

2022-23 Business Plan

Kearsley High School
FRC Team 5150
Flint, MI

1.0 Executive Summary

1.1 MISSION STATEMENT: “Strong Alone; Stronger United.”

We are strong in our grit and determination, and strong in our commitment to each other and the values of *FIRST*, including Gracious Professionalism and Coopertition. We may come from a largely impoverished area, and we may not have access to resources like machining equipment, but we outweigh these weaknesses with our strength of character, our work ethic, and our integrity to our team, our community, and ourselves.

Hybrid Hornets’ Goals & Objectives:

- Respect for teammates, leaders and mentors at all times
- Foster curiosity and the engineering process
- Learn time management and goal setting strategies
- Promote *FIRST* values and STEAM within our community

1.2 Team Facts

Team Name: **Hybrid Hornets FRC #5150** from Kearsley High School – Flint, Michigan

Rookie Year: 2014

Team Members: 2023 Team 16 students, 5 mentors

Website: www.HybridHornets.weebly.com

Email: HybridHornets5150@gmail.com

2022-23 Team Members

Freshman	Sophomores	Juniors	Seniors	Mentors
	Joey Stallman Haedyn Scott	Bryson Glass Steven Gray Arianna Ash Stella Martin Jim Musselman Alex Fenner Drake Hollins	Jack Sidebotham Nathan Cunningham Lola Spohn Gabbie Ray Chianne Miles Zachary June Auna Gleason	Lane Sirois Bob Fenner Chiny Miles Alison Phelps Liz Sidebotham Kristie Zamora

Volunteer Mentors’ Roles

- Lane Sirois - Lead Mentor
- Bob Fenner - Parent - Mechanical, Fabrication, & Programming
- Chiny Miles - Alumna - Mechanical, Fabrication, & Programming
- Alison Phelps - Business Team
- Liz Sidebotham - Parent - Mechanical & Fabrication
- Kristie Zamora - Parent of Alumnus - School Communication & Business Team

2.0 Team History & Growth

2.1 PAST

Hybrid Hornets FRC team was formed by Kearsley science teacher Brandi Schmidt and parents, supported by a 2014 grant from the State of Michigan. Our team focused primarily on

building a strong robot that could complete tasks in each game. Little thought was given to the future, budgeting, or awards outside of the bare necessities. We qualified for the Michigan State Championship and *FIRST* Championship-St. Louis twice in these early years.

In the fall before the 2018 season, our team built a parallel team focused on outreach, business, and award submissions. We felt our weaknesses were in planning for the loss of organizational memory as members and mentors moved on from team 5150. Looking to unite in preparation for subsequent years, we created a business plan that won the Entrepreneurship Award at both of our 2018 district events and once again in 2019. We also submitted for the Chairman's Award in 2018 for the first time and felt great about how we had enriched our story's business side.

Just before the season started in December 2018, our longtime coaches stepped down to become caregivers to several of their family members. With support from our schools' administration & dedicated parents, Hybrid Hornets continued with mentors who were teachers and a business professional. In the 2019 season the Hybrid Hornets implemented our Action Plans and Risk Mitigation from our Business Plan.

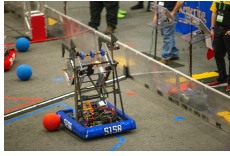
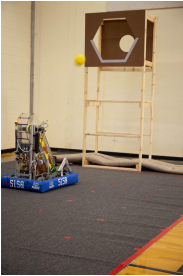

COVID-19 has impacted things for our team and district in terms of sharing the value of STEAM to our community. There had been coding clubs and classes in the past, as well as FTC qualifiers at our local middle school, but unfortunately neither opportunity has survived COVID-19. The loss of the FTC teams at our middle school has also impacted the future of our team as new students no longer come to us with any experience. In the past we have held resume-building workshops for our students, helping show employers and colleges that our students are truly skilled. We want all of our teammates to succeed and shine in their careers, and many have returned to help as mentors. We also plan to increase our education in programming and CAD, making sure our members can use software and ensuring all can perform critical tasks for our team. We saw an opportunity in the loss of our programming mentor to stress the importance of team members' familiarity with coding.

