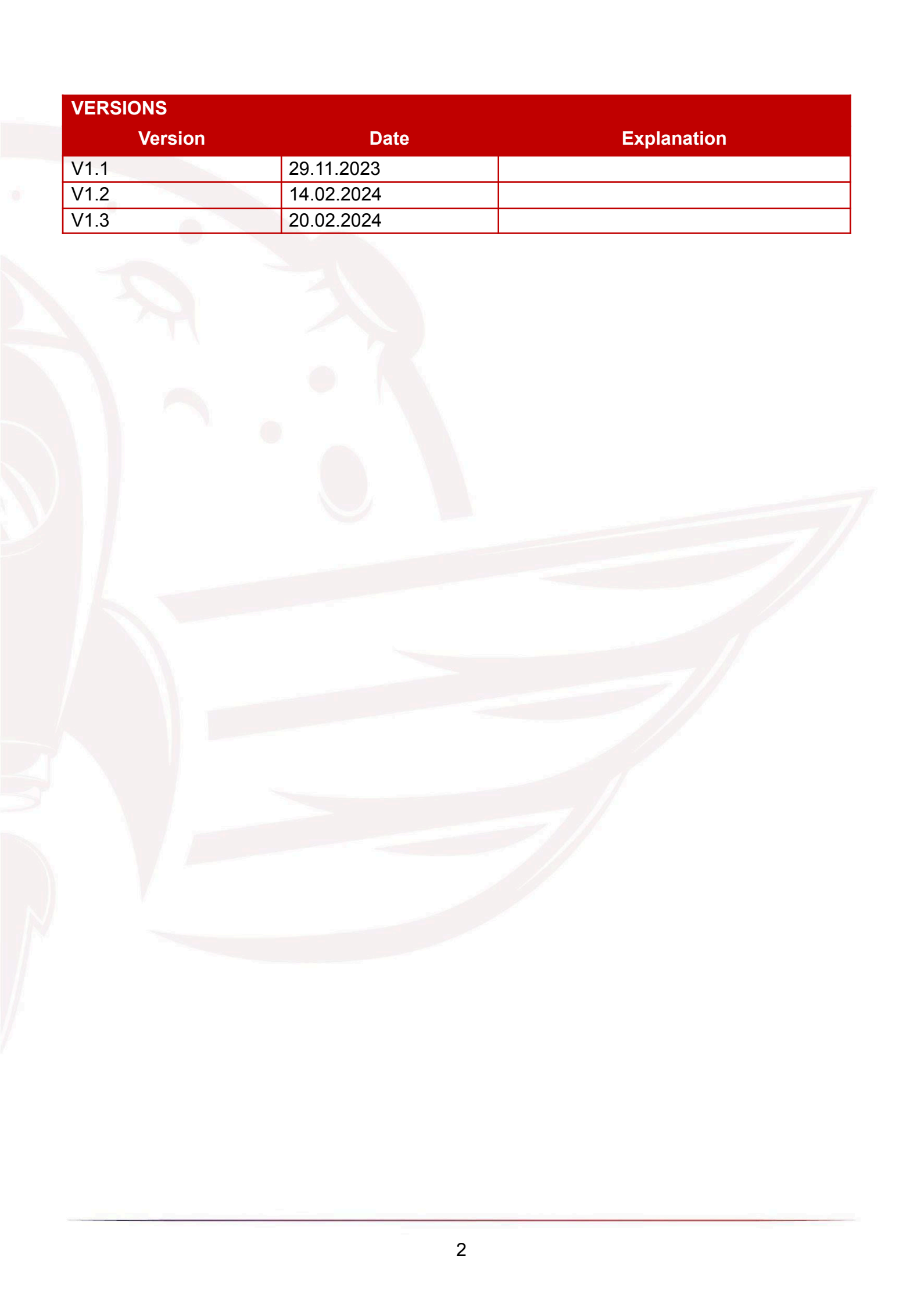




SMART TRANSPORTATION COMPETITION SPECIFICATION 2024



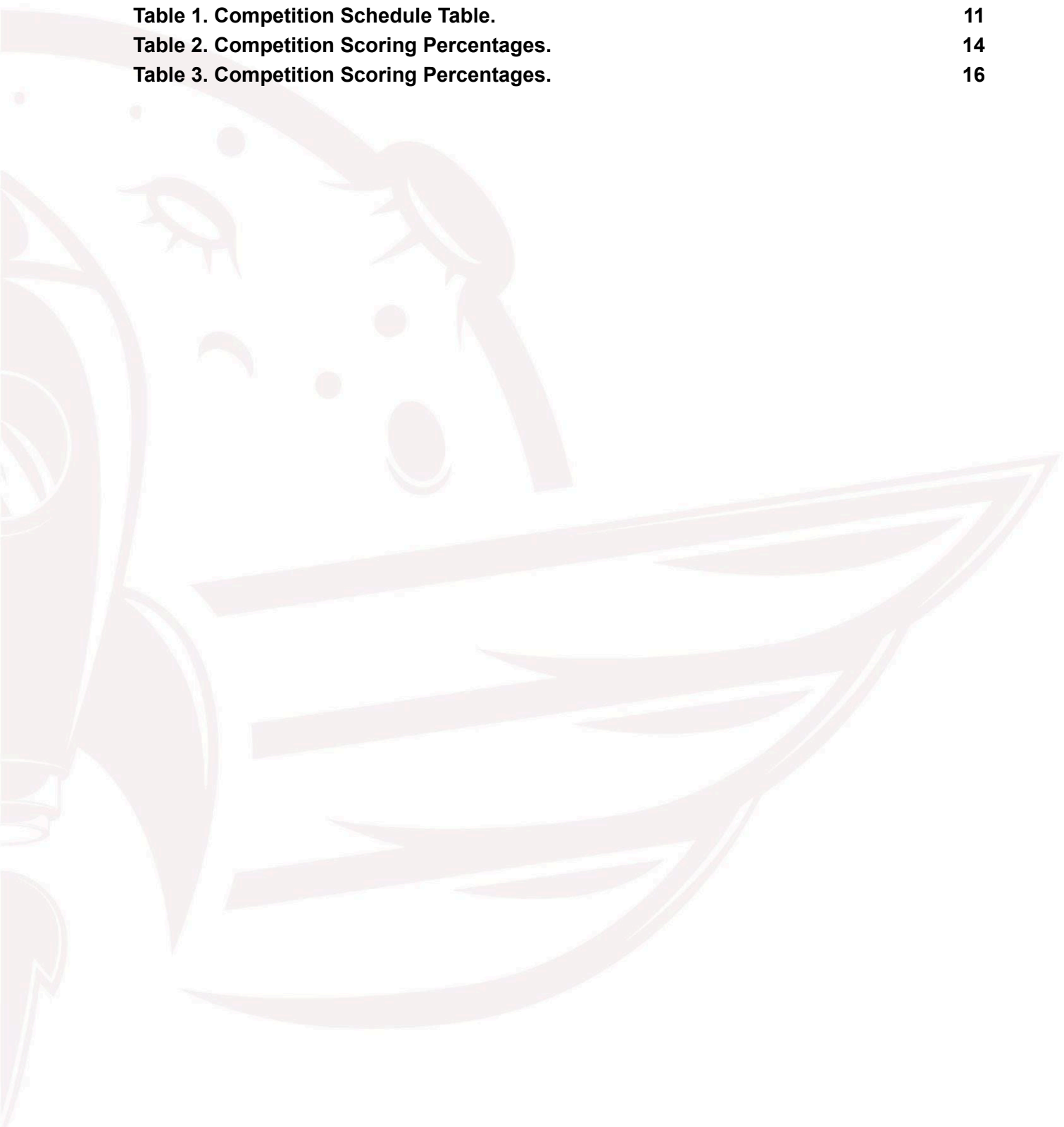
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1. COMPETITION OBJECTIVE

The competition aims to integrate individuals' sense of social responsibility with their technological knowledge and expertise, leading them to create projects that benefit society. The focus of feasible projects involving innovation and technological advancements in every aspect of human life includes utility, societal benefit, and convenience. In this context, projects will be evaluated and implemented. Simultaneously, the primary goal is to address problems from technological and economic perspectives, presenting solutions that simplify life by implementing technologies using original and national resources.

