



SPARC 5665

*IMPACT ANALYSIS
& sustainability*



2023-2024

#sparcisaware



Although this document concerns the entirety of the 2023-2024 season, the data it contains within was last updated on March 18th, 2024. This document's purpose is to analyze the impact of our outreach projects over the years and according to the feedback and results, determine their course for the upcoming seasons. Via the QR codes situated at the bottom of each page, you can access the files containing the documentation of each project. This document also contains our sustainability plan for the current season, containing our budget plan, current sponsors and how we apply the concept of sustainability to our mechanics & software development sub-division. Don't forget, **#sparcisaware.**

#sparcisaware

Our team history and mission

SPARC was founded in March 2015 at Sainte Pulchérie French High School. We made our debut as a team at the FIRST Central Illinois Regional. In the competition, we were entitled to receive the Rookie Inspiration award. In 2016, we won the Entrepreneurship Award and took part in the semi-finals of the Turkish Off Season. In the Orange County Regional, one of our members received the Dean's List Finalist Award and as a team, we won the Judges' Award. We won the Entrepreneurship Award at the 2018 NYC Regional and the Excellence in Engineering Award at Istanbul Regional 2018. We managed to become one of the finalists in the 2018 Türkiye Off Season and received the Entrepreneurship Award. In 2019, we received the Gracious Professionalism Award at Bosphorus Regional. We received the Safety Award at Izmir Off-Season in 2021, and the Judges' Award at Bosphorus Regional in 2022. Last year, at the Haliç Regional, our mentor Abidin Zenginler won the Woodie Flowers Finalist Award and we won the Industrial Design award as a team. We won the Impact Award at the NYC Regional and thanks to this award, we got qualified for the championship in Houston. We become one of the six Impact Award Finalists at Houston. This season, we received the Sustainability Award at Bosphorus Regional, and we're pre-qualified for the Houston Championship from last year.

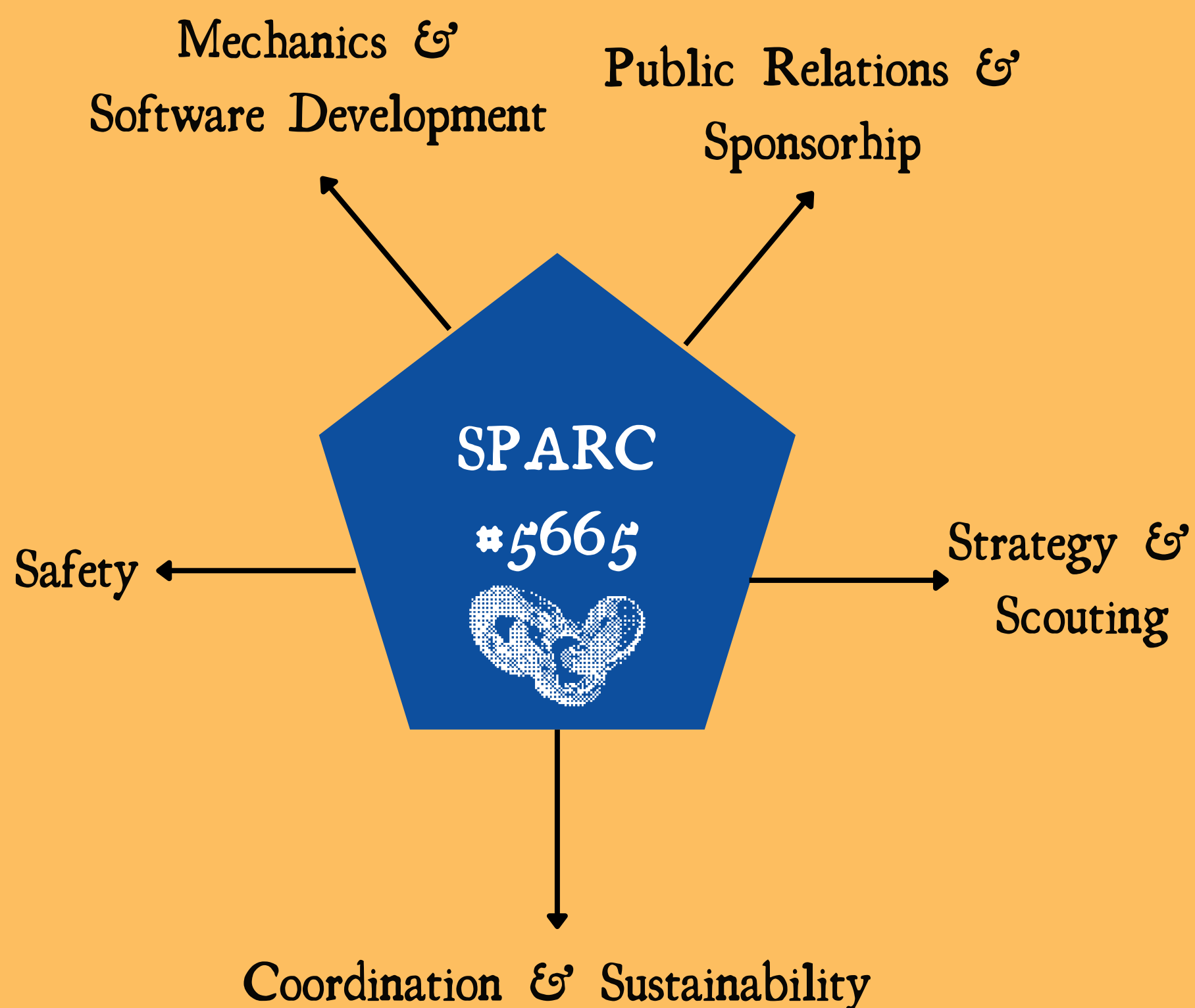
We have had a main and unchanging goal since the first day we were founded: to spread robotics and STEAM, starting from Turkey and then expanding to the world. We represent our country in America with the robots we build and the projects we carry out, and we try to make Turkey's name known in the fields of STEAM. In this way, we strive to improve our skills and discover new possibilities in the wide world of robotics, while inspiring those around us who share our passion for learning and creativity.

Our team structure

At the beginning of each season, we divide our team into 6 core sections: Mechanical, Software, PR & Sponsorship, Coordination & Sustainability, Security and Strategy. A “captain” is elected for each section to make sure everything goes smoothly. As students of a private school, we spend more time and effort finding sponsors than public school teams. As a result of long work, when we reach the goal we set at the beginning of the season, we organize our expenses according to the needs of the team: equipment, transportation, t-shirts, banners and accommodation.

