



Academia - Industry Cooperation on Autonomous Systems

QNRF- TÜBİTAK Joint Funding Program

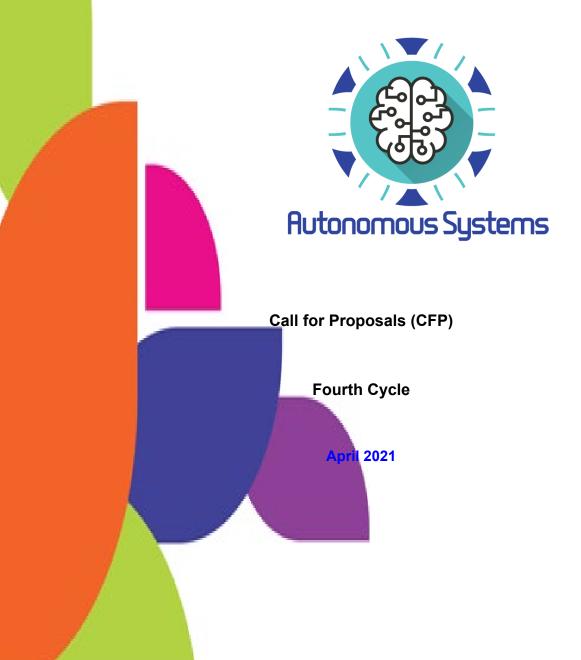


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Section 1. Acronym List

SCOPE	SCOPE		
Submission Opens	28 April 2021 (12pm, Istanbul/Doha time)		
Submission Deadline	 Final date for proposal submission by LPI to TÜBİTAK: 23 August 2021 (5:30pm, Istanbul/Doha time) Final date for proposal submission by LPI to QNRF: 24 August 2021 (12pm, Istanbul/Doha time) Final submission and RO vetting for QNRF: 25 August 2021 (12pm, Istanbul/Doha time) Final date for Turkish partners to finalize the e-signatures: 1 September 2021; 5:30pm istanbul/Doha time 		
Announce ment of Results	January/February 2022		
Anticipated Project Start Date	Project activities can begin only after the Master Research Funding Agreement (MRFA) with QNRF and grant agreement with TÜBITAK and other related agreements have been signed. This process can take up to 60 days from the time of the award announcement and this should be taken into consideration when preparing the implementation timeline of the application.		
Academia- Industry Cooperation Program Objectives	The aim of the call is to intensify cooperation between Turkish and Qatari participants in science and industry by means of Academia-Industry Cooperation projects. The theme of the fourth call is Autonomous Systems . "Academia-Industry Cooperation Projects" are R&D projects, which require the participation of at least one Turkish academic Institution (public research center/higher education institution/training and research hospital) and one Qatar-based academic institution, as well as at least one Turkish industrial partner and one Qatar-based research end-user as submitting and collaborative institutions. This call intends to lay the foundation for a lasting R&D innovation partnership.		
Specific Research Priority Areas	 Proposals are expected to tackle issues related to the technology of autonomous systems and/or their applications within one or more of the following areas: 1- Industry: Oil & gas Manufacturing Construction 2- Utilities: Power grids Water networks Transportation 		

Applicant Eligibility	 The Qatar LPIs must be affiliated to a submitting institution inside Qatar. They are the individuals eligible to apply for a grant. The LPI may collaborate with other research organizations located inside Qatar. An eligible LPI from academic institutions must hold a research-oriented doctorate or any of the approved terminal degrees as defined under the approved list of terminal degrees available at link. An eligible LPI must have a minimum h-index according to the "Research Area" of their AICC04 proposal as described in table1 below. For Qatari national LPI and LPI from research end-user entity, who do not meet the above h-index requirement, must have at least 5 peer-reviewed publications uploaded in his/her profile on Q-Grants). The LPI from a research end-user entity who may not hold a terminal degree, must have a track record in managing technology development projects and/or research projects, and a minimum of five publications or granted patents. 	The Principal Investigator (PI) and Lead Principal Investigator (LPI) from academia are expected to hold PhD. The LPI/PI from public institutions/organizations and private sector are expected to hold at least BA/BSc degree. LPI/PI from private sector must be working in their organization full-time for a minimum of 6 months. Higher education institutions, training and research hospitals, public institutions and organizations (including public research centers, metropolitan/city municipalities), SMEs and large companies established in Turkey, will be supported in accordance with the TÜBİTAK 1071- Capacity to Benefit from International Research Funds and the Support Program for Increasing Participation in International R&D Collaborations.
Awards Parameters	QNRF funds up to US \$200,000 per project per year. The proposal duration is up to three years.	TÜBITAK funds up to four million Turkish Liras per project (excl. overheads and Project Incentive Premium (PIP)) per project. The project duration is up to three years.
Co-funding and cost-sharing parameters	QNRF encourage co-funding/cost-sharing of projects in cash and/or in-kind. For further details, refer to <i>Co-Funding/Cost-Sharing</i> <i>Policy</i> at <u>link</u> .	Cost-sharing: SMEs are expected to contribute %25 of the total budget, Large enterprises are expected to contribute %40- of the total budget Co-funding contribution: Support letter is required for co-funding contributions.
How to Apply	Qatar and Turkey-based LPIs should prepare their joint application offline and each of them should submit it to their respective funding agency. Qatar-based LPI needs to register and submit through www.qgrants.org	For Turkey-based LPI, proposal submission is made using E-Signature via <u>uidb-</u> <u>pbs.tubitak.gov.tr</u> . For E-signature details; please contact <u>ardeb.e-imza@tubitak.gov.tr</u> or visit (Link).
IP Policy	For information on the IP policy, please visit Link.	For information on the IP policy, please visit <u>Link</u> .

