

FIRST Impact Award - Team 5665

2025 - Team 5665
Team Number
5665
Team Nickname
FENERBAHÇE DOĞUS SPARC
Team Location
ISTANBUL, 34 - Türkiye
Describe the impact of the <i>FIRST</i> program on team participants within the last 3 years. Think about percentages of those graduating high school, attending college, in STEM careers, leadership skills, and serving as mentors/sponsors in <i>FIRST</i> programs.
Over 3 years, 100% of FENERBAHÇE DOĞUŞ SPARC alumni pursued higher education, surpassing Turkey's 35.8% rate. 92.3% aim for STEM careers, 89% study or work in STEM, including Cambridge research. Alumni earned 196k \$ in scholarships, spanning 29 fields in 13 countries, with 8 as NASA ASTROCAMP Educators—34.3% return as FIRST mentors and volunteers, sustaining SPARC's legacy and global impact.
Describe your community along with its unique opportunities and circumstances. Think about your geographic region, diversity of town/school, language barriers, socioeconomic barriers, and cultural expectations.
SPARC operates in Istanbul, housing 19% of Turkey's population, with members from 42 neighborhoods. While Turkey's poverty rate is 13.7%, many students and women (35% of women in Turkey are unemployed) in rural areas lack STEM access. On February 6, 2023, the earthquake leveled 6,929 neighborhoods, we supported victims with aid packages, contributing to relief for 9k+ collapsed buildings. Partnering with Fenerbahçe has recently opened new doors to ease our motto "Reaching as many as we can".
Describe the team's methods, with emphasis on the past 3 years, for spreading the <i>FIRST</i> Mission in ways that are effective, scalable, sustainable, and creative.
We created reusable content—First Journeys book, podcasts (4,844 monthly listens), 132 STEM kits, and CodingDragon game—reaching 200,000+ people monthly via Instagram, YouTube, Spotify, web, TV and radio. Partnering with NGOs, schools and municipalities, we led STEM workshops using NASA and LEGO resources. Through FIRST HOTLINE, we provided 23,000 children with STEAM education and funded teams. FIRSTExpress reached 5 container cities. Our open resources empower future innovators worldwide.
Describe your team's goals and the progress you have made towards them to fulfill <i>FIRST's</i> Vision.

Our goal: Reach many, and empower the young generation of STEM leaders. Ongoing SPARC Weekly Podcast (23 episodes, 3,468 average monthly reaches) and Journal issues shared online. Sold 3,580 STEM kits with 132 models, including hydraulic elevators and periscopes. Organized "Pause de STEM" within our school for 60 students. Reached 6,5k+ students globally through lead mentor speeches. SPARC, Turkey's first NASA Astrocamp community partner, impacted 400 youth (ages 3-18) with STEM workshops.

What impact has your team seen from your efforts described in the above question? How does your team measure impact?

Among the students we trained, 8.9% of our workshop alumni joined or continued FIRST programs (vocational training with the Japanese Embassy enabled young women's self-employment) illustrating how we bridge STEM gaps and foster innovation across Turkey. We moved an inactive FRC team to Cyprus. Also pursued FIRST teams, exemplifying a tangible pathway from introductory STEM to innovation. We measure impact using competition outcomes, mentorship logs, and surveys.

Please provide specific examples of how your team and team members act as role models within the *FIRST* community with emphasis on the past 3 years. How do you share these best practices with other teams?

With 68% female members, we promote diversity. Through FIRST Like A Girl, we empower women in FRC, while our "Her Spotlight" series shares our female members' experiences. We have started, assisted, and mentored 24 teams, published 14 resources, and distributed them at events while hosting workshops in person and online. More than a team, we are a family—creating a welcoming space where everyone grows, learns, and supports one another in the FIRST community.

Describe your team's initiatives to Assist, Mentor, and/or Start other *FIRST* teams with emphasis on activities within the past 3 years.

In the past 3 years, we started 8 FRC and 3 FTC teams, mentored 5 FRC, and assisted 12 others across Türkiye, bringing one VEX team into FRC. We stay in contact throughout the season, providing full support. We organized workshops, including KickOff for 33 teams (850 students, 150 participants), focusing on mechanics and PR. In 2023, through "Pay It Forward" we funded 5 FRC teams with \$2,806.50.

What other initiatives have you created, grown, sustained, or participated in (*FIRST* or otherwise) to help inspire young people to be science and technology leaders and innovators? What outcomes have you seen from your efforts in the past 3 years?

