Hawktimus Prime

FRC Team 3229

Sponsorship Packet

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Section I: Executive Summary

Mission Statement

The mission of Hawktimus Prime is to help promote Science, Technology, Engineering and Mathematics (S.T.E.M.), while working together as a cohesive team to build a competitive robot and have fun.

History of Hawktimus Prime

- 2009: Initial entry in FIRST Robotics Competition
- 2017: North Carolina State Champions
- 2018: North Carolina State Champions–First NC State Team to win back-to-back Championships

Team Information

- Address: Holly Springs High School, 5329 Cass Holt Rd, Holly Springs, NC 27540
- Faculty Advisor: Benjamin Snead, CTE Teacher
- Team Makeup: 40 Students, 17 Leadership Roles, 11 Mentors, 6 Parent Boosters
- Team Status: A 501(c)(3) non-profit organization

Team Purpose

- Design, develop, and demonstrate a robot for the FIRST Robotics Competition (FRC)
- Teach High School students about STEM and team dynamics
- Sponsor and mentor a FIRST LEGO League (FLL) elementary school team
- Promote the FIRST doctrine of encouraging scientific and technological thinking in younger generations.

Summary of Growth

When the team was founded in 2009, it was made of a small group of students. Today the team consists of over 40 students. Also, the team has significantly matured by going from competing in only one regional competition to competing in two. We also won back to back State championships and represented North Carolina in the world competition in 2017 and 2018.

Team Objectives

- Expand our team and our knowledge
- Help encourage STEM in our community and work with local teams
- Learn how to be a good host team for competitions
- Come together to finance and build a competitive robot
- Continue to explore ways to find new partners and retain old ones
- Continue Community Outreach
- Continue working with local STEM programs

Section II: Program Summary

Hawktimus Prime 3229 is a FIRST Robotics Competition (FRC) team led by high school students with a passion for Engineering, Programming, and Business. Based out of Holly Springs, North Carolina, we use Holly Springs High School as our meeting place and workspace. Many students join with little to no experience in any areas of the team. Through the challenges of the initial build season, our first members worked together to construct a robot that laid the foundation for future members to expand on and succeed. Our team is not only proud of successfully building robots and competing as a cohesive team, we are also proud of the fact that we are teaching skills and providing a great experience to all members of our team.

2.1 Hawktimus History

Hawktimus Prime is a relatively new team founded in 2009 by a small group of students, and now our team has grown to over 40 members and has won the NC State Championship in both 2017 and 2018. Hawktimus Prime is split up into two major teams, each composed of sub teams. The major teams are Build Team and Business Team. The Build sub teams are Mechanical, Electrical, Safety, and Programming. The Business sub teams are Sponsorship, Marketing, Treasury, Safety, Competition/Travel, Game Strategy, Scouting, and Inventory. Each team and sub team are led by experienced students, who learn necessary leadership skills. Team 3229's efforts do not stop at building a robot. Our team thrives on giving kids from all walks of life a chance to learn about and experience technology in a way they may not have been able to otherwise. Over the past eight years, our team has influenced the lives of thousands of school age kids, from elementary to high school, by teaching them important engineering and leadership skills and with our demonstrations which spark their curiosity in STEM. By exposing kids to the possibilities that science and math can offer today, we are influencing the next generation of innovators for years to come.

2.2 About FIRST

FIRST (For Inspiration and Recognition of Science and Technology) Robotics is a nonprofit international robotics organization founded by Dean Kamen in 1989. The intent of FIRST is to inspire students in the fields of science and technology through competitions. The FIRST Robotics Competition combines gracious professionalism with technology. The result is an environment that fosters a deeper appreciation for science and technology. FIRST has four competitions it facilitates each year to promote this vision: FIRST Robotics Competition (FRC), FIRST LEGO League (FLL), FIRST Tech Challenge (FTC), and Junior FIRST LEGO League (JFLL).

Vision: “To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders.”-Dean Kamen

Mission: “Our mission is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.”

