

FIRST Impact Award 2024

Team 2996 is building a legacy of innovation and community engagement. Over the last 16 years, we have been creating pathways for our community's youth to become the next generation of innovators and creators. Through demos, volunteering, and advocating for *FIRST* in our state, we connect the community to STEM education and *FIRST* Robotics. Our efforts help build the leaders and skilled workers the world needs.

Structure

Our student-led team operates like a business to prepare members for future careers. We are led by a Chief Executive Officer, 5 business Vice Presidents, and 6 technical Vice Presidents who direct subteams. Like real jobs, students must apply for leadership roles by submitting a cover letter, resume, and transcript, then go through a formal interview with a panel of mentors. Through this experience, our members gain valuable skills required for applying for a job.

Values

Through our training, team bonding, and inclusive team policies, we prioritize the value of teamwork and accessibility to STEM and *FIRST*. During the pre-season, we begin by teaching our signature team dance as a way of connecting rookies with the team veterans in a lighthearted way. This exercise generates a supportive and encouraging atmosphere where everyone is able to find their place on the team. Through these experiences, we instill in our team the belief that anyone can be active and grow in STEM.

Community Outreach

For the past 8 years, our team has organized and run the Making a Difference (MAD) Summer Camp, a week-long event where we introduce middle schoolers to *FIRST* Robotics and the engineering process. With the students in small groups, we teach the principles of teamwork, cooperation, and robot design using hands-on projects. On the second-to-last day, we release a game and guide them through an abbreviated build season. The final day runs as a competition to teach the students that winning is not the most important aspect to competing; it's about what they learn from it. The summer camp has become a sustainable membership pipeline, as many campers join our team due to their inspirational STEM experience.

To introduce robotics to students at an early age, we conducted demos at 8 schools this past year, including a demo to specifically encourage young girls to pursue careers in STEM. Additionally,

we mentor 2 VEX teams and participated in 4 STEM nights hosted by local elementary schools. Every year, we drive our float featuring past competition robots at Coronado's Homecoming Parade, a major highlight of our westside community that draws over 500 spectators. These outreach efforts help us promote STEM and *FIRST* throughout Colorado Springs, building a passion for engineering in our city.

For the past decade, our team has been showcased at the UCCS Cool Science Festival, a fair about educating the community in STEM, reaching over 5,000 people annually. Through hands-on games of robot soccer and allowing kids to interact with our robot up close, we spark interest in STEM fields in even the youngest of attendees. This event helps us spread the message that STEM is accessible to all.

Advocacy

Recognizing the funding challenges faced by *FIRST* and STEM programs in Colorado, we launched the Colorado Cents for STEM Initiative in April 2023. After meeting with other Colorado *FIRST* teams to understand their needs, we started to advocate for state-level legislation that would allocate grant funding to rookie and struggling STEM extracurricular groups, including *FIRST* teams. Additionally, through this extensive outreach towards other teams, Colorado FRC is more connected now than ever.

We invited Colorado State Senator Bob Gardner to our shop and emphasized the valuable life skills imparted by *FIRST*. Additionally, our efforts extended to a meeting with Colorado State Senator Kevin Priola's office, who expressed interest in our initiative and *FIRST*. We presented the initiative to our school board, highlighting the widening gap in funding within *FIRST* and other STEM extracurricular programs that occurred after the COVID-19 pandemic. Emphasizing the potential of a grant program to alleviate these financial challenges, we also advocated for students involved in robotics programs, like *FIRST*, to be eligible for high school graduation credits, recognizing the educational value of STEM programs. Our school board is actively discussing the viability of high school credits for robotics participation and is also discussing how to increase the student voice in education policy due to our advocacy efforts.

To gain support across the state, we reached out to every FRC and FTC team in Colorado, and met with 10 of them, sharing resources such as email templates, examples of successful bills from other states, and guides on how to contact state officials. This helps other teams to advocate for *FIRST* and STEM programs to their elected representatives, fostering a sustainable movement that will last far beyond our current group of students.

