



2015 Chairman's Executive Summary and Essay

Executive Summary:

Impact on Team Members:

- >100% of alumni are attending college; 82% are pursuing STEM related majors.
- >(1) Dean's List Finalist and (2) FIRST scholarship recipients.
- >One alumnus awarded a FIRST Internship at SpaceX.
- >Students learn compassion and appreciation for the sacrifices of our veterans through The Hero Project.
- >Strong leadership and communication skills built through student-led team structure.
- >Introduce students to local business and community leaders.
- >Team members gain confidence and pursue new challenges.

Impact on Community:

- >Coordinates The Hero Project in partnership with veteran support groups.
- >Organizes "Take A Byte Out Of Hunger" annually, attracting 100+ FRC volunteers.
- >Promotes FIRST at Civil Air Patrol, Liberty Fall Festival, Jesse James Festival Parade, Boy Scouts Roundtable.
- >Participates in Operation Christmas Child and "Wreaths Across America."
- >Offers a week long App Camp for 25 students annually.
- >Hosts Camp Lego, a summer FLL camp.
- >Volunteers at FLL events annually.

Innovative Methods to Spread FIRST:

- >Regularly featured in 6 newspapers.
- >Letter-writing campaign to 17 elected officials.
- >Air1 and K-LOVE radio stations aired Up Next and FIRST nationally.
- >Hero Project broadcasted on KCTV5.
- >Strong online presence through social media channels and award winning website.
- >YouTube channel reaches an international audience with over 26,500 views.
- >Alumnus created a short film on our first week of the 2014 build season to excite others about FIRST.
- >Closely partners with FRC Nation, a new FRC blog.

Role Model Characteristics:

- >Actively assists teams with Java programming.
- >Two year Java beta test team.
- >Established the Shadow Cadet program to involve younger siblings.
- >Created "Next Up", a program that ensures new members are fully trained prior to build season.
- >Student-driven approach emphasizing leadership qualities.
- >Committed, full-time participation leads to diligence and excellence.
- >Close-knit team exemplifying Gracious Professionalism.
- >Multi-generational support with heavy family involvement.

Starting FRC Teams:

As a five year old team, we have accomplished our goal to make Up Next stable and sustainable. New FIRST Robotics teams will be created and developed to meet the growing needs of the homeschool community, bringing their creativity and unique viewpoint to the FIRST arena.

Starting Other Teams:

As a result of our summer FLL camp, FLL Team LEGOcy was formed in 2014. We have maintained a mentor partnership with this team by assisting with programming, project presentation, and providing useful knowledge from members who have previously been on FLL teams.

Assist Other Teams:

- >Helped a rookie team build their robot from scratch at the 2013 Arkansas Regional. .
- >Assisted FIRST Team 3158, from Mexico, with code via email.
- >Reprogrammed FIRST Team 1764's robot during competition.
- >Loaned a control board to 2014 rookie FIRST Team 5013.
- >Created "Will Code for Food", which offered programming instruction to 10 FRC teams.
- >Co-hosted KC QuickBuild for 3 years; helping rookie teams build a basic robot by the end of Kickoff day.
- >Shared tools and parts with other teams.

Mentor Other Teams:

- >Mentored FIRST Team 5098 with their Chairman's Award submission and presentation.
- >Mentored FLL Team LEGOcy with programming, research project, and tournament preparation.
- >Gave seminars to FTC mentors and students about the importance of developing a strong image and reaching out to their community.
- >Advised FIRST Team 3937 and FIRST Team 4849 via email, and supported them at their rookie competition.

Corporate/University Sponsors:

- >Metropolitan Community College (MCC) is our home base of operation.
- >Received corporate grants from IBM, KC STEM Bank of America, and ATK.
- >Local business sponsors include Price Chopper, Alliance Machine Systems International, LLC, Hunts Car Care Center, Kearney Trust Company, and Platte Clay Electric.
- >In-kind donations received from Laird Plastics, G&K Services (t-shirts), and EnerSys (robot batteries).
- >Supported by community organization, Knights of Columbus- Ladies Auxiliary 8915.

Strength of Partnership:

- >Up Next Leadership Foundation was created to provide STEM resources for the homeschool community.
- >Metropolitan Community College generously provides classrooms and the use of their Fab Lab.
- >Led the MCC 2011 graduation ceremony with our robot.
- >Offered Robotics training at the MCC Boy Scout Merit Badge Round-Up.
- >We connect with sponsors via quarterly newsletters, participate in their events and host an annual appreciation dinner.

