Studio De Marchi condenses hours of design work into minutes with Veesus Point Clouds for Rhino plug-in

Challenge	Solution	Results
▶ Needed to leverage 3D scanning tech on client projects ▶ Existing manual processes were time-consuming	▶ Veesus Point Clouds for Rhino plug-in ▶ Allows users to import and manipulate point clouds of any size natively in Rhino	▶ Tasks that used to take hours now completed in minutes ▶ Studio De Marchi is able to be more competitive

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About the company – Studio De Marchi

Studio De Marchi is a niche surveying and design company established in 2003 by Massimo De Marchi. The studio operates across the North of Italy, typically supporting clients with façade reconstructions, creating floorplans, and terrain modelling to assist with the renovation and maintenance of historic buildings – including UNESCO World Heritage Sites.

The Challenge
Time-consuming point cloud manipulation

Since beginning to use laser scanning in his work back in 2013, Massimo De Marchi, Business Owner at Studio De Marchi, has found that the 3D scans he generates from his FARO scanners are invaluable to him and his clients. However, working with the point clouds that his 3D scans generate was tricky in the early days.

The challenge was that very few software packages were able to handle point cloud files, which are often hundreds of gigabytes in size. In addition to this, there were very few options for incorporating point clouds into CAD workflows. As a result, professionals like Massimo were forced to find painstaking manual workarounds when wanting to use point cloud data in their designs – often adding hours to a project.

"Terrain remodelling was difficult," explains Massimo, "as was façade reconstruction, and creating floorplans of buildings was almost impossible. I would go so far as to say that the lack of software for designers working with point clouds almost made them unusable for me."

Given that they impacted on almost every area of Massimo's work, it was imperative that he find a way to work better with point clouds.

The Solution
Veesus Point Clouds for Rhino

Thankfully, Massimo discovered Veesus, and with it a better way to work with point clouds. Massimo originally used Arena4D, Veesus' dedicated point cloud manipulation software, but once the Point Clouds for Rhino plug-in was released, Massimo made the switch and hasn't looked back.

"The plug-in lets me do everything I did in Arena4D, but natively in Rhino. The speed and ease with which I can work with point clouds is impressive."

Point Clouds for Rhino is a plug-in that enables users to import and manipulate point clouds of any size natively in Rhino. Manipulation options include slicing, clipping, smoothing, lighting, and magnification – and combined with the existing design tools in Rhino, users can effortlessly incorporate point cloud data into their projects.

"For instance," Massimo explains, "I surveyed a set of buildings for a client recently. Using Veesus Point Clouds for Rhino, I was able to move through the point cloud in real time, looking at it from multiple angles, suggesting design elements as I went. It's excellent."

Massimo also combines the Veesus Point Clouds for Rhino plug-in with PointCab for generating plans and images to share with his clients. "The challenge with historical architecture is that nothing is in straight lines, or properly square – there are lots of odd angles, missing pieces and sloping walls that make it hard for automated tools to generate floorplans. Veesus Point Clouds for Rhino can handle them, though – and I can use the outputs from the plug-in with a tool like PointCab."

The Results
Lightning fast work times, using the best tools for the job

The biggest result for Studio De Marchi is that Massimo is now able to complete work much faster than he could before he discovered Veesus.

"Before Veesus, creating designs using point cloud data would take me hours. Now, it's all done in minutes. The Point Clouds for Rhino plug-in is so fast and so powerful – there's really nothing else on the market that can match it."

The speed Veesus brings to the table has realised a number of other benefits for Studio De Marchi. Firstly, it's now feasible for Massimo to use Rhino again as his primary design tool when working on client projects, rather than using lots of different software tools together. And secondly, the increased speed and ease has allowed Studio De Marchi to be more competitive in its pricing.

"In historical architecture clients are still unaware of the value 3D scanning can bring to their work," Massimo explains. "Now that I can be more competitive with my pricing, it's easier for me to start conversations with my clients and demonstrate to them the value that 3D scanning can bring to the projects they're working on."

Finally, Veesus has helped Massimo bring his workload under control. "Veesus gives me the confidence to take on new projects, knowing that I have the right tools to get them done," he explains. "I've recommended Veesus to everyone I know for years now – and I will continue to do so. There's so much data in point clouds, and Veesus is the only solution I've seen that lets designers and architects like me use all of that information."

> "Creating designs using point cloud data takes just minutes. The Point Clouds for Rhino plug-in is so fast and so powerful – there's really nothing else on the market that can match it."

Massimo De Marchi
Owner, Studio De Marchi