

OPERATION P.E.A.C.E.

ROBOTICS

4-H FIRST ROBOTICS TEAM 3461



BUSINESS PLAN
2022 - 2023

□ 1 OPENING STATEMENT



PREFACE

The purpose of this document is to guide new generations with an up-to-date, focused, and organized document for Operation P.E.A.C.C.E. Robotics for the 2023 season. This includes an overview of our mission, a breakdown of our financial records, our budget, and our future goals.

We chose to express these plans within a business plan, because of its in-depth structure and ease of creation. We intend to create these plans annually, with updates as needed for our financial records, structure change, and more.

This documentation is highly encouraged to be referenced upon for future team members, sponsors, and fellow robotics teams. However, parties cannot forge or copy our documentation without the consent of the team.



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EXECUTIVE SUMMARY

WHO WE ARE & HISTORY

Operation P.E.A.C.C.E. (Practicing Engineering and Competitive Cooperative Excellence) Robotics was established in 2010 to excite students to pursue STEAM through competitive robotics in Bristol, CT. Our team is a community team, meaning that we are not tied with any school system, being financially independent with the help of 4-H. Furthermore, we accept anyone regardless of background and skill level to join our team so they can learn the necessary skills to become the next generation of innovators.

Every year, we strive to compete at the highest level as our students gain more experience in STEAM to outperform previous year achievements. Today, the team is a strong player in the FIRST community, competing not only at the New England District Championships, but also the World Championships in Houston, TX.

OUR MISSION

Our mission at Operation P.E.A.C.C.E. Robotics #3461 is to teach students to explore and appreciate STEAM, encourage students to realize their capabilities, and to inspire others to learn and improve skills.

By the time a member graduates from the team, they will gain skills such as:

- How to apply engineering principles via the designing and construction of the robot
- Gained fluency in industry standard engineering software (Labview, SolidWorks, Java, etc.)
- Created a network with many engineering companies
- Developed business skills in fields such as marketing and graphic design
- Refined their public speaking and presentation skills



ACHIEVEMENTS

2011 - 2014

- Highest Rookie Seed at Northeast Utilities FIRST Connecticut District Event
- Team Spirit Award at Southington District Event
- Quality Award at Pine Tree District Event

2016

- District Event Winner at Hartford District Event
- Dean's List Finalist Award at New England District Championship

2018

- Team Spirit Award at Southington District Event
- Quality Award at Pine Tree District Event

2019

- District Event Finalist at Western New England Event

2022

- Entrepreneurship Award at Waterbury District Event
- 3rd Seed Captain at New England District Championship
- 5th Seed Captain at World Championships -- Newton Division
- Quality Award at World Championships -- Newton Division



TEAM STRUCTURE

TEAM CAPTAIN(S)

The team captains are typically two students who are elected by students and mentors on the team. The team captains are meant to help keep the team organized and on track during build season and competition season. They are the students leaders of the team who regularly discuss with the mentors the team's goals and how they will achieve them.

MENTORS

The mentors of Operation P.E.A.C.C.E. oversee decisions that the team captains and committee chairs make, while also managing the team to accomplish their goals. They take care of scheduling and other tasks of the team that does not involve the production of the robot or the team brand.

COMMITTEE CHAIR MEETINGS

Our team is split into multiple committees that have student leads voted upon by students and mentors of the team. Committee Chair meetings are meant to keep team captains on track with current team goals, and address any potential future issues. The meetings occur once a week throughout the FRC build season. Committees are split based on responsibilities of the team: Awards, Finance, Public Relations, Mechanical, Programming & Electrical, and Scouting & Safety.

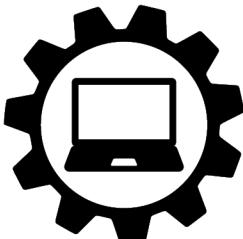
COMMITTEES

MECHANICAL



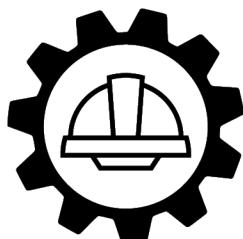
- Drivetrain
- CAD &
- Design
- Intake
- Arm
- Climber

PROG & ELEC



- Wiring
- Vision
- Limelight
- Auto
- Wheel
- Drive

SCOUT & SAFETY



- Data Collection
- Organize Data
- Manage Tools

AWARDS



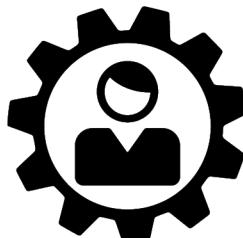
- FIRST
- Impact
- E.I.
- Imagery
- Video
- Photo

FINANCE



- Sponsors
- Grants
- Budget

FINANCE



- Recruit
- Social Media
- Marketing
- Comms
- Outreach

OUTREACH

Operation P.E.A.C.C.E. Robotics organizes a few outreach initiatives, and we're currently working on creating more partnerships in our area. These initiatives allow Operation P.E.A.C.C.E. to give back to the community by educating people on STEAM and FIRST.



