

# Czero - Premier Mechanical Engineering Analysis & Design Services

## About Czero

Czero specializes in using sophisticated analysis tools to solve tough design and R&D problems and transforming early stage concepts into robust prototype systems that can be tested to demonstrate proof of concept. Particular experience in high bandwidth hydraulics, engines, transmissions, hybrid vehicles, test apparatus/fixtures, experimental apparatus, and clean energy technologies such as algae based biofuels and CO2 based cleaning machines. Czero is classified as a small business.

## Engineering Services

### Primary NAICS

541330—Engineering Services / Engineering Services

541420—Industrial design services

541721—Engineering research and development services

### GSA Contract Holder (#GS-10F-0081X) - Special Item Numbers (SIN's)

871-1—Strategic planning for technology programs activities (ME/EE)

871-2—Concept development and requirements analysis (ME/EE)

871-3—System design, engineering and integration (ME/EE)

871-4—Test and evaluation (ME/EE)

### DUNS

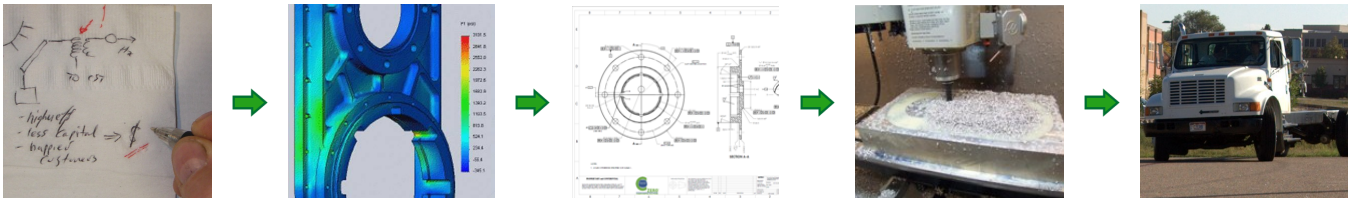
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### CAGE

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## Core Strength

Core strength is rapidly enabling new technology using a combination of sophisticated analysis tools, creativity, experience and hard work.



## Experience

25+ years experience in developing *innovative technologies* in multiple industries.

- Automotive and hydraulic power systems
- Engines, transmissions and fuel systems
- Hybrid vehicles
- Biofuels/bioreactors

## Expertise

- Mechanical design, solid modeling, GD&T
- High bandwidth hydraulic system and analysis
- Dynamic modeling
- FEA, CFD, Magnetic modeling
- Electronic controls
- Testing and development
- Project management

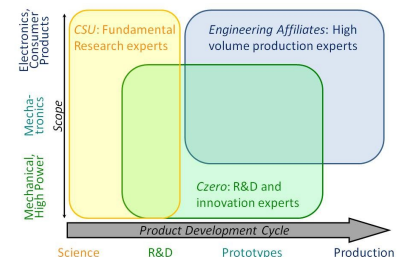
## Example Projects

Diesel fuel injector modeling and design, High bandwidth hydraulic dynamometer design and controls, hydraulic valve actuation systems (camless engines) hydraulic hybrid vehicles, exhaust energy recovery, hydraulic modeling for outboard engines, bioreactor design for algae based Biofuels, CO2 based cleaning machines, high speed hydraulic valves, test cells, experiment apparatus, sensors and instrumentation, automatic transmission design, natural gas injectors, SCADA systems, embedded controls, wind turbine design, distributed power generation

## Reputation:

*"Czero's ability to work with our engineers in developing innovative, ground breaking technology has been a great benefit to the SuperTurbo development. We have placed a lot of trust in Czero's ability to deliver and have not been disappointed. They are a top shelf organization"*

**Tom Waldron—Vice President of Operations, VanDyne SuperTurbo**  
(The VanDyne SuperTurbo was the 2009 Davinci Showcase Winner)



**Consider Czero engineering for your next project....**

Collectively, Czero and our affiliates have the expertise to take projects from fundamental research to commercial

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