

Commented [A1]: Change FIRST Robotics Competition logo picture & team logo pic

Business Plan & Risk Management Plan

2016

FIRST® Team 1741

Red Alert Robotics

*Center Grove High School
2717 South Morgantown Road
Greenwood, IN 46143*

*www.redalert1741.org
www.firstinspires.org*



Business Plan & Risk Management Plan

Table of Contents

1 Mission and Vision 6

 1.1 Mission Statement 6

 1.2 Vision Statement 6

 1.3 Team History 7

 1.4 Branding 8

 1.5 Quick Facts 10

2 Who we are update..... 12

 2.1 Sustainability with Our Students 13

 2.2 Recruiting New Members 13

 2.3 Active Students 15

 2.4 Management Plan 16

 2.4.1 Team Structure Diagram 16

 2.4.2 Expectation of Members 14

 2.4.3 Expectations of Mentors 17

 2.4.4 Expectations of Student Leaders..... 17

 2.4.4.1 Team Captain..... 17

 2.4.4.2 Engineering Captain 18

 2.4.4.3 Design Captain 18

 2.4.4.4 Operations Captain 18

 2.4.4.5 Safety Captain 19

 2.4.4.6 Digital Media Captain 19

 2.4.4.7 Scouting Captain 20

 2.4.4.8 Sub-team Captains 20

 2.5 Resources 20

 2.5.1 School 20

 2.5.2 Mentors 21

 2.5.2.1 Active Mentors 21

 2.5.3 Alumni 22



Business Plan & Risk Management Plan

2.6 Our Partnership with Our Community.....25

2.7 Analysis and Strategy.....26

 2.7.1 WWW/WNI Review26

 2.7.2 SWOT Analysis.....23

 2.7.3 PEST Analysis.....30

3 Outcomes and Goals.....33

 3.1 How we did in 201533

 3.1.1 Tournaments.....33

 3.1.2 Awards and Achievements.....33

 3.2 Opportunity Plan.....34

 3.3 What we want to do this year34

 3.3.1 External goals34

 3.3.2 Internal goals.....34

 3.4 If we succeed in these goals.....35

 3.4.1 We will change our community by:35

 3.4.2 To do this we must:35

 3.5 Short term plans.....35

 3.5.1 In One Year.....35

 3.5.2 In Three Years.....36

 3.5.3 In Five Years36

 3.5.4 In Ten Years.....36

4 Finances.....37

 4.1 2015-2016 Projected Income.....37

 4.2 2015-2016 Project Expenses37

 4.3 2015-2016 Finance Detail38

 4.3.1 Total Income.....38

 4.3.1.1 Sponsorship Include.....30

 4.3.1.2 Student Fees.....30

 4.3.1.3 Traveling Fees.....30



Business Plan & Risk Management Plan

4.3.1.4 Friends and Family Letters	30
4.3.1.5 Fundraising	30
4.3.2 Total Expenses	38
4.3.2.1 Entry Fees	31
4.3.2.2 Travel	31
4.3.2.3 Banquet	31
4.3.2.4 Non-Engineering.....	31
4.3.2.5 Trailer.....	31
4.4 2015-2016 Detailed Finances	39
4.4.1 Income	39
4.4.2 Expenses	40
4.5 2015-2016 Projected Income.....	41
4.6 2015-2016 Project Expenses	41
4.7 2015-2016 Finance Detail	42
4.7.1 Total income	42
4.7.1.1 Sponsors	33
4.7.1.2 Student Fees.....	34
4.7.1.3 Traveling Fees.....	34
4.7.1.4 Friends and Family Letters	34
4.7.1.5 Fundraising	34
4.7.2 Total expenses	43
4.7.2.1 Entry Fees	33
4.7.2.2 Travel	33
4.7.2.3 Banquet	33
4.7.2.4 Non-engineering	33
4.7.2.5 Trailer.....	33
4.8 2015-2016 Detailed Finances	43
4.8.1 Income.....	44
4.7.2 Expenses	45



Business Plan & Risk Management Plan

5 Execution46

5.1 Execution of the 2014 Build Season46

5.2 Team Sustainability.....46

5.2.1 Sustainability.....46

5.2.2 Importance of Sustainability46

5.2.3 Sustainability with *FIRST*®46

5.2.4 Sustainability within our Community47

5.2.5 Developing Sustainability within Our Team.....48

5.2.6 Developing Sustainability with Others49

5.2.7 Sustainability with our School50

6 Awards 51

7 Risk Management Plan53

7.1 Risk Matrix.....53

7.2 Possible Risks.....53

7.2.1 In case of Loss of School Build Area53

7.2.2 In Case We Lose Key Sponsors54

7.2.3 In Case Our Parent Organization Embezzles Our Funding54

7.2.4 In Case Our Team Loses Access to School Computers55

7.2.5 In Case We Lose Our School Liaison55

7.2.6 In Case of Snow and/or Ice Storm56

7.2.7 In Case of an Epidemic56

7.2.8 In Case of Tornado.....57

7.2.9 In Case of Flood.....57

7.2.10 In Case of Student Leadership Incapacitation57

7.2.11 In Case of Severe Injury58

7.2.12 In Case of Loss of key mentor(s)58



1 MISSION AND VISION

We create leaders by giving students real world problems to solve, which gives them experience in more than just science and technology.

1.1 MISSION STATEMENT

FIRST® Team 1741, Red Alert Robotics, will operate in the spirit of *FIRST*® in our minds and actions. We will operate in *FIRST*®'s image with quality, safety, Gracious Professionalism®, and respect; inspiring future generations to incorporate the core values of *FIRST*® into their lives.

1.2 VISION STATEMENT

We create leaders by giving students real world problems to solve, which gives them experience in more than just science and technology.

Our Vision For 1741's Future

Us

Our students will learn engineering, business, as well as life skills and use them throughout their careers.

Our team, students, parents, and community will understand the bigger picture of *FIRST*®.

We will not be afraid to be ourselves.

We will train students in leadership, build, design, business, and digital media to prepare them for success.

We will be successful while also maintaining good character and Gracious Professionalism®.

We will continue to be inspired to be the best we can be as well provide positive role models to our Jr. FIRST LEGO LEAGUE, FIRST LEGO LEAGUE, and FIRST TECH CHALLENGE teams.

Outreach

We will inspire and encourage our community to take part in STEAM.

We will help make STEAM more accessible to visually or hearing impaired students.

We will help rookie and developing teams on their way to success.

We will continue to provide guidance to teams in need of help.

We will sustain and lead while creating more *FIRST*® teams from Jr. FIRST LEGO LEAGUE to FIRST ROBOTICS COMPETITION.

Building

We will do our documentation while we are building our robot.

We will have a functioning robot to work with the third week of build season.



We will improve our communication and student leadership skills.

Competing

We will win all of our matches for our alliance.

We will be a prime example of Coopertition® and Gracious Professionalism®

We will win our way to World and win an award there.

We will win a blue banner for the robot.

We will win on Einstein without a mentor even touching the robot.

We will win the World Chairman's Award.

This Dream Wall was revised at a May 2014 meeting where nearly every student, mentor, and parent was present. Participants were asked to imagine they were in the same meeting in May 2015.

1.3 TEAM HISTORY

FIRST® Team 1741 Red Alert Robotics is located at Center Grove High School in Greenwood, Indiana, USA. For the past eleven years, since our team was founded in March of 2005, Red Alert has been led by a group of students, mentors, parents, and the Center Grove School Corporation, focused on spreading the mission of FIRST®, "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."

In 2005, Center Grove School Corporation noticed a void in their school activities with regards to science and technology. Summer Ehresman, a computer education teacher, and two families, the Baxter's and the McCoy's, decided to form a FIRST® team to fill the vacancy. They were the founding mentors of Red Alert Robotics. Linda McCoy and Sharon Baxter established the Non-engineering side of Red Alert Robotics (NEngA), and were the founding members of the Red Alert Robotics Parent Organization (RARPO), a non-profit organization, formed in 2008, run by parents in order to sustain our team. Steve McCoy and Dwight Baxter founded the Engineering side of the team teaching student's life skills in science and technology. Over the years we have had a lack of consistency with corporate sponsors, teacher connections with our school, and growth of student members and mentors. In August 2012, Mark Snodgrass became our new teacher sponsor and head coach, being instrumental in enhancing team development as well as growth and raising more funds for our team. Starting in August 2015, Gregory Valenta, stepped up as our teacher sponsor. Additionally, the past few years we have

Commented [A2]: Add info about more current events: IC, Mr. Valenta, team crises and how they were overcome (use chairman's essay)



struggled to find a permanent facility due to construction projects and many changes in administration. After meeting with our superintendent, the Innovation Center was built in order to provide our team access to design rooms and computers. This year we began the process of moving in. Since the founding year of FIRST® Team 1741, Red Alert Robotics has steadily grown from fifteen students and seven mentors to forty-five students and twenty mentors, with a quarter of the students being female.

1.4 BRANDING

To maintain FIRST® Team 1741 Red Alert Robotics visual identity, please keep to these branding standards. There are always exceptions to these standards, for example our 10th year logo as picture on the bottom of each page.





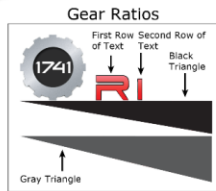
BRANDING STANDARDS

Team Logo

The Red Alert logo is a very important part of our team's outward appearance. As such, it is of utmost importance that it be displayed how it was intended to be displayed. That being said, the relations for how the logo should look in proportion to the gear are as follows:

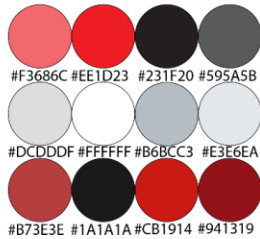
- The gear should be the same length across from the middle of the outside edge of any cog to the same spot on the opposite cog.
- The triangle should be approximately 5.778 times bigger than the gear horizontally.
- The triangle should be approximately 0.685 times the size of the gear vertically.
- The top row letters should be approximately 0.370 times the size of the gear vertically.
- The bottom row letters should be approximately 0.296 times the size of the gear vertically.

The gear should be placed in the upper left corner of the logo, the triangle placed with the largest angle opening upwards, with the base being parallel to the bottom or top of the page, and the black triangle overlaid onto the silver triangle, connecting at the base. The angles of the small corners of the silver triangle are approximately 13 degrees, the silver triangle's large angle is approximately 153 degrees. The black triangle overlaid onto the silver triangle has a small angle of 10 degrees, and 160 degrees for the large angle



Website Colors

To have our website have a consistent look we have a secondary color palette to compliment our team colors. We use the font Verdana for body paragraphs and places Dodger is not applicable.



