



**COMMUNICATION TECHNOLOGIES  
CONTEST TERMS AND CONDITIONS**

## **1. THE OBJECTIVE OF THE COMPETITION**

The competition aims to create an innovative product in the field of communication and / or to create solutions for existing problems by combining unique ideas that will facilitate daily life and benefit the society with the use of national resources. In this direction, projects will be evaluated and put into practice.

## **2. THE CONTEXT OF THE COMPETITION**

The scope of this contest includes all kinds of projects that are presented using radio frequency technologies, sensor technologies and software applications and that offer solutions in civil and military fields. It is expected that the projects to be presented have not been done before and have an innovative aspect. The projects should be designed both theoretically and practically to be the solution of an important problem, with priority given to the following headings (Each can be evaluated separately or together. A different title can also be determined).

### **2.1. Collecting and analyzing biometric data**

Heart rate, body temperature, sleep, etc. Innovative solutions for the collection of life function data, determination of the sensitive location of living and non-living objects in open and / or closed areas, and processes by processing these data; improvement and finding solutions.

Example: Biometric data of personnel are collected during a military operation and forwarded to the command center for processing. Making an action plan in the light of these data (These issues can also be applied to activities related to healthcare teams, disaster relief teams and security forces)

### **2.2. Logistics**

Determining the location, quantity, etc. of logistic elements such as vehicle, food, ammunition, equipment. Innovative solutions that will collect and analyze their information and increase their effectiveness and efficiency in logistics processes.

Example: Identifying the locations of the equipment in the field and ensuring that they are delivered to the operational units in need in a correct and rapid manner (These issues can also be applied to activities related to health teams, disaster relief teams and security forces)

### **2.3. Production Activities**

The design and production activities of the communication and communication technology tools required within the scope of the main subjects of the competition mentioned above are within the scope of the competition. These activities are subject to additional scoring. In addition, projects for the localization of communication products that our country purchases from outside will be evaluated in our competition.

## **3. TECHNICAL SPECIFICATIONS and LIMITATIONS**

The technical components to be used in the projects are listed below. These components must have standards suitable for all environmental conditions (durability, size, capacity, etc.) that the solution produced within the scope of the project can be applied. It is also expected that the properties of the components positioned in the project are suitable for the environmental conditions in the selected scenario, in which conditions and situations their inappropriate properties will cause problems and alternative solutions to these problems can be produced in the future.

### **3.1. Radio Frequency Technologies**

**At least one of the following radio frequency technologies must be used in the projects.**

#### **□ NB-IoT**

By using NB-IoT technology in which large R&D investments are made in the communication sector, solutions to be presented through the communication of people with objects or objects with objects are expected.

#### **□ LTE-M**

Solutions are expected by using LTE-M technology, which makes it possible to communicate with less energy and lower costs.

#### **□ Bluetooth**

Creative and beneficial solutions are expected to be presented with Bluetooth, a short-range wireless communication technology used for many years.

#### **● Lora**

Innovative solutions are expected to be presented in the field of communication, thanks to the Lora technology, which can carry low and medium data transfer over long distances.

#### **● UWB**

It is possible to communicate with Ultra Wide Band technology, which has a wide frequency spectrum, using low output power. Innovative solutions are expected from the competitors to be presented by using UWB technology.

### **3.2 Biometric and Environmental Data**

- Temperature
- Humidity
- Voice
- Pressure
- Vibration

### **3.3 Physical Constraints**

- Height
- Depth
- Weight
- Temperature

### **3.4 Standards**

- EMI / EMC standards
- Information security standards
- Communication standards
- IEEE standards

### **3.5 Power**

- Battery Life
- Frequency
- Efficiency

### **3.6 Software**

Participants are also expected to have a software application where the data to be produced from the components (sensors) to be used within the scope of the project will be collected, monitored, managed and analyzed.

It should include interfaces in line with / parallel to the idea aimed to be realized with the project.

Although there are no restrictions on the technological stack and tools (software language, development environment, protocol, database, etc.) to be used to develop the application, it is expected that all system parts that will form the application will be disclosed in the Project Pre-Evaluation and Project Detail Reports.