First, we strive to find sponsors by attending different conferences and fairs. After the competition, we send “thank you” emails to our sponsors to show our respect and gratitude for their support. Then, we demonstrate the features of our robot to our school and sponsors and show them the rewards we have won. Thanks to these processes, we maintain our continuous participation by achieving different successes in the enjoyable and incredible world of FIRST.

At the beginning of each year, we help new team members get acclimated through our mechanics and programming presentations.



Robot sustainability

Our team's sustainability approach aims to both use resources efficiently and leave a better world to future generations. With game themes changing every year, we make the best use of the resources we have to produce innovative and effective solutions.

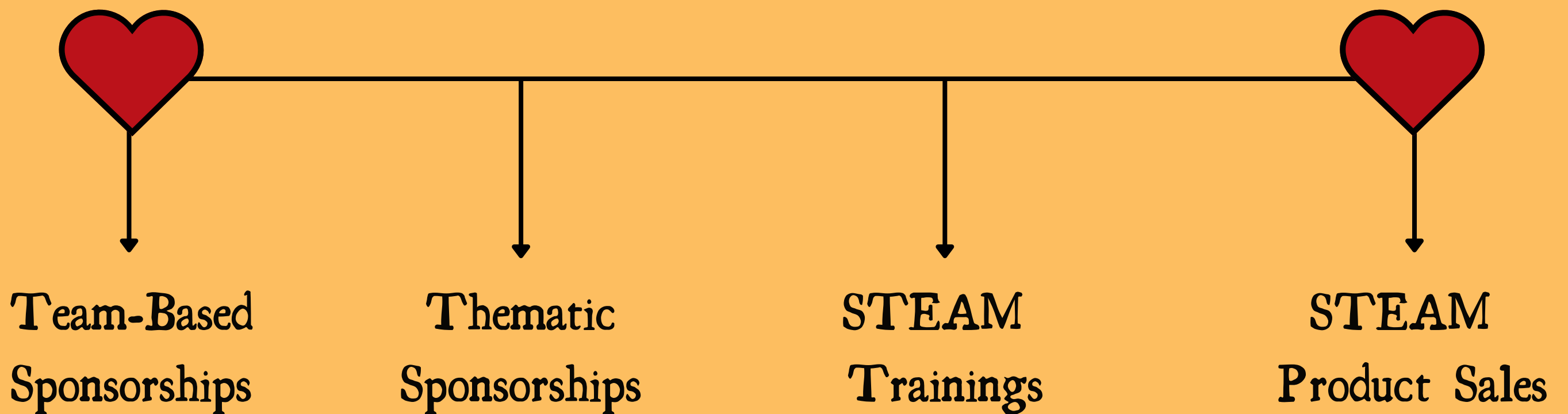
The materials we reuse are not limited to just one season, they form the basis of our long-term planning. Materials such as Swerve systems, Falcon 500 motors, Limelight and Roborio allow us to transfer our past experiences to our next projects and emphasize the importance of reuse.

In alignment with FIRST's sustainability vision, as a team we aim to minimize our impact on the environment and leave a positive mark on society. With environmentally friendly approaches at every step, from material selection to the production process, we take into account the needs of not only today but also future generations.

Our team aims to progress towards betterment every season by adopting the principle of sustainability not only as a goal but also as a road map.



Financial Sustainability



- **Team-Based sponsorships**

Team-based sponsorship involves receiving financial or resource support from local businesses or large corporations to support the overall needs of our team. Such sponsorships require us to advertise companies that bear our team's name and represent their brands at certain events or competitions. To be successful in this category, we prepare effective presentations and sponsorship files in which we can present our team's mission, goals and achievements well.

- **Thematic sponsorships**

We receive our project-focused sponsorships to fund specific projects or events. When seeking project-focused sponsorship, we clearly state to potential sponsors the details of our project, its objectives, the results we expect, and the positive impact it will have on society. We also highlight how the project aligns with the sponsor's brand image and how it will provide them with visibility. For example, our thematic sponsors covered the transportation and accommodation fees for SPARC, the girls' FLL team we founded in Çorum, to participate in the Regional to be held in Ankara. With this sponsorship, they aimed to increase the rate of women working in the STEAM field.

Financial Sustainability

• STEAM Trainings

By offering STEAM (Science, Technology, Engineering, Art, Mathematics) training, we both create a social impact by providing education within the community, and increase our financial sustainability with the income generated from these activities. In addition to providing students with practical skills in STEAM fields, these trainings also serve as a way to provide additional funding for our team. With our STEAMLIN platform, we deliver STEAM training to all parts of Turkey, and we increase our income by providing paid training with the STEAM centers we have established.

• STEAM Product Sales

As a team, we also generate income by selling products based on STEAM concepts. These products are robotics kits, educational toys, or other related products. We generate income from the sale of products such as Windmill, Zoo and Garden House Painting Sets, Robot Arm and Periscope Painting Set for older ages.