Team Colors and Branding

The team logo for Red Alert Robotics uses the Dodger font, for both the team name and the team number. In the background, we use a gray and black triangle. Our team is very specific with the colors we use. Our palette consists of many shades of gray, white, red, and black. Our team logo also contains gradients, one for the triangle which is gray, and red gradient for the "Red Alert Robotics" text. All specific colors can be found in the palette with their respective HTML color code.

DODGER
 A B C D E F G H I J K
 L M N O P Q R S T U
 V W X Y Z
 0 1 2 3 4 5 6 7 8 9

Verdana
 A B C D E F G H I J K L M N O P
 Q R S T U V W X Y Z
 a b c d e f g h i j k l m n o p q r
 s t u v w x y z
 0 1 2 3 4 5 6 7 8 9

Gear Logo Usage

The gear version of the 1741 logo should be used when there is not enough horizontal space available for the full logo, or where a square icon is required. The gear logo should always be shown with 1741 Red Alert Robotics' team numbers. The gear should always be used on a white or black background, and when a gradient version of the gear is unavailable, use a solid fill of color #B6BCC3 as seen to the left.



1.5 QUICK FACTS

←←UPDATE→→

Team Name	FIRST® Team 1741 Red Alert Robotics
Founding Year	March 2005
FIRST® Rookie Year	2006 (build season)
Current Team Students	45±
Number of Female Students	127
Percentage of Minority Students	11%
Team Mentors	20
Mentors With No Child On The Team	14
Number of College Mentors	02
Number of Female Mentors	23
Major Corporate Sponsors	Red Alert Robotics Parent Organization, Rolls Royce, Center Grove Education Foundation, Indiana Department of Education, Transformation Trust Inc., Praxair, Tech Point Youth Foundation, Stadium Graphics.
School Corporation	Center Grove High School
Located in	Greenwood, Indiana
Team Colors	Red, White, and Black
Logo	Text over triangle, with team number inside of a gear

Commented [A3]: update

Commented [A4R3]:

Year	Robot Names
2006	The Revolver
2007	Mantis, IRI: Nessie
2008	Thaddeus
2009	μ and Sherman
2010	Scorpion and Kirby
2011	Sampson, Destroyer of Worlds, Minibot: He-man, Master of the Universe; Squeaky, Minibot: Pipsqueaky
2012	Swish and Mordecai
2013	Whisbee and Rizzler
2014	Jaws and Inertia
2015	A.N.D.Y (Awesomeness, Nobility, Determination, and Youthfulness) and The Claaaaaaw



Business Plan & Risk Management Plan

2016 KnightFury and Ballista



2 WHO WE ARE UPDATE ~~←←EDIT THIS SECTION TO REFLECT STUDENTS IDEAS→→~~

We are the robotics team for Center Grove High School, *FIRST*® Team 1741 Red Alert Robotics (<http://www.redalert1741.org/>), located in Greenwood, Indiana, a suburb of Indianapolis. We compete in an international robotics league with more than 4,000 other high-school-aged teams. *FIRST*® (www.firstinspires.org), For Inspiration and Recognition of Science and Technology, has robotics leagues for Kindergarten-2nd grades: *FIRST*® Lego League Jr.; 3rd-8th grades: *FIRST*® Lego League; 7th-12th grades: *FIRST*® Tech Challenge; and our league of 9th-12th grades: *FIRST*® Robotics Competition. Each league is given a real world problem to solve requiring creativity, mathematics, science and technology, and a great deal of teamwork.

We have six weeks to design and build a 120 pound robot that competes in a game with and against other robots. This challenges us to accomplish tasks that relate to real world problems and involves Coopertition® and Gracious Professionalism®. Coopertition® is a mix between competition and cooperation and is put in place because we work with randomly selected alliances of three robots to play against another alliance in each match at tournaments. Gracious Professionalism® and Coopertition® embraces the spirit of *FIRST*® in competing against everyone, but working together for the greater good and being friendly and proficient.

We have a budget of \$69,755 annually and run like a business with an organizational chart and a Board of Directors. Students play important roles by not only designing and building a robot each season, but by creating the business plan, the web site, graphics, communications, safety plans as well as organizing outreach events and reaching out to sponsors. Funding and other resources come primarily from community sponsors, family, friends, and our school. We are incredibly fortunate to have a room in our high school dedicated to the team as well as having access to the high school's technology rooms and equipment which includes computers with CAD and animation software, as well as work rooms with equipment for construction.

We are a student lead team which means our Team operation requires students to develop collaboration, communication, and cooperation skills. ~~Students must learn to work with each other, as well as mentors, who have very different skills to function at a maturity level well above that of the average high school student. Students must work and communicate with a maturity~~



level higher than that of an average high school student, as well as be flexible enough to accommodate to the diversities that both the mentors and students bring. Our mentors guide and enable us to grow in our talents, knowledge, and leadership qualities.

We have set up our team to have leadership tiers. Each sub team captain has a non-senior co-captain learning what they do and how to do it. Once the captains depart the team, the co-captain can step up and know exactly how to run our team. This program was made so that the team's expertise does not leave with the seniors when they graduate.

2.1 SUSTAINABILITY WITH OUR STUDENTS

We are committed to building a better "us". Students gain transferrable skills in leadership, public speaking and business, designing and construction, along with self-discovery, self-esteem, and teamwork. We build our strength in these fields through unforgettable memories and experiences geared towards inspiring students to pursue STEAM fields.

During the off-season our team meets once twice a week. During these weekly meetings we hold training sessions for new students wanting to join the team, as well as regular meetings to perform outreach and to enhance our skills and teamwork. The training classes we teach include teamwork, Chairman's, scholarships, programming, electronics, scouting, CAD, leadership skills, machining, drivetrain, and safety. Before the build season begins we hold several design exercises to demonstrate the design process to our students in order to give them can an idea of what it takes to design a robot. During the design exercises, students must partner with other team members to design certain tasks such as a roller coaster, Jaguar box, a spaghetti tower, and a t-shirt canon robot ~~to design a robot for a previous year's game~~. Grades are extremely important to our team. In order to travel, a student on our team may not have an 'F' in any class and must have at least a 2.0 GPA. During the build season we do regular grade ~~checks, checks~~; if a student is struggling in a class we offer tutoring during the meeting. We partner with each other by offering a safe place to learn and offer help with homework assignments.

2.2 RECRUITING NEW MEMBERS <<REVIEW AND ENSURE THIS IS THOROUGH>>

FIRST® Team 1741, Red Alert Robotics, has a number of different ways to recruit members each year. Within this past year we FIRST® Red Alert Robotics



have hosted several open houses where we invited the whole community to come and see what Red Alert is all about. ~~In addition to the open houses we also hold a community tech night at a local middle school to help educate the community about technology along with FIRST® Team 1741 Red Alert Robotics.~~ ~~In terms of recruiting directly from our school, we have a call out at the beginning of the school year to encourage new students to join our team.~~ By participating in the high school's club fair ~~for~~ and ice cream social for freshmen at the beginning of the school year, we are able to encourage prospective students to join us at our call out meeting. ~~new students allow them to understand what we do on the robotics team.~~ At our schools "Meet the Teacher" night, we give the parents ~~of our school~~ a greater understanding of ~~who~~ who we are and flyers for our upcoming outreach events and call out meetings. ~~Our team also has a close relationship with our~~ FIRST LEGO LEAGUE teams. Not only are our students mentors and coaches for our six FIRST LEGO LEAGUE teams, but ~~they join us at C.A.G.E Match, an off season competition,~~ which ~~demonstrates what it is to be on a~~ FIRST ROBOTICS COMPETITION team. ~~At the end of the school year, we invite our~~ FIRST LEGO LEAGUE eighth graders to join our FIRST TECH CHALLENGE teams and participate throughout the summer. We have two FIRST TECH CHALLENGE teams combining eighth and ninth graders to fill the learning gap between FIRST LEGO LEAGUE and FIRST ROBOTICS COMPETITION. By working alongside our FIRST TECH CHALLENGE teams, we encourage the students to remain inspired by FIRST® while also illustrating the skills needed to be on a FIRST ROBOTICS COMPETITION team.



Business Plan & Risk Management Plan

2.3 ACTIVE STUDENTS

Commented [A5]: need few more FIRST years

Name	Years in FIRST®	Name	Years in FIRST®	Name	Years in FIRST®
Carpenter, DJ	*	Newport, Max	4	Strange, Veronica	*
Crews, Nick	2	Osborne, Connor	7	Terrell, Grayson	3
Franco, Emma	2	Putman, Laura	2*	Thielmeyer, Aaron	3
Golder, Peter	1	Rasche, Grace	1	Tugan, Braden	*
Horne, Taylor	5	Rasche, Sarah	4	Tugan, Noah	6
Isanaka, Ahkil	5	Rayner, Aaron	1	Vaught, Caleb	7
Kekre, Juhi	4	Reeves, Marie	3	Vaught, Isaiah	3
King, Caleb	2	Roeder, Ben	6		
Kogut, Adam	7	Schmoll, Andrew	6		
Kogut, Ben	2	Schneider, Zach	2		
Lange, Talmage	1	Schnurpel, Madi	1		
Lee, Malaya	1	Scifres, Colin	5		
Lovrinic, Jacob	6	Shr, Katie	3		
Martinez, Alvaro	1	Simpson, Reis	2		
McDaniel, Zach	2	Snyder, Cory	6		
Miller, Andy	7	Sorrentino, Ciana	1		
Mock, Chris	3	St. Louis, Adam	2		
Montgomery, Logan	5	Staats, Michael	3		
Morrow, Sarah	3	Stevens, Nick	3		

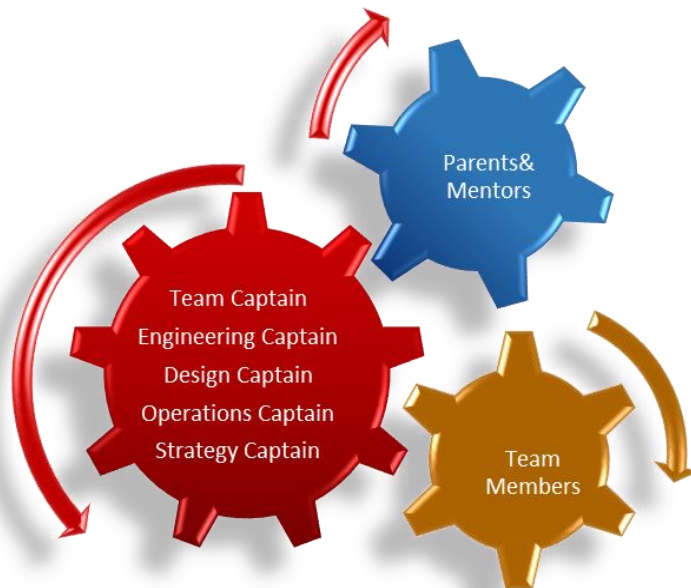


2.4 MANAGEMENT PLAN

<<Insert Kenzie's graphic of Ethan's drawing here>

2.4.1 TEAM STRUCTURE DIAGRAM

Commented [A6]: Add strategy captain



2.4.2 EXPECTATION OF MEMBERS <<REVIEW FOR THOROUGHNESS AND ACCURACY>>

- If a mentor or student in leadership requests you to do something, you will comply with the best of your ability. If you feel a request is beyond the scope of your capability, you are encouraged to attempt the task then speak to the lead mentor or head coach immediately.
- If you see others who are not being safe, encourage them to stop working and in a positive manner, show them how to do it correctly. If you are not certain, ask the nearest mentor.
- Perform to the best of your abilities at all times.
- Have respect for yourself, all fellow students, and mentors.
- Have a willingness to learn new things.
- It is the responsibility of all students to teach and mentor younger or new students to foster continuation of FIRST® principles and enable younger students to take on responsibilities as upperclassmen graduate.
- Gracious Professionalism: As outlined by FIRST.

