

Chairman's Award - Team 4776

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2019 - Team 4776

Team Number

4776

Team Name, Corporate/University Sponsors

S.C.O.T.S. Bots/Ford Motor Company/Delphi/Autodesk, Inc./Dell/Thai Summit America Corporation/Chem-Trend, Inc./ZF TRW/Michigan Dept. of Education/First National Bank of Howell/Grupo Antolin/Hatch Stamping/Automated Control Systems/J.J. Jinkleheimer & Company/Mugg & Bopps Convenience Stores/Five Star Signs/The Home Depot of Howell/Lowe's of Howell/The Howell Education Foundation/The University of Michigan-Flint/Trinity Health/Champion Chevrolet/Tube Right/Crosswinds Aviation/Howell Education Foundation/Howell Public Schools&Howell High School

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2018/2019 year and the preceding two to five years

We provide real-world opportunities for students that prepare them for the world of science and technology; This includes Ford Science and Technology classes and Autodesk Fusion CAD training. Our STEM Sisters group encourage women to continue pursuing STEM careers and become leaders in their field. Our upperclassmen attend scholarship and resume workshops and meet with mentors to receive guidance in the college admissions process. Our graduating seniors have received \$200K in scholarship money.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2018/2019 year and the preceding two to five years

Community service grants us an opportunity to show our team spirit, spread the mission of FIRST® and give back to the community that supports us. We volunteer at events such as Meals on Wheels, recycling drives, rescue vehicle day, backpack drives and many more to improve our community. We also volunteer at events like school reading nights and STEM nights at our elementary schools. Our team has volunteered over 400 hours of community service since 2014.

Team's innovative or creative method to spread the *FIRST* message

Our collaboration with our local library is our most important partnership to spread FIRST because it promotes lifelong learning within our community. We developed Young Engineers club and Design Squad, summer programs at the library, which have impacted over 300 kids and created interest in FIRST and STEM. We created and formed a project-based learning group called STEM Sisters, an alliance of motivated high school females from S.C.O.T.S. Bots and other local teams.

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

Our FRC students act as role models to our younger teams by participating in community events with them and teaching them the importance of community service. Our partnership within LCRA with other teams shows the importance of gracious professionalism and working together even when you have to compete with each other. At events we go around the pits and help other teams ensure that their safety kits and procedures are up to date to make sure all of our fellow teams are safe.

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

We've invited teams from Hartland, Corunna, Byron, Brighton, Whitmore Lake, CSA & Fowlerville to our machine shop, CAD training, fundraisers, and kickoffs. We assisted Corunna by giving them an opportunity to sell concessions at our events and purchased a banner for them. We helped them seek funding from Autodesk, which yielded 10K. We have also provided student to student and mentor to mentor communication between teams. The creation of LCRA this season has assisted teams in Livingston County.

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

We transformed the culture in Howell by building a program of 29 teams. We helped grow the program from 13 to 29 teams in one season. We support and manage 1 FRC team, 4 FTC, 12 FLL, and 12 Jr FLL. Last year we worked with our school board to provide paid positions for teacher liaisons to run teams at every school in the district. We set up workspaces for new teams in their respective schools and continue mentoring them throughout their seasons and prepare them for their competitions.

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

The Howell Highlander Robotics organization volunteers and mentors across all levels, making sure that the most impactful relationship comes from student to student experiences. We also are available to help out teams such as #7056, team F.A.S.T with their fundraising or even helping our local Livingston County teams with awards, fundraising ideas and preparations, or even sharing our shop materials. S.C.O.T.S. Bots has also helped run an official FTC Kick-off for local 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)

Livingston County teams came together to create a conglomerate of ideas while providing a platform to receive feedback from each of the 6 teams involved. This allows teams to provide help and ideas to each other throughout the season. We also volunteer with our younger teams throughout the summer and their seasons. We foster their creativity and help them to develop all aspects of their teams from robots to awards. We spent about 300 hours with our younger teams during their most recent season.

Describe your Corporate/University Sponsors

Aptiv/ANSYS/ General Motors/ MDEC Grant/Orchid Orthopedic/ Nishikawa Cooper LLC/Mugg and Bopps/First National Bank/ Asahi Kasei/Hatch Stamping/Miller and Co./Chem Trend/Diversified Creations/Roots Endodontics/Delta Airlines/ Home Depot/Heckler Law Firm/Fowlerville Dental/ Bigby/John Papadopoulos, DDS/Kathleen Knapp DO, PC/2 Redheads and Me

Describe the strength of your partnership with your sponsors with special emphasis on the 2018/2019 year and the preceding two to five years

We provide our students opportunities to reach out by having luncheons with our sponsors and encouraging our students to go out into the community to connect with them. S.C.O.T.S. Bots reaches out to our partners by inviting them to competitions we compete in or host. We also attend our sponsor's events such as a Women in Technology Seminar hosted by two of our major sponsors Ansys Inc and Aptiv PLC. Working closely with our sponsors has allowed multiple of our students to receive internships.

