ADAMBOTS

Team 245

Rochester Hills, Michigan
Adams High School

2018 Business Plan

COMPREHENSIVE PLAN FOR CONTINUITY, SUSTAINABILITY, AND CONNECTION

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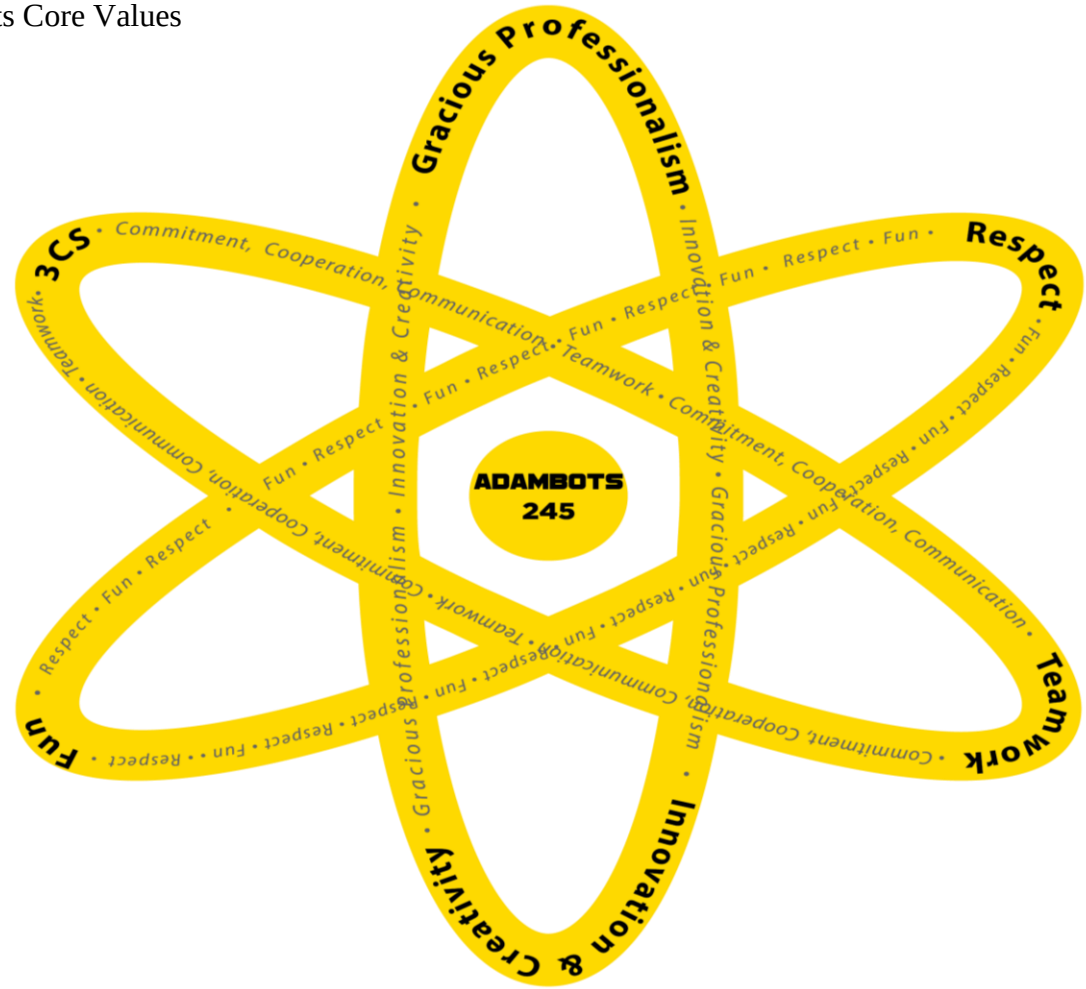
1.0 Executive Summary

Team Mission Statement

"To provide an inspiring learning environment that fosters growth and appreciation of STEAM and business knowledge, and to teach students skills vital to success in the real world through a strong relationship between students, mentors and sponsors."

At the nucleus of our mission, student and mentor team members collaborate to inspire interest, knowledge and application of STEAM, business and leadership skills. *FIRST* values such as *Gracious Professionalism*™ and *Coopertition*™ serve to bond our members—students and mentors alike—and provide a focus for all that we do. Orbiting the nucleus are our Core Values which further energize us to sustainable team success and contribute to the goal of spreading the word of *FIRST*.

AdamBots Core Values



See page 7 for detailed description of Core Values

Why a Business Plan?

Our Business Plan has been created to document the team's approach to achieving our mission in a sustainable manner. The AdamBots radiate our positive charge in a way that attracts, enthuses and empowers future team members as well as other *FIRST* teams both in our area and around the world.

Team Summary

Based at Adams High School in Rochester Hills, Michigan, the AdamBots began in 1999 with a small team of ten. We have grown steadily and today have 72 students and 42 mentors. In 2015, the AdamBots started and funded a new rookie *FRC* Team 5436, the Cyber Cats, at Stoney Creek High School! We continue to help them design their robot, as well as mentoring FLL, FTC and FRC teams in Rochester, Detroit, Grayling, and Mexico. We have thirteen sponsors, including corporate, government and friends and family that together fund almost half of our team expenses. Our largest sponsor is General Motors. Each fall we raise over $7,000 through our successful parking lot business. Community outreach is integral to our team culture, and the AdamBots provide over 2,250 hours of community service and outreach each year. Our team has been the top team fundraiser for the American Cancer Society's Relay for Life for the last two years in our area, raising more than $80,000 over the years. Our community service also resulted in our city mayor awarding us the Community First Award, for making "a notable effort to improve the quality of life for those around" us (rochesterhills.org).

Business Plan Roadmap
1.0 Executive Summary Summary of team mission, what is important to us and roadmap of our Business Plan document
2.0 Team Information Gives team demographics, benefits to team members, sponsors, and school, and Core Values
3.0 Organizational Plan Explains team structure, training, expectations of members, safety, location, and off-season events
4.0 Outreach and Mentoring Plan Explains how we spread *FIRST* by mentoring other teams and give back through community service
5.0 Operational Plan Details major *FIRST* season tasks and how we manage our work
6.0 Marketing Plan Explains how we use our brand to enhance partnerships with others
7.0 Financial Plan Lists sponsors and all sources of funding, details how we manage our team finances for sustainability
8.0 Strategic Plan A 3-5 year plan which defines our goals and actions to get there; also addresses risk management
9.0 Measuring Success

Outlines efforts to identify how the team succeeds and where the team can improve

