#SPARCISAWARE

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HOW TO MAKE A PROJECT?

EXPLANATORY HANDBOOK

#sparcisaware

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These steps include the essential elements that will help the project to be carried out successfully. Each stage addresses different aspects of the project, providing strategic information to help you achieve your goals.

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Who is SPARC?

We started our journey as SPARC in 2015. We consist of students from various schools, not just Sainte Pulchérie students, which allows us to bring different perspectives to our team and develop it further. We are more than just a team; we are like a family. First and foremost, we are all friends, everyone values each other's thoughts and listens to one another. During our working process, we always strive to be equal, free, and ensure that everyone feels comfortable.

As team members, we participate in workshops and training to grow and learn. We constantly strive to learn new things and improve ourselves. We follow events happening in our country, the world, and our surroundings, and aim to design projects that align with these events as much as possible to spread awareness.

We value science and technology as much as we value work in other fields. With the projects we produce, the STEAM education we provide, the workshops we organize, and the training we receive, we aim to improve ourselves in every field and reach as many people as possible. We work to create new robotics teams in different cities and countries, spreading science and technology and becoming a source of inspiration.

SPARC continues its various efforts to spread science and technology with the ideal of "reaching as many people as possible," while constantly improving and learning new things.

Foreword

As a team that has achieved success in the Impact area in the past, we wanted to provide an open resource that could help other FRC teams and inspire them.

We noticed that the accessibility of social projects in Turkey has increased. As SPARC 5665, we aimed to be a guide in this regard and advanced our work under the motto of reaching as many people as possible.

Since our establishment in 2015, we have learned from both the positives and negatives of our projects, and with the feedback we received from our other manual, "Impact Analysis," we aimed to organize and share the data and information we obtained for the benefit of other teams.
Always and everywhere, with our #sparcisaware movement, we strive to reach every living being we can and make a difference in the world.

Some sections are specifically exemplified with our projects. Every problem, solution, and idea you encounter while reading this manual is entirely derived from real experiences.

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FORMATION OF THE PROJECT IDEA

1

SEEKING A SOLUTION TO A PROBLEM

At the beginning of the project, you may be seeking a solution to a problem. This problem could be a difficulty encountered in daily life, a disaster, limited resources, or environmental issues.

2

SOURCES OF INSPIRATION

Social responsibility projects conducted outside the field of robotics, projects carried out in collaboration with municipalities, projects conducted by friends inside or outside the school, and the integration of existing projects from abroad into Turkey can be examples of sources of inspiration.

3

PROJECT-FOCUSED SPONSORS

Project-focused sponsors can inspire: Sponsors who are interested in the project's topic or have previously conducted projects related to the project's topic can provide new ideas or resources for the development of your project.

4

CONTRIBUTION OF TEAM MEMBERS

- Team members can contribute to the development of the project with their ideas. Brainstorming or discussions within the team can help new and creative ideas emerge.

- The knowledge and skills of team members can also influence the direction of the project: Each team member may have a different area of expertise or experience, which can play an important role in determining the scope or approach of the project.

CREATING THE PROJECT DRAFT AND R&D PROCESS

Creating the project draft and the R&D process are critical stages that require careful planning and collaboration.

Creating the Project Draft

The foundation of every successful project is laid with solid planning and management processes. Our projects are developed and implemented with a planning and management approach based on these principles. The project draft outlines the main points and basic steps of the project, aiming to emphasize the project's objectives and importance. The success of our projects begins with setting clear goals from the start and developing appropriate strategies. Therefore, we adopt an approach that meticulously follows the basic steps in our projects.

R&D Process

The R&D process is an important step in developing innovative solutions and supporting technological advancement. This process leverages existing knowledge to bring forth new ideas, products, and technologies. Our projects aim to guide the research and development process with specific steps by adopting this innovative approach.

4 STEPS TO CREATING THE PROJECT DRAFT

4

Resource Planning

The resources to be used in the project (human resources, financial resources, materials, equipment, etc.) should be identified and how these resources will be procured should be planned.

3

Defining the Project Scope and Boundaries

The scope and boundaries of the project should be defined. This helps clarify what the project will and will not cover.

2

Need Analysis

What needs the project addresses as to determine the development of a comprehensive need analysis should be carried out. This analysis shows that the project target audience, helps to identify the current situation and needs.