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

FIRST® Robotics Competition is not just about robots. It's about inspiring and impacting others to become interested in STEM. The opportunities provided here encourage innovation and entrepreneurship, cultivate valuable partnerships, and teach valuable life skills that stick with them throughout their lives. Most importantly, FIRST is a family. Students and mentors build bonds that can last a lifetime. FIRST helps students to grow both as a team and individually.

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

Over the past year we have added 2 FTC, 8 FLL, and 7 Jr.FLL programs to the Howell robotics family bringing our total number of teams to 1 FRC, 4 FTC, 12 FLL, and 12 Jr.FLL teams in our school district. This has caused our program to go from 125 kids to 256 kids in the past 12 months. Our students also now have the opportunity to earn their varsity letter for being in robotics. Around 25 students have achieved this honor for their above and beyond work with our program.

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

Ashlin Niemiec

Essay

S.C.O.T.S. Bots is fueled up and ready for takeoff! Our team emulates and embodies the purpose and goals of FIRST®, while also encouraging others to move into areas of science and technology, building upon the FIRST culture. Our team's values can be expressed in the five ways we fuel our mission: FIRST, School, Community, Students, and Family.

We begin fueling our mission with FIRST. Started seven years ago during the 2012-2013 season as a result of a mentor's daughter's interest in starting a robotics program, the Howell Robotics Program was born. In just seven seasons we have grown into a district-wide robotics family; growing from 1 team to 29, spanning grades K-12. Our season starts long before January. During the summer we work with our younger teams, and mentor them throughout their season.

S.C.O.T.S. Bots members have volunteered over 300 hours this season mentoring our younger teams. Our support allowed Howell Robotics to more than double the number of teams for the 2018-19 season with the growth of 13 teams to 29. Bringing the program to 1 FRC, 4 FTC, 12 FLL, and 12 JR. FLL teams. This led to an increase from 125 to 256 kids in the program.

Since beginning in 2012, we have hosted 8 FIRST events ranging from Jr. FLL to FRC, including Livingston County's first FTC double qualifier. At these events, our team supplied more than half of the volunteers to ensure events ran smoothly. Our team has volunteered at more than 30 other FIRST events throughout the Midwest! This year we hosted an official FTC Kickoff event in September and ran an un-official FRC kickoff event in January. For FTC, we hosted 10 teams, with over 500 students, parents, and mentors attending. We invited 5 local teams and hosted over 350 students, mentors, and parents for our FRC kickoff. After game reveals, teams worked collaboratively to strategize and learn about the game as well as discuss build and programming components.

We also work to actively engage our sponsors in the world of FIRST. We host team workshops, teaching members how to build business relationships with our corporate sponsors. We connect with sponsors for opportunities such as internships, seminars and inviting our sponsors to attend our events. This laid the groundwork for two of our graduates to receive internships at Chem-Trend, one of our local sponsors. Due to our students' entrepreneurial and business skills, we have won the Entrepreneurship Award 3 times in the past 3 seasons.

Last May, the robotic teams from Livingston County came together to collaborate and problem solve. From this, we created an organization called Livingston County Robotics Alliance, LCRA. This group consists of 6 FRC teams including team #3536 the Hartland Electro Eagles, #3668 the Trobots from Whitmore Lake, #3707 the Brighton Technodogs, #4362 the GEMS from Brighton, #7056 the F.A.S.T. team out of Fowlerville, and lastly our team. The goal of the group is to grow FIRST in our community and provide a platform for teams to engage in feedback to strengthen one another.

Through LCRA, we've had many team bonding activities, such as a bowling night, that help us get to know our neighboring teams. We hope to continue to collaborate with these teams throughout the heat of competition.

This October two of our students went to the Michigan FIRST advocacy day. There they learned how to effectively lobby and talk to elected representatives. They met with state representatives and senators to discuss funding for FIRST and STEM education. We invited our representative to our FTC qualifier where he spoke at opening ceremonies.

Our relationship with our school further fuels our mission. Through our initiative, last January, our School Board of Education approved creating 9 paid teacher liaisons positions, one for each school. We worked with them to create workspaces in every school for teams to work throughout the year. With this collaboration, we have been able to reach more students and grow our entire family of programs.