	For enquiries, please submit a ticket at	Please contact Nihad Abunasser	at			
Contact	http://support.qnrf.org/index.php?/Tickets/S	uidb@tubitak.gov.tr.				
	<u>ubmit.</u>					

Section 3. Background and Objectives of the Call

<u>QNRF</u> and <u>TÜBİTAK</u> are jointly launching the Academia-Industry Cooperation call with the aim of supporting joint research projects in the areas of application-oriented research and development. The theme of the fourth call is **Autonomous Systems**.

This call aims to enhance Public-Private Partnership in R&D projects by involving academia, research institutions, industrial companies, and research end users with the aim to help both countries enhance the quality of life and support the economy. The objective of this call is to enable RDI activities for a new generation of autonomous systems.

Section 4. Research Priority Areas of this Call

The call's research priority areas are aligned with the national strategies of both countries. Proposals are expected to tackle issues related to the technology of autonomous systems and/or their applications within one or more of the following areas;

4.1 Industry

4.1.1. Oil & Gas

Oil & gas industry faces a demanding business environment. Critical challenges are: 1) cost constraints, 2) health, safety, and security risks, 3) reducing the environmental footprint, 4) remote working areas, and 5) increased subsea infrastructure. Autonomous control throughout all phases of the full value chain (exploration, development, operations, and decommissioning) is needed to meet the above challenges faced by the oil and gas industry.

Applications of autonomous systems in oil and gas domain may contribute to the following tasks: inspection, survey vessels, seismic operations, production support, decommissioning support, data harvesting, environmental monitoring and other relevant tasks.

4.1.2. Manufacturing

Autonomous systems are needed to ensure a safe and secure manufacturing environment and improve the flexibility and efficiency of processes, production data flows, control structures, and functional operations. This will leverage the agility of the new concepts of additive and distributed manufacturing.

Examples include world-class robotics and intelligent autonomous systems for confined space inspection and repair, remote visual monitoring, autonomous warehouse operations, packing and assemblage, autonomous aerial and ground systems, process management/optimization systems, high precision, and accuracy tasks, ... etc.

4.1.3. Construction

Construction is a labor-intensive sector and is frequently plagued with delays, inefficiencies and risks surrounding workers' health and lives. Autonomous systems have the potential to reduce labor costs while improving productivity and quality. They can reduce injuries and free workers from conducting dangerous tasks. However, compared to other industries, the adoption level in construction industry is low. The applicants are encouraged to introduce more robust and market competitive solutions based on autonomous systems.

Examples of applications are: off-site automated prefabrication systems, on-site automated and robotic systems, terrestrial, aerial or nautical autonomous vehicles, smart support/lifting devices ...etc.

4.2. Utilities

4.2.1. Power Grids

Besides the physical assets like generation & transmission infrastructure, the electric grid is an ecosystem of asset owners, clients, manufacturers, service providers, and government officials. All should work together to have a stable and sustainable grid operation.

The applications of innovative autonomous controls can feature in: advanced distribution management system, autonomous grid devices, self-healing efficient grid, smart transactive energy, dynamic billing and tariff system, reliable renewable energy resources, demand response and load management, smart energy-efficient building, ... etc.

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4.2.2. Water Networks

Declining water quality and inefficient distribution system of water networks constitute real challenges due to poor infrastructure, traditional operation methods, and minimal use of technology. Autonomous systems can help in compliance to local regulations, optimize energy use, and reduce prices of sewage discharge.

The applicants are encouraged to work on developing advanced sensors for leakage detection and water-quality monitoring, pollution control, smart flow meters, integrated smart water management, proactive maintenance, interactive network visualization, smart billing systems, non-invasive monitoring and repair, other robotic-assisted activities, ... etc.

4.2.3. Transportation

Transportation sector is the backbone that boosts the national economy and improves the quality of life for society. It should offer residents universal access to safe, seamless transportation. Autonomous system can facilitate mobility of people by ensuring access to safe, accessible, and environment-friendly transportation services for all demographics and providing seamless personalized traveller experience.

Examples of autonomous systems in transportation include autonomous vehicles, shared transportation options, I2V communication, real-time crowd, and traffic management, route optimization ... etc.

Section 5. Scope of the Call

5.1. Funding Available

As a rule, Turkish teams that are eligible for funding can receive up to approximately (4 million Turkish liras (excl. overheads and Project Incentive Premium (PIP)) of funding per proposal in total. The partner(s) from academia cannot get more than the 40% of the total project budget. Turkish small and medium sized enterprises (SMEs) can receive 75% of the approved budget; Turkish large-scale enterprises can receive 60% of the approved budget. Higher education institutions, training and research hospitals, public institutions and organizations (including public research centers, metropolitan/city municipalities) can receive 100% of the approved budget.

The Qatar-based teams from academia and research-end users that are eligible for funding can receive up to US\$ 200,000 per project per year for up to three years. 100% of the proposed QNRF funded portion of the research budget must be spent inside Qatar.

The size of the grant may vary depending of the needs of each project and must be fully justified. TÜBİTAK-funded costs of each grant will be issued and managed by TÜBİTAK according to its funding guidelines and procedures. Similarly, QNRF-funded costs of each grant will be issued and managed by QNRF in accordance with its funding guidelines and procedures. Applicants need to ensure that supported elements of the proposal abide by all regulations for each funding agency.

