JOINT CALL FOR PROPOSALS

ERA CoBioTech 3rd Call

Bio-based replacement products, technologies and processes

Deadline: 30 June 2020 @ 13:00 CEST

Call Announcement

-Update-3

Published on May 18th, 2020

Deadline postponed to June 30, 2020, 13:00 h (CEST).
Page 8: TUBITAK can now fund not only companies, but also academia, universities and research organisations.
Page 8: ETAg`s maximum funding per project partner is corrected to mio€ 0.1, according to the info elsewhere in this document.
Page 8: ETAg flags, that consulting with the national contact person prior to submission is essential!

Content:

Summary:

ERA CoBioTech (ERA Net Cofund on Biotechnology) announces its third international call in the field of biotechnology. The scope of this Joint Call has been developed based on the ERA CoBioTech strategic process taking into account the key stakeholders of the European biotechnology community. For further details, please refer to the **ERA CoBioTech's Strategic Agenda** and the **European BioTech Hub platform**. Joint projects must have a **minimum of three** and a **maximum of six participants** applying for funding from a **minimum of two different ERA CoBioTech partner countries involved in this call**. A **maximum of eight partners** is acceptable if the **additional consortium partners** are **from any of these countries:** Estonia, Russia, Slovenia and Turkey. Partners participating at their own expense count towards the maximum number of partners but not to the minimum number of participants. No more than two eligible partners requesting funding may come from the same country. **The participation of one or more industrial partner(s) in the consortium is strongly recommended, but not mandatory**. The call applies a one-stage-scheme with an opportunity for "rebuttal".

- The deadline for submission of proposals is **June, 30th 2020 (13:00 CEST)**.

Projects are expected to start from January 2021, depending on the grant negotiations with the relevant national funding organisation(s). A harmonised starting date of all partners within a consortium is desirable.

Table 1: Call timeline

February 18, 2020	**Call Pre-Announcement**
March 18, 2020	**Official Call Announcement**
June 30, 2020 (13:00 CEST)	**Deadline for Proposal Submission**
September 14, 2020	**Information letters to the coordinators of project consortia**
September 28, 2020	**Rebuttal**: deadline for submission comments to issues raised by IEP' reviews; responsibility of the project coordinator
Early November	**Communication of the evaluation outcome to the applicants and start of grant negotiations**
From January 2021, depending on the progress of grant negotiations	**Start of the selected projects**

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Spain

ERA CoBioTech Submission Webpage: https://www.submission-cobiotech.eu/
ERA CoBioTech webpage: http://www.cobiotech.eu/

Background

ERA CoBioTech brings together owners and managers of national and regional R&D&I programmes of EU Member States, associated states and non-EU countries with significant experience in research funding and coordination.

This call aims to attract proposals focused on biotechnology as a key enabling technology (KET) in the context of the bio-based economy. It tackles 21st century societal challenges such as decarbonisation of the economy and reduction of the reliance on fossil feedstocks. Therefore, funding provided by national and regional programmes (see ANNEX 2) will be combined to launch this joint call for multilateral research projects addressing "Biotechnology for a sustainable bioeconomy".

ERA CoBioTech aims to connect research partners with different but complementary scientific and technological expertise to maximise resources and share risks, costs, and skills. A prerequisite for support of transnational projects via this call is the inclusion of different players with relevant expertise within a value chain. Whenever appropriate, this will enable the newly developed products, technologies or services to reach the market efficiently and in ways that are socially acceptable. Partnerships between academic researchers, and commercial and non-academic partners in the fields of biotechnology will improve and accelerate technology transfer in this regard. These partnerships will also strengthen European efforts to achieve a sustainable industrial development.

The following funding organisations participate in this joint call for multilateral research projects:

- Service Public de Wallonie (SPW-Research), Belgium
- Sächsisches Staatsministerium für Wissenschaft, Kultur und Tourismus (SMWK), Germany
- Agencia Estatal de Investigación (AEI), Spain
- Sihtasutus Eesti Teadusagentuur (ETAg), Estonia
- Agence Nationale de la Recherche (ANR), France
- Norges forskningsråd (RCN), Norway
- Фонд содействия развитию малых форм предприятий в научно-технической сфере (Foundation for Assistance to Small Innovative Enterprises) (FASIE), Russia
- Ministrstvo za izobrazevanje, znanost in sport (MIZS), Slovenia
- Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TUBITAK), Turkey

Applicants are strongly advised to contact their funding organisation before submitting an application. For contact details see ANNEX 1: National or regional contact persons.

Scope of the joint call

"**Bio-based replacement products, technologies and processes**" focuses on sustainability throughout the entire value chain.

Outputs

Research projects are expected **to facilitate the replacement of a specific product, technology or process** which involves either:

(i) **fossil-based or other unsustainable feedstocks** (e.g high ILUC and food/feed crops) or

(ii) **unsustainable industrial processes,** such as intensive production methods (e.g. involving carbon-intensive energy consumption and/or transportation).

The anticipated outputs are expected to fall within the range of commodity chemicals, intermediates and finished products/consumer goods. These can include, but are not limited to, bio-based materials[1], biomedical products, flavours/fragrances, food/feed ingredients, pharmaceuticals, biofuels, platform chemicals, pulp/paper products, textiles, upstream and downstream design, scale-up of biotechnological processes, systems approaches to bioprocesses and process development and/or gas fermentation.

Feedstocks

The research consortia are required to sustainably enhance biomass utilisation or make use of **innovative feedstocks** derived from sources commonly recognised as sustainable. The focus should be on the conversion of feedstock rather than the production of new biomass. Feedstocks can include waste (agricultural, municipal, forestry, marine etc.) or other currently underutilised biomass. Feedstocks should not be derived from fossil-based sources, sources producing high amounts of greenhouse gasses (GHG) or other sources and production methods commonly recognised as unsustainable. Feedstocks should adhere to the sustainability and land use criteria for biomass issued by the EC[2].

Industrial processes and translation

Projects need to be focused on research but the potential route to future application/translation should also be considered during proposal preparation. This includes the need to address necessary future or already planned scale-up activities. Therefore, depending on the technology readiness level (TRL) of the project, participation of industrial partner(s), and/or a technology transfer office (or equivalent) is **strongly recommended**.

Additionally, projects should start at a minimum of TRL2 and increase their TRL by 2 points (not exceeding TRL6) during the lifetime of the project. Definitions of TRLs are provided in **ANNEX 3.**

[1] This also includes products replacing unsustainable animal-based products e.g. vegan leather.

[2] https://ec.europa.eu/energy/en/topics/renewable-energy/biomass

Responsible research and innovation (RRI)

The environmental, social and economic impacts of the project should be considered in order to demonstrate the benefits of the expected product, technology or industrial process compared to the conventional product, technology or industrial process. To achieve this, Responsible Research and Innovation (RRI) dimensions should be integrated into the research projects. These dimensions may focus, for instance, on the social, environmental, philosophical or political dimensions of the project. Integration of RRI should lead to an improved awareness of the possible benefits, risks, and uncertainties of biotechnology in the bioeconomy across a broad cross-section of society.

RRI components will be evaluated as integral components in scope of all evaluation criteria (Excellence, Impact, and Implementation).

ERA CoBioTech has published an Agenda for RRI on its website and further information on approaches will be provided through webinars when the call is open. Further information about specific approaches is provided in ANNEX 6.

Scientific Approaches

The submitted proposals must be multidisciplinary and include **at least two** of the following scientific approaches:

- **Synthetic biology** for the design and construction of new biological parts, devices, and systems, or re-design of existing, natural biological systems for useful purposes by use of (but not limited to) e.g. orthogonal bio-systems, regulatory circuits, minimal genome approaches and protocells.
- **Systems biology** for optimisation of biological processes, including investigation of regulatory mechanisms in intra- and intercellular processes for bio-production, modelling, development of new computational methods and other new methodologies.
- **Use of bioinformatics tools** (e.g. data standardisation, modelling, open repositories) for the identification and utilisation of metabolic pathways. Datasets can have different origins, e.g. appropriate datasets on genomics, phenomics, proteomics, metabolomics, transcriptomics etc.; mapping and exploitation of cellular processes and metabolic capacities for bio-production and for strain/variety improvement are also included.
- **Biotechnological approaches** (possibly in combination with chemical ones) to transform bio-based building blocks into molecules in a sustainable way.

