

# 2013-2014 Team Submission Highlights

FIRST Team 2996 Cougars Gone Wired



**Includes Chairman's Essay and Business Plan Executive Summary**



## **Business Plan Executive Summary**

### Team Mission Statement

FIRST Team 2996 strives to build students while building robots, have fun while working hard, and try our best while helping others. We believe FIRST creates a place to learn and grow and FIRST Team 2996 promises to promote student involvement and interest in STEM. By showing the community the value of STEM education, FIRST Team 2996 will build a foundation for a STEM oriented culture.

### Team Origin

Prior to August 2008 Coronado High School knew nothing of FIRST Robotics; however, after the discovery of FIRST a few students started FIRST Team 2996, Cougars Gone Wired (CGW). With the determination of these competent students, and the subtle guidance of Bryce McLean, an engineering and mathematics teacher at Coronado High School, CGW accrued a total of 34 students from all over Colorado Springs School District 11 by the beginning of build season 2009. The team blossomed into a life changing experience that has touched the lives of many students throughout our schools. Room 407 in the Coronado Tech Building, Mr. McLeans classroom, became our home and we grew as a team. Currently our team has 77 members, which makes it the largest team in our short history.

During Lunacy, our rookie game, technical success was small but our team was established as a strong competitor thanks to the kindness of teams 399 and 1332, who chose us as part of their first seeded alliance at the Colorado Regional. Our robot that season, Dozer, could do little more than push robots aside and clear a path. Our team's skills and cohesiveness gradually improved with experience. For example, in our first two years our team size increased; however, team size declined in subsequent years. We made it our goal to recruit and get new people interested in STEM, and our numbers have nearly doubled over the past two years.



### Organizational Structure

To raise funds, FIRST Team 2996 participates in fundraising events and works with corporate sponsorships. The CFO and the finance team find potential sponsors and organize fundraisers. This year we partnered with a local haunted house to sell tickets and received a portion of the proceeds. In addition we sent out donation request letters to family and friends. Students also serve food and bus tables at dinners hosted by the Elks Lodge, where we earn tips that go toward the team.

To ensure the proper allocation of funds, the VPs of each sub team create a list of materials that need to be purchased. These lists are then taken to the CFO and the team coach to decide the validity of the request.

Corporate sponsors are our largest source of income. We find our sponsors through team connections. We then set up meetings with potential sponsors, and a presentation team, selected by the CFO, gives a pitch to initiate a relationship with the sponsorships. We encourage people of all ages to join robotics. Also, we attend school registrations, open houses, and assemblies to recruit new members to the team. Those who enjoy their robotics experience often choose to return as mentors, alongside knowledgeable parent mentors. As a team, we stress the values of FIRST, sportsmanship and cooperation. We invite other teams to participate in activities with us, such as our Mock Game. We also mentor Junior FLL and FLL teams to inspire a love of STEM in the local youth. Team 2996 upholds these values through our community outreach as we strive to emulate the model of an ideal FIRST team.

### Relationships

Cougars Gone Wired (CGW) aims to be a role model for other teams and to introduce STEM to youth through demonstrations, mentoring, and volunteering.

We have shined the light on STEM by demonstrating our robots at schools and events throughout our community. Through our demonstrations and presence at community events we educate people about FIRST, STEM, and our team.

CGW is a team dedicated to giving back to the community that has given so much to our team. When our community faced The Waldo Canyon and Black Forest fires, we rallied together to volunteer at several rehabilitation events.

To recruit members we have a booth at Coronado's school registration to spark interest in robotics and our team. We also host an annual picnic to allow new and potential members to bond with current team members.

At the end of each season we have a celebration where we give unique awards to say goodbye to seniors and to thank mentors for their help.

As for sponsors we try to help them as much as they help us. One of the sponsors we work with closely is BPO Elks Lodge #309 who has hosted fundraising dinners for us. We in turn bus and serve tables when they need us, and they donate the nights tips to the team. At the end of build season we host a banquet to thank the sponsors and parents for their support.



