



Guy Babbitt, left, and Chris Turner are co-founders of Czero. Based in Colorado State University's North College Avenue Power House campus in Fort Collins, Czero has developed a well-earned reputation for innovation. Courtesy Guy Babbitt

Northern Colorado Mercury 100: Czero engineers growth with high-profile R&D

by **Michelle Venus** on May 27, 2016

It's all in the numbers for Czero.

- One of three Northern Colorado firms to be named a 2015 Colorado Companies to Watch winner, recognized as a second-stage company making a significant impact on the state's economy.
- One of 30 companies invited by President Obama to attend last summer's first-ever White House Demo Day.
- No. 923 on Inc. magazine's list of the 5,000 fastest-growing private companies in the United States and seventh among engineering companies.

- A 484 percent annual growth rate.
- Increased revenue by nearly \$3.5 million in two years.
- Named to BizWest's 2015 and 2016 Mercury 100 lists.

All of those figures add up to one big wow.

The mechanical-engineering research and development firm has been very busy, indeed. Based in Colorado State University's North College Avenue Power House campus (formerly the Engines and Energy Conversion Laboratory), Czero has developed a well-earned reputation for innovation. The firm provides mechanical engineering R&D and consulting for private- and public-sector clients across a wide range of industries, including automotive, transportation fleets, hybrid hydraulics, clean tech, consumer products, aerospace, oil and gas, and renewable energy.



Recent Czero projects include advanced R&D support for Tier 1 automotive suppliers; collaboration with Brown University researchers developing new technology for harvesting tidal power in shallow waterways; and work for major oil and gas companies on next-generation hydraulic systems. Additionally, Czero has an ongoing collaboration with researchers and Oregon startup Onboard Dynamics (with whom it partnered for the White House Demo Day) to develop a dual-function natural gas vehicle engine that compresses low-pressure gas for self refueling, a project funded in part by \$4 million from the U.S. Department of Energy's Advanced Research Projects Agency program.

Managing such high-profile projects and the rapid growth associated with them is exciting but poses unique challenges. Co-founder and chief executive Guy Babbitt acknowledged the slippery slope. In addition to adding more engineers and administrative personnel to the company roster, the Czero team brought on Lyle Shuey last year as chief operating officer to round out the executive suite with Babbitt and fellow co-founder Chris Turner. While Babbitt and Turner focus on design and execution, Shuey is busy cultivating new opportunities for Czero. The physical space is growing as well: Czero occupies about half the fourth floor at Power House.

Czero is on target for even greater growth this year. Babbitt is especially excited about the company's foray into a social enterprise project.

"We're working with a company that is developing 10-kilowatt steam-powered electric systems for (communities in) Africa," he said. Czero is designing and helping with the production of the steam engines that power these systems. Work continues in Detroit, developing advanced engine and power train systems. Locally, Czero works with Littleton-based CO2Nexus, a dry-cleaning company that utilizes recycled liquid carbon dioxide instead of water as the wash medium in specially designed pressurized washers.

It's all very promising and very exciting, said Babbitt, reflecting upon the opportunities ahead of Czero. The sum total? Continued success.