Further criteria

- **The inclusion of one or more industrial partner(s) is strongly recommended.**
- **Previously unsuccessful ERA CoBioTech grant proposals must not be directly resubmitted in their original version.** Resubmissions will only be considered if the proposal has been substantially improved. All proposals are checked in the peer review administration process to identify any direct resubmissions. Resubmitted proposals must be declared as such, and include details on the modifications which merit their re-consideration.
- All project partners should contribute to and benefit from an equitable and balanced cooperation.
- Results of collaborative projects must be shared within the research consortium through a controlled process that adequately protects and equitably allocates intellectual property rights used in, and generated during, joint research and development.

- Each proposal must include a max. two-page **Communication and Dissemination Plan,** detailing how a two-way dialogue with different public and stakeholder groups will be pursued. For more information see ANNEX 4: Communication & Dissemination.

- Participation in this call will require **high quality Data Management (DM) standards** to ensure the overall sustainability of biotechnology research and its expected outcome(s). All applying consortia have to dedicate a section of their **proposal** to DM within the project (mandatory, max. two pages). More information on Data Management requirements within this call is given in ANNEX 5: Data Management. Please check the www.submission-cobiotech.eu web page for supporting webinars.

- Each proposal must include a max. two-page TRL plan on how higher TRLs will be achieved during the project lifetime or as a result of it (TRL definition: ANNEX 3). Ideally the engagement of industry (if applicable, see Table 2) to achieve a higher TRL can be described (e.g. the provision of tools, trainings, etc.) here.

- As with previous funding calls, all projects will be expected to include aspects relating to Communication and Dissemination (ANNEX 4), Data Management (ANNEX 5) and "Responsible Research & Innovation" (RRI), see ANNEX 6. Please check the www.submission-cobiotech.eu web page for supporting webinars on these topics.

Table 2: Summary of funding options and restrictions

Please also read and follow the "National or regional regulations and guidelines and eligibility criteria", as detailed ANNEX 2
Please note, that some (but not all) funding organisations require the involvement of an industrial partner in "their" national/regional share of a consortium (see table below).

Funding Organisation	Country	Indicative *total* national/regional funding (up to x M€)	Funding of: universities (HES), research organisations (REC), companies (PRC)	Maximum funding per project partner (M€)	Additional documents required	Funding of PhD students possible	Any other national / regional restrictions (Start/end date of projects)
SPW-Research	BE	1	yes	N/A	Walloon request for funding form	No	At least one Walloon company mandatory in the consortium
SMWK	DE	1.5	HES: yes, REC: yes, PRC: can be subcontractors of the HES/REC	none	none	yes	See Annex 2 on Saxon Regulations
ETAg	EE	0.1	yes	0.1	Confirmation Letter by the Host Institution	yes	see national rules and eligibility criteria; consulting with the national contact person prior to submission is essential
AEI	ES	0.4	Only HES and REC.	0.15 / 0.2 (coord)	According to national rules and conditions	yes	See national eligibility criteria
ANR	FR	1	yes	0.25	none	yes	See national eligibility criteria.
RCN	NO	1	yes	The total sum of the budgets of the Norwegian participants in each proposal must be limited to 0.5.	None	yes	See national requirements in annex 2
FASIE	RU	0.4	Only PRC. HES and REC can be sub-contractors of the PRC.	0.2 per project	The Russian applicant must submit the national application at online.fasie.ru. Applicants are encouraged to contact FASIE for details.	No	See ANNEX on National Regulations
MIZS	SI	0.42	All (in accordance with national regulations and state aid rules)	0.21 per project (regardless of no. of Slovenian partners in the project)	National documentation to be sent only after the completion of transnational call	Yes (tuition costs are not eligible)	See national regulations and criteria and refer to the MIZS website.
TUBITAK	TR	1,5	All (industry, academia, university, research organizations)	N/A	successful projects should apply for national funding program	no	none

Eligibility

Only proposals which meet all eligibility criteria will be considered for evaluation. National or regional regulations, guidelines and eligibility criteria are given in ANNEX 2: *National or regional regulations, guidelines and eligibility criteria.* In addition, all proposals must meet the following eligibility criteria:

General eligibility criteria

- Projects must address the scope of the call as outlined in pages 5 & 6. Proposals not addressing the scope of the call will be rejected. Additionally, applications should fit the specific remit of the national or regional regulations and guidelines and eligibility criteria of the respective funding organisations (ANNEX 2); it is strongly recommended that applicants contact their National/Regional Contact Persons (see ANNEX 1) **before** submission of a proposal.
- Proposals must be written in English and submitted until **June 30th 2020 (13:00 CEST)** using the ERA CoBioTech submission website (https://www.submission-cobiotech.eu/).
- If national/regional forms are required, these must be submitted directly to the national/regional funding organisation (see ANNEX 2, National or regional regulations and eligibility criteria) by the deadlines stated in ANNEX 2.
- The project duration must not exceed 36 months.
- If a proposal does not meet the minimum number of partners (see below), exceeds the eligible maximum number of partners, or if one of the partners requesting funding is considered ineligible, the proposal will be rejected before entering the evaluation phase.
- Project outputs are expected to provide benefits to all partner countries. Consortia need to be balanced between countries, both in terms of number of partners and distribution of work and budget; such that all project partners contribute to and benefit from an equitable and balanced cooperation.
- The requested funding budget of each partner must not exceed national or regional funding limits, where applicable (for details, see "Table 2 Summary of funding options and restrictions" and "National or regional regulations and eligibility criteria" (ANNEX 2).

Eligible funding recipients / consortium partners

- Funding is provided according to the "nationality principle". This means that each participating national/regional funding organisation funds its respective national/regional researcher(s) in a particular project consortium. Funding is subject to national or regional regulations and guidelines and eligibility criteria (see ANNEX 2). **ALL project partners must check their eligibility for funding prior to submission**.
- Consortia must include at least three eligible partners requesting funding from two different countries providing funds to this call. Consortia can involve a maximum of six partners. A maximum of eight partners is acceptable if the additional consortium partners are from any of these countries: Estonia, Russia, Slovenia and Turkey. However, in any case, no more than two partners requesting funding may come from the same country.
- Partners from countries not participating in the call may participate in a project at their own expense, if their contribution is important to achieve the project goals. The coordinator should take steps to ensure that sufficient funds are secured from these additional partners, and evidence of the availability of funds should be provided prior to project submission (letter of support/commitment, template available at www.submission-cobiotech.eu). The same applies for partners of participating countries not requesting funding. **Partners participating at their own expense count towards the maximum number of partners but not to the minimum number of participants**.

- The project coordinator must be eligible and request funding for the proposed project from a funding organisation participating in this call (i.e. an organisation participating at own expense, cannot act as coordinator). In such a case the proposal will be declared ineligible and not forwarded to evaluation.
- **The participation of at least one industrial partner in the consortium is strongly recommended**. Large companies, small and medium-size enterprises (SMEs), non-commercial bodies and academic research groups / organisations may be part of a consortium, although some funders may not be able to fund industrial partners (see ANNEX 2). Please clarify the conditions under which an industrial partner is involved in the research consortium. Subcontractors can be included and are managed under the national or regional regulations and guidelines and eligibility criteria of the responsible funding organisation (see ANNEX 2).
- Within a joint proposal, each group leader (for each partner organisation) will be the contact person for the relevant national or regional funding organisation. All research groups agree to abide by the rules and agreements of the ERA CoBioTech call.

Financial modalities and funding prerequisites

The total budget available for this call is **~€7.32** M (Table 3). Funding is granted according to national or regional regulations (See ANNEX 2 for details).

Table 3: Available funding

Country/Region		Funding Organisation	Estimated budget (up to €M)
Belgium		Service Public de Wallonie (SPW-Research)	1
Germany		Sächsisches Staatsministerium für Wissenschaft , Kultur und Tourismus (SMWK)	1.5
Estonia		Sihtasutus Eesti Teadusagentuur (ETAg)	0.1
Spain		Agencia Estatal de Investigación (AEI	0.4
France		Agence Nationale de la Recherche (ANR)	1
Norway		Norges forskningsråd (RCN)	1
Russia		Фонд содействия развитию малых форм предприятий в научно-технической сфере (Foundation for Assistance to Small Innovative Enterprises) (FASIE)	0.4
Slovenia		Ministrstvo za izobrazevanje, znanost in sport (MIZS)	0.42
Turkey		Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TUBITAK)	1,5
Total Call Volume			**7.32 M€**

Application procedure

The application process is one-phased (only full proposal) including a rebuttal procedure. Throughout the whole process, the ERA CoBioTech Call Office (era-ib@aei.gob.es) is the central communication point for all applicants.

