



TEAM 5401

**FIRST[®]
ROBOTICS
COMPETITION**

2022 BUSINESS PLAN

MISSION STATEMENT

- We enhance students' interest in STEM and business fields by engaging them with experienced mentors that challenge them with real-world situations that build character and foster a lifelong appreciation for teamwork.
- We believe that everyone is welcome on this team, no matter their ability or interest, they can find passion in something we do.
- We are not just an after-school club. We are a professional organization and competitive sport, preparing the next generation of engineers, entrepreneurs, and leaders for the bright future ahead of them.
- We choose to be a self-funded team so we are not a strain on our school district's financial resources. Additionally, we collect no dues from our team members because, as a Title 1 eligible school district, we do not want financial constraints limiting participation.
- We are committed to promoting and supporting STEM education at all levels both in our school district and in our community as a whole.
- We participate in community service and outreach to show our team spirit, introduce others to FIRST, and give back to the community that supports us.
- We will continue to grow, mentor, and sustain a family of FIRST teams all throughout Bucks County.

TEAM HISTORY & GROWTH

Based out of Bensalem, Pennsylvania, The Fightin' Robotic Owls was formed in 2014, with a group of 19 students and 3 mentors. During our 2019 season, we hosted our inaugural FRC-District Event and our team became the Tesla division winner in Detroit! We invited students from Neshaminy high school to join our team for a year, so they could start their own team the following year. That same season, we created an FLL pilot program at two of our elementary schools, which has evolved into our STEM Ambassador program.

Moving onto the 2020-2021 season, we started six more FLL teams in addition to the two teams we started the year before. Then at our local middle schools, we started two FTC teams. All 10 of these teams were supported financially by our team and our students mentored them through our STEM Ambassador program.

This is currently our 8th season and it is challenging us more than any other before. The pandemic really made a lot of changes to the robotics world and we are still trying to overcome them. However, we have been able to keep our momentum going by using digital collaboration tools such as Slack, Discord, Google Docs, and On-Shape. Since we have found innovative ways to keep people engaged during the pandemic, we have seen close to 37 students return and 18 rookies join, which is better than most pre-pandemic years.

ORGANIZATIONAL STRUCTURE

Team 5401's Leadership Team includes four student leaders; Program Manager, Chief Marketing & Operations Officer, Chief Engineer, and Chief Safety Engineer; as well as our 10 mentors. In our team, students can join different subteams such as manufacturing, electrical, CADD, business, assembly and programming. We are a student-run team, with mentors there to provide guidance as needed. We hold weekly meetings throughout the off-season, including summer, and during build season we meet four times a week. Outside of meetings, our team utilizes collaborative communication tools like Slack, Discord, and Google Drive to receive and share information.

Thanks to our STEM ambassador program, we have created a pipeline for students to work their way through the FIRST teams we support. This year, we have seen the first students from our FLL and FTC teams join our team. Our team allows other students from other schools in Bucks County to join our team to allow equal opportunity for all students. This influx of students from these programs will not only keep people joining our team but will also continue to keep STEM thriving in the Bensalem community.

MARKETING

The main way we promote our team and brand is by hosting the Bensalem FRC District Event. We hosted our first FRC event in 2019 and it was a great way to promote ourselves and FIRST to our community. Many members of our community volunteered at the event and even more came to the event where they gained a better understanding of what FIRST is and the impact it has on the community. This became a gateway for us to start different FIRST programs throughout our district because students in our elementary and middle schools were able to see how exciting FIRST is. We currently have seven FLL teams and two FTC teams that we mentor through our STEM Ambassador Program with plans to increase that number by 25% over the next 2 years.

FINANCIALS

Our team's major source of funding for the 2022 season comes from our Community Partners. We have ten Community Partners this year, two of which are new this season: CRC and NAVMAR Applied Sciences. The majority of our partners are large corporations, providing us with anywhere from \$3,000 to \$10,000 annually. Hopefully next year we will be able to reach out to local businesses again, but currently, we decided not to. Our team thought it wasn't fair to ask them due to the financial struggles they faced during the pandemic.

When recruiting Community Partners, we look for businesses that want to help us share our mission of spreading FIRST in Bucks County. Because of this, all seven of our FLL and our two FTC teams have received funding from three of our Community Partners: Dow, DOD STEM, and Verizon. Team 5401 wants to give a big thank you to all our sponsors!

