

# How to Create a *FIRST* Team Business Plan

## Executive Summary Business Plan Document SWOT Analysis “How To”

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## Introduction

*NOTE: This Revision is updated to match the 2014 FIRST Administrative Manual and changes.*

This document is meant to be a guide for *FIRST* Robotics teams creating a business plan for the first time. The plan follows the guidelines identified by *FIRST* for the Entrepreneurship Award, but it is an interpretation of those guidelines by Cyber Blue Robotics, Team 234. This is not an official *FIRST* document or *FIRST* reference.

This document lays out the different sections of a Business Plan and provides some definition of what might be included in those sections, and in some cases, it provides examples of what those sections could look like.

The Executive Summary sample that is provided is for a pretend team, Team 6311 “Robust Robotics”.

Please use this document as you wish for creating your own Business Plan. It is meant to be a guide and a template and is offered for teams to use. If you desire, you can reference “Cyber Blue, *FIRST* Robotics Team 234” as a source or reference.

Some additional reference materials are identified below. Items 1 and 2 are located on the Chief Delphi “Media Section”.

1. Cyber Blue 234 / 2012 Business Plan and Continuity Plan
2. Cyber Blue 234 / 2009 Championship Presentation on Continuity Plans
3. SBA (Small Business Association) “How to Write a Business Plan” (google search)

Please provide any comments and feedback on the document, including any items that could be improved on or added, to [first@cyberblue234.com](mailto:first@cyberblue234.com).

Remember – this is only a guide for you to use. It is based on our interpretation of the *FIRST* documents. Please be sure to read the *FIRST* Administrative Manual, Awards Section, 6.10 “Entrepreneurship Award”.

## **BUILDING YOUR BUSINESS PLAN**

*FIRST* has asked teams to prepare two types of documentation for submission. The first is an Executive Summary and the second is a Business Plan. The information contained both is very similar, but the Executive Summary captures just the highlights and key points. The Business Plan will be longer and more detailed. For most businesses, the Executive Summary is the “Introduction” to the Business Plan itself.

For this document, the “Creating You Executive Summary” section will be a near “cut and paste” of the *FIRST* Administrative Manual section. The information *FIRST* is requesting is very specific and you are limited on space.

The Business Plan will take the topics and information from the Executive Summary and expand it into a formal document. There is a little more freedom in the Business Plan to add additional material. For this Business Plan template, the organization and order of the sections will follow the *FIRST* Guidelines for the Executive Summary.

There are 4 Sections to this paper:

1. Creating your “Executive Summary”
2. Sample Executive Summary (Made Up *FIRST* Team 6311)
3. Sample Business Plan Document
4. SWOT Basics

# **SECTION 1.**

## **CREATING YOUR EXECUTIVE SUMMARY**

## SECTION 1.

### CREATING YOUR “EXECUTIVE SUMMARY”

Each of these sections allows for 1600 characters, including spaces and punctuation. It can be a good idea to use a text editor (notepad) to create these segments because regular word processing software does not count characters the same way as a text editor.

Samples of ideas for each segment are on the following pages.

**TEAM MISSION STATEMENT:** What drives your team? What does your team want to accomplish through your business plan?

**TEAM ORIGIN:** When was your team formed, where is it located, how many members are on the team (students and mentors), has your team grown, what challenges have you overcome to participate in *FIRST*?

**ORGANIZATIONAL STRUCTURE:** How is the team structured to **Raise** money, **Ensure** funds are properly spent, **Find** and engage sponsors, **Recruit** members and mentors and **Ensure** *FIRST* principals remain core to the team. For this segment, you can also upload an organizational chart if it shows how the structure meets these requirements.

**RELATIONSHIPS:** How does your team engage, inspire, educate and retain Team members, Mentors and Sponsors?

**DEPLOYMENT OF RESOURCES:** How are your team resources (money, facilities, talents) utilized to **Engage** the community and spread the message of *FIRST*, **Inspire** others to get involved so *FIRST* continues to grow and **Ensure** all team members get the most out of their *FIRST* experience.

**FUTURE PLANS:** Discuss any specific plans the team has to for the next three years regarding team sponsorship, team and community outreach (including helping *FIRST* grow), and describe how you will accomplish these goals.

