



# Reverse Engineering Remotely

How AP&C Nearly **Eliminated** Trips to Their Facility using Prevu3D

## New problems bring new solutions

AP&C works with major producers of biomedical and aerospace equipment, supplying the highest quality additive manufacturing powders. By continually investing in research and development, AP&C is leading the industry in innovating higher quality products at lower prices.

As a GE company, AP&C must document, evaluate, and optimize their processes to near perfection. Since some of their machinery was custom made without CAD, no documentation was available. They needed to reverse engineer a massive machine. The facility was quite far from their offices, and a global pandemic made their travels riskier. They had to find a way to work around these complications. They opted for a reality capture solution that has had a long-lasting impact on their practices.



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## The product

In order to create a digital twin of the machinery that is precise enough for measurements and reverse engineering, Prevu3D works with experienced 3D-scanning professionals. In just one trip to the facility, they were able to scan the machinery in its entirety and get back to their offices - all in one day.

Data in hand, these professionals proceeded to develop custom solutions within our software in order to satisfy and meet AP&C's unique needs. With efficient communication and frequent updates, Prevu3D streamlined the process of providing solutions to AP&C in a timely manner.

When the solution was ready, a Prevu3D professional met with AP&C and provided training for every participating team member on Prevu3D's features and best practices, responding to questions as they arose and providing continued support.

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## How Prevu3D helped overcome many challenges

The AP&C team used the Prevu3D software to reverse engineer machinery that was built without proper documentation. Being a GE company, they handle data security issues seriously. AP&C needed their CAD models on their own privately hosted and secured applications. This is one of the many reasons why they chose Prevu3D rather than other web-hosted solutions, as Prevu3D has the flexibility to adapt to the client's constraints.

Usually, going on site is not an obstacle to an engineer. However, in this time of global pandemic, even minor displacements from zone to zone can increase risks to the team and spread the virus. Limiting travel is essential to providing a safe work environment and a part of our social responsibility. Prevu3D's approach means that measurements are easier to collect, limiting the need to visit the facility to gather extra information. Now, engineers can simply launch the application, take measurements from their desktop, edit their CAD files, and verify their results by uploading their CAD model back into their digital space - all without leaving the office.



**Instead of taking the long and complex process to regularly go on-site to measure machinery, it was much easier to launch Prevu3D and take diverse measurements of the facility. Moreover, employees are extremely efficient at working from home! We might even make it a long-lasting approach.**



**Olivier Dubreuil,**  
*Atomization engineering leader at AP&C*

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## Results, ROI and plans for the future

AP&C's team has greatly benefited from Prevu3D's solution, immensely reducing trips to their facilities. Lower health risks and increased efficiency have led them to encourage working remotely as a long-term solution for their engineering team. They also plan on using Prevu3D for other purposes, such as planning a factory floor reconfiguration in another facility. Prevu3D has proven its value and will continue to do so with AP&C in the future.

