



RTI Initiative **PRODUCTION** of the **FUTURE**

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

Bundesministerium für Verkehr, Innovation und Technologie
Abteilung III/I 5 - Informations- und industrielle Technologien

Radetzkystraße 2, 1030 Wien

www.bmvit.gv.at
infothek.bmvit.gv.at

Call Guideline

Transnational

Cooperative R&D Projects,

Austria, FFG and China, SHANGHAI University and SITI

Submission Deadline Austria, FFG:

21. June 2018, 11:00 Central European Summer Time (C.E.S.T.)

Joint Proposal - Austrian-Chinese Cooperative R&D Projects must be submitted electronically via <https://ecall.ffg.at>

Submission Deadline China, SHANGHAI University:

21. June 2018, 17:00 China Standard Time (C.S.T.)

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

Joint Proposal by email attachment to Mrs. Wu Hongmin, Email: whm_hermione@shu.edu.cn

Version 1.0 – 28 March 2018

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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' organized by **Austria, the SHANGHAI University (SHA) and the Shanghai Industrial Technology Institute (SITI), China**. The call promotes the bilateral collaboration in application oriented research and development projects between Austria and China. 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), SHA and SITI.

Table 1: Overview

Programme	FFG, <i>Production of the Future</i>	SHANGHAI University (SHA) / SITI
Instrument	Cooperative R&D project	
Research category	<i>Industrial research or experimental development</i>	<i>Basic research, industrial research, experimental development</i>
Topics	Topics (see Chapter 2)	
	<ol style="list-style-type: none"> 1. Nano- and low dimensional nanomaterials, functional devices 2. Controllable Porous Nanomaterials, focusing on feature study and application development, especially their effects and functions in the development of molecular diagnosis technologies, methods and devices 3. Micro/Nano thin films and advanced characterization methods 4. 3D-printing, especially high performance ceramic printing 	
Key data	Key data	
Funding amount	min. EUR 100.000 to max. EUR 700.000 for total project duration	SHA or SITI each up to CNY 300.000 p.a (approx. EUR 38.000 each per year). Total: max. CNY 900.000 for 3 years each
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	BMVIT	SHANGHAI University (SHA) / SITI
Submission deadlines	Joint Proposal via FFG eCall, SHA & SITI: 21 June 2018, 11:00 C.E.S.T.	
	Austrian Annex and Cost Plan: 21 June 2018, 11:00 C.E.S.T.	SHA / SITI additional documents: 21 June 2018, 17:00 C.S.T.
Language	FFG eCall Joint Proposal: English FFG eCall Austrian Annex: English or German	SHA / SIT - Joint Proposal: English SHA / SIT - national proposal: Chinese
Contact	DI Johanna Dragan T: +43 (0)57755-5085 E: johanna.dragan@ffg.at	Wu Hongmin T: +86 (0) 21 66136028 E: whm_hermione@shu.edu.cn
Information on the Web	https://www.ffg.at/27-ausschreibung-produktion-der-zukunft	www.nano.shu.edu.cn

The present **Call Guidelines** apply to the Austrian partners. They summarise information about the third joint call on the topics **Nanomaterials and 3D Printing** 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 27th Call under the RTI Initiative 'Production of the Future'.

The call documents can be found at <https://www.ffg.at/27-ausschreibung-produktion-der-zukunft>.

The full set of application documents must be submitted via eCall (<https://ecall.ffg.at>) 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 eighth 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. And Innovations in the manufacturing sector will continue to be an indispensable basis for added value and employment in the future.

The 27th Call of the RTI Initiative 'Production of the Future' will focus on the collaboration between Austria and China with the SHANGHAI University and the Shanghai Industrial Technology Institute, in application-oriented research. The strategic aim of 'strengthening European and international collaborations and networks' will be addressed in particular. The topics of the call are designed to leverage common fields of expertise of Austria, the SHANGHAI University and the Shanghai Industrial Technology Institute in China.

The RTI Initiative 'Production of the Future' also takes part in the European Research Area Network M-ERA.NET 'From materials science and engineering to innovation for Europe'. The network enables coordinated funding of transnational and international research and development projects and is supported by more than 40 funding organisations.

Furthermore the Programme for Internationalisation of RTI Projects "Beyond Europe" supports Austrian companies, research and university institutes and other organisations in creating and extending collaborations. The Programme is open to all thematic fields. Funding is available for projects in all technical disciplines.

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 production compared to the state of the art and enable the extraction of critical raw materials. Another aim is to substitute fossil resources with renewable raw materials and 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 more flexible production processes by means of modular, effective process chains, especially for small batch sizes and cross-company value networks. The aim is to enable a high level of product diversity and dynamics, taking into consideration aspects such as human-machine cooperation and the division 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 based on innovative processes and advanced materials, nanomaterials, bio-based raw materials or extensive use of ICT in product development and in the production process.

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 area.