2.4.3 EXPECTATIONS OF MENTORS <<REVIEW WITH MENTORS>>

- Demonstrate the highest level of integrity
- Listen
- Demonstrate exemplary conflict management skills

2.4.4 EXPECTATIONS OF STUDENT LEADERS <<REVIEW WITH MENTORS>>

2.4.4.1 TEAM CAPTAIN

- Oversee and manage the team's year round program
- Oversee all outreach and team events
- Responsible for the team year-long calendar of events
- Act as a liaison between the Red Alert Robotics Parent Organization and the team members
- Be a mentor and example to all other students
- Act as a 3rd party during a disagreement /difficult experience
- Make general decisions concerning the team
- Represent the team at all events
- Facilitate team discussions
- Lead weekly captains meetings



- Lead weekly team meetings
- If absent, make certain leadership is present at all meetings and team events.

2.4.4.2 ENGINEERING CAPTAIN

- Communicate with overall team captain progress and problems
- Oversee and manage the building of the competition robot
- Oversee all off season engineering/build projects
- Act as a liaison between the team captain and the engineering sub-teams
- Be a mentor and example to all other students
- Act as a 3rd party during a disagreement /difficult experience
- Make general decisions concerning the engineering sub-teams
- Coordinate robot demonstrations.
- Represent the team at all events
- Facilitate engineering team discussions
- Attend weekly leadership meetings
- If absent, make certain leadership is present at all meetings and team events.

2.4.4.3 DESIGN CAPTAIN

- Communicate with overall team captain progress and problems
- Oversee and manage the design of the competition robot
- Ensure all CAD is complete for the competition robot
- Oversee all use of the 3D printer
- Oversee all off season design projects
- Be a mentor and example to all other students
- Act as a 3rd party during a disagreement /difficult experience
- Represent the team at all events
- Facilitate engineering team discussions
- Track weight and cost of the robot.
- Attend weekly leadership meetings
- If absent, make certain leadership is present at all meetings and team events. ~~Etc.~~

2.4.4.4 OPERATIONS CAPTAIN

- Communicate with overall team captain progress and problems
- Oversee and manage the non-engineering sub-teams
- Oversee all team outreach and events



- Act as a liaison between the team captain and the non-engineering sub-teams
- Be a mentor and example to all other students Act as a 3rd party during a disagreement /difficult experience
- Make general decisions concerning the non-engineering sub-teams
- Represent the team at all events
- Facilitate non-engineering team discussions
- Attend weekly leadership meetings
- If absent, make certain leadership is present at all meetings and team events.

2.4.4.5 SAFETY CAPTAIN

- ~~<<Work with the Engineering mentors on this one>>~~Oversee and manage the safety sub-team
- Ensure safe practices are followed in the shop and all events
- Oversee the safety animation submission
- Design/maintain the robot cart
- Design/maintain the pit layout
- Track any injuries on the team
- Maintain the FIRST® Aid Kits
- Attend weekly leadership meetings
- Be a mentor and example to all other students
- If absent, communicate with assistant to make certain leadership is present at all meetings and team events.

Commented [A7]: Add strategy captain expectations

2.4.4.6 DIGITAL MEDIA CAPTAIN~~<<WORK WITH LEAD MENTOR AND COACH ON THIS ONE>>~~

- Communicate with the overall team captain about all progress and problems
- Oversee and manage the communications sub-team
- Send out weekly team newsletter
- Manage team social media accounts
- Maintain the team website
- Attend weekly leadership meetings
- Be a mentor and example to all other students
- If absent, communicate with assistant to make certain leadership is present at all meetings and team events.



2.4.4.7 STRATEGY CAPTAIN <<WORK WITH LEAD MENTOR AND COACH ON THIS ONE>>

- Communicate with the overall team captain about all progress and problems
- Communicate with overall team captain progress and problems
- Oversee and manage the strategy sub-team
- Oversee all scouting activities Be a mentor and example to all other students
- Act as a 3rd party during a disagreement/difficult experience
- Make general decisions concerning the strategy sub-teams
- Represent the team at all events
- Facilitate strategy team discussions
- Attend weekly leadership meetings
- If absent, make certain leadership is present at all meetings and team events.

2.4.4.8 Sub-team Captains

- Communicate with the engineering captain about all progress and problems
- Communicate with the digital media captain about all progress
- Lead their respective sub-team
- Oversee activities for which the sub-team is responsible
- Act as a liaison between the team captains and their sub-team
- Be a mentor and example to all other students
- Act as a 3rd party during a disagreement /difficult experience
- Make general decisions concerning their sub-team
- Attend weekly leadership meetings
- If absent, communicate with assistant to make certain leadership is present at all meetings and team events.

2.5 Resources

2.5.1 School

FIRST® Team 1741 is sustained with a developed partnership with our school. We help the school in any way we can since they are a major resource to us. Throughout the years, FIRST® Team 1741 has struggled with having room to work on our robot and store all of our tools. The school has assisted us by giving us a facility all to ourselves and allowing us to use the wood shop, machine lab, design room, and CAD lab. We also have access to a gym that is located in a separate building, but still on campus. In the past,



they have donated several computers to our team and for competitions they allow us to use school buses. They have also allowed us to have both a refrigerator and microwave in the room, which are used during the long build season days. Due to recent construction projects, FIRST® Team 1741 had to move out of our space last May and house our tools at the separate gym facility. Our school corporation has built the Innovation Center to provide 1741 with a permanent space and we are in the process of fully moving in.

2.5.2 Mentors

Our continued success is sustained primarily through our mentors. All of our mentors are community volunteers, except for our head mentor. Our strongest partnership is with our mentors. Our mentors are always there to encourage and empower us. They put in countless hours to push us to pursue excellence. Our dedication stems from the commitment they show us. Some of our mentors are people who came in for a day and were so inspired that they stayed on the team for years, even without having students on the team or a previous affiliation with FIRST®.

2.5.2.1 Active Mentors

Commented [A8]: Add updated years for the new mentors.

Name	Years in FIRST®	Name	Years in FIRST®
Baxter, Sharon	11	Miller, Jordan	9
Cardwell, Jon	5	Newport, Trent	1
Coulombe, Nathan	6	Osborne, Chris	4
Crider, David	4	Putman, Pat	2
Frampton, Patrick	11	Rose, Christopher	6
George, John	1	Schmoll, Bob	3
Hamilton, Bob	5	Settles, Tim	9
Horne, Mark	2	Thielmeyer, Rich	7
Ikegwonu, Valentine	5	Valenta, Greg	1



Kring, Ethan	5	Meyer, Hugh	10
---------------------	---	--------------------	----

2.5.3 ALUMNI <<UPDATE>>

Commented [A9]: Update 2015

100% of our students graduate from high school and go on to college or the military. 18% of our graduated students stayed involved with *FIRST*® as mentors or volunteers. We try to keep in touch with our alumni through social media. Most alumni are a part of the Red Alert Alumni Facebook Page and continue to keep a close relationship with their past team mates throughout college.

{ } around their name indicates that their information is unverified.

A * by their name indicates they stayed involved with *FIRST*® after graduation.

A ** by their name indicates they are currently involved with *FIRST*®.

2006

- {Nathan Dubbs – IUPUI}
- {*Cory Foster – Purdue University}
- *Kurt Mauer - Engineering at Purdue University- Cincinnati

2007

- Emily Baumgartner - Navy Electrical Engineer
- David Doane - Video Game Design at Manchester College in England
- **Patrick Frampton - Computer Science at IUPUI- Apperatis
- Autumn Holman - Law at IUPUI- (Mills) Murphy USA
- {Scott Pace - Electrical Engineering at Purdue University}
- **Betsy Smith-Baxter – Special Education teacher

2008

- *Eric Andrews - Media Arts and Science at IUPUI- Marriott
- **Charlie Baxter – The Med Institute- West Lafayette
- *Aaron Clay - Computer Science at Purdue University- Twitch Video streaming CA
- {Devin Dressler - Farming Technician at Ivy Tech}
- {*Michael Foley - Graphic Design at IUPUI}
- James Kramer - Management Information Systems at Washington State University- Boeing



Business Plan & Risk Management Plan

- *Mike McCoy -Mechanical Engineering at Purdue University- Impact Seattle

2009

- {*James Dugan- Working at Allison Transmission and Engineering at Ivy Tech}

2010

- {Andrew Alderson - Computer Science at IUPUI}
- {*Colin Ballast - Computer Science at IUPUI}
- {Tim Barnett - Music at Ball State- Graduated}
- {*David Foley - Mechanical Engineering at IUPUI}
- Kelsey Hart -Civil Engineering at Purdue University- Microsoft
- Jeremiah Hansen - Nursing at IUPUI
- Zack Hansen – Construction Engineering at IUPUI
- Ben Hyatte - Environmental Science at IUPUI-Menards
- Jacob Hyatte - Chemistry at Purdue University- AMRI Global Research Scientist
- *Alyssa Inman-McCoy -Economics through Purdue University
- *Mike Kobierski – Industrial Engineering at Purdue University
- Ryan Martin –EMT
- *Matt Misner - Informatics and Security at IUPUI- Amazon in Seattle
- {Colton Sprague – Independent video game tester}
- **Trevor Settles - Physics at Purdue University graduated
- *Levi Miller - Electrical Engineering at Purdue University- Apple
- *Craig Roberts - Electrical Engineering Technology at IUPUI- Dallora Indy Car Racing
- *Zach Stanley - Electrical Engineering at Purdue University- Cummins

