

## Chairman's Award - Team 1741

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2020 - Team 1741

**Team Number**

1741

**Team Name, Corporate/University Sponsors**

Crossroads Engineers/Cummins Foundation/B2S Life Sciences/JCREMC Community Fund - Operation Round-Up/Rolls-Royce/Center Grove Education Foundation/Endress+Hauser/Red Alert Robotics Parent Organization&Center Grove High School

**Briefly describe the impact of the *FIRST* program on team participants within the last five years.**

Red Alert teaches our members the importance of a defining phrase within our team, "Challenge Accepted." We teach all involved the skills necessary to succeed in college and beyond, with a focus on communication, leadership, and technical expertise. We also encourage a positive learning environment, providing a second home and family for all. We have a 2:1 student to mentor ratio, 100% team members graduate, and 85% study STEAM fields in college.

**Describe the impact of the *FIRST* program on your community within the last five years.**

Red Alert helped Center Grove design and construct a 15,000 sq ft Innovation Center that houses all of our operations. This building is a STEAM hub for the greater Indianapolis area. We host competitions for every FIRST program, and many demos including an annual summer camp, mall demos, STEM fairs, etc. We work with legislators to spread FIRST and have received a grant to help rookie teams succeed at all levels of FIRST in our community.

**Describe the team's methods for spreading the *FIRST* message in ways that are effective, scalable, sustainable, and creative.**

We work to get our community in our build space through camps and various open houses. We have a unique coffee flavor at a local shop called Strange Brew and our own popcorn flavor at Not Just Popcorn. We reached out to IndyCar driver Charlie Kimball to spread FIRST, inspiring him to wear our logo at a race. We have also worked with our fire department, animal shelter, and elementary schools. Globally, we have helped a FIRST global team in Burundi, sending them parts and tools.

**Describe examples of how your team members act as role models and inspire other *FIRST* team members to emulate**

Many members continually serve as student ambassadors at FRC competitions. We have presented at both Purdue and Indiana University FIRST forums. We encourage all students to serve as mentors for FTC and FLL teams within our school corporation, 27% doing so. To ensure Gracious Professionalism, we have an open door policy at our shop. Diversity within our team is another critical emphasis, supporting a team with a 27% ethnic minority representation, and a quarter of our students being female.

**Describe the team's initiatives to help start or form other FRC teams**

This past year, we were granted a \$15,000 grant for us to help start new FIRST teams in our community. This money will go towards giving teams tools, materials, and funds to start off. We work to educate teams on sustainable behavior through our provided resources. In the past, we have sent out rookie kits to new teams with build season essentials like gift cards and tools. Our alumni have started FRC teams 5188, 4272, and 7457, and we started and continually work with team 3180.

**Describe the team's initiatives to help start or form other *FIRST* teams (including Jr.FLL, FLL, & FTC)**

We actively work to solidify our FIRST pipeline, encouraging members to mentor teams beneath us through our Varsity letter program. We house 3 FTC teams in our Innovation Center and we have supported over 38 FLL and 4 FLL Jr. teams in our corporation. We also have started a new FLL Jr. team at a local library as a Girl Scout Gold Award project. Our new grant will support levels beneath us. This support is also continued through our hosting of competitions at all levels of FIRST.

**Describe the team's initiatives on assisting other *FIRST* teams (including Jr.FLL, FLL, FTC, & FRC) with progressing through the *FIRST* program**

We currently hold the honor of being the only Indiana team to have hosted competitions at all levels of FIRST in one year. We also ensure an open door policy at our shop. Annually, we host a week 0 scrimmage for all FRC teams, allowing them a full field and machine shop for their use. We provide support through email and in person communication year round and have provided materials for teams' use, directly assisting over 25 FRC teams.

**Describe how your team works with other *FIRST* teams to serve as mentors to younger or less experienced *FIRST* teams (includes Jr.FLL, FLL, FTC, & FRC teams)**

We have helped a FIRST Global Team in Burundi, Africa. Through financial support, and cyber communication, we have grown FIRST in a developing nation. 25% of our alumni remain involved in FIRST through mentoring and volunteering. In the past five years, multiple mentors from our team have expanded to assist other FIRST teams such as 3180 and 1529. Also, we encourage our students to mentor through a mentoring requirement within our varsity letter.

**Describe your Corporate/University Sponsors**

We have a mutually beneficial relationship with our sponsors. Endress+Hauser and Rolls Royce are long term sponsors along with the Center Grove Education Foundation. Crossroad Engineers and Indiana Realty Pros are both owned by Red Alert alumni parents, yet they continue to support us because FIRST made a difference in their families' lives. We partner with Not Just Popcorn and Strange Brew Coffee to have Red Alert branded popcorn and coffee products sold at each location.