1. **Nano- and low dimensional nanomaterials, functional devices**
2. **Controllable Porous Nanomaterials, focusing on feature study and application development, especially their effects and functions in the development of molecular diagnosis technologies, methods and devices**
3. **Micro/Nano thin films and advanced characterization methods**
4. **3D-printing, especially high performance ceramic printing**

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 or SITI 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 and Chinese research institutions). This applies to the entire international consortium in deviation from the Austrian Technical Guidelines for Cooperative R&D Projects at a Transnational Level. Therefore as a matter of fact, Chapter 1.2 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 / SITI prior to the preparation of the national funding agreement.
- **The Joint Proposal** must be submitted via **FFG eCall** (<https://eCall.ffg.at>) by **21 June 2018, 11:00 C.E.S.T. Central European Summer Time** at the latest.
- **The Joint Proposal** must be submitted to **SHANGHAI University by 21 June 2018, 17:00 C.S.T. China Standard Time** at the latest.
- The **Joint Proposal** submitted to FFG and SHANGHAI University / SITI **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

Bilateral cooperative research and development projects between Austria and China falling into the research categories 'Industrial Research' or 'Experimental Development' may only 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: www.ffg.at/27-ausschreibung-produktion-der-zukunft/downloadcenter)
- In addition to the Joint Proposal the **Austrian national Annex** must be uploaded via eCall. **The application documents must be submitted via eCall** (<https://eCall.ffg.at>) by **21. June 2018, 11:00 C.E.S.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 1.2 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 1.2 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 research groups of SHANGHAI University or SITI. Additional Chinese partners may only participate in the consortium after prior agreement with SHANGHAI University / SITI.
 - **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 (http://ec.europa.eu/budget/contracts_grants/info_contracts/inforeuro/inforeuro_en.cfm). 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 fourth bilateral call in deviation from the provisions of the Technical Guidelines.

Austrian partners and partners of SHANGHAI University / SITI 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. BMVIT will take the funding decision for the Austrian project partners. SHANGHAI University / SITI shall be responsible for the funding decision for the Chinese partners.







4. Call Documents

4.1 Joint call documents Austria – SHANGHAI University / SITI

Joint transnational call documents	
Download at www.ffg.at/27-ausschreibung-produktion-der-zukunft/downloadcenter	
Call Fiche	 Call Fiche Joint call guidelines FFG and SHANGHAI University / SITI
Application form	 Joint Proposal Joint project description Austria – SHANGHAI University / SITI

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:

Additional documents to be submitted by Austrian participants under the RTI Initiative ‘Production of the Future’	
Download at: www.ffg.at/27-ausschreibung-produktion-der-zukunft/downloadcenter	
Call Guideline <i>(present document)</i>	 Call Guideline RTI Initiative ‘Production of the Future’, 27th Call (Version 1.0)
Application forms: for transnational cooperative R&D projects IR or ED*	 Technical Guidelines for Cooperative R&D Projects at Transnational Level  Project Description - Austrian Annex  Declaration of SME Status (if required)**
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)

* IR Industrial Research, ED Experimental Development

** 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.

National applications must be submitted electronically via **eCall** at <https://ecall.ffg.at>. 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 call documents can be found in the download centre at: <http://www.ffg.at/27-ausschreibung-produktion-der-zukunft/downloadcenter>

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':**
www.ffg.at/27-ausschreibung-produktion-der-zukunft
- **eCall submission:** <https://ecall.ffg.at>
- **National contact:**
DI Johanna Dragan BSc, E: johanna.dragan@ffg.at
T: +43 (0)57755-5085
Programme manager

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

4.3 National call documents for SHANGHAI University / SITI

For the Chinese partners, further national call documents of SHANGHAI University / SITI 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 SHANGHAI University / SITI:**
www.nano.shu.edu.cn
- **National contact at SHANGHAI University / SITI:**
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 <https://www.ffg.at/recht-finanzen/rechtsgrundlagen>.

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** (<https://projekte.ffg.at/>) 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:

<https://www.ffg.at/content/fragen-antworten-zur-ffg-projektdatenbank>

6.2 BMVIT Open4Innovation

The [open4innovation](http://www.open4innovation.at)¹ platform of the Federal Ministry for Transport, Innovation and Technology (bmvit) 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](https://dmponline.dcc.ac.uk/)². The "[Guidelines on FAIR Data Management](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf)"³ 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.

¹ www.open4innovation.at

² <https://dmponline.dcc.ac.uk/>

³ http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf

European Programmes:

HORIZON 2020 – the next EU Framework Programme (2014-2020);
Initial Information at <http://rp7.ffg.at/horizon2020>

Nanosciences, Nanotechnologies, Materials and New Production Technologies

Contact: DI Gerald Kern

T: +43 (0) 57755-4301, E: gerald.kern@ffg.at

Health

Contact: Dr. Astrid Hoebertz

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

Environment

Contact: Dr. Michalis Tzatzanis

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

Security

Contact: DI Jeannette Klonk

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

BEYOND EUROPE:

Information at <https://www.ffg.at/en/beyond-europe>

Contact: Dipl.-Ing. Maria Bürgermeister-Mähr

T: + 43 (0) 57755-5040, E: maria.buergermeister-maehr@ffg.at