COMMUNITY OUTREACH

Harwinton Fair - We've attended the Harwinton Fair for the past 7 years. We run a booth where we demonstrate our robot and encourage children to drive it as well. We also sell an assortment of taffy.

Bristol Mum Festival - We've attended the Bristol Mum Festival for the past 5 years, running a booth where we demonstrate the robot and encourage children to drive it. We also sell an assortment of taffy.



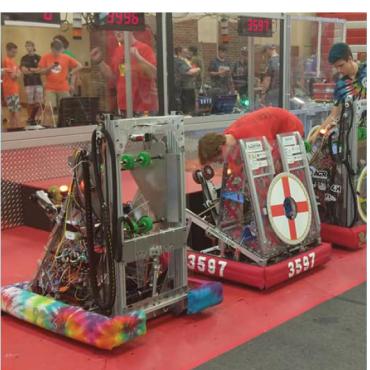
4-H Fair - We've attended the 4-H Fair for the past 8 years, where we showcase our robot and allow our community to operate it. We help by doing a lot of tasks such as keeping the bathrooms tidy and stocked, preparing meals, and arranging the dinner hall with chairs and tables.



STEAM OUTREACH

Bristol Boys & Girls Club - In 2016, we created a STEM curriculum for the Bristol Boys & Girls club. It was the first of its kind to be introduced into any Boys & Girls Club in Connecticut and other clubs have since used our program as a model to create their own.

Java Programming Class - This class has been run every summer since 2017. The class usually hosts about 15 students and they are given multiple challenges to complete in order to help teach them about Java programming. One of these challenges is usually to write a program to control the past season's robot.



New Britain Boys and Girls Club - FRC 3461 established a STEM Curriculum at the Bristol Boys and Girls Club for their after school program. This was the first of its kind to be introduced in B&G Clubs in CT, other clubs have since used our program as a model to create their own.



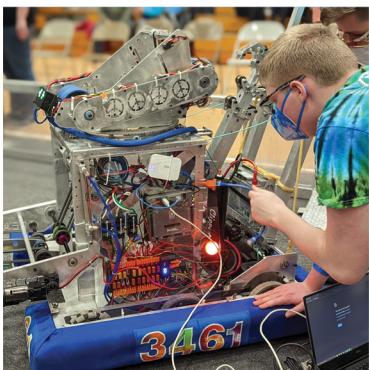
Central Connecticut Robotics Alliance (CCRA) - In 2022, Operation P.E.A.C.C.E. Robotics founded the CCRA alongside FRC-1071, MAX; and FRC-178, The Second Law Enforcers. The purpose of our organization is to spread accessible STEAM for everyone within Central Connecticut. Currently, we are focusing on our fundraising initiatives to fuel our organization's future.

SOCIAL MEDIA MARKETING



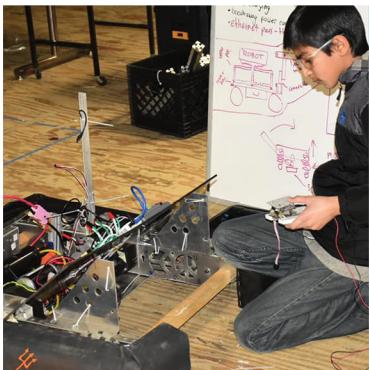
By using social media, we hope to promote FIRST programs and STEAM to kids all over Connecticut and beyond. This is also a great way to get kids in Connecticut interested in joining our team while also updating sponsors and parents frequently on our progress. The following are some examples of social media and our blogs we use frequently:

- Operation P.E.A.C.C.E. Facebook Page
- Operation P.E.A.C.C.E. Website
- Twitter (@FRCteam3461)
- Instagram (peacce3461)
- Newsletter



COMPETITION MARKETING

While at competitions, we like to market our team to judges, parents, and other students of FIRST. We accomplish this by handing out various flyers, handouts, and buttons to promote our team and the values and goals we represent.



MISCELLANEOUS MARKETING

We also try to market our enthusiasm of competitive robotics no matter where we are! Whether we are talking to potential sponsors, displaying in front of schools, presenting in front of our local legislators, we make it our mission to have our voice heard all over the world.