Building robots is an important part of Cougars Gone Wired but building relationships is what really matters and the relationships built in Team 2996 are bonds that will last a life time.

### Deployment of Resources

FIRST Team 2996 utilizes resources for more than just building a robot; we also deploy resources to promote the FIRST ideology. Cougars Gone Wired inspires others by sharing our knowledge throughout our community. During pre-season, CGW built a homecoming float to raise awareness of FIRST in our school and the Colorado Springs community. Team 2996 also manned a booth at the Cool Science event held at the University of Colorado at Colorado Springs and at the "What If?" festival to engage children and encourage an interest in STEM and FIRST. Students from CGW mentor fourteen Junior FLL and FLL teams to help children build a foundation in engineering and an interest in pursuing an FRC team later in life. Moreover we provide financial assistance to the teams we mentor for tools and supplies in order to complete their FIRST experience. These funds come out of our team savings; however, seeing the love of STEM grow in their eyes makes the expense worth it.

In addition, Team 2996 encourages high school students who have never been involved in a FIRST program to participate in FTC to ensure that every student has a chance to develop the skills necessary to be successful in FRC. CGW also holds classes outside of regular team hours to educate members who are new to their sub-team or FRC. In these classes mentors work with VPs to teach fundamental and in-depth concepts in preparation for build season. We require members to be on both a business sub-team and a technical sub-team to promote a well-rounded experience that provides a wide range of "tools" for their future after FIRST.

### Future Plans

Throughout the next three years, FIRST Team 2996 hopes to not only maintain the same standard of excellence, but also to raise the bar each year.

We intend to improve by becoming even more involved in community activities and by spreading Junior FLL, FLL, and FTC to more schools. Another objective of ours is to raise the percentage of team members who regularly participate in community outreach.

Due to the large size of the team, we also want to implement more team building activities to create unbreakable bonds. Additionally, we will focus on helping new team leaders and new members adjust to their positions.

Sponsorship means more to us than just the monetary aspect, it means being a part of Cougars Gone Wired, and we like to welcome every member of our team. CGW will reach out to more corporations and organizations and obtain a closer relationship with our sponsors.

To assure we keep our values, we will continue to participate in community outreach programs such as library demonstrations, the Susan G. Komen Race for the Cure, and Care and Share. We will show good sportsmanship and encourage other teams, keeping the FIRST environment amicable. Team 2996 will continue to be a family and foster growth within our team, our community, and FIRST.



**Financial Statement**

<b>Entrance Fees:</b>	
Utah Regional	\$4,000.00
Colorado Regional	\$5,000.00
Championship (tentative)	\$5,000.00
<b>Lodging:</b>	
Utah Regional Hotel	\$5,300.00
Colorado Regional Hotel	\$3,800.00
Championship Hotel (tentative)	\$7,500.00
<b>Transportation:</b>	
Bus for Utah	\$3,100.00
Bus for Championship (tentative)	\$7,000.00
<b>Build Season:</b>	
Robot Materials (Prototype, Practice, & Competition Robot)	\$5,300.00
Field Materials	\$1,400.00
Miscellaneous	\$2,500.00
<b>FTC:</b>	
FTC Qualifier	\$3,000.00
FTC Team 3635	\$1,700.00
<b>Community Outreach:</b>	
FIRST Outreach	\$400.00
Local Outreach	\$300.00
<b>Total Cost (excluding Championship)</b>	<b>\$35,800.00</b>
<b>Total Cost (including Championship)</b>	<b>\$55,300.00</b>



### Risk Analysis

#### **Strengths:**

- Mentorship
- Team Size
- Reputation
- Facilities Accessibility
- Wood Shop
- Auto Shop
- Community Room

#### **Opportunities:**

- Spread STEM in a community fascinated by STEM
- Organizations aiming to get involved with STEM and education
- Schools interested in STEM and FIRST

#### **Weaknesses:**

- Funding
- Varying degrees of commitment
- Acquiring New Sponsors
- Training

#### **Threats:**

- Sponsorship Cuts
- Economy's effect on sponsor resources
- Loss of student interest





## Chairman's Award Essay Submission

FIRST Team 2996 Cougars Gone Wired (CGW) embodies the spirit of family. Though we have grown over the years to nearly 80 students, we are as close as blood relatives and the team benefits from our bonds.