The rapid development seen in communication and information technologies in recent years is also reflected in transportation systems. Generally referred to as "Smart Transportation," the goal of these applications is to utilize technological advancements for the more efficient and secure planning, management, and analysis of transportation and traffic. Smart Transportation can be defined as transportation solutions aimed at reducing the burden of thinking or decision-making on individuals. This often involves designing systems based on the use of electronic and computer technologies for regulating and directing transportation, including the development of new smart transportation systems.

2. COMPETITION SCOPE

The escalating demand for technological infrastructure, secure transportation, and innovative solutions that enhance daily life underscores the necessity for safer, faster, easier, and more economical transportation. This demand is particularly evident in intelligent transportation applications for road, sea, and air transport. The concepts of "mobility" and "sustainable transportation" are increasingly pervasive in our lives. To meet these objectives, the critical importance of integrating Smart Transportation into transportation systems, leveraging high technology, cannot be overstated.

Considering the future of transportation technologies, TEKNOFEST, as a competition, organizes the Smart Transportation Competition to contribute to the development of a vision for investing in and establishing a productive unit in this field. The perspective developed through TEKNOFEST will evaluate Smart Transportation applications within the competition scope, taking into account the progress in science, industry, and technology fields in our country and worldwide.

Within the competition framework, project ideas are sought from students that address the production of national products, aligning with the reality of increasing production of national products in the fields of science, industry, and technology. These ideas should focus on alternative transportation vehicles and systems that provide solutions, either existing or non-existent, and offer a new perspective on national transportation technologies.

The Smart Transportation Competition aims to reduce travel times, increase traffic safety, enhance mobility, achieve energy efficiency, and develop and present environmentally friendly projects. Teams are expected to conduct studies that increase mobility and safety in transportation while reducing environmental impacts.

In this context, participants are encouraged to conduct projects on the suggested topics below:

- Development of innovative mobility solutions through an integrated and smart transportation approach.
- Integrated smart transportation solutions with the aviation sector.
- Development of sustainable and ecological practices.
- Secure transportation solutions for airports.
- Implementation of smart payment systems and enhanced payment experiences at parking lots, terminal shopping, and payment points.
- Digital applications for enhancing mobility experiences.
- Creation of projects to simplify, streamline, and improve the efficiency of terminal movements, both internally and externally.
- Addressing and providing solutions for the increased impact of the new normal (pandemic) on terminal movements.
- Integration of solutions and mobile applications for individuals with special needs at airports.
- Project development in areas such as baggage systems, control centers, and traffic control.
- Secure transportation solutions.
- Implementation of smart payment systems/pricing systems.
- Solutions for digital travel and seamless mobility experiences.
- Technological and service needs to meet transportation requirements.
- Redesigning city transportation with innovative solutions for environmental sustainability.

- Creation of end-to-end interconnected and integrated transportation solutions.
- Establishment of the necessary infrastructure for the widespread electrification of transportation.
- Development of projects to simplify, streamline, and enhance mobility within city limits.
- Improvement of real-time traffic monitoring and methods using IoT-based systems.
- Development of applications contributing to safe mobility methods, including intelligent driving support systems.
- Projects focusing on these areas, emphasizing improvement and efficiency enhancement, will be the main focus of the competition.

Additionally, projects related to smart transportation technologies outside the suggested topics will also be considered within the scope of the competition.

3. COMPETITION PARTICIPATION CONDITIONS

- The competition is open to all primary, middle school, high school (including Open Education), university students (Bachelor's, Associate, Master's, PhD, and Open Education), and graduates studying in Türkiye and abroad.
- Teams at the primary, middle, and high school levels are required to have an advisor. The advisor must submit a document, signed wet, along with the Project Detail Report, affirming their commitment to fulfilling advisory duties.
- University-level teams and above are not obligated to have an advisor.
- Advisors are required to support the team until the final stage and commit to being present with the team during the final stage. It is mandatory for advisors of primary, middle, and high school level teams with projects that reach the final stage to be present in the field.
- Primary, middle, and high school level teams must apply through their advisors.
- Participation can be individual or as a team.
- Individuals applying individually with their projects must create a one-person team through the Team Creation module on the KYS portal.
- Individuals applying individually at the primary, middle, and high school levels must have an advisor.

