



FLYING CAR COMPETITION SPECIFICATIONS

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1 AIM

The idea of an airborne vehicle for personal use or for public transport has been one of the ongoing research topics since the early 20th century. Advances have been made in many fields to be used in both the defense industry, the transportation industry, and space exploration, and the dominance of human beings has reached space. Although vehicles operating on different principles have been developed, a personal aircraft that can be used by a wide audience has not yet been developed. This idea is still being worked on today, and according to many opinions, one of the personal aircraft of the future is the flying car.

The aim of this competition is; It is the introduction of the concept of a “Flying Car” ecosystem that can safely navigate by air from one point to another in residential areas or between residential areas, including densely populated areas.

2 SCOPE

Flying Car Competition is an upper autonomy simulation competition that can decide autonomously according to changing conditions and emergencies.

In addition to this, an air traffic management system design will be carried out in order to design an viable air traffic system for the future.

3 AIR TRAFFIC MANAGEMENT SYSTEM AND SCENARIOS

Within the scope of the competition, an ‘Air Traffic Management System’ design is expected from the competitors. Teams that pass the evaluation of the Preliminary Design Report (PDR) that consists of an Air Traffic Management System design will be entitled to participate in the Flying Car Competition.

The competition will be held in a simulation environment on a virtual platform. In this simulation, a city environment will be presented to the contestants. There will be a virtual flying car to realize different scenarios in the city environment. The aim of the competitors is to develop an algorithm that will autonomously fulfill the tasks in the scenarios prepared by the advisory board. User accounts will be created to access the virtual platform over the internet on behalf of the teams that have passed the PDR stage. Competitors will have the opportunity to work on the scenarios specified until the day of the competition through these user accounts. During the competition, trainings will be organized on the use of the simulation environment.

The vehicle design that will be studied in the scenario environment will not be made for this year. A fixed vehicle design to be announced by the competition committee will be tried to be implemented on this city plan.

The scenarios to be prepared will consist of missions that a flying car may encounter in the future. At the same time, environmental factors and emergencies will be found in this city simulation environment and will be randomly assigned by the simulation system.

For example, there will be scenarios such as transporting passengers from the airport to the city center, transporting the injured from the accident site to the hospital, or going from point A to point B. In these scenarios, in addition to environmental factors such as declaring certain areas in the city as a no-fly zone, precipitation, heavy fog and strong wind; Emergency situations such as health problems, GNSS failure, battery failure that may prevent the aircraft from continuing its journey will also be implemented in this simulation environment.

3.1 Air Traffic Management System Design

In the event that more than one flying car is operating in a city at the same time, the vehicles must move safely with each other and their surroundings. Therefore, it is inevitable to design a system to manage this traffic.

The traffic control system that controls and manages the air traffic on the city should be designed and presented in the scope of PDR. How the Air Traffic Management System will meet the following requirements should be expressed in the report:

1. Airborne Movement Rules of Vehicles
 - Features that vehicles must have to comply with the rule
 - Punishments in case of failure to comply with the rules
2. Communications of Vehicles
 - Vehicle-to-vehicle communication
 - Vehicle-to-central communication
3. How to get on and off to Vehicle
 - Central Stops
 - Individual Use
4. Route Planning
 - Choice of Destination
 - Availability of a more convenient route while traveling
 - Situation of changing the destination by user
5. Reacting to Non-Ideal Circumstances
 - Variable Weather
 - Unexpected Traffic Congestion
 - Emergencies (Birth, Heart Attack vs.)
6. Fuel/Battery Status
 - Management of battery / fuel capacity
 - At what intervals the charging / refueling will be done
 - Where to charge / refuel

While introducing this system, an exemplary routine of any vehicle running in the system should be explained with visuals and flowcharts.

3.2 Scenario

Competitors will be provided with independent 'exercise scenarios' so that they can practice in the simulation environment. In the final stage of the competition, the software developed by the competitors is expected to be completed autonomously in the 'competition scenarios'. Competition scenarios will consist of a combination of plots from the exercise scenarios and will not be exactly the same. Competition scenarios will not be shared with the competitors until the final day and will not be published on any platform. What is expected from the competitors here is that they develop a robust software in the face of an unprecedented scenario. In this respect, it is essential that the 'competition scenarios' remain confidential.