**Describe the strength of your partnership with your sponsors within the last five years.**

We have been able to maintain positive sponsorship relations through our continued mutual support. We annually host a banquet in which they are invited, as well as an open house specific to them. With hand written cards, assisting Indy Wiring in moving facilities, volunteering at Chip Ganassi Racing, Servpro, Ingredion, Cummins, and Endress+Hauser community outreach events, and demoing at Toyota & other companies STEM nights, these relationships have been well supported.

**Describe how your team would explain what *FIRST* is to someone who has never heard of it**

FIRST is a global initiative in which students and mentors come together to learn invaluable skills and build elaborate robots. These K-12 teams teach students the skills of teamwork, time-management, innovation, and leadership so that a continued motive of excellence propels a student down whatever path they take. FIRST not only deals with robots, but graphic design, business manners, and countless interpersonal skills. FIRST is a family where all are free to explore and achieve great things.

**Briefly describe other matters of interest to the *FIRST* judges, if any**

We are continually supportive of FIRST Indiana through our volunteers, excellent competitive experiences, and selfless work. We are prominent in our school, participating in the homecoming parade, offering a varsity letter, and working with the theatre. We help Girl Scouts earn a robotics patch we created called Girls Engineering Awesome Robots Successfully. We have a well supported pipeline of all FIRST levels. We support safety initiatives and wrote a children's book to encourage this.

**For FRC teams older than 5 years, briefly describe your team's broader impact from its inception.**

Red Alert has emphasized being bigger than ourselves. Through our work with our school to design an Innovation Center and a Student Activity Center, alongside our countless demos, competitions, and open-door policy, we have made FIRST incredibly loud for all to see. With grants given to grow teams, we are looking forward to helping more people experience the joy of FIRST robotics with our continual support by their side.

**Team Captain/Student Representative that has double-checked this submission.**

Meredith Fain

## Essay

FIRST® Team 1741 Red Alert Robotics is proud to celebrate our 15th season as a team and we want to take a moment to remember our roots; a moment to remember the passion of the founding members, the parents who established our 501(c)3 parent organization, and the key aspects that define us. If you asked most Indiana teams what Red Alert is known for, many would say the phrase "Challenge Accepted." A comedic quip, this phrase quickly adapted to become a critical part of our team's operations in many ways. We say this not only as a way to get our members' attention, but also as a driving motivation to overcome any obstacle we encounter. We have had highs and lows these past 15 years, but nevertheless, we have persisted, always accepting every challenge with passion and perseverance.

In the past, Red Alert has consistently upheld a reputation of selflessness and excellence throughout all of our actions. We have ensured that the theme of Gracious Professionalism® and our "Challenge Accepted" mentality have not only been the expectation, but the norm. One of our ongoing successes is our well-supported and established pipeline. We have worked hard to grow the FIRST® program through our school corporation, having 4 FLL Jr. and 38 FLL teams over the past 15 years. We also house 3 FTC teams in our own Innovation Center (IC).

Our Innovation Center is an integral component of our team and community. In 2015, Red Alert was in danger of losing our build space due to school capacity. Students, parents, and alumni came together to advocate to the school the importance of a more solidified STEAM presence in our community. Their enthusiastic response resulted in the construction of a new STEAM hub, the IC. This building now houses all of our operations, including our full-sized field, machine shop, and collaboration space; it provides all students in Center Grove K-12 the environment to learn about STEAM along with allowing teachers to improve their professional development skills.

We have been honored with many opportunities to aid teams in our FIRST® community. After their shop suffered fire damage, we opened our doors to team 3180 Blaise of Glory; we worked alongside them within our build space until they regained access to their shop. From 2013-16, we were able to assist running the FLL Central Library Tournament, which was a huge opportunity for us to serve and encourage the FIRST® programs underneath FRC. For a number of years, we have co-hosted an off-season competition, CAGE match, with FRC Team 1529. We plan, run, and host a STEAM fair for the attendees. We have established a global presence in the FIRST® community. In 2017, we partnered with a FIRST® Global team in Burundi, East Africa, with our FTC team 8149. Through video chats and financial support, we ensured they are spreading the message of FIRST® to developing parts of the world. We have hosted competitions at all levels of FIRST®, including our first FRC district last year. In 2019, we became the first FRC team in Indiana to host competitions at all FIRST® levels within one year. We have been able to provide Indiana and the world of FIRST® exceptional competing experiences, earning prominent recognition.

Red Alert has emphasized making FIRST® loud. With Indianapolis being the racing capital of the world, we partnered with IndyCar driver Charlie Kimball. Through our relationship, we have hosted him in our shop and our competitions and visited his racing facility. He also wore our team's logo on his helmet during the Long Beach Grand Prix, showcasing FIRST® to over 180,000 people. Because of Charlie, we learned about the Juvenile Diabetes Research Foundation, an organization he cares deeply about. He informed us about the "One Walk" event to raise awareness for juvenile diabetes. At this event, we managed the kids' zone and demoed our robot at Victory Field in Indianapolis, impacting over 2000 people.

