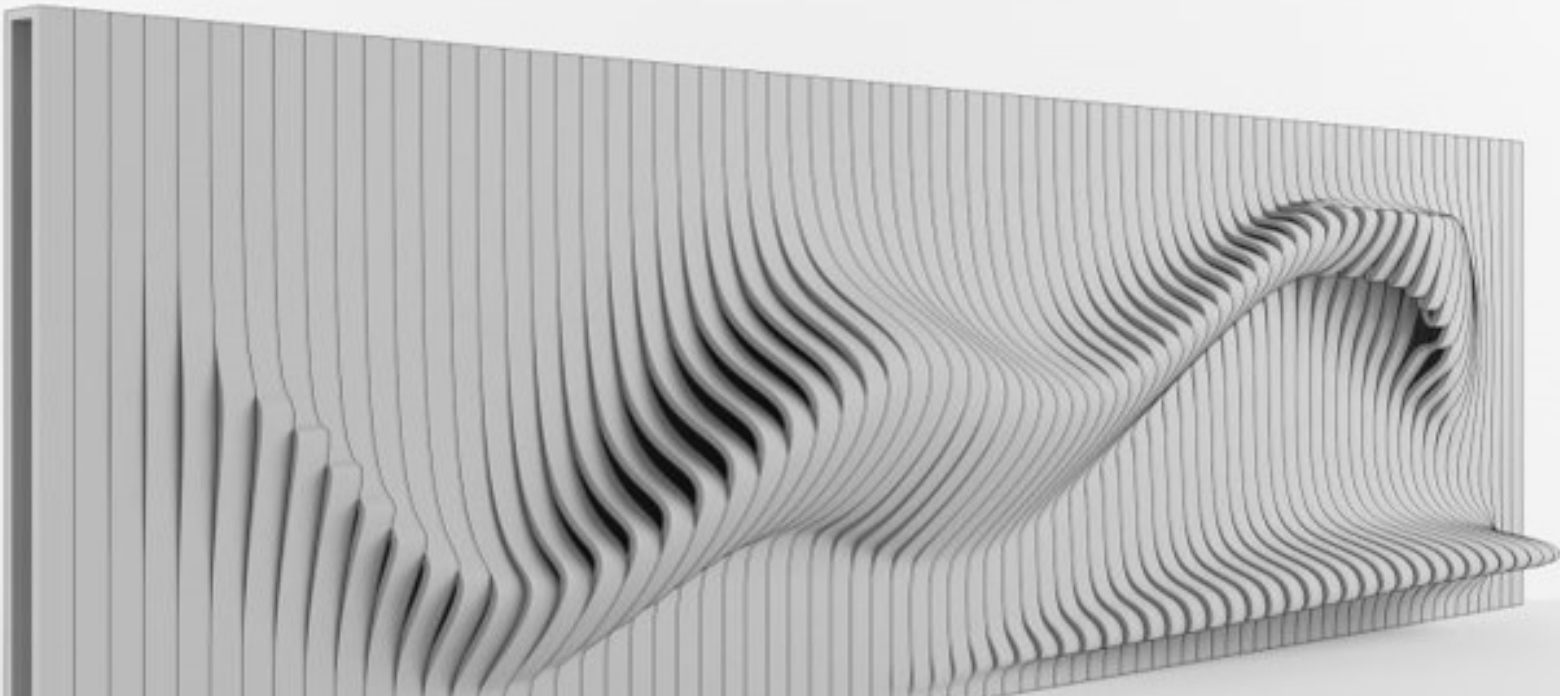


METAGUISE

SCULPTING COMPLEX, METAL, LUXURY WALL FACADES AND ARCHITECTURAL FEATURES WITH **3DEXPERIENCE** WORKS SOLUTIONS

Case Study



Metaguisse replaced the AutoCAD 2D drawing tools that it had been using with **3DEXPERIENCE** Works solutions in order to create more complex surfaces for its metal exterior and interior wall facades, cladding, and artistic features for luxury residential and commercial building markets, as well as streamline its operations, resulting in a 35 percent jump in market share.

Challenge:

Quickly develop complex surfaces and shapes for metal louvers, interior wall cladding panels, and exterior building facades while simultaneously streamlining organizational process flow to shorten inquiry response time and manage, track, and secure all engineering and related data.

Solution:

Replace AutoCAD® 2D drawing software with modeling, industrial design, rendering, collaboration, data management, project planning, simulation, and communication solutions from the 3DEXPERIENCE® Works portfolio—including 3DEXPERIENCE SOLIDWORKS® Premium, 3DEXPERIENCE SOLIDWORKS Professional, 3D Sculptor, Visualize Connected, Design Manager, and Project Planner roles—on the cloud-based 3DEXPERIENCE platform.

Results:

- Cut design cycles and project completion timelines by 40 to 45 percent
- Shortened time to market by 35 percent
- Reduced development costs by 25 to 35 percent
- Increased market share by approximately 35 percent

Metaguisse is a leading brand of complex, metal, interior and exterior wall facades, cladding, and artistic features for luxury residential and commercial building markets. Developed, manufactured, and marketed by VEDA Innovation, a sustainability-driven modular metal architectural firm in India, Metaguisse products are engineered to perfection with accuracy of up to 3 mm for products made from a variety of metals, including aluminum, aluminum alloys, copper, brass, zinc, galvanized iron, and stainless steel. The company's products are fully customizable, with life cycles ranging from 50 to 200 years depending on the metal used, assuring high sustainability and a low carbon footprint in the long run.



“The 3DEXPERIENCE cloud platform is very fruitful for all industries to streamline organizational process flow because of its flexibility to collaborate across distances and ability to purchase just the roles and apps specific to a company’s needs. For example, we create complex surfaces for our facades, conduct static analysis to measure the factor of safety of our facade designs, and manage our engineering data in the cloud, ensuring that we have the correct revision for laser cutting parts from a DXF® file.”

