

RTI Initiative PRODUCTION of the FUTURE

Innovative technologies, processes and new materials as
key to the industry of the future

Call Guideline 5th call

Cooperative R&D Projects between Austria, FFG and
China, SHANGHAI University (SHU)

Deadline for submission to FFG via eCall and to SHU:

FFG: March 3rd 2022, 11:00 Central European Time (C.E.T.)

SHU: March 3rd 2022, 18:00 China Standard Time (C.S.T.)

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0. Key Facts at a Glance

The present Call Guidelines provide information about the international call of the RTI Initiative 'Production of the Future' organised by **Austria and the SHANGHAI University, China**. The call promotes the bilateral collaboration in application oriented research and development projects. A total of **EUR 700.000** in funding is available for Austrian partners. The call is carried out jointly by the Austrian Research Promotion Agency (FFG) and the SHANGHAI University (SHU).

Table 1: Overview

Programme	FFG, Production of the Future	SHU - SHANGHAI University
Instrument	Cooperative R&D project	Cooperative R&D project
Research category	Industrial research or experimental development	Basic research, industrial research, experimental development
Topics	Topic 1: new nanomaterials and technologies for carbon neutral and zero emission goal Topic 2: nanomaterials for additive manufacturing and relevant processing technologies Topic 3: nanomaterials, sensors and sensorsystems	Topic 1: new nanomaterials and technologies for carbon neutral and zero emission goal Topic 2: nanomaterials for additive manufacturing and relevant processing technologies Topic 3: nanomaterials, sensors and sensorsystems
Funding amount	min. EUR 100.000 to max. EUR 700.000 for total project duration	CNY 300.000 p.a. (approx. EUR 40.000 per year).total: max. CNY 900.000 for 3 years
Funding rate	max. 85%	approx. 50% (see Call Fiche)
Duration	max. 36 months	max. 36 months
Cooperation required	Yes, is required, see present guidelines	Yes
Total budget	EUR 700.000	open
Funding provider	Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)	SHANGHAI University (SHU)

Programme	FFG, Production of the Future	SHU - SHANGHAI University
Submission deadlines transnational	Joint Proposal via FFG eCall & SHU: 03.03.2022 11:00 C.E.T.	Joint Proposal via FFG eCall & SHU: 03.03.2022, 18:00 C.S.T.
Submission deadlines national	Austrian Annex and Cost Plan: 03.03.2022, 11:00 C.E.T.	SHU additional documents: 03.03.2022, 18:00 C.S.T.
Language	FFG eCall Joint Proposal: English FFG eCall Austrian Annex: English or German	SHU Joint Proposal: English SHU national proposal: Chinese
Contact	DI Manuel Binder T: +43 (0)57755-5041 E: manuel.binder@ffg.at	Wu Hongmin T: +86 (0) 21 66136028 E: whm_hermione@shu.edu.cn
Information on the Web	https://www.ffg.at/38-ausschreibung-produktion-der-zukunft	www.nano.shu.edu.cn

The present **Call Guidelines** apply to the Austrian partners. They summarise information about the fifth bilateral call on the topic **Nanomaterials** under the RTI Initiative 'Production of the Future' and refer to the related call documents (in particular Technical Guidelines, application forms, Cost Guideline). The call is carried out as the 38th Call under the RTI Initiative 'Production of the Future'.

The call documents can be found at <https://www.ffg.at/38-ausschreibung-produktion-der-zukunft>

The full set of application documents must be submitted via **eCall** by the submission deadline.

Please note:

If the application does not meet the formal requirements for project submissions in accordance with the conditions and criteria of the respective funding instrument and if the deficiencies cannot be corrected the application will be excluded from the further procedure and will be formally rejected without exception in accordance with the principle of equal treatment of applications.

1 Motivation

The RTI Initiative 'Production of the Future' was launched by the Federal Ministry of Transport, Innovation and Technology (BMVIT) in 2011. The initiative was aimed at developing a comprehensive strategy for research, technology and innovation in the production sector in close dialogue with representatives from the manufacturing industry, research institutions, stakeholder groups and disseminators. Now in its tenth year of implementation, it has built a track record of national, transnational and human resource measures.

