



## Business Plan Executive Summaries

### 2017 rules/explanations

- **TEAM MISSION STATEMENT:** Please briefly indicate what you believe to be the “driving engine” of your team. Your mission should be clear and concise. It should represent to any reader exactly what your business plan strives to accomplish. (1600 characters allowed, including spaces and punctuation)
- **TEAM ORIGIN:** Please provide the date that your team formed, the location of your team, the current number of team members (highlighting any growth over past years) and describe the challenges the team had to overcome in order to participate in *FIRST* events. (1600 characters allowed, including spaces and punctuation)
- **ORGANIZATIONAL STRUCTURE:** Please detail how the team is structured to 1) Raise funds; 2) Ensure funds are properly spent; 3) Find and engage sponsors; 4) Recruit team members/ mentors for current & future seasons; 5) Ensure *FIRST* principles remain core to the team’s efforts. Uploading an image of your team organizational chart below, will also satisfy this requirement. (1600 characters allowed, including spaces and punctuation. Graphic image allowed in addition to or as an alternative to text - upload 5” x 4” 100 dpi resolution images that end in .JPG or .GIF)
- **RELATIONSHIPS:** Please detail team efforts to specifically engage, inspire, educate and retain 1) Team members; 2) Mentors; 3) Sponsors/Community. (1600 characters allowed, including spaces and punctuation)
- **DEPLOYMENT OF RESOURCES:** Please detail how the resources of your team (Financial or otherwise) have been deployed to 1) Engage the community to spread the message of *FIRST*; 2) Inspire others to get involved so that *FIRST* continues to grow; 3) Ensure all team members get the most out of their *FIRST* experience. (1600 characters allowed, including spaces and punctuation)
- **FUTURE PLANS:** Please indicate specific plans the team has for the next 3 years in regards to sponsorship, team and community outreach (including helping *FIRST* grow) and detail how you expect to be able to accomplish these goals. (1600 characters allowed, including spaces and punctuation)
- **FINANCIAL STATEMENT:** Please include information on team finances (include financial statement detailing income and expenditures). Uploading an image of your team financial plan below, will also satisfy this requirement. (1600 characters allowed, including spaces and punctuation. Graphic image allowed in addition to or as an alternative to text - upload 5” x 4” 100 dpi resolution images that end in .JPG or .GIF)
- **RISK ANALYSIS:** Please describe the team’s risk mitigation plan. Present a SwOT (Strengths, weaknesses, Opportunities, and Threats) analysis or narrative that describes the team plan to identify and respond to sustainability threats. (1600 characters allowed, including spaces and punctuation)
- **PICTURES:** Please upload Organizational Charts and Budgets. Picture 1: Please upload 5” x 4” 100 dpi resolution images that end in .JPG or .GIF Picture 2: Please upload 5” x 4” 100 dpi resolution images that end in .JPG or .GIF Picture 3: Please upload 5” x 4” 100 dpi resolution images that end in .JPG or .GIF Picture 4: Please upload 5” x 4” 100 dpi resolution images that end in .JPG or .GIF

### TEAM MISSION STATEMENT

The Highlanders’ mission is to give children elementary through high school the opportunity to pursue *FIRST* and STEM. HR hopes to share the impact *FIRST* has had on our lives by giving students a hands-on experience in STEM. We funnel resources into community outreach, *FIRST*-

related events, and other FIRST teams to ensure that these students get all the opportunities they can in a STEM field of their choosing. To give students the full experience in STEM and make business connects, we create real-life interactions with companies while exhibiting gracious professionalism, teamwork, and innovation regardless of what we do.

*The Highlanders' (HR) mission is to give children, from elementary through high school the opportunity to pursue science, technology, engineering, and mathematics. We give these students a hands-on experience in STEM. We create real-life business interactions with companies while exhibiting gracious professionalism, teamwork, and innovation in all we do. FIRST has had a direct impact on our lives, now we want to go out and give back, sharing the values and opportunities we have been given.*

## TEAM ORIGIN

The Highlanders started in Fort Collins, CO in 2007 as an FLL team composed of 8 kids that met in the neighborhood Highland Hills, thus the name. HR continued into FRC in 2012 when two rival FTC teams joined together. Less than a season into FRC, the team decided to pursue their mission of spreading STEM. To make this happen outside of the confines of a school, our mentors created a 501(c)3 corporation, Neaera Robotics, to act as a foundation to enable youth in the area to pursue robotics and STEM; it also supports teams throughout Colorado by sponsoring them by our non-profit umbrella. That first year we had 20 members, the great majority of them being sophomores in high school. For the 2013-2014 season we had 23 members and increased the diversity in ages, but were still heavily centered on that core group of students. In our third year we had 23 members again, and diversified somewhat, but still had slightly more than half our team as seniors. This set up a new challenge for The Highlanders: with the original, core members graduating, we would have only eight team members returning for 2015-2016. During the summer and off-season, we took on the challenge of rebuilding our team, staging recruiting events, extending our reach, and moving kids up from our umbrella. In the 2015-2016 season, we got our numbers back up to 22 and we now have over 60% of those alumni come back as mentors. In the current season, we have 17 very committed students, about a quarter being girls.