1

Setting Project Goals

Purpose of the project and objectives should be clearly defined. These goals are specific, measurable and achievable, relevant and SMART method (Specific, Measurable, Achievable, Relevant, Time based) connected as time in accordance with the concept should be.

5 POINTS OF THE R&D PROCESS

1

Literature Review (Reviewing Existing Knowledge)

Existing literature and studies related to the project should be reviewed. This ensures that the project is innovative and based on existing knowledge.

2

Research in the Engineering Field (Technological and Scientific)

Detailed research should be conducted on the technological and scientific aspects of the project. This research helps determine the project's feasibility and innovative aspects.

3

Prototype Development

Initial drafts and prototypes of the project should be developed. These prototypes can be used to test the project's feasibility.

4

Testing and Evaluation

The developed prototypes and solutions should be tested and evaluated according to predetermined criteria. This stage helps identify potential shortcomings and areas for improvement.

5

Feedback and Improvement

Based on the test and evaluation results, areas for improvement should be identified, and necessary adjustments should be made. Feedback from contributors should also be considered at this stage.

People Involved in the Project

Any project must have the right resources and people to progress successfully. Therefore, the selection of people involved in the project is an important factor affecting the project's success.

1. Team Members:
- Team members with expertise in various fields should be included in the project development process. These members may be involved in engineering, software, design, finance, communication, etc.

2. Advisors and Mentors:
- Experienced advisors and mentors should be available to guide the project. These individuals provide important guidance during the project development process.

3. Collaborations and Inter-team Joint Efforts:
- In addition to programming within the team, we can spread the impact of our projects to a larger and more permanent area through collaborations. We create great projects with our partners through communication and motivation

- Some of our business partners include:
  - Payastem
  - Idea Universal
  - NASA
  - Robin Robotics 8263
  - FMWill Robotics 7576
  - Kaiser Robotics 6989

Integration of Our First Steps Project into the 2nd Section:

Creating the Project Draft

Setting Project Goals:
We started with the question of how to make our FRC and First presentations more fun and took steps to create a platform where children can learn while having fun. The main goal of our project is to instill the 7 First principles in children.

Needs Analysis:
We identified our target audience as kindergarten-level children. We realized that some team members involved in the project needed software knowledge for the game's design and coding. As a result, we provided the necessary software training to team members who lacked sufficient knowledge.

Defining the Project Scope and Boundaries:
We aimed for our "First Steps" project to be a new way of introducing First and FRC. Our game includes stages based on the 7 core principles of First: discovery, innovation, impact, inclusion, teamwork, and fun.

Resource Planning:
We needed to make our application available on platforms like the App Store and Google Play. We identified the necessary resources for the licensing process and applied for a license. Since "First Steps" is an application, there were no necessary materials. The licensing phase was divided into two main resources for this project: financial resources and promoting the application to children.

R&D Process

Literature Review (Reviewing Existing Knowledge):
We conducted research on educational materials, game design, and learning processes in relevant sources.

Research in the Engineering Field (Technological and Scientific):
Our team conducted the necessary scientific and technological research for the game's technical infrastructure. We worked on which platform to use, graphic design, and user interface to ensure the game appeals to its target audience.

Prototype Development:
The game's prototype was developed by our design and software team. We created a prototype for the game mechanics, graphics, sound effects, and user interface. At this stage, we tested the game's basic structure and functionality.

