

# case study:

IGI REVOLUTIONIZES VIRTUAL REALITY  
COLLABORATION FOR LEADING INTERNATIONAL  
AUTOMOTIVE COMPANY





# Introduction

For many decades clay modeling and physical prototypes dominated the automotive engineering and design processes. While still an integral part of automotive development, advanced visualization has helped augment these often time- and cost-intensive processes, allowing for ultra-high resolution full-scale viewing of design and engineering data.

Advanced visualization has been key in progressing the auto design and engineering process and has been solidified as the standard for automotive design and engineering teams. Virtual build teams use advanced visualization to verify and validate nearly every aspect of the vehicle development in minute detail.

The advent and widespread adoption of virtual reality (VR) head-mounted displays (HMDs) for professional use has added another element to advanced visualization by providing a more immersive and life-like environment to evaluate data. Automotive engineering teams commonly load CAD data to an advanced visualization display, like a PowerWall or CAVE, and use HMDs to navigate to specific areas of the vehicle for engineering validation.

Recently, one of the world's largest automotive manufacturers sought to improve its time to market but was limited by an inability to view designs at the required resolution. The company's current system included the use of stand alone consumer VR devices. This setup was neither the most efficient working environment for design staff nor appropriate for presenting designs to upper management.

This multinational automotive manufacturer contacted IGI seeking a solution that would maintain the company's high standards and better meet the needs of its design and engineering teams. Specifically, the company sought a more functional and efficient day-to-day VR environment suitable for collaboration.



## THE ISSUE

The automotive manufacturer's current process prevented the ability for teams to see specific issues identified by the end-user wearing the HMD. This created a very inefficient and cumbersome means of communicating and documenting problems not only within the specific team doing the evaluation, but with other internal and external groups working on the same platform.

In discussions with IGI, the auto manufacturing company expressed interest in creating a collaborative environment where issues found through the use of virtual reality could be shared and documented in real-time between internal and external groups. Because the core philosophy at IGI is to stay abreast of the bleeding edge of visualization technology, and to provide this technology when it becomes more reliable and cost effective, the manufacturer knew that IGI would design a system to meet their specific needs while providing the absolute latest technology available.



## THE SOLUTION

IGI's engineering team performed a comprehensive requirements analysis and used its experience with other automotive customers to determine the optimal solution. While the team considered large-scale LCD and direct-view LED display options for the auto manufacturer, a projection-based ultra-high resolution 4K PowerWall projection system coupled with a unique set of collaboration tools was deemed the best option. In addition to accelerating collaborative decision making, the system would provide rich image quality, clarity, and exceptional color fidelity at full scale.

The IGI team first rendered a full design of the new advanced visualization VR space, and then listened to customer input before revising the design and adding customization options. The final design included a custom connectivity backbone which allows for any video from any HMD to be displayed on the PowerWall simultaneously along with full-scale content. An end-user interface allows for ease of control and access of the system.



## THE RESULTS

The advanced visualization system's popularity is a testament to its success. Within weeks of the room completion it was consistently overbooked with teams eager to leverage the technology. This new system helps streamline communication between design and engineering teams and facilitates interoffice collaboration and presentation. The room was so successful that the automotive manufacturer worked with IGI to integrate additional VR environments in an effort to meet demand.

Contact IGI to learn more about advanced visualization integration and how your organization can increase efficiency and improve processes. Or, visit [www.werigi.com](http://www.werigi.com) to read more case studies.

## ABOUT IGI

IGI is an industry leading provider of large scale, ultra-high resolution projection systems for advanced visualization applications. These state-of-the-art solutions are the culmination of our vast industry experience in delivering leading-edge technologies and our unwavering commitment to reliability, quality and attentive service.



### CASE STUDY:

IGI REVOLUTIONIZES VIRTUAL REALITY COLLABORATION FOR LEADING INTERNATIONAL AUTOMOTIVE COMPANY

PAGE 3

[WERIGI.COM](http://WERIGI.COM)