Team 2996 is the sole District 11 team, based out of Coronado High School in Colorado Springs, CO. We were started in 2008 by 2 dozen students and 1 ambitious teacher. Our rookie year formed traditions and set the foundation for us to build upon in later years. We invite students from schools all over the city to join the family of 2996. Taking the advice of FRC Team 662, we built our structure from the ground up. Our team is run like a company with technical and business halves and a CEO and CFO. Each half has sub teams that handle one particular aspect, and each sub team is led by a student vice president. Every student participates on both a technical and business team, developing well-rounded individuals. With this completely student-run structure, we are able to teach life skills to everyone on the team.

Due to our open door policy and ability to recruit from the entire city, we've accrued a large number of diverse students. We are proud of the diversity of our team members; not only do we have a high female to male ratio and high minority percentages, our team attracts students with an eclectic array of passions beyond engineering. Our members have interests in business, music, and medicine; and represent every sport barring lacrosse, including varsity athletes and team captains. It's this diversity that makes all our successes as a team and family possible, as it takes away the stigma against science, technology, engineering and mathematics (STEM) and encourages an increasing number of people to join every year. But with so many on the team, it can be difficult to give individuals the attention necessary for their growth. To solve this dilemma, CGW established an FTC team that acts as our junior varsity. Despite the different competition levels, we consider ourselves one family. We go by Cougars Gone Wired, have the same mentors, go to the same meetings, attend each other's competitions, and volunteer at the same events. Thanks to our FTC program, new students are able to hone necessary skills in the more individualized atmosphere of FTC before joining FRC, as well as grow a FIRST mindset through an introduction to Gracious Professionalism and Coopertition.

With such a large team, funding has become an issue. Despite being the sole District 11 team, they cannot provide financial aid outside of small, individual scholarships for students unable to pay for competitions. All of our fundraising is done by the team. Most of it comes from student planned and run presentations to existing and potential corporate sponsors, though we also hold a fundraiser to earn between \$5,000 and \$8,000 every year. Past fundraisers have included selling hex bugs, team apparel, and light bulbs. Through these efforts and the generosity of our sponsors, we are able to raise over \$60,000 each year.

Although our district does not provide monetary support, they assist us in other ways. With frequent meetings between various members of the school board, CGW has garnered district-wide approval resulting in numerous opportunities for our team, and the district. We captivated the audience at both the General Staff Meeting (demonstrating the district's theme for the year, Creating Awesome) and at the annual Gifted and Talented Night for elementary and middle school students. CGW debuted in a district run commercial that was shown in movie theaters all over the city. For the first time, team members can earn a varsity sports letter for participating in robotics. Because of the public exposure



that comes from our partnership, strangers often recognize our name and image as a predominant facet of the community.

By participating in school activities at every opportunity, we make robotics as prevalent as football or basketball. Every year we participate in the annual Homecoming Parade in which we build a float and walk with other clubs and teams from the school. At Coronado assemblies, we present alongside all of the sports teams. CGW welcomes new students to join at the Freshman Orientation, 8<sup>th</sup> grade Open-House and Coronado Registration, as well as run the annual Welcome BBQ for new and returning members and alumni. CGW also participates in the annual Fall Festival, a family Halloween trick-or-treating event.

Team 2996 stresses the importance of inspiring youth with our community service projects. Because of the dedication of our members, we volunteer as much as possible in both the off season and during build season. During the summer, we shared our passion for STEM at 3 library presentations by inviting small children to drive the robot, and by teaching at 4 engineering camps for middle schools. We also attend both the "What If?" Festival and the Cool Science Festival yearly, where we interact with all age groups and invite them to drive the robot igniting their interest in STEM and FIRST. To represent the opportunities of STEM for teens, we present at the 8<sup>th</sup> grade Career Fair. Finally, the team hosts and volunteers at Sea Perch, an underwater robot competition to help Challenger Learning Center, one of our sponsors. There is nothing more rewarding to our family than seeing the love of STEM grow in a child's eyes.

