

JOINT CALL FOR PROPOSALS

Biotechnology for a sustainable bioeconomy

Deadline for submission of pre-proposals:
March 2, 2017, 13:00CET

Guidelines for Applicants

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1. Background:

ERA CoBioTech brings together owners and managers of national and regional R&D&I programmes of Member States, associate and third 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 and to tackle 21st century societal challenges such as decarbonisation of the economy and reduction of the reliance on fossil feedstocks. To achieve this, funding provided by national and regional programmes of Member States and other countries will be combined with the European Commission's 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 parts of the value chain. As appropriate, this will enable the newly developed products, technologies or services to reach the market efficiently. The partnership between industrial and academic researchers in the fields of biotechnology will improve and accelerate technology transfer and it will also strengthen European efforts to achieve sustainable industrial development.

2. Project areas and scope

The aim of the call is to contribute to **transforming the global economy from a dependence on fossil raw materials to a sustainable bio-based economy.**

The submitted proposals must be multidisciplinary and include **at least one** 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 e.g. (but not limited to) 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 bioinformatic 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 with high added value in a sustainable way.

→ ***Please carefully check the national/regional funding regulations (ANNEX 2) because some of these topics described below may not be suitable/eligible for all funding organisations.***

The co-funded call covers industrial biotechnology. Applications must address one of the topics described below:

- **Sustainable production and conversion of different types of feedstocks and bioresources** (including, but not limited to, waste and residues e.g. from households, agriculture, forestry, industrial by-products, alternative raw materials) **into value-added products** including new compounds e.g. for materials, chemicals, food/feed ingredients, flavours and fragrances, pharmaceuticals, biofuels, textiles or pulp/paper products.
- **New products, value-added products and supply services** (e.g. bio-based materials, platform chemicals, pharmaceuticals, biomedical products, functional food/feed ingredients etc.) originating from novel metabolic pathways or pathway improvement. This also includes bio-catalytic elements like enzymes, microorganisms and cell-free biosynthesis systems from natural or synthetic origins.
- **Sustainable industrial processes:** Upstream and downstream design, scale-up of biotechnological processes also including systems approaches to bioprocesses and process development; fermentation processes; usage of microbial consortia; intensification and/or integration in existing industrial processes; and development of innovative, environmentally sound industrial processes.

Further, projects are required to consider the following principles:

- The projects should fall within Technology Readiness Levels¹ (TRL) 3-6, although they are not necessarily required to cover the whole range. Industry engagement should be appropriate for the TRL range of the project.
- Projects are required to include a component investigating social aspects relevant to the project. This may include (but is not limited to) **Ethical, Legal and Social Aspects (ELSA), Responsible Research and Innovation (RRI)** aspects, or eco-social aspects e.g. **Life Cycle Assessment (LCA)**.
- The ERA CoBioTech consortium is aiming to level up innovation performance of biotechnology research and the countries participating in this call, thus it encourages cooperation beyond the EU-15. In this line, the involvement of the ERA CoBioTech participants Argentina, Estonia, Israel, Latvia, Poland, Romania, Russia, Slovenia and Turkey in research consortia is highly desirable.
- 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 **full proposal** must include a two page Dissemination and Communication plan, reaching out to the wider public. In collaboration with the H2020 knowledge transfer project CommBeBiz ERA CoBioTech will support all funded proposals in their efforts to communicate with a wider public, providing opportunities to learn through *webinars on preparing a Dissemination and Communication plan* in the full proposal preparation phase (dates will be announced on <https://www.submission-cobiotech.eu/>) and a *Work Shop on developing a communication toolbox* after the selected project's start. For more information see Call Announcement ANNEX₄: Dissemination and communication)

¹ Technology Readiness Levels scale is a tool for assessing the maturity of technology for commercialisation. Horizon 2020 work programme 2016 –2017 makes use of the TRL scale to make decisions on which type of projects to be funded. The TRL scale definition used within H2020 and applied for this call can be found in [Annex 3](#) or under: http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2016_2017/annexes/h2020-wp1617-annex-g-trl_en.pdf