Although scenario work is in progress, examples of scenarios that can be implemented are given below. During the scenarios, environmental factors and failure conditions may vary. Competitors are expected to find solutions to the related difficulties in the scenarios given and to complete the scenarios under the desired conditions.

Faults within the scenarios will be assigned at random times.

The scoring of the competition scenarios will be announced by the competition committee on the final day.

3.2.1 Example Scenarios

Example Scenario 1

The flying car is asked to go from point A to point B. There is an airport with a no-fly zone between points A and B. The flying car must not violate the no-fly zone while following the route.

Example Scenario 2

The flying car is asked to go from point A to point B. During landing at point B, GNSS, Radar and Barometer data are lost on the aircraft. The flying car is expected to complete the landing under these conditions.

Example Scenario 3

A flying car serving in cargo transportation is required to go from point A (although the order is not important) to points B, C, D and E. For the mission to be considered successful, the route must be completed within a maximum of 4 hours. A speed limit restriction applies between points B and C and between points D and E. The distance between points D and E and other points is too long to travel with a single charge.

3.2.2 Environmental Conditions

The conditions here will be randomly assigned or not assigned before each scenario, but will not change as the scenario continues.

Precipitation

There is precipitation in certain areas of the city. In this case, the reliability of some sensors on the vehicle decreases.

Wind

There are variable winds in certain parts of the city. These winds can cause deviations in the vehicle's position.

Fog

There is fog in certain areas of the city. In this case, the reliability of the optical sensors on the vehicle decreases. At the same time, there are certain restrictions on the speed of the vehicle.

No-fly Zone

A certain area over the city has been declared a no-fly zone. In this case, vehicles cannot pass through this area.

3.2.3 Emergencies and Faults

During the competition scenarios, various emergencies/breakdowns are updated as the scenario continues. Solutions to these problems should be resolved within the autonomy system.

GNSS Fault

There has been a malfunction in the GNSS receiver on the vehicle. The reliability of the data from this sensor decreases.

GNSS Jamming

The tool entered an environment containing a jammer and started to receive incorrect results from the GNSS data in this environment.

Engine Failure

One of the engines on the vehicle has failed.

Battery Failure

A sudden drop in voltage of the vehicle battery may occur or the battery may overheat. In these cases, appropriate solutions should be produced.

Communication Failure

The Flying Car loses its communication with the central system. Thus, it cannot receive environmental factors and no-fly zone information and information of other aircraft.

Health Conditions

While traveling with a Flying Car, passengers may experience instant health problems for various reasons. In this case, the Flying Car system needs to reach the health center as quickly as possible.

3.3 Simulation Environment

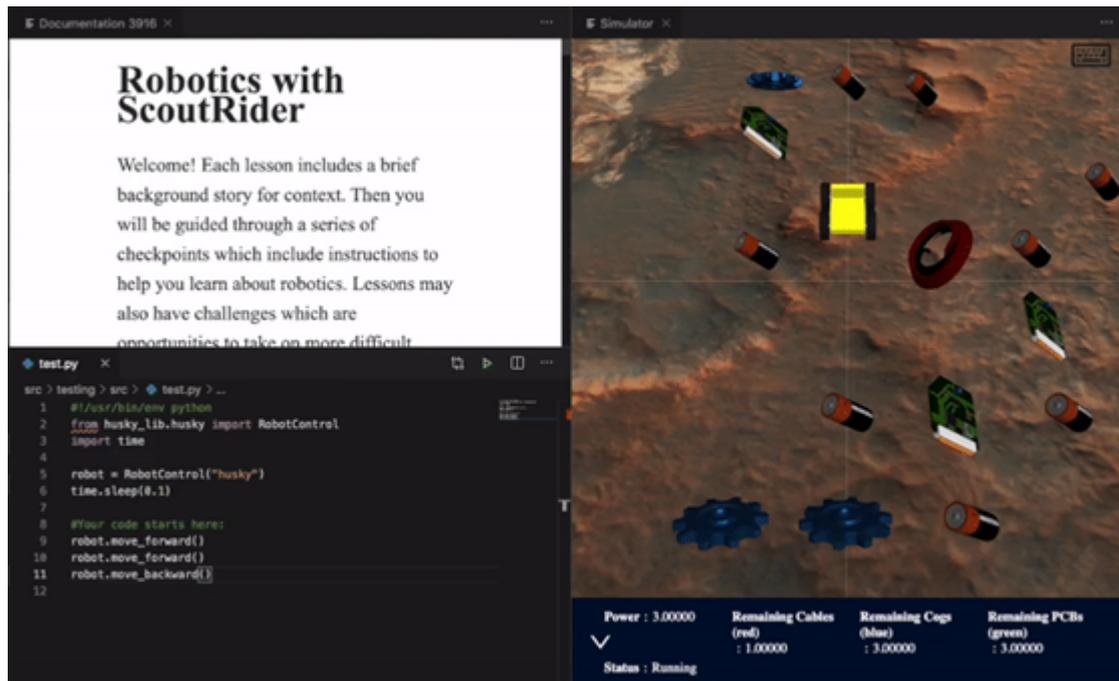
The simulation system in which the given scenarios will be implemented will be shared with the competitors and each competitor will work in the same simulation environment. While the scenarios are simulated, it is expected that certain air traffic management rules will be determined and how these rules will be complied with.