- Project ideas must not be copied. Projects identified as similar or imitative will be disqualified. If the participant has previously participated in another competition with the same project, they must provide information about the competition's name, location, date, organizer, and results within the project file.
- Participants who have participated in previous TEKNOFEST technology competitions with the same project can reapply with the condition of developing and/or transforming their project.
- Only one category or competition within TEKNOFEST can be applied with the same project. Applications of teams or individuals applying to different categories or different competitions organized within TEKNOFEST with the same project will be considered invalid.
- Participants cannot submit the exact same project report as in a previous year. If quoting from reports published on www.teknofest.org in previous years, the source must be indicated following the format specified in the regulations.
- A separate application form must be completed for each project.
- Teams must consist of a maximum of 10 members for all categories and education levels, excluding the advisor. (The advisor is not included in this number.)
- The advisor should not be added as a team member. Each team can have at most one advisor. Teams with more than one advisor will have their applications considered invalid.
- There must be a team captain within the team. Individual applicants must select the team captain role.
- Throughout the competition process, all information provided by the TEKNOFEST competitions committee will be communicated to the designated contact person within each team. Therefore, each team must designate a communication representative.
- Monitoring the processes (Application, Report Upload Deadline, Objection Process, Form Completion, etc.) is the responsibility of the communication representative. The TEKNOFEST competitions committee is not responsible for delays or disruptions caused by the communication representative.

- Between the application dates, the team captain/advisor registers on the system, completes the registration, enters the correct and complete information of the advisor and/or team captain/team members, and sends invitations to the advisor and/or team captain/team members, if any. The invited member enters the application system, accepts the invitation from the "My Team Information" section, and completes the registration. Otherwise, the registration will not be completed.
- Participants who complete the team creation process must apply for the relevant competition with their project.
- All necessary processes (Application, Report Submission, Report Results, Financial Support Application, Objection Processes, Adding/Removing Members, etc.) during the competition are carried out through the KYS system. Teams must follow their processes through the KYS portal.
- Adding/removing members can be done until the Project Detail Report Submission date. Changes cannot be made within teams after the final submission of the Project Detail Report.
- Throughout the competition process, application through KYS, uploading reports, filling out objection process forms, etc., are within the authority of the team captain and/or advisor, and the competition processes are managed through these individuals.
- Transportation and accommodation support for the teams that reach the final is limited. The number of supported individuals is a maximum of 3 people per team (including the advisor), and the TEKNOFEST Competitions Committee reserves the right to make changes.
- The TEKNOFEST Competitions Committee has the authority to limit the number of members present in the festival area. In case of limitation, the committee will inform the participants.
- University-level participants are not required to come with their advisor to the final stage. If there is an advisor in university-level applications, the advisor must send an advisory document.
- Participants can apply to different TEKNOFEST competitions with different projects.

- Teams can be formed from a single school or as a mixed team with one or more primary, middle, or higher education students coming together. The competition category that the team can participate in will be determined based on the highest education level of the team members.
- Teams consisting of primary school students will compete among themselves, teams consisting of high school students will compete among themselves, and teams consisting of university-level students and graduates will compete among themselves.
- Throughout the competition process, your education level at the time of application will be taken into account. Please pay attention to this when choosing the category.
- Participants can only enter the competition after reading and approving all explanations and participation conditions regarding the competition.
- Those who apply to the competition are deemed to have accepted all the conditions specified in the specifications.

3.1. Application Principles

Applications will be received through the official website of the TEKNOFEST Aerospace, Space, and Technology Festival Technology Competitions (www.teknofest.org). Applications are to be submitted online via the www.t3kys.com application system until **February 29, 2024**.

4. COMPETITION CALENDAR, SCORING AND EVALUATION

Detailed information regarding the competition timeline, scoring, and evaluations is outlined below:

4.1. Competition Schedule

DATE	EXPLANATION
29.02.2024	Competition Application Deadline
19.03.2024 - 22:00	Project Preliminary Evaluation Report Deadline
26.04.2024	Announcement of the Teams That Passed the Preliminary Elimination According to the Results of the Project Preliminary Evaluation Report
28.05.2024 - 17:00	Project Presentation Deadline
01 - 30 June 2024	Project Presentation (Semi-Final)
11.07.2024	Announcement of Finalists
August-September 2024	Competition Finals
August-September 2024	TEKNOFEST

Table 1. Competition Schedule Table.