RISK ANALYSIS

Outreach- Strength

As a team, we are committed to promoting and supporting STEM education at all levels, both in our school district and in our community as a whole. In our district, we mentor seven FLL teams and two FTC teams through our STEM Ambassador program. In our community, we utilize a unique method for starting FRC teams at nearby high schools. Our strategy is to invite a group of students and teachers from a local high school to join our team, where they help design and build our robot. The following year, with continued help and support from us, they will form a veteran core to a unique rookie team. This method is especially helpful in combating the lack of FRC in our FIRST "dead zone". As we look towards next year, we have identified our next partner to be Pennsbury High School.

Transfer of Knowledge- Opportunity

Our biggest opportunity is adaptability. When the pandemic first hit and our school shut down, as a team we struggled since we could not meet in person. We needed to pivot and find innovative ways to engage team members and mentors. By the beginning of summer, we held regular Discord calls for team members to continue to not only collaborate on projects but also socialize and bond. To this day, these Discord calls have continued even though our school has reopened because it provides members a hybrid working environment.

Logistics- Weakness

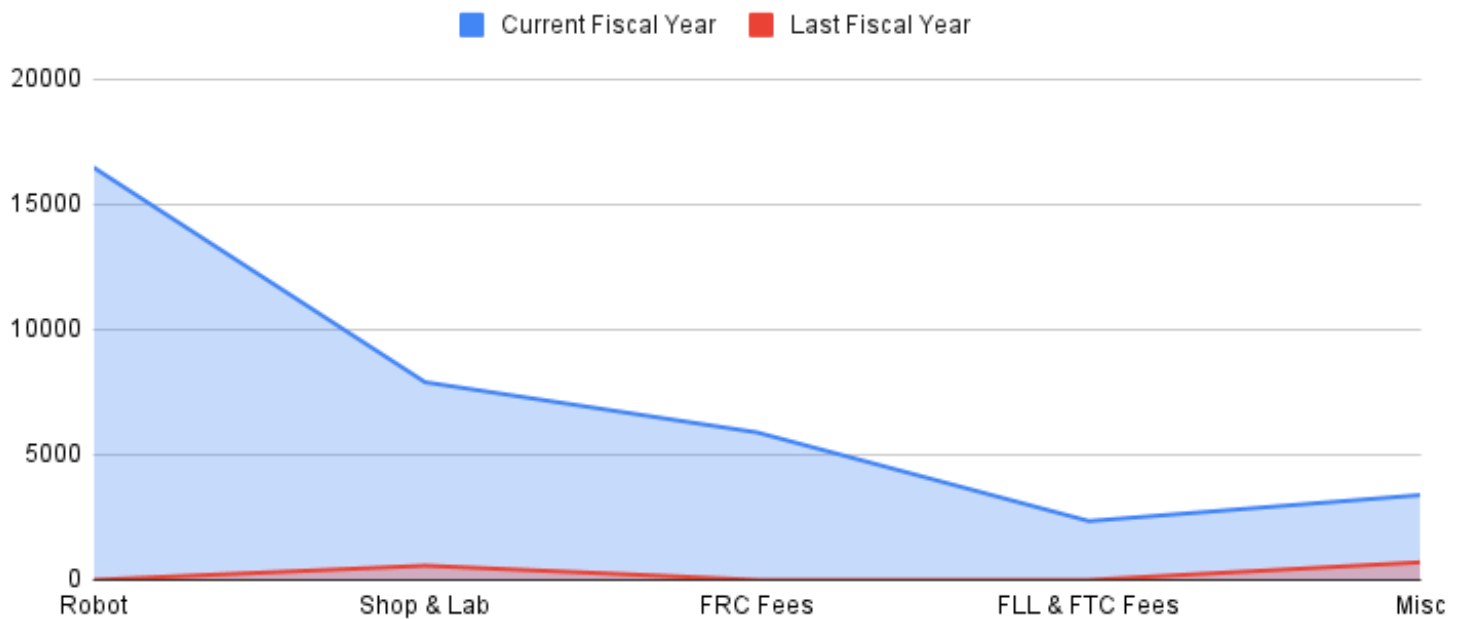
Our biggest struggle is logistics, specifically around purchasing, inventory management, and transportation. For transportation, many team members lack guaranteed transportation and because of this, are unable to show up to weekend meetings and have to leave our meetings early. For purchasing and inventory management– we struggle with keeping track of what we have on hand so we frequently order items last minute at expedited prices, often to find out we had the item all along.