Explain FIRST:

We believe there is a difference between what you learn from a book and what can be gained from hands-on application. *FIRST* not only makes it possible for young people to gain real life engineering experience by building a robot, but students also learn how to build a team. Through FIRST robotics, students learn and grow to become the scientists, engineers, and leaders of tomorrow.

Other Considerations:

Up Next makes a significant impact on the homeschool community. Due to a lack of infrastructure and funding, most homeschooled students are unable to experience STEM in a cooperative atmosphere. To give our students the opportunity to apply STEM to the real world in a tangible way, we initiated The Hero Project - a program to identify and meet the physical needs of disabled veterans around the country. We have received commitments from four teams across the nation to join us in this project.

Chairman's Essay:

Audrey Hepburn once said, "Nothing is impossible; the word itself says, 'I'm possible!'" To Up Next, *FIRST* Team 3528, possibilities are what *FIRST* is all about. Our mission is "to provide leadership, life, and technical skill development opportunities for the homeschool community." We have been given this mission, and we choose to accept it.

No mission is possible without supportive partners. Metropolitan Community College (MCC) dedicates two classrooms for our use and provides access to their Fab-Lab. We also partner with the college, the new venue for the FRC Greater Kansas City Regional, to promote *FIRST* throughout the community. For example, we qualified Boy Scouts for their Robotics merit badge at the college's Merit Badge Round-Up, and our robot led the 2011 MCC graduation ceremony!

Through the Up Next Leadership Foundation, we provide STEM resources and leadership opportunities primarily for the benefit of the fastest growing form of education - homeschooling. It is our mission to make advanced applied learning possible for these students. Our dedicated members develop a professional work ethic by working the equivalent of a full-time job on the team during build season, in addition to their regular studies. To provide smooth transitions onto the team each year, we started "Next Up," a program that ensures everyone is fully trained through a series of technical and safety workshops. Even before the build season begins, new members have become so invested in the team that nobody can truly be called a rookie. Since many of our students have younger siblings who share their interest in STEM, we created the Shadow Cadet program. This gives them a way to be part of the team and learn skills even before they can officially join.

Our alumni implement these skills, making significant contributions to society and giving back to the *FIRST* community. For example, Jordan Ousley, a film studies major, created a short film covering our first week of build season to inspire excitement about *FIRST* and STEM. David Andrews collaborated with other FRC members to create *FRCNation*, a blog for the *FIRST* community. In 2013, Titus Woo was one of only fifteen students nationwide selected for a *FIRST* internship at SpaceX. In addition, our alumni return to the team as mentors and volunteer at local *FIRST* events. These young adults make an impact as they embrace the skills learned through Up Next.

We realize the importance of connecting with elected officials to demonstrate how vital *FIRST* and STEM are to the future of Missouri students. State Representative Ken Wilson had never considered all the things *FIRST* robotics makes possible until we invited him to attend the FRC Greater Kansas City Regional. Afterwards, he expressed a deeper understanding of how science and technology impact our culture. We contact seventeen state and local representatives through a letter-writing

campaign each year. Our goal is for them to share our excitement and partner with us in furthering STEM education.

To promote the mission of *FIRST*, we employ innovative methods throughout our local and national communities. Our efforts have been featured in six newspapers, and we reach an international audience through YouTube, Facebook, Twitter, and our award-winning website. We constantly build and sustain relationships with our students, mentors, supporters, and community through social media. Last year, The Hero Project caught the attention of KCTV5 News. The project was featured on their morning newscast and their website. In addition, KCTV5 and NBC Action News interviewed one of our students at this year's kickoff about the upcoming season and how we help other teams.

Up Next believes in making a better community. As a result, we participate in many diverse outreach events. One program we established is called "Take A Byte Out of Hunger." For this annual event, we recruit local FRC teams to join us in sorting and packaging thousands of pounds of food for Harvesters' food bank. Operation Christmas Child, another event we participate in each year, involves assembling and loading shoe box gifts for impoverished children around the world. In addition, we honored the countless men and women who have made the ultimate sacrifice for our country by participating in "Wreaths Across America."