- Additionally each **full proposal** will include a plan on how higher levels of technological readiness will be achieved in the long term. The engagement of industry (if applicable, see ANNEX2) for achieving a higher TRL must be described (e.g. the provision of tools, trainings, etc.).
- 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 will be required to dedicate a section of their **full proposal** to their approach to DM within the project. Applicants are encouraged (but not obliged) to utilise the DM services offered through the central data management project FAIRDOM², and to participate in the voluntary Open Research Data Pilot in Horizon 2020³. Webinars to support the consortia in developing and preparing a data management plan will be provided in the full proposal preparation phase (dates will be announced on <https://www.submission-cobiotech.eu/>). More information on data management requirements within this call is detailed in the Call Announcement ANNEX 5: Data management)

→ ***Please carefully check the national/regional funding regulations (ANNEX 2) because some of these topics described below may not be suitable/eligible for all funding organisations.***

2.1. Project budgets and project duration

The project duration must not exceed 3 years. Project budgets must convincingly allow the achievement of the project goals and must not exceed national or regional funding limits for each partner (for details, see ANNEX 2 "*Summary of funding options and restrictions*" of this document and "*National or regional regulations and eligibility criteria*" (**Annex 2 of the Call Announcement**)).

2.2. Budget & funding modalities

Funding of project partners is provided by the national or regional funding organisations according to *national or regional regulations, and national or regional eligibility criteria* (see **Annex 2 of the Call Announcement**). Note that national / regional budgets differ, which limits funding possibilities for lower ranked proposals.

All project partners are required to sign a Consortium Agreement (CA) before the official project start or in any case no later than three months of the project start, addressing the points given in the *Consortium agreement guidelines* (available on <https://www.submission-cobiotech.eu/>). It is advisable to contact the respective funding organisations in order to check if there are the national and/or regional requirements about the obligation of the signature of a Consortium Agreement before applying for a grant.

² For additional information, please visit http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/open-access_en.htm

3. ERA CoBioTech eligibility requirements

ERA CoBioTech has developed formal criteria that are applied in the eligibility check and evaluation process to select the best projects. These criteria have been agreed on by all participating national or regional funding organisations, the ERA CoBioTech Call Steering Committee and are described below. **Please note that more specific criteria as detailed in Annex 2 “National or regional regulations and eligibility criteria” may apply.**

- Projects must address the scope of the call as outlined in the Call Announcement and in section 2. Pre-proposals not addressing the scope of the call will be rejected. Additionally, applications should fit to the specific remit of the national/regional funding organisations (see ANNEX 2 of the Call Announcement); it is strongly recommended, that applicants contact their National/Regional Contact Persons (see ANNEX 1) before submission.
 - Pre-proposals and full proposals must be written in English and pre-proposals must be submitted by **March 2, 2017 (13:00 CET)** via 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 agency (see **ANNEX 2 of the Call Announcement, “National or regional regulations and eligibility criteria”**) by the deadlines stated there.
 - The project duration must not exceed 3 years.
 - If a proposal does not meet the minimum number of partners, exceeds the maximum number of partners, or if one of the partners is ineligible, it will be rejected before 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 budget; such that all project partners contribute to and benefit from an equitable and balanced cooperation.
 - If applicable, the requested funding budget of each partner must not exceed national or regional funding limits (for details, see ANNEX 2 “*Summary of funding options and restrictions*” of this document and “*National or regional regulations and eligibility criteria*” in **ANNEX 2 of the Call Announcement**)
- Funding is provided according to the “nationality principle”, meaning that each participating national/regional funding agency funds their respective national/regional researchers in a particular project consortium. Funding is subject to national/regional eligibility regulations (see **ANNEX 2 of the Call Announcement**) and project partners should check their eligibility for funding prior to submission.
 - Consortia must include at least three partners requesting funding from three different ERA CoBioTech member countries who contribute funds to the call. Consortia can involve a maximum of six partners, unless partners from Argentina, Estonia, Israel, Latvia, Poland, Romania, Russia, Slovenia and Turkey are part of the consortium, then the allowed maximum number of partners is eight. No more than two eligible partners 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 commitment, to be uploaded via the left navigation bar of

the submission tool). The same applies for partners who are not eligible for national/regional funding from the agencies participating in the call. Partners participating at their own expense count towards the maximum number of partners but not to the minimum number of participants.