Pandemic- Threat

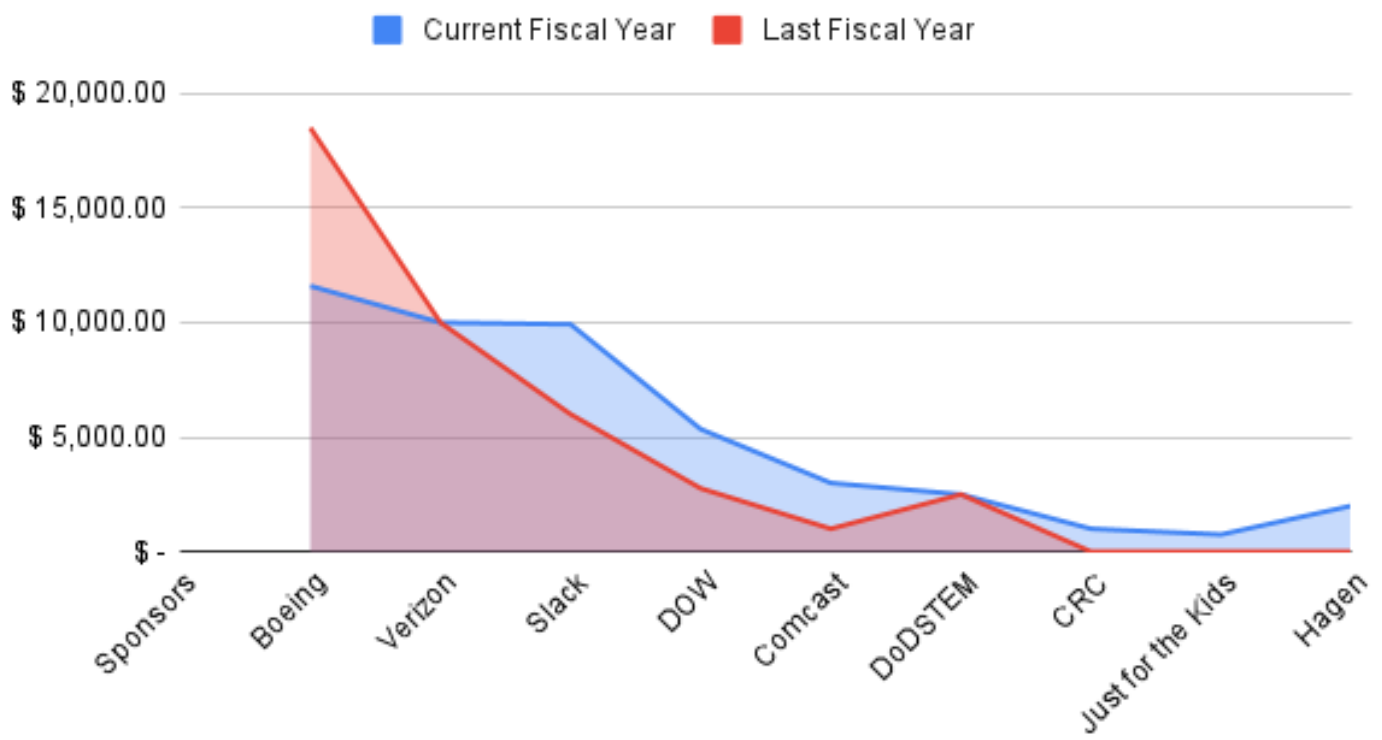
The pandemic has been the biggest challenge our team has faced. Since the start of the pandemic, we were limited in our ability to connect with our mentors. To get these mentors engaged, we have pursued alternative ways of engaging everyone virtually. When the 2021-2022 season started, we had to take precautions to fight this pandemic. To minimize this problem, we enforce a mask mandate for all members of the team and remain as socially distant as possible. Our team members and mentors are also strongly advised not to participate in meetings if they are feeling any symptoms or have been exposed. Because of these precautions, we have been able to have a season where everyone can feel safe and be successful.