2011

- Robin Eid - Electrical Engineering at IUPUI
- Alyx Kopie - Painting at Herron School of Art at IUPUI- Tattoo Artist
- **Jordan Miller – Media Arts and Science at IUPUI



Business Plan & Risk Management Plan

- *Carly Morris - Entomology at Purdue University
- Cynthia Rose - Engineering at Purdue University- Co-op at NASA
- **Nick Roeder - Engineering at Purdue University
- *Austin Settles - Biology at Purdue University- Studying overseas
- Justin Sluka - Computer Science at Purdue- Apparatus

2012

- **Rachel Daniel - Technology Education at Indiana State University
- *Steven Himebrook - Architecture at Ball State University
- Rushi Patel - Electrical Engineering at Purdue University
- **Alden Ray - Electrical Engineering at Purdue University

2013

- Darius Choksy - Physics at University of Chicago
- **Rick Clark - Chemical Engineering at Rose-Hulman
- *Josh Raker - Computer Information Systems at IUPUI
- Ethan Kring - employee at Walgreens

2014

- Brandi Butcher- Psychology at University of Indianapolis
- **Nathan Cardwell- Biomedical Engineering at IUPUI
- Torben Eid- Computer Engineering at IUPUI
- Jessica Kobierski- Psychology and Sociology at IUPFW
- Ryan Leser- Mechanical Engineering at IUPUI
- Dustin McKnight- Computer Science at IUPUI
- Mariah Smith- Materials Engineering at Purdue University
- Amy Tam- Industrial Design DAAP (Design, Architecture, Art, and Planning) School at University of Cincinnati

2015

- Hailey Rose- Accounting at IUPUI
- Travis Leser- Interdisciplinary Engineering at IUPUI
- Tyler Ray- Nuclear Engineering at Purdue University
- Sean Reeves- Computer Science at Vincennes University
- Tyler Hamaker- Technology Education at Ivy Tech
- Nathaniel Ziegler- unknown
- Justin Kiggins- unknown

Commented [A10]: Get their information



- Cameron Davis- employee at Target
- Joey Martz- Air Force
- Thomas Ramirez- Business Management at Purdue University

2.6 OUR PARTNERSHIP WITH OUR COMMUNITY <<UPDATE THIS>>

Commented [A11]: Update to newer outreach

- Adopted a Military camp: Sent letters of appreciation & care packages to the Military camp in Afghanistan.
- Camp Atterbury: Toured the military camp and told them about FIRST
- Camp Can Do: Engaged children who have disabilities and demonstrated our robot
- Children's Museum Demo: Organized STEM activities and demonstrated our robot
- Conner Prairie- Mini Maker's Faire: Demonstrated our robot and taught people about FIRST®
- Craft Fair: Brought our robot and merchandise to our school's craft fair
- FIRST® team mentoring: Establish and sustain local FIRST LEGO LEAGUE, FIRST TECH CHALLENGE, and FIRST ROBOTICS COMPETITION teams
- Girls Engineering Awesome Robots Successfully (GEARS): A program that is affiliated with Girls Scouts of America that gives young girls the opportunity to become passionate about engineering
- Girl Scouts of America Partnership: Fundraising and Gold award
- Homecoming: Designed & built a float that represents school's theme and FIRST®
- Indy South FIRST LEGO LEAGUE Tournament: Hosted, organized, ran, and judged
- Indy South FIRST TECH CHALLENGE Tournament: Hosted, organized, and volunteered
- IT girls club and App club: a middle school club that encourages students to pursue STEAM
- Library Demos: Promoted literacy and technology through interactions with children, to inspire them
- Pop tab donation: Donated 6 pounds of recycled pop tabs to a young girl in honor of her brother.
- Project Linus: Crafted blankets given to first responders to distribute to children involved in trauma



Business Plan & Risk Management Plan

- Radical Robot Summer Camp: Organized and taught a five day summer camp for elementary kids Scouting at FIRST® Competitions: Working collaboratively with FIRST® community members to scout at regionals
- Robots at Restaurants: Demonstrated our robot and educated people about FIRST®
- Science Fair: An experience for pre-FIRST® aged children to learn about science and technology at local events
- Sponsor Presentations: Robot demos displaying the benefits from the company's financial contributions
- Barnes & Noble Mini-Maker's Fair: Demonstrated our robot and introduced STEM-based toys to younger children
- Vision Walk: Volunteered to assist with the event in honor of past, visually impaired, team members
- WFYI (NPR): Volunteer positions to assist with costume characters and interacted with the community
- Ray Skillman's Clothe the Children Campaign: wrapped gifts for 1000 children during the holidays

2.7 ANALYSIS AND STRATEGY

2.7.1 WWW/WNI REVIEW

This activity was performed in early October by the students in reflection on the 2015 Build and Competition seasons.

What Went Well	What Needs Improvement	What We Have Improved (Since Then)
Our team is becoming better known in our community.	Organization & communication throughout the team & sub teams	Leadership Skills
More efficient	Spirit for team and others	Organization & communication throughout the team & subteams
Relationships with other teams	Training new people	Training new people
Listened to Judges and input from other people	Check that ideas are realistic	Check that ideas are realistic
Business Plan and robot competition	Be more prepared for pre-competition scrimmages	Keeping things clean
We are role models to other teams	Feel more like a team	Have a better sense of game & robot design strategy
Innovation with the robot	Enforce Rules	Enforce Rules
Scouting was more effective	Follow schedules and meet deadlines	RARPO-Student & Parent involvement
Properly welded robot	Complete tasks before build season	Respect



Business Plan & Risk Management Plan

Recognized by many	Decrease drama &/or deal with drama better	Decrease drama &/or dealt with drama better
Many Judges present at one time in our pit area	Have a better sense of game and robot design strategy	Improved CAD Database
Winning Engineering Inspiration at the Purdue District Event	Respect	More Fundraising for students
Qualifying for the World Competition	Integration among members & mentors	
Improvement	More school involvement	
Team work	Leadership Skills	
Team Pride	Keeping up on the game rules	
Team Documentation	CAD Database	
Partnerships	Pit Crowd Control	
	Robot Cart	
	Keeping things clean	
	RARPO-Student & Parent involvement	



~~<<insert table here. Create table from photos on flash drive>>~~ 2.7.2
SWOT Analysis <<update from photos on flash drive>>

Commented [A12]: update

The SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis was performed with students in May of 2015. In this analysis, students perform a review of issues internal to the team.

Strengths	Weaknesses	Opportunities	Threats
Large team	Including everyone	Personal recognition	Drama
Went to World Championship	Large team	State politics	Budget cuts
Outreach	Drama and working together	Working with a charity	Grades
Leadership	Lack of Precision	Partnerships	Lack of training safety
Safety at competitions	Too social	Charlie Kimball	Lack of money
RARPO	Pre-season training (including captains)	Win at World	Other teams
Passion	Limited to our space	STEAM Day	Sabotage
Team bonding	Time management (deadlines)	Become a leader with leadership training	Disgruntled students
EI award	Exclusive opportunities	Community fair, Art fair	Injuries
Helping other teams	Communication	Relationships	Loss of students
Team advocates	Document entire build process	Learning experiences	Attitude towards outreach (we do it for chairman's)
Established team	Same group of people at outreach	New types of outreach	Loss of workspace
Good sponsors	Clean up	Entire team collaboration	Loss of computer access
Scouting	No game strategy (start of build season)	CGTV	Loss of machine work
Motivated students	Staying committed	Win a Regional with robot	Overall mindset of winning
Public Speaking	Grades/academics	Speaking to NASA	Loss of sponsors
Wide array of talents	Public appearance	Knowledge of all subteams	Lack of respect
Great CAD	Accountability	MIC event with team 868	Not enough incoming students



Business Plan & Risk Management Plan

Documentation	Organization	Relationships with other FIRST ROBOTICS COMPETITION Teams	Bad Weather
Assistant Captains		3D animation	

Strengths	Weaknesses	Opportunities	Threats
Not afraid of change	Balance between us and FIRST®	Personal recognition	Drama
Good at Regionals	Drama	Scholarships	Budget cuts
Outreach	Working together (sometimes)	Bringing back experienced mentors	Self-destructive behavior
Delegation	Need machines	Partnerships	Lack of training, safety and understanding the student body
Business plan	Knowing when we are crossing the line	Connections	Lack of money
Administration support	Time management	Win at World	Other teams
Great mentors	No teacher contact	Gain experience	Sabotage
Moving in a good direction	Lack of Precision	Become a leader	Disgruntled students
FIRST® web site	No school support	Networking	Lack of rules
Relationships	Bad media	Internships	Injuries
Get things done when we have to	Training	Relationships	Loss of students
Team advocates	Limited to our space	Time to get better at what you do	Loss of parents
Established team	No extra anything	Learning experiences	Loss of workspace
Good sponsors	Lack of participation	Go for World Chairman's	Loss of computer access



Business Plan & Risk Management Plan

Strengths	Weaknesses	Opportunities	Threats
Awesome parents	Team ownership	Learn about other fields	Loss of machine work
Motivated students	More NEngAs	Starting over	Loss of mentors
Team spirit	Communication	Friendships	Loss of sponsors

2.7.3 PEST ANALYSIS

Commented [A13]: update

The PEST (Politics, Economics, Social Issues, and Technology) Analysis was performed with students in October of 2014. In this analysis, students perform a review of issues external to the team.

