

## Case Study

# ClearStream Improves Design Time with CPQ

In the water treatment industry, lead-time is often more important than price. US-based ClearStream Environmental previously allocated four to six weeks to produce a design and custom quote for one of its sedimentation units. Today, with Tacton Design Automation for SOLIDWORKS, the company completes the same process in a day, making sure they're always one step ahead of the competition.

**“This type of automation has been a key factor in our business growth.”**

—Brian Bartholomew, Senior Project Engineer  
ClearStream Environmental

When ClearStream Environmental entered the water treatment market in 2002, the Utah-based company made a strategic decision to embrace design automation technology from the outset. By leveraging technology, ClearStream hoped to carve out market space and differentiate from the competition.

The company began by investing in 3D design and simulation tools from SOLIDWORKS and then looked for ways to streamline the design process. The solution came in the form of Tacton Design Automation.

This early focus on innovation and technology has proved a successful tactic for ClearStream. The company has grown quickly and is achieving margins above the industry average. Today ClearStream's water and wastewater treatment systems are in operation across the US and internationally – from Mexico to Saudi Arabia.

*“For a small company like us, finding a software vendor that is so responsive has been a huge factor.”*

—Larry DeBirk, President ClearStream Environmental

## The challenge - each unit is a one-off

While water treatment systems are made up of fairly standard elements, each unit is custom-designed and fabricated to each individual customer's needs. Changing the diameter of a sedimentation tank by half a foot, for example, has a knock-on effect on many other components – and their

interdependencies.

Keeping on top of this complexity was a challenge. And quoting for, designing and engineering the systems was tedious, time-consuming and error-prone. Producing a design specification for a sedimentation unit, for example, would involve 100 plus drawings, and typically take four to six weeks.

Today, ClearStream can complete the same process in as little as two days. In an industry where margins are extremely small, these efficiencies make a big difference to the bottom line.

## Quotation time has been cut from days to hours

One area where ClearStream has seen great benefits is in the bidding process. Previously, designers would work from an existing proposal, changing the details for the new specification. To give even a crude approximation of what the customer wanted would take up to two days.

With Tacton Design Automation, ClearStream is now producing accurate, high-quality quotes with detailed drawings in a fraction of the time it takes the competition. And the company's hit rate has gone up dramatically.

Senior designer Chris Price comments, “We have



*gotten to a point where our main constraint is how quickly we can extract the information from the customer specification and put it into the configurator. The modeling end is so fast; it is no longer a factor."*

### **The efficiencies carry through to the design and engineering process**

Once the proposal was accepted, detailing the specification would typically take a further 180 – 220 man-hours. With Tacton Design Automation, the fabrication drawings, and even the bill of materials are now generated at the same time as the proposal.

Brian Bartholomew, Senior Project Engineer at ClearStream comments, *"In the water treatment industry, lead-time is often more important than price. With the combined SolidWorks and TactonWorks solution, once our proposal is accepted, the design goes through engineering in just a few days, then out to fabrication. This type of automation has been a key factor in our business growth."*

These time savings mean that engineers can now focus on R&D and product development. Bartholomew comments, *"We are able to consistently develop innovative, better-performing equipment, faster than our competitors."*

ClearStream also uses Tacton Design Automation to standardize assemblies for the core units. The standardization saves design hours and has also enabled ClearStream to achieve more competitive prices from the fabricators.

Another benefit is that error trapping is inherently built into the system. Any conflicts are picked up and flagged automatically by Tacton Design Automation. Not only is this a huge time saver for ClearStream, it also eliminates back charges due to design errors.

### **Why Tacton?**

A major factor in selecting Tacton was the integration with SOLIDWORKS. Because the Tacton Design Automation configurator is fully embedded in the SOLIDWORKS environment, the interface is familiar to anyone accustomed to SOLIDWORKS. This means that getting new staff up to speed is quicker and easier. ClearStream has been able to grow 20-30% per year without running into issues and bottlenecks with training.

Another factor was Tacton's responsiveness. Chris Price comments, *"Tacton has been extremely attentive and quick to respond to any issue. For example, we needed our units of measurements in feet and inches rather than metrics. Tacton solved the problem for us quickly and easily. This has been our experience throughout the process, and the fact that we are in different time zones just seems to work in our favor. I can email an issue at the end of my day and Tacton has a solution by the time I get in the next morning."*

### **Future plans**

ClearStream has made a strategic decision to build on Tacton's technology, as Larry DeBirk comments, *"We are just starting to reap the benefits of what Tacton can really do for us."*

#### **About Tacton**

Tacton is a leading SaaS company trusted by global manufacturers. Tacton Trusted Configuration simplifies sales for manufacturers of complex products. Tacton's Configure, Price, Quote software is named a Visionary by Gartner in the Magic Quadrant for CPQ Application Suites and is recognized for its advanced product configuration and visualization capabilities. Tacton's founders pioneered computer-based product configuration which today powers Tacton CPQ and CAD Design Automation. Since 1998, Tacton is trusted by global customers such as ABB, Daimler, MAN, Scania, Siemens, Xylem, and Yaskawa. It is co-headquartered in Chicago and Stockholm, with regional offices in Karlsruhe, Warsaw, and Tokyo.