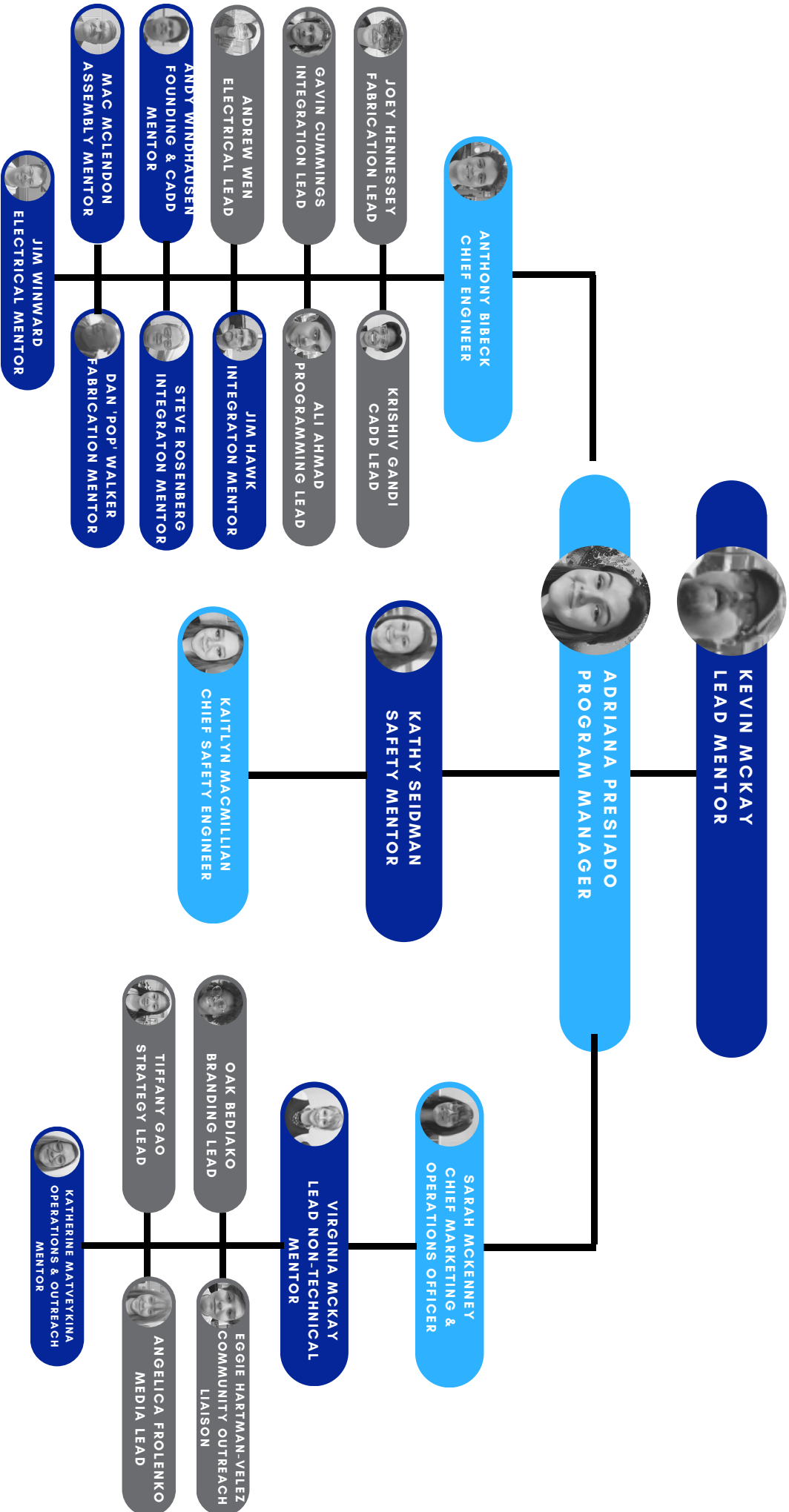
2021-2022 FINANCES

Expenses



Community Partners





KEY

- Mentor
- Student Leadership
- Sub Team Captain/Committee Lead

OUR FUTURE GOALS

SCHOLARSHIPS

OUR GOAL IS TO HAVE THE SCHOLARSHIP MONEY OFFERED TO STUDENTS ON THIS TEAM BE DOUBLE THE TOTAL AMOUNT OF OUR SPONSORSHIP FUNDS RECEIVED. OUR STRATEGY IS TO INVITE SCHOOL GUIDANCE COUNSELORS AND REPRESENTATIVES FROM LOCAL COLLEGES TO ATTEND A TEAM MEETING WHERE THEY GO OVER THE COLLEGE ADMISSION PROCESS, EXTERNAL SCHOLARSHIP OPPORTUNITIES, AND THE FIRST SCHOLARSHIP DATABASE.

