

Federal Ministry
Republic of Austria
Education, Science
and Research



1ST CALL QUANTUM AUSTRIA

SUBMISSION DEADLINE FOR TOPIC 1:

- BRIDGE: 30/03/2022, 12:00
- INDIVIDUAL PROJECTS IR; COOPERATIVE R&D PROJECT; R&D INFRASTRUCTURE: 27/04/2022, 12:00
- FLAGSHIP PROJECTS: 31/05/2022, 12:00

SUBMISSION DEADLINE FOR TOPIC 2: 30/03/2022, 12:00

DATE: VIENNA, MAY 2022

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QUANTUM AUSTRIA CALL GUIDELINE

VERSION 1.2



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1 KEY POINTS AT A GLANCE

The Quantum Austria funding initiative launched by the Federal Ministry of Education, Science and Research (BMBWF) as part of the Recovery and Resilience Plan 2020-2026 is financed by the European Union – NextGenerationEU.

The funds are allocated via the Austrian Science Fund (FWF) and the Austrian Research Promotion Agency (FFG).

Figure 1 gives an overview of the funding initiative with the two call topics, the funding agencies FWF and FFG, and their funding programmes and instruments. Further details on the call can be found in section **Fehler! Verweisquelle konnte nicht gefunden werden.**

Figure 1: Overview of the Quantum Austria funding initiative Funded by the Quantum Austria 2022-2026 **European Union** Total budget: € 107 million NextGenerationEU Topic 2 Topic 1 HPC Infrastructure Update and Research Cooperation and R&D Infrastructure Transfer to Regular Operation **FWF FFG FFG** Cooperative Individual R&D Infra-Stand-Alone Flagship R&D Infrastructure R&D Bridge Project Projects IR structure Projects

The 1st call managed by the FFG will provide maximum funding of 39.2 million euros. Submissions must be made electronically by the specified deadline via the FFG eCall system (https://ecall.ffg.at).



Table 1: Overview of FFG total budget, deadlines, contact

Further information	Further details
Total budget	Max. € 39.2 million
Submission deadline	Topic 1: 30/03/2022 12:00 CEST (Bridge) 27/04/2022 12:00 CEST (Individual projects IR, cooperative R&D projects, R&D infrastructure) 31/05/2022 12:00 CEST (flagship projects) Topic 2: 30/03/2022 12:00 CEST
Language	English
Contact Thematic questions	Dr. Olaf Hartmann, T ++43 (0) 5 7755-4902; E olaf.hartmann@ffg.at Dr. Andreas Geissler, T ++43 (0) 5 7755-5146; E andreas.geissler@ffg.at
Contacts Cost questions	Mag. Erwin Eckhart MSc, T ++43 (0) 5 7755-6095; E erwin.eckhart@ffg.at Mag. Alexander Glechner, T ++43 (0) 57755-6082; E alexander.glechner@ffg.at
Online information	http://www.ffg.at/quantum-austria
Submission portal	https://ecall.ffg.at



Table 2: Overview of funding instruments available for the call

Funding/ Financing instrument	Short description	Funding (€)	Funding rate ¹	Max. duration (months)	Cooperation required
BRIDGE Science Transfer	Cooperation project aimed at transferring R&D results and ideas from science to industry for practical application	max. 360,000	max. 80%	36	yes
Individual Project IR	Individual project Industrial Research (IR)	max. 1 million	max. 70%	36	no
Cooperative R&D Project	National or transnational cooperative R&D project Industrial Research (IR) or Experimental Development (ED)	min. 100,000 to max. 2 million	max. 85%	36	yes
Flagship Project	Sector-relevant cooperation project IR and/or ED	min. 2 to max. 5 million	max. 85%	36	yes
R&D Infrastructure	Acquisition and preparation for start-up of R&D infrastructure	min. 500,000 max. 10 million/ max. 20 million ²	Economic use: max. 50%; Non-economic use: max. 100%	36	desirable third party access mandatory!

¹ The maximum funding rate is based on the research category, the type of project and organisation and (for companies) on the size of the company (see guidelines of funding instruments and cost guideline, Table 5)

² Depending on call topic, see section 3.