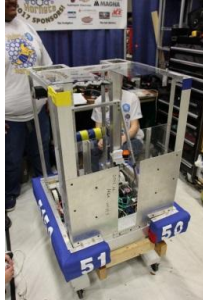


In the 2021-2022 school year, we started with 8 members in October but by January had lost all but 2 due to sports, COVID concerns, and other commitments. We were able to recruit 2 new freshmen in March and placed first in both the Kettering 2 and Lansing Competitions. We also earned the Judge's Award at the Lansing Competition. At the end of the school year, our lead mentor (who had continued to stay on a full season after her son graduated) stepped down, leading the team without a leader until well into the 2022 - 2023 school year.


2.2 PRESENT & FUTURE

This year, we have 5 recurring members, 11 new members, and 6 mentors. Our lead mentor, Lane Sirois, was part of the #548 Robostangs robotics team and has a passion for helping out with Kearsley youth. This year our robotics team is focusing on being inclusive, kind, and supportive to other team members. Our team plans to try out for every award that is available to us; as always, we are determined to do the best we can. Members are encouraged to focus on time management, better their goal-setting strategies, and find creative ways to overcome the struggles of being in the "working class". This season we are also keeping our longevity in mind so that we can continue to build upon each seasons' success.

2.3 TEAM GROWTH & PERFORMANCE

Year & Game	Events and Awards	Robot & Info
2021-2022 RAPID REACT	Kettering University FIM Event Week 2 <i>March 11-12, 2022</i> <ul style="list-style-type: none"> ● District Event Winner FiM District Lansing Event <i>March 24-26, 2022</i> <ul style="list-style-type: none"> ● District Event Winner Michigan State Championship- DTE Energy <i>April 13-16, 2022</i> <ul style="list-style-type: none"> ● Judges' Award 	 <p>Robot: AirBuzz</p> <ul style="list-style-type: none"> ● Auton - low goal shooting ● Low goal shooting during match play ● Low & mid rung climb ● Defense ● Pneumatics
2020-2021 INFINITE RECHARGE At Home Challenges	The team designed, built & programmed the robot for a series of at home challenges that were recorded and submitted to judges. A video interview was also held with the judges in April 2021.	 <ul style="list-style-type: none"> ● Hyperdrive Challenge ● Powerpoint Challenge ● Interstellar Accuracy Challenge
2019-2020 INFINITE RECHARGE	Kettering University FIM Event Week 1 Feb 27-29, 2020 We did not get our 2nd event due to COVID	<ul style="list-style-type: none"> ● Low goal ● Rio issues during competition
2018-19 DEEP SPACE	Kettering University FIM Event Week 1 <i>February 28-March 2, 2019</i> <ul style="list-style-type: none"> ● District Event Winner ● Team Spirit Award sponsored by FCA Foundation Alpena #2 FiM Event Week 5 <i>March 28-30, 2019</i> <ul style="list-style-type: none"> ● Entrepreneurship Award sponsored by Kleiner Perkins Caufield and Byers Michigan State Championship Consumers Energy Division <ul style="list-style-type: none"> ● Rank 34 	
2017-18 POWER UP!	Kettering University FiM Event Week 1 <ul style="list-style-type: none"> ● 12th Seed ● 4th Alliance 1st Pick ● Entrepreneurship Award Sponsored by Kleiner Perkins Caufield and Byers Lansing FiM Event Week 4 <ul style="list-style-type: none"> ● 11th Seed ● 3rd Alliance 1st Pick ● Entrepreneurship Award Sponsored by Kleiner Perkins Caufield and Byers Michigan State Championship Ford Division	Robot: <i>Hornet V</i> <ul style="list-style-type: none"> ● Able to reach the scale, switch & exchange ● Operate scale & switch in Auton ● 115 lbs.