Politics	Economics	Social Issues	Technology
Kit Kat debate	Non-engineering sponsors may be more recession-proof	We are not using social networking to its full potential	3D printing
Recognition in school (CGTV)	Sponsor presentations	Inappropriate language and attitude	Using iPads for scouting
Other teams see us, rumors	School funding	More team bonding	Use social media to its full potential
Inviting gov. officials to events	Sponsor recognition	Team social events	Scouting strategy
Technology grants	Budget cuts & referenda adversely affecting us	Start a trend in clothing, buttons, fedoras	Transferring data is easy over the Internet
Tax law changes	Fewer Sponsors	Ice cream social	YouTube channel
Get to know the politicians	Payment by students (good)	More "cliques" this year	Safety first videos
Get to know school and district administration	Need to show why <i>FIRST</i> ® leads to more jobs through STEM	Culture and knowledge with team	Training videos
Understanding how we fit into the politics system	Getting funding from the state for all <i>FIRST</i> ® teams in IN	MAKE IT LOUD	Write smartphone games or app, like scouting
Working with other governments in US	Light Bulbs	Reputation with teachers	Uses of scouting data
Getting involved with STUGO	Parts and travel fees go up	Socializing with other teams	Use of tablets and smartphones for communication



Business Plan & Risk Management Plan

	Students recruiting more sponsors		
	Economics	Social Issues	Technology
Legislation for FIRST®	Non-engineering sponsors may be more recession proof	We are not using social networking to its full potential	Scouting
Mandated funding	Michigan gets twice the competition for the same price	Being smart should be cool	New eRio is coming There are different types of aluminum available
Technology grants	School funding	Improve community technology	We are not using social networking to its full potential
Tax law changes	Put tariffs on imports	Internet could be good or bad—cyber bullying	Using simulators
Get to know the politicians	Budget cuts & referenda adversely affecting us	Start a trend in clothing, buttons, fedoras	Transferring data is easy over the Internet
Get to know school and district administration	Potentially fewer sponsors	Ice cream social	Get list of what tools we need
What to Do About It	Taxable donations may be gone soon	Cyber bullying action plan	Refurbish mill
Understanding how we fit into the politics system	Need to show why FIRST® leads to more jobs through STEM	Team up with popular club/activity like eg dubstep	Write our own OS or programming language
Working with other governments in US	Getting funding from the state for all FIRST® team in IN	CG Robotics T-shirt	Write smartphone games or app, like scouting



Business Plan & Risk Management Plan

Contacting possible future government member to get there support before they go into office

Partnering with Cummins for other team sponsorships

YouTube video

Partner with excelling tech companies for internships and in-kind donations

Getting involved with STUGO

Sponsor presentations

TV exposure

Partner with software and hardware companies



3 OUTCOMES AND GOALS <<MAKE SURE THIS IS COMPLETE AND ACCURATE>>

Commented [A14]: update

3.1 HOW WE DID IN 2015

3.1.1 TOURNAMENTS

- Indianapolis District, Indianapolis, Indiana, February 28- March 1
- Purdue District, Lafayette, Indiana, March 19-21
- Indiana District Championship, Indianapolis, Indiana, April 2-4
- World Championship, St. Louis, Missouri, April 22-25
- IRI (Indiana Robotics Invitational), July 17-18
- C.A.G.E Match, October 17

3.1.2 AWARDS AND ACHIEVEMENTS

INDIANAPOLIS DISTRICT

- o Judge's Award
 - Celebrates a team that keeps appearing for consideration for other awards and other judges who have commented on aspects of the team

PURDUE DISTRICT

- o Engineering Inspiration
 - Celebrates outstanding success in advancing respect and appreciation for engineering within a team's school or organization and community

INDIANA DISTRICT CHAMPIONSHIP

- o Gracious Professionalism
 - Celebrates outstanding demonstration of FIRST Core Values such as continuous Gracious Professionalism and working together both on and off the playing field.

IRI (INDIANA ROBOTICS INVITATIONAL)

This is an invitation-only off-season tournament we are proud to have participated in over the past 6 years. Teams from all over North America attend, including the teams that played on the Einstein field at the World Championship.



C.A.G.E. Match

This is an off-season competition that takes place in October. We are proud to have attended since its founding year in 2008. We take advantage of this event to train new members on how a competition is run.

3.2 Opportunity Plan

FIRST® Team 1741 will achieve their goals by following these values:

PRIORITY	The top priority of the entire team is the development of student leaders
FOCUS	Keeping the focus of the team on learning as well as the inspiration of science, technology, and business, that will never be sacrificed for distractions such as winning
INVOLVEMENT	Striving to always involve the students and community in our projects
COMMUNITY	Teaching team members the importance of giving back to the community
MENTORING	Mentoring our middle and elementary school students as positive role models
ACHIEVEMENT	Promoting the significance of academic achievement at all times
PRIDE	Encouraging students to have pride in their school, community, and team

3.3 WHAT WE WANT TO DO THIS YEAR

Commented [A15]: update

3.3.1 EXTERNAL GOALS

- ~~Giving definition to changing technology in the Center Grove School District~~ Give an opportunity for students to join and be involved in an alternative program that recognizes the importance and significance of technology
- Be recognized throughout our community
- Help other teams get sufficient funding to be sustainable

3.3.2 INTERNAL GOALS



Business Plan & Risk Management Plan

- Students do all designing and building
- Continue to win non-engineering awards
- Continue to win engineering awards
- Win a robotics district event
- ~~Creating~~ an environment where each student can find their strengths and are encouraged to excel
- ~~Encouraging~~ students to have pride in their school, community, and team-
- Inspire students to appreciate both sides of the team and establish equality
- Be better recognized by outside parties and perceived to be just as important as athletics
- Improve our relationship with Project Lead the Way

3.4 IF WE SUCCEED IN THESE GOALS

3.4.1 WE WILL CHANGE OUR COMMUNITY BY:

- Bringing our community together in the same way our athletic teams do. We need to start in our school by making ourselves well-known ~~a common subject.~~
- Giving our community an idea of what their future generation looks like by showing them what we are capable of
- Showing our community how impressive our high school is by showing them how capable and diverse our students are
- Becoming a symbol that the community can look up to
- Bringing needed technology skills to the community
- Encouraging others to pursue careers associated with STEAM

3.4.2 TO DO THIS WE MUST:

- Advertise our activities in the school and community by updating media sites more frequently and by having our tournaments streamed online
- Become viral through social media, such as our website, Facebook page, Twitter, and Instagram accounts
- ~~Flash mob during school the Monday after Kick-off~~
- Wear our team t-shirts to school
- Make team presentations to more teachers and potential sponsors

3.5 SHORT TERM PLANS ~~←←MUST BE COMPLETELY REWRITTEN → INCLUDE EVERYTHING →→~~

3.5.1 IN ONE YEAR

~~Update Equipment for both the Engineering and Non-Engineering side~~
~~Machining mentors to help design and produce parts~~

Commented [A16]: We should strategize new and more REALISTIC goals...have a team meeting to discuss this????



Business Plan & Risk Management Plan

Incorporate classes—both during the off season and build season times

- Strengthen relationship between students and mentors
- Better communication with Red Alert Robotics Parent Organization; Students more involved in the meetings to know the financial aspect of the team
- Increase communication with school, local newspapers and TV stations
- Sustain the amount of girls on the engineering side

3.5.2 IN THREE YEARS

- Start an FIRST LEGO LEAGUE or Jr. FIRST LEGO LEAGUE team in every local elementary school
- Female engineering mentor
- Establish a robot camp at two local elementary schools

3.5.3 IN FIVE YEARS

- Four additional Major Corporate sponsors
- GEARS (Girls Engineering Awesome Robots Successfully) in our district elementary school
- Organize and run one Jr. FIRST LEGO LEAGUE event at a local school
- Have the majority of our cost supported by sponsors
- Establish 1 sustainable local High School FIRST® FIRST ROBOTICS COMPETITION team

3.5.4 IN TEN YEARS

- FIRST® robotics class as a part of High School Curriculum
- Create an FIRST ROBOTICS COMPETITION/FIRST TECH CHALLENGE team at every high school in our county

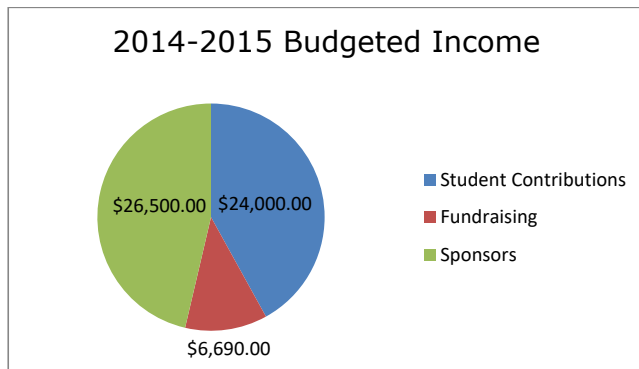


4 FINANCES

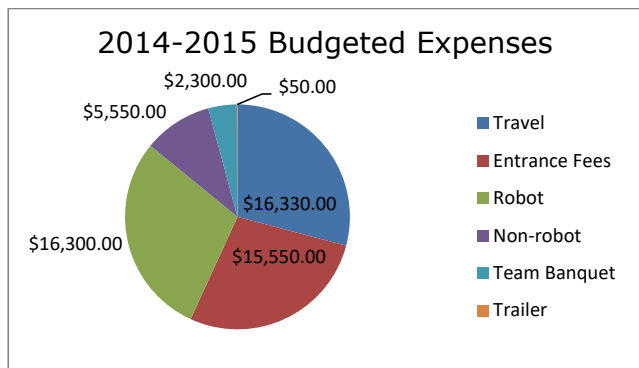
Commented [A17]: update. Where to find this info?

In the past, the treasurer of Red Alert Robotics booster club has been solely responsible for drafting our budget. To improve sustainability and a student lead team, the student captains participate in official budget to create each year's budget. In order to meet our goals in the future, the Team Captain now has the job of financial adviser and liaison between the team, mentors, and the booster club.

4.1 2014-2015 BUDGETED INCOME = \$45,285.00



4.2 2014-2015 BUDGETED EXPENSES = \$45,785.00



4.2 2014-2015 FINANCE DETAIL <<KEEP THIS UP TO DATE>>

4.2.1 TOTAL INCOME = \$53,924

4.2.1.1 SPONSORSHIPS INCLUDE

- Rolls-Royce
- Endress+Hauser
- ~~Dept. Workforce Development~~ Indiana Department of Education
- Stadium Graphics
- Crossroad Engineers
- Cook Medical
- [Center Grove Education Foundation](#)
- [Tech Point Youth Foundation](#)
- Indiana Realty Pros
- Dr. Michael Reeves, DDS
- [Southside Pediatrics](#)
- Anonymous Sponsor

4.2.1.2 STUDENT FEES= \$400 per student, with financial aid to those unable to pay

4.3.1.3 STUDENTS ALSO PAY A TRAVELING DUE TO OUR LARGE TEAM

4.3.1.4 FRIENDS & FAMILY INCLUDES DONATIONS TO THE TEAM ON BEHALF OF INDIVIDUAL STUDENTS

4.3.1.5 FUNDRAISING

- *FIRST*® Light Bulbs
- Script Gift Cards
- Concessions from Indy South FIRST LEGO LEAGUE Tournament
- Chocolate bars
- Popcorn
- T-shirts
- Coffee

4.3.2 TOTAL EXPENSES = \$57,190

4.3.2.1 ENTRY FEES

- District Registration
- Indiana District Championship
- World Championship
- IRI invitational
- CAGE Match



4.3.2.2 TRAVEL

- Hotels [at Purdue](#) & World Championship
- School Bus
- Charter bus rental
- Gasoline for trailer
- [Team meals](#)

4.3.2.3 BANQUET

- Food
- Mentor awards
- Sponsor awards
- [Student awards](#)
- [Decorations](#)

4.3.2.4 NON-ENGINEERING

- Spirit wear
- Office supplies
- ~~Button~~ Button supplies
- [Wrist band](#)
- Homecoming float
- Other expenses

TRAILER

- Registration

Commented [A18]: Does thi

4.4 2014-2015 DETAILED FINANCES <<REVIEW AND UPDATE>>

Commented [A19]: Update to 2014-2015

4.4.1 INCOME

Item	Amount	Description
Sponsors		
Rolls Royce	\$4,500	A yearly sponsorship from Rolls Royce
Anonymous Sponsor	\$5,000	
Center Grove Education Foundation	\$2,000	
Southside Pediatrics	\$1,000	
Indiana Reality Pros, LLC	\$1,000	
Endress and Hauser	\$5,000	A yearly sponsorship from Endress and Hauser
Crossroad Engineers	\$1,000	
Fundraising	\$3,255	FIRST LED light bulbs, dine to donates, candy, etc.