Table 3: Applicable instruments and indicative budgets

Funding/ Financing	Topic 1 Research Cooperation and R&D Infrastructure	Topic 2 HPC Infrastructure Update and Transfer to Regular Operation	
instrument	Indicative budget: € 19.2 million	Indicative budget: € 20 million	
BRIDGE	yes	no	
Individual Project IR	yes	no	
Cooperative R&D Project	yes	no	
Flagship Project	yes	no	
R&D Infrastructure	yes	yes	

Important:

The call is financed by the Federal Ministry of Education, Science and Research as part of the <u>Austrian Recovery and Resilience Plan</u> via the European Union's <u>NextGenerationEU</u> initiative. The maximum project duration is determined by the resulting time schedule for project accounting. The duration of projects submitted to the 1st call is limited to a maximum of 36 months. The funding period can only be extended in exceptional cases for a maximum of three months on a cost-neutral basis. However, the project period may not be extended beyond 31/12/2025, irrespective of the start date of the project, in order to ensure that final project accounting can be completed by mid-2026.

Changes in version 1.1: Modification of the deadlines (table 1) Changes in version 1.2: Special directive put into force (legal basis chapter 5); additional contact person added in table 1.



2 CALL OBJECTIVES

2.1 Challenges

The European Union has responded to the Covid pandemic and its challenges with the <u>Next Generation EU</u> recovery instrument, and has also presented a forward-looking financing instrument for investments – the Recovery and Resilience Facility (RRF).

The Federal Ministry of Education, Science and Research (BMBWF) has developed a proposal for the sustained support of digital transformation in the fields of HPC (high performance computing) and quantum technologies in the category of knowledge-based recovery, one of the four components of Austria's National Recovery and Resilience Plan. The proposal worth EUR 107 million has been approved by the European Commission and adopted by the European Council.

The Austrian research community, based at universities, non-university research institutions, universities of applied sciences, and in commercial enterprises, is involved in numerous HPC and quantum projects, and has key technological expertise in this field.

Based on the strategic directives of the Recovery and Resilience Plan, the national research promotion agencies – the Austrian Science Fund (FWF) and the Austrian Research Promotion Agency (FFG) – are tasked with developing the operative implementation of the programme using tried and test, coordinated funding formats.

2.2 Strategic objectives

Over the past years there have been significant advances in quantum research and the development of quantum technologies, and it is expected that this field will become a key enabling technology. These advances are based on the targeted preparation and control of quantum states, as well as new algorithms which exploit the superposition and entanglement of quantum states. Applications in quantum communication are well developed, and over the medium term the transfer of technologies from basic research to specific applications and commercial exploitation can be expected in the fields of sensors, quantum simulation, and quantum computing. With respect to its sustainable and long-term impact, the initiative seeks to promote new approaches to combining quantum research fields beyond established ideas.

As a key investment in research and development, *Quantum Austria* is part of the Austrian RTI strategy, supporting the RTI objectives of excellent research and



efficient cooperative research and digital infrastructures. Focused support for the research, development and application of quantum technologies creates a unique opportunity to uphold Austria's recognised position, to contribute to Europe's technological sovereignty, to ensure productivity over the long term, and to give Europe a leading role in this global competition.

The strategic objective is for Austria to be one of the EU countries which successfully use quantum technologies for innovative research, products, and services; to strengthen Austria as a partner in European programmes and support EU goals; and to shape the digital transformation for the good of both research and society. This requires adapting to European developments in the field of next generation HPC, as well as supporting the European drive to link HPC with quantum technologies, including transcribing problems into algorithms (software). A particular focus in this context should be placed on quantum error correction, a key component in quantum computing. With respect to hardware, the objective is the use of an internationally competitive, scalable quantum computer, creating a "quantum ecosystem" with a holistic perspective for developing quantum information tools.

2.3 Operative objectives

Austrian research groups play a leading role in many noted fields of basic research, as well as in the early stages of technological development. A key objective of **Quantum Austria** is to extend this position, to intensify investment in basic research for quantum technologies, and to facilitate knowledge transfer to create specific applications, products, systems, and services. The funding measures should also be used to network Austrian research groups strategically and operatively at national and European level in order to achieve the critical size for globally competitive innovation structures.