	<ul style="list-style-type: none"> Rank 18 	
<p>2016-17 STEAMWORKS</p>	<p>Kettering University FiM Event Week 1</p> <ul style="list-style-type: none"> 10th Seed 2nd Alliance 1st Pick District Event Finalist <p>Marysville FiM Event Week 6</p> <ul style="list-style-type: none"> 19th Seed 5th Alliance 1st Pick Semi-finalist Quality Award <p>Michigan State Championship Dow Division</p> <ul style="list-style-type: none"> 12th Seed (37th at MSC) 7th Alliance Captain Semi-finalist <p>FIRST Championship - St. Louis Carson Division</p> <ul style="list-style-type: none"> 42nd Seed 7th Alliance 3rd Pick Sub-division Quarter-finalist 	 <p>Robot: <i>Buzz LightGear</i></p> <ul style="list-style-type: none"> Gear Manipulator Climber 6 Wheel Drive 4" Traction Wheels 24.5" long x 23" wide x 35.75" tall without bumpers; 71.7 lbs.
<p>2015-16 STRONGHOLD</p>	<p>Kettering U. FiM Event Week 1</p> <ul style="list-style-type: none"> 1st Seed Captain Semi-finalist Team Spirit Award <p>Marysville FiM Event Week 4</p> <ul style="list-style-type: none"> 13th Seed 5th Alliance 1st Pick Semi-finalist Quality Award <p>Michigan State District Championship</p> <ul style="list-style-type: none"> 4th Seed Captain Finalist <p>FIRST Championship – St. Louis Newton Division</p> <ul style="list-style-type: none"> 5th Seed Captain Sub-division Quarter-finalist 	 <p>Robot: <i>Sir Buzzbee the Third of Robotis</i></p> <ul style="list-style-type: none"> Low Goal Shooter "Anti-Tortuga" Arm/Ball Intake/Class A Manipulator Outer Works Extraordinaire 6 Wheel Drive 8" Pneumatic Wheels Modified AndyMark KoP chassis Low Bar Capable - 14" Tall 30" wide x 28" long; 72 lbs.
<p>2014-15 RECYCLE RUSH</p>	<p>Kettering University FiM Event Week 2</p> <ul style="list-style-type: none"> Rank 30 Avg. Qualification Score of 29.33 <p>Livonia FiM Event Week 5</p> <ul style="list-style-type: none"> Rank 25 Avg. Qualification Score of 69.67 6th Alliance 2nd Pick Semi-finalist <p>Great Lake Bay Bot Bash</p> <ul style="list-style-type: none"> H.H. Dow High School, Midland Fire Up Bot Award 	 <p>Robot: <i>Hornet II</i></p> <ul style="list-style-type: none"> Able to stack totes & cans Elevator system power by two BAG motors on 100:1 VersaPlanetary gearbox per side 4 Wheel Drive 6" Mecanum Modified AndyMark KoP chassis 41" wide x 27" long x 67" tall, 119 lbs.

<p>2013-14 AERIAL ASSIST</p> <p><i>Rookie Year 2014</i></p>	<p>Kettering University FiM Event Week 2</p> <ul style="list-style-type: none"> • 8th Seed Captain • Quarter-finalist <p>Great Lakes Bay Region FiM Event Week 4</p> <ul style="list-style-type: none"> • Rank 19 	 <p>Robot: <i>Hornet I</i></p> <ul style="list-style-type: none"> • "Up and Over" Ball Intake • Pneumatic ball passer • 6 Wheel Drive 4" Traction Wheels • AndyMark KoP chassis • 29" long x 27" wide x 34" tall
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2.4 AWARD HISTORY

Hybrid Hornets have earned the following awards at competitions and off-season events:

- 2018-19 Deep Space – Kettering University FiM Event Week 1, Team Spirit Award sponsored by FCA Foundation
- 2019-19 Deep Space - – Alpena #2 FiM Event Week 5, Entrepreneurship Award Sponsored by Kleiner Perkins Caufield and Byers
- 2017-18 Power Up! – Kettering University FiM Event Week 1, Entrepreneurship Award Sponsored by Kleiner Perkins Caufield and Byers
- 2017-18 Power Up! – Lansing FiM Event Week 4, Entrepreneurship Award Sponsored by Kleiner Perkins Caufield and Byers
- 2016-17 Steamworks - Marysville FiM Event Week 6, Quality Award
- 2015-16 Stronghold - Kettering University FiM Event Week 1, Team Spirit Award
- 2015-16 Stronghold - Marysville FiM Event Week 4, Quality Award
- 2014-15 Recycle Rush - Great Lake Bay Bot Bash, Fire Up Bot Award