Business Plan & Risk Management Plan

Donations and Student Contributions	\$32,500	Through "Friends and Family Letters", we receive donations from community individuals, local businesses, and from people in eleven states.
--	----------	--

TOTAL INCOME= \$53,924

4.4.2 EXPENSES

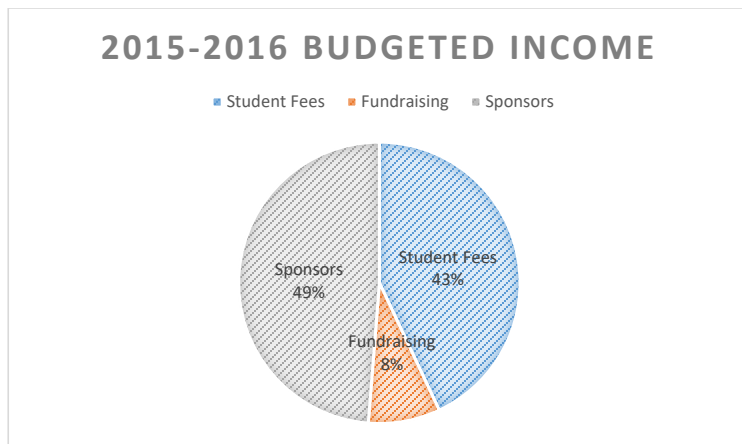
Item	Amount	Description
IRI Registration Fee	\$750	Entrance Fee Required for IRI
CAGE Match Registration Fee	\$250	Entrance Fee Required for CAGE Match
District Registration	\$5,000	FIRST® ® Registration Fee for 2 district events
Team Travel Expenses:	\$4,000	Commuting to the Districts, team social, and hotel
District Events		
Regional Championship	\$4,000	FIRST® ® Registration Fee for the IN District Regional Championship
Team Travel Expenses:	\$300	Transportation and meal costs
Regional Championship		
World Championship	\$5,000	FIRST® ® Registration Fee for World Championship
Team Travel Expenses:	\$16,025	Hotel and Charter bus cost for World Championship
World Championship		
Robot Expenses	\$19,216	Cost of construction of the competition robot and spare parts.
Game Field assembly	\$469.72	
Publicity Costs	\$2,459	Covers Banner, buttons, t-shirts, spirit wear, and the website.
Community Outreach	\$1,729	Cost of running FIRST LEGO LEAGUE Competition, Library Demonstrations, homecoming and other outreach activities.
Miscellaneous Yearly Costs	\$3,000	Cost of awards, team banquet and others

TOTAL EXPENSES= \$62,198

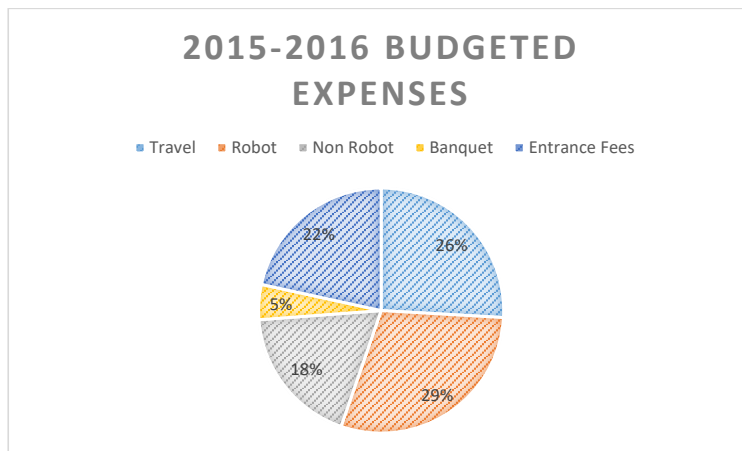
Any surplus funds are put into the team savings account to be applied to the following year. If a shortfall should happen in funds, mentors and/or students may be asked to pay for their own meals, spirit wear, and/or other expenses.

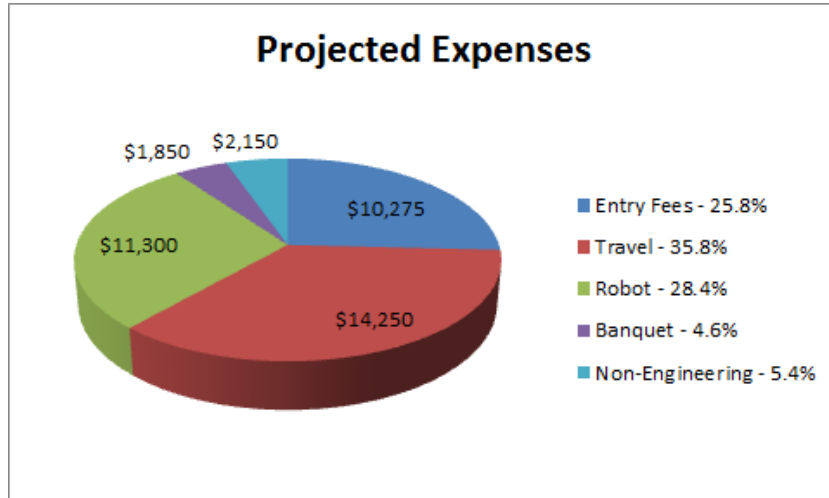


4.4 2015-2016 Budgeted Income = \$69,755



4.5 2015-2016 BUDGETED EXPENSES = \$69,755





4.6 2015-2016 Finance Detail <<keep this up to date>>

4.6.1 Total income = \$69,755

4.7.1.1 Sponsorships include

- Rolls-Royce
- Endress+Hauser
- Southside Pediatrics Dept. ~~Workforce Development~~ Indiana Department of Center Grove Education Foundation
- Cook Medical
- National Defense Education Program
- Indiana Realty Pros, LLC
- Dr. Michael Reeves, D.D.S
- MedExpress Urgent Care
- Crossroad Engineers, PC
- Anonymous sponsor

Commented [A20]: Waiting on sponsorship list

4.7.1.2 Student fees= \$500 PER STUDENT, WITH FINANCIAL AID TO THOSE UNABLE TO PAY

4.7.1.3 STUDENTS ALSO PAY A TRAVELING FEE, BECAUSE OF OUR LARGE TEAM

4.1.1.4 Friends & Family includes donations to the team on behalf of individual students

4.7.1.5 Fundraising

- *FIRST*® Light Bulbs
- Candy Bars
- Concessions from Indy South FIRST LEGO LEAGUE Tournament
- Mums
- Popcorn
- T-shirts
- Coffee

Commented [A21]: Update

4.7.2 Total expenses = \$69,755

4.7.2.1 Entry fees

- Tippecanoe, Warren Central, and Perry Meridian District Events
- Indiana State Competition (If qualified)
- World Championship (If qualified)~~Second Regional during spring break~~
- IRI (If qualified)
- CAGE Match at Southport High School

4.7.2.2 Travel

- Hotels at Purdue, Kokomo, & St. Louis
- Bus rental
- Gas for the trailer
- Team meals

4.7.2.3

Banquet

- Food
- Mentor/sponsor awards
- Student awards
- Decorations

4.7.2.4 Non-engineering

- Spirit wear
- Office supplies
- Homecoming float
- Media
- Outreach
- Other expenses

4.7.2.5 Trailer

- Registration

4.8 2015-2016 DETAILED FINANCES <<REVIEW AND UPDATE>>



4.8.1 BUDGETED INCOME

Item	Amount
Sponsors	
Rolls Royce	\$5,000
Endress and Hauser	\$5,000
Anonymous Sponsor	\$5,000
Center Grove Education Foundation	\$2,000
Cook Medical	\$2,500
Indiana Reality Pros, LLC	\$2,500
Southside Pediatrics	\$1,000
Dr. Michael Reeves D.D.S	\$1,000
MedExpress Urgent Care	\$1,000
CrossRoad Engineers	\$5,000
Beth Breuninger	\$500
Ted and Audrey Stehle	\$500
Fundraising	
Student Contributions	\$24,000
Travel Fees	\$7,500
FIRST® Light Bulbs Sales	\$1,300
Center Grove Fair	\$2,000
Candy Bar Sales	\$1,330
Other	\$2,000

TOTAL BUDGETED INCOME= \$57,190



4.8.2 Budgeted Expenses

Commented [A22]: Update events

Item	Amount
IRI Registration Fee	\$800
CAGE Match Registration Fee	\$250
District Entry Fees	\$5,000
Indiana State Championship Fee	\$4,000
World Championship Entry Fee	\$5,000
District Event Competitions Registration (2)	\$5,000
Travel to Purdue*	\$3,300
Additional District Event Registration	\$1,000
Travel to World Championship	\$11,850
Miscellaneous travel	\$500
Robot Parts	\$15,000
Shop Permanent	\$4,000
Shop Consumable	\$500
Game Field	\$1,000
Team Banquet	\$3,220
Outreach	\$1,000

Commented [A23]: Ask Tugan

TOTAL BUDGETED EXPENSES= \$69,755

Any surplus funds are put into the team savings account to be applied to the following year. If a shortfall should happen in funds, mentors and/or students may be asked to pay for their own meals, travel fees, and/or room fees.



5 5 EXECUTION UPDATE ~~←←REVISE ENTIRE SECTION TO ENSURE IT REFLECTS THIS YEAR'S THEME OF SUSTAINABILITY→→~~

5.1 EXECUTION OF THE 2016~~2~~ BUILD SEASON

See Build Season Gantt chart at Appendix A ~~←←being created by Darius and Ricky→→~~

Commented [A24]: Update. Where to find?