As a part of our mission to cultivate interest about STEM in the community, our team attends many local events including the Liberty Fall Festival, Jesse James Festival Parade, MPE Homeschool Conference, and Civil Air Patrol meetings. At the Kansas City Maker Faire, a display of invention and creativity, we show the spirit of *FIRST* by holding friendly competitions with other FRC teams. During these events, we foster excitement by inviting spectators to drive our robot.

Every summer we make it possible for students interested in mobile app development to experience hands-on learning at our Android App Camp. In partnership with KC Power Source, we teach 7th-12th graders how to create apps ranging from fun games to a car maintenance app. Students work in teams, and as individuals, learning the basics of application development before constructing their own personal apps.

Our App Camp has been so successful that last year we expanded our summer programs to include an FLL camp. At Camp Lego, younger students experienced an FLL season condensed into a week. They worked together to design a robot and create an innovative presentation to solve real problems. The week also included a special visit from KCTV5's Chief Meteorologist. One student's family got so excited about *FIRST* that they started their own FLL team, which we mentored during their rookie season.

Up Next takes pride in serving our local community, but we also consider it our mission to support the *FIRST* community through active mentoring and assisting of other teams. Since we were founded as a *FIRST* Lego League Team, there is a special place in our hearts for FLL. We have assisted at thirteen FLL tournaments as judges, timers and referees, in addition to building field models each year. Up Next also works with *FIRST* Tech Challenge teams by building and assembling fields for the 2013 and 2014 Kansas City FTC qualifiers. At FTC Kickoffs we present workshops to help new teams understand the importance of community outreach and media presence.

From FLL to FRC, it is our mission to show Gracious Professionalism in all we do. We never pass up an opportunity to share our knowledge with other teams, rookies and veterans alike. Last year we lent rookie *FIRST* Team 5013 a control board so they could compete in Cow Town Throwdown, an off-season event. At the 2013 Razorback Regional, we helped several teams pass inspection. During a competition we reprogrammed *FIRST* Team 1764's robot to Java so that they could compete. We are currently helping *FIRST* Team 5098 with their Chairman's Award submissions and loaning them robot parts.

A tremendous growth in FRC teams in our region has led to a great need for mentoring. As an experienced Java programming team, we organized an event known as "Will Code for Food," which provided valuable instruction for ten FRC teams. Our programmers also helped a team from Mexico via email with their Java code. To prepare rookie teams for their build season, we have co-hosted the Kansas City Quick Build with Garmin for the last three years. At this event we make it possible for teams to enter the first week of build season with a basic drivetrain already assembled.

While mentoring other *FIRST* teams is one of our favorite ways to serve people, our true mission is to develop solutions for real world problems. In 2012, our team decided that we wanted to make a tangible difference in people's lives. Around that time, one of our mentors met Ron Gulick, a quadriplegic. Ron had just received a service dog but was unable to leash and unleash her. This was the perfect opportunity to really make an impact in someone's life. The device we developed not only allowed Mr. Gulick to leash his dog, it also enabled him to feed himself for the first time in *eight years*. After this wonderful experience, our team wanted to do more to help the disabled. This gave birth to The Hero Project, a program designed to identify and meet specific physical needs of wounded and disabled veterans across the country.

Through The Hero Project, we recently helped Mr. John Weinburgh, a veteran who suffered a severe spinal injury during a military training exercise which left him a quadriplegic. Although his home is in Omaha, Nebraska, a three-hour drive from Kansas City, we were compelled to help him. Mr. Weinburgh requested a tool that would make it possible to retrieve items he drops. In response, we created a gripping device that is activated by a slight turn of his wrist and can pick up anything from a playing card to a full soda bottle.

With help from veteran support groups, we continue to identify wounded veterans and seek out other FRC teams across the nation to join in this effort. We have extended an invitation to FRC teams across the nation and have received commitments from four teams to join our cause. They will be matched with disabled veterans in their area, making it possible for these *FIRST* teams to use their robotics skills in real-world applications.

In conclusion, Up Next is not about a list of achievements. Our mission encompasses much more than just building a robot. We inspire students to become creative, intelligent, hardworking leaders of society. Through serving our community, partnering with media and industry experts, and aiding those in need, we make it possible for young people to impact the world. Our mission is to be the innovators of tomorrow that change society for the better, to be the ones that make a difference. We strive to be those people because we, as a generation, are Up Next.