Our FIRST HOTLINE project reached 23k+ students in 57 cities in Turkey, offering 628 courses (8 hours each) to spread the FIRST message. Joined in a children's carnival, we engaged with 12k children over four days, inspiring them through interactive STEM activities. SPARCING YOUNG MINDS featured 120 student creations in an exhibition that reached 2k+ people. These efforts led to a 34% increase in STEM enrollment. Mentor Moments supplies role models of FRC Turkey with over 31,500 viewers.

Describe the partnerships and relationships that you've created with other organizations (teams, sponsors, educational institutions, government, philanthropic entities, etc.) and what you have accomplished together, with emphasis on the past 3 years.

Strategic partnerships drive our mission. As a FIRSTLikeAGirl ambassador, we collaborate to foster gender equity. MBA schools enhance leadership skills, while Fenerbahçe (20.3M fans nationally)

broadens youth outreach with collaborative events and educational initiatives. NASA AstroCamp® engaged 400+ students. Idea Universal scales global STEM. With FRC teams 6652, 1796, 1868, we share best practices. Üsküdar Municipality’s Kickoff united 33 teams, 850 students, strengthening community ties.

Describe your team’s efforts in the past 3 years to promote equity, diversity, and inclusion within your team, *FIRST*, and your communities.

Co-captains, male and female, lead a team with a gender gap of 6% (majority women). As a "FIRST Like a Girl" ambassador, SPARC promotes gender equity. The Women in STEAM and Women in FRC conferences hosted 461 participants. Vocational Training tackled 11.3% unemployment by training 54 women in 3D design, e-commerce. The Soap Workshop in Madagascar empowered 125 women, raising the 59.8% female workforce rate. The ongoing "HER Spotlight" series,with 16 videos, showcases STEAM's 52% gender gap.

Explain how you ensure your team and the initiatives you have created will be sustainable.

To ensure the long-term success of our initiatives, our new “Coordination and Sustainability” department prepares an annual sustainability plan. This plan includes a detailed budget, sponsorship folder, marketing strategies, and a SWOT Analysis to ensure unified progress. We adapt our projects to current challenges, as seen in our collaboration with the Mexican team 7552, where we advanced their “Theraplay” project, and they continued our “Women in STEAM” initiative, fostering mutual growth.

Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.

One area our team needs to improve its membership process after joining Fenerbahçe Sports Club. The FB Children and Youth Club sent forms to 800 people, and 203 completed them. We needed to onboard 100 candidates during the season but couldn’t apply our usual summer-long selection process. Instead, we will invite all applicants who completed the form to regional events to introduce them to FRC and SPARC, then implement a structured selection process next season to integrate interested members.

Briefly describe other matters of interest to the *FIRST* Judges, including items that may not fit into the above topics. The judges are interested in learning about aspects of your team that may be unique, particularly noteworthy, or had a large impact.

DRAGON TALES is a five-book STEM series introducing FRC, pollution, Houston Champs, and NASA Astrocamp, open-source with 100 Braille copies for 17 schools, benefiting 560 visually impaired students, 310 teachers. At PAYASTEM, we reached 5761 earthquake-affected children in Hatay through STEM4YOUTH, proving STEM’s resilience.Partnering with Hayata Sarıl Lokantası, we aided 136 homeless individuals. SPARCSTAND provides wheelchairs and shelters for disabled animals—impacting lives beyond robotics.

Judge Feedback

We have already endeavored to make a change and reach as many people as we can with our initiatives, but since there is always room to improve, can you pinpoint specific areas in our projects where you see opportunities for further enhancement?

An area the team has an opportunity to improve.

Something that really impressed the judges.

Essay

What began in 2015 as a small team of 18 students in Istanbul has grown into a community of 57 students. At FENERBAHÇE DOĞUŞ SPARC, we're more than a robotics team—we're a movement for innovation, boundary-pushing, and inspiration. Our motto "Reaching as many as we can" defines our VISION. In FIRST's collaborative culture, we believe unity spurs growth. Though we started small, we now shape the future, expanding our impact with every person we reach. With 87+ million people, Türkiye faces economic and educational disparities. Istanbul, home to 19% of the population across 81 cities, highlights gaps between developed and underserved areas. Education access is critical: 14.1% of Türkiye's underage population (612,814 children) are out of school, mostly in rural regions. Worldwide, 19% of children face the same issue. At SPARC, we transform inequalities into opportunities. OUR MISSION is to spread STEM across Türkiye—not just Istanbul—while sharing FIRST's spirit nationwide. Aligned with FIRST's MISSION, we see robotics education as more than competition: it's about cultivating future leaders who drive real change. Recognizing educational challenges worldwide, we also expand globally, promoting STEM and FIRST values. Through impactful COLLABORATION, we tackle local, global obstacles.