5.2 TEAM SUSTAINABILITY

5.2.1 SUSTAINABILITY

FIRST® Team 1741 ~~workworks~~ to maintain *FIRST®*'s presence in our community. We organize events open to the public to ~~encourage~~ encourage knowledge of science and technology. In addition, we are working with our school system to give younger students the opportunity to join *FIRST®* earlier. This acts as a funnel encouraging them to participate in *FIRST®* throughout their school career and leads them into our team.

5.2.2 IMPORTANCE OF SUSTAINABILITY

FIRST® Team 1741 knows that ~~partnerships are~~ sustainability is what makes *FIRST®* such a success. *FIRST®* is about innovation, inspiration, teamwork, Gracious Professionalism®, Coopertition®, and passion; we believe these are the essential roots of ~~a partnerships~~ sustainability. These roots help to fuel our drive and dedication in the *FIRST®* program. With our ~~partnerships~~ sustainability, we strive to plant a seed of *FIRST®* in the hearts of every individual we come in contact with and to nurture the growth of *FIRST®*. ~~creates partnerships because we believe in the power of FIRST®. Our partnerships create positive impacts on the future of our students, our team, our community, and the world. FIRST® allows us to grow as individuals and as a team through transferrable skills, hands on experiences, and self discovery. We work closely with our mentors to obtain a greater knowledge about STEM, gracious professionalism, coopertition, teamwork, our community, and ultimately ourselves.~~

5.2.3 SUSTAINABILITY WITH *FIRST®*

FIRST® Team 1741 believes the best way to create ~~a partnership~~ sustainability is to help facilitate younger teams. Within the past few years, we have started new teams for younger students and tried to foster a love and interest in science and technology. We have done this through FIRST LEGO LEAGUE teams, FIRST TECH CHALLENGE team, and our GEARS program. Since we reach these children at a young age, we hope to instill in them a love of FIRST® so that they continue to participate in it through high school. As of this year, we have helped start six FIRST LEGO LEAGUE teams and four FIRST TECH CHALLENGE teams. In case we lose a major sponsor, we have created a list of fundraisers we could do ~~in case we lose a major sponsor. We are working on building up our school support to make sure we always have sponsors and the ability to travel.~~ partnered with a local high school to help start FIRST® Team



Business Plan & Risk Management Plan

~~3180. To start them out, we invited them to a local off-season competition and loaned them a robot to learn the ropes. After that experience, they were hooked. They are now an up-and-coming team that has become involved in hosting off-season events of their own!~~

We have built a strong partnership with many local teams in addition to *FIRST*® Team 3180. Every year we deliver a care package to Team 3180 and 4926. For the last few years, we have supported Team 1529 in setting up their local off season competition C.A.G.E. Match. Last year we shared a bus with team 5188 to the World Championship in order to enable them to participate. ~~Each year they weld our robot frame and we return the favor by providing parts and breakfast.~~ We also strive collaborate to assist other teams to the best of our ability, in order to enable their make everyone's Chairman's, scouting, robot, and Business Plan to bes successful ~~the best they can be!~~

FIRST® Team 1741 is interested in expanding all levels of *FIRST*®. We have started two *FIRST* TECH CHALLENGE teams of 8th and 9th graders to work alongside our team. The 9th graders are a part of both teams, allowing them to increase their knowledge of *FIRST*® and spread Gracious Professionalism®. We are proud to say that we have started and facilitated many *FIRST* LEGO LEAGUE teams over the past several years. *FIRST*® Team 1741 hosts the Indy South Tournament - the only official *FIRST* LEGO LEAGUE event in central Indiana and the only event sponsored and run by an *FIRST* ROBOTICS COMPETITION team. ~~This past~~

We have a 100% high school graduation rate and 100% attend college or join the military. 18% of our graduates currently continue on in *FIRST*® as mentors or volunteers. ~~This shows~~ These statistics show what an impact *FIRST*® has had on ~~students' lives,~~ the lives of our students.

5.2.4 <<give all of our media exposure, including hyperlinks>>

SUSTAINABILITY WITHIN OUR COMMUNITY

FIRST® Team 1741 partners with our community. We host and participate in events that positively impact our community while allowing our students to step up as leaders and engage in high-level planning. To catch the attention of young children at our events, we hold mini-science fairs that encourage creativity and science/technology. We section off areas dedicated to young children and include student-created lesson plans such as "Fun with Physics." We hold our science fairs at various public events across our state. At our summer camp, Radical Robots, kids were able to build NXT robots & engage in STEM experiments. Red Alert also participates in Project Linus where our team parents, students, and our school's other clubs come together to craft blankets for children in need.



Business Plan & Risk Management Plan

We have created several partnerships within our community. Strange Brew, a local coffee shop, allowed us to create a coffee blend, Robot Rampage, which they sell. Not Just Popcorn, a local gourmet popcorn shop, created popcorn named Red Alert Velvet and allow us to sell the Red Alert Velvet as a fundraiser for our team. These partnerships enable us to spread the name of the businesses while promoting FIRST® and sustaining our team.

~~FIRST® Team 1741 supports our military. We visited an Air Force base to learn about military technology and visited a veterans' hospital to thank them for their service and learn about prosthetics. We showed them our technology and they showed us theirs!!~~

One of our most successful events each year is our *FIRST®* Community Tech Night. ~~This is a student led event that attracts over 100 people.~~ We focus on creating better cyber-citizens and increasing digital literacy within our community. ~~We offer~~In previous years, we have offered different classes including internet safety, video game safety, anti-cyber bullying—that included a visit from the Greenwood Chief of Police—E-mail, Microsoft Word, and classes for technology used within the school corporation. Most classes are taught by *FIRST®* Team 1741 students and district middle school teachers. Classes offered for young children included “Silly Science” and “Marble Coaster eXtreme” classes. With this event we reach people of all ages and spread the knowledge of STEM and *FIRST®* throughout our community.

Commented [A25]: Delete?

To sustain our team we participated in the Community Fair located at a local mechanics shop. At this event we demonstrated our robot along with other aspects of our team. We were able to spread the name of *FIRST®* and Red Alert throughout our community. We also spread our name and love of STEAM by visiting Riley’s children hospital. At this event we showed the children how technology is used outside of their hospital room. Along with Riley we visited two Camp Ability sites and one Camp Can-Do site, which are both camps for disabled children during the summer. Red Alert demonstrated our robot and conducted a silly science fair with the children. †

FIRST® Team 1741 tours the state with our own traveling exhibit called, “Amazing Robots.” We visit libraries and perform demonstrations while spreading the word of *FIRST®*. ~~In conjunction with our library demonstrations we have started a literacy program called “Read Alert” where we boost literacy skills with technology-related literature.~~

Commented [A26]: Do we still do this??

5.2.5 DEVELOPING SUSTAINABILITY WITHIN OUR TEAM

We are determined to build a better ~~us~~team. We strive to do our best in all areas and aspects of *FIRST®*. Students gain transferrable skills in leadership, public speaking, business, and teamwork. We pride ourselves in the strenuous processes of high-level planning and decision-making of our team. Each student must show their commitment and willingness to make decisions for the good of the team and work in



harmony with each other. We build our strength in these fields through unforgettable memories and experiences geared towards inspiring students to pursue STEAM fields.

Before build season begins, we focus on improving the skills of our students. We offer training sessions in areas including teamwork, Chairman's, scholarships, programming, electronics, scouting, CAD, leadership skills, machining, drivetrain, and safety. Before the build season begins we hold several design exercises to demonstrate the design process to our students in order to give them an idea of what it takes to design a robot. During the design exercises, students must partner with other team members to design certain tasks such as a roller coaster, Jaguar box, a spaghetti tower, and a t-shirt canon robot. In addition to our other expectations, grades are very important to our team in order to emphasize that school is the first priority. During the build season, our mentors monitor grades to ensure students are succeeding in their classes. ~~offer tutoring and a safe, quiet place to learn for help with homework assignments.~~

5.2.6 DEVELOPING SUSTAINABILITY WITH OTHERS

Our strongest partnership is with our mentors. Even though we are a student lead team, our mentors are always there to guide us every step of the way and put in immeasurable volunteer hours to see us succeed. From this commitment we learn what it is to be dedicated. Our mentors are people who continuously inspire us with science and technology and encourage us to keep going. Most of our mentors do not have a student on the team and never have had a student on the team. This shows that we have inspired them just as much as they have inspired us in the ideals that *FIRST*® has created.

Without a partnership with sponsors, our team could not function. Their ability to extend their knowledge and resources keeps us running and gives us a glimpse of our future through donations, summer internships, and jobs. We try to give back to our sponsors by updating them on our success throughout the year by giving presentations and inviting them to our competitions.

To help our local and extended community we serve Pack Away Hunger, which is a non-profit organization whose mission is to improve the lives of children and others who suffer from hunger and malnutrition in the United States and developing nations. We stuffed letters and cleaned some of their equipment after a packing event. This year we also funded a packing event through this organization and the meals we packed were sent to Africa to aid with the Ebola crisis. Red Alert wants to have a lasting impact on our local and extended communities and by volunteering at Pack Away Hunger we are able to achieve this goal.

During the Christmas season our team partners with a worldwide organization, Operation Christmas Child, to help pack care packages. We helped pack 1300+ boxes to be shipped across the world. *FIRST*® Team 1741 also partnered with a local Girl



Scout troop for fundraising. We helped another Girl Scout create GEARS, a mini robotics and science club (Girls Engineering Awesome Robots Successfully), for her Gold Award. GEARS reaches out to girls in grades 3rd through 5th inspiring them to become involved with science and technology and feed them into our FIRST LEGO LEAGUE teams.

5.2.7 SUSTAINABILITY WITH OUR SCHOOL

FIRST® Team 1741 has developed ~~a partnershipsustainability~~ within our school through partnerships. ~~Through our partnership with our school's football team, we were able to help a~~ Our partnerships within our school help us continue our sustainability due to their commitment to help us with necessary assistance. ~~player with low vision raise money for the Vision Walk — which we have been involved in helping run for the last three years. We also partnered with the school's basketball team to learn different skills for this year's game, Rebound Rumble. Our team is the only school extra-curricular activity to build a float for to participate in the homecoming parade, and we are hoping to continue that throughout the years to come. Each year we have a design that coincides with the homecoming theme and the message of FIRST@.~~

~~Partnering with the school curriculum, during the off season, our team was given a reading and discussion assignment by the school, to increase students' critical literacy skills. Every student read The New Cool and then discussed it in small groups. This allowed students to gain a greater knowledge of what a FIRST@ team is all about.~~

~~Our team is strongly involved in other areas of the school curriculum as well, which will hopefully be carried out in the future. Our robot starred in a pneumatics lesson and we are working with the science department to create a lesson on prosthetics. We are also heavily~~ Many of our students are involved in our school's Project Lead the Way classes.