**FINANCIAL STATEMENT:** Describe your team finances. Include information on income and expenditures. For this segment, you can include an image of the team financial statement.

**RISK ANALYSIS:** Describe the team Risk Mitigation Plan. This can be a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis or a written description. The focus is on the sustainability of the team.

**PICTURES:** *FIRST* requests 4 pictures be uploaded. These should be 5” x 4” images, 100 dpi resolution and be either .JPG or .GIF files. Two of these may be the Organizational Chart and / or the Financial Statement.

## **SECTION 2.**

# **SAMPLE EXECUTIVE SUMMARY**

## Sample Executive Summary – Robust Robotics Team 6311

**TEAM MISSION STATEMENT:** Robust Robotics mission is to generate interest and skills in the fields of engineering science and technology in our local community. We strive to be an open and inclusive *FIRST* Robotics team so that we are inviting to all interested members of our school community. We strive to become involved with our middle school and elementary school and local youth programs to encourage students to participate in the *FIRST* Lego League and *FIRST* Tech Challenge. Our goal for this season is to add 6 new members.

**TEAM ORIGIN:** Our team was formed in September 2012. Our first competition season was the 2013 game “Ultimate Ascent”. We are located at Medium High School in Indianapolis, Indiana. Our team was formed by our principal after he saw a special program about *FIRST*. In 2013, we had 7 students, 1 teacher and 2 engineering mentors. For 2014, we have grown to 14 students and added a non-engineering mentor to work with us on team organization. Our biggest challenge to compete in 2013 was raising the funds to travel to our competition. We addressed this by selling “shares” in our team to community businesses and have gained several new sponsors for 2014. Our big challenge this year is to add more younger students to our team.

**ORGANIZATIONAL STRUCTURE:** We are a small team, so each person on the team shares responsibility for the overall operation of the team. We have made extensive use of NEMO (Non-Engineering Mentor Organization) resources from the *FIRST* website. Each student on the team pays \$100 to participate and is expected to recruit \$50 in community sponsorships. We have brainstorming sessions to identify potential big sponsors and then contact them to arrange a visit and demo. Since we are a school team, all of our funds are managed through the school treasurer to be sure we meet legal requirements. We keep a team budget and our lead teacher manages the funds. Everyone on the team knows our budget and where we are spending our money.

To assure *FIRST* principals are known and understood by the team, we have watched the Morgan Freeman video about mentoring, one of Dean Kamen’s interviews from the news, and we invited a Woodie Flowers Award winner to a meeting to talk with us about *FIRST* and Gracious Professionalism.

**RELATIONSHIPS:** Our relationship with new team members starts when they attend our open house night or come to their first meeting. We encourage them to check out each sub-team to learn where their interests are. All members are encouraged to step in and get involved. Veteran members are tasked with training and developing new members. Fall projects, demos and community events help all members become a part of the team.

Mentors are invited in and formally paired with another mentor to learn how the team works and where the highest need for mentor support is. At the end of the season, the students recognize each mentor for their unique contributions to the team. We nominate a mentor for the Regional Woodie Flowers Award each year.

When we recruit new sponsors, we go to them with information about the team and tell them what we do. We invite them to our meetings and our open house event to see our build in progress. We also invite them to our competitions and encourage them to be event sponsors or volunteer judges.

**DEPLOYMENT OF RESOURCES:** We use our resources to spread the message of FIRST, inspire others and help our team members benefit from being a part of our team. We participate in community events and demonstrate our robot at all of our local elementary and middle schools. This year our robot “walked” a 5K benefit race with 4 team members to help raise money for the charity and raise awareness of our program. At all of our events we have a team flyer that we give out that tells about the team and the different *FIRST* programs available. We work hard to be sure all team members are able to travel to our competitions and participate in all events. We also hold a “scholarship night” where a teacher from our English department helps members write essays to apply for *FIRST* scholarships.