It is expected that all approaches related to collation and analysis of data to be produced from components will be explained methodically. (Algorithms to use, inferences, rules, etc.)

It is preferred that the application be designed in a scalable structure according to the usage area of the solution presented in the project.

Regarding to define the properties of the software application

- Including summary information (software language, platform, interface page names, etc.) into the Project Pre-Evaluation Report.
- And for the Project Detail Reports (software architecture, user authorization, system configuration, data fields and types, data processing performance values, etc.) is expected to be entered.

The completed version of the software application will be evaluated at the presentation stage. The application to be presented is expected to be developed in line with the features defined in the Project Pre-Evaluation and Detail Reports.

## 4. GENERAL INFORMATION ABOUT THE COMPETITION

### 4.1. CONDITIONS OF PARTICIPATION FOR COMPETITION

- All university and higher education students who are studying in Turkey and abroad can participate in competition.
- Teams can be formed from a single school or can be formed as a mixed team by bringing together one or more higher education students.
- Along with the Project Pre-Evaluation Report, approved student documents must be submitted for students, and a certified document showing that they are lecturers, research assistants or teachers for advisors.
- The document stating that the person who will serve as the advisor will fulfill the consultancy duties must be uploaded to the system together with the Project Pre-Evaluation Report with wet signature.
- Higher education level teams can recruit a lecturer / member or research assistant as an advisor.
- Project ideas must not be copied. Projects that are found to be similar or imitated will be excluded from the competition. **If the competitor has already been in another competition with the same project, the name, place, date, organizer, and conclusion**

**information of the competitor he / she participated in must be reported in the project file.**

- Teams should be formed with a maximum of 8 members. (This number does not include the advisor.)
- The advisor should not be added as a team member.
- Transportation and accommodation support to finals is limited. The number of people to be supported will be notified to the teams by TEKNOFEST Competitions Committee.
- TEKNOFEST Competitions Committee has the authority to limit the number of members to be in the festival area. In case of limitation, information will be given by the committee.
- A project can only be submitted to one category. Applications of teams or persons who apply to different categories with the same project will be eliminated.
- The contestant will be able to participate in the contest by reading and approving all the explanations about the contest and the participation conditions before applying.

The applicants for the competition are considered to have agreed to all of the above conditions.

## **4.2. Application Principles**

Applications will be received on the official website of the Aviation, Space and Technology Festival TEKNOFEST Technology Competitions ([www.teknofest.org](http://www.teknofest.org))

For application, the application form must be filled until 15.03.2021.

### **4.2.1. For Higher Education / Graduates:**

In the application form;

- Participant name, surname, university, faculty, department name and contact information (e-mail address, phone number), project name and category,
- In the application as a team, the team name will be added along with the information of the other group members (student names, university, faculty, department name and contact information).
- Information about the consultant will be taken at the time of application.

## **5. Competition Schedule, Scoring and Evaluation**

Detailed information about the competition calendar, scoring and evaluations are given below;

### **5.1. Competition Schedule**

Table 1 : Competition Schedule

Date	Description
15 March 2021	Application Deadline
02 April 2021	Deadline for Project Pre-Evaluation Form
24 April 2021	Announcement of the successful teams based on the Project Pre Evaluation Form results.
24 June 2021	Deadline for Detailed Project Reports
07-13 July 2021	The announcement of Detailed Project Reports' Results, Teams that Will Receive Financial Support and the Finalists
21 - 26 September 2021	TEKNOFEST

Evaluation will be done in three different segments as Project Preliminary Evaluation Form, Project Detail Report and competition scoring. Teams that do not submit the Project Preliminary Evaluation Form and Project Detail Report files will not be eligible to participate in the competition.

## **5.2. Project Pre-Evaluation Report**

Teams are obliged to submit their Project Pre-Evaluation Reports on the date specified in the competition calendar. Detailed information regarding the submission of the Project Pre-Evaluation Reports will be shared with the teams that have completed their application after the competition application deadline. A pre-selection will be made according to the results of the Project Pre-Evaluation Reports. You can access the Pre-Evaluation report template on the website. Teams that move to the second stage as a result of the pre-evaluation will be announced on the date specified in the competition calendar. The points to be considered in the Project Pre-Evaluation Report are as follows:

### **5.2.1. Preliminary Elimination Criteria**

The projects submitted to us in accordance with the principles of application will be subjected to preelimination taking into consideration the following criteria.