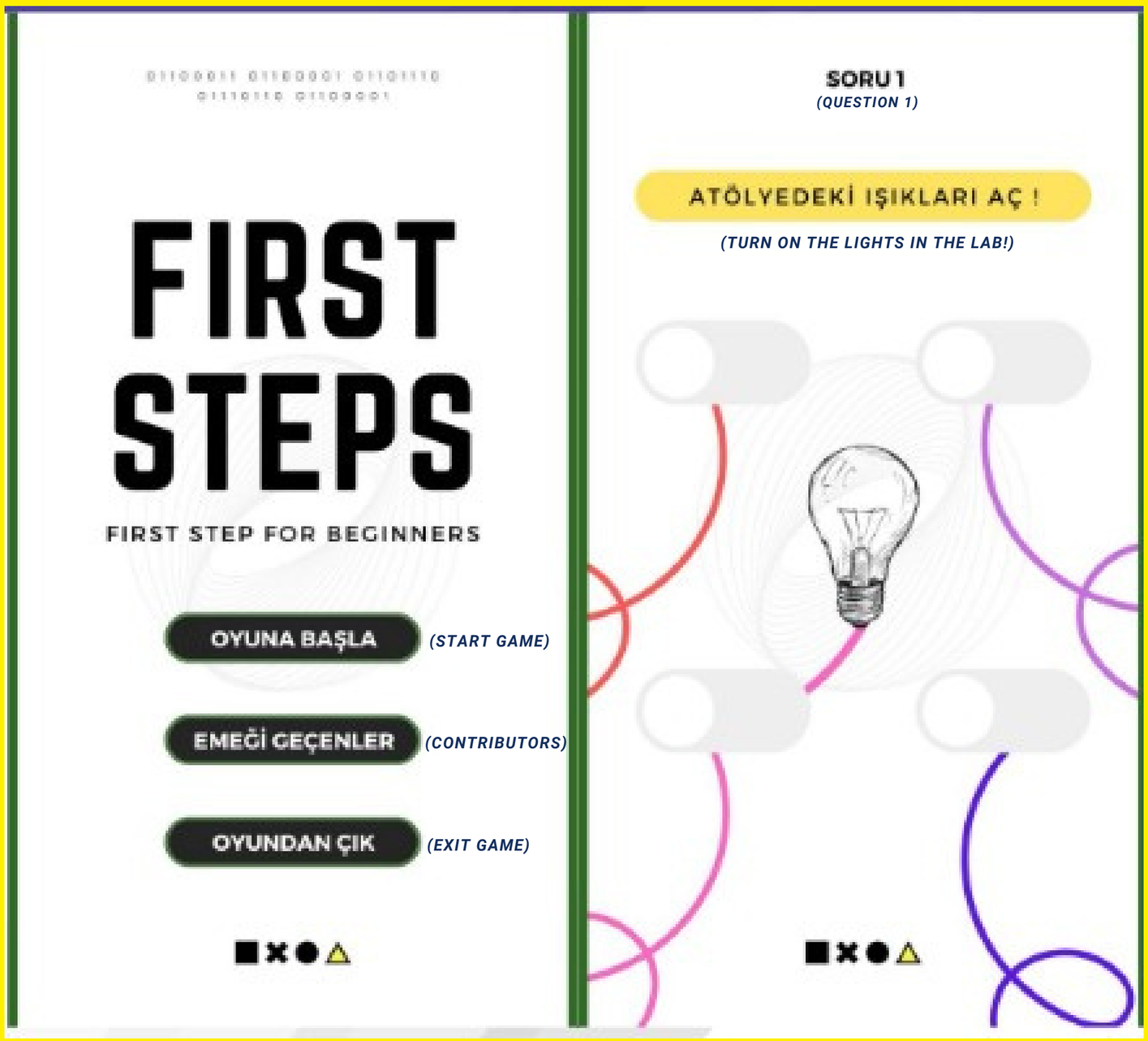
Testing and Evaluation:
The prototype was tested by selected groups. User feedback was collected, and the game's performance and usability were evaluated.

Feedback and Improvement:
Based on the test results, necessary corrections were made, and the final version of the game was created based on feedback. The final version of the game was prepared for release, uploaded to platforms, and launched.

People Involved in the Project

Team Members:
The software, design, and PR teams were actively involved in the project process. Each team came together with members suitable for scenario, software, and coding in their respective fields.

Advisors and Mentors:
Advisors and mentors guided the team during the project process, provided technical support, and contributed to project management. The support of individuals with expertise in game design and technical infrastructure was particularly valuable.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FIRST
STEPS
FIRST STEP FOR BEGINNERS
OYUNA BAŞLA
(START GAME)
EMEĞİ GEÇENLER
(CONTRIBUTORS)
OYUNDAN ÇIK
(EXIT GAME)
SORU 1
(QUESTION 1)
ATÖLYEDEKİ IŞIKLARI AÇ !
(TURN ON THE LIGHTS IN THE LAB!)

FIRSTSTEPS
Google Play
FirstSteps
Sparc#5665
0+
Téléchargements
PEGI 3
Installer
Ajouter à la liste de souhaits
FIRST STEPS
Jeux
Applications
Films
Livres
Enfants
OYUNUMUZ ÇIKTI!
(OUR GAME IS OUT!)!

