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The Flying Toasters

Varsity Letter Essay

19 April 2016

### All About the Business Plan

Every team has their moment when they realize there is something more they could be doing, and they jump on the idea in order to improve the team. A moment such as this happened to Team 3641, The Flying Toasters. This year, the Toasters held a QFD (Quality Function Deployment) night with the Hackbots, Team 3414. Their Business and Chairman's team arrived along with their build members, and they came to talk to the Toasters Chairman's team. From this meeting, the Hackbots showed the Toasters their thirty-five page long business plan and explained why it was important to have, the awards that could be won from it, and showed them what they could do to create one. The idea was that in an effort to organize the team and be able to show and present how our team works and functions--not only through monetary means, government organization, but also outreach-- the Toaster's would learn how to and create a business plan. The Flying Toasters had already started one, but with the bare bones of their outreach being the only page, the help was greatly appreciated. Henceforth, they began the harrowing journey of creating their own business plan. The expedition had commenced.

Why is a business plan important? A business plan is like a progress report, showing statistics about the team, what they do with money and support, and how they reach out to the community. Having one creates something in writing to look back on and see how the past years

went. It holds the amount of funding that might have been received, how it was used, or how it came in. That way, in the future, it can be looked back upon in order to decide how to format future inflow and spending budgets, or could be compared to the future to show growth. In the world of FIRST robotics, having a business plan is important for competitions. It can help with Chairman's to show their involvement and structure, along with aiding in understanding how the team as a whole operates. Such aids provide more information to the judges that complement the presentations and can assist in winning the prestigious Chairman's Award. Similar to this award is the Engineering Inspiration Award, and like Chairman's it stems on outreach and the spread of STEM in the community and a gained interest in it. Including a business plan in this can help the same way it did for the Chairman's award. Another award that can be won, however, is the Entrepreneurship Award, one that is defined as "celebrat[ing] the entrepreneurial spirit by recognizing a team that has developed the framework for a comprehensive business plan to scope, manage, and achieve team objectives."<sup>1</sup> For this one to be won, you have to have the plan and have it be concise. These awards are important to the team, as they show advancement and can give the members pride in getting recognition for their hard work, but they are also important in advancing the team to the next stage of competition to compete for these outstanding awards. Another reason why the business plan is important is because it gives the students working on it experience in working with how the team is organized, where money comes from and how to effectively use it, and shows what ways the team has tried to help the community and can give new ideas of how to help it in the future. In the same way that the robot build team provides

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<sup>1</sup> All citations for quotes on bibliography page.

valuable experience for working in STEAM careers, a business plan takes care of the experience in fields that aren't as hands on and more corporate.

There is no specific template for a business plan in regards to robotics (at least not one that the Toasters are aware of), and so some of the things that are included are specific to the team creating it. However, there are some things that are important to include. Since it is a *business* plan, it should have things regarding the organization or government of the team: how it manages itself, the chain of command, how things get done, and the representation of the members and mentors on the team. Another thing that is important is the aforementioned breakdown of inflow of funds, usually in robotics from sponsors or fundraising. This can include who it comes from, and how it is used or saved. Some common things it would be used for would be budgets for select parts of the team, competitions, and banquets. Other things that could be inserted would be pictures and graphs, since visuals are often easier to comprehend than mass amounts of letters or large strings of numbers and percents. Pictures of the team or of people in the community that came to team outreach events would create a personal connection and give validity to the facts on the page. A big thing for formatting and writing is realizing not everyone knows as much as the author does, and so things such as footnotes to explain acronyms and terms specific to robotics or the team itself are very useful. They also are a sort of dictionary to find definitions in instead of interrupting what is being said to add the meaning in parentheses. To continue with easier reading and comprehension, bullet points are a good way to sort information instead of in daunting paragraphs full of information. If the team does outreach, descriptions of these could be included in the business plan. These could be expanded upon in

further detail if the team does not have a comprehensive Impact Study that details these outreaches like the Toasters do.