Deney Setleri

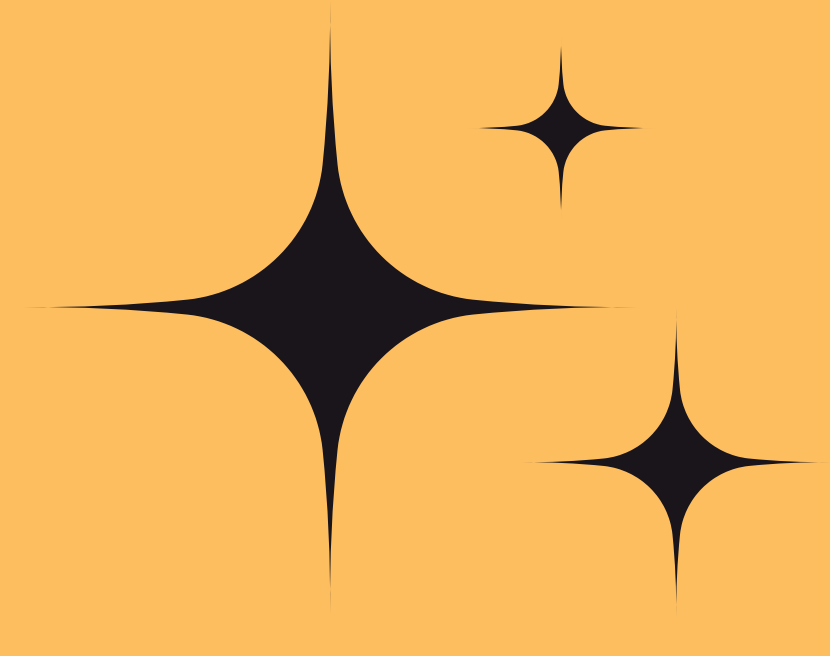
2005	2006	2007	2008
			
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LIFE UNIT

What does a unit do?	<p>It consists of 3 stages. We aim to reach people's basic needs in the shortest time and most effectively.</p> <p>Firstly, with its solar energy purification system, it produces up to 10000 liters of clean water per day in accordance with World Health Organization standards.</p> <p>Secondly, it charges up to 200 phones a day with solar panels. Third and finally, it provides internet - access with Superbox technology.</p>
How many people did we reach?	500,000+ people in the earthquake zones
How do we measure the impact of this project?	<p>We constantly receive data from our volunteers working on-site at the earthquake zones. We analyze the data and keep it updated. According to the data, we keep the project sustainable and amplify our impact every day.</p>
Where?	Antakya, Hatay and Kahramanmaras in Turkey; Madagascar and Tanzania in Africa
How many units?	20 units
Future goals	<p>In the future, we're planning on being more present in the R&D stages of the project, and finding more sponsors to build more life units across the globe.</p>



IDEA LAB



How do we measure the impact of this project?	We measure the impact with the help of our on-site volunteers. We analyze the data we receive and update them on an online panel. According to the data, we determine in which courses children need the most help and in which locations we should establish new labs.
In which locations?	Hatay, Bursa, Adana, Istanbul, Zanzibar
Which one is the center location?	Karatas, Adana
How many apps?	500 apps translated to Turkish by our team
How many teachers?	2 teachers
How many participant children?	2000 children
How many hours per day?	2 hours / day
Future goals	Currently, the Mobile Learning Laboratory Pilot study determines the places where education is most disrupted through its analysis and we are working on the establishment of these stations there.



STEAMLINE



How many users?	Currently, the STEAMLINE website is being used by an average of 1350 students.
How many mentors?	We have 163 mentors, 2.3 mentors per province.
What benefits have we seen?	<p>Thanks to this project, we created a mentor network and enabled FRC teams from different countries to come together, work together and share information.</p> <p>We aimed to increase young people's knowledge and skills in the STEAM field, to enable them to develop innovative projects and to encourage them to produce solutions that are beneficial to society. Thanks to this project, we organized training programs with the support provided by various sponsors, enabled young people to develop their skills in these fields, and provided financial support for their projects.</p>
How many people did it reach?	2800 people were reached in Turkey.
Our progress on Steamline International	Contacts were established, batteries, workshops were provided in India. We have mentors in Australia, with whom we hold meetings regularly. We had an agreement with Team 4613, Barker Redbacks, to become one of our representatives in Australia.
Future Goals	In the future, we aim to establish contact with at least one mentor in each providence of Turkey. We would also like to spread our STEAMLINE International platform across the globe, to the best of our ability.

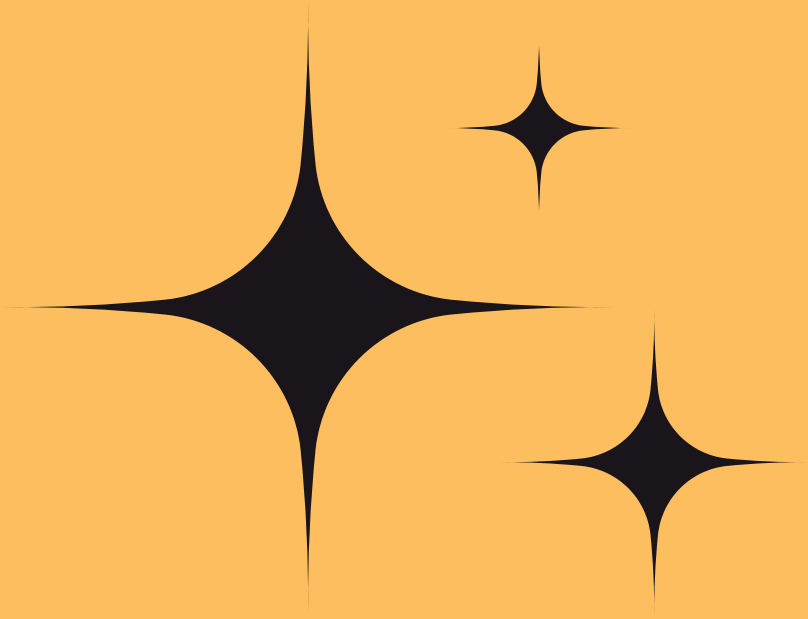


SMART EDUCATION CARD

How many people worked on it?	3 mentors from PAYASTEM Artificial Intelligence Center, as well as 10 SPARC team members worked on it.
How many users?	Currently, the product is being tested by 350 people.
Current situation	We're done with the design part, but we haven't put it into use yet. We recently had a meeting with the Play-Doh company, and prototypes were produced.
In what areas was it used in?	The Smart Education Card, also known as Smart Octopus because of its 8 arms, aims to teach children how to match shapes with sounds.
Future Goals	We're planning on sending it to mass production next year. By attaching shapes made of Play-Doh onto each arm of the octopus, we plan on helping children form associations between shapes and sounds, which will also be available in different languages.