Finding Sponsors

Project-Focused Sponsorship

We receive project-focused sponsorships to finance specific projects or events. These sponsorships are specifically allocated for the project's needs. When seeking project-focused sponsors, we clearly explain the details, goals, expected outcomes, and positive impact on society to potential sponsors. We also emphasize how the project aligns with the sponsor's brand image and how it will provide visibility. For example, thematic sponsors covered the transportation and accommodation costs for our girls' FLL team SPARC to participate in the Regional in Ankara. These sponsors aimed to increase the rate of women working in the STEAM field.

Finding sponsors after the R&D phase is a critical step to increase the project's sustainability and chances of success. These sponsors can provide direct or indirect support based on their preferences. Direct sponsors can provide funding, equipment, and mentorship, while indirect sponsors can offer training, collaboration, and research support. Participating in sectoral events and funds can provide a solution for finding sponsors, and active use of social media can help spread your project to a wider audience and introduce it to the media.

At the same time, an effective analysis should be conducted for the contributions your supporters can make to the project. In selecting suitable sponsors for the project, every detail from identifying the target audience to measuring problems should be planned in advance, and potential sponsors should be selected accordingly.

Additionally, new expenses and needs that may arise during the project's execution can cause certain difficulties in the project's progress. To prevent these as much as possible, it is very important to make a budget plan both for the team in general and for the project specifically.

Problems and Finding Solutions to Problems

This section explains the possible problems teams may encounter during social responsibility and awareness projects and how to find solutions to these problems. Challenges in projects can arise in various areas, from the planning phase to the implementation process. For example, problems such as lack of access to sufficient resources during the planning phase, communication deficiencies within the team, and coordination issues may be encountered, while time management, budget constraints, and technical issues may arise during the implementation process.

Additionally, cultural differences and misunderstandings may arise when interacting with the community. Identifying these problems and developing solutions is critical for the success of projects. Regular meetings and effective communication tools can be used to address communication deficiencies. Sponsorships and donation campaigns can be organized to overcome resource shortages, and participants can be involved in projects. A detailed timeline can be created for more effective time management, and each stage can be regularly monitored. For technical issues, preparations can be made in advance, backup plans can be created, and necessary training can be provided.

Thus, we aim to make projects more sustainable and effective. Addressing problems one by one and adopting a solution-oriented approach will increase the success of teams' projects and their contribution to society.

Some Problems SPARC Faced in Projects in Different Fields and Solutions

Seed Ball Project

Our seed ball project was implemented to support the vegetation damaged in the Mediterranean fires. In this project, we conducted 4 sessions, and our team members, in collaboration with FRC teams we agreed with in the disaster area, threw seed balls made from fertilizer suitable for the region's soil type using drones.

The main problem we faced in this project was that the seeds we threw into the soil did not fully match the soil type in the disaster area, causing the seeds to fail to achieve the intended purpose.

To successfully complete the project, we developed the seeds ourselves in our workshop, blending them with fertilizers suitable for the fire-affected area to create seed balls.

Hear Me, Know Me Project

Our Hear Me, Know Me project consists of 5 sessions of face-to-face and online conferences aimed at breaking taboos in society regardless of age, race, or gender. In these conferences, our mission is to remind everyone that they can feel a sense of belonging, have a voice, and a place in society as individuals.

In the third of these conferences, the LGBTQIA+ session, we received opposing opinions from certain segments of society and encountered users who made comments that would disturb others in these conferences aimed at liberating people.

After receiving feedback from our participants, we started to prioritize confidentiality. In accordance with KVKK forms, we anonymized the information we received and decided to approve conference participants after they passed our evaluations conducted via Google Forms.

Seed Ball Project

** HEAR ME, KNOW ME!*
3rd Conference
With Psychologist Hazal Yılmaz
"LGBTQ+ BULLYING, DISCRIMINATION, SEXUAL ORIENTATION AWARENESS"

Compost Project in Adana

Adana Compost was a project consisting of a 45-person team and 3 sessions. In this project, we went to certain markets in the Adana region, separated foreign materials (string, caps, rubber, plastic bags, etc.) from the waste left there, and sent them to relevant units for fertilizer production. We decided to work on this region after a team member from Adana told us about the difficulties he faced in his hometown.