FINANCIAL PLAN

INCOME STATEMENT

The Operation P.E.A.C.C.E. fiscal year begins on January 1 and ends on December 31. Over the course of the year, the team keeps track of purchases on a google sheet to manage allocation of money. Our budget for the 2022 season is attached to the back. In order to ensure the stability of FRC-3461, we must identify our areas of purchase to distribute accordingly.

BUDGET BREAKDOWN

Mechanical Budget - The Mechanical Budget of the year consists of the team's ever changing needs for items for the technological aspect of students. This takes up more of the needs for purchases, and covers team costs for robot assembly, replacement parts, electrical needs, and programming assistance.

Business Budget - Alike the Mechanical Budget, Business also has a substantial budget for team needs. It takes care of the non-mechanical part of purchases, such as funding the team brand with apparel. The business budget may also make purchases to improve the team brand

FIRST Budget - Finally, the FIRST part of the budget covers the team's costs annually for competing. This area of the budget is the most expensive, with the basic \$6000 fee making up the biggest chunk. The FIRST part also covers travel costs, and items such as the Kit of Parts, a kit that assists the team in building the chassis of the robot. This may also cover the team's venture to the New England District if the team qualifies.

RAISING MONEY

Sponsors - In order to make our annual journey successful, the team needs support from the community on several different levels. One of the most effective ways to support the team is to gather supportive sponsors. By contributing monetary support, the team can purchase necessary materials and tools to construct the robot and compete in area events; in return, we offer several benefits such as representing them at competitions and outreach and shout-outs at events. Recieving in-kind support through donations and discounts allow us to stretch our financial resources even farther.

Fundraisers - FRC-3461 holds an annual taffy fundraiser to help field costs for the season. At the start of every season, the team places orders for over twenty different flavors of taffy, and sells it across different outreach events. Alongside our taffy, we also allow people to purchase a 3461 inflatable alien. The costs for both fundraisers has earned us over \$1000 to help with purchasing robot materials, parts, and travel expenses

GOALS

SWOT ANALYSIS

Currently, this SWOT analysis has been abbreviated to show an understanding of our team. A full SWOT analysis can be found within our appendix.

STRENGTHS

- Strong partnership with AGR
- Communication between committees
- Dedicated mentors/students
- Great communication between Drive Team and Scouting
- Excellent and diverse recruitment
- Usage of technical skills

WEAKNESSES

- Communication throughout the entire team
- Organization
- Community and STEAM Outreach
- Obtaining new members
- Transportation of robot
- Meeting deadlines and creating

OPPORTUNITIES

- Partner with sponsorships
- Recruitment through outreach
- Reaching out to students unable to participate in robotics programs

THREATS

- Lack of interest in a robotics program
- Disagreements within the team
- Losing membership

SMART GOALS

To improve our team, our committee chairs have identified SMART goals that can be accomplished. SMART stands for Specific, Measurable, Achievable, Realistic, and Timely, and they look at goals that can be achieved with identification, realistic steps, and all within a timely manner.

SMART Goal #1 - Achieve One of the 5 Engineering Awards in 2023 Competition Season -

Many of the members of our team want to improve and earn at least one of the five engineering awards in the 2023 competition season. To accomplish this, members will start improving and honing skills correlating to robot performance, and keep a written record of the robot to improve assembly and knowledge for the pit. We'll know if we achieved our goal by the end of the 2023 season through the awards we won.

SMART Goal #2 - Improve Financial Stability - Operation P.E.A.C.C.E. Robotics' financial stability is sufficient to continue the team for future years. However, we would like to improve this financial stability to guarantee success within our team. Our first part of achieving this is to obtain 3 new sponsors who will annually support the team. By doing this, it'll give us more money for materials and other supplies we may need, and may increase our total income. To measure the team's financial stability to see improvement, we will evaluate our revenue, expenses, and income in the summer of 2022 to see if our income has increased, and to see if our goal of new sponsors has been achieved.

SMART Goal #3 - Improve Community Outreach - Currently, Operation P.E.A.C.C.E. Robotics doesn't reach many kids through our outreach initiatives. To improve our community outreach, we want to reach a total of 500 people through our outreach initiatives, including the new Operation Innovation initiative. This will help us in our recruitment efforts as well as help to spread the mission of FIRST. Measuring this goal's success will involve the performance of our Operation P.E.A.C.C.E. initiative, and our attendance at numerous events we attend such as the 4-H faire. Members will start to count how many people we have reached through all of our outreach initiatives. This includes all outreach we attend over the year, and our annual programming workshops. By January 2024, we hope to have an accurate count of how many people we reach per initiative on a spreadsheet accessible to the team.