FRC stages short games played by remote-controlled robots. The robots are designed and built in six weeks (out of a common set of basic parts) by a team of high school students and guided by a handful of mentors. The students pilot the robots on the field. Each school year, teams are formed in the fall. Competitions take place in March and April. FRC Regional events are typically held in university arenas. They involve 40 to 70 teams cheered by thousands of fans over three days. A championship event caps the season. Referees oversee the competition and Judges present awards to teams for design, technology, sportsmanship and commitment to FIRST. The Chairman’s Award is FIRST’s highest honor.

2.3 History of FIRST

While FIRST was founded in 1989, the first FRC season wasn't until 1992. From 1992 to 2004, games were played with two teams on each of the two alliances on the field, where an alliance represents a group of teams that are allied for one match. From 2005 on, which is commonly known as the "modern era", games are played with three teams to each alliance. The FRC competition has evolved each year with its beginnings on small fields filled with corn kernels to the 27' X 54' field with lights, sensors, buzzers and obstacles that we all have come to know and love.

2.4 Team Finances

2016-2017: 50 members
Sponsor money: $7,252
Money spent: $3,418.76
Money leftover: $12,544.81

2017-2018: 40 Members
Sponsor money: $19,278
Money spent: $20,535
Money leftover: $5848.55

Estimated 2018-2019: 60 members
Sponsor money: ~$30,000
Money spent: ~$25,000
Anticipated Money leftover: ~$10,000

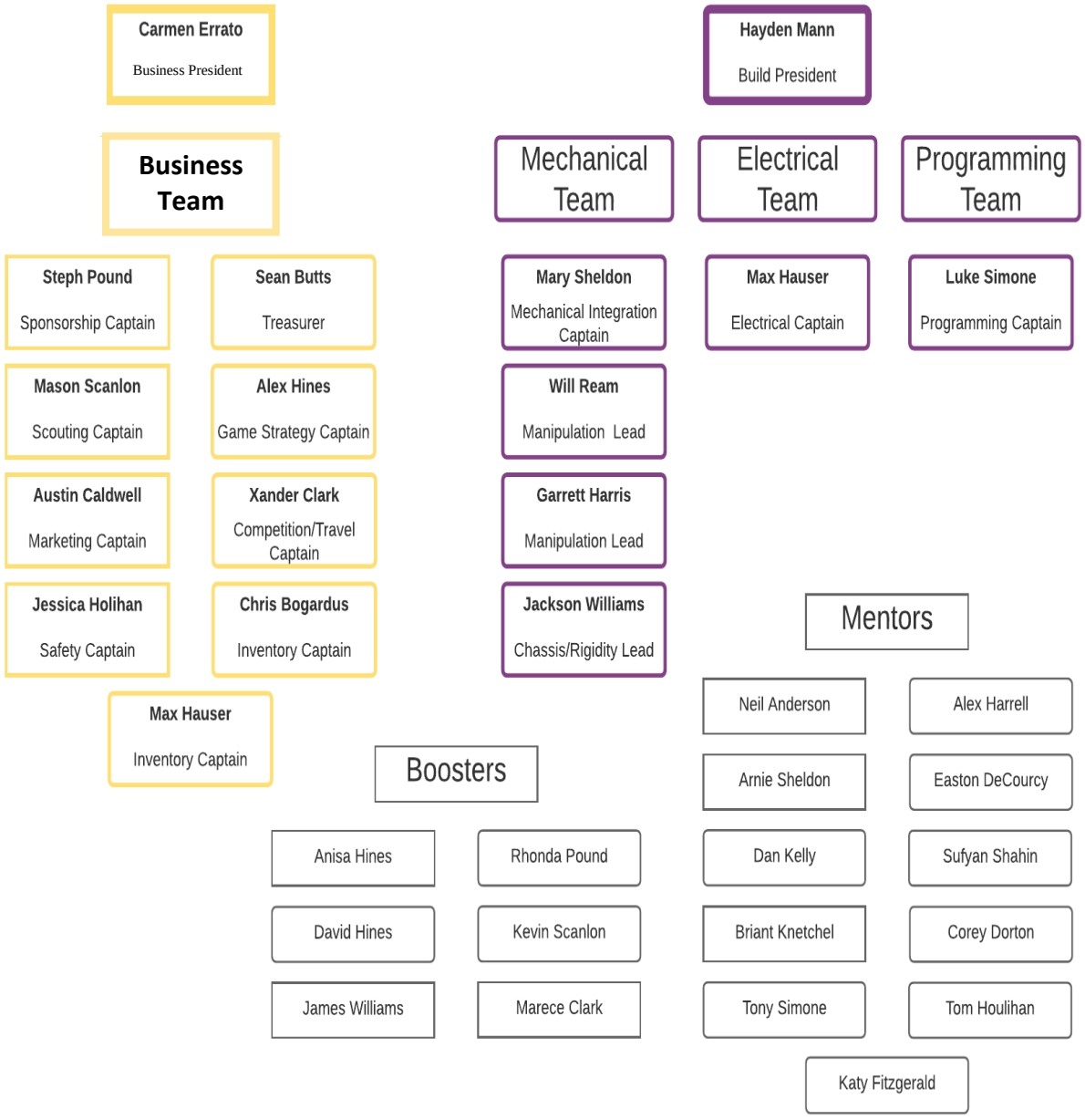
Minimum start-up expenses: $12,000-$15,000
Necessary items for start-up: workshop, students, mentors, enough space, proper tools and raw materials.