The coordinators must submit proposals electronically via the ERA CoBioTech submission website (http://www.submission-cobiotech.eu/). The deadline for submitting proposals is **June 30th, 2020 (13:00 CEST)**. For technical issues please contact ptj-cobiotech@fz-juelich.de.

Evaluation procedure

Proposals that are submitted correctly and within the deadline will be checked for eligibility. The eligibility check will focus on the "**General eligibility criteria"** (see page 9) and "**National or regional regulations, national or regional eligibility criteria**" (see ANNEX 2). The involvement of one or more **ineligible project partners will result in rejection of the entire project proposal.**

Eligible proposals will be peer-review evaluated by an international panel of experts with relevant expertise in the scientific fields concerned. Each expert is independent of any funding organisation involved in this call and no conflict of interest will exist in relation to the proposals evaluated. Each proposal will be reviewed by at least three external reviewers/experts. The composition of the international evaluation panel (IEP) is decided by the ERA CoBioTech Call Steering Committee.

Proposals will be evaluated according to the evaluation criteria given below:

- **Excellence**

  - Clarity and pertinence of the objectives.
  - Soundness of the concept.
  - Credibility of the proposed methodology.
  - Quality and expertise of the consortium as a whole.

- **Impact**

  Extent to which the outputs of the project will contribute to impacts on:
  - At least 2 of the 4 scientific approaches shown above (see page 6), that should be conveniently explained and justified throughout the proposal.
  - Technological and economic development by describing an envisioned plan to achieve a higher TRL of the processes and technologies, especially how to achieve an increase of the TRL by 2 levels compared to the initial TRL.
  - Non-academic and commercial partners, for instance through technological innovation and expanding the exploitation capabilities of potential industrial partners or involved end-users.
  - Sustainability of biotechnology research and its outcomes, supported by a data management (DM) plan.
  - ERA CoBioTech's commitment to Responsible Research & Innovation (RRI), for instance through investigation and consideration of:
    - The environmental aspects of transformation to a bio-based economy (e.g. through Life Cycle Assessment); and/or
    - Interdisciplinary collaboration with social sciences and/or humanities researchers; and/or
    - Other innovative approaches to RRI within the ERA CoBioTech Programme (please refer to the relevant annex of this document).
  - Engagement with diverse public and stakeholder groups, through an efficient Communication and Dissemination Plan addressing also communication with the general public.

- **Quality and efficiency of the implementation**

  - Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables.
  - Appropriateness of the management structures and procedures, including risk and innovation management.
  - Complementarity of the participants and extent to which the consortium as a whole brings together the necessary expertise.

- Appropriateness of the allocation of tasks, ensuring that all participants have a valid role and adequate resources in the project to fulfil that role.
- The project budget is appropriate to the planned work and allows the achievement of the project goals.

Evaluation scores will be awarded for each of the three main criteria. Sub-criteria are aspects that the expert will consider in the assessment of that criterion. Each criterion will be scored out of 5 (half scores are allowed) and equally weighted.

The 0-5 scoring system for each criterion indicates the following assessment:

> ***0*** *- The proposal fails to address the criterion or cannot be assessed due to missing or incomplete information.*
>
> ***1*** *- Poor. The criterion is inadequately addressed, or there are serious inherent weaknesses.*
>
> ***2*** *- Fair. The proposal broadly addresses the criterion, but there are significant weaknesses.*
>
> ***3*** *- Good. The proposal addresses the criterion well, but a number of shortcomings are present.*
>
> ***4*** *- Very Good. The proposal addresses the criterion very well, but a small number of shortcomings are present.*
>
> ***5*** *- Excellent. The proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.*

The **threshold mark** for individual criteria will be **3**. The overall **threshold mark,** applying to the sum of the three individual scores, will be **10**.

Rebuttal stage

The evaluation process provides applicants with the opportunity to reply to issues raised by the assessments of reviewers. Coordinators of proposals will get access to the anonymised questions and comments raised by the evaluators concerning their proposal. This stage allows applicants to comment on factual errors or misunderstandings that may have been committed by the reviewers while assessing the proposals and to reply to reviewers' questions. Proposal coordinators may submit a single response to the reviews via ERA CoBioTech submission (www.submission-cobiotech.eu) after receiving the reviews (see Table 1 "Call timeline"). This response is optional, i.e. no response does not exclude the proposal from the evaluation process.

Please note that issues not related to reviewers' comments or changes on the proposals (such as work plan, requested budget, etc.) will not be accepted and will not be taken into account by reviewers.

International Evaluation Panel (IEP) meeting

The reviewers will meet in an IEP meeting after receipt of the rebuttal document to discuss each proposal and will decide on one final ranking list of proposals recommended for funding. Based on the ranking list and the available funding, the ERA CoBioTech Call Steering Committee will decide which projects will be funded.

Subsequently, the coordinators of the research consortia will be informed about funding decisions. Evaluation summaries will be provided. The coordinators of the research consortia are responsible for forwarding all information to their research consortium partners.

Forms, guidelines and further information

All documents related to the call (Call Announcement, Proposal Template, Template for Letters of Commitment, templates for CV) are available on www.submission-cobiotech.eu. As the participating funding organisations may have additional national or regional requirements and eligibility criteria, it is strongly recommended that applicants contact their respective national or regional funding organisations prior to submission of the proposal for further information (see ANNEX 1.). For questions related to the submission of your proposal, please contact the ERA CoBioTech Call Office of this call (era-ib@aei.gob.es). For technical questions regarding the submission tool please contact Project Management Juelich (ptj-cobiotech@fz-juelich.de).

All project partners are required to sign a Consortium Agreement (CA) before the official project start or no later than three months from the project start. Supporting information can be found under www.desca-2020.eu/. On request, the CA must be made available to the national or regional funding organisations, together with any other information required by national or regional regulations.

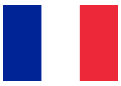
Project monitoring and reporting

Project objectives must be reached within a maximum of three years.

Project coordinators are required to provide a mid-term and a final report as well as a non-confidential summary of the outcomes of their project for publication via the website (www.cobiotech.eu) and the ERA CoBioTech newsletter. Hereby, ERA CoBioTech wants to reach out to the wider research community and interested public, therefore a summary of research results is needed that can be understood by a broader audience. ERA CoBioTech will provide a template for this summary on the submission website. Each funding body may require additional reporting or monitoring of the projects.

In addition, a kick-off, midterm and final seminar, in which project coordinators will present their projects, will be organised (Status Seminars). **The costs for attending these Status Seminars should be covered by the requested project budget.** The objectives of the status seminars are: (1) to help monitor projects funded through ERA CoBioTech; (2) provide opportunities for shared learning (e.g. about RRI practices); and (3) offer opportunities to network, develop future collaborations and communicate with a broader community, i.e. the members of the "European Biotech Hub" established under ERA CoBioTech.

ANNEX 1: National or regional contact persons

Country		Funding Organisation	National Contact Person (NCP)
BE		**SPW-Research**	Thomas Gerards thomas.gerards@spw.wallonie.be +32-81-33-45-57, Nicolas Delsaux nicolas.delsaux@spw.wallonie.be +32 81 33 45 20
EE		**ETAg**	Katrin Saar katrin.saar@etag.ee +372-731-7386
FR		**ANR**	Liz Pons +33-1-78-09-80-49 liz.pons@anr.fr Mélanie Lorion Melanie.LORION@anr.fr +33-1-73 54 82 37
DE		**SMWK**	Gabriele Süptitz +49-351-564-64210 gabriele.sueptitz@smwk.sachsen.de or cobiotech@smwk.sachsen.de
NO		**RCN**	Øystein Rønning +4791623960 oro@rcn.no
RU		**FASIE**	Olga Levchenko +74952313851 levchenko@fasie.ru
SI		**MIZS**	Katja Ceglar +386(1)4784736 katja.ceglar@gov.si
ES		**AEI**	Manuel Sánchez-Blanco +34 916038447 Jesús M. Sanz (scientific issues) era-ib@aei.gob.es
TR		**TUBITAK**	Dilek Sahin +90-312-298 94 91 dilek.sahin@tubitak.gov.tr