SMART Goal #4 - Qualify for DCMP through robot performance - Operation P.E.A.C.C.E. Robotics has qualified for the District Championship (DCMP) several times since its foundation in 2011. However, this year, Operation P.E.A.C.C.E. would like to qualify for DCMP and continue to do so for future years. Alongside this, we would like to receive our invite to DCMP this year by becoming an alliance captain or the first pick robot on an alliance at both of our competitions. This goal will be founded upon the achievement of SMART Goal #1, through not only our performance at annual events, but also by our students educating new members of the team to further the skills they develop every year. We will know we have qualified for DCMP by its start on April 5 2023.

SMART Goal #5 - Recruit More Team Members - Currently, Operation P.E.A.C.C.E. has a total of 10 team members. We would like to expand this number, considering the many recruitment opportunities we receive. To achieve this goal, we will improve our recruitment members and take advantage of any recruitment opportunities we may have. Completing this goal will help us to expand our team and increase performance. By providing more information about joining our team at outreach, and by making the induction process easier upon our members, we'll know our success at the start of the 2024 build season by making a tally chart of new members and returning members to measure our achievement.

APPENDIX A: BUDGET

2022 - 2023 SEASON ESTIMATED COSTS

ITEM	COSTS	BREAKDOWN
Robot Materials Cost	\$6,000	Materials, electronics, machines
Travel	\$42,000	Events, Championships, Worlds
Team T-Shirts	\$300	Fabric, dye, printing
Registration Fees	\$15,000	
Event Registration	\$6,000	
District Championships	\$4,000	
World Championships	\$5000	
Competition Pit & Equipment	\$3,000	Shelves, equipment, and promotional materials
Sponsor Recognition	\$500	
TOTAL EXPENSES		\$66,800

APPENDIX B: SPONSORS



The Arthur G. Russell Co., Inc. (AGR) is a world leader in custom assembly machinery, with a focus in the medical device and diagnostics industry. They provide us our build space, access to their shop tools and machines, and contributes financial aid. We have a close working relationship with the engineers and machinists, providing guidance and advice on our designs



Our team has sustained a relationship with our 501(c)3 sponsor, 4-H, since our inception. They help us maintain independence from any schools, thus giving us the unique ability to recruit students from any high school that doesn't have a FIRST team as well as homeschoolers, who otherwise wouldn't be able to access FIRST's programs.



**Phillip
Weingart**



**Sean
Drzweiecki**



**Connecticut Tooling & Machining Association
City of Bristol Mayor's Office**

**Johnny Chea
Sam Patterson
Price Chopper
Robert Butler
Frank Sathory**

**Patz Family
Dennis Yard
Dawn Newmin
DaCruz Mfg.**

**Elizabeth Trotta
Richard Covell
Eileen Candels
Nancy Edwards**

APPENDIX C: TIERS

PLATINUM SPONSORS - \$3,000 +

Gold benefits, plus...

- A medium version of your business' logo displayed on our robot, our banner at events, tournaments, fundraisers, and on the back of our t-shirts worn by team members
- A thank you letter with a plaque



GOLD SPONSORS - \$1,000 - 3,000

Silver benefits, plus...

- A small version of your business' logo displayed on our robot, our banner at events, tournaments, fundraisers, and on the back of our t-shirts worn by team members



SILVER SPONSORS - \$100 - 1,000

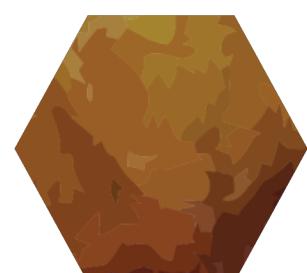
Bronze benefits, plus...

- A business card sized logo displayed on our robot, our banner at events, tournaments, fundraisers, and on the back of our t-shirts worn by team members
- Your logo and a link to your website on the sponsorship page of our website



BRONZE SPONSORS - \$25 - 100

- A social media "shout-out" on our team Facebook, Twitter, and Instagram page
- A thank you letter



Dollar Amount	Sponsor Level	Logo Size	Shirts	Robot	Banner
\$25	Bronze	Text			
\$100	Silver	Business Card		1" square	2" square
\$1,000	Gold	Small	3" square	4" square	6" square
\$3,000	Platinum	Medium	3" x 8" rectangle	2" x 7" rectangle	10" square / 6" x 16" rectangle