**Innovative-Original:** Projects will be checked whether there is any similarity with other projects already implemented.

- Are there similar products or projects?

**Producing a Solution to a Problem / Needs:** We will look at what problem, how and which solution the project idea will produce in society and whether the project idea supports this solution.

- Which problem of society does my project idea solve?
- Does the project produce or contribute a solution to a local, regional or global problem?

### 5.3. Project Detail Report

Teams that move to 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 in which the Project Development processes including Analysis, Design, Development, Test and Application (integration and transition to live activities) are explained in more detail, as well as the Project Budget, Project Plan (project calendar) and Project Scope. You can access the template of the Project Detail Report on the TEKNOFEST website. The teams that qualify for financial support according to the results of the PDR and the teams that qualify for the final will be announced on the date specified in the Competition Calendar.

#### 4.3.1. Project Detail Report Criteria

According to the results of the Project Pre-Evaluation Form, the projects that are eligible to continue after the selection will be evaluated considering the following criteria.

**Innovative-Original:** Projects will be checked whether there is any similarity with other projects already implemented.

- Are there similar products or projects?
- Does it offer a new technology, design or service?
- What distinguishes your project from similar products on the market?

**Producing Solutions to a Problem / Need:** Projects will be checked which problem in the society the project idea will produce and what kind of solution it will support and whether the proposed project idea supports this solution.

- Which problem of society does my project idea solve?
- Why are the current solutions inadequate?
- Does the project produce or contribute a solution to a local or regional problem?

**Method:** We will look at the methods you use when creating a solution that suits your project.

- On which scientific and / or technical applications do you propose a solution? What are their basic principles?



- Is there any visual (2D) and / or prototype of your project?

**Implementability / Applicability:** The possibility of implementation of the project, as much as the national resources will be examined.

- Can the proposed project be transformed into a technological commercial product?

**Estimated Cost:** It will be checked if the estimated cost of the project and whether the least cost is applicable. A time schedule including the design, production and testing processes of the product and budget planning for the production and a list of materials to be used will be prepared.

- How can the project be developed at the lowest costs?
- Have you been informed about which monetary expenditures will be made and in which period according to the project plan?
- Is a cost calculation made for the project? Has a cost comparison been made with similar projects?

**Target Group of Project Idea:** Who will use the project and who will address this project will be checked if it is specified here.

- Who or who is the target audience of the product or process?
- If there is a problem about the product, is the definition of the people who experienced the problem made ?

**Project Team:** It will be checked whether all persons and institutions involved in the project have been identified.

- Who is the project team? Who is the project manager?
- Has planning been made with whom and why to collaborate for the project?

**Risks:** It will be checked whether there are any elements (risks) that will adversely affect the project.

- It will be checked whether the factors (risks) that will adversely affect the project have been identified.
- Are any problems identified during the implementation of the project identified?

Apart from the above items, the Competition Advisory Board can add a different criterion if it deems appropriate. The criteria that can be added will be specified in the report template.

## 5.4 Competition Scoring

The competition score consists of two part. First part of the score is the evaluation of the report and second part of the score is the evaluation of the prototype and visual presentation.

Below are the scoring types and percentages: The score of the report make up %40 of the total point.

Table 2 : Score Distribution of the Report

Score Type	Percentage of Score
Project Pre-Evaluation Form	% 10
Project Detail Report	% 30
Prototype and Presentation Scoring	% 60

### 5.5. Prototype and Presentation Scoring

The projects of the finalist teams will be evaluated by the expert jury teams in the relevant category areas. Visual presentation must be prepared for jury evaluation.

The prototype (first example) is a concrete representation of the product or process that will emerge after the project. This is the most primitive form of the product that will eventually emerge. It may include some screenshots and screen designs that have functionality for a prototype software project, as well as an example made of any material that has functionality in hardware projects.

Making the project using domestic products and basing on original ideas will be taken into consideration while scoring the contestants.

Detailed information about the competition environment requirements, the contestants' showing their prototypes to the jury and the visual presentations will be shared with the finalist teams after the finalist teams are determined.