5.2. Duration of the Project

The duration of the project will be up to three years.

Section 6. Eligibility

6.1. Eligibility of Proposal

6.1.1. It is a prerequisite that proposals include the participation of the below as submitting and collaborative institutions:

- At least one Turkish academic institution (higher education institutions, training and research hospitals, public research centers) and one Qatar-based academic institution.
- At least one Turkish industrial partner and one Qatari research end-user. Research end-user includes any entity (including industry, public bodies, service providers, nonprofit organizations) for which research and development activity is not part of its main mission and that can benefit from the research outcomes of the project.

For Turkish teams, two prerequisites listed above are the minimum conditions for teaming up an eligible consortium. Other public institutions (e.g. metropolitan/city municipalities) are welcome to join the project consortium only after the two prerequisites stated above are fulfilled.

- 6.1.2. The proposal must be within one or more of the specific research priority areas described in Section 4.
- 6.1.3. Turkish and Qatar-based teams must each be led by a Lead Principal Investigator (LPI).

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6.1.4. Each proposal should have a Project Coordinator who will be selected from the LPIs of the proposal and will be responsible for coordinating the application form and progress reports.

6.2. Turkey-based Team

- Eligibility to become principle Investigator, researchers, and consultants:
- 6.2.1. Eligibility to become Lead Principal Investigator (LPI) and Principal Investigator (PI)
- 6.2.1.1. University; must hold a PhD degree (Proficiency in art/specialty in medicine). This rule also applies for employees of training and research hospitals.
- 6.2.1.2. Public or private sector staff; must hold at least a BA/BSc Degree.
- 6.2.1.3. Private sector; LPI/PI must be a full time employee at the project submitting institution and must be working in their organization full-time for a minimum of 6 months.

6.2.2. Researchers and Consultants

- 6.2.2.1. Researchers and consultants must hold at least a BA/BSc Degree.
- 6.2.2.2. Overseas researchers cannot be appointed to the Turkish project team under this call.

6.2.3. Scholarship Students

Undergraduate and postgraduate students continuing their education in higher education institutions in Turkey or "Research/Teaching Assistants" with student status and postdoctoral researchers can take a role in the project team as scholarship students.

For more information, please refer to national rules document on the link.

6.3. Qatar-based Team

6.3.1. Eligibility of Submitting Institution

- 6.3.1.1. Institutions inside Qatar with approved Research Offices (ROs) (see definition at <u>link</u>) are eligible to submit proposals. See submitting institution (see definition at <u>link</u>) and RO roles in the *Institution's Responsibilities and Post-Award* document available at <u>link</u>.
- 6.3.1.2. Submissions should be within the research area(s) of the submitting institutions, as declared by the approved ROs.
- 6.3.1.3. Authorized Research Office Representatives (ARORs) and other members of the RO are not eligible to participate in any project under this call.

6.3.2. Eligibility of Lead Principal Investigators (LPIs)

- 6.3.2.1 The LPI must be affiliated with a submitting institution inside Qatar. They are eligible to apply for one AICC proposal per cycle. The LPI may collaborate with other research entities, located inside Qatar.
- 6.3.2.1 The LPI from academic institutions must hold a research-oriented doctorate or any of the approved terminal degrees as defined under the approved list of terminal degrees, which is available at <u>link</u>.
- 6.3.2.1 An eligible LPI must have a minimum h-index according to the **Research Area** of their AICC proposal as described in the table below:

Research Area	H-index
1. Natural Sciences	10
2. Engineering and Technology	10
3. Medical and Health Sciences	10
4. Agricultural Sciences	5
5. Social Sciences	5
6. Humanities	5

Table 1: Required H-index per Research Area

6.3.2.1 For Qatari national LPIs and LPIs from research end-user entity (see definition at <u>link</u>), who do not meet the above h-index requirement, they must have at least five peer-reviewed publications uploaded in their profile on Q-Grants).

Types of publications accepted by QNRF include journal papers, full paper conference proceedings, books, book chapters or patents by the LPI. In addition, QNRF accepts peer-reviewed creative works that cover the following research areas: performing arts, visual arts, creative writing, design works, and communication media. These creative works are only accepted when the LPI provides an **attestation letter** from the LPI's affiliated institution, indicating that these particular creative works (see definition at <u>link</u>) are acceptable research outcomes.

- 6.3.2.1 For research end-user LPIs who do not hold a terminal degree or meet the above h-index requirement, they must have a track record in managing research/development projects, and a minimum of five items of any of the following; publications, peer reviewed technical reports, or authored patent applications/patents.
- 6.3.2.1 Postdoctoral scholars and ECRA awardees are not eligible to act as LPIs in AICC calls (see definition at <u>link</u>).
- 6.3.2.1 LPI must be registered in the QNRF online system on <u>link</u>.

6.3.3. Research team

6.3.3.1 Principal Investigators (PIs)

- 6.3.3.1.1 A PI must be affiliated with a submitting institution in Qatar or a collaborative institution in Qatar (see definition at <u>link</u>).
- 6.3.3.1.2 An eligible PI must hold at least a university postgraduate degree and should have a suitable research experience relevant to the area of the proposal and the tasks assigned to them.
- 6.3.3.1.3 PI must be registered in the QNRF online system on <u>link</u>.
- 6.3.3.1.4 A postdoctoral scholar or ECRA awardee is not eligible to act as a PI (see definition at link).