In the case of multiple flying cars operating in a city at the same time, the vehicles must move safely with each other and their surroundings. Therefore, it is inevitable to design a system to manage this traffic. Aircraft must struggle with environmental factors and overcome potential problems while navigating in the city within the framework of the rules determined by the competitors.

3.3.1 Riders

Riders has been developed as a solution to existing problems encountered in robotic application development, cost, scaling, and development processes by Acrome, a robotics company that has been producing and selling accessible robotics systems for use in research and education since 2015. Riders provides a fast and accessible development environment and enables robotic application development to scale more easily.

Riders offers a cloud-based online development platform, enabling the development of advanced applications in a simulation environment and eliminating the need for setup processes and expensive physical equipment.



Riders only needs a web browser to work and offers cloud capacity (CPU and RAM), necessary software, IDE that can be configured for various purposes, and interactive simulation content for each project on the platform.

Riders offers courses, competitions, and projects on:

- Coding
- Robotics
- STEM
- Information Technologies
- Machine Learning
- Artificial Intelligence
- Image Processing
- Deep Learning

Riders platform will host an online competition in collaboration with Baykar Technology. Detailed information about the date and participation details of this competition will be shared soon.

3.3.2 Flying Car

Each flying car is equipped with various sensors. It is requested to perform the tasks determined with the Flying Car, which will be given by the competition committee as design features. The data from the sensors on this Flying Car will be instantly presented to the users in the simulation environment.

3.3.2.1 Sensor Data

The Flying Car contains various sensors for Speed, Position, Orientation, Altitude data. Each sensor gives high accuracy data during normal operation. Each sensor is equipped with control algorithms that can detect its failure. Competitors will go from one point to another through these sensors while performing their tasks in the city.

Sensor Name	Purpose	Failure Notifications
GNSS	Flying Car can get the location, altitude and speed information on the map axis in the city..	-Working Status -Mix Detection
Barometer	Flying Car can receive altitude and vertical speed information.	-Working Status
Radar	The radar system gives the vertical distance to the solid objects (building, earth, etc.) under the Flying Car with radar signals.	-Working Status -Out of Limit Measurement
Inertial Measurement Unit	Acceleration and velocity information on the body axis of the aircraft are provided by the inertial measurement system.	-Working Status -Noisy Measurement
Lidar	The Lidar system gives the vertical distance to the solid objects (building, earth, etc.) located under the Flying Car with laser beams.	-Working Status -Out of Limit Measurement
Magnetometer	Thanks to the magnetometer, the Flying Car can detect which direction it is facing.	-Working Status -Noisy Measurement
Battery Measurement Unit	It gives the voltage, current consumption, temperature and battery charge rate about the general condition of the battery.	-Working Status -Overheating
Motor Measurement Unit	It gives the motor (propeller) speed.	-Working Status -Overheating

3.3.2.2 Battery

The battery can be depleted and can be charged in the simulation environment. Battery consumption values change according to the traveling speed of the Flying Car. In addition, the battery consumption rate affects the battery temperature and affects the reliability of the aircraft. Data about the battery is given to the competitors via the battery measuring unit.