With pioneering research and development projects and state-of-the-art (quantum/HPC) infrastructure, and building on excellent expertise, *Quantum Austria* is intended to facilitate forward-looking, digital, and innovative research to support the green and digital transformation. As hardware and software development are often mutually dependent, every effort will be made to ensure equal funding is available for each in order to create the necessary holistic approach. Efficient and technologically adequate software makes a significant contribution towards reducing the energy footprint of a particular solution, and is simultaneously a precondition for the (optimal) use of modern hardware.

Specifically, funding should be available for research infrastructure, including quantum hardware, software development and R&D projects (materials and personnel costs), in order to broaden the knowledge base for the (further) development of quantum technologies in all applicable fields, e.g., hardware and software for quantum computing/simulation/error correction and communication. A special focus lies on joining forces within Austria, strengthening European cooperation (with other quantum initiatives, particularly in the German-speaking



region), and establishing or expanding additional constructive cooperation with relevant European initiatives and projects (e.g., EuroHPC and EuroCC). Cooperation between various stakeholders in the innovation system is seen as a means of encouraging knowledge transfer. In principle, no new quantum research centres are planned in Austria.

Quantum Austria specifically welcomes proposals for projects with a high degree of technical risk.

3 CALL TOPICS

3.1 Introduction

For many years, quantum technologies have been regarded as key enabling technologies, both globally and in Europe. Austria has invested in this field for a long time (since the 1970s), establishing a broad, diverse, and globally visible basis. The Quantum Flagship initiative, offering billions in funding, was launched in Europe during Austria's 2018 EU Presidency. In many countries, large funding volumes are made available, with the promise of often revolutionary results. In the conviction that this offers huge potential, Austria is also investing in this area, but without limiting its focus to the mainstream.

This bottom-up approach has been highly successful to date, generating significant contributions in areas such as research into the fundamental aspects of the entanglement of quantum systems, e.g., giving rise to quantum communication and quantum information processing. Open questions currently under consideration include those in the fields of: macroscopic and complex quantum systems; quantum metrology and quantum information processing; the thermodynamics of quantum systems; research into fundamental concepts such as causality, contextuality, and complementarity; and in many interfaces with other fields of science and mathematics, such as the structure of space-time and gravitation; high energy and solid state physics; biology; and control theory. This creates numerous potential interfaces with quantum sensing, simulation, and error correction for quantum computing, etc., and hugely rich fields of work and research topics overall.

All the R&D project types offered are thematically open, specifying only that projects fall within the broad framework of quantum research and technologies, quantum computers, and next generation HPC. The focus of the R&D projects lies on the quality of the research, the creativity of those involved, and the projects' innovative potential. Projects with a high technical risk are particularly welcomed.

Table 4 gives a short description of the call topics.



Table 4: Overview of call topics

Topic	Short description
Research Cooperation and R&D Infrastructure	Sub-topic 1.1: R&D projects, including R&D infrastructure (processors, devices, instruments, laboratory equipment etc.); Sub-topic 1.2: Interface between quantum computer and HPC infrastructure.
HPC Infrastructure Update and Transfer to Regular Operation	Significant increase in national HPC computing capacity through state-of-the-art (e.g. GPU) expansion(s) with the aim to achieve the "green digital transformation" and to use and integrate quantum technology.

3.2 Topic 1: Research Cooperation and R&D Infrastructure

3.2.1 Research and development projects

The pillar model of the European Programmes can only be applied for thematically assigning the projects to the business sector. In general, the field of quantum research and technology can be characterised according to the following areas. Submitted proposals must address at least one of the areas, or its set of research topics, but may also cover several of these areas:

- Quantum communication: Development of quantum technologies for secure information transfer.
- Quantum simulation: Development of controlled quantum systems with the goal of answering fundamental scientific problems or developing new materials.
- Quantum sensors: Achieving increased sensitivity and precision in diagnostics, metrology, and measurement technologies.
- Quantum computing: Development and use of programmable quantum computers to solve special, complex tasks which is not possible using traditional technologies.
- Other research and development relevant to quantum technologies: Research into quantum mechanical principles, e.g., in the field of quantum biology, quantum bioinformatics, quantum surface effects, energy technologies and quantum machines.