Another reason was that Adana is an earthquake zone, and due to the disaster, farmers in the region could not meet their fertilizer needs. We contacted the municipalities participating in this application to select the most suitable location.

Another obstacle we faced was delivering the fertilizer we obtained from biodegradable waste to our farmers. We collaborated with the Yüreğir Municipality to calculate the amount of fertilizer needed by the farmers in the region, find their locations more easily, and make 10 tons of fertilizer more accessible.

Life Unit Project

The Life Unit was one of our most noteworthy projects in terms of the problems we encountered. Establishing units in earthquake zones to heal the wounds of the February 6 earthquake was challenging due to the difficulty of financing and transportation to the regions, as well as the inability of team members to maintain constant communication with Southeastern Anatolia.

During this process, we received support from Payastem, Turkey's largest STEM center, which we established in Payas, Hatay, in 2016. Idea Universal represented SPARC in the earthquake zone, participating in field studies and collecting data.

The financing was based on multiple sponsors. Since preparing one unit cost $12,000, it was not feasible for a robotics team to cover this. During this process, we held necessary meetings with foundations and companies that could easily reach the region and provide financial support, and supported the establishment of two units.

Adana Compost Project

SPARC 5665

Yaşam Ünitesi *

günlük

10.000 L

içme suyu

ulaşılan

500.000

kişi

**** Life Unit***
daily
10,000 L
drinking water
reached
500,000
people

Soap Workshop Project

In our Soap Workshop project, we identified regions in Tanzania and Madagascar suffering from hygiene deficiencies and provided soap production training to housewives in the region. This 5-session, 1-week training's main problem was how and based on what criteria to select participants and how to communicate with them.

We discussed these issues with Idea Universal, with whom we collaborated on the project, and after a thorough discussion, we left the participant selection to Idea Universal, as they were familiar with the region due to other projects. Since it was impossible for our team members to go to Tanzania and Madagascar, we were involved in the R&D and sponsor-finding parts of the project and benefited from Idea Universal's field studies and data collection.