6.3.3.2 Other Research Team Members

Postdoctoral scholars, graduate students, research associates, research assistants, undergraduate students, lab technicians, and engineers are considered research team members. LPIs are required to recruit/hire local GS and PD such as GS and PD through GSRA and PDRA programs. Also, QNRF encourages the applicants to hire QRLP (Qatar Research Leadership Program) graduates and candidates, and GSs from Qatar. The QRLP members will be at zero cost. The LPI can find Information about QRLP members, in addition to other QNRF awarded researchers, through QNRF Researcher Network (QRN) (Section 19). (see definitions of the research team members at <u>link</u>).

6.3.3.3 Graduate Students

A graduate student (GS) are permitted to participate in this CFP project provided that they are enrolled in a higher education degree program at the submitting or collaborating institution and that the indicated research activities are related to the GS's degree program.

6.3.3.4 Undergraduate Students

If necessary, the LPI may include undergraduate students as research team members under the "Undergraduate Student" roles on the QNRF online submission website, provided that their participation complies with their institution's policies.

6.3.3.5 Consultants

If the need for consultant (see definition at <u>link</u>) services is anticipated, the nature of the proposed consultant services must be justified and included in the proposal. The consultant services cannot be considered as scientific or intellectual contribution to the project. Consultants must not conduct research, analyze, or report its results. Consultants who are added to the project will not be compensated from the AICC research call funds.

6.4. Number of Roles

6.4.1 The Qatar-based LPI can submit only one application in the current cycle.

6.4.2. For the Qatar-based team, the count of an individual's participation in all on-going projects in the calls under the Thematic and Grand Challenges Program, available at <u>https://www.qnrf.org/en-us/Funding/Research-Programs/Thematic-and-Grand-Challenges-Research-Program</u>, as a key investigator (KI) (see definition at <u>link</u>) must not exceed three roles, excluding participation in projects ending before **1**st **December 2021**.

6.4.3. For the Turkey-based team, LPI, PIs and other team members can participate with an unlimited number of applications.

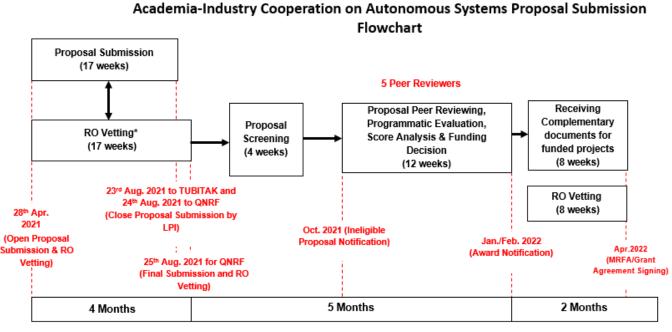
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Section 7. Submission Process

7.1. Proposal Submission Flowchart and Timeline

7.1.1. Flowchart

The following flowchart illustrates the steps necessary for proposal submission by the LPIs.



Proposal Preparation & RO Vetting*

Internal Processing

Pre-Funding Phase

7.1.2. Timeline

The following table shows important dates for the call.

Timeline For Academia-Industry Cooperation on Autonomous Systems		
Description	Dates	
Open proposal submission to QNRF and TÜBİTAK and RO vetting* process	28 April 2021 (12pm noon, Istanbul/Doha time)	
Close proposal submission by the Turkey-Based LPI to TÜBİTAK	23 August 2021 (5.30pm , Istanbul/Doha time)	
Close proposal submission by the Qatar-based LPI to QNRF	24 August 2021 (12pm noon, Istanbul/Doha time)	
RO final proposal submission and vetting by the Qatar- based team to QNRF	25 August 2021 (12pm noon, Istanbul/Doha time)	
Notifying ineligible proposals	October 2021	
Awards announcement	January/February 2022	

*RO vetting (see definition at link) for the Qatar-based team only.

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Section 8. Budget

8.1. Grant and Effort Allocation for the Turkish Team

8.1.1. Budget items to be funded by TÜBİTAK are as follows:

Eligible costs are:

- 8.1.1.1. Personnel Expenses (For the personnel expenses of **private sector**, the provisions of <u>TÜBİTAK 1007</u> are valid).
- 8.1.1.2. Consumable Expenses.
- 8.1.1.3. Travel Expenses (The sending party will meet all related costs connected with travel, lodging, and allowances according to their own regulation).
- 8.1.1.4. Service Procurement Expenses (Consultancy and service purchase expenses from national and international project partners are not supported).
- 8.1.1.5. Tools and Equipment Expenses.

A balanced distribution between the project budget items is required.

For more information please visit Link

8.2. Grant and Effort Allocation for the Qatar-based Team

- 8.2.1. 100% of the proposed funded research effort must be conducted inside Qatar by the Qatar-based research team and 100% of the total annual budget must be spent inside Qatar.
- 8.2.2. Indirect cost (see definition at <u>link</u>) shall not exceed a total of 10% of the project's annual direct cost (see definition at <u>link</u>).

For more budget details for the Qatar-based team, please refer to the *Budget Components* document available at <u>link</u>.

8.3. Co-funding and cost-sharing Rules for the Qatar-based Team

For the Qatar-based team, co-funding and cost-sharing (see definition at <u>link</u>), especially, by end-users is highly encouraged as it is seen as an evidence of the interest of stakeholders and end-users and of their engagement. The relevance of the co-funders/cost-sharers and the level of the co-funding will be evaluated as part of the programmatic review. Applicants are requested to comply with QNRF's co-funding and cost-sharing policy at <u>link</u>.