ANNEX 2: National or regional regulations and eligibility criteria

Belgium – SPW

Participating organisation: SPW-Research

Indicative Budget: **1.0 M€**

National Contact Person(s):

Thomas Gerards
Tel.: +32 81 334 557
E-Mail: thomas.gerards@spw.wallonie.be
Name: Nicolas Delsaux
Tel.: +32 81 334 520; Mobile: + 32 473 556 174
E-Mail: nicolas.delsaux@spw.wallonie.be

Name of & link to the funding programme(s) and other relevant information:
https://recherche-technologie.wallonie.be/fr/menu/acteurs-institutionnels/service-public-de-wallonie-services-en-charge-de-la-recherche-et-des-technologies/departement-des-programmes-de-recherche/direction-des-programmes-federaux-et-internationaux/era-nets/les-era-nets.html

Min.project duration: 12 months
Max. project duration: 36 months

Maximum funding per project: none

Institutional eligibility criteria:

- SMEs, large industries, research centres and Universities are eligible;
- 40% of the Walloon budget must be allocated to an enterprise;
- The project cannot receive double funding;
- The budget for the Walloon partners should follow the SPW-Research cost model;
- The funding rate will be the maximum allowed by the decree of the 3rd of July 2008;
- The beneficiary must have a stable financial situation;
- The beneficiary must have Operational offices in the Walloon Region;
- The project must add benefit to the regional economy;
- All information needed for evaluation should be available;
- A Walloon complementary funding request's form must be submitted to the SPW-Research.

Institutional thematic priorities: none

Proposals with the following focus cannot be funded: none

Additional information:
A Walloon complementary funding request's form must be submitted online to the SPW-Research.

Germany – Free state of Saxony

STAATSMINISTERIUM FÜR WISSENSCHAFT UND KUNST | Freistaat SACHSEN

Participating organisation: **Saxon State Ministry for Science, Culture and Tourism (SMWK)**

Indicative Budget: **1.5 M€**

Regional Contact Person(s):

Gabriele Süptitz
Tel.: +49 351 564 64210
E-Mail: gabriele.sueptitz@smwk.sachsen.de
cobiotech@smwk.sachsen.de

Name of & link to the funding programme(s) and other relevant information:
please contact the regional contact person

Max. project duration: 36 months

Maximum funding per project: no limitation

Institutional eligibility criteria: see Saxon guidelines
(Richtlinie des Sächsischen Staatsministeriums für Wissenschaft und Kunst zu Gewährung von Zuwendungen für Maßnahmen im Rahmen der wettbewerblichen EU-Förderprogramme für Forschung und Innovation (RL EuProNet) vom 7. März 2017)

Institutional thematic priorities SMWK will support projects within the entire scientific scope outlined in the Call Announcement

Proposals with the following focus cannot be funded: All Saxon proposals within the scope outlined in the Call Announcement can be funded.

Additional information:
In the case of a positive funding recommendation, Saxon applicants will be asked to submit a regional application according to the related Saxon guideline.

Estonia – ETAg

Eesti Teadusagentuur
Estonian Research Council

Participating organisation: Eesti Teadusagentuur / Estonian Research Council

Indicative Budget: **0.1 M€**

National Contact Person(s):

Katrin Saar
Phone: +372-731-7386
E-mail: katrin.saar@etag.ee

Name of & link to the funding programme(s) and other relevant information: www.etag.ee

Maximum funding per project: 100 000 €

Institutional eligibility criteria:

The Estonian Research Council (hereinafter ETAg) funds basic and applied research. Applied research is only funded as far as it does not refer to product development with commercial value and for marketing purposes.

The Host Institution is the institution to which the grant will be allocated. The Host Institution must be registered and located in Estonia. R&D institutions must conform to the Organisation of Research and Development Act. For enterprises, subsection 3(2) of the Organisation of Research and Development Act does not apply. The Host Institution must declare that the project can be carried out within their premises and that it will employ the Principal Investigator during the proposed project, should the project receive funding.

The Principal Investigator is the researcher who submits the project proposal and who will be responsible for the use of the grant and for the implementation of the project. The Principal Investigator:

- must have an updated public profile in the Estonian Research Information System (ETIS), or as an alternative, convert his/her ETIS publications table into a PDF and send it directly to the ERA-NET's contact point at ETAg;
- must hold a doctoral degree or an equivalent qualification. The degree must be awarded by the submission deadline of the grant application, at the latest;
- must have published at least three articles which comply with the requirements of clause 1.1 of the ETIS classification of publications, or at least five articles which comply with the requirements of clauses 1.1, 1.2, 2.1 or 3.1, within the last five years prior to the proposal submission deadline. International patents are equalled with publications of clause 1.1. A monograph (ETIS clause 2.1) is equalled with three publications mentioned in clause 1.1 if the number of authors is three or less. If the applicant has been on pregnancy and maternity or parental leave or in the compulsory military service, or has other serious grounds, the publication period requirement will be extended by the respective time.

Senior research staff of the project participates in the substantial performance of the project. They must hold at least master's degree or an equivalent qualification.

Research expenses consist of direct costs (personnel costs incl. scholarships, travel costs and other direct costs) and subcontracting costs. The research expenses must be used to carry out the project and be respectively identifiable.

Direct costs:

- **Personnel costs** are monthly salaries with social security charges and all other statutory costs of the participants of the project calculated according to their commitment and proportionately to their total salary cost at their Host Institution.
- **Scholarships** equal to the state doctoral allowance may be paid out of the grant to doctoral students not receiving any salary from the Host Institution. Should a doctoral student participate in several

projects financed by ETAg, the total amount of the scholarship from these projects may not exceed the nationally determined amount of doctoral allowance.
- **Travel costs** may cover expenses for transport, accommodation and daily allowances..

Other direct costs are:
- consumables related to the project;
- costs for publication and dissemination of project results;
- costs for organising meetings, seminars or conferences;
- fees for participation in scientific forums and conferences;
- all other costs that are identifiable as clearly required for the implementation of the project.

Subcontracting costs should not be included in the overhead calculation and should cover only additional or complementary research related tasks (e.g. costs for translation, analyses, etc.) performed by third parties. Core project tasks should not be subcontracted. Subcontracting costs may not exceed 10% of the total costs.

Overhead may not exceed 20% of eligible direct research costs and should cover general expenses of the Host Institution. Costs for equipment and services intended for public use (copying machine or printer publicly used, phone bills, copying service, etc.) should be covered from the overhead.

Double funding of activities is not acceptable.

Enterprises :
EU Regulations on State Aid for Research and Development must be taken into account when requesting funding from ETAg. The state aid form must be filled in. No tax arrears are allowed on the proposal submission date.

Grant Agreement
ETAg shall enter into a grant agreement with the Host Institution and the Principal Investigator.

Research involving human subjects or animal tests:
If human research or animal tests are intended in the project, a positive resolution by the Human Research Ethics Committee or the Authorization Committee for Animal Experiments must be submitted to ETAg by the start of the relevant activities.

Nagoya protocol:
By applying for funding by ETAg the applicants agree to consider the relevance of Nagoya protocol for their research, and to submit the Due Diligence Declaration if applicable.

APPLICANTS MUST COORDINATE THEIR PROPOSAL WITH THEIR HOST INSTITUTION AND ARE STRONGLY ADVISED TO CONTACT THE NATIONAL CONTACT POINTS FOR PRE-ELIGIBILITY CHECK.

Spain – AEI

Participating organisation: **Agencia Estatal de Investigación (AEI)**

Indicative Budget: **0.4 M€**

National Contact Person(s):

Representative: Juan Climent Blasco

Manuel Sánchez-Blanco
(Administrative and technical issues)

Jesús Miguel Sanz
(Scientific issues)

Telephone number: +34 91 603 8447

Email address: era-ib@aei.gob.es

The Spanish legal entities granted are obliged by the regulations established in the national call "Programación Conjunta Internacional (PCI)" (or its equivalent) and by the funding limits specified below.

Call will be managed by the *Subdivisión de Programas Científico-Técnicos Transversales, Fortalecimiento y Excelencia - Agencia Estatal de Investigación (AEI)*

Min.project duration: 3 years
Max. project duration: 3 years
Maximum funding per project: €150,000 per partner; €200,000 per Consortium Coordinator

The following funding limits are considered eligibility criteria by AEI. Proposals not respecting these limits could be declared non eligible.

Only one Spanish partner will be accepted per proposal. When a Spanish legal entity participates in the proposal, the maximum funding is 150,000€ (additional 50,000€ when the project is coordinated by a Spanish PI).