The economic performance of Austria strongly depends on its manufacturing industry. The ability to manufacture internationally competitive products and to increase productivity is key to the economic growth of Austria as a highly industrialised and knowledge based country. In addition, Innovations in the manufacturing sector will continue to be an indispensable basis for added value and employment in the future.

The 38th Call of the RTI Initiative 'Production of the Future' will focus on the bilateral collaboration between Austria and China with the SHANGHAI University, in application-oriented research. The strategic aim of 'strengthening European and international collaborations and networks' will be addressed in particular. The topic of the call, Nanomaterials, is designed to leverage common fields of expertise of Austria and the SHANGHAI University in China.

The RTI Initiative 'Production of the Future' also takes part in the European Research Area Network M-ERA.NET for research and innovation on materials and battery technologies, supporting the European Green deal. The network enables coordinated funding of transnational and international research and development projects and is supported by more than 50 funding organisations.

1.1 Strategic objectives

The **strategic objectives** of the RTI Initiative 'Production of the Future' are...

- **to increase the innovation performance of the national manufacturing industry** by making better use of collaboration options to solve challenging interdisciplinary tasks, by motivating companies that have so far shown little or no innovation activity

and by improving the industry's access to relevant research expertise available at research institutions and organisations.

- **to encourage the build-up of research expertise in research institutions**
by establishing and expanding research and teaching capacities (e.g. through the establishment of endowed professorships).
- **to strengthen European and international collaborations and networks**
by participating in ERA-Nets (European Research Area Networks) relevant to the manufacturing industry, by carrying out bilateral calls with selected non-EU countries or by organising research workshops with Austrian stakeholders from the manufacturing industry and production research in selected countries within and outside Europe.

1.2 Operative objectives

The following **operative objectives** are essential for the **specific call topics** described in Chapter 2 – at least one of these must be addressed in the national application.

- **Objective 1: Efficient use of resources and raw materials and efficient production technologies**
This objective addresses research and development projects that substantially reduce the use of resources and raw materials in the manufacturing industry compared to the state of the art and make a significant contribution to low-carbon and climate-friendly production. Another aim is to apply virtual methods in the development of resource-efficient production processes.
- **Objective 2: Flexible production**
This objective addresses research and development projects that contribute to enhancing flexibility in the manufacturing industry taking into account environmental and climate goals. The aim is to create modular, effective process chains, especially for small batch sizes and cross-company value networks. This ensures high levels of product diversity and dynamics, taking into consideration aspects such as human-machine cooperation and the allocation of functions between humans and machines.
- **Objective 3: Manufacture of high-quality products**
This objective addresses research and development projects that contribute to the manufacture of high-quality products taking into account environmental and climate goals. The products should be based on innovative processes and advanced materials, nanomaterials, bio-based raw materials or intensive use of ICT in product development and in the production process.

1.3 Sustainability

Future-oriented research and development seeks to achieve the current global, European, national and regional goals that are designed to put us on a path to a sustainable future. The integration of sustainability aspects in research and development projects generates new knowledge which is essential for supporting ecological, social and economic transformation processes. Responsible research funding therefore supports social adaptation, learning and decision-making processes that are of relevance for industry and science and promote their sustainable development.

This call requires applicants to address the key sustainability goals to which the proposed project makes a concrete positive contribution. The planned sustainability effects must be described in the application and taken into account in the research design.

What are the underlying sustainability initiatives and measures?

The call makes reference to the global Sustainable Development Goals of the United Nations (SDGs) and the European elements of the EU Green Deal. This is supplemented by additional national goals specified in the Government Programme 2020, including climate neutrality, efficient use of resources and implementation of a clean circular economy.

More detailed information can be found in the Annex.

Please note: Applicants should cite only those sustainability goals and aspects to which the project makes a substantial contribution and which are relevant for the content, implementation and exploitation of the project. Citing a large number of sustainability goals will not necessarily lead to a better assessment of the project.

The project is expected to make a positive contribution to the following sustainability goals and aspects. These should be primarily addressed and considered by the applicants in their research design.

2 Call Topics

The project must have its key focus on one of the Call topics listed below but may also address more than one of these areas.