Projects in all these areas can be submitted within the framework of this call, with the exception of basic research. Project proposals in the field of basic research are part of the Quantum Austria funding initiative but are exclusively covered under calls issued by the FWF³ in a variety of funding formats (and not by the FFG). An indicative budget of EUR 11.2 million is allocated for this sub-topic.

³ Austrian Science Fund (FWF)



3.2.2 Interface between quantum computer and HPC infrastructure

This call also addresses special projects which focus on integrating quantum computers in high performance computing centres (in Austria), and which are therefore directly related to call topic 2 (see 3.3). The aim is to establish a hybrid high performance computing centre with an integrated quantum computer; this will expand the circle of users of this novel technology, as well as enabling experiences from practical application to be transferred to the technology of quantum computers and their integration with conventional HPC systems. This includes the development of new software for implementing algorithms on quantum computers, in direct interaction with "conventional" HPC systems, and of "quantum-aware" software for the users. The projects should also consider the implementation of algorithms on quantum computers for industrial purposes.

An indicative budget of EUR 8 million is allocated for this sub-topic.

Applicable instruments for call topic 1

(see Tables 2 and 3):

- Bridge Science Transfer
- Individual Projects / Industrial Research
- Cooperative Projects / Industrial Research or Experimental Development
- Flagship Projects
- R&D Infrastructure for economic and non-economic use

The choice of funding instrument depends on the project content as well as the number of partners involved (individual organisations or consortium). The instruments are described in the relevant guidelines. The deviations for the instruments applicable to this call (see Table 5: Call documents –) are listed in the sections below. Where there are deviations, the corresponding provisions of the general guidelines of the funding instrument shall not apply.

The cost of facility usage is also eligible for funding under Bridge Science Transfer, Individual Projects of Industrial Research, Cooperative R&D Projects and Flagship Projects (see FFG Cost Guidelines). In the R&D Infrastructure instrument, funding is only available for the costs listed under 3.2.2.5 and/or in the general guidelines of the funding instrument.

3.2.2.1 Funding instrument: Bridge Science Transfer

Science transfer projects are basic research projects conducted in cooperation between science and commercialisation partners. The majority of project work (min. 80%) is carried out by the scientific partners. The project must originate in scientific research. The companies involved are obliged to provide match funding to meet the remaining costs of the scientific partners, if necessary.

Submissions to Bridge Science Transfer are to be made via the <u>35th BRIDGE call</u>. The project title should have a reference to Quantum Austria.

The <u>BRIDGE Guideline</u> shall apply. It provides detailed information about the call and the funding instrument.



3.2.2.2 Funding instrument: Individual Project of Industrial Research

An Individual Project of Industrial Research is an innovative research project which is conducted by an institution in the category of industrial research. The funding applicant carries out major parts of the project.

Deviations from and additions to the general guideline of the funding instrument

Companies, non-university research institutions, other non-commercial institutions as well as universities and universities of applied sciences are eligible to participate and receive funding under this call. The funding rates for companies can be found in the general guidelines of the funding instrument. The maximum funding rate for research organisations, including universities, universities of applied sciences and other non-commercial institutions is 70% of eligible project costs. The funding for the remaining balance must be presented in the application.

3.2.2.3 Funding instrument: Cooperative Research and Development Project

Cooperative Research and Development Projects are carried out by several consortium partners working together on a joint project with defined R&D goals. The R&D project may be designed <u>either</u> as industrial research (further from the market) <u>or</u> as experimental development (closer to the market).

Deviations from and additions to the general guideline of the funding instrument

No deviations, the general guidelines of the funding instrument shall apply.

3.2.2.4 Funding instrument: Flagship Project

Flagship Projects are large collaborative research and development projects which involve several consortium partners and have a substantial impact on one or several economic sectors. Flagship projects carried out as part of the Quantum Austria initiative should cover a wide range of technology development and application and go significantly beyond the scope of the projects submitted under 3.2.2.3.

