



LOCAL HIGH SCHOOL STUDENTS WIN SQUARE ONE INNOVATIVE VEHICLE DESIGN AWARDS

Students put self-built autonomous, electric and connected vehicles to the test at Mcity in Ann Arbor

ANN ARBOR, Mich., May 11, 2017 – Last Saturday, May 6, high-school students from 40 schools across the Great Lakes region gathered at Mcity, a vehicle proving ground in Ann Arbor, to put their self-built autonomous, electric and connected vehicles to the test. At the 11th annual Square One [Innovative Vehicle Design \(IVD\) Mobility Challenge](#), student teams from Utica Center for Science and Industry; Capital Area Career Center in Lansing; and Glenbrook South High School in Glenview, Illinois; took home first-place trophies for overall vehicle performance.

The event, attended by Gov. Rick Snyder and several automotive industry leaders, encouraged high-school students to creatively integrate the science, technology, engineering and math (STEM) concepts they learned throughout a year-long, hands-on program into one tangible project. Students participating in this grand finale event put their problem-solving skills and teamwork to use for a high-energy, real-world learning opportunity.

Full Scale Innovative Vehicle Design Challenge



Left to right: Paul Guetschow (Engineering Technologies Instructor), with Capital Area Career Center students Caleb Wood, Zach Cantrall, Mike Post, Keegan Bresler, Nuru Abeli (driving)

Capital Area Career Center students took first place in Square One's full-scale IVD Challenge. Students transformed a gas-powered go-kart kit into an electric vehicle, and were judged on their vehicle's overall energy management. The vehicles were tested for performance on two courses: a figure-eight course, where students drove the vehicles in a figure-eight pattern for 20 minutes to test the vehicle's stability and

sturdiness through constant twists and turns; and, a life-like Cityscape course on which students drove their vehicles through the Mcity streets with stops, turns and elevations for 60 minutes.

Autonomous Innovative Vehicle Design Challenge



Left to right: Glenbrook South High School students Will Okuno, Nicholas Ermolov, Alex Chang, Keyur Patel, George Gikas, Jeremy Friedman, Jack Riley

Glenbrook South High School students took first place in Square One’s Autonomous IVD Challenge, where students demonstrate the ability of toddler-sized jeep vehicles to navigate a specific course and avoid obstacles based on programming and sensor technologies within a “driverless” configuration. Autonomous IVD teams compete in eight vehicle-test challenges including traveling a chalked-out course, obstacle avoidance, parallel parking and platooning.

Mini Innovative Vehicle Design Challenge



Left to right: Utica Center for Science and Industry students Ryan Oleski, Ben Walker, Hunter Giddy, Jon Mauser, Cody Beard. (Not pictured Nolan Bridges, John Chearon)

Utica Center for Science and Industry students took first place in Square One’s Mini IVD Challenge, where students employed RC vehicles for a high-speed performance contest. Mini IVD teams are tested based on four performance areas: an agility course that consists of multiple twists and turns; a high-

speed challenge that demonstrates their ability to tune the vehicle for optimum speed and handling; a pit stop challenge that combines speed with precision driving skills through a slalom course; and, the Michigan Mini Oval, a NASCAR-style race with multiple cars on the track at the same time.

Using a fixed budget, a kit of basic materials, a deadline and a list of requirements, student teams worked for months to design and construct vehicles that solve many of today's mobility challenges. To make this dynamic, hands-on learning opportunity accessible to every student in Michigan, Square One also provides grants and/or vehicle kits to schools that don't have the district funding to afford the program.

"Our programs are designed to provide STEM learning opportunities to every student in every school in Michigan, leveling the playing field across geographies and districts. We are thrilled to see the program grow and engage more students, providing them with opportunities to explore engineering and technology careers," said Barb Land, Square One operations director. "This event was a great chance for these high-school students to put their STEM knowledge to practice while putting them in contact with industry professionals and leaders."

Square One also awarded four \$500 scholarships on behalf of Brose and the North American International Auto Show. Brose management and Square One staff and board members conducted the selection process; and the following scholarships were awarded to seniors based on their participation and engagement in the autonomous IVD program and their goals and aspirations for mechatronics and STEM careers:

- Desmond Barber, Oak Park High School
- Matthew Bowen, Laker High School
- Camron Grant, Oak Park High School
- Johnathan Riley, Glenbrook South High School

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ABOUT SQUARE ONE

The Square One Education Network empowers teachers with a complete set of resources for students to engage, using hands-on learning tools and modern learning fundamentals, with the intent of developing skills needed to become the next generation technical workforce. This year, Square One will invest \$350,000 toward school grants, professional development workshops for teachers, and Innovative Vehicle Design (IVD) Performance Challenge programs. Its work will reach 11,000 students and 250 teachers. For more information, please visit www.squareonenetwork.org.

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