In the final stage, it is obligatory for the teams to prepare posters for visual presentations, and the information about the poster size and content is made by the TEKNOFEST Competitions Committee in September.

According to the final evaluations, the final ranking of the finalists will be announced on the website <https://www.teknofest.org/> after the TEKNOFEST Competition Final.

### 6. AWARDS

As a result of the evaluation in three stages in the competition, the teams that pass the pre-selection and rank in their own category in the final evaluation will be awarded a monetary award. The awards stated in the table below show the total amount to be awarded to the teams that are entitled to receive awards, no individual awards will be made. The first, second and third prizes will be divided equally according to the total number of Team Members (to all members registered in the System) and will be deposited into the bank account specified by each person. Payment will be made to the advisor of the winning team within the scope of the competition. A payment of 1.000,00 TL will be made to the advisors of our ranked teams.

**Table 3: Amounts of Awards**

Category	Higher Education and Graduates	Advisor
First	20.000,00 ₺	1.000,00 ₺
Second	15.000,00 ₺	1.000,00 ₺
Third	10.000,00 ₺	1.000,00 ₺

### 6.1. Minimum Success Criteria for Award Ranking:

In order to qualify for the prize ranking in the competition, teams must successfully pass the pre-selection. Only those who can get a degree from the teams that can enter the award ranking will be eligible to receive the awards listed in Table 3.

## 7. GENERAL RULES

- □ Teams have the right to object to the concerned judge through their team leaders.
- □ Objections can be made verbally, provided that they are submitted in writing at a later time. Verbal objections must be put in writing within 24 hours. In any case, non-written objections will not be taken into consideration. Objections will be finalized within 72 hours after having examined by the judge panel.
- After the evaluation results are announced, team leaders are required to submit their objections and justifications in writing. Objections must be received from [iletisim@teknofest.org](mailto:iletisim@teknofest.org)
- The appeal process must be made within one week - 7 days - after the results of the competition are announced. Otherwise, the objections are not taken into consideration.
- The role of the advisor; to help students to plan their own education, to guide them in academic, social and cultural issues, to help prepare the appropriate environment for the development of the student's personality as a whole with its mental, social and emotional aspects, etc. tasks and services. The role of the advisor in the team is to provide the academic support that will be needed in the project, to guide the team members to find solutions to their problems.
- The work of ideas that is the subject of the competition is; may produce with member of the team and this idea belongs to the team and the consultant will not be accepted as the owner of the work.
- Our teams that have benefited from the reports of the past years on our website have to include cited phrase after the sentence cited. CITED FORMAT: "Cited Phrase/s (Year, Competition Name, Category, Team Name) EXAMPLE QUOTE: "Failure to determine the location of the earthquake victim in the wreckage is the most important problem that slows down the debris removal and search for the earthquake victim." (2020, Technology For Humanity, Disaster Management, X Team)
- Each contestant is responsible for taking the necessary precautions and showing the expected attention to his/her peers and the environment.

- Turkish Technology Team (T3) Foundation and the organisation committee reserve the right to make any amendments to the specifications in order for the contest to take place in accordance with the specified impartial criteria so that any violations may result in judicial outcomes, to better meet all sortsof requirements by the contestants, to provide necessary safety precautions and to maintain the functionality of the contest specifications.
- Having made the necessary evaluations following the application deadline, T3 Foundation and the organisation committee reserves the right to cancel the contest given that sufficient number of applications is not reached with the required technical knowledge and skills.
- TEKNOFEST Safety and Security Terms and Conditions will be communicated to all contestants, delegations and concerned parties. All competing teams are responsible for observing the safety terms and conditions specific to their respective categories specified in TEKNOFEST Safety and Security Terms and Conditions. In this regard, with the exception of security precautions contained in the aforementioned security instructions, it is the contestants' responsibility to take additional precautions arising from the systems employed.
- T3 Foundation and the organisation committee has the right to exclude any and all teams from the contest who do not fulfill the terms and conditions of TEKNOFEST Safety and Security Terms and Conditions to provide a safe environment for holding the contest. T3 Foundation and organisation officials cannot be held responsible for damages arising from the violation of terms and conditions by the contestants, delegations and concerned parties.
- Regarding the competition, the competitor hereby accepts and consents to any kind of written or visual promotion, publication, social media and internet broadcasting to be made by the T3 Foundation and / or TEKNOFEST before or after the competition. In addition, the competitor agrees and submits that any and all intellectual property generated as pertains to the competition, including but not exclusive to designs, code, and manufactured products, belongs exclusively to the T3 Foundation and / or TEKNOFEST and that the competitor does not have any rights to or demands on these artifacts. T3 reserves the right to disclose all intellectual property thereby for public consumption in a manner it deems fitting.
- In the event that a competitor infringes upon the intellectual property rights of any product, and T3 Foundation and/or TEKNOFEST incur damages, the responsibility for such damages will be borne entirely by the relevant participant(s).
- All teams who qualify to compete in the contest will be given a Participation Certificate.