The largest time commitment for CGW is our involvement in all of the other levels of FIRST: Jr. FLL, FLL and FTC. This is one of our major goals, as FIRST is one of the best ways to spread an appreciation of STEM and we want others to have the same opportunities that we have. Beyond helping other FRC teams at every opportunity, 2996 focuses on the spread of FIRST in Colorado. The team started and runs the first and only Jr. FLL showcase event in Southern Colorado. Every single Jr. FLL team in attendance was started and mentored by our team. Though this is only the second year the showcase has existed, it has already had enormous success in inspiring children to respect STEM and FIRST. The showcase grew 140% compared to the previous year, up from 5 teams to 12.

At the Southern Colorado FLL Qualifier, CGW members provided the bulk of the student volunteers and helped set up prior to the competition. CGW also mentors some of the attending FLL teams. Team members were even given an award for their volunteering and excellent mentoring of one team. At the state competition, team members volunteered as referees.

Team 2996 hosted and ran the FTC Southern Colorado Qualifier this year, an enormous project that took months of preparation. Our whole family including parents, alumni, students and mentors stepped up to take on as much of the responsibility of hosting the event as possible, filling the majority of volunteer positions. 13 teams attended from 3 different states across the Southwest. Though running the Qualifier for our area prevented our FTC team from competing at this Qualifier, the event was immensely enjoyable, a great learning experience, and a chance to grow together.

CGW also runs the annual Colorado FRC Pre-Ship Scrimmage. This event is a major undertaking, as the team builds an entire game field and sets up all the technology and space needed for a competition, which requires over 5 hours of labor the night before, even with the entire team, parents,





alumni, and mentors working. We hold the Scrimmage with the intention of uniting attending teams and giving them a leg up in competition. All 20 attending teams – 19 from Colorado and 1 from Wyoming-tell us that it is great preparation for competitions.

Team 2996 also assists in numerous community service events beyond STEM and FIRST to better our neighborhoods, cities, state, and beyond. The team participates in the annual American Heart Association Heart Walk, helping to distribute water, register runners, direct traffic, and paint faces. We have a group of students who run or walk the Susan G. Komen Race for the Cure every year to show our support.

CGW volunteers in times of need as well. The previous two years, Colorado has endured several devastating natural disasters, such as the Waldo Canyon Fire, the Black Forest Fire, dozens of other wildfires, and subsequent flooding of burnt areas. These fires and the flooding are some of the worst natural disasters Colorado has ever experienced. As the fire burned within 3 miles of Coronado, several team mates watched their entire lives go up in smoke. Many of the rest of the team had displaced families living in their homes and most were evacuated for more than 2 weeks. CGW stepped in to help the community and team mates who had suffered. We attended 3 sandbag fill-up events run by the city, to make and distribute thousands of free sandbags to fire victims to prevent flooding on their properties. These days consisted of long, tiring hours of labor filling and moving 10,000 pounds of sand. Team members spent a day at the famous Flying W Ranch, which burnt down in the Waldo Canyon Fire, to replant trees. During the Black Forest Fire, CGW team members participated in the Care and Share Donation Drive, sorting the thousands of pounds of donations that came in for evacuated families and fire fighters. Later, the team worked with disaster relief organizations to clear debris and build retainer walls to prevent flooding around at-risk homes in the burn scar.

Through steadfast hard work and dedication over our entire 5 year lifetime, Team 2996 has succeeded in growing the influence of FIRST all throughout Colorado, improving our community, and integrating new members into the mindset of FIRST. By following the successes and difficulties of previous years, we have created something that is more than a team. We have created a family of students, mentors and other teams that will withstand the test of time.