SPREADING FIRST From 2009 to 2019, over half of Turkish FRC teams competing abroad won regional awards, with one-third reaching the Championship. Post-pandemic and economic struggles, in 2022, 54% won awards, but only 8% advanced; by 2024, 21% qualified—still below pre-pandemic levels. For SPARC, these numbers signal a call to action. We mentor and collaborate to rebuild a thriving, well-supported community.

Building on this vision, we created FIRST HOTLINE for consistent follow-up. FIRST HOTLINE brings FIRST and structured STEM to 57 cities and 5 international locations, reaching 23k+ students through 628 structured 8-hour courses over 2 years. We blend STEM training with FIRST outreach, establishing networks of mentors and sponsors. As students gain skills, we guide them toward forming teams, expanding FIRST culture.

We ran a major FRC KICKOFF in Üsküdar for the FIRSTDIVE season with Team 8159, welcoming 33 teams, 850 competitors, 150 attendees. Besides the game reveal, we provided strategy, marketing, and sales training to help teams excel in both robotics and business.

STARTED: 2020: TEAM 7552;2021: TEAM 8785;2022-2023: TEAM 9041, 9159, 8084;2023-2024: TEAM 9174, FTC TEAMS 25165, 25166, 24713; 2024-2025: TEAM 10353, 10321, 10342, 10471

MENTORED: 2020: TEAM 7552; 2024-2025: TEAM 10353, 10321, 10471, 9185

ASSISTED: 2020: TEAMS 7552, 7285, 8159, 6064, 6415, 4972, 6014, 6985, 6435;2023-2024: TEAMS 7748, 6038, 9565;2024-2025: TEAMS 7611, 10353, 10321, 10045, 9185, 10043, 8393

Through "PAY IT FORWARD" we awarded 5 grants in 2023-2024, providing funds and resources so teams could bring their ideas to life.

In the 3rd and 4th seasons of MENTOR MOMENTS, which reached 31.5k people, we interviewed

mentors from various teams via social media to encourage FIRST alumni to become mentors and provide a more authentic atmosphere for newcomers.

MAKING STEM ACCESSIBLE We deliver hands-on STEM to underserved, disabled, disaster-affected communities. By blending STEM with storytelling, cognitive development, and real-world issues, we ensure every child can envision themselves in STEM.

In 2024, we became Türkiye's first NASA ASTROCAMP® Community Partner, sparking interest in space and STEM. To address the lack of hands-on space education, we provided NASA resources to 400+ students (ages 3-18) at an Istanbul preschool and PAYASTEM in Hatay, helping earthquake-affected youth explore rocketry, robotics, planetary science.

At PAYASTEM, Türkiye's largest STEM center which we established in 2016, we developed STEM4YOUTH for earthquake-impacted children in Hatay. Covering SCIENTIFIC INQUIRY, MATHEMATICAL MODELING, ROBOTICS & CODING, CYBERSECURITY, it has benefited 5,761 students over 3 years, showing STEM can flourish under challenging conditions.

Many underserved students lack workshops and mentors. Our mobile lab, SPARCEXPRESS, served 5 container cities and rural schools in Hatay's earthquake-affected areas, delivering NASA materials and hands-on STEM kits directly to children's doors.

At SPARCESSIBLE in Mutluluğun Adresi, 54 individuals (ages 10-52) with intellectual disabilities engaged in NASA coloring activities. With an Interact Club, we led 7-week LEGO sessions at Lape Mental Hospital for 34 participants (ages 50-70). In both, we used STEMTOPUS—an interactive, voice-command octopus teaching FIRST values and STEM—to make learning fun and accessible.

We created DRAGON TALES, an open-source 5-book series. We distributed 100 Braille copies to 17 state-run schools via the Turkish Association for the Visually Impaired, reaching 560 visually impaired students and 310 teachers—ensuring everyone can dream of STEM.

We designed CODING DRAGON, letting players use coding to clear ocean pollution, optimize solutions, and integrate recycling. At an Ataşehir Municipality event, children (ages 7-12) played it, engaging 12k+ parents and kids in coding and environmental talks.

