Project description for proposals to Quantum Austria

1st Call 2022

Version 2.6; November 2021

|  |  |
| --- | --- |
| **RTI Initiative:** | *<Name of RTI-Initiative>* |
| **Full title of the project:** | *(max.* *120 digits)* |
| **Short title of the project:** | *(max. 20 digits)* |
| **Applicant:** | *Name of the leading organisation*  |
| **Project partner(s):** | *Name of partner organisation(s)*  |
| **Priority call topic covered:** | [x]  Call topic 1 (R&D co-operation and R&D infrastructure)[x]  R&D project[ ]  Interface quantum computer and HPC-infrastructure |
| **Research category:** | [ ]  Industrial Research (IR)[ ]  Experimental Development (ED) |
| **Project duration:** | * From [MM.YY]
* Duration in months (max. 36)(End date before 31/12/2025)
 |
| **Costs:** | * Total costs [€]:
* Total funding [€] (max. 2 Mio)
 |
| PROJECT GOALS: |  |

# General aspects

\_

## Checklist for Submission

The information provided in Chapter 1.1 to chapter 1.2 is designed to help you in your submission and can be deleted in the final Project Description to be uploaded as an attachment via eCall.

### Checklist for formal check

The formal check serves to check the application for formal correctness and completeness. Please note: **If the formal requirements are not met and the deficiencies cannot be corrected, the proposal will be excluded from the further procedure and will be formally rejected without exception in accordance with the principle of equal treatment of applications.**

Table 1: Checklist for formal check “Completeness of the project description”

| **Criterion** | **Items checked** | **Can deficiency be corrected?** | **Consequence** |
| --- | --- | --- | --- |
| Use of correct form (Instrument in eCall is consistent with project description)  | Project Description (see. [Downloadcenter](https://www.ffg.at/quantum-austria/1-ausschreibung)) | *No* | Rejection as result of formal check |
| Completeness of the application and use of the right language | Project Description: descriptive part of proposal (upload as .pdf file)The Project Description form must be completed; Please do not change headings!Language: English | *No* | Rejection as result of formal check |
| Attachments to eCall project data (upload as .pdf file) | Declaration of SME status for associations, start-ups, sole traders and non-Austrian companies | *yes* | Rectification via eCall is possible |
| Uploads to eCall master data (upload as .pdf file) | Annual accounts (balance sheet, profit and loss account) of the last 2 financial years have been submitted. For start-ups a business plan has to be provided. | *yes* | Rectification via eCall is possible |

Table 2: Checklist for formal check “Eligibility”

| **Criterion** | **Items checked** | **Can deficiency be corrected?** | **Consequence** |
| --- | --- | --- | --- |
| The applicant and project partners are eligible for submission of a proposal. | See guidelines for Cooperative R&D-Projects, chapter 2.4 “Who is eligible to receive funding?” | *No* | Rejection as result of formal check |
| Minimum requirements of consortium | See guidelines for Cooperative R&D-Projects, chapter 2.2 “What demands are placed on the consortium?” | *No* | Rejection as result of formal check |
| Duration | Max. 36 months | *No* | Rejection as result of formal check |
| Funding amount | Total funding amount requested must not exceed EUR 2 million | *No* | Rejection as result of formal check |

### General points

* Adhere to the questions. Questions, comments and notes marked in blue in the form may be overwritten or deleted
* Please make sure, that the information provided in this form corresponds to the information in the eCall-system. In case of differences, the information provided in the eCall-system is binding.
* Describe your project in sufficient detail for reviewers to form an accurate impression of your planned project. Try to keep your text precise and to the point.
* The maximum number of pages is NOT a request to reach this limit. Applications should enable the reviewers to understand the topic and the benefits resulting from the proposed project. Quality is more important than quantity.
* Please refer to the Call Guidelines for further information about thematic requirements and goals.
* In the event of any questions please refer to your contact person at the FFG (contact information is available in the call announcement).

## Submission

Project proposals may only be submitted electronically via [eCall-system](https://ecall.ffg.at/) of the FFG within the submission deadline. Please see the detailed [eCall tutorial](https://ecall.ffg.at/Cockpit/Tutorial-Hilfe) for further information.

The main proposal may only be submitted if all partners have previously completed and submitted their partner proposals via eCall.

A project proposal is considered to have been submitted if the eCall application has been finalised by clicking the “Submit“ (“Einreichung abschicken”) button. On successful submission, a confirmation will be sent by e-mail. It is not possible to resubmit the proposal or parts of it or to revise the proposal after the submission deadline.