~~Our robot even made an appearance in the Drama Club's fashion show!~~



6 AWARDS <<ENSURE THIS IS THOROUGH AND ACCURATE>>

Commented [A27]: Add 2015 awards – where to find?

2015:

- Judge’s Award- Lawrence North District
- Engineering Inspiration Award- Boilermaker District
- Gracious Professionalism Award- IN District Regional Championship

2014:

- Creativity Award – Boilermaker Regional
- Regional Finalists – Chesapeake Bay Regional
- Entrepreneurship Award – Chesapeake Bay Regional
- Gracious Professionalism Award – Chesapeake Bay Regional
- Industrial Safety Award – Chesapeake Bay Regional
- Winners – Indiana State Championship
- Winners – CAGE Match

2013:

- Entrepreneurship Award - Crossroads Regional
- FIRST® Dean’s List Finalist – Boilermaker Regional
- Regional Finalist – Boilermaker Regional
- Regional Chairman’s Award – Boilermaker Regional
- Innovation in Controls Award – Boilermaker Regional

2012:

- Entrepreneurship Award—Boilermaker Regional
- Engineering Inspiration Award—Queen City Regional

2011:

- Regional Chairman’s Award – Boilermaker Regional
- Entrepreneurship Award – Boilermaker Regional
- Most Charitable Donations - CAGE Match

2010:

- FIRST® Dean’s List Finalist – Boilermaker Regional
- Gracious Professionalism Award sponsored by Johnson and Johnson
- Regional Finalist – North Carolina Regional
- Most Charitable Donations - CAGE Match
- Humanitarian Award - MARC

2009:

- Most Charitable Donations - CAGE Match

2008:

- Motorola Quality Award – Boilermaker Regional
- Xerox Creativity Award – St. Louis Regional
- CAGE Match Finalist



Business Plan & Risk Management Plan

Most Charitable Donations - Cage Match

2006:

Rookie Inspiration Award – Boilermaker Regional
Regional Finalist –Boilermaker Regional



7 RISK MANAGEMENT PLAN

7.1 RISK MATRIX

Near certainty	5	10	15	20	25
Highly likely	4	8	12	16	20
Likely	3	6	9	12	15
Low likelihood	2	4	6	8	10
Probable	1	2	3	4	5
	Minimal	Minor	Major	Serious	Catastrophe

7.2 POSSIBLE RISKS

~~7.2.1 <<Completely revise entire section reflecting work performed by students in risk management meeting. There are several risks for which no number was assigned—assign a number,!! and then create a plan for each. Remember we Mitigate, Respond, and Recover for disasters, but for risk we mitigate, avoid, or accept.>>~~

IN CASE OF LOSS OF INNOVATION CENTER

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

- We may have to move out of the Innovation Center. We have arranged a worst-case-scenario with parents who own barns. They may offer this as an option to us, should this happen.
- If barns or similar facilities are not available, the team may need to rent a space to use.
- We currently have 1/3 of the Innovation Center and 3 classrooms at the high school allotted for our use and should we move off-site, this space

Business Plan & Risk Management Plan

could be reduced and we would no longer have use of the school's equipment (i.e. lathe, mill, band saw, et al.)

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

- The engineering side of the team may need to meet separately from the non-engineering side of the team, in order to save space.
- We would need to reassess our budget to allow for purchasing of rental space or needed resources, such as tools.
- Market our team to other facilities, for example, Local Central 9 Career Center, in hopes of seeking alternative permanent meeting space; also continue contact with Center Grove in hopes of earning our meeting space back.

7.2.2 IN CASE WE LOSE KEY SPONSORS

Commented [A28]: update

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

- With fewer sponsor dollars to use, our team has had to adjust our budget. We would likely continue to spend less in all areas such as build cost, promotions, and outreach funding.
- If severe enough, the team may need to increase the cost of team membership to students, likely having them pay more to participate in the team, pay to travel, or pay their own hotel expenses.
- Mentors may also see a cost increase, possibly having to pay their own travel and hotel arrangements.
- As a team we may need to find alternate hotel arrangements. One year we stayed in West Lafayette Jr/Sr. High School, home of *FIRST*® Team 461, for the Boilermaker Regional.
- As a team we may need to find alternate travel arrangements. As a team, we traveled to the Smoky Mountain Regional on a bus with *FIRST*® Team 1747.
- If funds run low enough, we may attend fewer competitions, or possibly only one.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

- The team would need to do more fundraising and begin it earlier – not starting at the start of the school year, but possibly at the end of the previous year's competition season.
- Our team would need to market ourselves to attract new sponsors and to work towards a greater relationship with current sponsors.
- Start a team "Emergency Fund" which contains exactly enough money for a build expenses and one competition expense for the following year.

7.2.3 IN CASE OUR PARENT ORGANIZATION EMBEZZLES OUR FUNDING

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

54 | Red Alert Robotics – *FIRST*® 1741



Business Plan & Risk Management Plan

- First we would need to alert the proper authorities that this issue had arisen.
- The resulting loss of funds would have a similar effect as the Loss of Key Sponsors.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

- Our team would need to create new bank accounts for all of our funds.
- Anyone who has access to *FIRST*® Team 1741's funding would need to be bonded and ensured to handle our money.
- We would work to generate new funds through fundraising and finding new sponsors.
- We would work harder to apply for grants to fill in the missing funding.

7.2.4 IN CASE OUR TEAM LOSES ACCESS TO SCHOOL COMPUTERS

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

- Students would have to bring in their own personal computers to complete team work, work at home, or use the few laptops that the team owns.
- Students would no longer have access to the six years' worth of team data the team has saved for use.
- Students could possibly lose access to the Robotics Team networked hard-drive which is accessible from all school computers.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

- The team would need to pay for and install needed programs on team laptops and possibly personal laptops for team use.
- The team may need to budget for additional laptops for the future, depending on the need.
- We may need to find alternative hosting for the Robotics Team networked drive and possibly the team website

7.2.5 IN CASE WE LOSE OUR SCHOOL LIAISON

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

- With the support of our school's administration, the team can sustain without a school liaison as long as we work to inform this administrator, i.e. a Vice Principal such as Mr. Betts, of our team's activities.
- With the loss of this liaison, we would lose access to needed student information such as grades, attendance, and even locker numbers
- Without a school liaison it is often difficult to arrange for team traveling and team events within the school.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:



Business Plan & Risk Management Plan

- The school approves a mentor to be the sponsor and grants that mentor a key to access the building.
- The team would appoint a mentor to accept team mail.
- The team would work to document activities with the school.
- The team must work to recruit a new liaison.

7.2.6 IN CASE OF SNOW AND/OR ICE STORM

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

- Every day the school is closed, we are not permitted to meet. This shortens the amount of time we have to design and build the robot during build season.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

- We have a schedule tailored for each build season that maps out deadlines. Within this schedule, we have extra days implemented as buffers in case we should fall behind due to unsafe weather.
- If we should run out of buffer days, we will arrange several various strategies to continue progress.
 - If school is cancelled early on into Build Season, during the brainstorming and design process, the Engineering captain and sub-team captains shall arrange to communicate and continue progress through the technology available to us.
 - If school is cancelled during the later stages of Build Season, the Engineering captain and sub-team captains shall arrange to meet at an off-site work site to continue progress.
 - If school is cancelled, the Operations captain will arrange communication with their team and continue progress through the technology available to us.

7.2.7 IN CASE OF AN EPIDEMIC

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

- Because we work together daily and still attend school, there are many possible times where a team member could come into contact with the flu or another virus and can distribute the virus throughout the team before becoming sick themselves. This could cause many students among our team to fall sick during the crucial points in build season.
- Without the majority of our students, we would fall behind schedule and could possibly not finish by bag day.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

Formatted: Heading 3, Indent: Left: 0", Outline numbered + Level: 3 + Numbering Style: 1, 2, 3, ... + Start at: 3 + Alignment: Left + Aligned at: 0.13" + Indent at: 0.88"

Formatted: Heading 4, Indent: Left: 0.69"

- If it should spread enough to affect the schedule, we would use our buffer days to catch up and/or increase the meeting times to make up the lack of workforce.
- We encourage our students to wash their hands frequently during the Flu season and practice the proper coughing technique. Also, if they are feeling unwell the student may choose to stay home as to not spread the virus. If an epidemic should break out among our team we would send home students that were affected and try to conduct business as usual.

7.2.8 IN CASE OF TORNADO

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

- In the past, the damage caused by tornados that would affect our team is road damage or blockage. The road blockage would be cleared within a day or two allowing us to continue to meet.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

- Our team practices tornado drills in case we were in the building when one struck.
- If a tornado would create road blockage or damage, we would find alternative routes to the school and if that was not possible then rearrange the schedule and use a buffer day. If we were out of buffer days then we would increase the length of team meetings to make up for lost time.

7.2.9 IN CASE OF FLOOD

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

- In the event of a flood in our facility, not only would we not be able to enter the building, there would be a chance of damage to our team documents, machines, tools, and computers.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

- In case of damage, there are certain items of ours that are insured by the school. We would fundraise to replace anything else.

7.2.10 IN CASE OF STUDENT LEADERSHIP INCAPACITATION

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

Formatted: Heading 4, Indent: Left: 0.69"

Formatted: Heading 4, Indent: Left: 0.69"

Formatted: Heading 3, Indent: Left: 0", Hanging: 0.69", Space Before: 12 pt, Bulleted + Level: 1 + Aligned at: 0.75" + Indent at: 1"



Business Plan & Risk Management Plan

- There would be little to no impact on our team in case this should happen. We have set up our team with a leadership system where each captain has a sub-captain that can take over in case of emergency.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

- We have an aforementioned system of captains so our team is always prepared for this situation.

7.2.11 IN CASE OF SEVERE INJURY

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

- Depending on the severity of the injury, the school district could take away machines and even our team.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

- In case equipment is taken from us, we would work with private companies to machine our parts.
- In case the school discontinues our team, we would relocate the team.

7.2.12 IN CASE OF LOSS OF KEY MENTOR(S)

THE EFFECT THIS WOULD HAVE ON OUR TEAM:

- Each mentor has certain roles they perform, without those tasks being accomplished, our team would fall behind.
- If we were to lose our teacher sponsor, our team would not have a connection to our school.

HOW WE WOULD HANDLE THIS, SHOULD IT ARISE:

- The captains will have to identify the mentor's roles and divide them amongst themselves.
- We would have to work with the administration on finding a new connection to the school.

Formatted: Heading 3, Indent: Left: 0", Hanging: 0.69", Outline numbered + Level: 3 + Numbering Style: 1, 2, 3, ... + Start at: 3 + Alignment: Left + Aligned at: 0.13" + Indent at: 0.88"