Institutional eligibility criteria:

The eligible institutions are non-profit research organisations as per national call "Programación Conjunta Internacional (PCI)" (or its equivalent), such as Universities, Public Research Institutions, Technological Centers, and other Private non-profit Institutions performing RDI activities in Spain.

Eligible applicants:

• Spanish Principal Investigators must be eligible under the PCI call (or its equivalent) and must have experience as investigators in projects funded by the Plan Nacional I+D+i 2008-2011, the Plan Estatal I+D+i 2013-2016, ERC Grants, European Framework Programmes or other relevant international programmes.

Incompatibilities:

• Principal Investigators are not allowed to apply for funding in more than one proposal under the CoBioTech Joint Call 2018 nor in more than one proposal under the PCI national call (or its equivalent). In addition, **Principal Investigators will not be allowed to apply for funding in more than one proposal in the same PCI call or in two PCI calls in consecutive years**. This must be taken into account when participating in different ERA-Net calls or other international initiatives.

• Principal Investigators must remain unchanged between the proposal of this transnational call and the PCI national call (or its equivalent).

Eligible costs:

• Direct costs such as:

- ✓ Personnel costs for temporary employment contracts (scholarships are not eligible).
- ✓ Current costs, small scientific equipment, disposable materials, travelling expenses, coordination cost, and other costs that can be justified as necessary to carry out the proposed activities.

• Indirect costs (overheads) or clinical assays, proofs of concept, proofs of principle **are not eligible** for funding in the PCI call.

Other funding criteria:

Agencia Estatal de Investigación will avoid double funding and will not finance projects or parts of projects already funded through other national or EU calls.

• Compliance with the funding limits will be considered under the eligibility criteria. Proposals not respecting these limits could be declared ineligible.

• The final funding will take into account the transnational evaluation of the collaborative proposal, the scientific quality of the Spanish group, the added value of the international collaboration, the participation of the industrial sector and the financial resources available.

Any publication or dissemination activity resulting from the granted projects must acknowledge funding by the Agencia Estatal de Investigación: "Project (reference nº XX) funded by the State Research Agency through PCI (*or its equivalent*)".

Additional information:

Programación Conjunta Internacional (or its equivalent)
The applicants may consult the national regulation in the Programación Conjunta Internacional 2019 for informative purposes.

Useful links:
Agencia Estatal de Investigación – Calls and Grants
Esquema ERA-Nets

France – ANR

Participating organisation: Agence Nationale de Recherche (ANR)

Indicative Budget: **1 M€**

National Contact Person(s):

Mélanie LORION
+33 1 73 54 82 37
melanie.lorion@anr.fr

Liz PONS
+33 1 78 09 80 49
liz.pons@anr.fr

Name of & link to the funding programme(s) and other relevant information: http://www.agence-nationale-recherche.fr

Maximum funding per project: 250 000 €

Institutional eligibility criteria:

Projects are expected to have an initial TRL (technology readiness level) ranging **between 2 and 4** and should increase their TRL by 2 levels.

A proposal must not be similar in whole or in part to any other proposal submitted to calls of the 2020 edition of the ANR work program (https://anr.fr/fr/lanr-et-la-recherche/plan-daction-2020/), or to any previously granted project. The similar character is established when the proposals in question (in their totality or in part) describe identical main objectives, or result from a simple adaptation, and involve teams that are essentially identical.

Partners eligible for ANR financing:
ANR finances Partners[3] from public research organisations or related-one[4] and commercial company type (please read the funding rules: http://www.agence-nationale-recherche.fr/RF).

A complete version of the French annex to the call can be found here.

[3] I.e. partners with at least one branch or establishment in France.

[4] include public law entities engaged in research activity and private law entities engaged in research and/or teaching activity, with an establishment or branch in France (excluding companies)

Norway – RCN

Participating organisation: **Research Council of Norway (RCN)**

Indicative Budget: **1.0 M€**

National Contact Person(s):

Dr. Øystein Rønning
Tel: +4791623960
E-Mail: oro@rcn.no

Name of & link to the funding programme(s) and other relevant information:
BIOTEK2021 (http://www.forskningsradet.no/biotek2021)

Additional information:
The Research Council of Norway (RCN) participates through the national program Biotechnology for Innovation (BIOTEK2021).

RCN does not require a national application, but it should be clear from the common application what role the Norwegian partners would have and the size of their budget. The total sum of the budgets of the Norwegian participants in each proposal must be limited to 5 M NOK (500 000 EUR).

Universities and research organisations may receive funding according to the rules of Researcher projects (Forskerprosjekt) of RCN. In these cases up to 100% of total eligible costs may be funded.
Companies and commercial entities may receive funding according to the rules of Innovation Project for the Industrial Sector (Innovasjonsprosjekter i næringslivet) of RCN. In these cases up to 50% of total eligible costs may be requested if this funding is used to cover the costs of activities that fall completely within the R&D categories "fundamental research" or "industrial research" as defined in the state aid rules.

Russia - FASIE

Participating organisation: **Foundation for Assistance to Small Innovative Enterprises (FASIE)**

Indicative Budget: **0.4 M€**

National Contact Person(s):
Olga Levchenko
Tel. +7 495 231 38 51
E-Mail: levchenko@fasie.ru

Name of & link to the funding programme(s) and other relevant information:

Max. project duration: 24 months
Maximum funding per project: 0.2

Institutional eligibility criteria:
Only small compenies according to the Russian law (Federal Law №209, Article 4): up to 100 personnel, up to 800 mln Roubles turnover and less than 49% participation of public, foreign and large companies. Special exception is made for „Skolkovo" residents. Universities, research organisations and other public bodies can participate as subcontractors (with not more than 30% share received as a grant from FASIE being subcontracted.

Ideally, applicant should be a small company not younger than 1 year with a proved track record, IP, and a good turnover.

Institutional thematic priorities: none

Additional information:

- **Which type of projects are eligible?**
  Technically and financially feasible R&D projects with an impact increase in the R&D company activities are eligible.

- **Which types of costs are eligible?**

  Personnel costs (up to 40%) , equipment (where applicable), subcontracting, some „other" costs are eligible. Travelling/subsistence, IPR, marketing are not eligible. Those have to be covered from co-financing.
  50% of the amount of the grant provided by FASIE should be co-financed (7.5 million Roubles)

- **Funding is provided as grant/loan/capital loan/guarantee**

  Funding is provided as a grant.

- **Limits of funding per proposal**
  Maximum amount per proposal is 15 millions Rubles (the amount which can be provided by FASIE-equivalent of 200 000 EUR). Projects can last 18 or 24 months.
- **Other conditions**
  - The company which has an "open" contract with FASIE when applying for is not eligible;
  - The project must add benefit to the national economy and demonstrate added value from the international cooperation;
  - The project should demonstrate commercialization potential;
  - There is no legal limitation to the size and financial status of the company; however, preference will be given to the already established companies having proven record and a good turnover;
  - The company must have enough financial means to fund its own part of the project (50% of the amount of the grant) or, alternatively, find an investor;
  - Companies which received funding from FASIE previously will have to provide additional materials showing the effectiveness of the funded projects;
  - Russian applicant must submit a national application via the electronic submission system: online.fasie.ru

Details of the program can be found here: http://fasie.ru/programs/programma-internatsionalizatsiya/polozhenie-o-konkurse-mezhdunarodnye-programmy.php

Slovenia - MIZS

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA IZOBRAŽEVANJE, ZNANOST IN ŠPORT

Ministry of Education, Science and Sport (MIZS)
Masarykova 16, 1000 Ljubljana

All Slovenian applicants must refer to the guidelines for Slovenian applicants published on the MIZS webpage (http://www.mizs.gov.si/si/javne_objave_in_razpisi/javni_razpisi/).