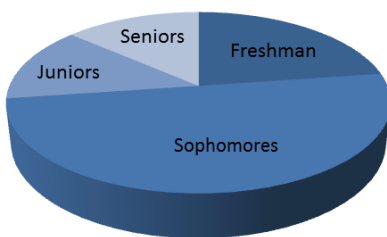
The Toasters included a section that introduced the team, stated their mission statement:

“to inspire and intrigue, unite and achieve greatness,” and had a quick synopsis of what they’re about and explained their coined Circle of Growth, an integral part of how they spread the word of robotics and their team. This gives a sense of connectedness to the team that works the same as an introduction to a person before giving them a speech about what they do. They then continued it with what they have done in the past, what they’re doing in the present, and aim to do in the future. For a business plan, having a structure laid out of what you did in the past, and comparing it to the present creates an image of improvement. It shows that the team has used their respective governments to increase the functionality of the team or has increased how or how often they reach out to the community. For the future, it is professional to show the team’s direction; the Toasters explain their future goals but also work through a five year plan.



### Team Breakdown<sup>2</sup>

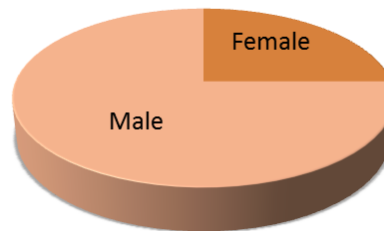
Age Proportion of Team 3641



#### Ages

Freshmen: 23%  
Sophomores: 50%  
Juniors: 14%  
Seniors: 14%  
**Total: 44**

Gender Proportions of Team 3641



#### Gender

Males: 75%  
Females: 25%  
**Total: 44**

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<sup>2</sup> Information relevant to The Flying Toasters

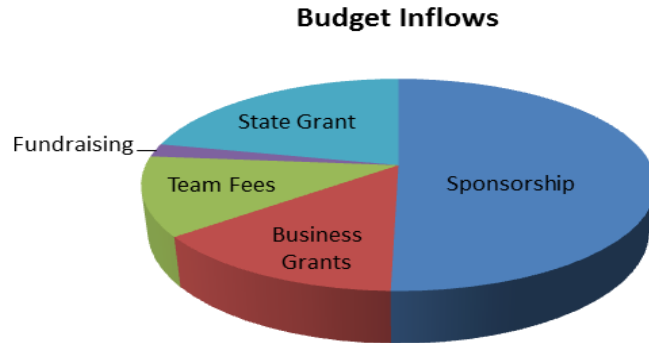
Infographics and team breakdowns show how many people are on team, and can provide information and or backing to arguments made in a presentation, such as team growth, or increased amount of girls or minorities interested in the FIRST robotics program. In addition, they break up sections and give the reader something to look at and learn about the team.

**Budget<sup>3</sup>**

Income Sources

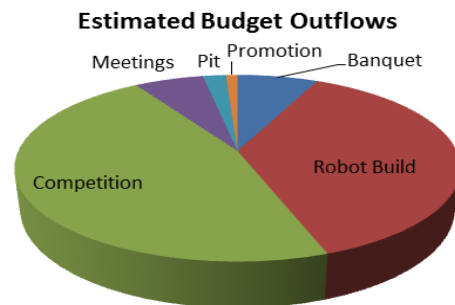
Sponsorship.....	\$21,000*
State Grant.....	\$9,000
Business Grants.....	\$5,800
Team Fees.....	\$5,000
Fundraising.....	\$700
<b>Total.....</b>	<b>\$41,500</b>

\*Subject to change over the course of the season.



Projected Season Costs

Competition.....	\$19,500
Robot Build.....	\$15,500
Banquet.....	\$2,900
Meetings.....	\$2,500
Pit.....	\$1,000
Promotion.....	\$500
<b>Total.....</b>	<b>\$41,900</b>



Sponsors are very important to FIRST robotics teams. Having sponsors is a very favorable element for a team. They provide the funding necessary for the teams to pay for competitions, robot parts and machinery, and outreach or competition materials (such as buttons,

<sup>3</sup> More examples of infographics and team breakdowns. Information relevant to The Flying Toasters, an FRC team.

shirts, pits, etc.). Sponsors can also provide materials for a team, such as computer programs, machines, or parts. This, along with providing mentoring opportunities, or places to practice and perfect a robot (such as proving grounds), makes sponsors highly regarded. Due to this, sponsors always deserve a thank you or an important part of any important team document. The business plan has to do with money inflow, and sponsors provide the majority of this. Therefore, the Toasters have a section dedicated to their sponsors and explain why they have so many:

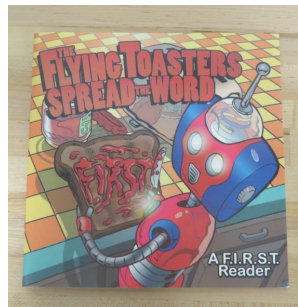
“The Toasters are required to reach out to businesses to increase relations in the community and prove that they are not just another school team. Because of this, they have one hundred and twenty corporate and family sponsors.”