Section 9. Online Submission Procedures

A project coordinator needs to be identified among either LPIs and they will be responsible for coordinating the application form and the progress reports. Turkish and Qatari applicants should prepare their joint application offline. Each LPI will submit it online to their respective funding agencies. LPIs must ensure that the information in the application form is matching the information entered on QNRF and TÜBİTAK submission systems and that the application form files submitted to QNRF and TÜBİTAK are matching.

The Turkey-based LPI needs to submit the joint application to TÜBİTAK through <u>http://uidb-pbs.tubitak.gov.tr.</u> The Qatar-based LPI needs to be registered and submit the joint application to QNRF through <u>https://oss.qgrants.org/</u>.

9.1. Application Procedures

During proposal preparation, LPIs must select one of the two types of applications stated below:

9.1.1. New

- 9.1.1.1. LPI must select "New" application, if it is the first time that the application is submitted for funding.
- 9.1.1.2. New application may also include proposals that did not pass screening in previous cycles.
- 9.1.2. Resubmission
- 9.1.2.1. Proposals which passed screening but were not awarded are allowed to be resubmitted <u>in the subsequent</u> <u>cycle</u>. Such proposals should be flagged as a **Resubmission**. A proposal can be resubmitted once only.
- 9.1.2.2. Previous proposals that have passed screening but were not awarded and are being resubmitted as **New** proposals will be disqualified during the screening.

9.2. The supporting documents for the Turkish applicants are listed below:

For the supporting documents for the Turkish applicants please visit the Link.

9.3. The Qatar-based LPI is required to provide the below:

- 9.3.1. The online application, submitted by the LPI, must be vetted by the Research Office (RO) of the submitting institution in order to be considered as an official submission to QNRF. RO vetting must be completed in accordance with the timeline (section 7.1.1), and the RO responsibilities at <u>link.</u>
- 9.3.2. The Qatar-based LPIs and PIs need to be registered with QNRF and update their profile prior to submitting the application.
- 9.3.3. After registration, the LPI is required to register the proposal via the following website: <u>https://www.qgrants.org/</u>.
- 9.3.4. An applicant is required to use their official work email addresses (if available) when registering. Those who have previously registered do not need to re-register, but will need to update their profile and CV as applicable. Applicants who register with two different emails will be disqualified.
- 9.3.5. Each LPI must add all available 'researcher profiles' link(s) to Q-Grants under 'profile' section where QNRF team can add the h-index accordingly. Qatari national LPI or LPI from research end-user is required to upload a minimum of five peer-reviewed publications. Research end-users LPIs may include patent applications. Applicants from a research end-user entity who do not hold a terminal degree should request an approval from QNRF to act as LPI through the online system.
- 9.3.6. Consultants are required to register and upload their CVs, stating their affiliation.
- 9.3.7. For the requirements regarding online registration and submission, please refer to the *Grant Application Guide* (GAG) at <u>link</u>. (see definitions at <u>link</u>)
- 9.3.8. The LPI may use the **Comments to QNRF** box to designate persons they would prefer not to review the proposal and should indicate why. The decision to follow the suggestions or not, however, remains with QNRF. The LPI may also utilize the Comments to QNRF box for any other issues they need to declare before submission. The LPI should also identify any research work that they have conducted/are conducting which is similar to the proposal and explain how the latter is distinct.
- 9.3.9. During the **Proposal Preparation**, the LPI has to submit the information according to the online sections listed below as well as upload documents as required. The LPI must ensure to enter and upload the same information submitted by the Turkish LPI to TÜBİTAK submission system.
- 9.3.9.1. **Proposal Summary:** This should be the same as the proposal abstract/summary used in the application form.
- 9.3.9.2. **Submitting Institution's Information:** A research institution registered inside Qatar that has appropriate research resources specialized in area(s) within QNRS and is responsible for submitting research proposals to QNRF. The LPI's institution in Qatar will be considered as the submitting institution and will be responsible for vetting the proposal.
- 9.3.9.3. **Collaborative Institutions' Information:** Institutions inside Qatar, collaborating with the submitting institution in conducting the research proposal (see definitions at <u>link</u>). If collaborative institutions are involved in the proposal, the LPI should enter the required information for each institution, including uploading an official support letter at <u>Link</u>. The collaborative institution must include at least one PI.

9.3.9.4. Personnel:

- **Research Team:** The LPI can nominate research team members (see definitions at <u>link</u>) from the submitting and collaborating institutions. Pls are required to be registered in order to be added to the proposal submission. The system will request the Pls to update their profiles with all required documentation/information, including those related to effort, in order to be added to the proposal.
- **Consultant:** The LPI lists the consultants for the project. Consultants (see definitions at <u>link</u>) must be registered in order to be added to the proposal.
- 9.3.9.5. **Research Plan:** The LPI should prepare the application form file according to the template available at <u>link</u>. Please ensure to upload the same joint application form submitted online by the Turkish LPI to TÜBİTAK.
- 9.3.9.6. **Turkish Collaborator:** Insert the information about the Turkish LPI and PI(s).

