

## **CASE STUDY:**

### **EMPOWERING COLLABORATION:**

VERITAS AUTOMATA'S JOURNEY TO  
REVOLUTIONIZE COMPUTER AIDED  
DESIGN (CAD) SOFTWARE  
SOLUTIONS FOR A TOP  
ENGINEERING SOLUTION PROVIDER

Gerardo Calvo



# **Veritas Automata™**

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## Client Overview

A prominent South Korean company specializing in civil and structural engineering and finite element analysis has earned its place as one of the world's top engineering solution providers. Headquartered in South Korea and with a branch in the United States, the company develops and distributes engineering software and aims to empower professionals in the industry with cutting-edge tools and services.

## Client Challenge

The engineering solution provider faced a pressing challenge in its quest to maintain its market share and relevance in the civil and structural engineering domain, especially in the United States and South America. The company provided only offline licenses for its Computer Aided Design (CAD) software, which restricted the ability of teams to collaborate effectively. While competitors offered cloud-based solutions and collaborative environments, the engineering solution provider lagged behind, unable to efficiently store files or offer immediate access to design data on various devices, particularly for CAD drawings. The engineering solution provider required very specific technology that would allow them to upload extremely heavy files quickly and provide immediate access via any tablet or computer.

Additionally, they needed to be able to manage users and track the actions of those users without sacrificing confidentiality.

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# Collaboration with Veritas Automata

The collaboration with Veritas Automata Professional Services began with ProColombia, a state-funded agency, selecting Veritas Automata Professional Services to participate in a business roundtable with international companies looking to engage Colombian firms. In March 2020, initial discussions commenced with the engineering solution provider's US team, led by their General Manager for the Americas. Veritas Automata Professional Services, led by Chief Growth Officer Gerardo Calvo, managed to secure the contract, outshining other top contenders in the bid.

# Project Overview and Outcomes

The primary goal of the project was to develop a web application that would enable teams using the engineering solution provider's CAD software to collaborate, discuss, edit, and enhance designs. Key components included file visualization, secure file storage, user management, action tracking, and collaboration features. The project was executed in multiple phases, beginning with a prototype and the Minimum Viable Product (MVP), followed by incremental development. The project was deemed successful in terms of technology developed, and Veritas Automata Professional Services successfully validated the engineering solution provider's need for collaborative platforms, prompting them to bring the application in-house to expand its suite of solutions. Veritas Automata Professional Services successfully narrowed the gap with competitors who had already integrated web applications into their offerings.

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# Veritas Automata Stakeholders and Project Personnel

The project was led by Gerardo Calvo, Project Manager at Veritas Automata Professional Services, and his dedicated team of Developers, Quality Assurance Specialists, Business Analysts, and a UX/UI Designer. On the engineering solution provider's side, the General Manager for US Operations played a pivotal role in ensuring the project's success.

# Technologies Used

Veritas Automata Professional Services employed a blend of technologies to meet the project's unique requirements. Angular was chosen for the front end, .NET for the back end, and Microsoft Azure for cloud deployment. A SQL database was utilized for secure file storage, and external file visualization components, including a licensed tool from a Polish firm, were integrated to enable the web application to visualize the engineering solution provider's specific file types and sizes.



Angular



Microsoft Azure



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# Challenges & Lessons Learned

The project encountered its fair share of challenges, including limitations related to file size imposed by third-party components and the engineering solution provider's servers. Communication hurdles emerged as the engineering solution provider maintained a barrier between their clients and Veritas Automata Professional Services, resulting in complexities in conveying project progress and understanding client needs. The project required adaptability to accommodate changing priorities and bridge cultural communication differences.

# Impact

The application developed by Veritas Automata Professional Services received positive feedback from initial users in North and South America. Such success caught the attention of the engineering solution provider's HQ Board, leading them to bring the product in-house—a testament to the project's importance. Veritas Automata Professional Services managed to achieve remarkable feats with a small team and budget constraints, especially in comparison to other global firms in the same domain.

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# Conclusion

The collaboration between the engineering solution provider and Veritas Automata Professional Services was marked by open communication, regular meetings, and a proactive, adaptive approach. The engineering solution provider appreciated Veritas Automata Professional Services' responsiveness and over-communicative engagement practices, and Veritas Automata Professional Services' ability to work around critical technical issues, such as not having the budget to build the model and licensing it in order to move forward and be successful. Veritas Automata Professional Services' guidance and training allowed the engineering solution provider to take ownership of the technology Veritas Automata Professional Services developed, paving the way for further innovation and success in the field. Future considerations include building stronger relationships with the client's HQ Engineering Team and focusing on business-aligned metrics to further enhance the bottom line and revenue streams.

This collaborative success story highlights how proactive communication, adaptability, and cutting-edge technology can address the unique challenges faced by businesses in highly specialized industries.

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