helping Jayco realize the full benefits of migrating from an obsolete 2D CAD environment to being able to leverage the power of a true 3D modeling tool has been amazing, resulting in improvements in throughput, productivity gains, workflows and efficiencies,” says Bob Heeg, executive vice president at IMAGINiT Technologies. “It’s been a very gratifying process to help Jayco drive interdepartmental efficiency, while strengthening its competitive position in the marketplace.”
IMAGiNiT and Autodesk Pave the Way for Best-in-Class Marketing Capabilities

In addition to speed, the 3D CAD platform also opens up a new world of possibilities for Jayco to attract and retain customers. “Ultimately, the 3D platform will allow Jayco to involve customers in choosing custom designs and features for the RVs they order by being able to see virtual 3D animations and interact with them,” says Bontrager. “Thanks to Autodesk and IMAGiNiT, we’re exploring new approaches to marketing to get miles ahead of the competition.”

For more information on Jayco, visit www.jayco.com.

About IMAGiNiT Technologies

IMAGiNiT Technologies, a division of Rand Worldwide, advances the way architects and engineers design, develop, and manage projects. Customers of this leading professional services and technology company include organizations in the building, infrastructure, manufacturing, and facilities management industries. Fortune 500 and Engineering News Record’s Top 100 organizations work with IMAGiNiT Technologies to gain competitive advantages through expert technology consulting, implementation, training, and support services. As one of the world’s largest integrators of Autodesk 3D design and engineering software, the team leverages unrivalled industry experience to design systems that accelerate innovation while improving project quality and profitability.

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