2.0 Team Information

2.1 Basic Team Facts

Rookie Year	1999
Location	Rochester Adams High School, Rochester Hills, Michigan
School Affiliation	Rochester Adams High School
Team Demographics	72 Students (up from 10 during Rookie year) • 20 girls and 52 boys • 9 Seniors, 19 Juniors, 13 Sophomores, 31 Freshmen
Mentors	41 Mentors (up from 3 during Rookie year). 21 of our mentors have no children on the team We draw mentors from current and retired teachers, alumni, and past and present team parents.
Sponsors	DoDSTEM, Doolin and Haddad Dentistry, Emagine Entertainment, FCA Foundation, Four Star Cable and Wire, Friends and Family, General Motors Global Product Development, GKN Sinter Metals, JTEKT, Magna Powertrain, Nemak, Patrick Ainslie DDS, R&G Drummer, Rochester Adams High School, State of Michigan FRC Grant, Tek Pros Today, ThyssenKrupp, Valeo Thermal Systems
Website	AdamBots.com

2.2 Member Benefits – Students, Mentors, School and Sponsors

For Students:

- Learn how to plan and build a working robot
- Develop confidence, communication and leadership skills
- Have fun
- Be part of a community and work as a team
- Help others through community outreach
- Gain opportunities to earn scholarships and obtain interships
- Get a head start in studying a STEAM related field such as engineering etc.
- Develop multi-tasking and time-management skills
- Work with and learn from adult mentors who have professional experience in the areas of science, technology, engineering, math and business

For Mentors:

- Share knowledge and experience with students to help them accomplish their tasks, in both engineering and business areas
- Have fun
- Be part of a community and work as a team
- Help others through community outreach
- Help give the students a “real life” learning experience they cannot get in the regular classroom

For School:

- Support an outstanding student development program
- Support STEAM and business interests in students
- Increase name recognition as a school that helps develop outstanding students
- Gain insight of professionals outside of academia to help set curriculum
- Help support students through scholarship opportunities

For Sponsors:

- An opportunity to market their company
- Reach out to the community in a positive way
- Develop future employees
- Help inspire students to enter STEAM and business fields
- Provides opportunity to be good corporate citizens

2.3 AdamBots Core Values

Students and mentors worked together to define Core Values which we believe are key to our success, sustainability and help us to be a role model team.

Gracious Professionalism™

We do the right thing with integrity. We set positive examples for others to follow. We compete on an even playing field and help our allies and opponents to be their best. We are also be on our best behavior whenever we are participating on the team; at the school, at competitions, at robotic demonstrations, and at community outreach events. *"Gracious professionals learn and compete like crazy, but treat one another with respect and kindness in the process…In the long run; Gracious Professionalism is part of pursuing a meaningful life. One can add to society and enjoy the satisfaction of knowing one has acted with integrity and sensitivity."* – WOODIE FLOWERS

3Cs: Commitment, Cooperation, and Communication

We believe that all members of the team should demonstrate commitment to the team values and mission, cooperation with all team members, and a continuous effort to communicate so the team can meet the mission of FIRST and our team. We believe that the team leadership should set the example for all team members to follow and help keep us on track with the 3C values.

Respect

We accept each other and the unique talents and experiences we bring to the team. We behave in a spirit of honoring each other as members of the family. We listen to the opinions and observations of others. We give respect in order to receive respect.

AdamBots 245

Fun

We believe that being a member of the robotics team should be a fun and enjoyable experience for all members. We believe that school work, robotics team responsibilities, and life should be integrated in a way that being a member of the team is a rich and rewarding experience.

Teamwork

Each member has a role to play on the team. Our best solutions come from when we work together with students, mentors, sponsors, and school administration. Effective teamwork demands strong respect, relationships, and communication.

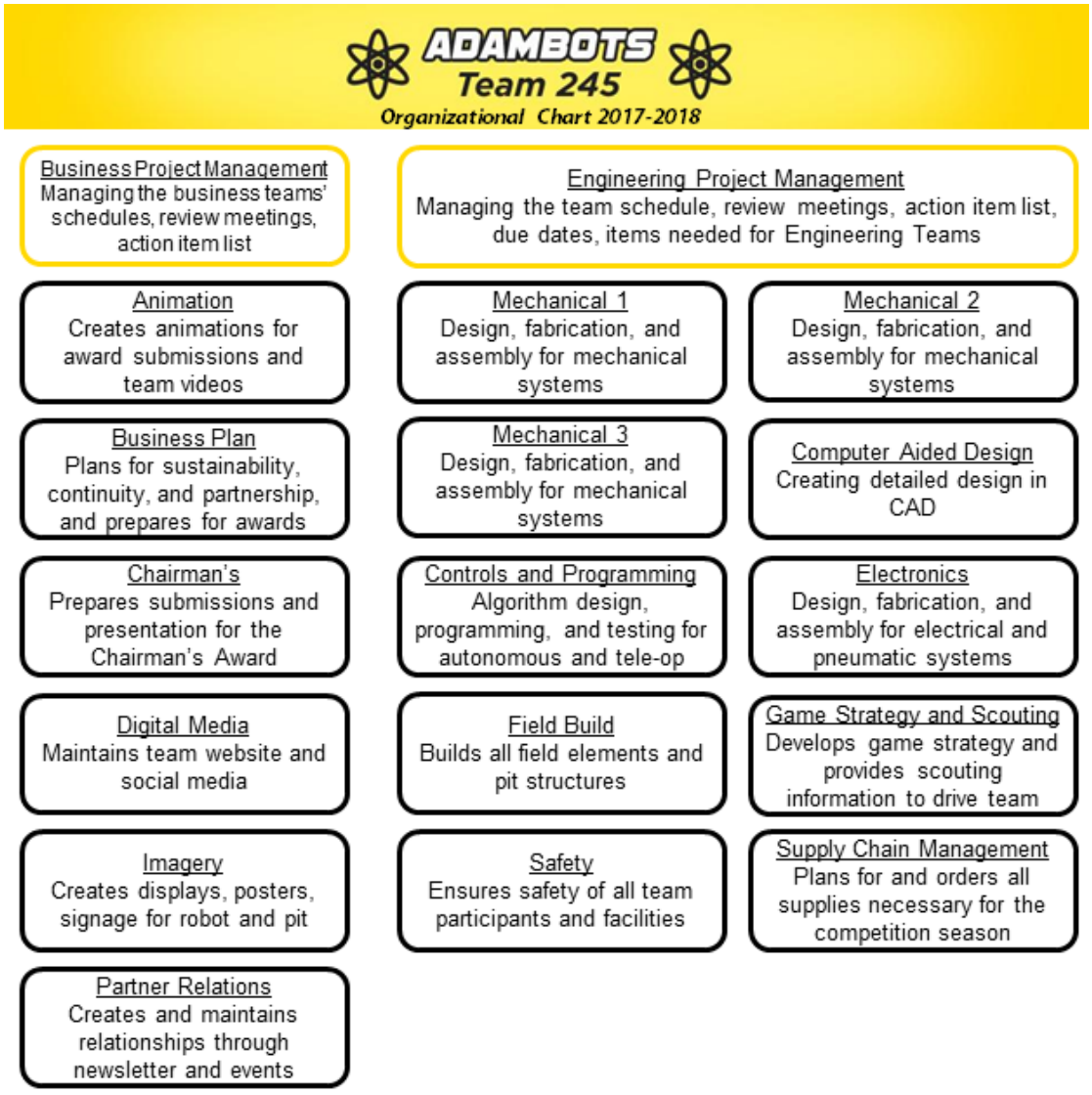
Innovation & Creativity

We appreciate new ideas and imaginative ways to solve problems. We embrace trying new technology when appropriate. We strive to develop creative solutions and put them into action.