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- 9.3.9.7. **Co-Funding/cost-sharing:** In case of co-funding or cost-sharing, the LPI is required to provide justification, the total amount of co-funding, including the expected structure of contributions and upload a commitment letter from the co-funder(s)/cost-sharer signed by a dean or equivalent. The template is available at <u>link</u>.
- 9.3.9.8. **Ethical Compliance:** For research involving human subject(s), stem cells in human subject(s), research with laboratory animals, DNA research and biohazards materials, the LPI is required to comply with the regulations and policies set out by the Ministry of Public Health Qatar (MoPH) for the protection of human subjects and laboratory animals.
- 9.3.9.9. **IP/Market:** In this section, there are some questions related to Intellectual Property that need to be addressed by the LPI.
- 9.3.9.10. **Miscellaneous Documents:** This section may contain any supporting documents such as tables, appendices, etc. Documents wrongly uploaded under this section will not be considered. All the information required for the evaluation process should be included in the Research Plan.
- 9.3.9.11. **Declarations:** The LPI should declare electronically that the proposal is their own work, except where appropriately referenced and that the proposal has not and will not be submitted in whole, or in part, for funding twice within the same cycle, or to other funding programs within QNRF, or other funding agencies.

Section 10. Proposal Screening

All submitted proposals are subject to screening for the Qatar-based team by QNRF which entails screening of eligibility, research plan, letters, etc. For more details, please refer to the screening process and criteria outlined at <u>link</u>. All submitted proposals are subject to screening for the Turkish team by TÜBİTAK according to their national rules.

Section 11. Proposal Evaluation

11.1. Proposal Review and Ranking

The proposal review and ranking process comprises a number of assessment steps that first include peer review by external reviewers, followed by a joint expert panel to perform a programmatic review. The process is detailed below.

11.1.1. Peer Review

Five qualified, peer reviewers are going to evaluate each proposal according to the criteria listed below. The reviewers will evaluate and score the proposals, make funding recommendations, and provide written feedback.

The proposals will be reviewed according to a set of evaluation criteria listed below. Details of each criteria are listed in **Annex I**.

- Scientific and technological excellence (40%)
- Project feasibility (20%)
- Relevance and caliber of the project team and institutions (20%)
- Impact of the project (20%)
- Appropriateness of the project's expenses will also be evaluated, but not scored, in order to determine the possible funding to be approved by the funding agencies.

11.1.2. Programmatic Review Panel

Following the peer-review evaluation, top-scoring proposals will be shortlisted based on the shortlisting procedure and the weightages above. Subsequently, a QNRF/TÜBİTAK joint expert panel will perform a programmatic review. The programmatic review is designed to assess and compare all proposals in a given specific research priority area. It takes into account the peer reviewers' comments and strategic goals of QNRF/TÜBİTAK related, but not limited to:

- The strength of the alignment with the priority themes as identified in this CFP
- Effectiveness of the project to advance knowledge, transfer technology and build capacity
- The quality and importance of local and bilateral collaboration
- The potential impact on Qatar and Turkey and the broader commercial market and TRL (if applicable)
- Quality of co-funding/cost sharing and engagement of end-users
- Previous Funding

• The composition of the team in terms of complementarity, experience and past performance Details of each criteria are listed in **Annex I**.

The panel provides QNRF and TÜBİTAK with a ranking list of proposals. The ranking list will be divided into four categories that are "Highly Competitive," "Competitive," and "Not Competitive" as shown in the table below.

	Group	Evaluation Outcome	Description
Shortlisted – Programmatic Review	A	Highly Competitive	The proposal was evaluated to be an excellent project during the review process (with minor to negligible weaknesses) and is, therefore, considered "highly competitive" for funding. (Funding decisions are based on the available budget).
	в	Competitive	The proposal was evaluated to be a very good project during the review process (with moderate to minor weaknesses) and is, therefore, considered "competitive" for funding. (Funding decisions are based on the available budget).
	с	Not Competitive	The proposal was considered "not competitive" for funding due to moderate to significant weaknesses identified by the review process.
Not shortlisted	D	Not Competitive	The proposal was not shortlisted and is considered "not competitive" for funding due to significant weaknesses or shortcomings identified by the review process.

11.1.3. Joint Funding Decisions

At the end of the review and ranking processes, proposals to be funded will be selected jointly by QNRF's and TÜBİTAK's management after considering their national strategies and priorities.

After the review and ranking processes, proposals are categorized in terms of their competitiveness. The final funding decision will group proposals as shown in the table above.

Section 12. Pre-Funding

- 12.1. Awarded proposals will go through a pre-funding stage, which starts after the announcement of results and continues for approximately eight weeks. During the pre-funding period, the awarded institution will be notified about the requirements (possible budget reduction, budget details, timeline changes, etc.) and the duration allocated to complete these requirements on the system.
- 12.2. During the pre-funding phase, the Qatar-based LPI should submit the data management plan as per the Data Management Policy available at <u>link</u>.
- 12.3. For each awarded proposal, QNRF will sign the Master Research Funding Agreement with the RO of the submitting institution for the Qatar-based team. TÜBİTAK will sign the agreement with the Turkish submitting institution for the Turkey- based team.
- 12.4. For Qatar-based team, please see more information on the pre-funding stage in the *Institutions Responsibilities and Post Award* document available at <u>link</u>.

Section 13. Post-Award

13.1. The project coordinator of each project needs to provide the Consortium Agreement to QNRF and TÜBİTAK once the project is awarded and within the first six months of the project start date.

- 13.2. The project coordinator of each project has to prepare financial and scientific/technical progress reports to be submitted to both QNRF and TÜBİTAK.
- 13.3. For the rules and regulations related to pre-funding, fund management, payment schedule and reporting for the Qatar-based team, please refer to the institutions' responsibilities and post award document available at <u>link</u>.
- 13.4. The projects will be monitored through progress reports and the final report by both TÜBİTAK and QNRF for its content and progress.

