

# UNIVERSAL CYCLES LTD.

*AUTOMATING QUICK-RESPONSE BICYCLE DOCUMENTATION  
WITH SOLIDWORKS COMPOSER*



With SOLIDWORKS Composer software, Universal Cycles has streamlined the development of bicycle user documentation while simultaneously improving its quality and usability, including the creation of instructional animations.

### Challenge:

Improve the quality of bicycle documentation for customers and distributors while taking advantage of Internet—and smartphone—based communication technologies.

### Solution:

Implement SOLIDWORKS Professional design software in concert with SOLIDWORKS Composer technical communication software.

### Results:

- Cut product manual development from 18 months to two weeks
- Reduced translation costs through use of less verbiage
- Took advantage of smart QR technology to access animations
- Improved customer documentation experience

Universal Cycles Ltd. has grown from its founding in the late 1970s to become one of the largest suppliers of bicycles in the United Kingdom and across Europe. The Essex-based bicycle manufacturer produces a number of internationally recognized road and mountain bike brand names, as well as a vast array of exclusively licensed cycling accessories.

Until 2011, Universal Cycles used BikeCAD® software, a free design application used by bicycle frame builders, assemblers, shops, and fit specialists. That's when management decided to modernize both the company's design operation and product documentation function, according to Design Engineer Stuart Wortley.

"I introduced SOLIDWORKS® Professional design software, which I've used for 15 years, when I joined Universal Cycles," Wortley recalls. "Management also wanted to leverage 3D to improve the quality of product documentation and marketing materials. We needed a tool that could quickly transform our 3D designs into renderings, animations, and step-by-step illustrated instructions. That's why we acquired SOLIDWORKS Composer software."

Within six months of implementing SOLIDWORKS software, Universal Cycles added the SOLIDWORKS Composer technical communication solution. "Management understood the value of putting instructional animations on YouTube and taking advantage of smartphone technology," Wortley says. "We wanted to move from the paper manuals and catalogs full of photographs that the company had relied on for many years and really plug our materials into the web and growing wireless communications. We believed SOLIDWORKS Composer would help us use our 3D CAD data to create this type of content efficiently and cost-effectively."

Since implementing SOLIDWORKS Composer software, Universal Cycles has improved the quality, clarity, and level of detail included in its product manuals and user instructions, while simultaneously reducing the time and resources required to produce them. For example, a bike manual that used to take 18 months to produce can now be finished in two weeks. Universal Cycles has realized additional savings by decreasing the number of words used in manuals, reducing associated translation costs.

"SOLIDWORKS Composer has enabled us to quickly create professional, concise instruction sheets and videos that impress our distributors and end customers, increasing customer satisfaction," Wortley stresses. "We don't need to produce parts, conduct photo shoots, or undertake lengthy production schedules. With SOLIDWORKS Composer, we simply call up the 3D models, create our illustrations, and drop them in the manual."



While product and user manual production is more efficient with SOLIDWORKS Composer, the ability to use the software to quickly and easily create animated videos of how to assemble, maintain, and service bikes is the solution that Universal Cycles foresees as the future of documentation. The company has already posted several animations on YouTube, including one that shows how to fold the Col de Turini Davoss Folding Bicycle.

“There’s no question that an animation created in SOLIDWORKS Composer is more informative and easier to understand than a series of photographs in a booklet or instruction sheet,” Wortley notes. “Animations will become the standard for documentation and the web will be the delivery medium. When a customer calls our support desk, no longer will someone need to walk them through the manual. They will simply direct them to an instructional video that demonstrates how to perform the necessary task.”

In addition to using SOLIDWORKS Composer to create documentation that leverages the Internet, Universal Cycles is also planning to take advantage of smartphone technology. The company intends to include Quick Response (QR) codes, the matrix bar codes read by smartphones, on its products so that customers and distributors can access instructional videos and product information on their smartphones by scanning the QR code on the bike frame.

“By combining content created with SOLIDWORKS Composer with QR code/smartphone technology, we give customers and distributors instant access to the information they need,” Wortley says. “A customer could be riding one of our bikes and discover that the brakes aren’t working properly—or maybe the chain keeps falling off the sprocket because the derailleur needs adjustment.

“They will be able to scan the QR code with their smartphone, and then watch an instructional video on how to adjust the brakes or gears,” Wortley continues. “There’s no need to go home and look for the manual. With SOLIDWORKS Composer, we can create content for delivery via smartphone, tablet, or computer. That’s the future of product documentation.”



[Click here to view animated assembly instructions created in SOLIDWORKS Composer.](#)



Using SOLIDWORKS Composer software to create interactive 3D product content, Universal Cycles is taking advantage of QR code/smartphone scanning technology to give customers and distributors instant access to the information they need.

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