In the event of any questions about eCall please refer to your contact person at the FFG (contact information is available in the call announcement). It is NOT required to send a duly signed copy of the proposal submitted online.

All proposals submitted will only be made available to the persons involved in the administration of the call. All these persons are subject to strict confidentiality. In particular, the national and international experts who take part in the evaluation procedure must sign a declaration of confidentiality before they start their work.

Table 3: Submission deadline

|  |
| --- |
| **Submission deadline:****Proposals for funding must be received via eCallby 12:00 noon on 27.04.2022!** |

Contents

[1 General aspects 2](#_Toc90472928)

[1.1 Checklist for Submission 2](#_Toc90472929)

[1.1.1 Checklist for formal check 2](#_Toc90472930)

[1.1.2 General points 3](#_Toc90472931)

[1.2 Submission 4](#_Toc90472932)

[Kurzfassung 6](#_Toc90472933)

[Abstract 7](#_Toc90472934)

[2 Quality of the project 8](#_Toc90472935)

[2.1 State of the art – current level of technology/knowledge 8](#_Toc90472936)

[2.1.1 Results from other projects 8](#_Toc90472937)

[2.2 Degree of Innovation 10](#_Toc90472938)

[2.2.1 Problem and research need 10](#_Toc90472939)

[2.2.2 Goals 10](#_Toc90472940)

[2.2.3 Degree of innovation and associated risk 10](#_Toc90472941)

[2.3 Integration of gender-specific aspects 10](#_Toc90472942)

[2.4 Consideration of sustainability effects 10](#_Toc90472943)

[2.5 Quality of planning 12](#_Toc90472944)

[2.5.1 Overview and description of work packages 12](#_Toc90472945)

[2.5.2 Detailed description of work packages 13](#_Toc90472946)

[2.5.3 Work and time schedule (Gantt chart) 14](#_Toc90472947)

[2.5.4 Description of submitted costs 14](#_Toc90472948)

[2.5.5 Third-party costs (if exceeding 20% of total costs per partner) 14](#_Toc90472949)

[3 Suitability of Applicant / Project Partners 15](#_Toc90472950)

[3.1 Description of the expertise of project partners 15](#_Toc90472951)

[3.1.1 Applicant (A) 15](#_Toc90472952)

[3.1.2 Project partners (Pn) 15](#_Toc90472953)

[3.2 Capacity of the consortium to achieve the project goals 15](#_Toc90472954)

[3.2.1 Completeness and coordination of required expertise 15](#_Toc90472955)

[3.2.2 Third-party expertise required 16](#_Toc90472956)

[3.3 Composition of project team with regard to gender balance (gender mainstreaming) 17](#_Toc90472957)

[4 Benefit and exploitation 17](#_Toc90472958)

[4.1 User benefit and exploitation potential 17](#_Toc90472959)

[4.2 Impact and significance of the project results for the organisations involved in the project 18](#_Toc90472960)

[4.3 Exploitation strategy 18](#_Toc90472961)

[5 Relevance of the Project 19](#_Toc90472962)

[5.1 Relevance to the Call 19](#_Toc90472963)

[5.2 Incentive effect of funding (additionality) 19](#_Toc90472964)

# Kurzfassung

\_

Kurzfassung auf **Deutsch** (max. 1 Seite), entspricht der Kurzfassung aus den Projektdaten im eCall-System.

Die aussagekräftige Kurzfassung muss folgende Punkte beinhalten:

* Ausgangssituation, Problematik und Motivation zur Durchführung des F&E-Projekts
* Ziele und Innovationsgehalt gegenüber dem Stand der Technik / Stand des Wissens und mit Bezug zu den erwarteten Nachhaltigkeitseffekten.
* Angestrebte Ergebnisse und Erkenntnisse

# Abstract

\_

Summary in English (translation of "Kurzfassung") (max. 1 page), corresponds to English summary from eCall project data. It should include:

* Starting point, challenge and motivation for executing this project
* Goals and degree of innovation with respect to the state of the art / common knowledge and also relation to the expected sustainability effects.
* Planned goals and findings

#  Quality of the project

\_

## State of the art – current level of technology/knowledge

(max. 7 pages, in sum for chapters 2.1 and 2.1.1, but excluding the table “Results from other projects”)

Describe the current state of the art, i.e. current level of technology/knowledge, relevant to the project based on the following criteria:

* State of the art – current level of technology/knowledge
	+ in the company or research institution itself
	+ in the national innovation system
	+ in Europe (including EU projects) and internationally
	+ results of patent searches
* Relevant products, procedures or services that are already on the market
	+ by the company/company group
	+ by competitors
* Relevant alternative technologies, methods and approaches that are in competition with the proposed approach
* Relevant indicators and/or evidence demonstrating that the planned project will achieve a positive sustainability effect (initial situation: e.g. sectoral indicators, indicators of value networks, technology comparisons, LCAs,…)

### Results from other projects

(max. 7 pages, in sum for chapters 2.1 and 2.1.1, but excluding the table “Results from other projects”)

Please explain the differences to other projects carried out by the consortium partners in the past three years. Include in particular all ongoing and completed projects of thematic relevance. Special focus should be placed on the results you intend to use for your project and potential synergies. Use the description to underline that you have the expertise and experience to carry out the proposed project (supplementary to chapter 3, Suitability of Applicant / Project Partners).

If these projects were funded by the FFG, please indicate the FFG project number and the project title.

If necessary: Please clearify the delimination of relevant projects from your proposal. Doing so, you verify that multiple funding for this activity is excluded. Your data might also be checked against funding from other funding agencies. Wrong or incomplete information can lead to the rejection of your funding proposal.

Use the following table to provide the relevant information:

**Existing results and deliverables obtained from publicly funded projects, that provide the basis of or feed into the proposed project**

Table 4: Description of results already obtained and relevant deliverables

| **Funding provider** | **Project-number** | **Title** | **Description of results already obtained and relevant deliverables (verifiable results / products of R&D work) in terms of the basis for / differentiation from the proposed project** | **Location and type of documentation****(e.g. link to homepage, publication, conference proceedings, interim report, final report, …)** |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## Degree of Innovation

(max. 8 pages)

### Problem and research need

Clearly point out the problem and/or unsolved scientific/technical questions giving rise to the need for a funded research and development project.

### Goals

Describe briefly and concisely the key qualitative and quantitative goals and expected results of the project. These goals should be clear, measurable, realistic and achievable within the project duration. The objectives should be consistent with the benefit, exploitation of the results and the planned sustainability effects.

### Degree of innovation and associated risk

Describe the degree of innovation with reference to the state of the art (current level of technology / knowledge) as well as relevant products, procedures and services presented in chapter 2.1.

* How do the goals of the project go beyond the state of the art (current level of technology / knowledge):
	+ in the company or research institution itself
	+ at national level
	+ at international level
* How does the project improve existing solutions, cause a technological leap or create the basis for the registration of IPRs?
* Please quantify the improvements to be achieved (e.g. higher efficiency, lower cost, faster throughput, enhanced functions etc.), or explain why the degree of innovation can only be described qualitatively.
* Describe the technical and economic risk involved at project and/or partner level. Describe the provisions made to ensure that the funding has a high impact despite the high risk involved (risk management, risk and contingency plan). However, you should not limit yourself to describing the risk in terms of project management.

## Integration of gender-specific aspects

(max. 1 page)

If the project relates to people, please explain how and in what work packages gender-specific aspects have been taken into account in the methodological approach.

## Consideration of sustainability effects

(max. 1 page)

Please describe what contribution the planned project will make to the ecological/social/economic sustainability goals that you think are relevant, indicating the key relevant Sustainable Development Goals of the United Nations (UN SDGs) and, if applicable, the EU Green Deal. Sustainability goals from other strategy documents may also be included.

Please refer to the Call Guidelines for further information about the topic of sustainability.

* Please provide the following information with regard to the above sustainability goals:
	+ Description of the positive effects (ecological, social or economic effects)
	+ Qualitative and quantitative assessment of the positive effects, if sufficient data are available; describe the effects as compared to the state of the art (e.g. sectoral average, alternative processes…)
	+ Description and consideration of system boundaries / system relevant issues (e.g. effects within value networks,…)

Please note: Negative displacement effects should also be taken into account.

If the planned project is not expected to achieve explicitly positive effects / contributions to sustainability goals at any time (research, benefit and exploitation, ex-post impact monitoring and beyond), we would ask you to explain and justify this neutral status / effect.

Please note that projects producing overall (net) negative effects will score 0 points in this criterion.

## Quality of planning

### Overview and description of work packages

The Work Package (WP1) Project Management is mandatory. A maximum of 10 work packages are permitted. Please ensure consistency with the eCall data.

Please insert additional rows if necessary: place cursor in last row and select “Table -> insert -> row below” from the menu bar.