3.3.2.3 Physical Properties

The Flying Car is an aircraft designed to be light and durable due to its structure. The Flying Car, which has been designed with an environmentally friendly understanding as fully electric, has some limits (Maximum altitude, ground contact speed, maximum speeds, etc.). These limits will be announced to the competitors.

3.3.2.4 Failures

Sensor failure notifications are presented to the competitors in addition to the sensor data. Some faults can be detected very quickly, while others may take time to be detected. For this reason, malfunctions can be reported to the user sometime after they occur. In addition to sensor malfunctions, various

malfunctions may occur in subsystems. All malfunctions will also be presented to the competitors collectively.

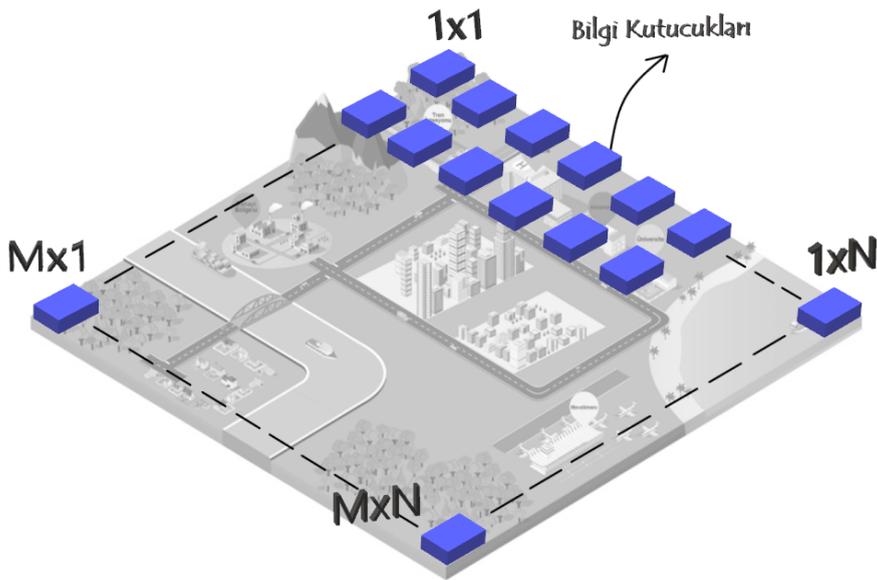
3.3.2.5 City Data

The central information system provides some information to flying cars over the communication network. Among these data, environmental conditions (precipitation, fog, wind, etc.), city layout plan (hospitals, charging stations, etc.), city elevation map, no-fly area information, air traffic map, etc. maps will be presented to the competitors.



It is a representative city image, the city dimensions will be enlarged and detailed to match the flying car dimensions.

City data will be presented to the competitors in matrix format. Each data will be given to the competitors in the form of $M \times N$ with a separate matrix, updated periodically by the simulation system.



City data will be shared with the competitors in matrix form.

3.3.2.6 Vehicle Control

In the Flying Car simulation environment, the controls of the aircraft are expected from the competitors. The autonomy system, which creates the commands for the aircraft to perform the relevant tasks, will be prepared by the competitors by looking at the relevant sensor data and the city situation.

Speed commands of the aircraft are expected from the competitors in the command system. These speed commands will be selected from the predetermined steps and given to the simulation environment instantly. These commands will be FORWARD, GO BACK, FORWARD RIGHT, FORWARD LEFT, GO UP, GO DOWN, TURN RIGHT, and TURN LEFT. In addition to these commands, the steps of the commands can be selected as SLOW, MEDIUM and FAST.

Considering that the sensors on the vehicle have complementary features and that alternative solutions are required in case of malfunctions, the competitors are also expected to establish predictive algorithms for this purpose.

3.3.2.7 Vehicle Dynamics

In the Flying Car simulation environment, it is expected that the competitors will generally focus on scenarios and deal with emergencies/breakdowns, but randomness and stochastic distortions will also take place in the simulation environment in order for the system to reflect the real world. Apart from this, vehicle dynamics have been added to the simulation environment as simplified dynamics in order to appeal to large audiences.