FLL OUTREACH

OUR GOAL IS TO HOST AN FLL DISTRICT EVENT IN BENSLEM. OUR STRATEGY IS TO ENGAGE STUDENTS THROUGHOUT OUR DISTRICT WITH OUR STEM AMBASSADOR PROGRAM TO KEEP FIRST IN THE BENSLEM CULTURE. CURRENTLY WE HOST THE BENSLEM DISTRICT EVENT WHICH IS PREPARING US TO HOST OTHER FIRST EVENTS. THROUGH THIS METHOD, WE HOPE TO GROW A LARGER COMMUNITY WITHIN OUR SCHOOL DISTRICT THAT SUPPORTS FIRST.

FTC OUTREACH

LAST YEAR WE REGISTERED TWO FTC TEAMS AT OUR TWO MIDDLE SCHOOLS HERE IN THE BENSLEM TOWNSHIP SCHOOL DISTRICT. LIKE WE DID WITH OUR FLL TEAMS, WE ARE GOING TO CONTINUE TO USE OUR STEM AMBASSADOR PROGRAM TO HAVE OUR MEMBERS MENTOR THE FTC TEAMS AND HELP THEM ESTABLISH SKILLS NECESSARY TO PARTICIPATE IN THEIR COMPETITION SEASON.

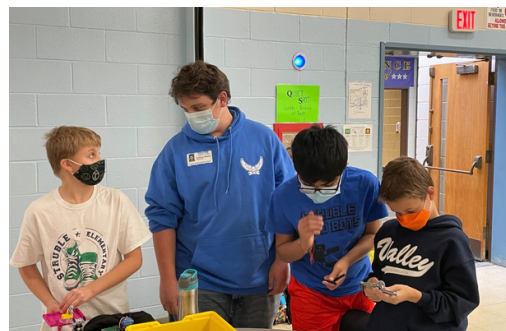
FRC OUTREACH

OUR GOAL IS TO CONTINUE HELPING HIGH SCHOOLS IN THE BUCKS COUNTY AREA BY HELPING THEM START THEIR OWN FRC TEAMS. OUR STRATEGY IS TO TAKE A GROUP OF STUDENTS AND TEACHERS FROM A LOCAL HIGH SCHOOL AND HAVE THEM JOIN OUR TEAM. THE FOLLOWING YEAR, WITH CONTINUED HELP AND SUPPORT FROM US, THEY WILL FORM A ROOKIE TEAM WITH A VETERAN CORE. PREVIOUSLY, WE WERE DOING THAT WITH NESHAMINY HIGH SCHOOL. WE PREVIOUSLY DID THIS WITH WILLIAM TENNENT HIGH SCHOOL FIVE YEARS AGO AND TEAM 6808 WT ROBOTICS CONTINUES TO COMPETE WITH FIRST. SINCE OUR INCEPTION, WE HAVE INCREASED THE NUMBER OF FRC TEAMS IN BUCKS COUNTY BY 66% AND OVER THE NEXT THREE YEARS OUR GOAL IS TO INCREASE THAT NUMBER BY AN ADDITIONAL 60% AND HELP THREE ADDITIONAL HIGH SCHOOLS ESTABLISH FRC TEAMS.

EITC FUNDING

OUR GOAL IS TO INCREASE THE AMOUNT OF SPONSORSHIP DOLLARS WE RECEIVE BY PARTICIPATING IN PENNSYLVANIA'S EDUCATIONAL IMPROVEMENT TAX CREDIT PROGRAM. OUR STRATEGY IS TO INVITE LOCAL BUSINESSES TO BECOME EITC DONORS BY INFORMING THEM THEY CAN RECEIVE A 75% TAX CREDIT FOR A 1-YEAR DONATION COMMITMENT AND UP TO A 90% TAX CREDIT FOR A 2-YEAR DONATION COMMITMENT.

HOW OUR TEAM SPREADS THE MESSAGE OF FIRST



"Team 5401 has become much more than just a school robotics program over the years in Bensalem School District. They are also worth much more than their many trophies or awards on a shelf. They have become prevalent members of the greater community and role models for future students by pushing for STEM initiatives at all levels of education."

- Molly Moran (49279 FLL Mentor)



"The members of Team 5401 have spent countless hours showing us how to set up the different components of our team – fundraising, marketing, build, programming, and safety."

- Kate Liese (17457 FTC Mentor)



"Their instruction was paramount in supporting our students and allowing them to jump right in with their students and team as if we were members of their school. Even today, they provide a willingness to reach out to us to check on our progress and to answer any questions we come up with or to update us on changes or challenges that their team is dealing with during their build season."

- Jeff Czekaj (Team 6808 Mentor)