Section 14. Research Ethics and Regulatory Requirements

- 14.1. For the Qatar-based team, the proposed research must meet all the requirements outlined by Qatar's Ministry of Public Health' policies for the protection of human subjects from research risks and data and safety monitoring (when applicable). Please refer to the *Research Ethics and Regulatory Requirements* document available at <u>link</u>.
- 14.2. For the Turkish team, please refer to the Ethics Committee Approval Document, Official Permission Document and Research and Publication Ethics Committee Regulation as you can find on the links (Link 1) (Link 2).

Section 15. Research Integrity

For further information regarding research integrity and other related policies, please see the *Research Ethics Guide* (REG) at Link.

Section 16. Intellectual Property Policy

QNRF will follow the Qatar Foundation (QF) IP policy. Please consult the QNRF website for details on the applicable intellectual property policy at <u>http://www.qnrf.org/en-us/Funding/IP-Policy</u>. TÜBİTAK IP policy concerning this call is available at <u>Link</u>

16.1. Obligations of QF Awardees

QF Awardees agree to promptly disclose all results produced by them to industry, development and knowledge transfer (IDKT) in accordance with QF procedures. This includes properly disclosing to IDKTT any intellectual property with sufficient technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, and operation of the Intellectual Property. The disclosure can also be related to inventions and/ or any other type of outcomes.

16.2. Protection, Management and Exploitation of Jointly Owned Results

In the event that Intellectual Property has been jointly created by TÜBİTAK beneficiary(ies) and QF, the joint owners shall enter into an Intellectual Property Management Agreement, which shall govern how the jointly owned results will be protected, managed, and exploited.

Section 17. QNRF Data Management Plan Policy

This policy supports the development of a robust environment for the sustainable management, use and reuse of QNRF funded research data in collaboration with Qatar National Library (QNL).

QNRF recognizes the importance of data management to protect its investment in research and development by ensuring that research data are findable, accessible, interoperable, reusable (FAIR) which will:

- 1) expedite the scientific process;
- 2) reduce duplication of effort;
- 3) support reproducibility and research integrity;
- 4) optimize availability and reuse of research outputs; and
- 5) facilitate the preservation of the scholarly record of Qatar.

LPIs of the awarded projects should submit the data management plan (see definition at <u>link</u>) during the pre-funding phase according to the templates that will be available on QNRF website. The Data Management Plan Policy is available at <u>Link</u>.

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Section 18. Inquiries

For any inquiry regarding the Turkish team and the electronic proposal submission process, please send an email to <u>uidb@tubitak.gov.tr</u>.

For any inquiry regarding the Qatar-based team, please use QNRF's **Support link** at <u>https://qnrf.kayako.com/conversation/new.</u>

Section 19. QNRF Research Support Resources

This section describes a number of available research support resources whether within QNRF or inside Qatar. For more details, please refer to the **Research Support Resources** at <u>link</u>.

These resources include but not limited to:

- Qatar Biobank (QBB) data and samples
- Asset management (for available equipment)
- QNRF Researcher Network (QRN)
- QNRF awarded projects

Annex I: Evaluation Criteria and Scores

A. Peer Review Evaluation Criteria

1. Scientific and Technological Excellence (Maximum Score 40)

- Presentation of the project proposal with concrete/measurable targets, outputs and solution suggestions.
- Literature/patent researches made.
- Technical feasibility studies and determination of the standards/conditions to be followed for the project output made during the project preparation.
- Originality and innovative nature of the project and relationship to the "state of art" of research in the field.
- Inventive conceptual/theoretical contributions to the related scientific/technological areas
- Feasibility of the scientific approach.
- Innovation level of the project output in the international market.
- Research and technological quality including inter-disciplinary and multi-disciplinary aspects.
- Level of technical challenge of the proposal.
- Use of a technology that is critical to the first-ever development of an industry, product, process in Qatar & Turkey.
- Strategic priority of the technology that is to be used in the project for the country.
- Distribution of the original contribution of the consortium components to the R&D and technical/technological content of the project.

2. Project feasibility (Maximum Score 20)

- Feasibility and suitability of the methodology to achieve the project goals.
- Feasibility and suitability of the work packages defined to achieve the goals of the project.
- Suitability of time intervals and durations of work packages with the goals of the proposal.
- Suitability of the person in charge for each work package.
- Feasibility of risk management plan for critical risks, relating to project implementation.
- Feasibility of risk management plan for critical risks, relating to budget.
- Quality and sufficiency of infrastructure/facilities to conduct the project.

3. Relevance and calibre of the project team and institutions (20)

- The calibres of the research team members.
- The qualification to the designated roles in the research plan.
- The LPI's capability to coordinate and manage the project and the research teams.
- The appropriateness institution research facilities to the proposed research activities.

4. Impact of the Project (Maximum Score 20)

- Accumulation of knowledge to be gained through the project's outputs.
- Potential to increase high-quality employment in Qatar & Turkey.
- Impact of the project output on the competitiveness of the industrial partner and productivity growth.
- Potential for economic return.
- Adequacy of market research and economic feasibility.
- Potential of the project to reduce the external dependency of Qatar & Turkey in the field.
- Anticipation of the risks and sufficiency of measures taken against them to execute the project and commercialize the targeted output.
- Potential of the project's output to create a new market or use area.

- Potential of the project's output to provide efficiency-productivity growth and cost decrease to the industrial partner.
- Potential of the project's output to be patented.
- Potential of the project to trigger new R&D projects.
- Potential to create sociocultural benefits.
- Positive effects of project on the environment.