Through SPARC-ING YOUNG MINDS, 124 students studied underwater pollution, built submarine robot concepts showcased at Sainte Pulchérie French High School. At our formal school, PAUSE DE STEM offered 3 workshops each for 60 participants (20 per group).

We show STEM need not be limited to privileged or traditional settings.

EQUITY, DIVERSITY, INCLUSION STEM fields in Türkiye remain male-dominated: only 34.7% of STEM graduates are women. Türkiye ranks 124th of 146 in women's economic participation (WEF 2023).

As a FIRSTLikeAGirl ambassador we take pride in fostering inclusivity for women in STEM. To expand our impact globally, we held an international panel with FRC teams from Brazil (9305, 7567) and the US (1023), attracting 3844 viewers. This panel was also featured in Women in FRC. We launched the 2nd season of HER SPOTLIGHT revealing the gender disparities in Türkiye reaching 6443 viewers. In the

first season (reached 11504 viewers) we collaborated with Team 1796. Our series was continued by Team 3161 from Canada (3284 viewers).

We originally launched 5-conferences as HEAR MY VOICE, which laid the foundation for our WOMEN IN STEAM initiative last year. Building on this, we introduced WOMEN IN FRC this season as an open symposium, bringing together women captains and mentors from 6 Turkish FRC teams. To ensure the knowledge and insights shared reached a broader audience, we later compiled a booklet.

At PAYASTEM, in partnership with the Japanese Embassy, we provided vocational training to 54 women in 3D printing, laser cutting, CNC, online marketing—7 achieved financial independence.

We also believe feminine hygiene products should be free, entrusted by TEAM 1868. We plan to supply them at Istanbul and Bosphorus Regionals for the 2025 season, partnering with nonprofits to normalize access, push for an equitable future.

By publishing our GENDER EQUITY ACTION PLAN, we promote transparency and inclusive standards.

We aim to transform cultural norms so everyone, regardless of gender, can excel.

OPEN SOURCE Without open-source resources, FIRST and STEM lose momentum, slowing collaboration and innovation. We counter this by developing open-source materials to share knowledge and empower future innovators. THE FIRST JOURNEYS BOOK, PODCAST preserve FRC mentors' experiences in 7 languages and 4 narrations. SPARC WEEKLY PODCAST, JOURNAL, with AI narration and 23+ issues, reached 4844 listeners, spreading FRC culture and technical insight.

We also compiled a 132-piece STEM KIT CATALOG, selling 3580 kits in 3 years to offer affordable STEM exploration. On our website, we provide 2 PODCAST SERIES in English and French, a STEM MAGAZINE, an ONLINE GAME, a 5-BOOK COLLECTION, FIRST JOURNEYS BOOK (7 languages), 12 MANUALS, and 8 PROJECT GUIDES.

Our social media is an OPEN-SOURCE platform, openly sharing knowledge for all.

We plan to offer FIRSTAID at 2 regionals in 2025, providing critical equipment and human support so teams can focus on innovation.

COMMUNITY OUTREACH For us, FIRST is about social impact—boosting education, healthcare, sustainability, equity. This season, we partnered with TEAM 6652 (Mexico) to exchange SUSTAINABILITY projects. We recreated their “Theraplay” a 3D-printed modular therapy tool for musculoskeletal, stroke, and thrombosis treatments, while they advanced our Women in STEAM initiative.

Healthcare innovation is key to our work. We assisted TEAM 8393 (USA) with THE BRAINSTEM: CVI, which helps children with Cortical Visual Impairment recognize objects by salient features. We contributed to a 400+ image database, presented at the Innovations in CVI Medical Conference.

We created SPARCSTAND—custom wheelchairs for disabled animals. After visiting a farm in Çatalca/Istanbul with 200+ animals, we built 2 prototypes under a vet's guidance. Then, in collaboration

with Kurtaran Ev and Haçiko, we're constructing 8 weatherproof shelters for stray animals.

Istanbul has over 10k homeless people; with Hayata Sarıl Lokantası, we served 136 individuals in 2 sessions, providing socks.

REACHED This season, we begin a new chapter as Fenerbahçe Doğuş SPARC. As part of this transition, we are increasing our visibility, including at least 2 TV appearances by March 1st. We now have 66,874 monthly social media interactions, 500+ website clicks, and our impact grows daily. As part of FIRST's global movement, in the last 3 years we've reached 2,671,314 people, transforming lives and sharing hope. All data mentioned are updated as of 13 February 2025. ;