3.0 Team Members & Structure

3.1 HYBRID HORNETS CORE VALUES

Our core values are aligned with *FIRST* and Kearsley High School's mission statement & B-Code:

Kearsley High School will promote life-long learners by demonstrating - PRIDE
Perseverance | Responsibility | Integrity | Dedication | Excellence

Kearsley students are expected to follow the **B-Code** at all times and in all locations while coming to school, in school and going home -
Be Ready | Be Responsible | Be Respectful

We believe, honor and follow *FIRST* Core Values:

- We are a team.
- We do the work to find solutions with guidance from our coaches and mentors.
- We honor the spirit of friendly competition.
- What we discover is more important than what we win.
- We share our experiences with others.
- We display Gracious Professionalism® and Coopertition® in everything we do.

- We have FUN!

Hybrid Hornets are a diverse team in race and gender. We strive to make our workshop inviting to all and a safe place for anyone interested in robotics. We do this by moderating discussion between teammates and making sure all points of view are respected. We make it our mission to give all students a chance to excel and innovate.

We are more than just robotics students. We are Girl Scouts, band members, chess players, quiz bowlers, journalists, NHS members and officers, future problem solvers, athletes, and employees. Our team exhibits diversity in race, ethnicity, socioeconomic status, gender, sexual orientation, religion, and ability. We have given back to our community, scrubbing veterans' headstones at the Great Lakes National Cemetery and tutoring our peers after school. No challenge is too great and no task is too small for us to unite in solving.

3.2 ORGANIZATIONAL STRUCTURE

The Hybrid Hornets are divided into two main teams: Build and Business. Each team is divided into smaller subcommittees such as Programming, Electrical, Fabrication, Field, Fundraising, Sponsorships, Outreach, and Social Networking. At the beginning of the season, members were asked to pick the groups they would like to work on. They were encouraged to pick a role on the Build Team AND a role on the Business Team. We cross-train for sustainability, growing skills and leadership opportunities. Mentors are assigned to groups based on the goal for each group meeting.

3.3 PROJECT MANAGEMENT

We utilize a large calendar in our workroom listing important deadlines and upcoming events. We also have each committee and its members posted in the front of our workroom. For team communication, we utilize Slack, which we are able to divide into channels for business, general, and robotics. We debrief with all team members after each meeting and competition about goals and plans for the next event.

3.4 MEMBER BENEFITS

Participating on our robotics team, Hybrid Hornets are able to:

- Apply engineering principles to the design, build and operation of robots for competitions
- Learn and use CAD and other engineering software
- Gain hands-on experience with multi-disciplinary collaborative problem solving
- Program robots for both autonomous and human operated modes
- Travel to competitions
- Apply and earn college scholarships
- Network with professionals that serve as mentors
- Volunteer in our community
- Earn a Varsity Letter for participation

3.5 HUMAN RESOURCES

Team Members – Our team members come from diverse backgrounds and bring a wide-range of skills to the group. We value academic success along with team success. Our students must:

- Maintain grades and school attendance
- Follow the team’s Member Expectations and Core Values
- Learn in training seminars and be knowledgeable about shop and tool safety
- Attend and actively participate in workshop meetings
- Support all team workgroups
- Participate in team fundraising and outreach efforts

Hybrid Hornet Mentors – 2 of our mentors are members of our school community, 2 are parents of current team members, 1 is a parent of a team alumnus, and 1 is a team alumna. Our mentors focus on:

- Serving – They give freely of their time and skills to support the team
- Safety - Background security checks have been made through *FIRST* and Kearsley Community Schools
- Learning – They have attended workshops at Kettering; those offered by regional FRC teams; and *FIRST* training through Schoology

Parents/Family Members – The Hybrid Hornets team has an amazing support system of parents, grandparents, aunts/uncles and siblings. They assist us by:

- Transporting the team and equipment to workshops, competitions and community events
- Providing team meals
- Helping team fundraisers
- Supporting with outreach and community service

3.6 LOCATIONS

Hybrid Hornets had several workshop locations in our early years. With support from Kearsley Community Schools, we have settled into the Jane Burgtorf Building with three rooms: one for building, one for programming, and one for building and storing field pieces. Kearsley provides our team with Wi-Fi, custodial services and utilities. We also have a store room available for our use. We are excited to announce that our workspace is part of the recently passed bond for revamping in the near future.