4. GENERAL INFORMATION ON THE COMPETITION

4.1. Conditions of Participation in the Contest

- All high school (including Open Education) and university students (including undergraduate, associate degree, postgraduate, doctorate and open education) and graduates studying in Turkey and abroad can participate in the competition.
- Participation in the competition can be made individually or as a team.
- Teams should be formed so that the number of team members consists of a maximum of 5 people for all categories and education levels. (This number does not include the consultant.)
- The advisor should not be added as a team member. Each team can have at most one advisor.
- A member of a team cannot be a member of another team.
- The graduate category includes high school graduates and university graduates.
- High school graduates are required to pass a maximum of 3 (three) years from the date of graduation.
- There must be a team captain in the team. Our individual applicants must choose the team role as team captain.
- All information to be made by the TEKNOFEST competitions committee during the competition process will be made to the person designated as the team's communication officer. For this reason, each team should designate a contact person.
- The follow-up of the processes (Application, Report Upload Deadline, Form to be filled, etc.) is the duty of the communication officer, and TEKNOFEST competitions committee is not responsible for delays and/or disruptions caused by the communication officer.
- Applications are made online through the www.t3kys.com application system until ---.
- Between the application dates, the team captain/advisor registers through the system, makes the correct and complete registration of the consultant and/or team captain/team members, if any, and sends an invitation to the advisor and members' e-mails, if any. The member to whom the invitation is sent, logs in to the Application system, accepts the invitation from the "My Team Information" section and the registration is completed. Otherwise, the registration will not be completed.

- Competitors who have completed the team formation process must apply to the competition in accordance with their project.
- All necessary processes within the scope of the competition (Application, Report Receipt, Report Results, Objection Processes, Member addition/removal procedures, etc.) are carried out through the KYS system. Teams are required to follow their processes through the KYS system.
- Adding/removing members is done until the final Design Report Submission date.
- During the competition process, the processes of applying through the KYS, uploading reports and filling out forms are under the authority of the team captain and/or the consultant, and the competition processes are managed through these people.
- Teams can be formed from a single school, or they can be formed as a mixed team by gathering one or more secondary education/higher education students. The competition category that the team can participate in will be determined according to the team members with the highest education level.
- Undergraduate, graduate and graduate-level teams may hire a lecturer/member or research assistant as an advisor.
- High school teams have to be advisors.
- Transportation and accommodation support to be provided to the finalist teams is limited. The number of people to be supported will be notified to the competitors by the TEKNOFEST Competitions Committee.
- The consultants are required to upload the document, which they will receive from the relevant education/training institutions they work, to the system together with the Final Design Report, indicating that they have been teaching/training/academics.
- In case of a change of consultant, the teams have to notify the relevant TEKNOFEST Committee in writing.
- Teams that were finalists in the past years must have developed their projects and stated in their reports that they have participated in the competition before. In case of a contrary situation, the relevant teams may be banned from the competition by the advisory board.
- Applications of teams that do not meet the above requirements will be deemed invalid.

- Applications will be made through the official website of TEKNOFEST Aviation, Space and Technology Festival Technology Competitions (www.teknofest.org).

4.2. Competition Schedule

The competition schedule is given below.

No	TARİH	AÇIKLAMA
1	30.11.2022	Contest Application Deadline
2	06.12.2022	Project Preliminary Design Report (PDR) Deadline
3	24.12.2022	Announcement of the Teams Passing the Preliminary Elimination According to the Project Preliminary Design Report (PDR) Results
4	16.01.2023	Final Design Report (FDR) Deadline
5	08.02.2023	Announcement of Final Design Report (FDR) Results and Announcement of Finalist Teams
6	March 2023 (It will be announced.)	Competition Days
7	May 2023	TEKNOFEST 2023

4.2. Competition Process

As mentioned, the Flying Car Competition is an upper autonomy simulation competition that can make decisions autonomously according to changing conditions and emergencies. In this context, the competitors will simulate the algorithms they developed in the "exercise scenarios" in the city environment given in the "competition scenarios" in the final stage. The competition process and evaluations will be as follows.

