

Barry-Wehmiller International Resources

GROWING A GLOBAL MANUFACTURING CONSULTING FIRM WITH SOLIDWORKS



Barry-Wehmiller International Resources selected the SolidWorks 3D mechanical design system because it provides the smoothest transition from 2D to 3D and the most efficient approach for developing large assemblies related to its manufacturing systems.

Barry-Wehmiller International Resources (BWIR) provides design and manufacturing systems consulting services to some of the world's top manufacturers, including Barry-Wehmiller Companies. In 1998, Barry-Wehmiller Companies began to challenge traditional 2D design methods and investigated available 3D design tools. Lost productivity resulting from file conversions, data compatibility issues, and errors in the design of parts within moving assemblies prompted Barry-Wehmiller Companies to engage BWIR to study standardizing on a 3D system, according to Senthil Kumar, BWIR director of engineering services.

"We evaluated the move to 3D for many reasons, the most critical being to save time and improve productivity," Kumar explains. "We realized 3D design would be faster and enable our clients to fully visualize assemblies, some of which involve thousands of parts, before production. We believed moving to 3D would save time and reduce a significant portion of costs related to errors and rework."

"Time-to-market has become increasingly important to our clients, and working in a 2D world simply cannot provide the speed demanded, especially in the design and manufacture of complex equipment," adds James Webb, BWIR vice president of professional services. "We saw 3D as a way to increase productivity, bring costs down, and win business in highly competitive markets." Following a preliminary evaluation of a full range of CAD systems, BWIR thoroughly evaluated three finalists. Barry-Wehmiller Companies standardized on SolidWorks® software because of its large assembly functionality, ease-of-use, short learning curve, affordability, and communications capabilities. The Barry-Wehmiller Companies have implemented over 400 seats of SolidWorks software worldwide.

A smooth transition to 3D

BWIR assisted in the transition from 2D to 3D design. The SolidWorks implementations took place without business downtime or disruptions. "Ease-of-use was extremely important," Kumar recalls. "Moving an engineer from 2D to 3D CAD can involve a substantial learning curve, which SolidWorks drastically reduces. People with prior 3D modeling exposure found the move to SolidWorks extremely smooth and those with no 3D experience picked up SolidWorks in a fraction of the time we have seen on other 3D solutions."

"We have become convinced that SolidWorks has the best vision for applying 3D productively," Webb notes. "When you are moving large numbers of design engineers to a new platform, a smooth transition is as important from a business standpoint as technical functionality is from an engineering standpoint. You want to keep productivity losses to a minimum so you can begin reaping the benefits of 3D as quickly as possible. SolidWorks has the best understanding of the business issues involved, such as reducing the time and cost of training, handling legacy 2D data efficiently, minimizing workflow disruptions, and providing the support, ease-of-use, and development necessary for an effective transition."

Webb says that since implementing SolidWorks software, Barry-Wehmiller Companies have cut design cycles by as much as 30 percent and reduced production time by as much as 25 percent.

→ Barry-Wehmiller International Resources (BWIR), one of the first American-owned project-based design and manufacturing consulting firms with an offshore component, is part of Barry-Wehmiller Companies, Inc., a consortium that includes a leading packaging automation and converting group; a major corrugated paperboard and folding carton equipment manufacturer; and a top engineering and IT consulting firm. BWIR provides design and manufacturing systems consulting and development services to Barry-Wehmiller Companies and some of the world's leading manufacturers. Headquartered in St. Louis, Missouri, with primary operations in Chennai, India, BWIR provides practical experience and proven success in the design and implementation of solutions for today's manufacturing environments.



- Shortened design cycles by as much as 30 percent
- Reduced production time by as much as 25 percent
- Cut costs associated with ECOs and rework
- Improved collaboration/communication with customers

→ **CHALLENGE:** BWIR provides design and manufacturing systems development consulting services to Barry-Wehmiller Companies as well as some of the world's leading manufacturers. A thorough study of existing CAD solutions by BWIR resulted in the Barry-Wehmiller Companies selecting SolidWorks software as its standard 3D CAD solution worldwide.

