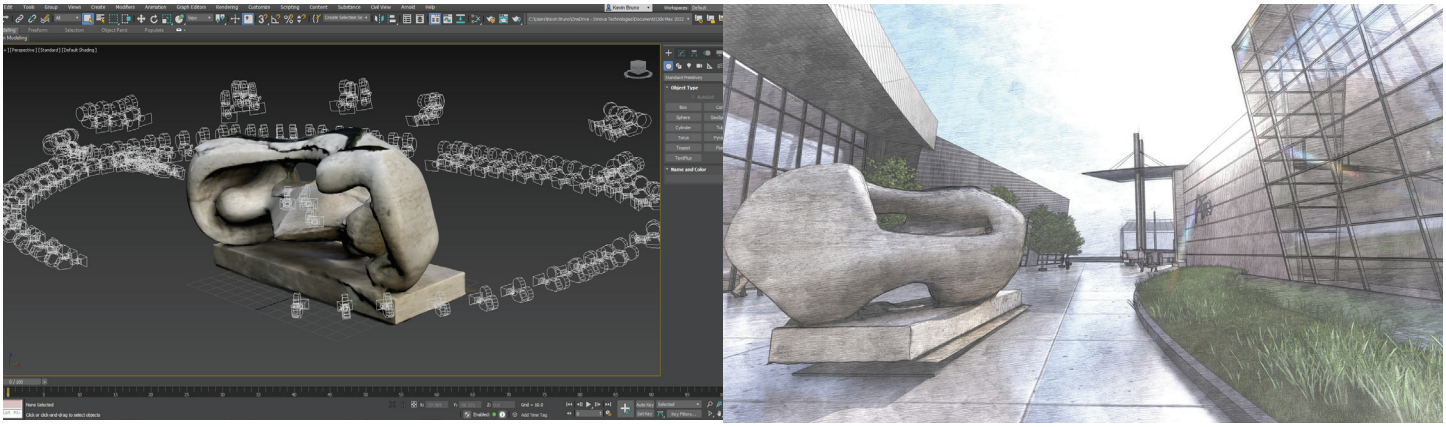
STRUCTURAL | CONSTRUCTION | TRANSPORTATION

INNOVA TECHNOLOGIES

Innovating Solutions for You!

HOW 3D VISUALIZATION AND ANIMATION CAN HELP THE AEC INDUSTRY

1432 S. Jones Blvd, Las Vegas, NV 89146 702.220.6640 www.innovanv.com



How 3D Visualization and Animation Can Help the AEC Industry

In 2009, Halbert Brothers, Inc., City of Industry, CA, hired Innova Technologies to create a rigging plan allowing Aria to deliver Henry Moore's artwork into its new home in the main connecting plaza linking Aria to the Crystals shopping mall. Initially constructed from 1969 to 1974, the travertine marble piece itself, separates into three individual pieces weighing 18,000 lbs, 20,000 lbs, and 39,000 lbs respectively. Utilizing a gantry system along with a track system designed by Innova Technologies, we successfully installed the estimated $5,000,000 statue for Aria's future patrons to enjoy.

Fast forward to 2021, Aria chose to sell Henry Moore's piece to a private collector, and Innova Technologies, in partnership with Halbert Brothers, was retained by Aria to safely remove the piece from its open plaza allowing for future development of the space. The removal plan was a more difficult operation due to a restricted time-frame, previous redevelopment of the space, and the fragility of the piece itself.

Digitalization continues to grow and develop in the AEC industry. Innova Technologies utilizes some of the latest software from multiple developers, including Autodesk, to facilitate digitalization projects like these. Using Autodesk Recap and digital photography, the team successfully digitized and separated each individual segment of the piece into a workable 3D environment, delivering realistic, and accurate information. In addition to the geometry of the free-formed shape, these 3D models provided a better understanding of the artist's lifting points, visualizations of workflow procedures, and allowed for digital animation to give all parties a more thorough understanding of our intended plan.

Many factors come into play when developing a handling plan for a complex and fragile structure such as Mr. Moore's iconic piece: Structural instabilities, transportation, and overall preservation needs. The plan was to have the piece entirely removed by October 17, 2021, which was executed on schedule. The team continuously worked on the engineering and execution of the project and were pleased to not only bring new technologies into the project but consistently deliver top results to our many repeat customers."

Both phases of this project illustrated the impact 3D Visualization and Animation can have on the AEC industry. Like most companies across many generations, Innova had been using 2D Drawings to convey ideologies and relay information to our clients. While the 2D environment has a role to play in this industry, Innova is committed to using emerging technologies to captivate and communicate more efficiently and reliably with our clients and partners utilizing 3D visualizations and animations. Incorporating programs like Lumion allows us to offer new levels of service and visualizations to enhance the client's overall experience. For more information on the benefits of 3D modeling in engineering services, click here. (newsletter)

The benefits of 3D Modeling for engineering services?

1. Design Efficiency – Simply put, 3D Modeling helps reduce the time and money needed for design. 3D CAD software lets each component of a structure or product be checked, tested, and revised before going into production or construction. This helps to avoid costly returns to the drawing board. Just the ability to see an object from any angle can reveal issues such as stress points, friction areas, and obstacles that no drawing or 2D

design ever could.
2. Better Visualization and Forecasting – 3D Modeling allows owner-operators, engineering, procurement, and contractors to visualize the design of a building, treatment plant, manufacturing facility, or transportation hub to make intelligent, data-driven decisions. During the design process, ‘what-if’ scenarios can be played out for better future forecasting. Animated 3D Modeling can also demonstrate traffic flow, process automation, and interactive parts movement.

3. More Precision & Control – Even before design begins, 3D scanning and Modeling can create precise virtual sites and spaces with accurate topography and contours.

4. Faster to Market – From structural engineering to product design, you don’t have the luxury of time that was once available to continue to perfect the part or product. 3D Modeling generally results in a finished, market-ready product sooner.

5 Keep Stakeholders in the Loop – Engineers and designers aren’t the only ones who benefit from seeing an object while it’s still in the design stages. Likewise, investors, customers, and other stakeholders can be reassured and motivated by seeing a ‘working model’ before it goes into production.

By Craig Ruark for Innova Technologies, Inc.