3.0 Organizational Plan

3.1 Team Structure

Our team is organized into six Engineering subteams and ten Business subteams, each with at least one student leader and one mentor. The team also has a Program Management Team that is responsible for leading areas that impact the entire team: business planning, Chairman's, finding and engaging partners (sponsors), scheduling, managing robot weight and bill of materials, as well as handling purchases and finances. Program Management is divided into Engineering Project Management and Business Project management, which ensure subteams are working effectively with one another. Several mentors fulfill the roles of Team Manager, Financial Manager and Purchasing Manager. These roles oversee team administration and travel, finances, and purchases. Prior to the build season, students fill out forms ranking their top subteam choices and nominating themselves for leadership positions. Mentors interview and select student leaders and place students on subteams based on their interests.



3.2 Human Resources

Recruitment

At the beginning of each school year we start our recruiting process by hanging up posters, which give the time and place of our first meeting, around our school to promote the robotics club. Many students also join as a continuation of our feeder programs. At the first meeting, we gives an overview of our team and what the robotics season entails. Students can then decide if they want to join. We also do recruitment of mentors during our Team Startup Meeting held in the first week of December. This is a meeting that both students and parents attend in order to receive detailed information on travel, competitions, fees, and more. At the end of this meeting we encourage any parents who might be interested in becoming a mentor to sign up. Later on in the year, before *FIRST* season begins, they will attend a training session.

Training

In the fall, veteran students and mentors hold weekly workshops to train students and introduce them to tools, safety and design concepts such as chassis, control, electronics and programming. Mentors also go through training to learn how to best engage students. In addition, we have a Buddy System that ensures new members feel like a part of the team right away and that they are always informed about upcoming events. This Buddy System pairs two seasoned members with two to three new members. It is the veteran members' job to keep in contact with their 'mentees', sending them weekly reminds and answering any questions.

Leadership Boot Camp

The Leadership Boot Camp is an important team building and training event that is held annually in the fall and attended by all students and mentors. It was developed and held for the first time in October 2015. At the Boot Camp, students and mentors spend a day together team building and learning about team history, core values, culture, leadership, communication and teamwork. This year we designed our team building activities to explore deeper into our core values. Not only is it fun team bonding experience, but it is also an effective way to welcome our newest team members.

Attendance, Participation and Behavior Expectations

It is important that students are on time to all events, matches and meetings. If a student is unable to attend, a mentor or student leader should be made aware of his or her absence in advance. It is also important that all students regularly attend their own subteam meetings and always let a leader know in advance if they are unable to attend.

Grades are of utmost importance to our team. For a student to remain on the team, he or she must have at least C's in all classes. Students are also expected to participate in community outreach activities throughout the year. Opportunities to sign up and participate are available regularly.

In addition, students are expected to exhibit gracious team spirit at competitions not only for our team, but for other teams as well. Students are also enouraged to focus on the competition and avoid playing on an electronic device or other form of entertainment. Importantly, team members are always expected to be "Gracious Professionals," or in the words of Woodie Flowers, "Never do anything you wouldn't want your grandmother to see." Therefore, team members must always strive to work together peacefully and cooperatively, remembering to be gracious in winning and losing.

Safety

Safety of team members is critical. Students and mentors working with the robot at school or in the pit must wear safety glasses. Safety topics are covered in all of our fall training workshops, and the use of power tools is supervised by experienced mentors. In addition, our team adheres to a rigorous, award-winning safety plan.

3.3 Location

Rochester Adams High School allows us to work and build in the school CAD computer lab and the adjacent workroom. We have equipped the workroom with the machinery and tools our team needs. When more specific machining is needed, mentors will take parts home or will work with students to machine the parts elsewhere.

3.4 Oakland County Competitive Robotics Association (OCCRA)

Each fall, the AdamBots participate in the Oakland County Competitive Robotics Association (OCCRA), a local robotics competition held in Oakland County, Michigan. Twenty-five county high schools, including the AdamBots, participate. Each year, a new game is given and the teams must build a robot to play this game. *OCCRA* and *FIRST* differ in several ways. One of the rules of OCCRA is that teams are not allowed to use any precision machining. Robots must be built with lighter machinery, such as hacksaws and drills. Also, teams are not allowed any kind of corporate funding, so students work together to fundraise and cover expenses. The biggest difference between *FIRST* and OCCRA is that robots must be student designed, built and operated. Mentors are not allowed to help with any part of the robot. This gives students more responsibility over the project and allows them to be in control of the build process from start to finish. OCCRA also helps students continue to develop robotics skills in preparation for the *FIRST* season. The OCCRA team is comprised of veteran students only (students who have been on the team for at least one year) who have the previous skill set to build a robot without mentor assistance. This provides time for new students to attend other workshops, which our team provides, in order to learn and develop basic skills. New team members, however, are not excluded from the OCCRA competitions. They are encouraged to come to the competitions to cheer along the team and to have their first taste of a robotics competition. The whole team attends the Diversity Tournament, the competition that we host.

3.5 Off-Season Events

The AdamBots typically participate in two of four off-season events: Kettering Kickoff, MARC, IRI and the Bloomfield Hills All-Girls *FIRST* Competition. We participate in these competitions to allow team members to gain more experience. These competitions are held during the summer or fall following the regular season and utilize the game played during the previous *FIRST* season.

	ription	Location
Competi	e event. mBots gain erience for new embers	Monroe, Michigan
IRI (India Robotics Invitation	st vents in world. The mBots have been ed each time we ed but once.	Indianapolis, Indiana
Kettering Kickoff	September event. AdamBots gain experience for new Drive Team members and have fun.	Flint, Michigan
Bloomfield Hills All-Girls *FIRST* Competition	November event. Only female students may drive and work with the robot.	Bloomfield Hills, Michigan

4.0 Outreach and Mentoring Plan

4.1 Community Outreach

The AdamBots choose to do a plethora of community outreach events to further impact our community, to spread awareness of *FIRST* and to emphasize the importance of social responsibility to team members. We provide over 2,500 hours of total community outreach each year and are always looking for more opportunities to get involved in the community!

Relay for Life

The Relay for Life is a walk to support the American Cancer Society. The AdamBots participate in the local Rochester Area Relay for Life every summer. The team raises money by selling luminaries. Luminaries are placed around a track in honor and memory of those who have died from cancer or who are currently battling it. Our team has been recognized by the American Cancer Society as the top team fundraiser in our area for the past two years, and we have raised more than $93,000 over the years.