Table 5: Overview of work packages

| **WP****No.** | **Work package title** | **Duration (months)** | **StartMM/YY** | **EndMM/YY** | **Planned result** |
| --- | --- | --- | --- | --- | --- |
| 1 | Project Management |  |  |  |  |
| 2 |  |  |  |  |  |
| n |  |  |  |  |  |

Table 6: Overview of milestones

| **Milestone No.** | **Milestone title** | **Work packages involved** | **Expected date** | **Milestone is achieved when:**  |
| --- | --- | --- | --- | --- |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| n |  |  |  |  |

### Detailed description of work packages

Describe the contents of the individual work packages, the results expected within the duration of the project and the milestones. The individual **methods** and steps must be clearly and consistently defined and/or described (max 2 pages per work package).

The template per work package should be copied and completed separately for each work package (WP). Please adjust the WP-numbering in the table

**Description of work package**

Table 7: Work package description – WP number and title

|  |  |
| --- | --- |
| WP No. |  |
| Title of WP: |  |

Table 8: Work package description – Participating organisations (A/Pn) and number of person months per organisation

|  |
| --- |
| **WP 1: Participating Organisation (A/Pn) and number of person months per organisation:** |
|  |

Table 9: Work package description - Goals

|  |
| --- |
| **WP 1: Goals:** |
|  |

Table 10: Work package description: description of content

|  |
| --- |
| **WP 1: Description of content:** |
|  |

Table 11: Work package description - method

|  |
| --- |
| **WP 1: Method:** |
|  |

Table 12: Work package description – milestones, planned results and deliverables

|  |
| --- |
| **WP 1: Milestones (to measure project progress), planned results and deliverables (verifiable results / products of R&D work)** |
|  |

### Work and time schedule (Gantt chart)

Insert a detailed work and time schedule.

Please pay attention to readability.

### Description of submitted costs

(max. 1 page)

Please explain the relevance of the items listed in the cost plan for the project: personnel costs, costs of infrastructure use, costs of materials, third-party costs and travel costs (especially purpose of travel).

**Please observe the regulations in the** [**guideline for cost eligibility in FFG projects**](https://fdoc.ffg.at/s/vdb/public/node/content/R2lbxEeBTQGa0zYaBN22Cg/2.1?a=true)**.**

### Third-party costs (if exceeding 20% of total costs per partner)

(max. 1/4 page)

Third-party costs should not exceed 20% of the total project costs per partner. Please justify any excess.

# Suitability of Applicant / Project Partners

\_

## Description of the expertise of project partners

(max. 1 page per partner)

### Applicant (A)

1. Company name / name of institution
2. Relevant expertise of organisation and staff involved in the project
Provide evidence of relevant expertise by uploading appropriate and current CVs of senior scientific and technical project staff in the “Ressource Pool/MitarbeiterInnen-Pool” section of the eCall-system. Please consider the guidelines for the demands of attachments.
3. Description of know-how relevant to the project, e.g. market success, patents
4. Description of existing infrastructure relevant to the project and other aspects indicating the applicant’s ability to perform the project

### Project partners (Pn)

This page is to be completed individually and separately for each project partner.

1. Company name / name of institution
2. Relevant expertise of organisation and staff involved in the project
Provide evidence of relevant expertise by uploading appropriate and current CVs of senior scientific and technical project staff in the “Ressource Pool/MitarbeiterInnen-Pool” section of the eCall-system
3. Description of know-how relevant to the project, e.g. market success, patents
4. Description of existing infrastructure relevant to the project and other aspects indicating the applicant’s ability to perform the project

## Capacity of the consortium to achieve the project goals

(max. 2 pages, including the table)

### Completeness and coordination of required expertise

Please use the following table and additional descriptions to illustrate that the chosen consortium structure is suitable for achieving the qualitative and quantitative goals and expected results within the planned project period. Show that the consortium has the scientific, technical and economic expertise required for the project.

**Main tasks of all project partners**

Table 13: Main tasks of all project partners

| **Work package** | **Key expertise required for the work package** | **Name of partner contributing key expertise** |
| --- | --- | --- |
| 1 |  |  |
|  |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| X |  |  |

If the consortium includes partners from outside Austria: explain why these partners are essential for the project and what advantage the participation of the non-Austrian partner/s bring/s as compared to an Austrian organisation. Describe the benefits for Austria as a business and research location. Describe the IPR regulations to be agreed with the partner/s from outside Austria.