## ORGANIZATIONAL STRUCTURE - PICTURE

We generate funds from both grants and partnerships, both nationally and locally. We offer different levels of sponsorship in which we encourage our partners to further fund our journey in exchange for levels of advertising. To ensure that funds are not wasted, our team has gone through the process of becoming a non-profit 501c3 corporation. Through the engine of our 501c3, we are able to qualify for additional funding from small businesses and families because of a tax deduction. Our marketing team goes out into the community personally inviting businesses to partner with us, maintains relationships with current and previous partners, and researches the availability of grants. To get and maintain sponsors, we arrange demos of our robot, showing them the finished product of what they have contributed to. Our primary sponsor Neaera Consulting, hires team members and alums as interns; a portion of the profits Neaera earns from their work goes straight to HR. In 2 years, they generated approx. \$48,000 of financial support. We also participate in demos, expos, fairs, and presentations to draw new members to the team and inspire FIRST in our community. Our team is centered around values of FIRST including Gracious Professionalism and Coopertition, competing to the best of our ability and helping other teams to do the same, no matter who wins in the process. We instill this

in our new members by setting an example and requiring them to participate in various outreach events and mentoring opportunities. These values are taught to teams we mentor under our non-profit.

*From the outset, The Highlanders had a clear mission for the team organization. A well-defined structure creates organization but allows members to explore new areas of robotics and community relations. Starting at the top: the team member who holds the values of FIRST, the traits of a leader, and knowledge of a seasoned vet is chosen as our Team Captain. Reporting to the team captain are the Strategy Team Lead, who heads up the robot design and drive teams, and Operational Safety and Excellence Captain who leads our community, marketing and business endeavors. We generate funds from both grants and partnerships, both nationally and locally. We offer different levels of sponsorship in which we encourage our partners to further fund our journey in exchange for levels of advertising. Finally, our marketing head goes out into the community personally inviting businesses to partner with us, maintains relationships with current and previous partners, and researches the availability of grants. To ensure that funds are not wasted, our team has gone through the process of becoming a non-profit 501c3 corporation. Through the engine of our 501c3, we are able to save money in the materials we buy. The entire team is responsible for recruitment and community relations; team members come up with ideas to spread the word of FIRST and take the lead on those initiatives.*

## RELATIONSHIPS

Our team creates a relationship as a family. We meet year-around, training new members and learning skills in the off season. Students are allowed to pursue anything they would like over the off season, inspiring students to continue to learn STEM skills that they are not comfortable with. Apart from learning, our team has a lot of fun through events such as paintball, laser tag and mud runs, encouraging them to stay with their new family. The relationships we create from being together allow us to educate teammates easier, keeping them engaged year-around. Many alumni have returned as mentors, assisting us on weekends away from college or through Skype. Our mentors are constantly energized by the energy our members bring to practice because they once were where we are now. While in the shop, even mentors are inspired to learn new skills. Many of our mentors have had children on the team, but even when these members graduated, the parents remained mentors, completely committed to working with other kids being educated about robotics and STEM. In our community, relationships we create are far more important than the numbers we achieve. When working with any kid, our whole team helps to create a one-on-one relationship with the students, allowing them to retain more and inspiring them to continue on through FIRST. Our sponsors are valued, through internships, facility tours, and demos we make sure our connections are more than the financial support we receive, but true partners valued for the educational opportunities and mentorships.

## DEPLOYMENT OF RESOURCES

In our community, we are constantly putting aside resources for the numerous events we host and participate in. For example, in our three summer camps advertising, team member mentorship, and donated supplies make these a success. We set aside a lot of team resources to start new FIRST teams. In these past three years, we switched focus, pushing more of our resources into the underprivileged and minority groups. We have reached out to four Boys and Girls Clubs in our county starting and mentoring FLL teams at three of them and downloading the Mindstorms program for all the Clubs. Overall, we have funded approx. 21 FIRST teams under our umbrella, either starting them or helping them grow. To ensure the success of our team members, we encourage everything from programming to machining to marketing and

videography. Our facilities over the years have grown. One of our highly-used machines is the CNC plasma jet that our very own members designed and built. Our CNC HAAS milling machine is one of our most intensive tools to learn and master. The exploration that comes along with engineering is encouraged greatly, ensuring we learn all we want to. For example, this season our team wanted to learn how to make, not just a custom gear box but also custom gears. Every student is accepted for whatever their passion is despite their strong suits, allowing them to specialize in whatever they want. Knowledge isn't our only focus for team resources though. Through team events, members grow closer and learn more about themselves and their community.