- **Topic 1: New nanomaterials and technologies for carbon neutral and zero emission production processes**
- **Topic 2: Nanomaterials for additive manufacturing and relevant processing technologies**
- **Topic 3 Nanomaterials, sensors and sensorsystems**

3 Requirements

3.1 General requirements for the Chinese-Austrian consortium

The requirements and procedures described in the 'Call Fiche' apply to the consortium. The following criteria must be met:

- The consortium shall consist of **at least one partner from SHANGHAI University and at least one Austrian partner.**
- The consortium shall include **at least one Austrian industrial partner.**
- **Individual enterprises** account for a maximum of 70% of the eligible project costs with shares of affiliated companies counting as one enterprise.
- **Companies share** is a minimum of 20% and a maximum of 90%.
- The **research institution(s) bear(s) at least 10% and a maximum of 80% of the eligible costs** (relates to the total share of Austrian research institutions and SHU research groups). This applies to the entire bilateral consortium in deviation from the Austrian Technical Guidelines for Cooperative R&D Projects at a Transnational Level. Therefore as a matter of fact, Chapter 2.2 in the Technical Guidelines for Cooperative R&D Projects is not valid for this call.
- The research institution(s) shall be entitled to publish the **results of the research** carried out by the respective institution(s).
- The applicant must ensure that the bilateral projects submitted are not aimed at developing **weapons or violence-promoting products. This provision must be**

specifically included in the Consortium Agreement. The payment of funding depends on compliance with this requirement.

- The applicant must ensure that the bilateral projects submitted are not aimed at **gambling** of any kind (i.e. games in which the outcome is determined exclusively or predominantly by chance). **This provision must be specifically included in the Consortium Agreement.** The payment of funding depends on compliance with this requirement.
- Any other **commercial and/or export restrictions** currently in place must be observed.
- A **Consortium Agreement** signed by all partners must be forwarded to FFG via eCall and to SHANGHAI University prior to the preparation of the national funding agreement.
- **The Joint Proposal** must be submitted via **FFG eCall** by **03.03.2022, 11:00 C.E.T. Central European Time** at the latest.
- **The Joint Proposal** must be submitted to **SHANGHAI University** by **03.03.2022, 18:00 C.S.T. China Standard Time** at the latest.
- The **Joint Proposal** submitted to FFG and SHANGHAI University **must be identical**. In the event of deviations, FFG reserves the right to reject the proposal for formal reasons.

3.2 National requirements for Production of the Future

Only bilateral cooperative research and development projects between Austria and China falling into the research categories 'Industrial Research' or 'Experimental Development' may be submitted under this call.

The following requirements shall apply to submissions by Austrian participants to the RTI Initiative 'Production of the Future' **in addition to** the general requirements specified in Chapter 3.1 above:

- The provisions of the **Technical Guidelines for Cooperative R&D Projects at Transnational Level** ([download](#))
- In addition to the Joint Proposal the **Austrian national Annex** must be uploaded via eCall. **The application documents must be submitted via eCall** by **03.03.2022, 11:00 C.E.T.** at the latest.

The following provisions apply in deviation from the Technical Guidelines for Cooperative R&D Projects at Transnational Level:

- The amount of funding requested by the Austrian partners must be between **EUR 100.000 and EUR 700.000**.
- The following requirements shall apply to the entire Austrian-Chinese consortium instead of the requirements specified in Chapter 2.2 of the Technical Guidelines:
 - the research institution(s) bear(s) at least 10% and a maximum of 80% of the eligible costs