Deviations from and additions to the general guideline of the funding instrument

- The maximum project duration is 36 months.
- The maximum funding for a flagship project is EUR 5 million.
- An obligatory advisory meeting with FFG must be held no later than 10 May

3.2.2.5 Funding instrument: R&D Infrastructure

R&D infrastructure projects must be closely related to quantum research and quantum technology.

Projects under this call topic may also address a combination of HPC infrastructure from the second call topic (see 3.3) and quantum technologies and/or quantum computing (e.g. hybrid system).

R&D infrastructure projects must be assigned to one of two use types: "non-economic" or "economic". In both use types, funding is provided for R&D infrastructure acquisition costs (Module 1). Infrastructure for "non-economic use"



may additionally receive funding for start-up costs (Module 2) which are required for proper commissioning of the funded R&D infrastructure.

The call provides funding for investments in R&D infrastructure for both "economic use" and "non-economic use".

Deviations from and additions to the general guideline of the funding instrument

- The infrastructure may be acquired by an organisation alone or as part of a consortium.
- The maximum funding amount per project is EUR 10 million.
- The project duration is up to 36 months.
- The funding for international partners is limited to 20% of total costs.

Additional specifications for infrastructure for "non-economic use"

- The start-up costs (Module 2) for infrastructure for "non-economic use" must not exceed 15% of total costs and are limited to EUR 500,000.
- The maximum funding rate for infrastructure for "non-economic use" is 100%.
- The minimum total costs for infrastructure for "non-economic use" are EUR 500,000.

Additional specifications for infrastructure for "economic use"

- The maximum funding rate for infrastructure for "economic use" is 50%.
- The minimum total costs for infrastructure for "economic use" are EUR 1 million.

3.3 Topic 2: HPC Infrastructure Update and Transfer to Regular Operation

Austria also has an active and internationally competitive R&D scene in the field of high performance computing. Advances in this sector are dependent, among others, on the availability of local high performance computer capacities. Although access to European and/or international high performance computers is also important, easy access to computing capacity in Austria is essential. It is also important that the users of these local systems acquire competences which are an essential precondition for the use of (future) European high performance computers.

Austria has not yet achieved parity with international pioneers and comparable European countries including Ireland, Norway, and the Netherlands. In terms of computing capacity, Austria comes almost bottom of the TOP500 list: existing systems are often working at full capacity and waiting periods of several days for jobs are common. Furthermore, it can be assumed that, as well as the largely academic community in the fields of physics, chemistry and engineering sciences, there will also be rapidly growing demand from other fields including big data and artificial intelligence. The demand for computing capacity will increase as the expected economic application of these processes is realised.



Therefore, additional hardware should be procured in order to provide additional computing capacity, including connections to mass storage. The additional hardware can be used either to extend an existing system or be configured as an autonomous system. This additional hardware should be equipped with compatible technology to ease the transition to European high performance computers.

Specifically, additional R&D infrastructure for high performance computing should be procured via a public tender within the framework of this topic. This R&D infrastructure can either be an independent system, or an extension to an existing system. The system may consist of two expansion phases, and/or a closely linked subsystem at different sites.

In accordance with the state-of-the-art, this should create a cluster system with high speed interconnect.

The proposal must describe the design of the tendering procedure.

Proposals must explain the demands which will be made on powerful and energy-efficient high performance computers with respect to performance and energy consumption, the use of accelerators and cooling infrastructure, and how these can be evaluated in a potential tendering procedure.

Particular importance is placed on the subject of energy efficiency, and this must be addressed in the proposal in addition to the topics noted above, e.g., with respect to the reuse of waste heat. An overall concept for cooling/heat recovery must be presented.

With respect to software, the following points must be considered:

- Operating system, preferably a current 64bit LINUX version
- Software deployment and boot for the nodes
- Central management, monitoring and logging software
- Job management
- Compiler suite, libraries, development tools

Where possible, the software should be in the public domain, and must not be subject to licencing restrictions with respect to different user groups. If necessary, costs for this software should be included in the acquisition costs.

A suitable security concept must be implemented.

A 2025 upgrade to the state-of-the-art, as well as maintenance for hardware and software, including the supply of spare parts and software updates for the lifetime of the system (for example 6 years), should be included in the acquisition costs. Please note that funding is only available for costs incurred during the funding period.