- 2013-14 Aerial Assist | KHS Cafeteria; off-site at Fitzgerald family’s garage; local antique store backroom
- 2014-15 Recycle Rush | Kearsley Community Schools Burgtorf - 1 room
- 2015-16 Stronghold | Kearsley Community Schools Burgtorf - 1 room
- 2016-17 Steamworks | Kearsley Community Schools Burgtorf - 2 rooms (relocated)
- 2017-18 Power Up! – Present | Kearsley Community Schools Burgtorf - 2 rooms + 1 storeroom

3.7 SCHEDULES

Build & Competition Season: January-April

Our schedule has varied based on need. We meet Tuesdays and Thursdays in the evening for 2 hours and Saturdays for 4-5 hours. We also meet on Mondays and Wednesdays in subcommittees as needed.

Off-Season: May, September-December

Thursdays & Wednesday: 2 hours

Saturdays for 2-4 hours

Advanced notice for summer and weekend events

3.8 TEAM COMMUNICATION

Hybrid Hornets have used the communications app Slack as the primary communication tool for the team. It is used to communicate at competitions, in the days between meetings, and in remote brainstorming sessions. Direct messages are sent to channels created in the app, e.g. General, Business, and Robotics. Slack has proved to be a great safety asset to the team. In 2017, the power at the Marysville competition went out. We were able to locate and communicate with all of our team members and instruct them to meet at our pre-designated safety spot.

Email is used for more detailed and important communications to parents/guardians and students. Our mentors will use email to send out information about travel for competitions and they typically include required attachments. Our team's email address is HybridHornets5150@gmail.com. Team documents and photography are shared in GoogleDocs.

We also share information on a private Facebook group with our Hybrid Hornet family.

3.9 OFF-SEASON EVENTS

Our first off-season event was the 2015 Great Lakes Bay Bot Bash at H.H. Dow High School in Midland. We looked forward to participating in Lapeer's RoboCon and the Kettering Kick-off.

4.0 Risk Analysis

4.1 STRATEGIC PLANNING PROCESS

The Hybrid Hornets completed a SWOT analysis for the first-time in January 2018 and again in 2019, to identify team strengths, weaknesses, opportunities & threats. The afternoon after this year's kickoff event we performed our SWOT analysis for the 2023 team. Each student team member and mentor had the opportunity to participate and share observations.

4.2 SWOT ANALYSIS

Strengths	Weaknesses
<ul style="list-style-type: none">- Increased membership- Knowledge- Positive outlooks	<ul style="list-style-type: none">- Focus/Attention- Time- Organization

- Improved equipment - Diversity - Fresh ideas - Strong finances - School support - Inclusivity	- Programming - Expertise - Facility - Limited resources - Loss of skilled mentors
Opportunities	Threats
- Gaining friendships - Sponsors - Travel - Job/college opportunities - Gaining experience - Manufacturing in America event - Scholarships	- Unsuccessful Fundraising - Too many people vying for leadership positions - Snow days - Losing sponsors/mentors - Tunnel vision

5.0 Marketing

The team is deliberate in our marketing efforts. We focus on developing long-term relationships. We use our website and Facebook to draw in potential members and sponsors. Fall 2019 we demonstrated at the Flint Makers Fest, teaching community members how to drive our robot and issued Robot Driver's licenses. Also that Fall we hosted an Open House to recruit new members, showcase our work and thank our sponsors. We present at school board meetings and in the past elementary and middle school Science Nights. Our school district newspapers *The Eclipse* and the *Kearsley Connection* highlight team and achievements. In addition, the district shares information about our competitions and accomplishments on our school's social media accounts. The Hybrid Hornets have marched in our homecoming parade & support our school in the ABC12's Spirit Cup. We also volunteer to help our community while raising brand awareness.

5.1 TARGET AUDIENCES

Hybrid Hornets have identified several audiences we would like a stronger relationship with, including: new student team members and their families; our partners (school district, sponsors and community organizations); *FIRST* teams; and finally our team members, families, mentors and team alumni.