Wishlist:

- Swerve drive and other new technology
- Batteries
- Spirit/mascot
- Lexan and metal
- Mentors

Section III: Team Organization

3.1 Leadership Overview



This flowchart illustrates how our team is set up. The two presidents are equal and oversee their own teams, while all the captains/leads are equal. Currently, we only have 4 teams; but as we continue through the season, we intend on creating more and expanding on the ones we currently have.

3.2 Season Planning

Pre-season

For most members of our team, the Pre-season typically begins in September. For team leadership, however, preseason begins the moment their new positions are announced to the rest of the team. Previous leaders step back to teach the incoming leaders what to do and allow them to plan for our team's upcoming year. Once the school year ends, the two presidents continually look for events to enter, hold leadership meetings for their respective teams, and have at least one combined leadership meeting to discuss possible preseason projects, upcoming year meeting dates, and current/potential sponsors. Just prior to the new school year and into the first couple of weeks of school, we participate in school events for all students. This allows us to be more recognizable, demonstrate our robot, and recruit new students.

During this time, we have two meetings per week until the start of build season. At these meetings we organize the sub teams, train the new robot drivers, and train new/inexperienced members. A major way we teach the skills is with preseason projects in which inexperienced members work with their team captains to successfully work on and successfully complete designated projects. We also focus on fundraising and sponsorship, both local and corporate, during this time.

Each year, we attend, as a team, a preseason competition called THOR. This helps get the new members situated and allows them to see what a real competition is like.

Build Season

Our Build Season begins when FIRST hosts Kickoff in the beginning of January. Until this time, we are kept in the dark about the objective of the new game. FIRST Kickoff is essentially one big event where FIRST releases the game manual, gives each team a kit of parts (KoP), and explains everything about the game to all the teams simultaneously. Hawktimus Prime breaks out into two teams for Kickoff with one team setting up for and viewing the livestream while the other team attends the official regional Kickoff to collect the KoP from FIRST. Both teams join up afterwards. Once the livestream is over, we start brainstorming ideas as to how we can accomplish the goals of the game and what kind of mechanisms we should have on the robot. On the first day of school after Kickoff, we begin building. We typically have only four to five weeks to build the robot. We use our remaining time purely for testing and repairs.

Post Season

Once our competitions are over we move into Post Season which consists of signing up for events, spring cleaning, signing up for leadership positions, and our end of the year picnic. Once new leaders are announced, we have come full circle and start another season.

Section IV: Marketing

4.1 Overview

Within Hawktimus Prime 3229, there is a defined marketing/business team. This team oversees budgeting, fundraising, money management and planning, and outreach. We stress the importance of a quality and professional relationship with our sponsors. As a group, we would like to uphold a good relationship with everyone who supports us as well as with our peers. To do this, we feel it is important to uphold certain expectations we have for the team. We appreciate everyone who participates in and contributes to FIRST.

