Architectural models breathe life into abstract concepts, but they have traditionally taken so long to create that clients wonder if they’re waiting for an actual building to go up. This pain is troublesome for architectural firms facing important deadlines like client presentations or public hearings. It has created a tremendous business opportunity, however, for The Realization Group, a multi-dimensional visualization firm in Miami, Fla.

The Realization Group has been a service bureau for architects, engineers and builders since 1997, when it began creating computer simulation models and animations for professionals who needed a way to bring their building concepts to life. Over the next few years, the company naturally branched out to physical massing models. It has recently been producing these models by laser-cutting plastic or sending design files to an outside vendor who creates physical models via expensive stereolithography. Both are time-consuming and expensive options.

Through 2005, The Realization Group offered physical models primarily as a goodwill service to satisfy customer needs and secure business. Realization Group owner Rafael Tapanes, however, spent that same year investigating ways to make the physical modeling business more cost-effective for both his company and his clients. He’d been following the development of a new breed of fast and affordable 3D printers, and he investigated the pros and cons of various 3D printer offerings.

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**Challenge**

Time and Expense of Traditional 3D Model Creation

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Solution

Invest in ZPrinter 310 Plus

Tapanes considered speed, printing quality and price to determine value. After a year of evaluation, he decided The Realization Group should invest in the ZPrinter 310 Plus from 3D Systems. The machine was five times faster than any other system and one-sixth of the price of the runner-up in his evaluation.

“Speed is the key,” Tapanes says. “I can take an order for a model today and drop it off with the customer tomorrow. News of our new capability is spreading quickly by word of mouth. Cost is another key. In addition to the low machine price, I can make that model for one-fourth the cost of stereolithography or laser-cutting.”

Results

Speed, Affordability, Profit and Client Satisfaction

The benefits of speed and affordability revealed themselves from the start. In early 2006, a real estate developer was forced to make significant revisions to a downtown city block known as the Metropolitan Miami (“The Met”) project, a mix of condos, stores and entertainment venues in the heart of downtown. The developer needed entirely new physical models within two weeks for an important meeting with city officials. He thought he was out of luck until he heard about The Realization Group’s new, ultra-fast architectural model turnaround. Tapanes produced the model of the complex, including two towers that stand more than two feet tall each, well within the deadline. The same work would have cost four to six times as much to produce by stereolithography due to the premium for rush jobs. It would have taken four times as long with traditional laser-cutting methods.

In another example, a retail office and residential complex in nearby Coral Gables called Lancaster Plaza ordered a model of its premises for marketing purposes. Impressed by the speed, quality and the price of the work, the company the next day ordered 100 models — one for every new tenant. The Realization Group turned around the order in an astonishing two days. “Architects cherish tradition and are appropriately skeptical about new technology,” says Tapanes. “We’re earning their approval of 3D printing, however, by producing affordable high-quality models in record time. Clients who were dubious at first are now saying, ‘You did this? That big? That fast? For how much? Oh, wow, the detail looks good!’ ”

The lower costs of creating models with the ZPrinter 310 Plus are letting The Realization Group offer customers two or three 3D printed models for what used to be the price of one. In-house 3D printing is also fueling new sales. “I just feel more comfortable now when a customer or prospect starts inquiring about physical modeling. For the first time, I can guarantee affordability, I can guarantee the work will be done on time, and I can guarantee there won’t be any complications because we’re doing all the work ourselves in house,” says Tapanes. More customers can now take advantage of modeling services because The Realization Group has found a way to make it more affordable. “We can now offer clients a wide range of models at various price points and lead times, including the fastest turnaround in the greater Miami region,” Tapanes says.

The result of the new speed and affordability of in-house 3D printing is that The Realization Group and its clients are sharing in the cost savings and positive impact of the new service. Demand for the service is escalating rapidly as architects and their clients witness the speed and affordability of the models they can obtain.

“Clients love the models. The turnaround is fabulous, the price is great, and the detail is all they need,” says Tapanes. “My clients are demanding, but they’re delighted with this new service.”

The Realization Group’s dealer for 3D Systems products is Quantum Leap Associates of Palm Beach Gardens, Fla.