Rochester Hometown Christmas Parade

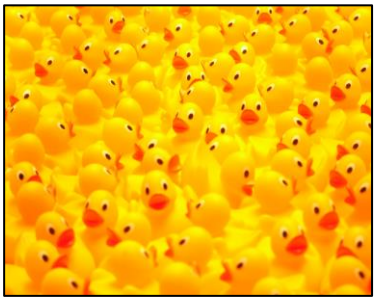
The AdamBots, along with other local *FIRST* teams, march in the Christmas Parade each December. Over the years, we've built floats and demonstrated our robots and police robots. A few students from each team walk next to these, carrying signs and posters for *FIRST*. We have won first place in the high school and college category for our floats for many years.

Hunger Walk

The Hunger Walk is a local charity walk created by the AdamBots to support the Rochester Neighborhood House and benefit those in our community who are in need. We raise around $500 for this cause each year. This event takes place in the fall, and participants include members of the AdamBots, Cyber Cats, and FEDs teams as well as friends and family.

Make-A-Wish Duck Races

The Make-A-Wish Foundation locally holds an annual Duck Race at the Rochester Municipal Park, where participants "adopt" a rubber duck to race in the nearby creek, participate in a 5K Fun Run and play some carnival games. The AdamBots volunteer and help by collecting the thousands of ducks from the creek, sorting and packing them for next year. Awareness of this event is also spread during the year, as we have adopted the yellow rubber ducky as our mascot.



Halloween Hoot

The Halloween Hoot takes place at the Dinosaur Hill Nature Preserve in the Rochester community every year in October. It is completely run by the community. Children carve pumpkins, teens act out Halloween skits and members of the Rochester Hills Women's Club provide cider and doughnuts. The AdamBots clean up after the last night of the Halloween Hoot. We take down the decorations and pick up after everyone is gone from the trails.

Robot Demonstrations

We display our robots at different events, including elementary school assemblies, science fairs, partner locations, Girl and Boy Scout functions and library demos. For example, this year, students demonstrated the robot at Delta Kelly Elementary School. Robot demonstrations allow us to inspire students to have an interest in STEM education, spread awareness of *FIRST* and give partners a first-hand look at the benefits of our partnerships.

Ambassador Program

Whenever an AdamBots student goes abroad, they have the option of presenting to students in that country about opportunities in STEAM education. These can vary from conversations on a street corner to brochures at a library to EV3 robot demonstrations at a hotel. New in 2017, AdamBots Ambassadors have been to England, Haiti, Mexico, and Japan.

School Board – Career and Technical Education (CTE) Advisory Committee

We have several mentors on the school board's CTE Advisory Committee, including the CTE Advisory Instructor, three design and technology committee members and two business committee members. The group meets a few times each year to analyze new technologies and labor trends to apply to the curriculum. The committee may recommend new instructional materials, safety policies and procedures, as well as promote and assist in maintaining quality STEM programs in our schools.

School – Parent Teacher Student Association (PTSA) STEAM Committee

New this year, we have four students and one parent on the school PTSA STEAM Committee. With a mission of expanding student participation in STEAM fields, they connect students to professionals through monthly workshops and an annual STEAM fair. The committee also facilitates cooperation between school clubs to strive together towards this common goal.

4.2 Mentoring and Assisting Other Teams

Mentoring and assisting other teams is an integral part of the AdamBots' strategy to *Spread the Message of FIRST*. We mentor FRC teams LamBots 3478, East English Village Bulldogs 3096, and Robo Vikes 6121, using weekly web conferencing meetings of an hour each. Together we discuss strategy, robot design, team organization, outreach, business planning, Chairman's award work and any other topic requiring focus. Team Cyber Cats 5436 also have a part in the discussions because they work closely with the AdamBots. At the meetings, participants work through problems they are facing and solutions to the problems, which helps all teams involved. Each year, we make plans to attend competitions with each of these teams when possible; at competitions we are able to have further conversations to help each other.

FRC Team LamBot 3478

In 2010, General Motors, one of our partners, asked for experienced *FIRST* teams to help rookie teams in Mexico. The AdamBots gladly chose to assist Team LamBot from San Luis Potosi, Mexico. Several LamBot mentors flew to Michigan and met with the AdamBots to discuss team structure and organization and the *FIRST* season. Each year, the AdamBots continue to partner with Team LamBot by assisting them remotely through web conferencing.

FRC Team East English Village 3096

Last season, General Motors asked us to mentor a local Detroit team, East English Village. They were a rookie team in 2015 and faced significant challenges in getting needed support from their school. We continue to mentor them this year and aid them in gaining additional support. In helping this team, we share our designs, offer feedback and use many of the same methods used when first helping out the LamBots. We also look forward to developing a lasting, meaningful relationship with this team over the coming years.

FRC Team Cyber Cats 5436

In 2014, the AdamBots successfully created Team 5436, the Cyber Cats! Students from the local Stoney Creek High School previously came to our team, but we helped them to form their own at their school. After a successful 2015 *FIRST* rookie season, the Cyber Cats have expanded their team and acquired a workspace of their own. The AdamBots continue to mentor and assist their team in designing and building their robot.

The Vikings VEX teams 6623 and 10930

In 2011, the AdamBots started and mentored an FTC team at a neighboring school, Van Hoosen Middle School. Our team mentored both the engineering and business areas of the rookie team. Since then, the program has expanded to include STAT students across nine teams. We continue to mentor VEX EDR teams 6623 (a) (b) (c), VEX EDR teams 10930 (a) (b) (c), and VEX IQ teams 10930 (a) (b) (c).

FLL and STEAM Education

The AdamBots mentor FLL Team Robo Geeks 8872 at Long Meadow Elementary and fund and teach LEGO robotics after school STEM classes at several other local elementary schools including Brewster, Delta Kelly, Long Meadow and Musson Elementary Schools. The AdamBots meet with each team at least once per week, guiding students to appreciate STEAM fields of education and the values of *FIRST*. The AdamBots plan to continue mentoring and teaching in the future and add new teams and classes.

FIRST Community Support

At each local *FIRST* competition, we provide two to six volunteers to assist, including both mentor and student volunteers. We support not only *FIRST* season events, but also off-season events such as IRI, MARC and Kettering Kick-off. Volunteers help set up the competition field, administrate the pit area, queue teams, distribute safety glasses, and even coordinate other volunteers. Our volunteering is one way our team gives back to support the success of the *FIRST* community.

