

Paly Robotics

FRC 8 | 2022



Business Plan



Palo Alto Senior High School
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Business Plan

Team Mission Statement

Paly Robotics is dedicated to enriching the educational experiences of our students and community by increasing STEAM exposure and inspiring others through FIRST programs. Even with many changes on our team, our mission has remained focused on self-improvement and positively impacting the community.

We envision our long-term impact to remain student-led and recognized for our tangible results, and hope to see a growing, tight-knit community of people positively impacted by our efforts.

Since Team 8's inception, our mission statement has developed to accommodate our evolving goals. Even with many years of change on our team, our core mission has remained the same: to strive for diversity and self-improvement, promote leadership, and positively impact and inspire the community.

Team History & Growth

Paly Robotics was established in 1996 at Palo Alto High School as a team of 20 students and has since grown to be 75 members strong.

In 2012, the departure of our head coach and lack of student experience resulted in the team's poor performance. In response, we developed a sustainable structure of learning that involves veteran members teaching knowledge and skills to newer members. This reorganization allowed us to successfully rebuild, resulting in us placing first at the 2020 Utah Regional, our first win at such a large event in 14 years.

Since 2012, we have invited students from the Townley Grammar School in England to tour our lab, as well as participate in a Women in STEM panel. In 2016, we initiated our LEGO Robotics Summer Program, a free summer camp teaching LEGO Mindstorms to underprivileged students. In the last five years, we have done over 50 robot demonstrations, including robot demos at 11 middle and elementary schools, 7 science fairs, and 7 community events and parades. In 2020, despite the COVID-19 pandemic, Team 8 continued to spread the ideals of STEAM to our community through free Zoom workshops. Going into 2022, we are excited to resume our in-person outreach activities including our annual summer camp for middle schoolers.

Organizational Structure

Paly Robotics distinguishes itself from other FRC teams through our student-led structure. All operations are planned, reviewed, and executed by the students, displaying the mindset of student growth through student leadership. This mindset of student growth is evident across the team, from our student leadership to our mentors' roles, and instills responsibility, problem solving, and diligence in team members—90% of our upperclassmen report that they developed leadership skills through experiences on Team 8.

Our mentors embrace our student-led structure by teaching students various skills and practicing hands-off support; they help teach decision-making and leadership skills, enabling the students to make their own informed choices. By providing valuable insight, our mentors turn student mistakes into learning opportunities and give students the tools they need to succeed in FIRST.

Marketing

From outreach efforts across communities, to our summer programs, to our student-led structure and even our signature green color, Paly Robotics has developed a strong brand that allows us to effectively promote our message to pursue STEAM to community members and others.

Using consistent branding, we become recognizable in our community. By utilizing our website and social media platforms—Instagram, Facebook, Youtube, and Twitter—we connect with our community and other FRC teams. We also connect with our sponsors through our monthly newsletter. During our recruitment period, Paly Robotics reaches out to hundreds of students at our school. We present to over 500 incoming freshmen during school orientation, as well as Career Technical Education, business, and art classes, reaching over 2,500 students in the past five years. Paly Robotics also presents its brand through numerous outreach programs. Our annual Paly Robotics Summer Camp for middle schoolers is one of our most well-known outreach efforts and has served over 795 campers so far.

Recognizing the importance of outreach and its impact on the community, Paly Robotics strives to continue to provide opportunities for enrichment within our community. From growing our outreach programs—including our annual summer camps, robot demos, and FLL and FTC mentorship programs—to developing connections with potential robotics partners around the globe, Paly Robotics strives to create a sustainable and long-lasting program for students. Our dedication to these projects is all in an effort to enhance and emphasize a younger generation's pursuit of STEAM.

Financial Statement

For the 2021-22 season, Paly Robotics has a budget of \$83,228 and a projected income of \$60,000. Paly Robotics Boosters, a group of parent volunteers, collaborate with subteam captains and our student treasurer to develop the team's budget annually.

The majority of our budget covers parts and materials for 3 robots—the robot we build for the competition season, an additional practice robot, and a robot for the off-season. Additionally, we budget for competition registration fees, as well as facilities, subteam, and financial management. Our budget also includes expenses for team merchandise, competition fees, and our various outreach activities. New expenses for this year include a Grizzly drill press and belt sander, increasing our team's machining efficiency.

Team 8 receives monetary support from our corporate sponsors, as well as material, software, and food support from in-kind sponsors. We also obtain revenue from our summer camp and individual donations.