– Anuj Raheja , Founder and CEO

Until late 2021, Metaguisse used AutoCAD 2D drawing software to develop its product designs. However, as the firm has grown, Metaguisse has faced additional business challenges, including the ability to track and manage both its request for quote (RFQ) process, from initial customer inquiry to final quotation, and its project execution process, from initial industrial design through product delivery; a method for safeguarding the security of its intellectual properties; a more cost-effective approach to facade safety testing; a solution for creating photorealistic renderings and videos of product designs; and better data management and revision control tools.

According to Anuj Raheja, Metaguisse founder and CEO, the company faced product design challenges as well as business challenges, such as needing the capability to create innovative complex shapes and surfaces and the ability to work collaboratively with satellite design studios far away from the central office. “We needed to address several issues that led us to investigate a cloud-based platform,” Raheja recalls.

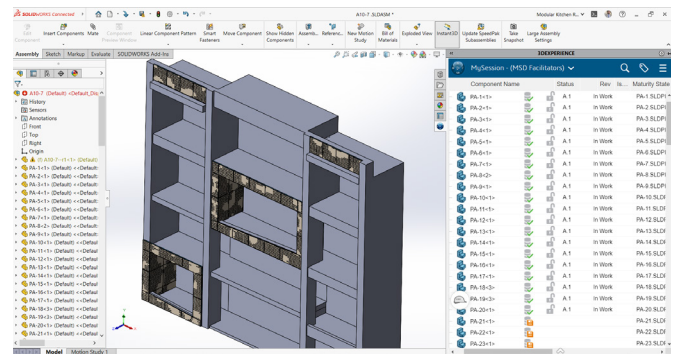
“In addition to securing our engineering data, creating new product concepts, improving project/resource planning, using static simulations to test facade structures, and producing high-quality rendered images and videos to finalize customer orders, we needed to streamline engineering/organizational process flow, minimize IT overhead, improve inter-departmental communication, and provide access to real-time product design and engineering information,” Raheja adds. “That’s what prompted us to evaluate **3DEXPERIENCE** Works solutions on the cloud-based **3DEXPERIENCE** platform.”

After evaluating product development solutions from Autodesk, Tekla®, and Dassault Systèmes, Metaguisse chose to move to modeling, industrial design, rendering, collaboration, data management, project planning, simulation, and communication solutions from the **3DEXPERIENCE** Works portfolio—including **3DEXPERIENCE SOLIDWORKS** Premium, **3DEXPERIENCE SOLIDWORKS** Professional, 3D Sculptor, Visualize Connected, Design Manager, and Project Planner roles. The innovation portfolio leverages the cloud-based **3DEXPERIENCE** platform to give customers access to the power of industry-leading tools for design, simulation, manufacturing, data management, and marketing from Dassault Systèmes.

“Our major challenge is to quickly turn around quotes when we receive 200 to 250 inquiries each day,” Raheja explains. “It used to take one to two days to complete the engineering and quotation for these inquiries. By implementing the **3DEXPERIENCE** platform, we have completed standardization for all of our major work, creating processes for RFQ, engineering approvals, and other functions that have enabled us to finalize quotes within two to three hours of receiving an inquiry.”

CREATING COMPLEX SURFACES QUICKLY AND EASILY WITH 3D SCULPTOR

After switching to **3DEXPERIENCE** Works solutions, Metaguisse engineers were quickly able to create industrial designs for the complex shapes and surfaces that are essential to the company’s products at a more affordable cost. This has allowed the company



In addition to using **3DEXPERIENCE** Works industrial design solutions to create stunning complex surface facades, Metaguisse leverages **3DEXPERIENCE** Works static simulation and project planning solutions to improve product quality and accelerate development.

“to increase our gross sales by doing extra projects within the same time that we spent on fewer projects previously, helping us increase our market share and gross sales by 30 to 40 percent” Raheja says.

“We have successfully executed stunning complex surface facades using 3D Sculptor and **3DEXPERIENCE SOLIDWORKS**,” Raheja continues. “We’re not only creating more innovative, artistic products, but have also cut design cycles and project completion timelines by 40 to 45 percent, shortening time to market by 35 percent while sustaining explosive growth.”

STATIC SIMULATIONS OF FACADES SAVE TIME AND MONEY

Using the **3DEXPERIENCE SOLIDWORKS Premium** role, Metaguise is using static simulations to ensure an adequate factor of safety for its facades instead of conducting physical prototype testing, saving time and money in the process. "Our initial interest in SOLIDWORKS and **3DEXPERIENCE Works** solutions was to acquire the simulation product to validate the safety of our facade designs," Raheja notes.

"We decided to purchase the **3DEXPERIENCE SOLIDWORKS Premium** role for simulation—as well as the other roles that we acquired on the cloud-based **3DEXPERIENCE** platform—because evaluating the technology in the context of our work, we realized that the platform would be very helpful for our company, which it has been," Raheja points out. "Using factor-of-safety simulations, we've cut our prototyping costs by 40 to 45 percent, and our overall development costs by 25 to 35 percent."

KEEPING EVERYTHING ON TRACK

Other important **3DEXPERIENCE Works** roles that are helping Metaguise streamline organizational and product development process flow are Design Manager, which supports engineering and design data management in the cloud, and Project Planner, which supports project and resource planning in the cloud. "The **3DEXPERIENCE** platform helps us to maintain our engineering, sales, and marketing process flow in such a manner as to increase our productivity by reducing the project cost and project time deadline," Raheja stresses.

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Our **3DEXPERIENCE**® platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3DEXPERIENCE** Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 250,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.



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