5.0 Operational Plan

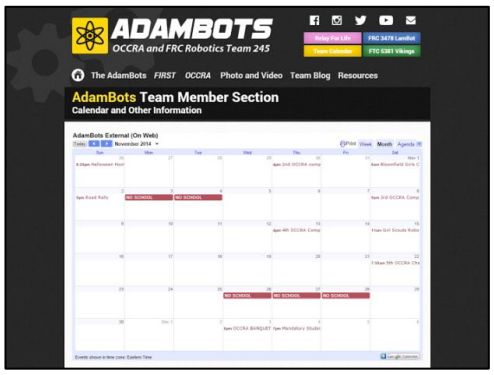
5.1 Tasks

During the *FIRST* season, we are tasked to complete a new robot each year within a six-week time frame. Our team also completes many other important tasks. Below are the tasks we work to achieve each year as a *FIRST* team.

5.2 Scheduling

Each Tuesday after school, we conduct meetings that are attended by all student team members. We also meet at the beginning of the *FIRST* season, on the day after the game is announced, to conduct an initial strategy development session and begin the robot design process. Each Saturday, engineering subteam leaders meet to discuss deadlines and projects that involve multiple sub-teams. Each of our subeams meet at staggered times throughout the work week to ensure that there are not too many people in the robot build area. Subteams decide what schedule works best for both the students and mentors.

5.3 Communication



Communication within the team is accomplished with team meetings, sub-team meetings, email blasts, group chats, leader-to-member communication and the website. Students receive important team notifications via Remind, especially during travel. While traveling, we meet nightly to discuss plans for the next day. Our Team Manager sends emails to all team members and/or parents regarding events that involve the whole team. Student and mentor sub-team leaders send emails to communicate with sub-team members. On our website, www.AdamBots.com, the Project Management Team maintains a calendar for use within our team.

5.4 Project Management

Good project management is vital to our continued success during the *FIRST* build season. Our team utilizes two Project Management Team that consist of our engineering or business subteam leaders to help keep our team on task and on schedule. The Project Management Teams conducts weekly meetings with sub-team leaders to review progress, manage resources and resolve problems and a status review for the entire team every Saturday afternoon. The Project Management Team also makes use of a board (pictured right) to review the project schedule.

Engineering sub-team student leaders and mentors participate in a design review meeting every Thursday evening that is led by the Project Management Team. During these meetings, each Engineering sub-team presents their design using CAD drawings. This review identifies design issues, coordinates interfaces between sub-teams and makes the robot build status visible to all involved. Issues are recorded on an action item list for follow-up after the meeting. The design process is debriefed to the whole team each Saturday.

New this year, our design process is documented in our Engineering Notebook. Subteam leaders receive weekly updates via this medium, enabling them to stay up-to-date with team functions in the event of absence.

5.5 EDGE Teaching Method

Our team uses the EDGE teaching method, an effective four step teaching approach borrowed from Boy Scouts of America, to teach team members new skills and concepts.

EDGE is an acronym for four teaching steps including:

- **Explain** – The trainer explains how something is done.
- **Demonstrate** – After the trainer explains, the trainer demonstrates while explaining again.
- **Guide** – The learner tries the skill while the trainer guides him or her through it.
- **Enable** – The learner works on his or her own under the watchful eye of the trainer. The trainer's role in this step is to remove any obstacles to success, which enables the learner to succeed.

This approach is used consistently by mentors and students. For example, it might be used by a student or mentor to teach another student how to use a piece of equipment. The trainer explains how the equipment works. The trainer then demonstrates, while explaining again, by using the equipment to transform the material (drill a hole for example). The trainer then lets the student do it, but helps guide them through the steps. Finally the student does it by themselves, and these steps may be repeated until the trainer and the student are satisfied that the student has mastered the task. After that, the trainer no longer has to stand by the student when they operate the equipment to perform this task.

The EDGE teaching method is similarly used to teach a wide variety of skills and concepts related to the AdamBots work, including any Engineering or Business sub-team task. For example, the method could also be used to show someone how to use a camera, update the website or create items for the Business Plan.

6.0 Marketing Plan

6.1 Target Audience

Rochester Adams High School Administration

We market ourselves to the administration and faculty to ensure their strong, continued support through formal meetings, casual conversations, and team demonstrations. We formally invite the principal and faculty to attend events hosted at home. We also extend invitations to administration and faculty to attend all of our local competitions. Through our involvement in the school board's Career and Technical Education (CTE) Advisory Committee, we market the value of our team's activity. In addition to CTE, one AdamBots parent is a member of the school board.

Partners (Sponsors)

Partners provide the largest financial support, as well as many of our mentors and miscellaneous donations to the team. We target current and potential partners through marketing and direct communication to ensure their continued support and to gain new partners. Specific students and/or mentors are assigned to keep partners up to date, and we have visited partners to thank them for their assistance.

Potential Team Members (Students and Mentors)

We market to and strive to recruit team members, both students and mentors, because our people are the most important component of our team. We use in-school and online marketing to get the word of our team out to students and to invite them to apply to join the team at the beginning of the year. One way we showcase our team in the school is by wearing our spirit wear in class before competitions. We also encourage teachers and parents to mentor the team. The best way we can reach potential team members is through our various outreach and mentoring programs. There, we can encourage interest in STEAM, *FIRST*, and the AdamBots.

6.2 Marketing Mediums

Robot Demonstrations / Speaking Events

We regularly participate in a wide variety of events, where we demonstrate our robot and speak to attendees about *FIRST* and the AdamBots. Events have included elementary school science fairs and assemblies, Boy Scout and Girl Scout meetings, high school pep assemblies, demonstrations at freshman parent orientation, meetings with high school principals, presentations to the RCS School Board and demonstrations at the Rochester Hills Public Library. Our Ambassador Program allows us to market *FIRST* and other STEAM education opportunities to our global community.

Meet the AdamBots

Every year our team hosts an open house called "Meet the AdamBots." This event has been a successful means for our team to inform and build relationships with partners, school administration, politicians, community leaders, parents and family members by introducing them to our team, our projects, facilities and how we operate. The goals of "Meet the AdamBots" are to reach out to all our partners, spark interest to gain new partners and spread the message of *FIRST*. A presentation explaining our team, our history and the objective of the current year's game is given. Also, those attending are broken up into small groups and led by student guides on a tour where they see our build room and meet students from our sub-teams who explain and present their sub-team's function and projects. The tour also includes a demonstration of our robot for the current and past seasons.

Imagery: Posters, Robot Graphics, T-Shirts, Flyers, Giveaways, etc.

Team imagery is an integral part of our marketing, allowing us to become more recognizable and memorable within the *FIRST* community. We strive to be cohesive in every aspect, from team shirts, documentation and presentation materials, to the website and social media channels, as well as our competition pit displays and the robot's graphics. We also create t-shirts for every regional or championship we attend, and give out marketing items at competitions, such as our renowned ducks and team buttons.

Newsletter

Every month we distribute an electronic newsletter to all our partners including sponsors, school administration, teachers, politicians, community leaders, parents, students and mentors. It is generally sent out within the first week of the month. Subscribers sign up to receive the newsletter on the team website, and an online service called MailChimp is used to email it to subscribers. This newsletter enables our partners to keep up to date with team activities and future plans. It includes information about competitions, outreach, team recognition and awards, a team wish list identifying material and support needs and recognizes our sponsors.