PAY IT FORWARD



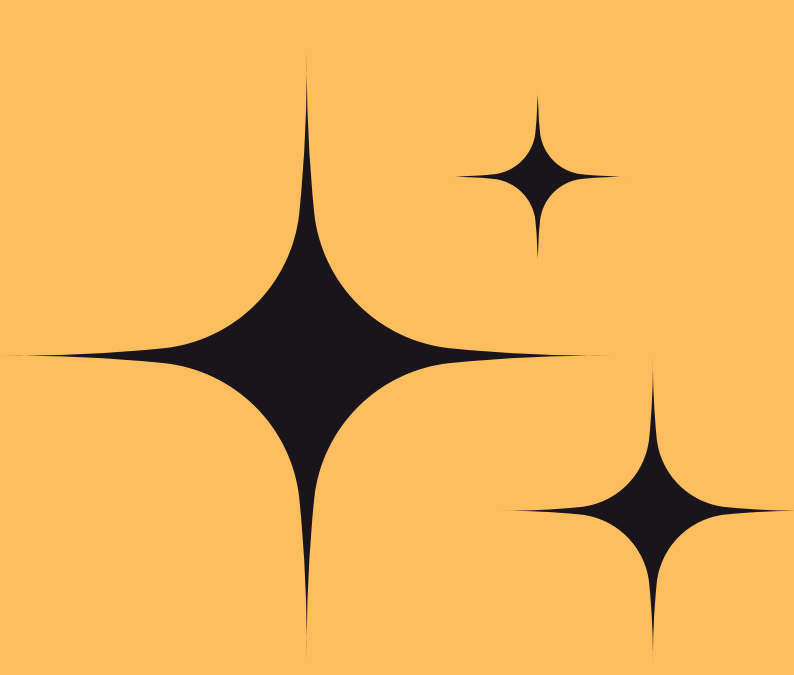
How many teams?	A total of 40 teams applied for this fund. As a result of these applications, we evaluated the teams meticulously and as a result of the evaluations, we distributed this fund to a total of 5 teams.
How much money?	We allocated a total budget of 50,000 TL: 10,000 TL for each team.
How were the calculations made?	According to our team's budget planning, after finalizing the money required for our own expenses, our robot and our projects, a budget of 50,000 TL was allocated for this project fund.
For what did the teams use the money?	4 of the 5 teams with whom we decided to share this fund used this fund for PR projects. The remaining 1 team used this budget in the construction of their robots.
How do we follow the outcomes and get feedback?	We see the robots and projects of the teams participating in this fund at the regionals we attend. We also follow their projects and are informed about the developments in these projects. We are very happy to see the teams participating in this fund develop their projects and robots, and we encourage other teams to transfer the money other teams in accordance with the name of the project when they become financially stable.
Future Goals	Our goal next year is to support 20 FRC teams with this project.



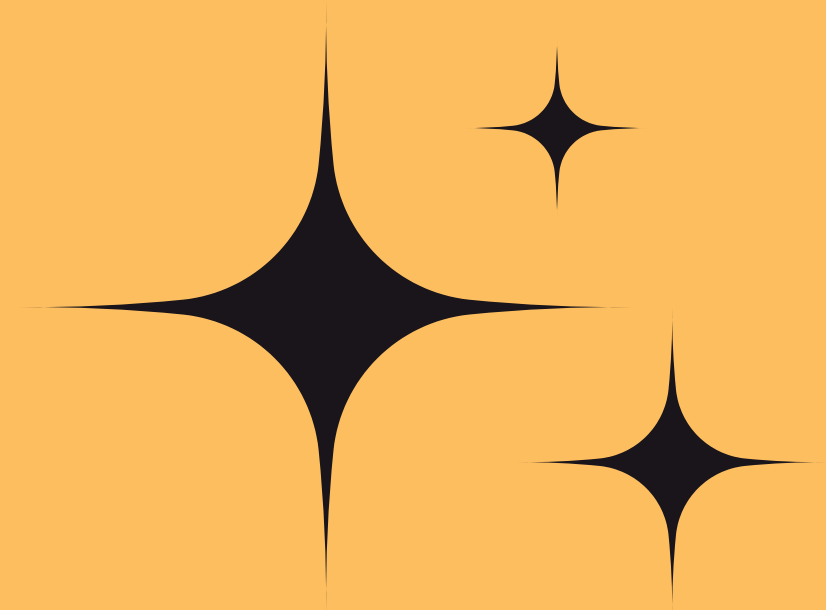
UNiTE x SPARC



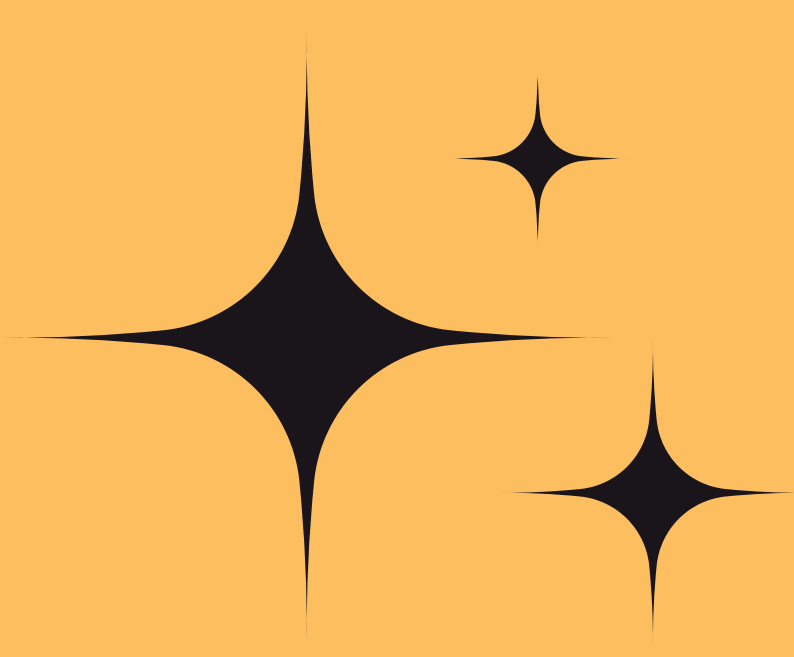
What is the purpose?	<p>The aim of this project is to work under the #sparcisaware movement, which is an awareness movement to draw attention to various social issues and come up with solutions. These efforts include accelerating progress to meet the needs of women and girls around the world, and gender equality and empowerment of women and girls.</p>
What is the action taken?	<p>Within the scope of this project, we did research on UN Women's UNiTE To End Violence Against Women initiative and came up with an action plan containing the steps we have taken or planning to take to become a model team and make an impact by raising awareness on gender equality. Our document contains the gender ratio in our team, as well as the outreach projects we conducted to spread awareness on this topic.</p>
How many people were reached?	<p>By publishing the project on our website, it reaches everyone who visits our website during the day. We also delivered this project to other FRC teams that participated in our conference held as SPARC.</p>
How many team members participated?	<p>Our Public Relations sub-division worked together to do research on the initiative and prepare the document.</p>
Future goals	<p>In the future, we aspire to get in contact with UN Women themselves, let them know about our initiative, and get support from them. We want to make our initiative more official by getting it approved by the organization.</p>