1. In the PDR phase; Evaluations will be made on the design of the 'Air Traffic Management System'.
2. After the PDR, the simulation environment will be opened to the competitors and work will begin on the shared scenarios. Up until the FDR stage, most of the scenarios should be achievable by the teams.
3. There will be links to the solutions brought to the scenarios during the FDR phase, how they were achieved, and even the videos of the scenarios that were realized.
4. All of the scenarios determined in the final stage will be tried on the main screen.
5. Evaluation of the final stage will be made according to the success of the competition scenarios. Points will be awarded based on successful simulation of the scenario. The team

that successfully completes the most scenarios, that is, collects the most points, will be the winner of the final stage.

4.2.1. Preliminary Design Report(PDR)

Teams are obliged to submit their Preliminary Design Reports (PDR) on the date specified in Table 1 in the Competition Calendar. PDR templates can be downloaded from the Teknofest website. The reports should be prepared to cover the content specified in the PDR template.

The preliminary design report must include the design of the 'Air Traffic Management System'.

The text part of the preliminary design report will be a maximum of '**10 pages**'.

A pre-selection will be held according to the results of the ETR. The teams that have passed to the Final Design Report (FDR) stage as a result of the PDR evaluations will be announced on the date specified in the Competition Calendar in Table 1.

4.2.2. Final Design Report

Teams that have passed to the Final Design Report (FDR) stage are obliged to submit their Final Design Reports on the date specified in Table 1 in the Competition Calendar. Templates and other requirements for the Final Design Report will be announced after the competition deadline.

Each team accepted to the competition is obliged to prepare and submit their final design reports until the deadline specified in the competition calendar. Teams that do not submit their reports by the specified deadline will be deemed unsuccessful and will not have the right to participate in the competition.

In the final design report, it will be explained how the solutions for the specified scenarios are implemented. There will be links to the solutions brought to the scenarios during the FTR phase, how they were achieved, and even the videos of the scenarios that were realized.

Final design reports of the teams participating in the Flying Car Design Competition will be evaluated and scored by the Flying Car Design Competition Advisory Board and Judges in accordance with the "Final Design Report Template".

The final design report will be a maximum of **30 pages in total**.

As a result of the evaluations, the teams that will be accepted to the competition will be determined, and the teams that will not be accepted to the competition will be eliminated. The evaluation results of the final design reports will be announced to the teams on the date specified in the competition calendar.

Final Design Report Template will be announced on the competition website.

4.2.3. Final Stage

Final simulation screening will be held in a simulation environment to be determined by the advisory board. Only one team will compete in the simulation environment at a time. Meanwhile, the competition can be followed from the main screen. Which team will compete in which order will be determined by drawing lots. Likewise, it will be clear when it is their turn to try which scenarios the competing teams will try.

5 SCORING AND EVALUATION

Scoring and evaluation will be done through the simulation that the competitors will send with the PDR, FDR and the final stage.

	Evaluation Step	Impact Percentage
	Preliminary Design Report	15%
	Final Design Report	25%
	Simulation Display	60%

Evaluated teams will be listed separately as University - Graduate and High School Teams. Awards will be made separately.

6 PRIZE

The teams that enter the prize ranking will be given the cash prizes specified in the table below. The awards stated in this table show the total amount to be given to the teams that are entitled to receive the award, no individual award will be made. First, second and third place prizes will be divided equally according to the total number of Team Members and deposited into the bank account specified by each person. No payment will be made to team advisors.

	University – Alumni Category	High School Category
First	60.000 TL	40.000 TL
Second	50.000 TL	30,000 TL
Third	30,000 TL	20.000 TL

6.1. Minimum Success Criteria for Award Ranking

In order to receive an award, the competing team must meet the following conditions;

- Participated in the PDR, FDR and Final Stages

Teams that fulfill the specified criteria will be considered successful.

Among the teams that fulfill all the criteria, the score will be considered **first** in the ranking.

An honorable mention is given to the teams that do not meet the specified conditions but qualify for the ranking.