Online Presence

Additionally, we operate various social media accounts on Facebook (over 700 likes)*, Instagram (about 700 followers)*, Twitter (about 1,500 followers)*, YouTube (100 subscribers)*, and Snapchat (about 70 followers)*. Using these tools, sponsor, competition and community outreach information, as well as team news, is communicated to families, classmates, friends, and members of the community. Our online presence helps build interest in *FIRST*, and enables us to communicate with other teams across the globe.

* Based on numbers taken in January 2018.

7.0 Financial Plan

We focus on long-term financial sustainability to ensure success. Financial support comes from three different sources: partners (sponsors), team member fees and contributions and our Art & Apples Festival parking lot business. We have contingencies in place, such as leaving "seed" money for the following year, so that we will still be in a viable financial condition in the event that we lose a sponsor, fundraiser or have some other event that results in a loss of funding.

7.1 Partners

Partners are the primary method in which we receive financial support. Our goal is to obtain enough funding to cover the costs of both *FIRST* registration fees and robot parts. Currently, we have thirteen partners and receive donations from several friends and family of team members. We also strive to obtain at least one new partner each year and keep all partners from the previous year. This is accomplished through partner thank yous and recognition, our monthly electronic newsletter and our annual "Meet the AdamBots" open house.

7.2 Member Contribution

Students and mentors also contribute financially. Students pay annual registration fees which help pay for transportation to competitions. This includes bus transportation to Michigan district and state

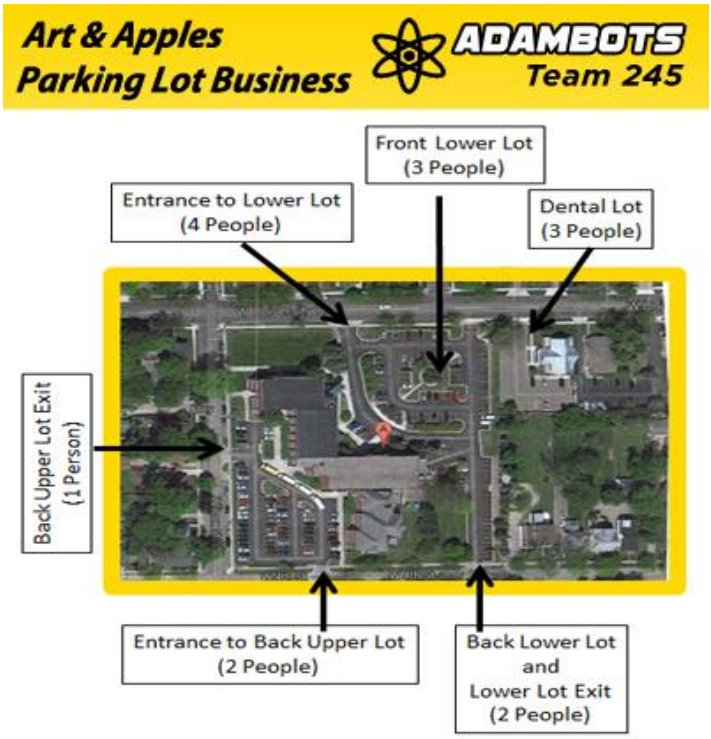
championship, out-of-state regional, World Championship and off-season competitions. When we travel out of the area for events, students and mentors pay half of the cost of travel and lodging.

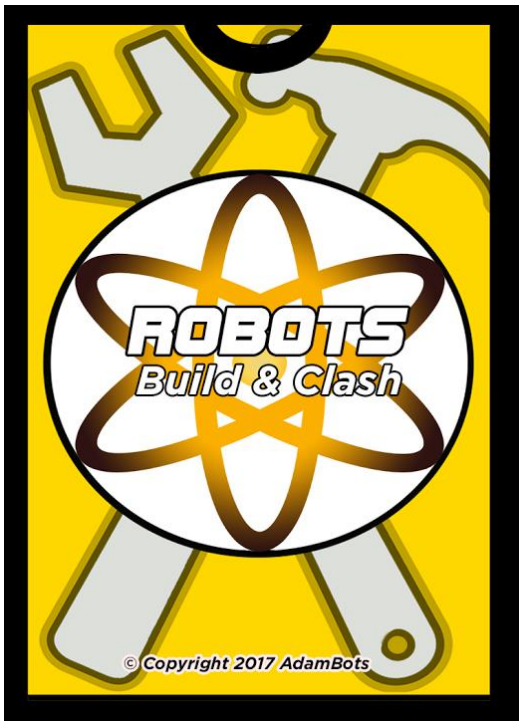
7.3 Parking Lot Business

Each September, AdamBots students, parents, and mentors operate a profitable parking lot business during a three-day arts festival, Art & Apples Festival, which is held in the local Rochester Park. This festival is a well-known tradition within the community and attracts thousands of people from a wide area. All funds raised go towards team expenses.

7.4 Card Game Business

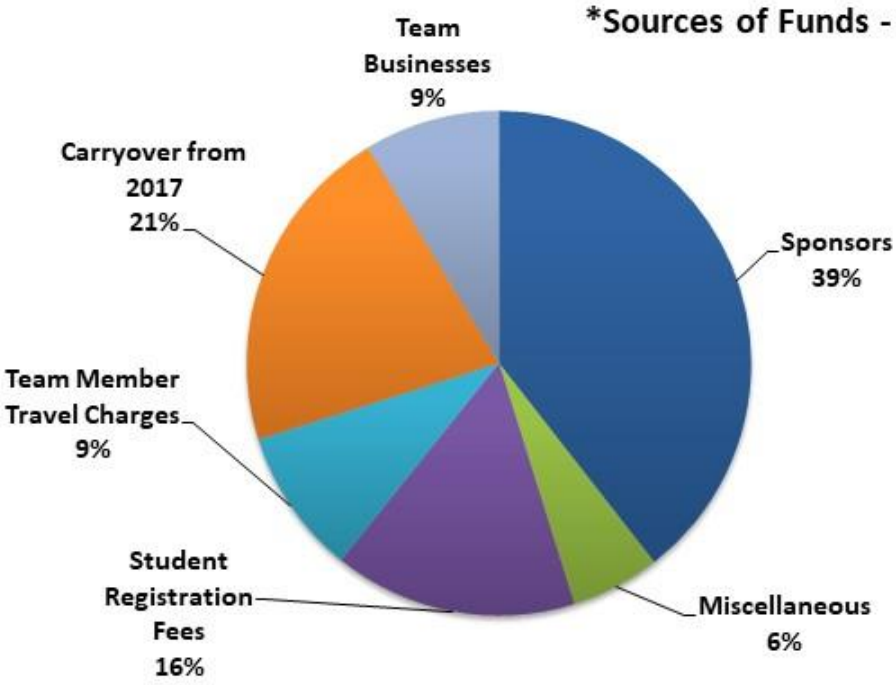
In late 2017, AdamBots students developed a new business to raise team funds: a robotics-themed custom card game. The game is produced by TheGameCrafter.com. Marketed digitally and at competitions, customers can buy the game via our website. (GET SALES INFO CLOSER TO COMPS). In addition to earning a profit, this increases the notoriety of the AdamBots and of *FIRST*.