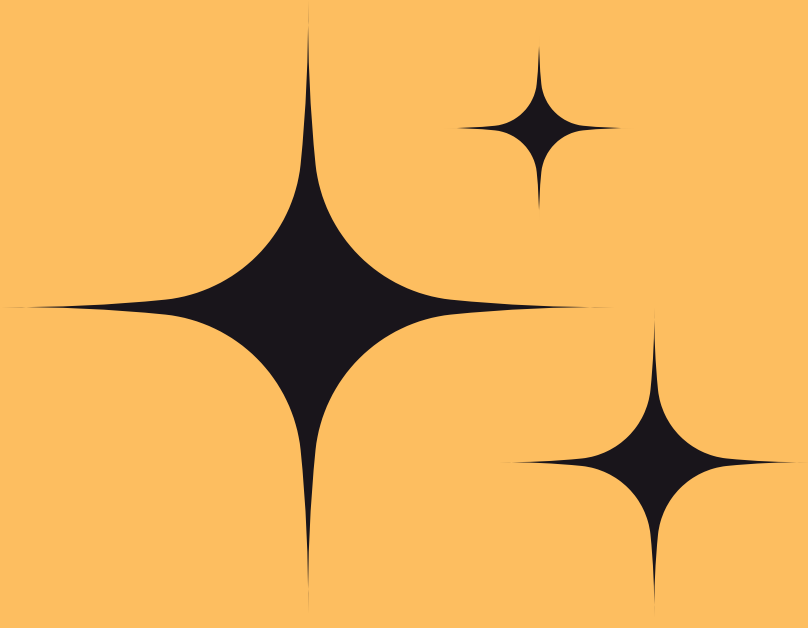
SOAP WORKSHOP



What is the purpose?	Our purpose in this project was to find practical solutions to the of lack of hygiene in the village, and help villagers become financially more independent.
How many days?	5 days
Where?	Madagascar, Africa and Tanzania, Africa
When?	September 13-20, 2023
How many people did it reach?	25 women / day, 125 women in total
Where did we get the funding?	As SPARC, we took part in finding funding and thematic sponsors. Our sponsors pay for the workshops and materials, as well as give microcredits to villagers to help them become financially more independent. Since the price of one workshop is 1000 dollars, by finding new sponsors, we aspire to make the project more sustainable and repeat it in the following years.
Future goals	In the future, we want to establish our “Eco Garden” project with Idea Universal, and start conducting soap workshops there as well. Also, we would like to find more sponsors in order to be able to conduct more soap workshops in the area.



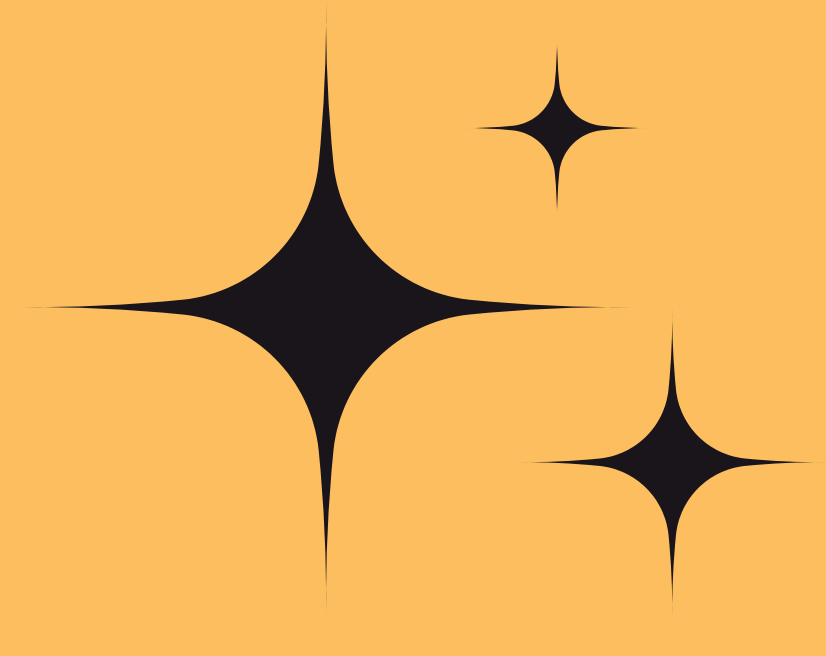
WOMEN IN STEAM



How many conferences were held?	2 conferences were held. One of them was online, and the other was face-to-face. At the first conference, our presenter, Elif Toprak Atmaca, shared valuable things about interior architecture and technology. We held our second conference face to face at TechIstanbul, situated in the Sishane Metro Station. Our four presenters talked about the role of women in the business world, the stereotyped "working woman" taboos, the inequality between men and women in society and how this inequality can be prevented, as well as answering questions from the audience.
How many participants?	165
Which FRC teams participated?	Team 4972 Borusan Robotics
How many team members participated?	40 SPARC team members
Future Goals	In the future, we would like to do one of these conferences overseas, or on an online platform like Zoom, but internationally. By doing so, we will be able to reach more people and create a bigger impact.



FIRST JOURNEY



What is it?	This book contains the memories we collected throughout the years as the FIRST community and turns it into a common source.
What languages?	Turkish, English and French
Which formats was it published in?	Paperback and e-book
What's the main goal?	The revenue generated from the project gets collected in a common fund. We plan on turning this revenue into money which teams will be able to use. By supporting each other, we plan on maintaining coopertition between us and other teams.
Future Goals	We aim to spread this book further across the globe and translate it into other languages. Since it provides us with the sense of unity, spreading it increases <u>coopertition</u> within the FIRST community.