5.2 TEAM'S DIGITAL FOOTPRINT

- Website: www.HybridHornets.weebly.com
- Facebook: Hybrid Hornets | <https://www.facebook.com/HybridHornets/>
- Twitter: @FRC5150 | <https://twitter.com/FRC5150>
- Tiktok: Hybrid Hornets
- Instagram: Hybrid Hornets

5.3 BRANDING

Team members early in our history developed the branding of Hybrid Hornets. They were active participants in Kearsley's DECA chapter.

Logo: Hybrid Hornets has two logos – the Hornet and also HH & team number. Both of our logos are used on team wear, website, social media, stationary and spirit. Our Hornet logo was updated this year by our team members.



Team Colors: Blue - #0152be and Yellow - #f2ce3a

Graphic Standards: Title text - Rod 24 pt.
 Body text - Sitka Text 12 pt.
 Photo captions - Narkisim 8 pt.
 Decorative - JLS Space Gothic RNC >24 pt.

Team Shirt: Light gray heather t-shirt for competitions & outreach
 Mechanic button-up shirt for final day of competition

6.0 Financials

6.1 FUNDRAISING

We use fundraising opportunities to spread the message of *FIRST* and to make community partners. Through fundraising and friend-raising, we have partnered with many local businesses and organizations. We also get Kroger community points from supporters while grocery shopping. We hold bottle drives, bake sales, and have worked the Holly Renaissance Festival to generate income. A team wish list was generated with needs of equipment and tools for the workshop.

6.2 SPONSORS

Our team distributes a sponsorship letter to all team members to share in the community. It includes our budget and sponsorship levels, beginning at Bronze (\$1-499) to Platinum (\$2500+). All sponsors will be thanked on our team website, banners, and social media messaging.

Hybrid Hornet's Sponsorship Levels*

Platinum - \$2500+	- Name and logo on robot - All gold perks
Gold - \$1000-2499	- Logo on team shirt - All silver perks
Silver - \$500-999	- Name on team shirt

	- All bronze perks
Bronze - \$1-499	- Name on website - Thank you on social media.

*All sponsors will be thanked on our team website and social media messaging.

We are grateful for support we have received from:

Our Financial Sponsors

- Kearsley Community Schools
- NASA
- Siemens
- Electromatic
- Michigan Lumber Co
- ELGA Credit Union
- Caden Palmer
- The Rice Family
- MCC Fab Lab

6.3 **MEMBER CONTRIBUTIONS**

Hybrid Hornets also contribute to the team individually within their means. There is no activity/participation fee to belong to the team, but members are responsible for food and some of the hotel costs when we travel. Our mentors work with those that need assistance.

Our parents and families have been very supportive and generous of their time. They drive us to our competitions and team events, prepare tasty team meals during build season, donate tools to the workshop, and share their skills.

Our alumni are helping the team by volunteering as mentors. They cheer us on at competitions and have been our required team volunteer and/or photographer.

We truly are “Strong Alone; Stronger United.”

7.0 **Relationships: Outreach and Partnerships**

7.1 **FRIEND-RAISING: COMMUNITY OUTREACH**

Hybrid Hornets spread the message of *FIRST* and STEAM in our community by participating in:

- **ABC Channel 12 & ELGA Credit Union Spirit Cup**, January 2018– Demonstrated our robot when Channel 12 visited our school. It was televised on the morning news.
- **Armstrong FTC Qualifier**, Nov. 2017 & 2018 – Hybrid Hornet’s Safety Captain created a **safety** display, posters and handouts for the event. Our team members, mentors and parents took **leadership volunteer roles** for this event, including: Pit Administrator, Judge’s Assistant, FTA Assistant, FTAA, Inspection, Referees and Score Keepers.