With many of our female members being active Girl Scouts, we have invited many troops to our shop to help them earn a patch called GEARS. The GEARS patch, or Girls Engineering Awesome Robots Successfully, is a patch created by a member of our team that teaches girls about STEAM and robots.

We have actively made a difference through our history ensuring that the greater Indianapolis area knows our name. Annually, we host a robotics camp for our community's students. During this week long camp, we plan various activities for each day of STEAM, and even partnered with a local pottery company called UPaint Pottery to provide art supplies. This partnership led to a statewide STEAM event at all UPaint studios. In 2019, we also hosted our first Trunk-or-Treat on Halloween night at our IC. The event was a massive success, resulting in 667 people attending our shop and seeing where we work. For multiple years we have partnered with FIRST® Indiana Robotics to run demos around the state, including the Children's Museum where we interacted with over 8000 people and the Conner Prairie Festival of Machines where we showed our robot to over 5000 spectators.

With this positive presence in our community, we have also been privileged to partner with local companies, Strange Brew and Not Just Popcorn, to create our own unique flavors, Robot Rampage and Red Alert Velvet, respectively. The unique bonds we foster allow us to reach out to a variety of businesses, creating new sponsorships and supportive relationships. Through our partnership with Cummins, we were provided funds for a CNC router for teams across Indiana.

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Our team continues to make strides within the FIRST® world through our continuous support of all levels of FIRST®. From 2014-19 we hosted the Indy South FTC Qualifying Tournament, being recognized for quality events by FTC Indiana. This year, we served as an FTC league administrator. For the 2019-20 season, we transitioned to hosting 3 league meets and the league championship, making us the only league administrator to host all league competitions. For the past 10 years, we have held the FLL Indy South qualifying tournament. We also annually host a week 0 FRC scrimmage in our IC. This scrimmage allows teams access to practice robot inspection, scouting, matches and a Chairman's Chat in the spirit of Gracious Professionalism® and Coopertition®.

Another key phrase that Red Alert values is "Safety is a Culture," which is something we greatly emphasize. The White River Fire Department has sought out our help multiple times when their safety animatronic dog, Patches, stopped working. At a local Strawberry Festival, the Fire Department presented us with a Community Award for our continued work in Greenwood. We also have many safety initiatives that make our team unique. In 2015, we wrote and illustrated a picture book called "Ryan the Raccoon and the Terrific Tree House." This book helps us educate children about working safely as a team and makes regular appearances at all of our events.

Red Alert is internally focused as well, working to make sure that our own students and mentors are respected and cared for. In order to fit the current needs of our students, we revamped our leadership structure. These new team dynamics have allowed us to host a mentor-guided leadership training and a student-led leadership training to ensure that we are being as effective and efficient as possible. This personalized care and attention stretches to all parts of our team through extended training sessions. We have a 2:1 student to mentor ratio with 89% of our mentors not having a student on the team. Red Alert Robotics Parent Organization, our 501(c)3, provides an opportunity for parents to get involved within the team as well as provide us with financial stability throughout all operations.

We make a lasting impact on our students; after graduation, 85% of our alumni have gone into STEAM fields, and over 50% have volunteered with FIRST®. Our team is proud to have 8 alumni join the military. We foster an interest in FIRST® beyond engineering, including graphic design, video production, and business management. Students also graduate with interpersonal skills that embody the essence of FIRST®. Diversity and inclusion is another critical emphasis for our team, boasting a 27% ethnic minority representation, compared to our school's 6%; and a 25% female representation. We constructed a wheelchair ramp that we bring to competitions, to allow for increased visual access to all attendees.

Red Alert has worked hard to make sure that moving forward, our team will consistently have new ways to grow and make FIRST® loud. As our school corporation continues to expand in numbers, we are built to do the same. This season, we changed our varsity letter requirements, adding in a student-mentoring section. By encouraging our students to earn this prestigious honor, we are working to engage them in our FIRST® pipeline.

This season, we were awarded the multi-year Growing Teams Growing Opportunities Grant by the Center Grove Education Foundation worth \$15,000 to help us support future, underserved areas in Indiana. These partnerships as well as plans for more sponsor open houses and extended ways to honor our partners are integral parts of our future. Our team is also advocating to Indiana's legislature about how to spread FIRST®. We have had multiple interactions with both State and U.S. Legislators. These efforts will help make FIRST® a possibility in all Indiana schools.

Red Alert has proved that we are not only here to stay, but to make a lasting impact on the world around us. We are sustainable, determined, innovative, and not afraid of any obstacle in our path. We strive to make a meaningful impact in all our interactions. Reflecting on all that we've done, from showing off our robot at a Pacers game to inspiring a new generation with FIRST®, we have upheld the passion of the founding members. With the past in mind and the future ahead, we say, "Challenge Accepted!"