

The background image is a composite. The left side shows a modern kitchen with a white marble countertop, a black sink, and a brass faucet. The right side shows a person's hand holding a brass electrical fixture component over a dark surface. On the surface are several other components: two black, two white, and one brass. A ruler and a keyboard are also visible.

# ZETR

## REDEFINING STYLE AND INNOVATION IN ELECTRICAL FIXTURE DESIGN WITH SOLIDWORKS AND 3DEXPERIENCE WORKS SOLUTIONS

Case Study

ZETR leveraged the combination of SOLIDWORKS software and 3DEXPERIENCE Works product development solutions to shorten design cycles, expand its product line, and prepare for international growth in sales of its minimalist, refined electrical fixtures.

### Challenge:

Accelerate the development of minimalist, flush-mounted electrical fixtures for newly emerging, high-end commercial and residential markets and transition the company from the startup phase to the full production and organizational growth stage.

### Solution:

Implement SOLIDWORKS Premium software for design and engineering and cloud-based 3DEXPERIENCE Works collaboration and transparent data management solutions.

### Results:

- Cut development time by 30 to 40 percent
- Supported growth rate of 50 percent, quarter over quarter
- Tripled its product offering
- Eliminated revision errors while formalizing workflows

Minimalist, refined electrical fixtures such as power outlets and light switches are the brainchild of ZETR Director Garth Elliott. While working for 20 years as an electrical contractor in Australia, handling commercial and residential jobs of varying types, Elliott continually noticed the lack of options for electrical fixtures, particularly in high-end architectural buildings. Noting this gap in the availability of power outlet and switch products that could maintain both the integrity and finish of modern, newly completed architectural work, Elliott was inspired to create a series of flush-finished outlets and switches that go beyond their physical function to blend into surfaces and act as a subtle detail in any space.

"I saw ZETR as a solution to the problem that architects and designers inevitably come across," Elliott recalls. "There was room in a market dominated by mass production for a premium series of fixtures that are visually respectful to newly constructed work. Witnessing that made diving into the design process feel so natural to me."

Founded in 2017, ZETR is changing the way people interact with power, transforming it into a considered, beautiful, and tactile experience. The company is on a mission to revolutionize the electrical market with refined, durable, and minimalist products that reshape the way architects and designers conceive projects and spaces. To achieve its mission, the startup needed to dramatically expand its product line of flush, trimless, and recessed fixtures; increase manufacturing throughput; and establish formalized product development workflows, according to Design and Product Manager Joseph Romano.

"When I joined ZETR in 2021, the company was using Autodesk® Fusion 360™ design software for fixture development," Romano recalls. "We tried to use Fusion 360 for a while, but had problems related to the accuracy of the models—with some models and sketches undefined—and also

experienced revision control issues. I had used SOLIDWORKS® design software for many years and knew that we could resolve the accuracy issues by replacing Fusion 360 with SOLIDWORKS. We moved to SOLIDWORKS Premium design software in June 2021."

The move to SOLIDWORKS also required ZETR to implement a data management solution for secure revision control. "I contacted Central Innovation, our SOLIDWORKS reseller, about acquiring the SOLIDWORKS PDM product data management system and a server to run it, and was told that we would be better off going with 3DEXPERIENCE® Works data management solutions on the cloud-based 3DEXPERIENCE platform because those solutions provide transparent data management in the cloud without having to purchase a server or hire a PDM administrator," Romano explains. "So, we added the Collaborative Designer for SOLIDWORKS, Collaborative Industry Innovator, and Collaborative Business Innovator solutions shortly after our move to SOLIDWORKS."



**"We're able to avoid unnecessary iterations and streamline our processes because using SOLIDWORKS in conjunction with 3DEXPERIENCE**

**Works solutions provides the opportunity to define a formal workflow. ...By standardizing workflows and tapping the power of SOLIDWORKS design configurations, we've been able to realize 30 to 40 percent time savings on our development timelines and tripled our product line in a relatively short time because everyone follows the same process and knows what the next step will be."**

— Joseph Romano, Design and Product Manager

### FASTER DESIGN, PRODUCT LINE EXPANSION, FORMALIZED WORKFLOWS

Since implementing SOLIDWORKS software and 3DEXPERIENCE Works solutions, ZETR has cut its development timelines by 30 to 40 percent while tripling its product offering. "Internal design iterations and back-and-forth communications with suppliers and manufacturers have been reduced greatly since moving to SOLIDWORKS and 3DEXPERIENCE Works solutions," Romano notes.

