

Marriott International, Inc.

Customer Success Story

AutoCAD®

Autodesk® Revit® Architecture

Autodesk® 3ds Max® Design

Autodesk® Buzzsaw®

“Typically, the model would cost \$250,000 or more. We spent \$25,000 in our virtual environment—reducing our costs by 90 percent without disturbing hotel guests with a renovation. Our executives are comfortable with the review cycle and encourage us to continue working virtually.”

—Deborah Huguely
Vice President of Product
Development, Architecture and
Construction
Marriott International, Inc.

Transforming Design.

Marriott redefines their design process with virtual hotels and photo-realistic visualization.



Image courtesy of Marriott International, Inc.

Project Summary

Marriott International, Inc. is one of the world's most recognizable hotel brands. The company continues to evolve to meet the changing needs of its customers, including renewed emphasis on contemporary design and speed to market. And how does Marriott achieve these goals? The company attributes some of this success to the benefits of Autodesk software, including AutoCAD®, building information modeling (BIM) solutions, online collaboration tools, and 3D visualization software.

Using Autodesk software, Marriott has:

- Replaced physical prototypes with digital photo-realistic models
- Reduced costs by 90 percent
- Increased speed to market by six months
- Streamlined management review and approvals

The Challenge

Marriott boasts more than 3,200 properties in 67 countries that hundreds of owners and franchisees manage. As hotel guests' tastes changed to expect unique and contemporary design, Marriott needed to work with hotel owners to create innovative building and interior designs faster. Until recently, Marriott used a traditional design process to build expensive physical prototypes to test new

designs and décor. And communicating architectural designs and décor changes to hotel owners was especially challenging.

“We needed to share our latest designs with the hotel owners for renovation projects and new builds,” says Karim Khalifa, Senior Vice President of Architecture and Construction at Marriott. “We used AutoCAD software for more than 20 years along with our owners' consultants and contractors. We looked for a collaboration solution to coordinate our AutoCAD designs and modifications with our stakeholders.”

In addition, Marriott wanted to replace the method of building physical prototypes for rooms and lobbies with new décor initiatives. “We hired a well-known consulting firm to advise us on how to take our new ideas to market as quickly as possible,” adds Khalifa.

The Solution

Marriott recognized that BIM was the game-changing process that could speed communication, shorten schedules, and save money. In short, BIM would transform their design process. The team acquired Autodesk® Revit® Architecture to design intelligent 3D models and Autodesk® Buzzsaw® for project collaboration. Marriott staff worked closely with Autodesk Consulting to implement the new system.

Autodesk®

Marriott shaves off \$225,000 from lobby projects by using visualization tools.

Having used AutoCAD software for so many years, the team selected a compatible solution. John Bauer, Director of Design Management with Marriott's Architecture and Construction group, explains, "Autodesk's web-based collaboration tool, Buzzsaw, quickly became the cornerstone of our communications with our owners and their consultants. We use the system to publish all of our design criteria, including written standards, AutoCAD drawings, photos, and documentation. Buzzsaw is the engine that drives our communication and makes design data available to owners, architects, and designers."

Visualization Brings Big Results

With the success of Marriott's collaboration system, the team researched visualization tools that could easily integrate with AutoCAD and Buzzsaw. "They demonstrated how we could implement a BIM process with Revit using our existing AutoCAD hotel designs and visualize them using Autodesk® 3ds Max® Design software. Once we complete the Revit model, AutoCAD documents the designs, 3ds Max creates photo-realistic images and Buzzsaw transfers the files easily to owners and consultants," explains Khalifa.

One example of the new process is a recent décor initiative for a hotel lobby. In the past, the team created a physical prototype with lighting, fabrics and furniture, and displayed it in an existing hotel lobby. Typically, this physical prototype cost \$250,000 and disrupted hotel guests.

"With our Revit models, we use 3ds Max Design to create a photo-realistic scene or vignette at our headquarters. We printed several images in very large wall format and ordered only a fraction of fabrics and materials to bring the vignette to life," explains Khalifa. "We have the actual materials to get a sense of the tactile properties combined with large prints of the imagery. We transitioned from completely renovating furnished hotel lobbies with the new designs and décor to a large room in our headquarters with printed images and samples for a 'virtual' prototype."

After the team digitally created its "virtual lobby", senior management visited the room and approved the design, which cost a fraction of the expense required to build a complete physical model. "We now have a review cycle that is completely virtual, greatly reducing the time and cost of building actual models," says Khalifa.

The Result

Implementing BIM has redefined the way Marriott designs hotels. In just two years, Marriott is managing more than 1,200 active projects on Buzzsaw with 4,000 users on the site who need only a web browser on their computer to view the designs. "It really helps us to communicate outside the design team," says Khalifa. "Non-designers can review and comment on suggested changes. It's really changed the speed of our business."

Visualization Saves Time and Money

Deborah Huguely, vice president of product development for Marriott's Architecture and Construction group, reports shaving \$225,000 off of lobby projects by using visualization tools. "Typically, the model would cost \$250,000 or more. We spent \$25,000 in our virtual environment—reducing our costs by 90 percent without disturbing hotel guests with a renovation. Our executives are comfortable with the review cycle and encourage us to continue working virtually."

In addition, the team reduced the total time to market from 16 months to only 10. "From end to end, we take our design concepts to market six months faster by implementing BIM," Khalifa adds.

BIM is a Home Run

Because AutoCAD complements the BIM process, Marriott's team continues to employ AutoCAD while migrating to BIM gradually and exploring new ideas. The company is considering the use of photo-realistic imagery in marketing material in the same way that auto manufacturers produce advertising long before building their first physical prototype. Beyond this, the company expects to use the new



Images courtesy of Marriott International, Inc.

virtual models to reduce the production costs for training videos that teach employees how to maintain properties and Marriott's standards of service.

Khalifa and his team are pleased with their Autodesk partnership. "Autodesk and the BIM technologies have proven themselves from a user level all the way to the executive or customer presentation level," explains Khalifa. "The results look beautiful while being simple enough for everyone to understand. That's truly a home run for Marriott."

Learn how Autodesk BIM software can save time and money on design and visualization projects at www.autodesk.com/bim.



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