S.C.O.T.S Bots was also able to reach out to our school and provide an opportunity for students to show the long hours they put into robotics. We worked with our Principal and mentors to develop criteria for a varsity letter in robotics during the 2016 season. In four short seasons around 25 students have earned their letter.

We continuing fueling our mission by fueling our community. One of the main aspects of S.C.O.T.S. Bots is service. We strive to provide service by volunteering not only within FIRST, but also by serving both our community and internationally, too. Our team was able to work with OE 324 to prototype a latrine which would be implemented in El Salvador. Besides helping in El Salvador, we had a mentor help judge a qualifier and mentor two teams in China.

During the summer, we partner with our local library to create Young Engineers Club and Design Squad. These workshops, attended by over 300 kids, provide fun out-of-the-box STEM challenges that students K-5 can enjoy. Our team also volunteers at many of other events during the summer including School Bus Safety day with Buster the bus, summer reading programs at our local elementary schools, and partnering with Livingston Educational Service Agency to hand out backpacks and supplies. We have also helped with Meals on Wheels, recycling drives, and much more.

S.C.O.T.S. Bots provides opportunities to all of the students on our team. These include college scholarship and resume workshops as well as mentor guidance for the college admissions process. We believe the best opportunity for students is participating in FIRST. We accept all applicants interested in joining our program. We have had team members from Howell, Hartland and Pinckney School Districts as well as foreign exchange students. In addition to our no application process, we also have a scholarship fund to support those students who cannot afford the membership fee. These funds are gathered by fundraisers like Quartermania; a bingo auction event that brings in over \$2,500 annually through our community, mentors, sponsors, and parents coming together for a night of fun.

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We continue the mission of impacting students, particularly women, with S.T.E.M. Sisters; started in 2015 to inspire young females. Activities vary from mentoring younger girls through activities such as cupcake science and merit badges with Girl Scouts, to attending symposiums, and listening to speakers throughout the world of S.T.E.M. This year our team was invited to take part in a Women in Technology Seminar hosted by major sponsor Ansys Inc. At this event, keynote speaker Jada Smith, the VP of Advanced Engineering & External Relations at Aptiv PLC, explained how she overcame the struggles of being a woman in a male-dominated field. This event included a social hour where we introduced our members to women leaders in their field of business. Through these introductions, we were granted a major sponsorship from Aptiv PLC. A panel of speakers also provided how to change the status quo to impact our own team as well as the community of FIRST. We want to inspire women to grow no matter what barriers are in their way.

To finish fueling our mission we have to work as a team; but S.C.O.T.S Bots is more than a team, we are family. Our family includes our parents, mentors and especially our students. Our first FTC team started in 2014, and we never thought about how much we would grow. This year we are graduating our first senior from that original FTC team, as well as 41% of our team being FTC alumni. It shows our growth and sustainability as we continue to grow and strengthen our relationships with one another.

Over the summer we have bonding events to reconnect old members and introduce new members. Our favorite event for team bonding is our Cardboard Regatta. A cardboard regatta is a competition between groups to build a boat with cardboard and duct tape that can survive a trip across the water. This event gives us time to work, eat, have fun, and strengthen team relationships.

In addition to being a family within our team, we are a family within our program. S.C.O.T.S Bots makes it a priority to grow and learn from one another be it a mentor to mentor, mentor to student or most importantly a student to student dynamic interaction. We all mentor the younger teams which lends to our Howell Robotics succession plan. While mentoring the younger teams, we embody the ideals and values of FIRST, which will contribute to the younger members teaching new members to do the same, ultimately spreading the purpose and goals of FIRST.

We also consider all of FIRST our family. S.C.O.T.S Bots has financially supported other rookie teams by donating money and providing fundraising opportunities. We continue to mentor various teams by providing support and mentor to mentor communication. We reach across the county to build comradery with other local teams by hosting joint kickoff events and sharing our available resources such as our machine shop. We like to make sure our FIRST family is safe at events by going from team to team in the pits to inquire how we could assist each team and provide safety check-ups such as first aid kits and fire extinguisher tests. Because of this we have won the UL Safety Award three times.

.Team #4776, the S.C.O.T.S Bots, live by our five core values of Service, Character, Opportunity, Teamwork, and Spirit! We strive to be ambassadors of FIRST both on and off the playing field while encouraging others to join and do the same. We continue to live by our values through our community which is impacted by our Service, our students who provide our Character, FIRST which gives us Opportunities to succeed, our family of Teamwork and lastly our school which showcases our Spirit. Through FIRST, school, community, students, and family we continue to make an impact wherever we are.