Legal basis – national regulation : State Administration Act (Zakon o državni upravi (Uradni list RS, št. 113/05 - UPB4, 89/07 - Odl.US, 126/07 - ZUP-E, 48/09, 8/10 - ZUP-G, 8/12 - ZVRS-F, 21/12, 47/13, 12/14, 90/14 in 51/16)) - Article 16 and 39; Public Finance Act (Zakon o javnih financah (Uradni list RS, št. 11/11- uradno prečiščeno besedilo, 14/13 – popr., 101/13, 55/15 – ZfisP, 96/15 – ZIPRS1617 in 13/18)) - Article 106. j; Regulation on the procedure of standards and manners to allocate means for the promotion of the evolutional programme and the preferential tasks (Uredba o postopku, merilih in načinih dodeljevanja sredstev za spodbujanje razvojnih programov in prednostnih nalog (Uradni list RS, št. 56/11)); Implementation of the Republic of Slovenia's Budget for 2020 and 2021 Act (Zakon o izvrševanju proračunov Republike Slovenije za leti 2020 in 2021 (ZIPRS 2021) (Uradni list RS, št. 75/19)); Intergrity and Prevention of Corruption Act (Zakon o integriteti in preprečevanju korupcije (Uradni list RS, št. 69/11 – uradno prečiščeno besedilo)); Resolution on the National Research and Development Programme 2011-2020 (Resolucije o raziskovalni in inovacijski strategiji Slovenije 2011-2020 (RISS) (Uradni list RS, št. 43/11)), Research and developmnet Act (Zakona o raziskovalni in razvojni dejavnosti (Uradni list RS, št. 22/06 – UPB1, 61/06-ZDru-1, 112/07, 9/11,57/12-ZPOP-1A, 21/18-ZNOrg in 9/19)); Decree on norms and standards used to determine funding for research activities financed from the Republic of Slovenia budget (Uredbe o normativih in standardih za določanje sredstev za izvajanje raziskovalne dejavnosti, financirane iz Proračuna Republike Slovenije (Uradni list RS, št. 103/11, 56/12, 15/14, 103/15, 27/17, 9/18 in 62/19)); Rules on criteria for establishing compliance with the conditions for being the head of a research project (Pravilnik o kriterijih za ugotavljanje izpolnjevanja pogojev za vodjo raziskovalnega projekta, Uradni list RS št. 53/16); Community Framework for State Aid for Research and Development and Innovation the provisions of the Community Framework for State Aid for Research and Development and Innovation (OJ EU C 198, 27. 6. 2014) (Okvir za državno pomoč za raziskave in razvoj ter inovacije (2014/C 198/01)); National scheme for state aid in Research and Development (Program za spodbujanje raziskav in razvoja Ministrstva za izobraževanje, znanost in šport na področju znanosti 2016-2020, št. 631-1/2016-1 z dne 8. 1. 2016); National strategy of open access to scientific publications and research data in Slovenia 2015-2020 (Nacionalna strategije odprtega dostopa do znanstvenih objav in raziskovalnih podatkov v Sloveniji 2015-2020, št. 60300-5/2015/5 z dne 3. 9. 2015).

Eligibility of a partner as a beneficiary institution: research organizations as defined in the national *Research and Development Act (Zakon o raziskovalni in razvojni dejavnosti – ZRRD).* All participating institutions have to be registered in the Slovenian Research Agency register of research institutions (Informacijski sistem o raziskovalni dejavnosti v Sloveniji - SICRIS).

Eligibility of principal investigator and other research team members: The project activities of the Slovenian partner have to be under the supervision of the primary investigator/primary researcher who fulfills the requirements for project leader as defined in Art. 29 of the national Decree on norms and standards used to determine funding for research activities financed from the Republic of Slovenia budget *(Uredba o normativih in standardih za določanje sredstev za izvajanje raziskovalne dejavnosti, financirane iz Proračuna Republike Slovenije, Uradni list RS, št. 103/11, 56/12, 15/14, 103/15,* 27/17, 9/18 in 62/19) *hereinafter*: *Decree on criteria and standards*). The criteria are further determined in the *Rules on Determining the Fulfillment of Conditions for a Research Project Leader (Pravilnik o kriterijih za ugotavljanje izpolnjevanja pogojev za vodjo raziskovalnega projekta)* and Methodology of Call proposal evaluation (spletna povezava: *Metodologija ocenjevanja prijav na razpise*). All participating researchers have to be registered in the Slovenian Research Agency register of researchers (SICRIS) and must have available research hours.

Eligibility of costs: MIZS will fund all eligible costs of successful Slovenian transnational projects, recommended for funding, in accordance with the *Decree on criteria and standards*. Eligible costs are defined based on the FTE value according to the Slovenian Research Agency's research project categorization (A, B, C or D based on the research conducted).
Eligible costs must be directly related to the research conducted and mandatory include all of the following categories as elements of the FTE:

- personnel (including social security, health, pension and other contributions according to national legislation);

- material (travel and meetings costs, consumables, dissemination and knowledge exchange costs, other costs);
- depreciation costs.

Overhead or indirect costs are eligible. The value is calculated based on the FTE value of category A, B,C, or D research projects, under the condition that costs under each of the specific FTE elements are appropriately decreased (by a max. of 20% for indirect costs). Providing the stipulated conditions are met, the Public Procurement Act (Zakon o javnem naročanju (Uradni list RS, št. 91/15 in 14/18) applies.

Period of eligibility of public expenditures: As of budgetary year 2022 until the end of the budgetary year 2024.

Period of eligibility of expenditures on the project: From the starting date of the transnational project stipulated in the consortium agreement for a period of 36 months, with a prescribed additional 30 day period for the payment of invoices related to the project costs. The period of eligibility of expenditures on the project can only start from the date the national contract enters into effect. The exact duration of the project will be defined in the contract between MIZS and the selected Slovenian partner, after the consortium agreement between the selected consortium partners enters into force.

National funding: max. 420,000 EUR including VAT.

Total requested funding per project: for all Slovenian partners within one consortium must not exceed 70,000 € per year (210,000 € for the total project duration of 36 months).

Eligible type of research and TRL: basic/applied – for Slovenian partner TRL range: 2-6. The type of research conducted by Slovenian researchers must be defined and explained in the project proposal (e.g. in the Comments on budget section).

Funding: 100 % for research organization (such as universities, public and private research institutes) whose financed activity is non-economic in accordance with the provisions of Community Framework for State Aid for Research and Development and Innovation. Wide dissemination of all research results on a non-exclusive and non-discriminatory basis is required.

For research organizations whose financed activity is economic in accordance with the provisions of Community Framework for State Aid for Research and Development and Innovation the provisions of the Community Framework for State Aid for Research and Development and Innovation (OJ EU C 198, 27. 6. 2014) and the national scheme for state aid in Research and Development: *Program za spodbujanje raziskav in razvoja Ministrstva za izobraževanja, znanost in šport na področju znanosti, št 631-1/2016-7, 8.1.2016*, applies.

Maximum funding percentages:

Type of research	Large Enterprises	Medium Enterprises	Small Enterprises	Universities and research organisations
Fundamental/Basic Research	65 %	75 %	80 %	non economic 100 %
Industrial/Applied Research	65 %	75 %	80 %	non economic 100 %

National contracting negotiations: will commence after the projects are selected for funding on the level of the transnational call. National documentation, including evidence of the starting date of the transnational project (in the form of a Consortia Agreement or statement on the starting date by the transnational project coordinator), will be a prerequisite for signing the contract on national level. All Slovenian applicants are strongly advised to contact the Slovenian National Contact Person, Ms. Katja Ceglar before preparing proposals for application (katja.ceglar@gov.si, T: +386(1) 478 47 36).

Turkey - TUBITAK

Participating organisation: TUBITAK

Indicative Budget: **1.5 M€**

National Contact Person(s): **Dilek Sahin**
Tel: 90 312 298 94 91
E-Mail: dilek.sahin@tubitak.gov.tr

Name of & link to the funding programme(s) and other relevant information:
1071 - Support Programme for Increasing Capacity to Benefit from International Research Funds and Participation in International R&D Cooperation

Min.project duration: NA
Max. project duration: 36 months
Maximum funding per project: 75% for SME's and 60% for large companies, %100 for universities and public institutions
Institutional eligibility criteria: NA
Institutional thematic priorities: NA
Proposals with the following focus cannot be funded: NA
Additional information:
Turkish partners should apply to Academic Research Funding Program Directorate to get their projects funded. The program that can be applied is Support Programme for Increasing Capacity to Benefit from International Research Funds and Participation in International R&D Cooperation (programme code: 1071). TUBITAK makes a national evaluation on the basis of the regulation and rules of the program. For further information please visit the above mentioned link and also see national call text on TUBITAK website.