Furthering collaboration with other *FIRST* teams, 2 of our students are members of the Colorado *FIRST* Student Advocacy Group, a coalition of *FIRST* students that aims to support underrepresented groups while increasing connections across *FIRST* programs. Through our

active participation with this group, we have become a clear and prominent voice in the future of Colorado *FIRST*.

FIRST Outreach

We contributed to the development of future STEM leaders by volunteering at the Manitou Springs *FIRST* Lego League Festival with Colorado FRC teams 2945, 662, and 8334. As judges and mentors, we provided valuable feedback on engineering challenges and helped students develop their public speaking and social skills. Additionally, we collaborated with teams 1619 and 4499 at Sierra Space, a prominent aerospace company who requested a presentation from Colorado *FIRST* teams. By describing our team's values and demonstrating our robot, we exemplified the impact of *FIRST* programs on future STEM innovators.

Since 2012, we have hosted the only Colorado Scrimmage, a free event that provides FRC teams with a valuable opportunity for preparation. Each year, our students build a full size competition field, which over 20 FRC teams from around Colorado come to use, allowing them to practice competing with other teams and test out their robots before their first regional. We have received positive feedback that the scrimmage is an excellent opportunity for teams to refine their strategies and designs. The impact of the scrimmage extends to every team in attendance, creating powerful bonds between Colorado FRC teams. Our commitment to supporting FRC teams continues beyond the scrimmage as we open our doors every Saturday, allowing teams to utilize our field for practice and continuous improvement throughout the competition season. We have also brought this field to the Colorado Regional as a practice field since 2013.

We introduced the Business Exchange at the Colorado Regional in 2016, a Socratic seminar aimed at helping teams develop effective business strategies. Led by our CFO, the Business Exchange encourages teams to collaborate on various business topics, such as team organization, management, establishing connections with local businesses, and fundraising. The exchange has not only assisted teams with their business endeavors, but has also fostered long lasting partnerships, friendships, and impactful collaborations.

We have been a member of the Open Alliance since 2022, and this year, we were selected as one of the featured teams in the organization. Open Alliance serves as a hub for the FRC community to exchange ideas, discuss challenges, and collaborate on design. On our episode of The Open Alliance Show, we reached over 2,300 people from around the world. Our involvement in Open Alliance has allowed us to extend our impact beyond our local FRC community by sharing ideas with teams as far as the Netherlands, Israel, and Turkey.

For 13 years, our team has used Youtube as a platform to share the message of STEM, and this year alone has reached 8,000 people. Beyond sharing brainstorming and designs, we share *FIRST* with a wider audience. Our channel isn't just for *FIRST* participants; it's for everyone. Our

content resonates with all ages, whether you're just starting to explore your passion for STEM or are an engineering major. We do not just make entertaining videos, we create excitement about STEM on a global scale.

Sponsor Outreach

BPO Elks Lodge 309, a community service organization, has been a main sponsor of Team 2996 since our inception. The Elks Lodge helped us launch our annual fundraiser dinner in 2015, which helps reduce the cost of regional attendance for all team members. In return, we volunteer at the Elks Lodge annual spring cleaning, and we have set up and waited tables at their charity dinners, benefiting programs such as a local children's hospital.

Students on our team find work after high school with several of our engineering sponsors, including Vertec, Exact Assembly, and the National Association of Women in Construction (NAWIC). Vertec is a local engineering company that machines and powder-coats our robot parts, while NAWIC has sourced materials to help us build our field.

Legacy

Team 2996 has crafted a legacy of creativity and community involvement. Our student-run team teaches members real-world skills such as teamwork, leadership, and a desire to grow. We encourage these values in students outside of our school through programs such as our MAD Summer Camp, elementary and middle school demos, and assorted STEM festivals and events. We are working to help other *FIRST* teams and STEM extracurriculars through our Cents for STEM Initiative, as well as share our ideas and progress through the Open Alliance. Our team does not just build robots; we build growth-minded people in our city, state, and world, all through the power of STEM.