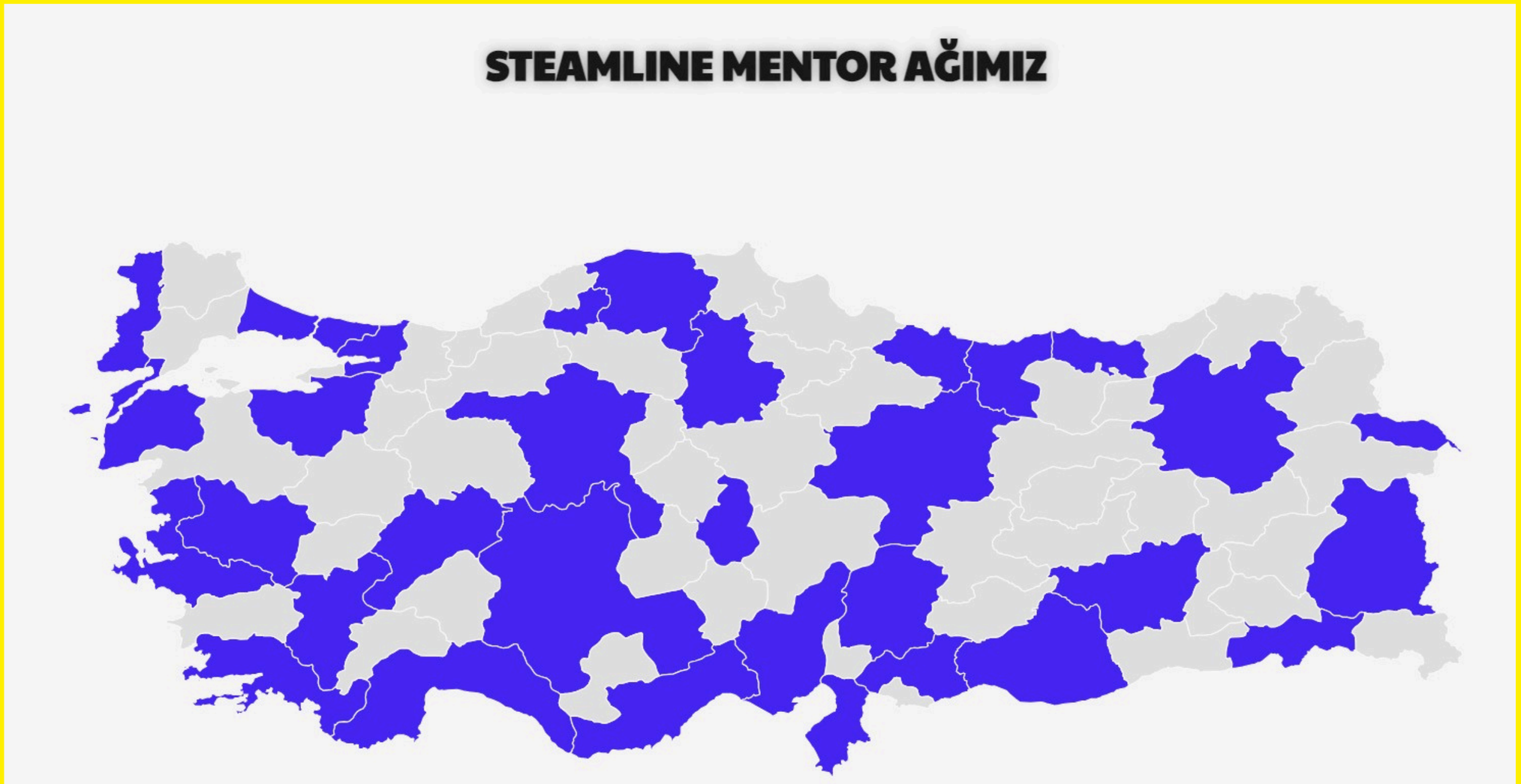
SteamLine Mentor Network

SteamLine Turkey was the first and only mentor transportation network worldwide. Its goal was to increase both national and international STEAM culture interaction and create a common goal within the framework of the training it provided.

Selecting a mentor from each city was a challenging process. Because the mentors responsible for the cities needed to be as committed to this sector as we were. At the same time, it was mandatory for us to stay in communication with our mentors at certain stages. For mentor selections, we held meetings either face-to-face or online based on transportation possibilities and carefully selected mentors who either applied to us or whom we offered.

Another problem we faced was the communication issue mentioned in the first paragraph. Especially after selecting mentors responsible for abroad, maintaining contact was difficult due to time differences and the mentors' personal lives. Therefore, we added mentors to our team who would meet our standards as much as possible and be passionate about this work. For mentors whose transportation was disrupted, we either reached a common opinion and made a new mentor selection or continued together and created a new program.

Soap Workshop Project



Current SteamLine Turkey Map (11.06.2024)

Project Sustainability

As the SPARC 5665 team, it is very important for us to plan, implement, and then ensure the sustainability of our existing projects. However, our main goal in sustainability is to move as far away as possible from the perspective of "continuing ongoing projects in the same way." Rather than continuing our projects as they are, we aim to develop our projects with the help of the feedback we receive and adapt them to current conditions and needs without deviating from their purpose.

The feedback we received from our Africa project, which we have been carrying out since 2015, led us to the idea phase of the soap workshop project, which has the same goal. Similarly, thanks to the success of our "Hear Me, Know Me" project, which consists of 6 online conferences, we were able to hold the "Women In STEAM" conference face-to-face at "Tech Istanbul" this year.

For us, the success of our projects comes before their continuity. Therefore, after analyzing why less successful projects were less successful, we focus our attention on projects with higher sustainability potential.

Creating Impact

Behind every project we do, there is social responsibility, as well as the desire for the impact we leave to be permanent on society. The motivation behind these projects is to appeal to people from all walks of life and leave a lasting impact on the world. By collaborating with international institutions like NASA and Idea Universal, we extend a helping hand to people all over the world and try to minimize the problems caused by geographical boundaries. Throughout this process, instead of being rewarded for our efforts, we aim to leave a lasting impact and discover our own potential.

We can classify and statistically analyze the impact we leave on society with these projects in a more measurable way. Based on these statistics, we determine the future stages of the project and ensure that the project continues sustainably by constantly making additions instead of ending. You can also achieve success in the presentation and promotion stages of your projects using this method.

Our goal in supporting other teams is to leave a lasting impact in the FIRST community by sharing our experiences with them and increasing the efficiency everyone gains from FIRST programs. Thus, together we can reach more people and increase our collective impact.

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