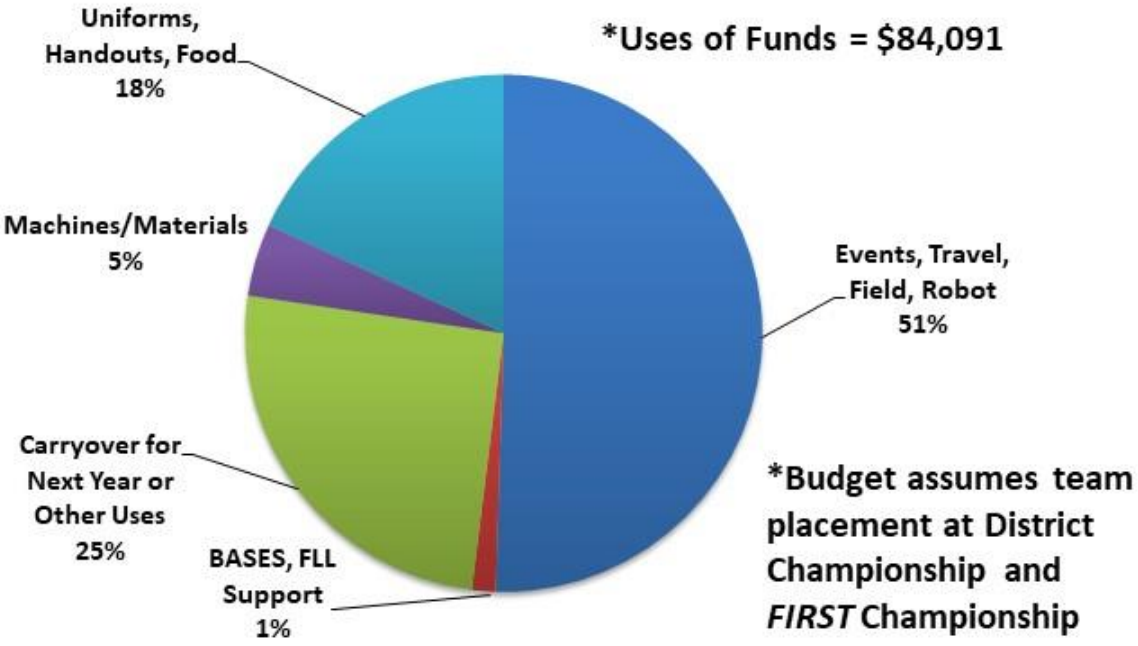




2018 Budget

ADAMBOTS Team 245





*Budget assumes team placement at District Championship and *FIRST* Championship

Sponsors may donate through the Rochester Community Schools Foundation 501(c)(3)

8.0 Strategic Plan

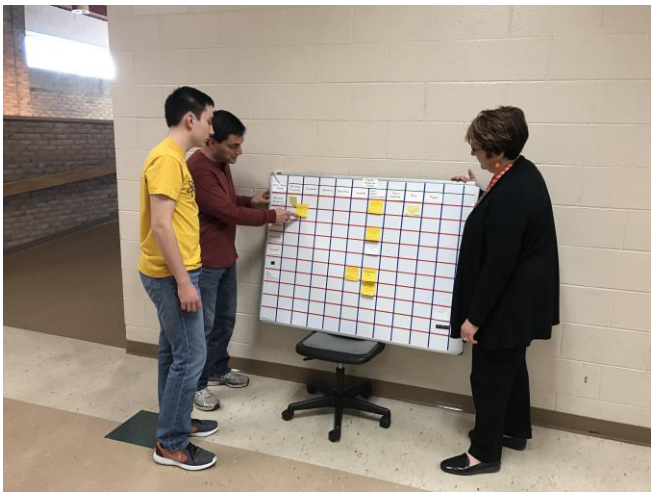
8.1 Team Strategies

The AdamBots have a Strategic Plan that supports the team's mission statement and is used to make team improvements, manage risk and enhance team sustainability. The Strategic Plan identifies five long-term (3-5 year) team strategies with supporting action plans.

AdamBots Team Strategies
Grow a Model Team
Learn and Continuously Improve by Building a Successful Robot
Develop Strong Team Leadership
Develop Excellent Team Financing and Partner Relationships
Spread the Message of *FIRST*

8.2 Strategic Planning Process

The AdamBots Strategic Plan was created in 2014. Students and mentors work together to review and update it two times per year (spring post-season and fall pre-season).



8.3 SWOT Analysis

The AdamBots completed a SWOT analysis for all five strategies to identify team strengths, weaknesses, opportunities and threats. The composite SWOT analysis chart below combines the SWOT analysis for all five strategies.

Composite SWOT Analysis for all AdamBots Team Strategies	
Strengths	**Weaknesses**
1. Large team leads to specialized subteams, different ideas, more people to spread the message of *FIRST* 2. History of success and pride in work 3. Knowledge base 4. Good image/brand 5. Solid financial base 6. Veterans teach new members via workshops, mentoring *FIRST*, VEX, and BASES 7. Community outreach and presence 8. Social media presence and website 9. Business Plan 10. Organizational structure 11. Members have strong interest in STEAM curriculum 12. AdamBots Core Values 13. Leadership Boot Camp 14. Connections with local robotics community 15. Team culture: spirited, well-rounded, accepting, student-led	1. Some inefficiency from number of people 2. Limited workspace 3. Drive Team selection/training 4. Quality control planning 5. Reactive purchasing 6. Rushing to get things done 7. Presentations to judges: not all are well-prepared 8. Student ideas not always well-considere
Opportunities	**Threats**
1. New sponsors (at least one per year) 2. Outreach and mentoring FRC, FTC, FLL, Jr. FLL, and VEX t3ams (develops future AdamBots and interest in STEAM) 3. “Meet the AdamBots” open house 4. Fall workshops to prepare new students 5. Business subteams can start working in the fall 6. Sponsors and mentors can provide internships for students 7. Mentors are participating in the Rochester Community Schools Career Technical Education Advisory Committee 8. Students are participating in the PTSA STEAM Committee 9. School support 10. Team interest in developing leadership skills 11. Leadership Boot Camp 12. New internal specialized training systems	1. Loss of mentors in key team roles 2. Loss of financial support 3. Loss of build space/equipment 4. Loss of Rochester Community Schools support 5. Loss of means to transport robot