- National application is required simultaneously with the international application.
- Budget limit is 1,5 M€
- Contact nationalontact person before application

ANNEX 3: Technology readiness levels (TRL)

(as defined in the HORIZON 2020 –Work Programme 2016-2017)

- **TRL 1** -basic principles observed
- **TRL 2** -technology concept formulated
- **TRL 3** -experimental proof of concept
- **TRL 4** -technology validated in lab
- **TRL 5** -technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- **TRL 6** -technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- **TRL 7** -system prototype demonstration in operational environment
- **TRL 8** -system complete and qualified
- **TRL 9** -actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)

ANNEX 4: Communication and Dissemination

Communication and Dissemination of project results is requested through **various communication routes** including scientific papers, presentations at scientific conferences, workshops, poster sessions, etc. Proper **reference** must be given to ERA CoBioTech in all related publications, exhibitions, lectures and press information. Additionally, each project proposal should go beyond dissemination and envision how it will **pursue two-way dialogue with a range of public and stakeholder groups**.

Each project has to submit a **Communication and Dissemination Plan** in the full proposal, specifying how the planned activities, including dissemination, communication and stakeholder interaction, will contribute to the impact of the project.

To fulfill the Communication and Dissemination Plan, funded projects must dedicate appropriate resources for communication and dissemination activities, which additionally have to include **attendance at events organized by ERA CoBioTech**:

- Attendance at seminars on three occasions: kick-off, midterm and final seminar of funded projects, in which your funded projects will be asked to communicate project content, aims and expected results in a way understandable to a general public.

For a well-elaborated Communication and Dissemination Plan, applicants are advised to:

- take into consideration also the EC guidelines on "Communicating EU research and innovation guidance for project participants"
- read the guidelines below on communication

Communication and Dissemination– why is this important in planning, developing, delivering and evaluating a successful research project?

Communication is here defined as the work you do and the effort you put in informing and engaging with the wider public so they are aware of the issue your research is addressing, the question you are posing, the methods you are using to answer that question and the anticipated outcomes. Communication is an addition to '**dissemination**', the latter being focused on the production of scientific papers, posters and presentations at closed scientific congresses, and work with specialist stakeholder groups. Please include both communication and dissemination activities in your plan.

Communication activities may include activities, such as development of a website and/or app, media communications programme, social media programme, videos/podcasts, infographics/project literature, creative artwork/exhibition stands, quizzes / games / serious gaming, science fairs/open houses intended for wider audiences, meetings of targeted stakeholders, training for Consortium on aspects of communication. Please consult the national annexes of your respected funding agency for potential limitations to funding certain communication activities.

There are four clear reasons **why effective communication** is an essential element of any ERA CoBioTech funded research project:

- European tax-payers are providing the funding for your research and are interested in knowing where their money goes and that they are receiving 'value for money'.
- Communicating about the relevance of your research work and its potential outcomes to society and the everyday life of citizens will help ensure that your innovations – products, knowledge, thinking – are accepted and utilised by society – not ignored, nor opposed.
- Everyone is a citizen whether President, MEP, policy-player, teacher, student, entrepreneur or industrialist who watches TV, reads the news, accesses online sources and has interests beyond their immediate network. Effective communication raises awareness of your research project and of the professionals working on it to mutual advantage, potentially laying the ground for more funding or support.

- ERA CoBioTech wishes to ensure that the projects it selects to fund make the best use they can of the 'results' each of them generate – that means ensuring that as many groups in society know about the excellent work that is being conducted and their potential results so they will be taken up by decision-makers in policy, industry or science itself creating impact. A Strategic communication plan utilising creative but accessible actions with measurable outcomes is required to deliver this.

What is a Communication and Dissemination Plan?

It is a document that demonstrates that a Consortium has clearly thought through the rationale, target stakeholders, activities, timescales, budgets and measures incl. their key performance indicators of success behind the dissemination / communications activities it will implement as an integral part of its project plan.

Whilst each Communication and Dissemination Plan will be different, it is likely to consist of:

- a narrative (the rationale/ approach)
- a table which draws together information on priority target stakeholder groups and methods to reach them
- a timetable/GANTT chart
- a budget table with enough detail on each action/activity/product and its delivery
- a table pulling together the agreed key performance indicators or measures of success against each planned for activity.

The elements of a Communication Plan that will demonstrate clarity of thought and planning are likely to be:

- Evidence that the whole Consortium are 'on board' with the plan and that all partners will support the actions
- Focus on purpose/objective of each selected dissemination/communication action – Who is it for? What do we want to happen as a result?
- Clarity on the messages that the project wishes to communicate overall and to specific groups
- Clear understanding of what success looks like for each action
- Description of the method to be used for delivery
- Utilisation of resources and talents within the consortium
- Realistic assessment of the potential impact of each action
- Built-in time points for review and adjustment
- Appropriate focus on internal communications within the Consortium
- Appropriate utilisation of the services and channels provided by the EC

The Plan should be able to answer the following questions clearly:

- What are the objectives of our Communication Plan?
- Who are our priority audiences and why?
- When is the most appropriate time to engage with each audience and why?
- How does our Communication Plan create synergy with the rest of the project plan?
- How do we justify the budget allocated to each of our proposed communications actions?
- How are we splitting responsibility for the resources and actions across the Consortium?

For ERA CoBioTech applications the expected minimum requirements of the Communication plan are:

- A max. two A4 page document
- A narrative on approach/rationale/contribution to the project
- A list of priority stakeholders, messages, actions & timetable
- Key performance Indicators / measures of success

A Sample Approach to a Stakeholder Table (key part of any communication plan)

The issue: we need to ensure that more young people know how to code

Why: to improve their personal employment prospects

Impact: overall economic benefit

	Communication Plan – Priority Stakeholders & Actions			
Priority Stakeholder Group	*What message/info*	*How to communicate?*	*When?*	*Success measures*
Priority 1: Policy players in Education & Business	Resources required for upper schools to deliver next generation of IT stars	-Create Consensus White Paper to present to Ministers and special Committees - Secure political Ambassadors - One on one briefing meetings -Articles in business press	From Day One – complete by end of Year One	Number of one on one meetings Questions in Parliament Media coverage
Priority 2: Head-teachers/ Governors/ Proprietors of colleges	Need trained teachers to deliver the training required plus 'Train the Trainers facilities'	-Articles in the specialist education media -Identify and contribute to LinkedIn groups -Attend/speak at specialist meetings -Create database of interested parties & send occasional	Years One & Two	Number of active enquirers (no on database) New courses set up Evidence of internal cascade of issue/action Active recruitment & allocation of resources Capture of success stories for use in newsletter Media coverage
Priority 3: Teachers of students 14 -18	Become active in a new area of teaching – professional opportunity Training available	-Articles in teacher press -Social media activity: IN, twitter etc.	Years Two & Three	Pick up of places on training courses Appointments in schools/ colleges
Priority 4: Students 14-18	Coding is cool See what you can do with it – it's fun but it can be profitable too Demand that you are given resources and guidance to help yourself	-Recruit student ambassadors who can code -Let them loose to use social media/channels as they choose (provide resources if needed) -Support with an event – Coding Convention template (to be taken up in many places) with col coding paraphernalia -Create matching events for students with business to demo relevance to lives/future prospects	Years Three/Four	Number of active ambassadors with 'followers' Number of new students learning code Number of successful Conventions & matching events

ANNEX 5: Data Management

Data Management is an essential component to the success of projects using systems/synthetic biology approaches and/or bioinformatic tools. Representatives from academia, industry, funding agencies, and scholarly publishers designed and jointly endorsed a concise and measurable set of principles referred to as FAIR Data Principles[5] with the intention to provide a guideline for reusability of data holdings. Four foundational principles – Findability, Accessibility, Interoperability and Reusability– are a necessity of data management. The EC recently published Guidelines on FAIR Data Management in Horizon 2020.

Fulfilling the FAIR principles needs the use of software platforms that enable capturing, cataloguing, and annotating data, associated with well documented SOPs, and supports interlinking data from specialized, as well as local collections. Moreover, in a systems approach, well annotated models (including parameters) must be catalogued and interlinked with relevant data. Each project should have one single starting point starting at which one can find out everything about the project.

Participation in this call requires fulfilling the FAIR principles, including the use of a cataloguing platform as described above. Therefore, research data and non-data assets like algorithms, tools and workflows or metadata produced in the projects funded under this call must be:

- machine-readable
- citable
- must be published in a registered repository
- interlinked with other project outcomes in a cataloguing platform. Privacy sensitive data that cannot be published needs to be catalogued, such that the creator of the data can be easily found for possible questions and collaboration. Data that is subject to Intellectual Property for Patents needs to be recorded and published in due course.