**FUTURE PLANS:** Our team is 6311, and we have adopted a 6-3-1-1 growth program. Each year, we want to add at least 6 new students, 3 community sponsors, 1 mentor and 1 new community outreach project. We believe by balancing our growth across all of these areas, we will be able to remain effective and have an impact on student members and our community. We have plans in place to accomplish these goals. Each student will work to recruit one new, younger member. Each mentor will work to recruit a new mentor who has a specialty different from theirs. As a team, we will brainstorm for new sponsors and then arrange demonstrations and visits to tell them about our program. We will also brainstorm to identify new community outreach opportunities and ask our parents and teachers for ideas.

**FINANCIAL STATEMENT:** Our budget is small and we work to make the most of each dollar we have. Our total income is \$12,000. This includes a NASA Grant (\$5,000), Student Fees (\$1,400), Community Sponsors (\$4,000) and Fundraising Events (\$1,600). We expect to spend \$11,000 during the competition season and maintain \$1,000 to carry over into the fall to support team activities such as off-season events and materials for a learning project. The \$11,000 is broken down by Registration (\$5,000), Robot Materials (\$2,500), Team Shirts (\$280), Travel and Hotels (\$2,000), Pit materials and flyers (\$220) and Unknown expenses (\$1,000).

**RISK ANALYSIS:** For the 2014 season, we completed a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis and put together plans to address the major risks we identified. The key items from the SWOT are listed below and there is more detail in our Business Plan.



### Strengths –

- Great school and administration support.
- Diversity in student and mentor population.
- Strong support from the community.

### Weaknesses –

- Small team.
- Most team members are seniors.
- Mentors have limited FIRST experience.

### Opportunities –

- Recruit a new major sponsor who just moved into town.
- Use school announcements and media to publicize the team and recruit new members.
- Search for creative, unique fundraising options.

### Threats –

- School decides to stop supporting the team.
- Team members cannot get approval to miss school to compete.

From our SWOT, we created action plans to address the key issues identified. To address the Weaknesses of “Small team” and “Mostly seniors” weaknesses, each team member is recruiting one new member who is younger than them. To address the Threat of the school not supporting us, we are each making sure we thank the principal for her support and telling our teachers about the program and how it helps us with regular classroom work.

**PICTURES:** *FIRST* requests 4 pictures be uploaded. These should be 5” x 4” images, 100 dpi resolution and be either .JPG or .GIF files. Two of these may be the Organizational Chart and / or the Financial Statement.

# **SECTION 3.**

## **SAMPLE BUSINESS PLAN DOCUMENT**

*Sample Business Plan Document  
Modeled after the FIRST Entrepreneurship Award*

# **Robust Robotics Team 6311**

## **Business Plan – 2014**

## Robust Robotics Team 6311

### Business Plan

***Note: This is a sample Business Plan based on the FIRST Entrepreneurship Award guidelines, with additional, optional items included. This is meant to be an example / sample for teams to use to help create their first business plan. Teams should customize and personalize their plan to reflect the items most important to the team.***

#### Table of Contents

(These are items you might want to include in your plan. Items in **Bold** are specifically identified by *FIRST* in the guidelines for the Entrepreneurship Award. Items with an \* are optional items for you to consider making part of your plan.)

1. **Executive Summary**
2. Program Summary \*
3. FIRST Description \*
4. **Team Origin, Description and History**
5. Team Impact \*
6. **Team Structure and Organization**
7. **Team Relationships**
8. **Team Use of Resources**
9. **Team Future Plans**
10. **Team Financial Statement**
11. **Team Risk Analysis and Risk Management**
12. For More Information \*
13. **Photos and Other Supplemental Materials**
14. Team Goals and Challenges \*
15. Sustainability \*

## **1.0 Executive Summary**

The Executive Summary should be a formatted version of the sections submitted online. You can highlight headings to make each section stand out. It should be a separated section in the plan.

## **2.0 Program Summary (optional)**

In this section, you can include more information about your team. Include information on special projects you have completed, any camps or other outreach programs and possibly some of your high level goals. This could be your team “story”.

## **3.0 *FIRST* Description (optional)**

Although someone from *FIRST* or a *FIRST* judge would know about the program, you might want to use your business plan to approach new sponsors or to help start a new team. There is a great deal of good information on the *FIRST* website that can be used in this section – just be sure to reference the *FIRST* organization if you copy and paste information from them into your document.

## **4.0 Team Origin, Description and History**

In this section, you can take the material from the Executive Summary and expand it to add more details.