"We're able to avoid unnecessary iterations and streamline our processes because using SOLIDWORKS in conjunction with 3DEXPERIENCE Works solutions provides the opportunity to define a formal workflow," Romano continues. "The entire

design team is producing to the same standard and using the same process. When we were using Fusion 360, it was every designer for him- or herself, with everyone having his or her own process. By standardizing workflows and tapping the power of SOLIDWORKS design configurations, we've been able to realize 30 to 40 percent time savings on our development timelines and tripled our product line in a relatively short time because everyone follows the same process and knows what the next step will be."

## MANAGING MANUFACTURABILITY AND DATA

While the transparent data management capabilities of 3DEXPERIENCE Works solutions have enabled ZETR to eliminate the revision control issues it previously had experienced, SOLIDWORKS design for manufacturability tools have helped ZETR improve interaction with manufacturing partners, resulting in a boost in production quality overall. "The vast majority of our products are manufactured through the injection-molding process," Romano points out.

"With SOLIDWORKS software, we run draft analysis on our designs and do a check on wall thicknesses to ensure that the product will eject cleanly from the mold without blemishes or defects," Romano adds. "Because we can interrogate the model with SOLIDWORKS before sending it to our overseas suppliers for production, we've improved quality, greatly reduced production time by cutting down iterations with suppliers, and gained greater confidence in the manufacturability of our designs."

## SETTING THE STAGE FOR INTERNATIONAL GROWTH

Although the inspiration for ZETR's redefined electrical fixtures sprung from its founder's experience in the field, the company's decision to move to SOLIDWORKS Premium design and engineering software and cloud-based 3DEXPERIENCE Works collaboration and data management solutions is part of an international growth strategy not only to meet expected demand for high-end electrical fixtures—ZETR has grown at a rate of 50 percent quarter over quarter—but also in response to discussions surrounding an emerging worldwide universal standard for power (electricity) and data (USB) outlets. "The European Union has been discussing legislation aimed at setting and requiring a universal power/data plug standard, which represents a huge opportunity for us," Romano says.

## Focus on ZETR

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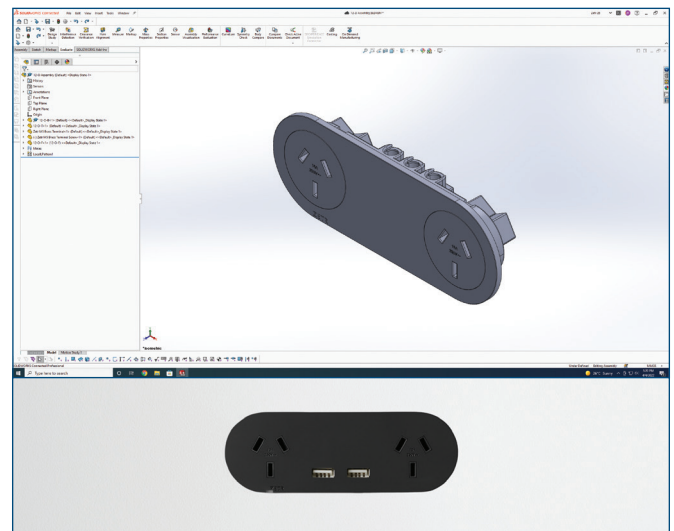
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"Now that we have our product development team working efficiently and effectively with SOLIDWORKS and 3DEXPERIENCE Works solutions, we've launched an R&D effort to take advantage of the international opportunity presented by a universal standard—requiring new and replacement fixtures—and have equipped our product development team with the tools that they need to ramp up development and production as we grow into an international company and organization," Romano says.



Using SOLIDWORKS and 3DEXPERIENCE Works product development solutions, ZETR has not only boosted product development throughput but has also accelerated R&D to take advantage of an emerging worldwide universal standard for power (electricity) and data (USB) outlets.

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