Since the business plan focuses a lot on winning an award related to the Chairman’s aspect of the team, an important part to include is an outreach portion.

What is outreach? Outreach is where a team goes into their community and builds bridges to the people there. It is to engage the people of the community, get them involved in the team so that the team becomes *more* than just another school sport, and allows them to become interested in STEM (or STEAM) careers and fields. Building these bridges into the community leads to sustained growth in the FRC team, and can (and more than often does) lead to the creation of other teams in the community, all the way from Jr. FLL to new FRC teams. These people then

spread the ideals of FIRST into their lives and continue on to higher education or careers in STEM fields. The Flying Toasters have a 100% graduation rate and 100% rate of alumni going on to continue STEAM careers in a higher educational setting. The idea of outreach connects to the Toasters' Circle of Growth, where raising awareness, leads to gaining more support, which creates continued success.



Examples of outreach can be anything from setting up STEAM Classes at the local library to get the younger generation involved in activities related to each aspect of STEAM (stations focused on science, technology, engineering, art, and mathematics) to volunteering in the community in order to help those in need or branch out to other clubs, like Girl Scouts and Boy Scouts. Having these outreach events are extremely important.

In the case of Team 3641, their outreach extends beyond the sense of helping out to being able to sell or give out physical products. They created a children's book, to which they read during their STEAM class night and is available to purchase. Since they have it on sale, the Toasters created a QR code to put in their business plan so that those who are interested in learning more about this vital product/outreach could look into it. Having the QR code in the business plan also gives judges another waypoint in which to investigate the validity of a presentation and see for themselves what the team has created to engage the minds of the younger generation.



After the outreach has shown its successes, and the amount of people interested in the teams in the community, another section can be added. Having a "Future Toasters" section, or a section discussing the plans for those in FTC and below level teams, and how the team is going to mentor them, can show a team's involvement, dedication, and follow through with the people they've gotten interested in the ideas of STEAM. It also lays out plans for the future when these members become members of the initial FTC team. Related to this, another important section is the connections to the other FRC teams around the city the team is located out of. The Toasters



have the powerful story of helping out team 5225, the Shambotz, included in their business plan to show their commitment and responsibility they feel towards getting other teams inspired.

The judges love themes. In order to keep everything connected, make sure the colors included in the business plan are team colors, and the design is consistent all the way through. This is also to keep the plan looking professional.

 3641 Business Plan 2016 ||

**Team 3641**  
**The Flying Toasters**

# Business Plan



**“Leading the way to a brighter future and creating a positive example for future generations.”**

**-The Flying Toasters**

The front cover of the Toasters' business plan is the same colors as used throughout everything used for competition, along with the one team logo and format that is similar to the one used for the impact study.

After creating their business plan, the Toasters brought it to competitions and used it to aid them in their presentations. They got the help from the Hackbots, who graciously saw the finished copy and gave very detailed notes and advice on how to improve on it (on a tasteful paper plate). After taking a look at the Hackbots bound copy, it was obvious to the team that they had goals to work on in their future, to one day have a plan that would win them as many Entrepreneurship Awards as the Hackbots can claim to their name. They look to their friends on the team to assist them on their goals and hope to accomplish their task in order to create something that will someday allow Chairman's to compete at Worlds.

## Bibliography

**Entrepreneurship Award Definition:** "Awards | FIRST." *Awards | FIRST*. N.p., n.d. Web. 19 Apr. 2016. <<http://www.firstinspires.org/robotics/frc/awards>>.

**Mission Statement and Business Plan Quotes:** Team 3641, The Flying Toasters. "Business Plan 2016." Google Docs, Feb.-Mar. 2016. Web. 19 Apr. 2016. <<https://docs.google.com/document/d/1d3y3xRq0rtyjMe3-0FtrhTOASMa7BO5iaDS53NoNY8A/edit?usp=sharing>>.

"Team-3641." *Team-3641*. N.p., n.d. Web. 19 Apr. 2016. <<http://www.theflyingtoasters.org/>>.

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