Evaluation will be conducted in three distinct stages: Project Preliminary Evaluation Report, Project Presentation, and final competition scoring. Teams that do not submit Project Preliminary Evaluation Reports and Project presentation files will not qualify for participation in the competition.

Report submission must be uploaded via the CMS system within the day and time specified in the calendar. The appeal process is notified to the teams by the TEKNOFEST competitions committee via e-mail sent after the results are announced. The TEKNOFEST Competitions Committee reserves the right to make changes to the schedule and timings. After the application, a "preliminary screening" process will be carried out based on the preliminary evaluation reports submitted by the teams. During this preliminary screening process, the submitted reports will be examined in terms of report structure and project content. The decision to consider the preliminary evaluation report for evaluation will be made, and invalid or incorrect applications will be eliminated. In this context, projects that are eliminated in the preliminary screening process do not have the right to appeal.

4.2. Project Preliminary Evaluation Report

During this evaluation phase, teams at all education levels (primary school, secondary school, high school, university and above) must upload reports.

Teams are obliged to submit their Project Preliminary Evaluation Reports on the date specified in the competition schedule. Detailed information regarding the submission

of Project Preliminary Evaluation Reports will be shared with teams that have completed their applications after the end of the application period. A preliminary screening will be conducted based on the results of the Project Preliminary Evaluation Reports. The template for the Project Preliminary Evaluation Report can be accessed on the website. Teams that proceed to the second stage based on the preliminary evaluation will be announced on the date specified in the competition schedule.

Projects submitted to us in accordance with the application principles will be subject to the following criteria during the screening:

- Project Summary
- Problem/Need Addressed by the Solution
- Localization and Uniqueness Aspect
- Method and Target Audience
- Innovation and Commercialization Potential
- Project Timeline

The template and details for the Project Preliminary Evaluation Report will be published on the official TEKNOFEST website.

4.3. Project Detail Report (Semi-Final)

At this evaluation stage, only teams with university education and above should upload reports. Teams at primary, secondary and high school levels will not upload Project Detail Reports.

Teams that have passed the Project Detail Report (PDR) stage are obliged to submit their Project Detail Reports on the date specified in the competition calendar. Project Detail Report; There should be a report detailing the Project Development processes including Analysis, Design, Development, Testing and Implementation (integration and go-live activities), as well as detailing the Project Budget, Project Plan (project schedule) and Project Scope. You can access the template of the Project Detail Report on the TEKNOFEST website. According to the results of the PDR, the teams that are entitled to receive financial support and the teams that are eligible to participate in the final will be announced on the date specified in the Competition Calendar. Teams that are successful according to the results of the Project Detail

report will be entitled to receive financial support if they apply, at this stage, the financial support form to be sent through the KYS system must be filled. The date for the financial support form will be determined by the TEKNOFEST Competitions Committee and information will be given to the contact person. It is not mandatory to apply for financial support.

Project Detail Report will be evaluated based on the following criteria:

- Project Summary
- Problem/Need Addressed by the Solution
- Localization and Uniqueness Aspect
- Method and Target Audience
- Feasibility
- Estimated Cost and Project Timeline
- Innovation, and Commercialization Potential

The project detail report template and details will be published on the official TEKNOFEST website.

4.4. Project Presentation (Semi-Final)

During this evaluation phase, teams at primary, secondary and high school education levels must upload and make presentations. University and above teams will not upload or make presentations during this evaluation phase.

Teams advancing to the project presentation stage are required to submit their presentations on the date specified in the competition schedule. Project presentations will be evaluated online. The template and requirements for the presentation can be accessed through the TEKNOFEST website. Teams that submit their presentations in accordance with the schedule and necessary criteria will have their online presentation dates and times determined. The respective team is obliged to present at the designated date and time.

Teams successful in the online presentation stage, both those eligible for financial support and those qualifying for the finals, will be announced on the date specified in the competition schedule. Teams successfully completing the semi-final stage will earn the right to compete in the TEKNOFEST finals.

Teams successful in the online presentation stage, if they have applied for financial support, will be eligible to receive it. At this stage, it is mandatory to fill out the

financial support form, which will be communicated to the teams through the KYS portal. The deadline for the financial support form will be determined by the TEKNOFEST Competitions Committee, and communication will be made through the designated communication representative. Applying for financial support is not obligatory.