5. Appropriateness of Project Expenses

- The appropriateness of person-month rates and total person-month value, taking into account the competence of the staff and the current workload.
- Travel expenses (those directly related to R&D activities should be indicated).
- Device / Equipment / Software / Publication Purchases.
- Activities handled by National R&D Institutions (content, relation with the project, budget, preliminary contact with the related institution, whether or not a contract has been made, repetition, as well as the obligation of obtaining foreign consultancy and services and affordability with domestic facilities etc. should be taken into consideration.).
- Consultancy services and other service procurements (content of project consultancy and service procurement and contributions to the project should be examined).
- Appropriateness of material purchases and quantities for project R&D work.
- Patent expenditures.
- If you are interested in improving the quality of the project's R&D, in deepening the scientific and technological dimension, and in increasing the effectiveness of the project, please indicate your suggestions. In case you deem necessary, you can also inform the partners about your suggestions.

B. Programmatic Review Criteria

1. The strength of the alignment with the priority themes as identified in this CFP

- The degree with which the topic of the research aligns to the themes of the call.
- The scope of coverage of the various themes of the call by the proposed topic and activities of the project.

2. Effectiveness of the project to advance knowledge, transfer technology and build capacity

- Potential to create, advance knowledge in the field and to transfer technology to the Qatar and Turkey.
- Potential to train students and other research staff.
- Potential to help advance the careers of the research team.
- Potential to establish or support relevant institutions or infrastructure.
- Potential to enhance the standing of the collaborating academic and industrial institutions.

3. The quality and importance of local and bilateral collaboration

- The extent of knowledge-creation inside Qatar/Turkey and of knowledge-transfer and potential for technology-transfer to Qatar/Turkey.
- The quality and extent of collaboration among researchers inside Qatar/Turkey and between the two countries.

4. The potential impact on Qatar and Turkey, the broader commercial market and TRL (if applicable)

- The relevance of the project to development in Qatar and Turkey with respect to industrial development; socio-economic, health, and environmental aspects; ability to address end-user needs.
- Potential to create positive international scientific visibility for Qatar and Turkey.
- The extent to which the project provides long term solutions addressing research needs of end-users in Qatar and Turkey.

5. The Quality of the co-funding/cost sharing and engagement of end-users

- Appropriateness of the budget as related to the objectives of the project
- If relevant, the quality level of involvement of research end-users, their capacity to utilize the research outcomes and their ability to benefit from them.
- If applicable, the quality, quantity, and relevance of any co-funding commitments.

6. Previous Funding

• Previous funding by the two agencies of the proposed topic of the project.

7. The composition of the team in terms of complementarity, experience and past performance

- Competence, experience and complementarity of the research team and their degree of coverage of the technical areas of the project.
- Past performance of the research team in their respective areas.
- Relevance of the industrial and other collaborators to the topic of the project.

Annex II: Definitions

Consortium Agreement: An agreement that participants conclude between themselves for the implementation of the project. It allows the participants to determine the detailed administrative and management provisions necessary to carry out their project. With this agreement, parties also outline the rights and responsibilities of each member of the consortium concerning intellectual property. This agreement cannot contradict or negate the provisions established by the project contracts and regulations of TÜBİTAK and QNRF.

Co-Funding: The mechanism through which Third-Party institutions contribute in cash or in-kind funding to a project.

Cost-Sharing: The mechanism through which any of the participating institutions (submitting and/or Collaborativecollaborative institution(s)) contribute in cash or in-kind funding to a project.

Grant: Term used to describe the funding instrument used by TÜBİTAK/QNRF for the execution of material support after signing the Grant Agreement/Master Research Funding Agreement.

Intellectual Property (IP): All intellectual property rights, of any kind or nature throughout the world, whether existing now or in the future, including without limitation the rights with respect to (i) inventions (whether or not patentable and whether or not reduced to practice), designs, patents and patent applications; (ii) trademarks and service marks together with all goodwill associated therewith and worldwide registrations, applications, and renewals related thereto; (iii) copyrights, copyrightable works (in whatever form or medium), and all registrations, applications, and renewals for any of the foregoing; (iv) trade secrets, data, database rights, and confidential information; and (v) all claims, causes of action, and remedies of any kind related to the foregoing.

Lead Principal Investigator (LPI): The Principal Investigator who is identified in the research proposal as the leader and manager of the research team in each country and who has the ultimate responsibility for all administrative and programmatic aspects of the proposed project, in addition to their research role.

Project(s): General term used to describe individual grant awards made to the principal investigators by QNRF and TÜBİTAK.

Principal Investigator (PI): The person designated on the research proposal as a principal individual involved in the scientific development and execution of a project.

The Project Consortium: It represents the whole project and is composed of project Research Teams (RT) from both countries.

Project Coordinator (PC): The person who coordinates the whole consortium. PCs are selected from among the LPIs of any project's research teams.

Project Incentive Premium (PIP): Payments made by TÜBİTAK to principal investigators, researchers, and consultants of the accepted projects, according to the amount determined in the project contract. These payments can only be made to permanent staff of universities/public institutions.

Researcher: The person who carries out scientific research as a part of the project research team.

Research End-User: Any entity (including industry, public bodies, service providers, non-profit organizations) that does not have research and development activities as part of its main mission and that can benefit from the research outcome of the project.

Research Team (RT): It is composed of project members from each country's project.

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Work Package: A major subdivision of work within the research project as a whole. The work package may be composed of one of several tasks (for example, project coordination, literature survey, experimental phase, data acquisition phase, data treatment of modeling phase, implementation phase, dissemination of results and so on).

QNRF Specific Definitions:

For definitions specific to QNRF, see definition at Link.