7 GENERAL RULES & REGULATIONS

- Objection cases consist of two headings: Report Objections and Final Stage Objections. Report objections are received via KYS within 48 hours after the report results are announced. The objections of the teams that cannot make their objections in accordance with the regulation in the link <https://teknofest.org/tr/competitions/objection/> within the period announced by the TEKNOFEST Competitions Coordinator will not be accepted. The objections of the teams are sent to different referee committees and re-evaluated.
- Final Stage Objections can be made during and after the competition. Objections to be made after the competition must be made within 48 hours after the rankings are announced. Objections made other than in violation of the specification and rule violations will not be accepted. For evaluations based on quantitative criteria, no objection will be received and no final or presentation evaluation will be made. These objections should be sent to iletisim@teknofest.org in the form of a petition with their justifications. Objections made in accordance with the rules will be examined by the TEKNOFEST Competitions Coordinator.
- Report Evaluation results after it was announced then every from the team official objection of persons and reasons in writing to transmit required. objections www.t3kys.com at is taken.
- The objection process must be made until the date that the competition committee will transmit after the competition results are announced. Otherwise, objections will not be considered.
- Appeals must be made by the team advisor or team captain. Objections that are not submitted within the specified process will not be considered.
- The advisor's task; to students own education and training so that they can plan about helper be academic, social and cultural on matters path to show, mental, social and emotional aspects helping to prepare the appropriate environment for the student's personality to develop as a whole, etc. task and services. The role of the advisor in the team is to provide the academic support needed for the project. its members to your problems solution to be able to produce for path is to show.

- Consultant terms; Teachers/academics working in education/training institutions as consultants or engineers/experts who continue their careers in the relevant field, etc. Individuals can take part in the team as consultants.
- The subject of the competition is the result of the effort of the competitor/competitors in the team, the intellectual work reflects the characteristics of the team members and the Consultant will not be accepted as the owner of the work. The project idea has to be created by the team members, and the consultants only need to give direction at this stage. If the project owner is determined to be a consultant, the application will be deemed invalid.
- In their report, our teams that have benefited from the previous year's reports on our website should indicate on the relevant page that they are quoting. State the explanation after the quoted sentence required. QUOTATION FORMAT: "Excerpt Sentence (s) made " (Year, Competition Name, Category, Team Name) EXAMPLE EXAMPLE: " The lack of determination of the earthquake victim's whereabouts in the debris is the most important problem that slows down the debris removal and earthquake victim search efforts." (2021, Technology Contest for the Benefit of Humanity, Disaster Management, Team X)
- Each competitor is obliged to take the necessary safety measures and to show the care expected of her/him towards her surroundings while competition.
- The Turkish Technology Team (T3) Foundation and the organization committee reserve the right to make any changes in this specification in order to ensure fair results, in order for the competitions to be held within objective criteria, to better meet all kinds of needs of the competitors, to ensure safety measures and to make the competition conditions work.
- T3 Foundation and the organizing committee reserve the right to cancel the competitions if, as a result of the evaluations to be made after the application process, there are not enough applicants with the necessary technical knowledge and skills to participate in the competitions.
- TEKNOFEST Safety and Security Specifications are communicated to all competitors, their delegations and relevant persons. All teams that will compete within the scope of the organization are obliged to meet the safety conditions specified in the TEKNOFEST Safety and Security Specifications, specific to the

competition they compete in. In this respect, it is the competitors' responsibility to take additional measures arising from the systems used, except for those in the said safety instruction.

- T3 Foundation and the organization committee, the teams that are determined not to meet the conditions specified in the TEKNOFEST Security and Safety Specifications, in order for the organization to take place in a safe environment. competition female leaving right hidden amount. of the competitors, of their delegations and relating to of people during the competitions born violations as a result may occur from damages T3 Foundation and organization officials is not responsible.
- Regarding the competition, the competitor accepts all kinds of written or visual promotions, publications, social media and internet broadcasts to be made before or after the competition by the T3 Foundation and/or TEKNOFEST. and commits. In addition, the competitor is entitled to the rights of processing, dissemination, reproduction, representation, visual or auditory means and the right to transmit to the public on the designs, codes and scientific and artistic work produced or contributed to the production of T3 Foundation / TEKNOFEST without any time limit. e , within the framework of the T3 Foundation 's open source policy. relating to your work It accepts, declares and undertakes that it consents to be presented to the public and used and developed by the relevant persons by reference. T3 Foundation reserves the right to make changes on the work when necessary and to make all intellectual property available to the public (limited to what it shares with the T3 Foundation) as and when it deems appropriate.
- Regarding the rights on the part of the competitor's work that it has transferred to the T3 Foundation, the Industrial Property Law No. 6769 and other legal provisions regulating Intellectual Property Rights legislation in the framework of Turkish Patent and Trademark Authority or WIPO (World Intellectual property Organization) before Provided that T3 Foundation obtains written permission, it can make a registration or protection application, T3 Foundation and T3 Foundation will not prevent its use by applying any prohibition against third parties who benefit within the scope of open source code policy, not apply for protection measures within the scope of legal legislation, allegation of violation accepts and undertakes that he/she will not make a request for the cessation of use.