8.4 Action Plans and Risk Mitigation

AdamBots Team Strategy: Grow a Model Team		
Action Plan (Continue these important annual team activities)	**Responsible**	**Estimated Completion**
1. Model team activities and culture of those characteristics of a Chairman's Award winning team	Chairman's Team, Team Leadership	Continuous
2. Compete in at least two off-season FRC competitions including the Bloomfield Girls Robotics Competition and at least one of the following: IRI, MARC, Kettering Kick-off or others	Team Manager, Team Leadership	Annually during summer and fall
3. Foster a welcoming environment for students of all backgrounds utilizing AdamBots Core Values	Mentors and Students	Continuous
4. Conduct a season wrap-up and planning activity to identify, prioritize and plan future team strategies, initiatives and risk mitigation	Mentors and Student Sub-team Leaders	Annually by June 17
5. Document new team strategies, initiatives and risk mitigation in AdamBots Business Plan	Business Plan Team	Annually by Feb. 12
6. Clean and organize storage spaces for improved efficiency	Build Room/Storage Organization Task Team	Annualy by Dec. 15

AdamBots Team Strategy: Learn and Continuously Improve by Building a Successful Robot		
Action Plan	**Responsible**	**Estimated Completion**
1. Implement methods to improve design and CAD (Computer Aided Design) processes	CAD Team	Jan. 15, 2018
2. Conduct fall workshops to include more "hands-on" learning: • Safety, tool and machine usage training • Mechanical, electrical and programming skill building workshops	Engineering Mentors and Leaders	Annually by Dec. 15
3. Clean and organize storage spaces for improved efficiency	Build Room/Storage Organization Task Team	Annually by Dec. 15
4. Implement and monitor Supply Chain Management subteam to improve purchasing and material management practices (move to proactive) for commonly used materials: • Identify and document a "commonly used materials" list including history of type, preferred supplier(s), amount used • Maintain adequate inventory and don't go under a set minimum amount • Purchase in larger quantities to maximize discounts and minimize shipping cost	Project Management Team	May 1, 2018
5. RISK MITIGATION: Identify an alternative build and meeting location to use in the event the school site is not available (discuss options with sponsors, school, mentors, parents)	Team Leadership	Ongoing
6. RISK MITIGATION: Identify an alternative robot transportation option which can be used in the event our primary robot transportation van is not available	Team Leadership	Ongoing

AdamBots Team Strategy: Develop Strong Team Leadership		
Action Plan	**Responsible**	**Estimated Completion**
1. Hold meetings to clarify and better communicate student leadership selection criteria and process	Team Manager, Mentors, Student Leaders	Semiannually in November and June
2. Improve Drive Team selection and training process	Team Leadership, Drive Team Mentor(s)	Ongoing
3. Conduct a Leadership Boot Camp for all team members (students and mentors)	Student and Mentor Volunteer Task Team	Annually in October
4. Continue to develop mentor and student leadership skills	Mentors and Students	Ongoing
5. Continue mentor training to discuss roles, responsibilities, and how to interact with students	Mentors, Team Leadership	Annually in November
6. Monitor and improve Project Management Team	Team Leadership, Project Management Team	Ongoing
7. RISK MITIGATION: Document job function of AdamBots key mentor leaders with details necessary to carry out responsibilities: • Team Manager • Financial Manager • Teacher(s) • Purchasing Manager • Team Leadership Mentors	Team Manager, Financial Manager, Teacher(s), Purchasing Manager, Program Leadership Mentors	Annually by June 17th
8. RISK MITIGATION: Document job function of AdamBots student leaders	Student Leaders	Annually by June 17th
9. RISK MITIGATION: Generate interest in future student leaders for each subteam	Student Leaders	Annually by June 17th

AdamBots Team Strategy: Develop Excellent Team Financing and Partner Relationships		
Action Plan	**Responsible**	**Estimated Completion**
1. Improve planning and purchasing of special equipment, tools, computers and software: • Identify and prioritize items for purchase • Determine funding • Purchase items to maximize discounts and minimize shipping costs	Team Leadership, Project Management	Annually by end of year (begin during season wrap-up)
2. Contact partners to determine internship opportunities for AdamBots students	Financial Manager	Annually by end of year
3. Practice and improve team business, engineering and robot presentation skills with comprehensive meetings	Project Management	Annually by 1st competition
4. Send a high quality electronic newsletter to update all partners including: sponsors, school administrators, community leaders, team members, parents and alumni	Marketing	Monthly or alternating months
5. Develop at least one new method to spread the *FIRST* message with our partners, especially within our high school and school system	Marketing Team	Annually
6. RISK MITIGATON: Gain at least one new partner every year	Financial Manager	Annually by end of year

AdamBots Team Strategy: Spread the Message of *FIRST*		
Action Plan	**Responsible**	**Estimated Completion**
1. Establish and/or mentor FRC, FTC, FLL, FLL Jr., or VEX teams and STEAM education classes each year	Team Leadership, Mentors, Students	Annually
2. Establish and/or mentor at least one FRC team each year	Team Leadership, Mentors, Students	Annually
3. Conduct community service and outreach projects including Rochester Hometown Christmas Parade, Relay for Life, and robot demonstrations	Project Management	Ongoing
4. Monitor and improve Ambassador Program for spreading STEAM inspiration in other countries	Chairman's Subteam	June 17th, 2018
5. RISK MITIGATION: Conduct a "Meet the AdamBots" open house event for sponsors, school administration, community leaders and parents	Partner Relations Subteam	Annually
6. RISK MITIGATION: Influence increased STEAM curriculum in Rochester Community Schools through mentor participation in RCS Career Technical Education Advisory Committee	Mentors	Ongoing
7. RISK MITIGATION: Influence increased STEAM interest in Rochester Community Schools through student participation in Adams PTSA STEAM committee	Students	Ongoing

9.0 Measuring Success

9.1: Key Performance Indicators

The AdamBots are implementing a plan for key performance indicators (KPIs) this year. The purpose is to measure changes in overall team success by examining several important factors. We determined our KPIs by examining our core values and mission statement. Measurements are taken through surveys, collected team statistics and competition performance. Our KPIs are:

Indicator	Measurement Method
Competition Performance	AdamBots Performance Rating (derived from District Ranking System)
Student STEM Interest	Number of students in STEM clubs at school
Student knowledge	Monthly subject area proficiency surveys
Alumni STEAM and Business Interest	What percent of graduates move on to STEAM fields? Business?
Team Environment / Core Values	Monthly student surveys covering respect, teamwork, communication, and fun

9.2: Implementation

Twice a year, the team meets to review the SWOT Analysis and the Strategic Plan. Data from our KPIs helps to facilitate discussion and back up modifications with evidence. The Business Planning subteam and mentors meet to analyze the data before these meetings. Because the surveys record information about leadership role, gender, and team experience, we can check to ensure each demographic of students is getting the most out of *FIRST* possible.