### Third-party expertise required

Please describe the fields of expertise that are not covered by the consortium and must therefore be contributed by a third party (e.g. via subcontracts). Name the subcontractors and describe in what form they will contribute the relevant expertise.

The content of **every subcontract exceeding 20% of the cost of the partner** must be described individually and in detail. If the subcontractor is not known yet, describe the aim of the work to be subcontracted and the qualifications to be met by the subcontractor (max. 1 page per subcontractor).

**General information about subcontractor**

Table 14: General information about subcontractor

|  |  |
| --- | --- |
| **Relevant WP(s)** |  |
| **Subcontractor of A/Pn** |  |
| **Name of subcontractor** |  |
| **Content of subcontract** |  |

## Composition of project team with regard to gender balance (gender mainstreaming)

(max. 1/2 page)

Please describe why the gender balance in the project team is an improvement over current conditions in the sector. Alternatively, justify why it is not possible to achieve a better gender balance.

# Benefit and exploitation

\_

(max. 4 pages)

## User benefit and exploitation potential

Describe the benefits of the project results and/or new technologies and planned innovations for users from the perspective of the partners involved in the project in both qualitative and quantitative terms (external benefit).

* What is the benefit for those applying the project results and the exploitation potential?
* What new knowledge can be gained from the project in the relevant scientific/technical target group?
* For whom are the results relevant?
* What are the USPs of the planned project results?
* For projects of the research category Industrial Research:
	+ How about the knowledge increase in the relevant scientific-technical target group?
* For projects of the research category Experimental Development:
	+ What are the specified users, markets and market segments? – How is this substantiated by turnover figures?
	+ What is the turnover potential of the innovation or added value of market growth in relation to the planned project costs?
	+ What resources are required to bring the results to the market?
	+ On what facts are your estimates based?

## Impact and significance of the project results for the organisations involved in the project

Describe the strategic significance of the project results and/or new technologies and planned innovations for the organisations involved in the project in both qualitative and quantitative terms (internal benefit):

* Long-term increase in R&D capacities
* Securing or extending the organisation's R&D position
* Expansion of existing R&D activities to include new fields of application
* Development of R&D platforms
* Opening up of new business fields etc.

## Exploitation strategy

Describe the exploitation strategy for the project results for each individual partner involved in the project in qualitative and quantitative terms. Please also indicate any specific exploitation expertise the relevant organisation has. **If the exploitation of the results has a significant impact on people, please also indicate how gender-specific issues have been taken into account in the exploitation of the economic potential**. Describe the positive sustainability effects during exploitation, indicating any sustainable economic perspectives created for the partners of the consortium as well as any additional societal / social effects. The contribution to sustainability need not be described for projects that are neutral (i.e. have no sustainability effects).

Research-oriented organisations:

* [Planned number of]: diploma and doctoral theses, publications in national and international journals (with or without review process), national and international conference papers, national, European and international patent applications, workshops, events and conferences, expert advisory boards etc…

Companies and application-oriented organisations

* [Planned number of]: industrial property rights, licences, national, European and international patent applications (in selected countries)
* Exploitation via subsidiaries, distribution partners
	+ based on competitive edge in fields such as production, expertise, trade secrets, market presence
	+ collaborations with third parties aimed at development and exploitation
* Marketing strategy
* Sales strategy
* Business plans/models
* Investment plans

# Relevance of the Project

\_

(max. 2 pages)

## Relevance to the Call

* Please list the **call topic** (“Ausschreibungsschwerpunkt”) primarily addressed by your project.
* Which **goals of the call** (“Ausschreibungsziele”) are primarily addressed by your project?
* Further explanation is not necessary.

## Incentive effect of funding (additionality)

Please explain how funding changes the project in terms of:

* **Enabling:** The project could not be carried out without funding.
	+ Please explain why funding is necessary to enable the project.
* **Duration:** The project can be completed within a shorter period of time than possible without funding. Explain to what extent and why funding helps to speed up the completion of the project.
* **Size**: The size of the project can be increased compared to the project being carried out without funding.
	+ Give reasons why the size of the project can be increased compared to the project being carried out without funding.
* **Scope**: The scope of the project can be increased.
* Give reasons why the funding makes the project more ambitious. A higher level of ambition can mean that the project
	+ is focused on more radical leaps in innovation
	+ follows a more long-term and research-intensive [as opposed to market oriented and development intensive] approach
	+ involves a higher technical risk
	+ involves a higher market risk
	+ leads to new or more extensive collaborations

Please demonstrate the incentive effect of the funding in accordance with the criteria applicable to the project.