

A global leader in the power grid industry leveraged a suite of PTC technologies to improve the customer experience

For many buyers, preparing to make a significant investment means making sure it's the right fit. Whether it's test-driving a car, touring a home, or trying on a pair of shoes—there's peace of mind in knowing what you're getting. So why should a business investment be any different? When businesses leverage the right technology, they can help customers better visualize solutions before making a purchase—saving time and money for all.

Leveraging past experience leads to accelerated growth

Manufacturers today face mounting pressures to keep up with rapidly changing customer needs. With time in short supply, sometimes the best way to keep up with change is to leverage the momentum you've already gained. A global leader in the power grid industry managed to do just that by iterating and improving upon past work. And with PTC's advanced technologies, they successfully scaled their business operations while advancing a portfolio of sustainable, digital energy solutions.

Highly customized solutions come at a cost to manufacturers

In any industry, providing high-quality products and services is critical to retaining customers and growing the business. When it comes to massive power grid systems, a drop in quality can impact the capabilities of the entire grid and all those connected to it. To address power quality problems, one leading power grid enterprise offers capacitors and filters—highly customized systems that improve the power quality of electrical networks by eliminating disturbances and improving efficiency. But these systems must be engineered to order, a time-consuming and costly process that requires a great deal of expertise in different areas.

In the power grid company's factories, the process for creating one of these systems was very manual, and despite their deep domain knowledge and dedicated team, human error



caused too many delays in production. Like a chain reaction, these delays began negatively impacting the system-wide process by causing a backlog of necessary corrections, from sales to distribution.

One stage that presented challenges was early in the sales cycle. In this stage of a highly customized solution, it was difficult for the customer to understand and visualize the unique product since there was no ready-made catalogue to reference for photos and diagrams. This became costly later when the customer was met with an unexpected solution offering and subsequently wanted to make changes to the design.

The power grid company knew that to improve customer support and scale operations, they needed to cost-optimize these engineered-to-order solutions through an automated process. Over time, they managed to make small pieces of software to



optimize design, but the process was slow, and it was too easy to make costly human-error mistakes through data miscalculations or measurements. The power grid company realized they had all the knowledge they needed, and if they could just build a better, larger platform, they could easily automate the sales and design process.

PTC solutions transform the sales and design cycle

The power grid company started by integrating multiple PTC products into their newly developed design and configuration tool. This single, unified system conducted back-end configuration of power system variables to create a cost-optimized, customized design solution and quote for the customer. It also leveraged data from Windchill—PTC's product lifecycle management (PLM) software—and Creo, their computer-aided design (CAD) software. With this functionality, a sales engineer could enter different part numbers into the system, and data associated with those

With more of the right technology, they could enhance the customer experience, improve purchase confidence, and boost sales effectiveness.



parts got pulled from Windchill and fed into Creo, where it was automatically generated into a 3D model. A 2D drawing was generated from the model and shown to the customer to help them visualize the potential design solution. The entire solution design was then saved and stored within Windchill, allowing the power grid company's sales engineers to access and adapt the design as needed.

They started using this solution in just one manufacturing facility at first, but after a few years of refining and improving, the company realized they could scale their operational transformation on a global level and expand their configuration system into an even better platform for increased sales and improved customer service. To do so, they turned to PTC's augmented reality (AR) solutions to transform their customer service abilities.

Taking business solutions to the next level with augmented reality

Building on the momentum from the creation of their configuration tool, the power grid company realized that with more of the right technology, they could enhance the customer experience, improve purchase confidence, and boost sales effectiveness.


For them, AR technology was a logical fit to accomplish these goals, thanks to their previous experience with other PTC products. They chose Vuforia Studio, an efficient AR authoring environment that enabled them to leverage their existing 3D CAD models to create immersive augmented reality experiences based on variants specified in their configuration software.

The AR experiences created in Vuforia Studio allowed the customer to see a full-scale, digital

representation of the proposed solution in their own environment and with exact placement in the greater power grid system. This allowed the customer to easily identify any inaccuracies or issues that needed to be corrected before the final system was built and shipped. AR has also eliminated the need for customers to rely on paper drawings, written instructions, and generic installation guides, all in favor of a more personalized and quicker solution.

A clear competitive advantage emerges

In addition to the AR project, the redeveloped configuration system is now in place across 14 global sales and engineering offices, and the power grid company has seen huge time and money savings, leading to further growth. They can conduct 15 times as much engineering work versus creating an entire solution manually, and this optimizes time spent on sales. Instead of a six-week lead time, sales are now closed after



The AR experiences created in Vuforia Studio allowed the customer to see a full-scale, digital representation of the proposed solution in their own environment and with exact placement in the greater power grid system.

just one or two customer meetings. With many reporting that the sales and service process is unlike anything they've ever seen in the industry, the company has witnessed a whole new level of purchasing confidence from their customers.

They've also seen a noticeable decrease in engineering risk—the detailed back-end data management helps minimize risks in the assembly processes by creating more accurate design specifications to work with. This saves money, and the power grid company can pass those savings onto customers with competitive pricing.

Inspired to lean on something they already valued

Building a successful partnership with PTC was a central component of the company's success—but it wasn't the only reason for it. Their journey also highlighted the need to acknowledge a long line of skilled internal teams that brought them to this point. Thanks to the previous work from other enterprise teams, the transformation didn't need to be a complete overhaul for their current team, but rather a shift in the way they conducted business.

In that vein, they hope other teams within the organization will get inspired to start their own journeys, and even spread the success to other industries—because when you build on a foundation of knowledge and collaboration, nearly anything is possible.



www.ptc.com/en/case-studies

© 2021, PTC Inc. (PTC). All rights reserved. Information described herein is furnished for informational use only, is subject to change without notice, and should not be taken as a guarantee, commitment, or offer by PTC. PTC, the PTC logo, and all PTC product names and logos are trademarks or registered trademarks of PTC and/or its subsidiaries in the United States and other countries. All other product or company names are property of their respective owners. The timing of any product release, including any features or functionality, is subject to change at PTC's discretion.