- **Great Lakes National Cemetery** Fall Clean-up, October 2017-2019 – Team members cleaned tombstones in preparation for Veteran’s Day.
- **Factory Two Flint Makers Fest** – September 2019 -Held at the **Flint Farmers Market**, Hybrid Hornets were the only FRC team demonstrating robotics and promoting STEAM to the community.
- **Baker College’s Hot Rod High** showcase Flint’s **Back to the Bricks** downtown festival, August 2017 - 2019 - We taught children and senior citizens how to drive our robot and had hands-on STEAM activities for participants.
- Lapeer’s **RoboCon**, 2016-2018 – Teach attendees how to drive our robot and issue “Driver’s Licenses.”
- **Kearsley Community Schools Board Meetings**, – Give presentations on the team’s activities, schedule varies each year.
- **Kearsley Homecoming Parade**, yearly – We walk in the parade and hand out flyers for the team.
- **Hybrid Hornet Open House**, September 2019 – Invite sponsors, Kearsley Community members and local charter schools to visit our workshop.
- **Flint Fire Department**, 2016-2018 – Visit the firefighters to thank them for their support of our safety education.
- LittleBits at the **Flint Public Library**, June 2016 – STEAM demonstration coordinated with the donation of toys from the LittleBits corporation to the library for elementary students.
- **FabLab** at Mott Community College, June 2016 – Summer camp with Hybrid Hornet and Armstrong FTC team members learning how to use equipment.
- **Wreaths Across America**, December 2015 – Placed wreaths on Veterans’ tombstones at the **Great Lakes National Cemetery** in Holly for the winter holidays.

7.2 MENTORING & ASSISTING OTHER TEAMS

Hybrid Hornets have been honored to be mentors to our school district’s two middle school teams - Kearsley Clockworks #8206 and Kearsley ScrapRats #10813 - when they were in existence. Several of our team members worked with the teams. They held mock Judge’s Presentations and taught the middle school team members how to introduce themselves and shake hands. Hybrid Hornets attended their qualifiers and cheered for the teams. We also volunteered at FTC spring events.

We are proud to be a part of the *FIRST* community and have assisted teams in Michigan:

- **Kearsley Armstrong FTC Qualifier**, November 2017 & 2018 – Our team members, mentors and parents took **leadership volunteer roles** for this event, including: Pit Administrator, Judge’s Assistant, FTA-in-training, FTAA, Inspection, Referees and Score Keepers. We the setup/cleaned up, many individuals worked 20+ hours that weekend.
- We have helped a variety of teams with scouting and in any way we can at competitions.
- Our mentors have also assisted the other mentors with team information and rookie teams with start up and team management.

8.0 **Appendix**

- I Hybrid Hornets Team Structure
- II Action Plans and Risk Mitigation
- III Season 2022-23 Hybrid Hornet Budget

2022-23 Hybrid Hornets Team Structure				
Lead Mentor: Lane Sirois				
<ul style="list-style-type: none"> • Lead with Kearsley Community Schools administration, team members, and parents/guardians • Lead with <i>FIRST</i> and <i>FIRST in Michigan</i> • Hybrid Hornets Budget, Sponsorship & Grant Writing • Coordination of Travel • Dean's List Submission • Varsity Lettering and First in Michigan Badges 				
Build Team Mentor: Lane Sirois			Business Team Mentor: Alison Phelps	
Programming & CAD	Electrical Controls	Fabrication & Safety	Team Management	Communication and Outreach
Nathan Alex Jim Drake Auna Joey Mentor: Bob Fenner	Wiring Operator Interface Autonomous Sensors & --- Chianne Jack Nathan Zach	Fabricate parts Build field elements Safety Capitan --- Steven Jack Jack Auna Zach Alex Arianna Safety Capt: Chianne Mentors: Liz Sidebotham, Bob Fenner	Scouting & Strategy Entrepreneurship Inspire Award Sponsorship Training --- Jacob Jack Joey Chianne Steven Gabbie Drake Arianna Lola Zach Scouting: All Mentor: Lane Sirois	Website Social Media Video/Photography Graphics Animation Community outreach Spirit Team Branding --- Gabbie Drake Lola Jack Joey Chianne Nathan Steven Mentor: Kristie Zamora
Drive Team: Pending Pit Crew: Pending				

Hybrid Hornets are a diverse team in race, gender, socioeconomic status, and more. We strive to make our workshop inviting to all and a safe place for anyone interested in robotics. We do this by moderating discussion between teammates and making sure all points of view are respected. We make it our mission to give all students a chance to excel and innovate.