COMPOSTING IN ADANA

How did it start?	<p>In partnership with Adana Yuregir Municipality, after careful analysis, we detected the amount of fertilizer needed to establish an environmental balance in Adana. By forming connections and inviting people from diverse cities, we conducted our project in 3 sessions.</p>
What is the purpose?	<p>The main purpose of this project is to support the organic fertilizer production process and raise awareness for sustainable and healthy food production in organic agriculture. In order to achieve this, we separated harmful substances from market waste and turned the waste into biodegradable fertilizer in order to contribute to forestation, plant growth and environmental sustainability.</p>
How many people participated?	<p>Session 1 = 19, Session 2 = 15, Session 3 = 15</p>
How much fertilizer was produced?	<p>10 tons of organic fertilizer</p>
Where does the fertilizer go?	<p>The scoop sent by the municipality came and took the waste, which we had purified from harmful substances, ready to become fertilizer, and placed it in the back of a truck. After it became fertilizer, half of it was given to farmers and the other half was sent to our prospective future project, the "Eco Garden".</p>
Future Goals	<p>Next year, in collaboration with Idea Universal, we want to connect this project onto "Eco Garden", where the fertilizer we produce will be used to grow plants in a garden and be part of a sustainable cycle.</p>



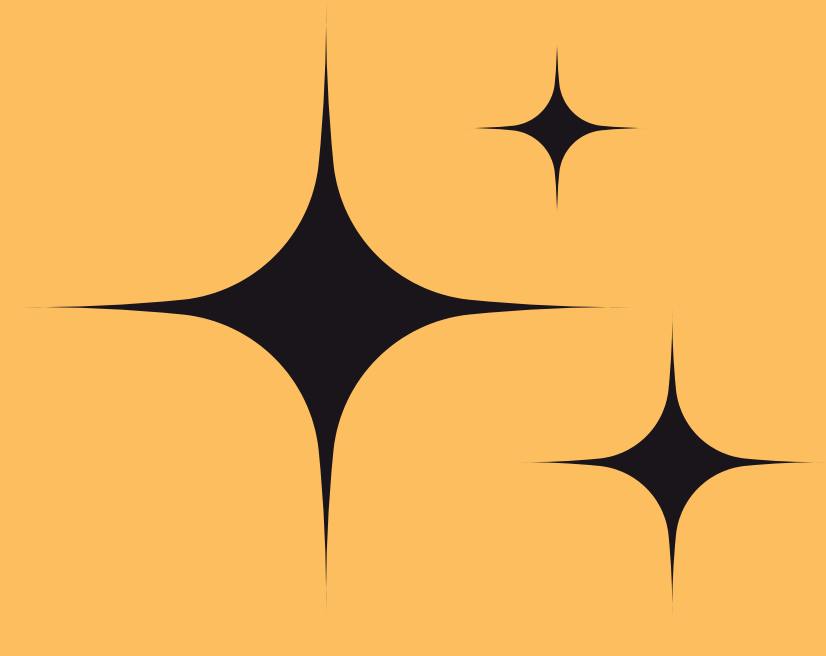
MENTOR MOMENTS



How many views?	13.998 views
How many episodes?	3 seasons, 16 episodes in total
Participants from how many FIRST teams?	12 FIRST teams
Broadcasted on which platforms?	Instagram and Youtube
Future goals	In the future, we aim to shoot more episodes and contribute to the passing down of information to the next generations, future leaders in the FIRST community.



FIRST STEPS



How many people worked on it?	25 people
How many downloads?	The app was downloaded by a total of 228 people.
How many people played the game?	We played this application to the participants in the Halic and New York Regionals and the Houston World Championship. In addition, all other children who wanted to download this application and discover the first journey also mastered the values of first while playing this application.
How many languages was it translated into?	The application has been translated and installed into English as well as Turkish. After the expected security checks, everyone who uses our application will step into this fun and informative first journey in English.
Future goals	In the future, we plan on translating the game onto other languages to spread the FIRST culture in an interactive way to the best of our ability.



HATAY DOGA COLLEGE

MENTORSHIP

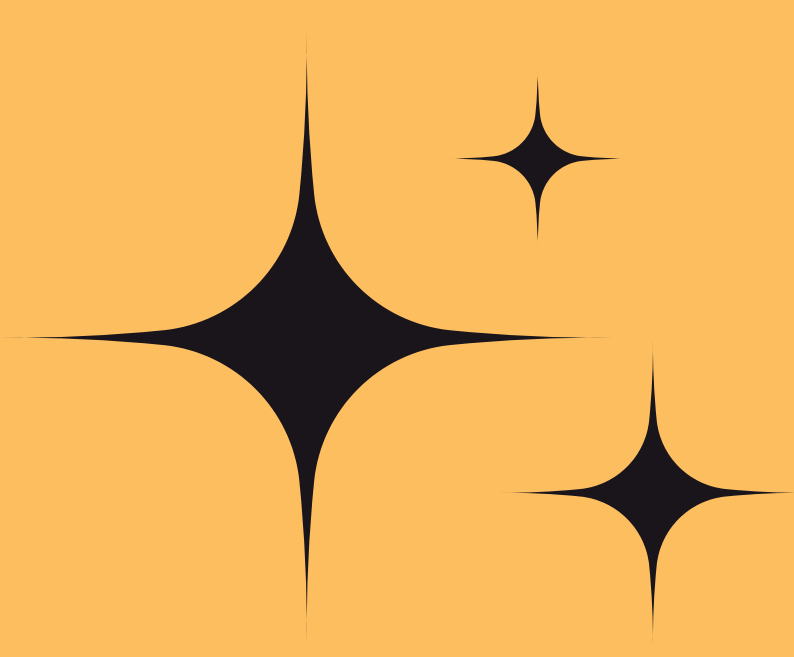
What is the project about?	<p>The FRC team that we, as SPARC, established at Hatay Doğa College was damaged after the February 6 earthquake. Thereupon, as SPARC, an FRC introduction training was given to the new members of the team via Google Meet. 2 months ago, a group of 20 students from Hatay Doga College came to our workshop to observe our robot and learn about the building process. Last week, we invited this group of students to the FRC 2024 Bosphorus Regional, where they supported our team and were introduced to FRC face-to-face.</p>
How many people participated?	<p>This project was done with approximately 25 children studying at Hatay Doga College.</p>
How many people gave the training?	<p>6 people from our team carried out this project: Azra, Ömer Tuna, Ege, Ela, Nazlı and Turgay.</p>
What was the purpose?	<p>To introduce the FRC team we established in Hatay to the FIRST values and to be a role model by telling them about the projects we have done.</p>
What was the feedback?	<p>Around 8 children who attended the training we held at Hatay Doğa College later transferred to the FRC team we established at "Private Kirac Schools" and contributed to their team with the information they learned. FRC Team Robokirac also competed with us at the Bosphorus Regional with their robot. Team Robokirac made their debut as a rookie team, while the other students of the Hatay Doga College supported us and officially became a part of our team.</p>
Future goals	<p>In the future, we would like for them to take active part in building the robot and have bigger roles in the team.</p>



