

Praxis³ Exceeds Clients' Expectations with Immediate Project Visualization

Leading Automotive Industry Architect Differentiates Itself by Using Autodesk® Revit® from Applied Software for Building Information Modeling (BIM)

Benefits:

- Provides clients with immediate project visualization
- Drives a higher level of client and contractor collaboration in the design process
- Optimizes design staff efficiency while minimizing extra time spent executing changes
- Keeps job site surprises to a minimum to ensure a seamless design-build experience.



Praxis³'s Revit rendering of BMW Chattanooga dealership presents a realistic 3-D impression of the building on the actual site.

Overview: Marketing-Leading Automotive Architecture Expert an Early BIM Technology Adopter

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– Craig James, AIA
Principal, Praxis³

Praxis³ is a southeast architectural design leader offering specialized services for the automotive industry as well as institutional, mixed use and residential design projects. Since its inception in 1997, Praxis³ has designed over 600 automotive dealerships in 30 states and its portfolio of automotive work includes new, renovated and expanded dealerships of all scales.

One of the keys to this Atlanta-based firm's success is its approach to the use of design technology. Praxis³ recognized the value of investing in advanced technology early on, understanding that it provides a higher level of client and contractor interaction in the design and construction process. In fact, the firm was one of the first in the nation to convert all design and production work to a Building Information Modeling (BIM) format over five years ago. BIM is a new building design paradigm that has shifted traditional two-dimensional design and business processes to an information rich three-dimensional design process that invites more collaboration and earlier decision making

Challenge: A Two-Dimensional Picture is Not Always Worth 1,000 Words

Many architecture firms today still rely on traditional two-dimensional design technology. The challenge is that most clients are not familiar with visualizing a project based on two-dimensional orthographic projected drawings. This can cause difficulty during the initial design phases because it can push out the identification of critical decisions and important changes to much later in the process. As a result, the changes often cause many hours of lost design time and incur expensive drafting revisions.



Finished BMW Chattanooga dealership shows close similarity to the Revit rendering.

“For many of our clients, viewing a two-dimensional plan is difficult,” says Craig James, AIA, principal, Praxis³. “They just can’t see or feel the actual space of the building in 2D. This is especially critical for automotive design where indoor amenity space and open floor plans are a key part of the modern-day dealership. We are always looking for new ways to help our clients stand out... yet it can be difficult for clients to feel what it would be like to walk through their new facility without a three-dimensional model.”

One of the additional challenges of two-dimensional design and drafting is the documentation of changes.

Once a necessary change has been identified, it is then important to properly propagate the change throughout all designs and plans to assure consistency and accuracy. This can be a very tedious, costly and time consuming task, especially since most design changes are made later in the process when two-dimensional drafting technology is used.

Solution: BIM Technology Simplifies Design Visualization

Praxis³ employs BIM methodology with an intelligent, parametric three-dimensional building design software called Autodesk® Revit®, delivered and supported by Applied Software, one of the largest and oldest Autodesk resellers in the southeastern United States. Revit is purpose-built for BIM. It enables Praxis³ to provide clients with immediate project visualization, inspiring a high-level of collaboration between designer and client early in the design process. Because clients see their project’s initial design as a three-dimensional model, changes can be made earlier in the process, saving time and costly drafting cycles.

“For our clients, seeing their initial building design as a three-dimensional model can be a very compelling and exciting experience,” said James. “With Revit we can literally ‘walk’ clients through the facility and display important design characteristics that can only truly be appreciated in a multi-dimensional view. They can really get a feel for the space and experience the design first hand.”

Praxis³ has actually found that by using three-dimensional modeling during its initial design presentations, they receive client consensus earlier in the project. And, because it creates a more active dialog, key details and specific features can be agreed upon quickly before changes become more complex.

“By using Revit, making design changes is much easier,” added James. “The change can be quickly deployed into the model and viewed by the client for approval. Meanwhile all the documentation associated with the change is captured throughout the program simplifying our drafting process. It really minimizes surprises throughout both the design and the build process.”

In fact, Praxis³ has found the use of BIM is also particularly beneficial when working with general contractors. Partners, such as Choate Construction Company of Atlanta, appreciate the benefits of BIM because they know clients have already seen how the building will actually fit into the site and its surroundings. This can dramatically reduce expected concerns that could otherwise arise as the facility is constructed.