Project presentations will be evaluated based on the following criteria:

- Project Summary
- Problem/Need Addressed by the Solution
- Localization and Uniqueness Aspect
- Method and Target Audience
- Feasibility
- Estimated Cost and Project Timeline
- Market Analysis, Innovation, and Commercialization Potential

The project presentation template and details will be published on the official TEKNOFEST website.

4.5. Scoring of the Competition

The scoring of the competition consists of two parts. The first part is the report evaluation, and the second part is the scoring for prototype development and visual presentation.

The table below outlines the types and percentages of scoring for the report. The report scores will constitute 20% of the Total Score.

SCORING TYPE	PERCENTAGE
Project Preliminary Evaluation Report	%5
Project Presentation (Semi-Final)	%15
Prototype and Final Presentation Scoring	%80

Table 2. Competition Scoring Percentages.

Please note that the percentages are indicative of the weight each component carries in the overall evaluation.

4.5.1. Prototype and Final Presentation Scoring

The projects of the teams that advance to the final will be evaluated by expert jury teams in the relevant category fields.

A prototype is a tangible demonstration of the product or process that will emerge after the project. It is the most primitive form of the eventual product. For a software project, a prototype may include some screen images and designs with functionality, while for hardware projects, it can be an example made of different materials such as cardboard, Lego, etc. Requirements for the competition environment, including how participants will show their prototypes to the jury and detailed information about visual presentations, will be shared with finalist teams after the determination of the finalist teams.

Final presentations must be made by team members; it is against the rules for advisors to present.

In the final stage, teams are required to prepare a poster for visual presentation, and information about poster size and content will be provided by the TEKNOFEST Competition Committee in the coming days.

The ranking of finalist teams based on the final evaluations will be announced on the www.teknofest.org website after the TEKNOFEST Competition finals.

5. AWARDS

In the competition, teams that pass the report stages and reach the final in their category will be awarded a cash prize based on their ranking in the final evaluation. The awards listed in the table below represent the total amount to be given to the teams that qualify for the award; individual awards will not be given. First, second, and third-place awards will be divided equally among all Team Members (all registered members in the system) and deposited into each person's specified bank account. A payment of 2,500.00 ₺ will be made to the advisor of the team that ranks in the competition. If the advisor does not come to the competition area, the advisor award will not be given. In addition, the best presentation awards will be given to the teams that are finalists in each of the three levels.

CATEGOR Y	PRIMARY SCHOOL - MIDDLE SCHOOL	HIGH SCHOOL	HIGHER EDUCATION AND GRADUATES	ADVISOR
1st PLACE	50.000,00 ₺	50.000,00 ₺	60.000,00 ₺	2.500,00 ₺
2nd PLACE	40.000,00 ₺	40.000,00 ₺	50.000,00 ₺	2.500,00 ₺
3rd PLACE	30.000,00 ₺	30.000,00 ₺	40.000,00 ₺	2.500,00 ₺

Table 3. Competition Scoring Percentages.

5.1. Best Presentation Award

This award is given to teams that aim to successfully complete their assigned tasks and business plans in the competition area, reflecting criteria such as project duration, accuracy of answers to questions, body language, attitude towards the audience, fluency of the presentation, and presentation outline. The evaluation will be based on these criteria as a team. The mentioned award is for prestige purposes and does not have a monetary value.

5.2. Commercialization Potential Award

The Commercialization Potential Award will be given to the team with the highest potential for commercialization among the finalist teams based on the following criteria:

- Ease of implementing the project,
- Absence of uncertainties and risks in producing the final product,
- Feasibility of production with existing technology and equipment,
- If the project output is a service product, it should be marketable and deliverable.

The mentioned award is for prestige purposes and does not have a monetary value.

6. GENERAL RULES

To access the General Rules booklet applicable to the competition, [click here](#).

7. ETHICS

To access the Ethics booklet applicable to the competition, [click here](#).

Declaration of Responsibility

T3 Foundation and TEKNOFEST are not liable for any injury or damage arising from any product submitted by participants or caused by participants in any way. T3 Foundation and the organization officials are not responsible for any damages caused by participants to third parties. T3 Foundation and TEKNOFEST are not responsible for ensuring that teams prepare and implement their systems within the framework of the laws of the Republic of Türkiye.

The Turkish Technology Team Foundation reserves the right to make any changes to this specification.