→ **SOLUTION:** Barry-Wehmiller Companies selected the SolidWorks 3D mechanical design system as its standard design environment because of the system's large assembly functionality, ease-of-use, short learning curve, affordability, and communications capabilities. By transitioning to SolidWorks software, Barry-Wehmiller Companies shortened their design cycles and production time significantly; cut costs associated with ECOs and rework; and improved collaboration and communication capabilities with their customers.

Visualizing large assemblies

Many of the productivity gains stem from improved visualization and configuration of large assemblies, which are common in Barry-Wehmiller Companies manufacturing machines and systems. "Barry-Wehmiller Companies have an acute need to handle large assemblies efficiently," Kumar says. "The largest machines have 6,000-7,000 parts and some systems can total 20,000-30,000 individual components. Using SolidWorks software has helped improve processes and visualization of assembly interaction before producing a single part."

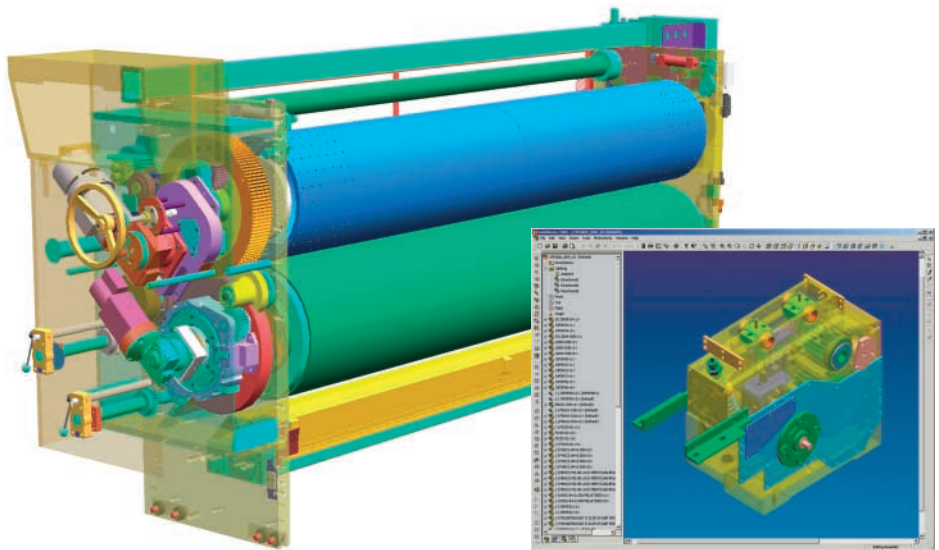
"With SolidWorks we do collision detection and interference checking up front," adds Senior Design Engineer Shaji Shereef. "We also use configurations to develop different combinations of assemblies based on customer requirements. Using SolidWorks, we have dramatically reduced engineering change orders (ECOs) and associated costs."

Communicating, collaborating, consulting

Additional benefits arise from SolidWorks automatic drawing creation capabilities; SolidWorks Office communications and animation applications, including email-enabled collaboration with eDrawings™ software; and BWIR's affiliation with the SolidWorks Manufacturing Network, an online directory of SolidWorks-enabled services.

"The ability for our clients to bring their customers a complete set of drawings (with eDrawings), sometimes animated (with SolidWorks Animator), so the customer knows exactly what he's getting, when he's getting it, and how it meets his specifications, without a lot of manual effort, is a great advantage for the client," Webb says.

"As a consulting company, we have found eDrawings to be a wonderful tool for communicating with clients, facilitating design reviews, and collaborating with Barry-Wehmiller Companies," Kumar adds. "By joining the SolidWorks Manufacturing Network, we have gained clients who simply came across our credentials via the network."



Barry-Wehmiller International Resources uses SolidWorks software to design, visualize, and configure large assemblies, which can total 20,000-30,000 individual components, in the development of a wide range of automated manufacturing systems and packaging equipment.

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