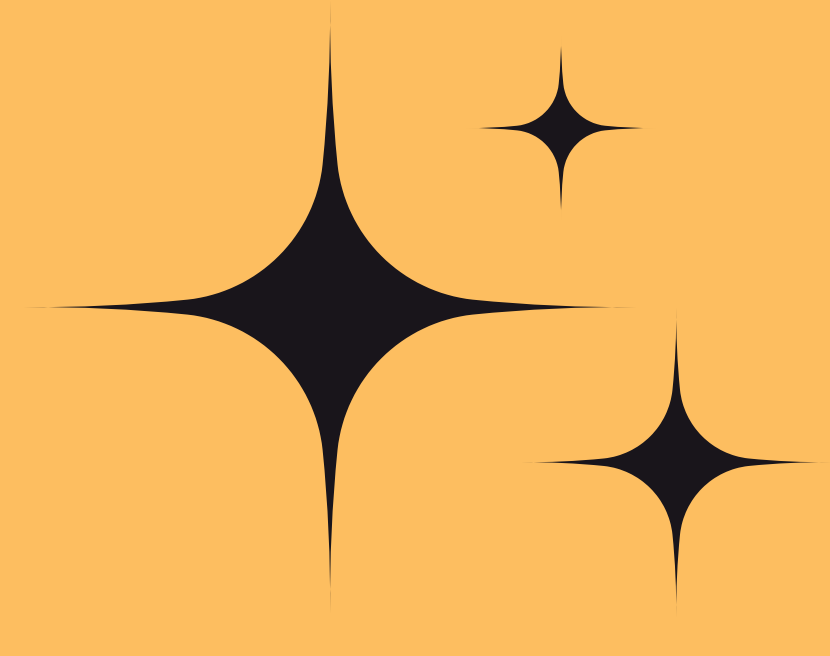
TECH RESCUE



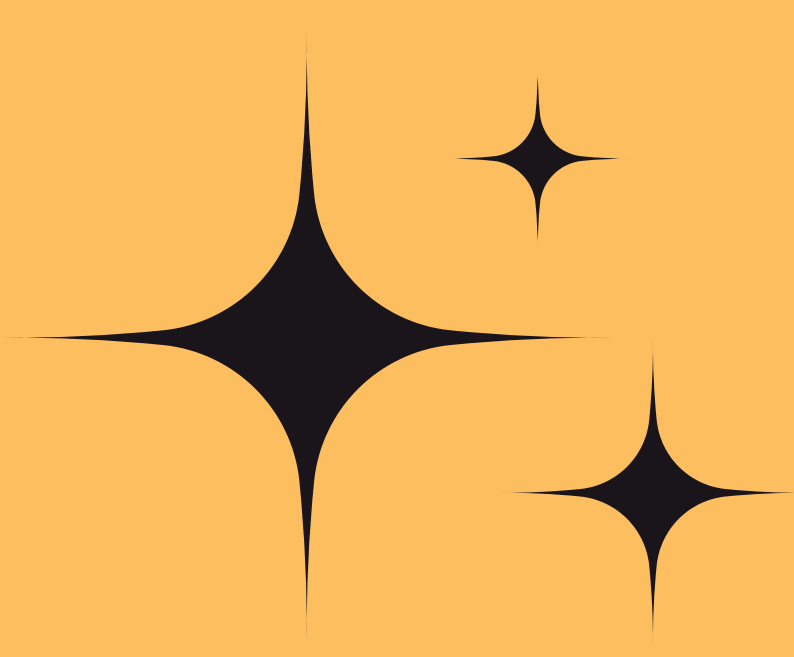
How many items were collected?	53 tablets, 21 power banks and 638 USB sticks were collected.
Where were they sent?	All collected electronic needs were sent to earthquake zones.
How many people collected them?	It was collected by Sainte Pulcherie French High School and 4 SPARC working groups from Hatay, Ankara, Corum and Mugla.
How many people used them?	$53 + 21 + 638 = 712$ people used these tech supplies.
How many team members participated?	The entirety of our team took part in this project, so 134 team members in total.
Future goals	Since this has been a successful initiative, touching the lives of 700+ students, we received great feedback We plan on conducting this project next season as well.



PAICO



What is its purpose?	<p>In order to spread the culture of programming, this electronic card was developed entirely as a result of the design of our students. With heat, temperature, distance and sensors on it, it was printed with our own means and used in training. It's being used to facilitate block coding or coding work on different platforms.</p>
How many people used it?	320 people
Who did it benefit?	For those who want to learn programming easily and at less cost
How much revenue did we generate?	We sold 20 of them. We earned 20,000 TL from 1000 TL each. This programming card is 50% less expensive than its equivalents.
Who used it?	Participants in trainings and studies; card buyers
Where was it used?	Block coding or coding studies on different platforms, trainings
Future goals	We would like to reach more potential buyers, because by selling more of these programming cards, we become financially more sustainable and spread programming culture further.