Team 8 understands the importance of the mutual benefits of our partnerships and recognizes sponsors in various ways, such as including their logo in our branding. We also host robot demos for sponsors at their company sites, send a monthly newsletter, and invite them to Robot Reveal Night, in which we show the features and capabilities of the year's robot. Paly Robotics is proud of the relationships we have developed with our network of sponsors in the community, and we hope to maintain these connections well into the future. This year, we plan to invite our sponsors to a virtual Sponsor Banquet, at which we demonstrate our robot and present about team accomplishments, goals, and ongoing projects.

Risk Analysis

Paly Robotics recognizes possible risks and plans ahead to mitigate them.

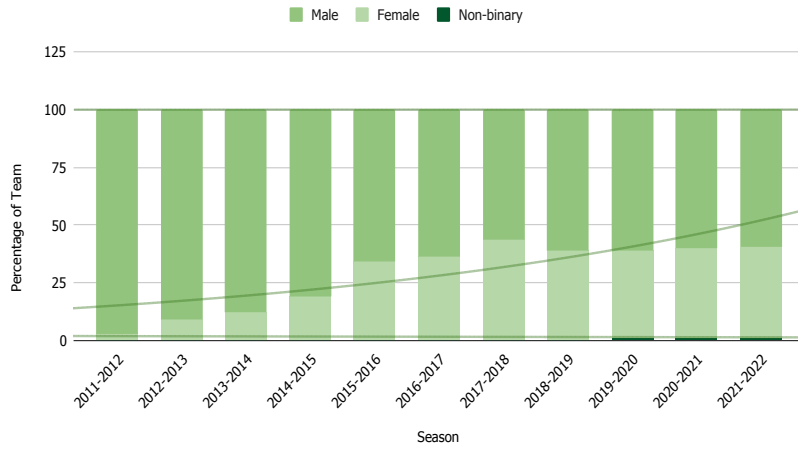
A lack of team sustainability could lead to poor performance; therefore, we have developed a Sustainability Plan outlining countermeasures and have veteran members pass down knowledge to younger members through lessons and workshops. Furthermore, poor lab conditions could possibly lead to the remodeling of our lab space. To prevent this, we received a safety inspection and have implemented its suggestions.

We recognize the threat of COVID-19, and we prioritize the safety of our students and community. To ensure the health of our members, we purchased protective equipment and air filters, implemented a mask mandate, and installed hand sanitizer stations.

Appendix

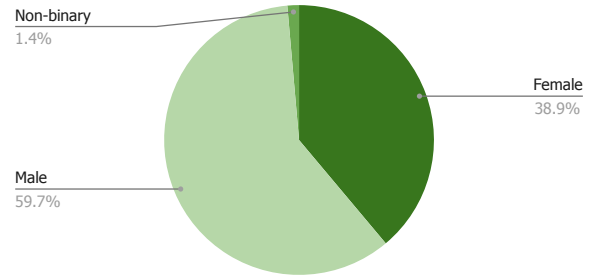
Paly Robotics Gender Diversity Growth 2011-2022

Paly Robotics has created a culture of diversity and equal opportunity over the years.



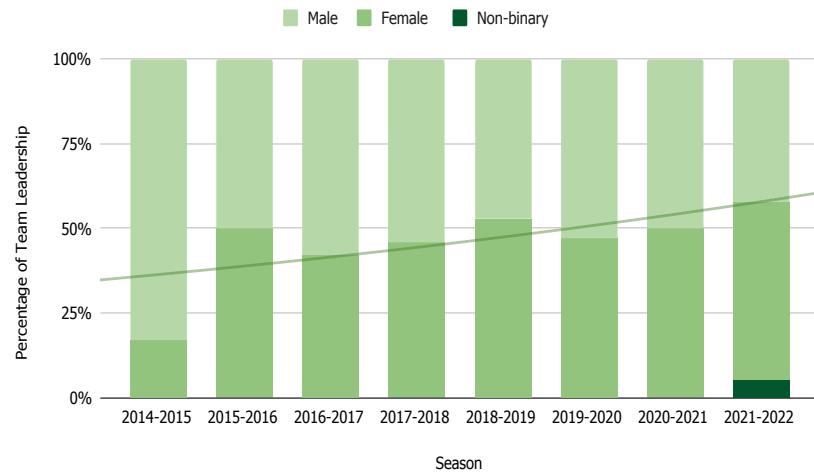
Paly Robotics Gender Diversity 2021-22

Our recruitment and outreach practices have created a more diverse representative team.

