



Business Plan Executive Summaries

TEAM MISSION STATEMENT

Our mission is simple. It encapsulates our community as we revel in our past endeavors and envision future opportunities. We aim to provide all students, elementary through high school, with hands-on experience in science, technology, engineering, and mathematics. We create real-life business interactions with firms in our community while striving to exhibit 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 began in Fort Collins, CO in September 2012 when two teams, having come up through all of the levels of FIRST, joined together into a new team that would start a whole different journey. These two teams were friendly rivals back in FLL and FTC as they competed in state and local tournaments. A new story unfolded as these rivals joined FRC together as teammates, diving into challenging but rewarding competition, engrossed in a mission to spread the impact of FIRST. 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 activities. 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 and extending our reach. We opened our doors and now are back up to 22 members strong. More than half of our new members are 9th grade and below, and one fourth are girls. While this presented a challenge, we are more prepared for our future than we have ever been before.

ORGANIZATIONAL STRUCTURE

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

The relationships fostered, and the stories made are highly valued to The Highlanders as we ground relationships in our team, our partners, and our community. Returning members went above and beyond to maintain our team bond. Training guides, machine tutorials, and one-on-one training allowed new members to quickly learn the basics of robot production. Apart from learning, events such as paintball, laser tag and mud runs bring new members quickly into the fold. To ensure the progress of knowledge members work their way through levels of expertise. From basic machining, to specific areas of expertise, to CAD and design team, our members are kept thoroughly engaged, constantly learning, and exceptionally inspired. Many alumni have returned as mentors, assisting us on weekends away from college or through Skype. Our mentors are constantly energized by the vitality and energy our members bring to practice. Many of our mentors have had children on the team, and when these members graduated, the parents remained mentors, completely committed to working with other kids learning robotics and STEM. In our community, relationships we craft are far more important than the numbers we achieve. Starting kids in FLL is a personal goal, but then ensuring they are able to climb the levels of FIRST with ample assistance is as important. Our partners too are valued. Through internships, facility tours, and robot demos we make sure that our connections are more than just sponsors, but true partners valued for what both bring to the table.

DEPLOYMENT OF RESOURCES

Our resources are categorized into three main areas: Our community and our endeavors to raise awareness, our efforts to grow the FIRST community in all four levels of FIRST, and finally ensuring our own team is bolstered in order to offer the most exceptional experience for all our members. In our community we are constantly putting aside money for the litany of events we host and participate. Our FLL Robocamp hosted during the summer is a major output of resources. Advertising, member participation, and Lego materials all make these weeks a success. We set aside a lot of team resources, time and money, to start new FIRST teams. These past two years we have switched focus, pushing a lot more of our resources into the underprivileged and minority groups. We have reached out to three Boys and Girls clubs in our county starting a successful FLL team at two of them. We meet twice a week during their build season to teach the basics of building and programming through the engineering design process. Ensuring the own success of our team and each member is a consistent priority. Our facilities in

our first year only consisted of a basic mill and other essentials. Through the progression of each year we have grown our shop capabilities. Our most valued machine is the CNC plasma jet our very own members designed and built. Just this past year we got our newest CNC HAAS adding to the number of machines our members are trained on. Knowledge isn't our only focus for team resources though. Team events that bond members into something greater creates memories worth remembering.

FUTURE PLANS

This past year we have begun implementing a five step process that over the course of the next three years will allow us to reach far beyond our mission. Simply put, we raise awareness, start early, encourage midway, join community, and finally partner with professionals. First, raising awareness is the foundation of our future. While we are ardent participants in many local events, we hope to begin our adventure in hosting our own events to raise awareness for STEM. Next, while starting kids early in FIRST with FLL has always been a priority, starting kids even earlier into STEM is already being thought through as we plan on reaching out to local Kindergarten and 1st grade classes in our community. In our third step of the mission, we have helped many FTC teams transition from FLL to FTC. Only a few teams know that they can come to us for help, we want to be the "door" to FIRST for the entire FTC community in our region as we help other FTC teams understand we are here to help. In our fourth step we join our community. In this area we have been strong since our inception, but plan to expand more. Current possibilities include everything from a teddy-bear robot to putting on a halftime show at a roller derby. The final step consists of partnering with professionals. Partnering more with local businesses in an attempt to strengthen the bond we have with businesses around us is our last goal for next year. Creating an entire marketing team to work with our marketing head is our path to success in this respect.

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 a 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 detailed budget listed on page 58, 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 *required to participate	\$5,000.00
Materials to build robot	\$10,000.00
Remaining Tools and Shop materials	\$12,000.00
Field components—build practice field objects	\$5,000.00
Marketing Materials—Buttons, pamphlets, etc.	\$800.00
TShirts, sweat shirts, etc	\$2,500.00
Banners, posters, event supplies for tournament	\$800.00
Pit design, build and supplies for tournament	\$1,200.00
Sub Total for season and 1 tournament	\$37,300.00
2nd Regional Tournament - Arizona North	
Registration	\$4,000.00
Materials/Supplies	\$3,000.00
Bus Rental	\$6,000.00
Parent/Family travel payments	(\$6,000.00)
Sub Total for 2nd tournament	\$7,000.00
Expenses Total	\$44,300.00
World Championship Costs **If qualify	
Registration	\$5,000.00
Costs for materials	\$500.00
Give-a-ways at tournament	\$500.00
Travel - bus	\$10,000.00
Travel - Robot expenses	\$250.00
Travel Reimbursement - Parent Covered Expenses	(\$10,000.00)
World Championship Total	\$6,250.00
Total with World Championship	\$50,550.00
Income	
PTC Grant	\$2,500.00
OtterCares	\$2,500.00
Neaera Consulting	\$20,000.00
Lockheed Martin	\$2,500.00
Peak Resources*	\$3,000.00
NASA	\$5,000.00
Concessions at FLL tournaments	\$600.00
Raffle at FLL tournament	\$200.00
Parent/Family donations	\$8,000.00
Income Total	\$44,300.00
Net Difference *2 tournament season	\$0.00
Net Difference *3 tournament season	\$6,250.00
Assets	
Shop useage / year	\$80,000.00
Supplies	\$15,000.00
Powder Coating Services	\$5,000.00
Metal donations	\$250.00
Total Assets	\$100,250.00

RISK ANALYSIS

- Team Composition: Over half our team consists of sophomores and younger.
- Strength: our strength is in our experienced members leading the team.
- 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.