Budget Plan

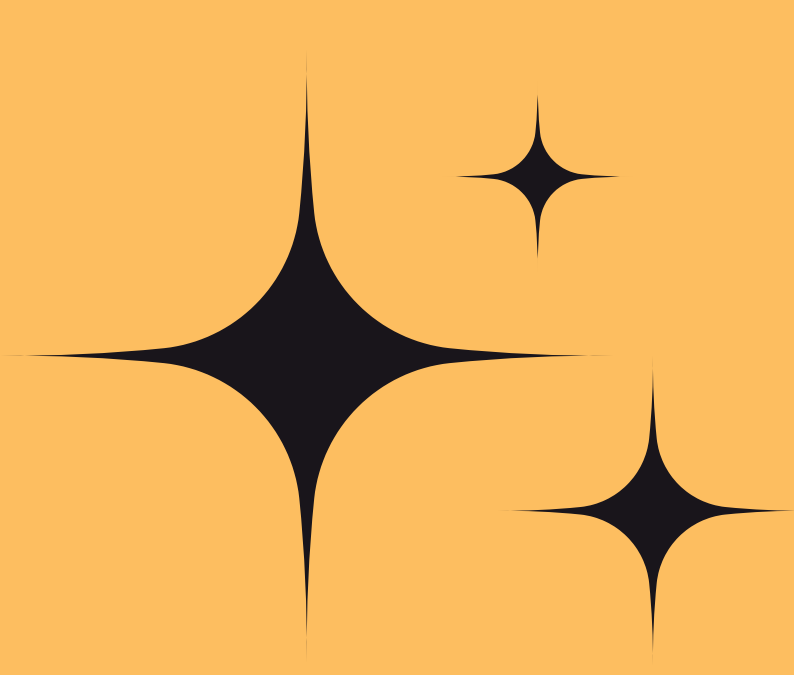
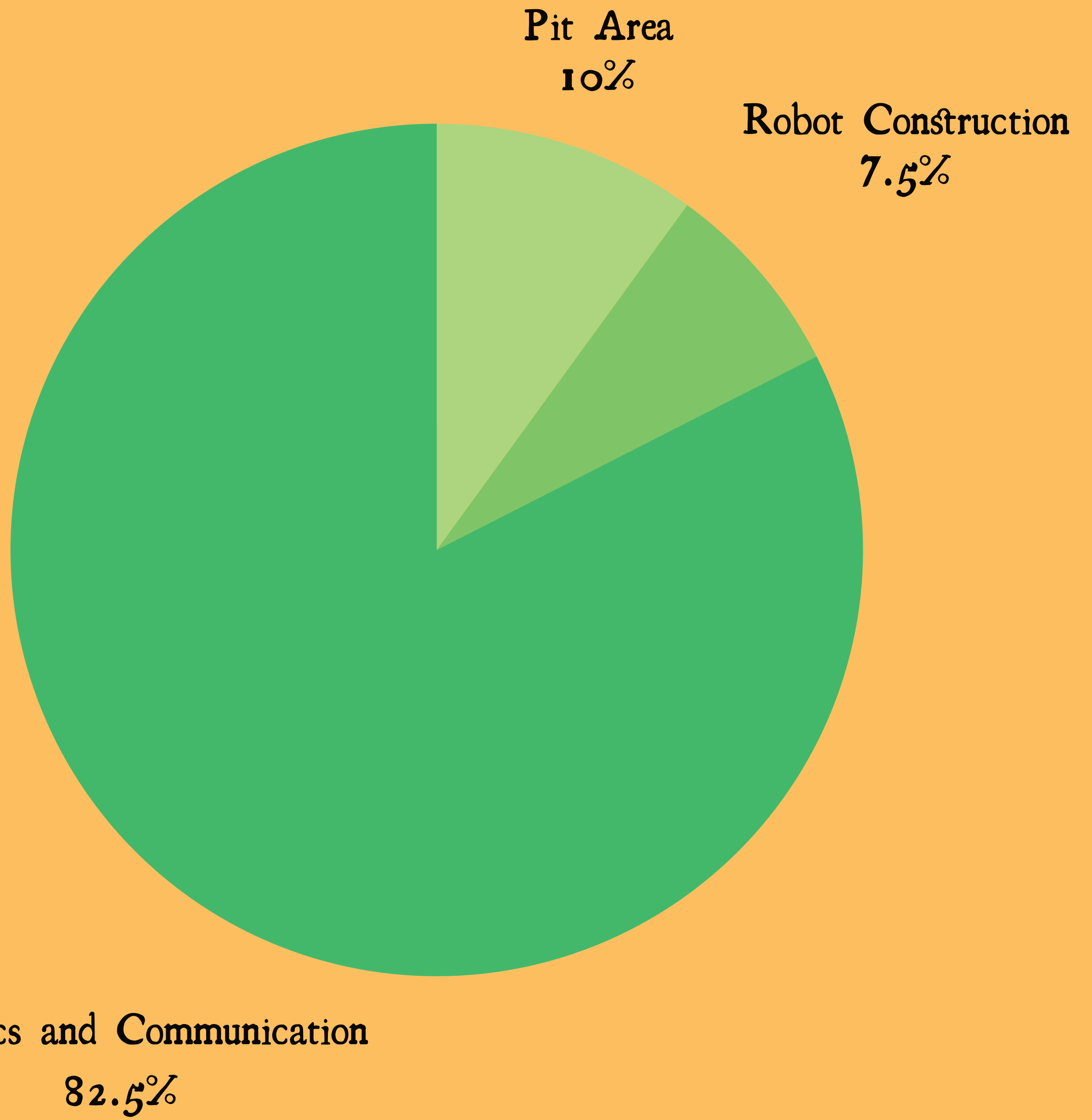
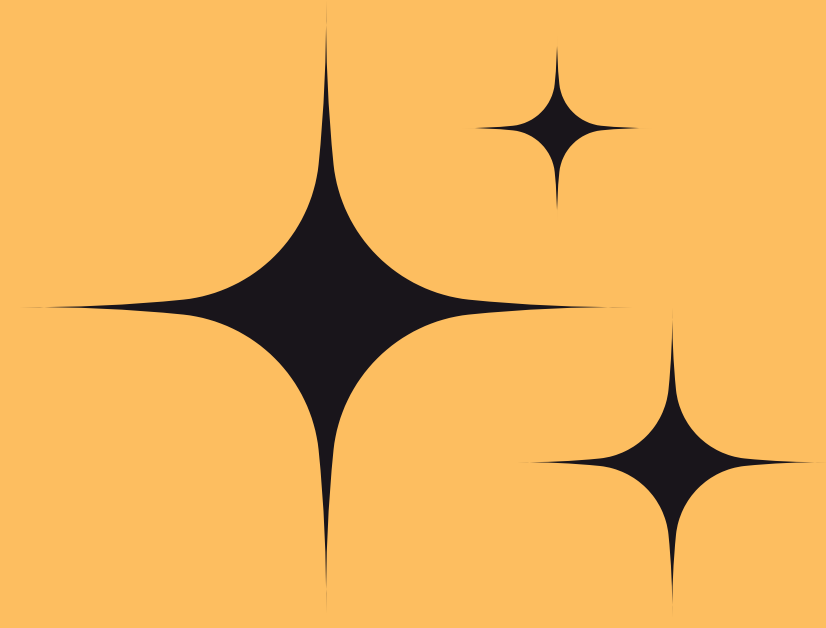
Robot	Logistics and Communication	Pit Area
Construction 4.000\$	Logistics 8.000\$	Pit Area Construction 8.000\$
Workshop Rent 4.000\$	Project Budget 4.000\$	Pit Area Supplies (Posters, Manuals, Documents) 8.000\$
Supplies 2.000\$	Travel Costs 120.000\$	
Electronic Equipment 2.000\$		

Toplam

12.000\$	132.000\$	16.000\$
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160.000\$

Budget Distribution



Our current sponsors



WOODY




odeabank



Barit Maden Türk

TRADU



To reach as many as we can,
#sparcisaaware