- Companies share is a minimum of 20% and a maximum of 90%
 - the research institution(s) shall be entitled to **publish the results of the research** carried out by the respective institution(s)
 - A Consortium Agreement signed by all partners must be forwarded to FFG via eCall prior to the preparation of the national funding agreement.
- The requirements specified in Chapter 2.2 of the Technical Guidelines shall be replaced by the requirement that at least **one Austrian company** must participate in the Austrian-Chinese consortium.
 - The Chinese applicant and partners must be from one or more SHU research groups.
 - **Companies are eligible to apply if they have a permanent establishment or branch** (according to Council Directive 2011/96/EU of 30 November 2011, in conjunction with Art. 11 (5) a GBER, No. 651/2014 of 17 June 2014) in Austria **at the time of submission of the application and payment of funding.**
 - Art. 2 (b): 'Permanent establishment' means a fixed place of business situated in a Member State through which the business of a company of another Member State is wholly or partly carried on in so far as the profits of that place of business are subject to tax in the Member State in which it is situated by virtue of the relevant bilateral tax treaty or, in the absence of such a treaty, by virtue of national law;
 - Art. 3 (1) Definition of parent company and subsidiary
 - Companies are eligible to apply if their main focus is on research and the exploitation of results is in Austria. Subsidiaries based in China may act as sub-contractors in the consortium, if required.
 - The EUR-CNY conversion rate of the [European Central Bank ECB](#) at the date of submission shall apply. This can either be the reference date specified in the Joint Proposal or the conversion rate provided by the ECB on a monthly basis. The rate must be specified in the Joint Proposal. The conversion rate shall apply for the duration of the project and for all reports related thereto.
 - The participation and financing of additional international partners in the consortium shall be excluded in this fifth bilateral call in deviation from the provisions of the Technical Guidelines.

Austrian partners and partners of SHU may cover their costs by own funds and/or grants provided by Austria or China. Partners from other countries shall be excluded from participating in the consortium. Organisations from outside Austria or China may be involved as sub-contractors of Austrian partners. FFG will check whether the Austrian project part is properly allocated to the research category of 'Industrial Research' or 'Experimental Development' based on the Joint Proposal. This may involve a reduction in the funding rate. BMK will take the funding decision for the Austrian project partners. SHU shall be responsible for the funding decision for the Chinese partners.

4 Call Documents

4.1 Joint call documents Austria – SHANGHAI University

Table 2: Joint transnational call documents

Joint transnational call documents	Documents in detail
Call Fiche	Call Fiche Joint call guidelines FFG and SHU
Application form	Joint Proposal Joint project description Austria – SHU
Download	www.ffg.at/38-ausschreibung-produktion-der-zukunft

4.2 National call documents for 'Production of the Future'

The following national call documents for the 'Production of the Future' programme shall apply in addition to the joint call documents:

Table 3: Additional documents to be submitted by Austrian participants

Additional documents to be submitted by Austrian participants	Documents in detail
Call Guideline (present document)	Call Guideline RTI Initiative 'Production of the Future', 38 th Call (Version 1.0)
Application forms: for transnational cooperative R&D projects Industrial Research or Experimental Development	Technical Guidelines for Cooperative R&D Projects at Transnational Level Project Description - Austrian Annex

Additional documents to be submitted by Austrian participants	Documents in detail
	Declaration of SME Status (if required) ¹
General cost regulations	Cost Guidelines 2.1 (eligibility of costs in FFG projects)
Legal basis	Guideline for the Promotion of Industrial/Technological Research, Technology Development and Innovation (FTI-Richtlinie 2015 -Themen-FTI-RL)
Download	www.ffg.at/38-ausschreibung-produktion-der-zukunft

National applications must be submitted electronically **via eCall** The **Joint Proposal** and the **Austrian Annex** must be uploaded via eCall as part of the electronic application.

Applicants are requested to use the specific templates provided for the submission of their projects. The funding conditions, application procedure and funding criteria are described in the corresponding Technical Guidelines and in the transnational call documents.

The cost plan has to be filled out via the eCall. It must show the project costs broken down to **work package level**. This also applies to accounts rendered as part of the reporting process.

More detailed information on the call and the relevant call documents can be found at

- [National website 'Production of the Future'](#)
- [eCall submission](#)
- **National contact:**

DI Manuel Binder MSc, E: manuel.binder@ffg.at
T: +43 (0)57755-5041
Programme manager

Dr. Margit Haas, E: margit.haas@ffg.at
T: +43 (0)57755-5080
Programme leader

¹ If there is no information available in the Austrian Business Compass (e.g. for associations and start-ups), a Declaration of SME Status must be provided upon submission of the proposal. In the template provided by the FFG, applicants must (as far as possible) categorise their business for the last three years according to the SME definition.