Low-threshold access to the high performance computers should be encouraged in order to promote their use outside the traditional user community.

Applicable funding instrument (see Tables 2 and 3):

R&D Infrastructure (economic and non-economic use)

3.3.1 Funding instrument: R&D Infrastructure

R&D Infrastructure is the only funding instrument available for high performance computing projects under this call topic. Projects outside this scope should be submitted under call topic 1 (see section 3.2).

R&D infrastructure projects must be assigned to one of two use types: "non-economic" or "economic". In both use types, funding is provided for R&D infrastructure acquisition costs (Module 1). Infrastructure for "non-economic use" may additionally receive funding for start-up costs (Module 2) which are required for proper commissioning of the funded R&D infrastructure.

The call provides funding for investments in R&D infrastructure for both "economic use" and "non-economic use".

<u>Deviations from and additions to the general guidelines of the funding instrument</u>

- The infrastructure may be acquired by an organisation alone or as part of a consortium.
- The maximum funding amount for R&D infrastructure is EUR 20 million. The maximum annual funding amount is EUR 7 million.
- The project duration is up to 36 months.
- The funding for international partners is limited to 20% of total costs.

Additional specifications for infrastructure for "non-economic use"

- The start-up costs (Module 2) for infrastructure for "non-economic use" must not exceed 15% of total costs and are limited to EUR 500,000.
- The maximum funding rate for infrastructure for "non-economic use" is 100%.
- The minimum total costs for infrastructure for "non-economic use" are EUR 500,000.

Additional specifications for infrastructure for "economic use"

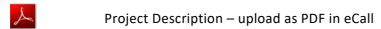
- The maximum funding rate for infrastructure for "economic use" is 50%.
- The minimum total costs for infrastructure for "economic use" are EUR 1 million.



4 CALL DOCUMENTS

Projects may only be submitted electronically via <u>eCall</u>. The project application consists of:

eCall Online cost plan – enter directly in eCall



Please use the templates and call documents provided in the <u>Download Center</u>. Please note that the Project Description must be submitted in English. The guidelines for the call and the funding instruments are available in German and in most cases also in English.

Table 5: Call documents – funding

Funding instrument / other information	Applicable call documents		
Bridge Science Transfer	_ <u>Call Guideline 35th Call</u>		
	 Project Description template 		
Individual Project IR	 Guideline for Individual Projects of Industrial Research German - English 		
	Project Description template		
Constructive DOD Duniont	 Declaration of SME Status (if required) 		
Cooperative R&D Project	 Guideline for Cooperative R&D Projects German - English 		
	 Project Description template 		
	 Declaration of SME Status (if required) 		
Flagship Project	 Guideline for Flagship Projects <u>German</u> – <u>English</u> 		
	 Project Description template 		
	 Declaration of SME Status (if required) 		



Funding instrument / other information	Applicable call documents		
R&D Infrastructure	 Guideline for R&D Infrastructure Funding German - English Project Description template Economic use Non-economic use 		
General cost regulations	 Cost Guidelines (cost recognition in FFG projects) German - English - FAQ 		

Please note: A Declaration of SME Status is required for associations, sole traders and foreign companies. In the template provided, applicants must (as far as possible) categorise their business for the last three years according to the SME definition.

Please note: The English versions of the above documents will shortly be available on the FFG website.

5 LEGAL BASIS

This call is based on the <u>Quantum Austria Special Directive</u> (Qu-AT-Sonderrichtlinie, GZ: BMBWF 2022-0.186.121).

The company size shall be established in accordance with the corresponding SME definition specified in EU competition law. For more information go to the SME page on the FFG website.

All EU provisions shall be applicable as amended.

6 ADDITIONAL INFORMATION

This section contains information about additional funding opportunities and services which you may find useful in connection with funding applications or funded projects.



6.1 FFG Project Database

The public access <u>FFG Project Database</u> provides the opportunity to publish brief information about funded projects and an overview of the project partners involved. This enables you to present your project and your project partners to the interested public. The database can also be used to search for cooperation partners.

