

EM DYNAMICS METAL FABRICATION WINNING NEW PRODUCT DEVELOPMENT BUSINESS OPPORTUNITIES, ACCELERATING DEVELOPMENT WITH SOLIDWORKS

Case Study



By adding SOLIDWORKS Visualize Professional photo-realistic rendering software to its SOLIDWORKS design installation, EM Dynamics can more effectively communicate design concepts, such as the private lounge shown here that the design consultancy completed for high-end Toronto-based bespoke custom-tailored clothier King & Bay, helping EM Dynamics capitalize on new business opportunities.

Challenge:

Improve ability to realistically visualize design concepts in 3D to communicate with clients more effectively, eliminate the cost of making presentation prototypes, and pursue new business opportunities with non-technical clients.

Solution:

Add SOLIDWORKS Visualize Professional software to the company's existing SOLIDWORKS Standard design, SOLIDWORKS Professional design, and SOLIDWORKS Simulation analysis software implementation.

Results:

- Shortened design process by 30 percent
- Reduced design-through-manufacturing process by 10 percent
- Improved ability to communicate concepts to clients
- Eliminated need to make presentation prototypes

EM Dynamics is a leading Canadian product development consultancy and contract manufacturer. With more than 40 years of experience, the company works with clients from around the world to design, engineer, manufacture, and integrate mechanical products and equipment. From its 80,000-square-foot, state-of-the-art manufacturing facility in Toronto, EM Dynamics provides customers with a range of specialized product development capabilities, including high-precision sheet-metal design and fabrication, CNC machining, assembly, testing, and supply chain management.

The consultancy is committed to leveraging cutting-edge technology to provide clients with a high level of design, engineering, process control, and manufacturing support. This is why EM Dynamics standardized on the SOLIDWORKS® 3D product development environment more than a decade ago, according to Mechanical Engineer Sohaib Siddiqui.

"Our focus is on design, engineering, and manufacturing versus what it takes to use a particular tool," Siddiqui says. "SOLIDWORKS is not only easy to use, which is why it's been our only CAD system for the past 15 years, it also provides integrated sheet-metal design and simulation tools, which makes developing products and making refinements faster and easier."

Although EM Dynamics has relied on SOLIDWORKS design and engineering solutions—including SOLIDWORKS Standard design, SOLIDWORKS Professional design, and SOLIDWORKS Simulation analysis software—the product development consultancy/contract manufacturer used third-party rendering tools to create photorealistic renderings of proposed design concepts.

"When SOLIDWORKS Visualize rendering capabilities were added to SOLIDWORKS Professional software, we saw the application at a seminar put on by Javelin Technologies, our SOLIDWORKS reseller, began playing around with it, and found it extremely useful," Siddiqui explains. "Management loved the renderings that we produced with SOLIDWORKS Visualize and asked if there was anything better. That's when we purchased SOLIDWORKS Visualize Professional. We knew we had to have it."

BRINGING DESIGN CONCEPTS TO LIFE WITH VISUALIZE PROFESSIONAL

Using SOLIDWORKS Visualize Professional software, EM Dynamics can quickly transform design concepts into compelling photorealistic images that are indistinguishable from high-end photography. In the past, the company typically produced physical prototypes to present "life-like" design concepts to clients. With SOLIDWORKS Visualize Professional, EM Dynamics has eliminated the need to produce presentation prototypes.

"The addition of SOLIDWORKS Visualize Professional has given us a lot more creative freedom," Siddiqui stresses. "Our clients challenge our creativity to produce innovative product designs. We need to be able to communicate our creativity to the customer. Before we had SOLIDWORKS Visualize Professional, we often had to create physical prototypes for customers to understand the concept. Now, we can communicate our ideas more effectively, while simultaneously saving time and money."



"The combination of SOLIDWORKS design and SOLIDWORKS Visualize software speeds up the process because whenever we need to make a change in SOLIDWORKS, the changes get transferred over to Visualize automatically. This allows us to reach final designs that everyone can agree on faster, resulting in a roughly 10 percent reduction in the entire design-through-manufacturing process."

— Sohaib Siddiqui, Mechanical Engineer

SAVING TIME WHILE WOWING CLIENTS

Since implementing SOLIDWORKS Visualize Professional software, EM Dynamics has been able to shorten the design process by 30 percent because photorealistic renderings enable the company to secure customer approval more quickly while “wowing” customers at the same time. For example, the company recently developed a new private lounge for King & Bay, a high-end Toronto-based bespoke custom-tailored clothier. Touted as “Toronto’s Finest Curated Custom Clothing Experience,” the new lounge at Brookfield Place in the heart of Toronto’s financial district is where customers seeking quality menswear meet with King & Bay Master Clothiers for selections and fittings.

“On the King & Bay private lounge, the customer was upgrading to a much larger space, so we wanted to do something big,” Siddiqui recalls. “The combination of SOLIDWORKS design and SOLIDWORKS Visualize software speeds up the process because whenever we need to make a change in SOLIDWORKS, the changes get transferred over to Visualize automatically. This allows us to reach final designs that everyone can agree on faster, resulting in a roughly 10 percent reduction in the entire design-through-manufacturing process.”

OPENING UP NEW BUSINESS OPPORTUNITIES

With the ability to quickly create realistic design concepts with SOLIDWORKS Visualize Professional software, new business opportunities have opened up for EM Dynamics. “While the majority of what we render doesn’t get made, the rendering speed and power of SOLIDWORKS Visualize software helps us win the projects that do,” Siddiqui says.

“We don’t just do one design concept but at least 10 possibilities for most projects,” Siddiqui adds. “Because we have rendering power, we quickly create at least 10 fully realized concepts, which give us a lot more opportunity to win the business.”

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With the ability to show clients how the final design will look without building it, SOLIDWORKS Visualize Professional software has allowed EM dynamics to shorten design time by 30 percent and the entire product development process by 10 percent.

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