## **5.0 Team Impact (optional)**

In this section, you could describe the impact you are having in your school or community. You can identify the specific benefits to student members and their college and/or career goals.

## **6.0 Team Structure and Organization**

In this section, you can take the material from the Executive Summary and expand it to add more details. You might want to add a basic organization chart that shows the team leadership and members. Describe if your team is based as a class in the school, a club or a special school organization, or maybe describe if you are a Boys and Girls Club or 4-H based team.

This section might describe how your Sponsors fit into your team structure. Do you have a mentor assigned to you from a sponsor, or sponsor company volunteers? How is your team integrated into the school?

This section could also include information on student membership and any rules or guidelines for membership. It could also define how students join the team and any specific financial responsibilities that members have.

## **7. Team Relationships**

In this section, you can take the material from the Executive Summary and expand it to add more details. You might include more specific information about each portion of this section.

## **8. Team Use of Resources**

In this section, you can take the material from the Executive Summary and expand it to add more details.

## **9. Team Future Plans**

In this section, you can take the material from the Executive Summary and expand it to add more details. You might describe your team planning for the season and the rest of the year. Describe your build season and competition season activities. Describe your plans for the summer and fall and what actions and activities you expect to be involved in. Describe any special capabilities you hope to develop.

This section could be laid out in a narrative form or in the form of a calendar with specific items for each month identified.

## **10. Team Financial Statement**

In this section, you can take the material from the Executive Summary and expand it to add more details. Since there is more space, you might want to include additional narrative or an Excel spreadsheet that details you income and expenses.

*Preparation of this section could be a great learning opportunity for the team if you could get a finance or business specialist to help you create these documents.*

## **11. Team Risk Analysis and Risk Management**

All organizations have risks, and successful ones have ways of identifying those risks and managing them. One method of Risk Analysis is to complete a SWOT. A guide on how to do this is included with this overall document.

In this section, you can take the material from the Executive Summary and expand it to add more details and more analysis.

An additional action from the SWOT analysis is to identify the Key Risks to your team and put together detailed actions to address them. These Risk Action Plans could be included in this section.

## **12. For More Information (optional)**

In this section, let the reader know how to contact your team for more information. List your team website and main contacts. While this might not be needed by FIRST, it can be useful and helpful information for community members or sponsors.

## **13. Photos and Other Supplemental Materials**

In this section, you can include the photos or files included in the Executive Summary as well as any other attachments you feel add value to your plan.

## **14. Team Goals and Challenges**

In this section, expand on Section 9 “Future Plans”. Describe what your goals are for the short term and long term. This might include goals for the competition season, for the team as a whole, for individual students, and for the rest of the calendar year. Describe any specific challenges your team faces and how they can be managed.

**GOALS** - Some possible goals are listed below.

### Short Term Goals

1. Complete our robot on schedule and be ready for practice day.
2. Win a Technical Award for part of our robot design.

### Team Goals

1. Nominate a Mentor for the Woodie Flowers Award
2. Nominate a Student for the Deans List

### Individual Goals

1. Every student on the team graduates from High School
2. Every student on the team applies for at least 1 FIRST scholarship

### Longer Term Goals

1. Compete in an off-season event in another city
2. Host a full day workshop for LEGO teams or students interested in forming a LEGO team.

**CHALLENGES** – What are special challenges your team faces and how can you address them? Some examples are listed below.

1. Build area only available on Saturdays.
  - a. Maybe you can meet at someone's home during the week nights and do your major work on Saturday. Maybe you can search for a new location.
2. Your lead mentor got a new job in another city.
  - a. Can other mentors step in? Maybe the mentor could be available by phone or email. Maybe you can work with another team.
3. Someone stole your robot during week 3.
  - a. Can you contact FIRST or other local teams for help? Does another team have parts you can have or borrow? Can you merge with another team to compete?

## **15. Sustainability**

Sustainability is part of your Risk Analysis (SWOT) and a critical issue for many *FIRST* teams. In this section, describe what actions you are taking to be sure your team can compete next year and the year after that.