Once funding is granted, the applicants are informed via eCall that they can publish brief defined information about their project in the FFG Project Database. The information will only be published if active consent is given in the eCall system.

For more information see the Project Database page of the FFG website.

6.2 Open Access publications

Research results obtained with the aid of public funding are to be put to the best use to provide maximum benefit to science, business and society. The Open Access principle should therefore be followed where possible for peer-reviewed publications produced with the support of FFG funding. The principle is "as open as possible, as closed as necessary", which also applies in European funding schemes.

Publication costs are eligible for funding.

6.3 Handling of project data – data management plan

A data management plan (DMP) is a tool that supports the efficient and systematic management of all data generated throughout the duration of a project. A DMP is optional for Quantum Austria projects; it is considered as a supportive tool for the project participants and will have no impact on the project evaluation.

DMPs can be created, e.g., using the free tool <u>DMP Online</u>. The <u>Guidelines on FAIR Data Management</u> of the European Commission also provide assistance in this respect.

A data management plan describes

- which data are collected, processed or generated within a project
- how these data are handled within the project
- what methods and standards are applied
- how the data are stored and updated over the long term and
- whether it is planned to make datasets available to third parties for reuse (i.e., open access to research data)

It is sensible to ensure public access to research data which provide the basis for peer-reviewed publications and whose publication is necessary to reproduce and verify the published results.



In the event of publication, the data should be "findable, accessible, interoperable and reusable". Storing data in established and internationally recognised repositories is recommended in order to ensure broad access.

6.4 Further funding opportunities provided by FFG

Table 6: Further national funding opportunities provided by FFG

Relevant national funding programmes	Contact	Link
ASAP – Austrian Space Applications Programme	Daniel Jokovic MSc T: +43 (0) 5 7755-3301 E: daniel.jokovic@ffg.at	<u>ASAP</u>
Quantum Research and Technology QuantERA	Dr. Fabienne Nikowitz T: +43 (0) 5 7755-5081 E: fabienne.nikowitz@ffg.at	QFTE QuantERA
Production of the Future	Dr. Margit Haas T: +43 (0) 57755-5080 E: margit.haas@ffg.at	Production of the Future
ICT of the Future	DI Dr. Peter Kerschl T: +43 (0) 57755 5022 E: peter.kerschl@ffg.at	ICT of the Future
General Programme Company projects – experimental development	Karin Ruzak T: +43 (0) 5 77 55 15 07 E: <u>karin.ruzak@ffg.at</u>	General Programme
Research Partnerships Focus on PhD projects at the interface between science and industry	Dr. Denise Schöfbeck T: +43 (0) 57755-2308 E: denise.schoefbeck@ffg.at	Research Partnerships



Table 7: Further international funding opportunities provided by FFG

Table 7: Further international funding opportunities provided by FFG				
Relevant international funding programmes	Contact	Link		
HORIZON EUROPE Nanotechnologies, materials, biotechnology, production and process technologies	DI Gerald Kern T: +43 (0) 57755-4301 E: gerald.kern@ffg.at	<u>Horizon Europe</u>		
DEP (Digital Europe Programme) Building and expanding digital capacities and infrastructures	DI Max Arends T: +43 (0) 5 7755-4206 E: max.arends@ffg.at	Digital Europe Programme		
EuroHPC Joint initiative between the EU and European countries to develop a competitive supercomputing ecosystem in Europe.	Mag. Verena Mussnig T: +43 (0)5 77 55-5135 E: verena.mussnig@ffg.at	<u>EuroHPC</u>		
KDT (Key Digital Technologies) This electronics initiative combines the topics of embedded systems and cyber-physical systems, micro and nanoelectronics and smart systems	Mag. Doris Vierbauch T: +43 (0) 57755-5024 E: doris.vierbauch@ffg.at	<u>KDT</u>		
EUREKA Programme independent mechanism for the funding of national project parts	Dr. Michael Walch T: +43 (0) 57755-4901 E: michael.walch@ffg.at	EUREKA		
Eurostars-3 Cross-border cooperation projects for SMEs	Mag. Johanna Scheck T: +43 (0) 57755-4907 E: johanna.scheck@ffg.at	<u>Eurostars</u>		