- The ideas shared in the previous year's reports should not be used directly. Necessary legal actions will be taken against the teams that are found to have used the idea directly, and it will be ensured that they cannot apply to the competitions organized within the scope of TEKNOFEST for at least 2 years.
- TEKNOFEST suffer any damage due to the competitor's violation of the intellectual property rights of any product, such damages will be covered by the relevant team (including the consultant).
- A Certificate of Participation will be given to all finalist teams entitled to participate in the competition.

ETHICS

- Festival in the field or competition process along (report steps, evaluation process etc.) society immoral a situation, verb, word, etc. behavior exhibited as soon as it is detected, the legal process against the person(s) who committed this act will be promptly initiated and the team will be barred from participating in any organization and event operating within the Turkish Technology Team Foundation for at least 2 years. The points to be considered in the language used in all communication with the TEKNOFEST Competitions Committee are as follows;
 - Rude and discourteous promise and from behavior should be avoided,
 - Insult, threatening and bad from the words should be avoided,
 - e-mail , facebook , skype , messenger , whatsapp , twitter etc. as social media with tools Directly targeted insults should be avoided,
 - Petition and in your objections, spelling to the rules and to the style Caution to be made required.
- Situations, verbs, words, etc. that will affect the functioning and motivation of other teams in the festival area. behavior should not be exhibited.
- Accommodation of your services given country and around social peace of mind eyelash before should be treated. Otherwise, the initiation of legal proceedings against the person will be carried out by the relevant institutions.

- In the project and product development process, the necessary equipment and materials are backed up/stored in advance, taking into account all kinds of negativities, and part replacement in case of a possible negativity. your team under the responsibility whether other a from the team product supply failure to provide required.
- In the festival area and in all kinds of services provided by TEKNOFEST, attention should be paid to the fact that it behaves in accordance with the requirements of the service in an impartial manner, without discrimination of language, religion, philosophical belief, political thought, race, age and gender, and without causing behaviors and practices that prevent equal opportunities.
- Taken not to use or allow TEKNOFEST and other company-institution-organization goods and resources to be used for purposes other than their purposes and service requirements, and not to waste these goods and resources.
- To support the works carried out to facilitate the operation of the festival, to meet their needs in the most effective, fast and efficient way, to increase the service quality and to increase the festival satisfaction.
- It affects or seems to affect the impartial and objective performance of the contestants in the festival area. and themselves, to their relatives, to your friends or in a relationship located person or should be careful about all kinds of benefits provided to organizations, financial or other obligations related to them and similar personal interests, and take the necessary measures to avoid conflicts of interest.
- Avoiding waste and extravagance in the use of TEKNOFEST, buildings and vehicles, and other public goods and resources, shift time, public goods, sources, labor and possibilities while using effective, efficient and frugal behavior is required.
- TEKNOFEST team members can be accountable for their responsibilities and obligations during their performance, and be open and ready for institutional evaluation and audit, take the necessary measures to prevent transactions or actions and corruption that are not in accordance with the objectives and policies of their institutions, and train their personnel on the principles of ethical behavior, it is necessary to monitor whether the principles are followed and to guide ethical behavior.

- Set members' duties in its place while bringing binding the institutions they work with by exceeding their authority. statement, commitment, promise or in attempts absence, deceptive and real female statement not giving required.

Responsibility Statement

- T3 Foundation and TEKNOFEST are not responsible in any way for any product delivered by the competitors or any injury or damage caused by the competitor. T3 Foundation and organization officials are not responsible for the damages caused by the competitors to third parties. T3 Foundation and TEKNOFEST are not responsible for ensuring that teams prepare and implement their own systems within the framework of the laws of the Republic of Turkey.

Turkey Technology Team Foundation herein in the specification each kinds change doesn't do that right hidden amount.