Describe how you are developing and nurturing sponsors. Describe how you are working with your school to gain more recognition. Define plans to develop LEGO or FTC teams in your community to help maintain interest and future team members. Many teams are able to obtain sponsors easily in the first year or two due to special grants and support options, and because you might be considered a new and exciting program. The bigger challenges can come in year 3 and beyond, so you need to identify how to prepare for that and assure the long term viability of the team.

Sustainability also includes retention of mentors. How are your mentors recruited and do you have several or just one? Do you have a succession plan for a team leader if the current one leaves the team? These are all questions that can be addressed in this section.



**SECTION 4.**  
**SWOT Basics**  
**Strengths, Weaknesses, Opportunities, Threats**  
**Basics of a SWOT Analysis**

## SWOT – Strengths, Weaknesses, Opportunities, Threats

### Basics of SWOT Analysis

#### Introduction

*The 2014 FIRST Entrepreneurship guide asks teams to conduct risk analysis using a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats). This is a tool used in business but may be a new approach for a FIRST team. This section is intended to introduce the concept of a SWOT analysis and provide some basic guidance on how to lead one for your team. Comments, feedback and suggestions are welcomed. Please send to [first@cyberblue234.com](mailto:first@cyberblue234.com).*

#### What Is a SWOT and How do you do a SWOT Analysis

A SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis is often used to determine what the internal and external factors are that can be a benefit or a risk to a business venture. For a FIRST Team, the SWOT analysis can be used to address the team’s challenges for sustainment and growth.

A SWOT analysis is best done with a representative group from the team. If possible, the whole team should participate to be sure all ideas are captured and everyone on the team understands the risks to the team. Following the SWOT analysis, the team should then put together action plans to address the issues identified. Taking these steps can improve the likelihood of success and sustainment for the team.

Strengths and Weaknesses are usually focused on issues “inside” the organization, while Opportunities and Threats are usually focused on “external” factors. However, both internal and external factors can be in any of the four categories.

In a typical SWOT analysis, the items are captured in a “4 BOX” layout with Strengths and Weaknesses in the top 2 boxes and Opportunities and Threats in the bottom 2 boxes. A sample of this layout is below.

STRENGTH	WEAKNESS
OPPORTUNITY	THREAT

Each of the four SWOT categories is defined below.

**Strengths** – A Strength is something or some capability that can help the team be successful and sustaining. It could be something that the team would share with other teams.

**Weaknesses** – A Weakness is something that is a disadvantage or significant additional challenge to the team.

**Opportunity** – An Opportunity is something the team may be able to do to help be more competitive or improve sustainability.

**Threats** – A Threat is something that poses a risk to the team and the ability of the team to sustain itself.

Examples of potential details for a *FIRST* Team are listed below.

**Strengths** –

- Great school and administration support.
- Dedicated building space.
- Long term mentors and mentor support.
- Large number of students, across several school age groups.
- Diversity in student and mentor population.
- Strong support from the community.
- Successful recruiting program.
- Training program for new members.
- Future team members through Elementary and Middle School programs.

### Weaknesses –

- Little support from the school or administration.
- Small team and ineffective recruitment.
- No diversity of team members.
- Most team members are seniors.
- Mentors only stay a year or two.
- Fundraising is always limited.
- There are very limited funds to purchase materials.
- Team can only meet 3 days per week.
- There is only one major sponsor.
- There is only one mentor.

### Opportunities –

- Partner with another school or community center.
- Recruit a new major sponsor who just moved into town.
- Use school announcements and media to publicize the team and recruit new members.
- Hold an open house to highlight the team and FIRST.
- Do a demo at major sponsors to highlight their support.
- Search for creative, unique fundraising options.

### Threats –

- School decides to stop supporting the team.
- Mentors “retire” from *FIRST* due to burnout or other commitments.
- Major sponsor closes down or decides to reduce funding.
- Students and / or Mentors cannot work together.
- Team members cannot get approval to miss school to compete.

A SWOT can be a very useful tool for a team. After completing the analysis, the next step is to put together action plans. Action plans can help assure that the Strengths and Opportunities are used to the advantage of the team, and the Weaknesses and Threats are addressed to remove them or reduce their impact on the team.

*For additional information, search the internet for “SWOT” for several other examples and descriptions of SWOT techniques and approaches for businesses.*