“Praxis³’s use of three-dimensional modeling is very valuable because I know the client already has a better understanding of how the facility will ultimately look,” said Croswell Brim, Division Manager, of Choate Construction Company. “The more complex the building, the more valuable the model is. By leveraging Praxis³’s BIM designs, I can also show the client how the building will look at each phase of construction and we can make important decisions on tactical logistics such as security, safety and where to receive building material delivery so that it doesn’t impact surrounding businesses. Overall, it creates a much more seamless construction process which saves time and labor costs.”

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Result: BIM Increases Sales, Improves Customer Satisfaction and Increases Productivity from Design to Construction Completion

For Praxis³ the early adoption of BIM has been a tremendous differentiator for its business. Because the company regularly competes for projects with architects that still utilize traditional technology, the three-dimensional modeling features of Revit nearly always help Praxis³ win business because clients have a better feel for how the design will really look once it's built.

“Our clients are always impressed when I share the Revit design via a webcast and allow them to virtually walk through their new building,” said James. “And, if they suggest a change, they can quickly see how the change will look within the context of the overall design.”

The efficiency of BIM has also been very important for Praxis³ because they often work on five to 10 automotive projects at a time. BIM enables the company to optimize its design staff while minimizing extra time spent executing changes. The efficiency has also benefitted Praxis³'s construction partners who see less change orders in the field than with architects using traditional technology.

“When we work with Praxis³, our efficiency is way up,” said Brim. “Clients have a better understanding of the process and surprises are kept to a minimum. And, because the customer has already seen how the building will look in the site's environment, I never get customer comments like, ‘We didn't think it would look like that!’ It simply makes the job easier for everyone.”

In one example, Praxis³ was able to give the Kennesaw State University (KSU), in Kennesaw, Georgia, a complete view of how its new central parking facility will impact its campus – before it was ever built. After growing from a commuter school of 1,000 students to a major state university with over 20,000, the university needed additional parking in a very crucial way. Using three-dimensional modeling and BIM, Praxis³ designed a new, centrally-located, eight-story parking structure to accommodate 2,600 cars and provide much needed relief for the rapidly expanding campus.

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The BIM design showed the university's facility staff just how well the structure would fit into the campus landscape from every angle and at every phase of construction. And, because the client was able to visualize the design, it dramatically sped up the design approval time. Finally, using BIM the client was able to easily see construction logistics, staging and phasing as 3D visualizations. This helped the university to more easily plan pedestrian and vehicular direction during construction to minimize any on-campus disruption as the parking facility was being built. As a result, the \$26 million design-build parking structure was successfully delivered on time and under budget by the Praxis³-Choate Construction Team.

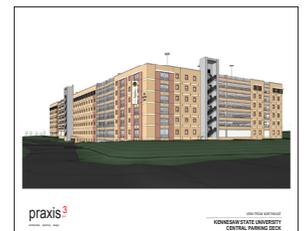
“BIM seemed to be a great tool that allowed the project to progress very quickly,” said John Anderson, KSU's Assistant Vice-President for Facilities. “We were very pleased with the results. This is a very attractive parking structure that was on time and under budget.”



Praxis³'s Revit rendering of BMW Chattanooga dealership presents a realistic 3-D impression of the building's interior.



Finished BMW Chattanooga dealership shows close similarity to the Revit rendering.



Revit-rendered image of KSU Parking Deck.



KSU Parking Deck Completed

About Applied Software:

Applied Software (www.asti.com) is the largest and one of the oldest (since 1982) Autodesk resellers in the southeastern United States. Headquartered in Atlanta (with a sales, service and training center in Charlotte, NC), the company provides consulting, implementation, customization and training services as well as mentoring and project management to architects, engineers and facility managers in the commercial, government and educational sectors of the architecture, engineering and construction (AEC) industry.

Recognized as an Autodesk Premier Solutions Provider and a leader in the emerging field of Building Information Modeling (BIM), Applied Software has been named to the Autodesk Platinum Club for selling the most BIM products in the United States. It is also an Authorized Autodesk Training Center (ATC®) employing a team of architects, engineers and designers with real-world experience to assist its customers in the use of Autodesk.

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Chattanooga BMW Photographer: David Dawson

KSU Parking Deck Photographer: Robb Helfrick

BMW Chattanooga Exterior Image is a Revit-rendered image.