The repository must be registered in as a "trustworthy repository" in e.g BioSharing or re3data (Registry for Research Data Repositories). For this, resources of existing community knowledge and data management platforms in Europe shall be preferably used.

The projects must consider the cost of Data Management in their proposals. The help given to the applicants should enable them to (i) properly estimate what cost will be incurred by performing FAIR Data Management, and (ii) provide a section in the template for proposals, in which some guiding questions help the applicants to answer the most relevant and pressing Data Management questions to the reviewers.

The Guidelines on FAIR Data Management in Horizon 2020 provides a Data Management Plan Template addresses to: 1) Data Summary, 2) FAIR Data, 3) Allocation of resources, 4) Data Security, 5) Ethical aspects, 6) Other issues..

Answering the questions, applicants will identify and resolve key questions about their data, models, SOPs and associated metadata. The Data Management plan will outline how data flows and the requirements on data, metadata, storage and data transfer throughout the project and beyond the project.

The costs associated to the Data Management plan (*e.g.* travel expenditures of staff to Data Management training; salary costs of staff curators; costs of servers, storage, archiving and backup) must be derived from this and clearly presented.

[5] http://www.nature.com/articles/sdata201618

Guiding questions include the following:

Generate and Store

- Who will generate the data/model/SOP?
- Who will receive the data/model/SOP?
- What does the user need from the generator?
- Where will you store data/model/SOP?
- How much storage capacity will you need short term?
- How will you transfer it?
- How much will you keep for longer? Who is responsible for this step?
- How will the data be made available for processing?

Curate

- Who will curate the data/model/SOP?
- How will the data/model/SOP be interlinked?
- How is data tracked through processes?
- How are versions of models and SOPs tracked?

Access

- Are you allowed to share data?
- Where, when and how will you make the data/model/SOP available?
- Which public archives will you deposit your data/model/SOPs in?
- How will you make the project's data/model/SOPs available in a unified way through a one-stop single starting point starting at which one can find out everything about the project?

While developing answers for the proposal, it will also become clear who is **responsible as a contact person**, for which parts of the Data Management of the project. This helps in defining whom to choose as Data Management contacts for the Data Management, and who would make sense for cross-project Data Management meetings.

Please note that Data Management is an ongoing activity of iterative improvement and adaptation rather than something that can be finished in one short effort. The Data Management plans must reflect this.

All of these points are relevant both in systems biology and systems. In *addition* to the points addressed in the checklist, the work with privacy sensitive data needs to be addressed. For the purposes of the proposal it makes sense to consider two groups of data: privacy-sensitive and privacy-insensitive data, and consider these independently, as well as considering:

- How can privacy sensitive data become privacy insensitive
- How can privacy insensitive data become privacy sensitive during the project's run time.

ANNEX 6: Responsible Research & Innovation

The technologies and innovations that ERA CoBioTech aims to produce will need to be more than just technically successful: they will also need be embedded into social, environmental and political worlds. This means that they will have to be a part of social change. There is much evidence to suggest that it is challenging to predict exactly how such change comes about. Instead of attempting to address these questions after a technology is rolled out, it is sensible to try to 'design-in' considerations of the social, environmental, economic, political and cultural dimensions to technologies as they are being conceived, designed and tested.

If this process of 'innovation governance' is done well, ERA CoBioTech can help to produce new scientific knowledge, new technologies and innovations that are more democratic, more environmentally sustainable and that address more meaningful societal demands than may otherwise be the case. If such technologies and innovations actively design-in the insights and knowledge of public and stakeholder groups, they are more likely to be 'socially robust' because they will accommodate questions that may arise later in their development.

There are many forms of 'innovation governance' but the most prominent, and arguably best-developed, is 'Responsible Research & Innovation'. There are many national and transnational frameworks for Responsible Research and Innovation[6], but it is these broad goals of producing more useful, more thoughtful and more democratic innovations that are most important to follow.

Implementing Responsible Research and Innovation requires a multi-level approach that is attentive to different sites of innovation governance – universities, companies, policy arenas. This means that responsibility must be a collective one; researchers are not the only ones responsible for developing innovations. ERA CoBioTech acknowledges this and has worked to develop programme-level mechanisms for Responsible Research and Innovation. There is an "Agenda for Responsible Research and Innovation in ERA CoBioTech" available **here**. The agenda spells out the shared vision for RRI in all projects funded by the CoBioTech research programme.

This call supports a wide range of methodologies to investigate the social, environmental, political, regulatory, historical, ethical or cultural dimensions of research at project level. ERA CoBioTech is conscious of the fact that technologies and innovation are products of social processes, meaning that attention may be best directed towards the laboratory, project or institutional cultures that produce them. Consortia should develop an approach that is best-suited to their topic and available expertise. The following approaches may be particularly appropriate to this call.

[6] See for instance: Research Council of Norway: https://www.forskningsradet.no/servlet/Satellite?cid=1254020095535&pagename=VedleggPointer&target=_blank, UK EPSRC: https://www.epsrc.ac.uk/research/framework/area/, and the European Commission: https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation

Interdisciplinary collaboration.

Social sciences and humanities scholars may be interested in collaborating with you. Researchers in Science and Technology Studies, Sociology, Anthropology, Geography, Socio-legal studies, History, Environmental Studies, and others may each bring new insights and expertise to the questions raised by your project. Their research may focus on the social and political dimensions of the project. These may include, but are not limited to, questions about translational pathways, dual-use, interdisciplinarity, biosafety, biosecurity, intellectual property or changing cultures of work in the life sciences. Some of the most innovative and productive research in this space has attempted to build collaborative research endeavours that value the contributions of both the social and natural sciences, for instance by creating spaces for reflection and discussion informed by data from each discipline.

User and public engagement

The practice of discussing the outputs and benefits of science with members of the public is widespread and supported within many funding programmes. However, there are still relatively few opportunities to integrate public and stakeholder (e.g. policy makers, end-users, citizen groups, NGOs, farmers, etc.) insights and knowledge into the design of research programmes. This is a challenging goal and takes careful consideration and appropriate resources but ERA CoBioTech welcomes approaches that attempt to achieve it in collaboration with social scientists. In particular we are keen to support approaches that allow citizens and stakeholder groups to inform the direction of research projects and their outputs.

Life Cycle Assessment (LCA)

LCA is an internationally standardised methodology (ISO 14040: 2006) that helps to quantify the environmental pressures related to goods and services (products). By attempting to account for the full life-cycle of the product, LCA helps to identify the trade-offs and potential areas for improvement[7]. The applicants in this ERA CoBioTech call may use and are encouraged to seek to advance the development of LCA or another robust methodology to assess the environmental implications of products, processes and technologies that may be developed or improved within the project.

Other forms of assessment

Environmental aspects are only one dimension of products, processes and technologies in development; other aspects can be assessed through tools beyond LCA. There are many well-established methodologies, including but not limited to: foresight studies; real time technology assessment; value sensitive design; user-driven design; critical design; techno-moral vignettes; citizen forums; co-production research; integrated assessment; alternatives assessment; multi-criteria mapping; socio-technical integration research; and a wide range of approaches within History and Philosophy of Science and Technology, Innovation Studies, Science and Technology Studies, Sustainability Science or Empirical Bioethics.

[7] http://ec.europa.eu/environment/ipp/lca.htm

Questions to consider when developing your consortia proposal

The following questions may be helpful to consider when developing your proposal:

Core questions and assumptions

- What is the central idea of your project?
- Are there any assumptions that underpin it and that would affect its success?
- Are there any kinds of knowledge that would help address those assumptions?
- Does your university or organisation have researchers working on the social, political, ethical or environmental dimensions of the life sciences?

Integration

- Is it possible to develop a set of shared research questions for all your collaborators at the outset?
- Does the most important question revolve around research in the lab or some other site (such as the pathways for translation, regulation, or the environment)?
- Are there particular points in time or sites where input and exchange would be particularly valuable?
- Is it valuable for the RRI component to extend over the life of your project?
- Is it possible for insights from the social, environmental, or legal research to inform the outcomes of your project? Can you demonstrate this?

Support & flexibility

- Can you demonstrate that the RRI research is resourced appropriately?
- Are there any extra resources, such as travel and networking, that you require from the CoBioTech programme to support your RRI project?
- Is it possible for your consortia proposal to adapt to changing developments within the project over time?