## FUTURE PLANS

HR's mission to provide kids a STEM opportunity affects the sustainability of our team and sponsors; our mission directly relates to the growth of FIRST as it brings students into STEM using FIRST as an outlet. Our five-step process to complete our mission will continue over the following years: we raise awareness, start early, encourage midway, unite community, and finally partner with professionals. First, we raise awareness, opening students' eyes are to the possibilities in STEM. While we are active partakers in many events, we hope to increase our own events to raise awareness for STEM, like our future learn-to-machine workshops. Next, our team plans to put a higher emphasis on younger students of FIRST like the FLL Jr. team we started this fall. For this coming summer, HR is advertising all our summer camps in the city activity catalog. In our third step, we helped FLL teams transition to FTC. HR wants to be the "door" to FIRST for the FTC community in our region since we are here to help. In our fourth step, we bring our community together through our events. In this area, we have been strong, but plan to expand more by participating in more parades, festivals, and expos. Current possibilities are endless, as innovative ideas come to mind, HR will always pursue them. The final step consists of partnering with professionals. Partnering more with local businesses to strengthen the bond we have with businesses around us is our last goal for next year. This not only helps our students learn in a professional setting, but it leads to sponsorship opportunities.

## FINANCIAL STATEMENT

Each year our team fills out several grants for financial assistance. We try to get 50% of our income through grants each year. We also spend a significant amount of time visiting our current sponsors in addition to new companies by giving robot demos and presentations. We hope to raise approximately 30% of our income with current and new sponsors. Finally, we have a tremendous family support structure and we usually raise 20% of our income from this means. Each year we hope to raise \$45,000 to cover enough expenses for 2 tournaments. On our budget is attached and in our business plan document, where we itemize out where are expenses are going. If our team qualifies for the World Championship, we fill out additional grant requests and reach out to our current sponsors to help with our additional expenses.

Expenses	Cost
1st Competition, Entry Fee and Kit of Parts	\$5,000.00
Materials to build robot	\$10,000.00
Remaining Tools and Shop materials	\$10,000.00
Field components—build practice field objects	\$2,000.00
Marketing Materials—Buttons, pamphlets, etc.	\$650.00
TShirts, sweat shirts, etc	\$1,500.00
Banners, posters, event supplies for tournament	\$1,300.00
Pit design, build and supplies for tournament	\$1,500.00
Sub Total for season and 1 tournament	\$31,950.00
2nd Regional Tournament - TBD	
Registration	\$4,000.00
Materials	\$3,000.00
Bus Rental	\$6,000.00
Sub Total for 2nd tournament	\$13,000.00
<b>Expenses Total</b>	<b>\$44,950.00</b>
<b>World Championship Costs **If qualify</b>	
Registration	\$5,000.00
Costs for materials	\$1,000.00
Give-a-ways at tournament	\$1,000.00
Travel - bus	\$10,000.00
Travel - Robot expenses	\$1,000.00
<b>World Championship Total</b>	<b>\$18,000.00</b>
<b>Total with World Championship</b>	<b>\$62,950.00</b>
<b>Income</b>	
Family Donations	\$2,500.00
Paul and Amy Hach Foundation	\$10,000.00
Concessions at FLL tournaments	\$800.00
Raffle at FLL tournament	\$200.00
<b>Income Total</b>	<b>\$13,500.00</b>
<b>Net Difference</b>	<b>\$49,450.00</b>

## RISK ANALYSIS

Team Composition: Over half our team consists of sophomores and younger.

- Strength: The more experienced members of our team lead the team and pass down their experience to the younger members during the off-season.
- Weaknesses: Many of the new members aren't as disciplined on the machines, and are unequipped to run the more dangerous and complex machines. This can slow production rate down substantially during build season.
- Opportunity: These new members gather knowledge and experience the longer they are in FIRST, generating hope for future years.
- Threats: The intensity at which an FRC team is run, and the speed at which we move can very easily turn younger members away as they are not prepared for an experience like this.

Financial Statement: We have sponsors nationally and locally supporting our team along with grants

- Strengths: We have grown strong relationships with our sponsors.
- Weaknesses: We are privately run and have no school sponsoring us and no funding to fall back on.
- Opportunity: People and corporations in the area are interested in kids going into STEM.
- Threats: Sponsorship is uncertain from year to year, and there are two other FRC teams in the area.

Team Skills:

- Strengths: We have a strong base of mentors and graduates assisting our team grow
- Weaknesses: We have a lot of new members with only general knowledge. We lack depth to specific fields.
- Opportunity: As new members get engaged, there is a lot of opportunity for growth in knowledge and ability.
- Threats: With limited experts this year, the loss of even one experienced member could have a significant impact.