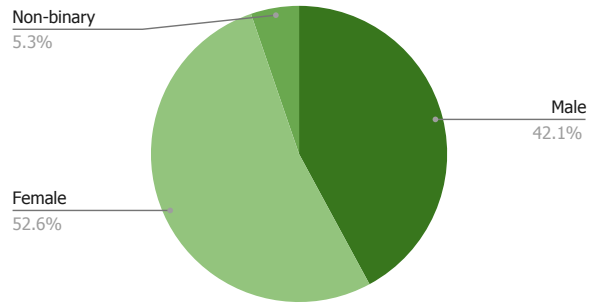


Paly Robotics Leadership Diversity Growth 2014-2022

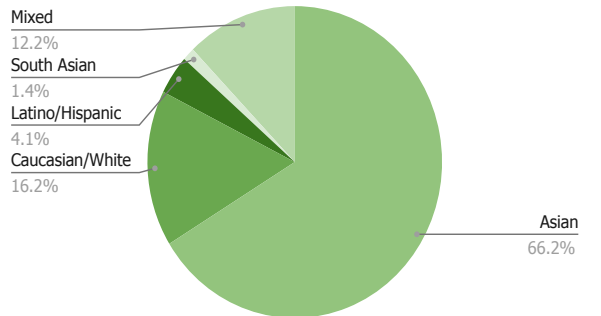
Paly Robotics' Leadership has become more diverse throughout the years to better represent the team's diverse and accepting culture.



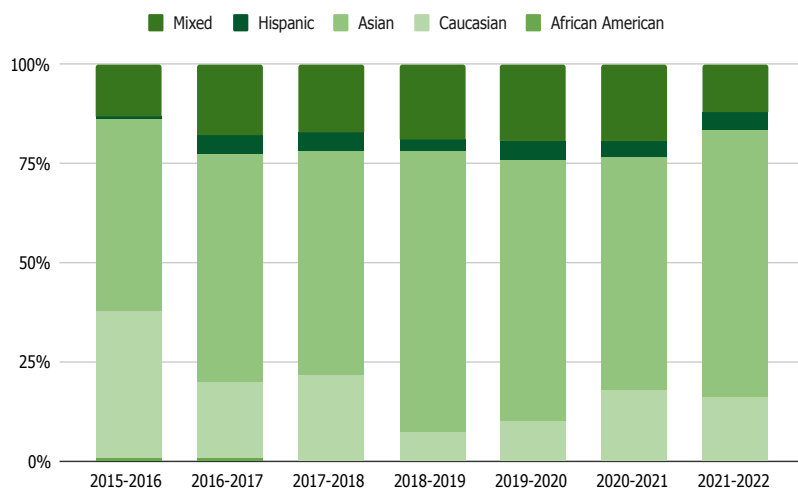
Paly Robotics Leadership Gender Diversity 2021-22



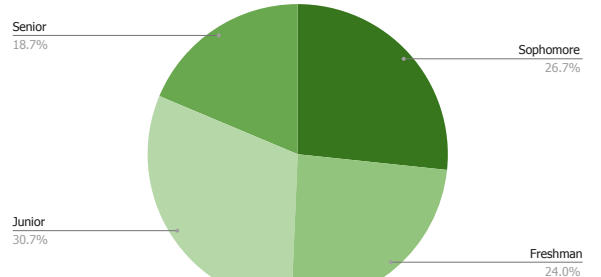
Paly Robotics Racial Diversity 2021-22



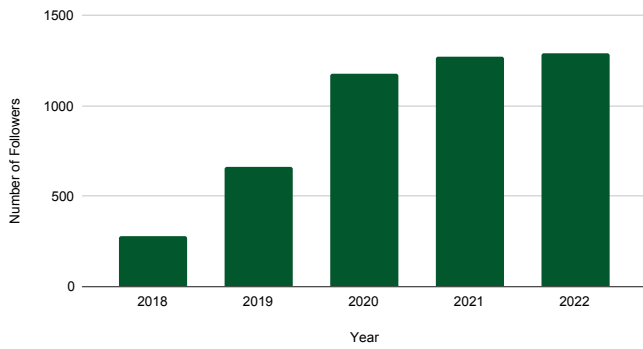
Paly Robotics Racial Diversity Growth 2015-2022