## 8. ETHICAL RULES

- The legal process will be urgently initiating for the people who performs a situation, action, speech, etc. contrary to social morality in the festival area or during the competition process (report stages, evaluation process, etc.) And team will be banned from all kinds of events and activities of T3 Foundation to participate at least 2 years.
- The issues to be considered in the language used in all communication with the TEKNOFEST Competitions Committee are as follows
  - Rude and impolite words and behaviors must be avoided,
  - Insults, threats and bad words must be avoided,
  - Direct targeting and insulting with social media tools such as E-mail, facebook, skype, messenger, whatsapp, twitter etc. must be avoided,

It is necessary to pay attention to the spelling rules and style in your petitions and objections.

- Situations, verbs, words etc. that will affect the functioning and motivation of other teams in the festival area must not be exhibited.
- Social peace in the dormitory and its surroundings where accommodation services are provided should be taken into consideration. Otherwise, the initiation of the legal process against the person will be carried out by the relevant institutions.
- During the project and product development process, it is the responsibility of the team to back up / store the necessary equipment and materials in advance, taking into account all kinds of negativity, and to change parts in case of a possible negativity. Product supply from another team must not be provided.
- Care should be taken to act in accordance with the service requirements in neutrality, without discrimination of language, religion, philosophical belief, political opinion, race, age and gender, and without giving rise to behaviors and practices that prevent equal opportunity in the festival area and in all kinds of services offered by TEKNOFEST.
- It is necessary to pay attention not to use and use TEKNOFEST and other company-institution-organization goods and resources outside of their purposes and service requirements, and not to waste these goods and resources.
- It is necessary to support the activities carried out in order to facilitate the functioning of the festival, to meet its needs in the most effective, fast and efficient way, to increase the quality of service and to increase festival satisfaction.
- Be careful about all kinds of benefits and financial or other liabilities and similar personal interests provided to themselves, their relatives, friends or the persons or organizations with whom they are in contact and that affect or seem to affect the competitors in the festival area to perform their duties impartially and objectively, to act and take the necessary precautions to avoid conflicts of interest.
- When using TEKNOFEST buildings and vehicles and other public goods and resources, it is necessary to avoid waste, to act effectively, efficiently and economically while using working time, public goods, resources, labor and facilities.
- TEKNOFEST team members must be accountable for their responsibilities and obligations during their execution, and are open and ready for corporate evaluation and supervision, advisors should take the necessary measures to prevent corruption with the actions or actions that are not in line with the goals and policies of their institutions, and train their members on ethical principles of behavior, It should be monitored whether these principles are followed or not and provide guidance on ethical behavior.
- While fulfilling their duties, team members should not make any commitments, promises or attempts binding the institutions they work for, and should not make deceptive and untrue statements.

## **STATEMENT OF LIABILITY**

Turkish Technology Team Foundation and TEKNOFEST are in no way liable for any injury or damage caused by any entry, any entrant, or by the disqualification of an entry. Turkish Technology Team Foundation and TEKNOFEST at large are not responsible for ensuring teams operate their systems within the law of the Turkish Republic. The Turkish Technology Team Foundation and TEKNOFEST, and organisation officials cannot be held responsible for the damages inflicted upon third parties by the contestants.

**Turkish Technology Team Foundation has the right to make any amendments to this terms and conditions.**