4.2 Planning

Each robotics team has unique requirements to ensure success, however, most can revolve around the same ideas. A solid team foundation, with good leaders who aspire to learn and teach, is necessary for a team to function. A stable financial foundation to support the team and their ideas. Finally, a drive to learn and participate in STEM. On our team, we have certain ways of going about accomplishing each of these things:

1. We expand our recruitment to our peers in the community, looking for a diverse set of students, and the adults who are willing to pass down the knowledge they have from experience.
2. Leadership holds meetings throughout the year, even during the off season, to ensure all of us share the same vision and support one another.
3. We educate new members in the way of FIRST and about all the different parts of our team, encouraging them to find what they enjoy the most.
4. Our business team continually reaches out to previous and potential sponsors keeping them apprised of what accomplishments Hawktimus Prime 3229 has achieved, what our goals are for each year, and what we can offer them as far as community recognition.
5. Budgeting our funds and planning for the season to come is important to us, and we use previous years to predict income and outcome.

As our plans are executed, we hope to seamlessly move into next season and do well to make our members and sponsors proud.

4.3 Sponsor Information

We are very lucky to have generous sponsors who donate to our team. These sponsors ensure our ability to expand on past years' experience so that we can grow on that success. Our sponsors range from local companies to large corporate bodies and provide a range of support.

- Local: Our local sponsors are local businesses and/or parents (and family) who have ties to the team or who stand behind the ideals of FIRST. They may provide time, money, or even space for our team.
- Corporate: Company sponsorship can include a wide variety of help such as donating money, and providing us with tools, all of which is very much appreciated. Also, the experience of being recognized on this level is amazing, and we work hard to keep these sponsors, as well as the local sponsors, updated on our achievements by sharing them on social media and our website, as well as emails.

4.4 Sponsor Levels

Donated Amount:	Family Sponsors:	Company Sponsors:
$50+	Receive updates on the team's progress and plans and recognition on team shirt.	Receive updates on the team's progress and plans.
$100+	Recognition on the team's website.	Recognition on the team's website.
$500+		Company's name and/or logo on our shirt and robot. (Highest sponsor names our robot)

4.5 Marketing Goal

The marketing team's goal is to help the overall team maximize their effort and provide the resources needed for success. A spectrum of duties falls under this team, and each are important for complete functionality. We want to allow our team members to have the opportunity to learn and enjoy themselves, so we aim to minimize the limitations that developing teams may have. The goal of fundraising and planning is to support these aspects of our team.

4.6 Sponsors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JOHN DEERE


CASTRA


STANLEY MARTIN


IMA SCHELLING
GROUP


ACH
CONSTRUCTION


TRIPLE A
HOMES, INC.

Section V: Community Outreach

Hawktimus Prime has been actively interacting with our community and surrounding schools by mentoring younger teams and showing off our robot to elementary schools.

Our Team's Contributions

2010/11

3229 helped team 3459 (Pyrotech) in their first year by helping with their robot as well as providing them a workspace to build and test their robot.

2011/12

3229's members wired and donated solar panels to students in Haiti to help power their electronics, so they could participate in interactive digital learning experiences at school.

2013/14

3229's members raised money to purchase and sent solar powered lamps to Haiti so the residents that received the lamps could see at night during the mass power outages present at the time.

2014/15

3229's members put together an activity book for lower socioeconomic families. These books contained STEM themed activities such as mazes and coloring pages. These books were donated to our local food bank (Holly Springs Food Bank) to be distributed to those in need.

2016/17

3229 began to help team 6565 (Bobcats) by providing student mentors as well as financial assistance.

2017/18

3229 assisted team 6565, Bobcats, for a second year. This year we helped them by paying their entry fees for the state competition. Without these funds, they would not have been able to attend the competition. As of 2018, 3229 has also mentored a FLL (First Lego League) team for 5 years by providing members of our team to help mentor the team.

Present

Along with giving back to the community, Hawktimus Prime also attends many outreach events locally. In the current 2018-19 season, we have already attended the Kids Appreciation Day event in Holly Springs, where we let kids drive the robot under our supervision and ask any questions regarding our robot and Hawktimus Prime as a team. We also attended Science, Technology, Engineering, Arts, and Math (STEAM) night at a local elementary school (Holly Springs Elementary) where we demonstrated robots as well as showing kids how to program using a simple app.