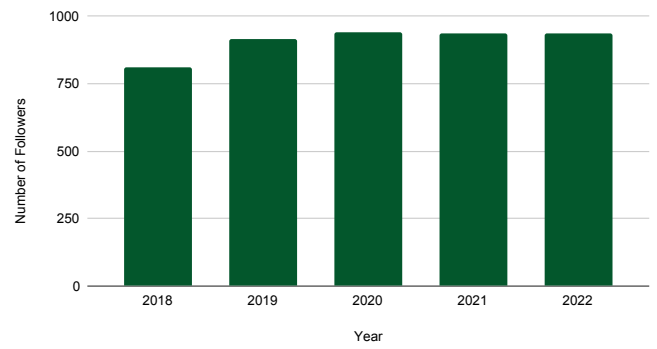
Paly Robotics Grade Diversity 2021-22



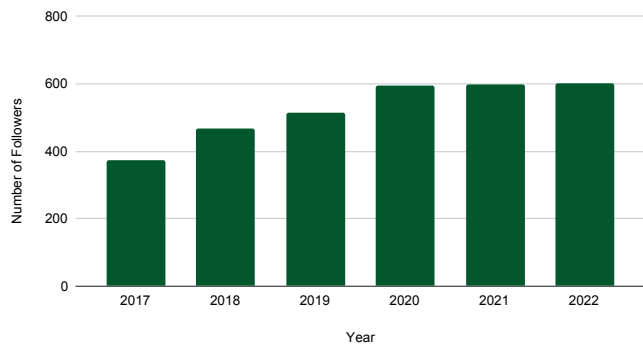
Paly Robotics' Instagram Followers



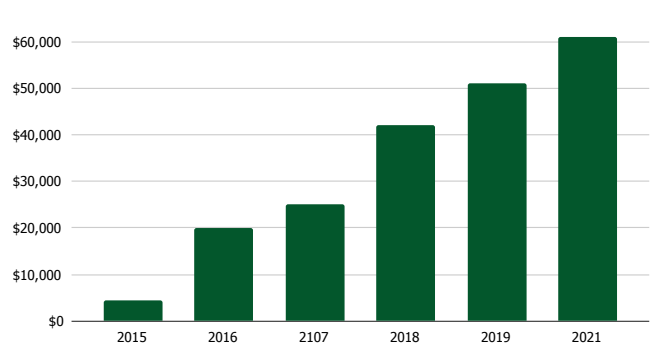
Paly Robotics' Twitter Followers



Paly Robotics' Facebook Followers



Paly Robotics Summer Camp Revenue 2015-2022



Team 8 is led by two Team Co-Captains, who work together to oversee and manage the operations of all subteams and committees, as well as administrative tasks.



Our Technical Director oversees all design and fabrication operations as well as facilitates robot progress throughout Build Season.



Our team is split into six subteams: Art, Business, Build, Design, Software, and Strategy and Scouting. Each contributes to the team's overall success and creates an effective and engaged network of students. Each subteam is led by a Subteam Captain, who is responsible for his or her respective subteam's operations.



Additional managerial roles, such as Lab Manager and Webmaster, ensure that all aspects of running a team are covered. Collaboration between our student treasurer and our the Paly Robotics Boosters, a group of team parents who help manage team finances, ensures that our monetary assets are allocated wisely.



Our team has various outreach initiative committees, from our annual Paly Robotics Summer Camp to our international engagement with Townley Grammar School, that are led by our students.

Statement of Financial Position

As of March 2, 2022

	Total
ASSETS	
Current Assets	
Bank Accounts	
Total Bank Accounts	112,062.00
Total Current Assets	112,062.00
TOTAL ASSETS	\$112,062.00
LIABILITIES AND EQUITY	
Liabilities	
Total Liabilities	
Equity	
Opening Balance Equity	-330.19
Retained Earnings	100,354.05
Net Revenue	12,038.14
Total Equity	112,062.00
TOTAL LIABILITIES AND EQUITY	\$112,062.00

Statement of Activity

July 1, 2021 - March 2, 2022

	Total
REVENUE	
2021-22 Donation from Amazon Smile	127.04
2021-22 Grant	15,850.00
2021-22 Individual Donation	24,186.05
2021-22 Redbubble	16.68
2021-22 Summer Camp Income	61,391.62
Total Revenue	101,571.39
GROSS PROFIT	101,571.39
EXPENDITURES	
2021-22 Art	65.46
2021-22 Booster	139.59
2021-22 FIRST Registration	5,000.00
2021-22 Insurance	654.00
2021-22 Kick off meal	818.44
2021-22 Lab Management	6,828.96
2021-22 Media	3,155.80
2021-22 Off Season Competition	300.00
2021-22 Off Season Food	892.97
2021-22 Off Season Projects	4,987.65
2021-22 Online Services	2,663.36
2021-22 Outreach	1,598.08
2021-22 Pit Management	190.09
2021-22 Robot Part and Materials	34,547.52
2021-22 Spirit	26.98
2021-22 Summer Camp	9,894.01
2021-22 Summer Camp Food Pass through	141.86
2021-22 Surplus	14,051.59
2021-22 Team Products	3,576.89
Total Expenditures	89,533.25
NET OPERATING REVENUE	12,038.14
NET REVENUE	\$12,038.14