4.3 National call documents for SHANGHAI University

For the Chinese partners, further national call documents of SHANGHAI University shall apply in addition to the joint call documents.

The Chinese partners will find more detailed information on the call and the relevant call documents at:

- [National website of SHU](#)

- **National contact at SHU:**

Mrs. Wu Hongmin

E: whm_hermione@shu.edu.cn

T: +86 (0) 21 66136028

No.111 Mailbox, NanoScience and Technology Research Center, Shanghai University,
No.99 Shangda Road, Shanghai, 200444, China.

5 Legal Basis

This Call is based on the RTI Guidelines for the Promotion of Industrial/Technological Research, Technology Development and Innovation (FTI-Richtlinie 2015 – Themen-FTI-RL) published at Themen-FTI-RL. The Themen-FTI-RL was extended to December 31, 2021 on the basis of the extended state aid basis of the European Commission (extension regulation, VO (EU) 2020/972 of July 2, 2020). The company size shall be established in accordance with the corresponding SME definition specified in EU competition law. For more information go to https://www.ffg.at/recht-finanzen/rechtliches_service_KMU.

All national and EU provisions shall be applicable as amended.

6 Additional Information

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

6.1 FFG Project Database

The public access [FFG Project Database](#) 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 [FAQ](#):

6.2 BMK Open4Innovation

The [open4innovation](#) platform of the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) offers an additional knowledge base for companies and researchers (community support, detailed information, success stories,...).

6.3 Handling 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.

DMPs can be created, e.g., using the free tool [DMP Online](#). The "[Guidelines on FAIR Data Management](#)" 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)

In the event of publication, the data should be "findable, accessible, interoperable and reusable". Storing data in established and internationally recognised repositories (see <http://service.re3data.org/search>) is recommended to ensure broad access.

7 Further Funding Options

FFG offers a broad range of funding options and support for the participation in international programmes. The following overview shows further international funding options related to this call. For further information please contact the FFG experts indicated below.

European Programme:

[HORIZON EUROPE](#) – the next EU Framework Programme (2021-2027);

Digitization, Industry & Space

Contact: DI Gerald Kern

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Health

Contact: Dr. Astrid Hoebertz

T: +43 (0) 57755-4104, E: astrid.hoebertz@ffg.at

Climate, Energy and Mobility

Contact: Dr. Michalis Tzatzanis

T: +43 (0) 57755-4405, E: michalis.tzatzanis@ffg.at

Civil security for society

Contact: DI Jeannette Klöckl

T: +43 (0) 57755-4401, E: jeannette.klonk@ffg.at

8 Annex: Sustainability

Responsible and future-oriented research and development seeks to achieve the current global, European, national and regional goals that are designed to put us on a path to a sustainable future. The transformation processes in industry and science are expected to make a major contribution to climate neutrality, a more efficient use of resources and a clean circular economy. Research funding must therefore be in line with the objectives of the two underlying initiatives, i.e. the Sustainable Development Goals of the United Nations (SDGs) and the eight elements of the EU Green Deal.

General information

The Austrian Federal Government has made the fight against climate change one of its top priorities in its [Government Programme 2020](#), which aims to achieve climate neutrality by 2040.

This national goal is based on the [2030 Agenda](#) adopted by the United Nations in 2015. It contains a set of 17 Sustainable Development Goals (UN SDGs) which UN member states, including Austria, have pledged to achieve.

The specific sub-goals of the 17 Sustainable Development Goals (UN SDGs) which are of relevance for Austria and can be practically implemented at the national level can be found on the website of the [Federal Chancellery](#).

In 2019 the European Commission published the [EU Green Deal](#), a strategy comprising eight elements with the aim to make Europe the first climate neutral continent by 2050.

The topic of sustainability was therefore integrated into the assessment criteria of the present funding instrument. Both funding applicants and funding recipients are required to describe and report on how their project contributes to achieving the ecological, social and economic sustainability goals and how sustainability aspects are taken into account in project planning, implementation and exploitation.

This general information is also available on the [FFG website](#).

Please note that sustainability will be considered with a focus on the ecological, social and economic effects of the project.