We are more than just robotics students. We are Girl Scouts, band members, chess players, quiz bowlers, journalists, NHS members and officers, future problem solvers, athletes, and employees. Our team exhibits diversity in race, ethnicity, socioeconomic status, gender, sexual orientation, religion, and ability. We have given back to our community, scrubbing veterans' headstones at the Great Lakes National Cemetery and tutoring our peers after school. No challenge is too great and no task is too small for us to unite in solving.

Action Plans and Risk Mitigation

<i>Action Plan</i>	<i>Responsible</i>	<i>Estimated Completion</i>
1. Develop Excellent Team Financing and Partner Relationship		
Give presentations and share our Business Plan with our current/past sponsors	Entire Team	Off season each year
Seek new sponsors	Entire Team	Ongoing
Give presentation to Kearsley School Board	Entire Team	Spring
2. Spread the Message of FIRST		
Demo robot & hands-on activity at the Flint Makers Fest	Entire Team	Fall 2019
Create Chairman's Award entry and Business Plan	Entire Team	22/23 Season
Social Media	Entire Team	Ongoing
3. Develop Strong Team Leadership through Team and Community Outreach		
Host workshops on Social Media Safety and Tool Safety	Entire Team	22/23 Season
Continue local volunteering, especially in the City of Flint – i.e. Back to the Bricks; Great Lakes National Cemetery	Entire Team	Ongoing
4. Grow a Model Team		
Hold Open House to recruit new members & thank sponsors	Entire Team	Fall
Create agendas for workshop meetings	Mentors	Ongoing
Adhering to the team's core values and not tolerating bullying	Entire Team, Led by the Mentors	Ongoing
Make team-building activities a priority	Mentors and Parents	Ongoing
Mentor participate in training and workshops	Mentors	Ongoing
5. Learn and Continuously Improve by Building a Successful Robot		
Learn new skills at Flint's Factory Two maker-space	Entire Team	Off Season
Game strategy and prototyping	Entire Team	Ongoing
Safety Training	Safety Captain	Ongoing
Scouting strategy and matrix	Entire Team	Ongoing

2022-23 Budget Hybrid Hornets 5150			
REVENUE	Cash	In-kind	Total
Team Carry-Over from 2021-2022	Waiting to hear from ISD		
Grants			
State of Michigan	Waiting to hear		
NASA	6000		6000
Corporate Sponsorship			
10 Business Sponsors – estimated total amount	8000	500	
Flint Fire Department – safety equipment		100	
Bob's Pizza - meals		100	
Partnerships & Community Support			
Kearsley Community Schools	6000		

Fundraising			
Can & Bottle Drive	350		
Kroger Community Points	1200		
Bake and Craft Sale	200		
Individuals			
10 Individual Sponsors – estimated total amount	1000		
#5150 Contributions – travel 15 people @ \$200	4500		
#5150 Contributions – 15 competition shirts @ \$50	750		
TOTAL INCOME	\$29,800 plus carry-over and MI grant	700	30,500 plus carry-over and MI grant
EXPENSES	Cash	In-kind	Total
Competition			
Registration Fee & Kit of Parts (2 District Events)	6000		6000
Registration Michigan State Championship	4000		
FIRST Championship - Houston	TBD		
Off-Season Events (RoboCon & Kettering Kick-off)	1500		1500
Robot and Game Field Construction			
Robot parts	2500		
Game field construction supplies & game elements	2000		
Safety equipment & supplies	550	100	650
Travel			
Hotel	6000		
Meals - Alpena, State & Championship	1500	100	
Rental U-Haul Trailer & Gas- State & Championship	250	500	750
Business & PR Materials			
Lead mentor stipend - <i>pd. by Kearsley Schools</i>	1300		
Team shirts	1100		
Computers - 2		2000	
Outreach	400		
Office Supplies – Award Entries	400		
End of the Year Banquet & Varsity Letters	200	550	750
Banners & Spirit		400	
TOTAL EXPENSES	29,700	1,350	31,050

Each team member assists with fundraising efforts and is listed as a team requirement in the Team Member Expectations.

Kearsley Community Schools' administration assists the team with accounting and budgeting. All team moneys – sponsorship, grants, fundraising and individual gifts are processed by:

Ashley Livingston, GISD finance