

Marquette Catholic Engineering Team Picked as SourceAmerica Design Challenge Top 5 National Finalist

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VIENNA, VA (April 5, 2019) – SourceAmerica®, an AbilityOne® authorized enterprise, announced the high school team finalists of its annual SourceAmerica Design Challenge. Marquette Catholic High School's MCHS Blue Crew Engineering Team from Alton, Illinois placed as one of the top five finalists out of a field of more than 50 entries.

This national engineering competition highlights high school students across the country that have created an innovative process, device, system or software that helps people with disabilities overcome workplace challenges.

The MCHS Blue Crew Engineering team collaborated with Challenge Unlimited, a nonprofit organization in Alton dedicated to providing opportunities for individuals with disabilities. Challenge Unlimited employee Don Lucas was the subject matter expert for the project. The team's goal was to create a device that would keep Don from

preventing errors, while improving his efficiency. His task of packing boxes of shotgun shells can be hard for employees with impaired motor skills.

“We had about eight weeks to research, design and create a solution, and went through about five prototypes until we reached our final product,” said Evan Hendricks, student at Marquette Catholic High School and team leader. “It was really rewarding to see Don nod and smile as he used the device. What was even more exciting is when we witnessed Don realize that he made a mistake and correct it on his own.”

The MCHS Blue Crew Engineering team created a device called the Shell Shover. The Shell Shover guides workers with placement and orientation of the ammunition. It is color-coded and has holes of differing sizes to help employees place shells properly into the device, and in turn, pack them correctly into the box. Employees that used the device increased their speed at carrying out the process and decreased the number of errors.

As required by the competition, once students developed a piece of technology or a process designed to overcome a workplace obstacle for the person they were paired with, it was tested, used by the individual it was designed for and implemented in the workplace to assess its effectiveness. Students then submitted a video, technical paper with 3D models, worksheets and additional paperwork to complete the Design Challenge requirements.

“The SourceAmerica Design Challenge truly mimics what the productivity engineers in our Strategy and Innovation department do to create jigs, devices or software for the nonprofit agencies we work with that employ people with disabilities,” said Charissa Garcia, productivity engineer and Design Challenge manager for SourceAmerica. “It’s exciting to see students engage with a person with a disability in their community who is experiencing a challenge in the workplace and create a solution that significantly improves the person’s job proficiency. It raises awareness of the struggles people with disabilities can face in the workplace, and allows engineering students to use their ingenuity and knowledge to create their projects.”

Marquette Catholic High School’s MCHS Blue Crew Engineering team will join the four other teams April 8-10 in Washington, D.C., for two days of training sessions and congressional visits on Capitol Hill. The finalists will present their projects in front of a judging panel and an audience, and will receive trophies and cash prizes.

Judges for the SourceAmerica Design Challenge are comprised of rehabilitation engineers, people with disabilities and others with relevant backgrounds. They evaluated the projects based on positive impact in the workplace -- job creation/retention, wage increases, production increases, contracts gained, waste reduction, stress/anxiety reduction and improved processes.

The MCHS Blue Crew Engineering team includes students Evan Hendricks (team leader), Will Dixon, Joseph Grabowski, and Elizabeth Wirth. The team's coach and engineering teacher, Michele Sands, supervised the students as they worked to create a workplace solution for Challenge Unlimited Inc. The MCHS Blue Crew Engineering's video submission can be viewed at: <https://bit.ly/2TE3UDu>. For more information about SourceAmerica's Design Challenge, please visit: www.sourceamerica.org/design-challenge/home.

About SourceAmerica

Established in 1974, SourceAmerica creates employment opportunities for a skilled and dedicated workforce of people with disabilities. SourceAmerica is the vital link between the federal government and private sector organizations that procure the products and services provided by this exceptional workforce via a network of more than 750 community-based nonprofits. Headquartered in Vienna, Virginia, SourceAmerica provides its nonprofit agency network with business development, contract management, legislative and regulatory assistance, communications and public relations materials, information technology support, engineering and technical assistance, and extensive professional training needed for successful nonprofit management. Visit SourceAmerica.org to learn more, or follow us on Facebook (@SourceAmerica), Twitter (@SourceAmericaUS) and LinkedIn (@SourceAmerica).