- The coordinator of any applying consortium must be from an organisation that is eligible for funding from one of the agencies participating in the call, i.e. an organisation that plans to participate at their own expense, without public funding provided via the ERA CoBioTech joint call, cannot act as coordinator.
- The participation of at least one industrial partner in the consortium is strongly recommended. Large companies, small and medium-size enterprises (SMEs) 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 “Summary of funding options and restrictions” of this document and “National or regional regulations and eligibility criteria” in ANNEX 2 of the Call Announcement). Subcontractors can be included and are managed under the national or regional financing regulations of the eligible participant (see ANNEX 2 of the Call Announcement).
- The project duration is up to three years (36 months), ending no later than April 30, 2021.
- Project budgets must convincingly allow the achievement of the project goals and must not exceed national or regional funding limits for each partner resp. project (for details, see ANNEX 2 “Summary of funding options and restrictions” of this document and “National or regional regulations and eligibility criteria” in ANNEX 2 of the Call Announcement).

Within a joint proposal, each group leader (for each partner organisation) will be the contact person for the relevant national or regional funding agency. All research groups agree to abide by the rules and agreements of the ERA CoBioTech call.

Please consider:

Not all funders can provide financial support to industrial partners (see **Annex 2 of the Call Announcement**). Please contact the relevant National Contact Person for more details.

3.1. Responsibility of the project coordinator

- The project coordinator will lead the consortium through the application procedure and is fully responsible for the overall project coordination.
- The project coordinator has to make sure the project complies with ERA CoBioTech requirements as detailed above and in the Call Announcement. While all partners should resolve possible queries with their respective national or regional agencies/ministries, the project coordinator has a responsibility to coordinate these activities in close contact with the ERA CoBioTech Call Office and the contact persons of his/her national or regional funding organisation.
- All communication with ERA CoBioTech concerning the project will be through the project coordinator. Consequently, the project coordinator has to disseminate information provided by ERA CoBioTech to all consortium partners.
- Before submission of a pre-proposal the coordinator has to make sure that all consortium partners requesting funding from ERA CoBioTech are eligible for support from their respective national or regional ERA CoBioTech funding organisations. For partners who are not eligible for support from at least one of the ERA CoBioTech funding organisations (e.g. international partners from non-ERA CoBioTech countries) the coordinator has to ensure

that these partners possess the required financial security to fulfil their tasks within the project via a letter of commitment/support. This letter can be uploaded as pdf file (max. 1MB size) only by the coordinator in a separate upload field in the submission system under www.submission-cobiotech.eu. A template for such a letter is provided there as well.

Note that the inclusion of a non-eligible partner in a proposal will result in the rejection of the entire proposal.

3.2. Project funding

All consortium partners must prove sufficient financial stability to conduct the project properly. National or regional funding organisations will check the financial status of partners from their respective country/region.

4. Application procedure

4.1. Application scheme

The application process is divided into two steps (pre-proposals and full proposals).

4.2. Pre-proposal submission

In the first step, pre-proposals are submitted via the ERA CoBioTech submission website (<http://www.submission-cobiotech.eu>) before the submission deadline of **March 2, 2017, 13:00 (CET)**.

The information given in the pre-proposal is binding and changes (composition of consortia, objectives of the project, requested budget or other fundamental changes in the projects) between the pre-proposal and the full proposal are subject to approval by the funding organisations involved. Thus, any changes between pre- and full proposals must be communicated to the ERA CoBioTech Call Office (ptj-cobiotech@fz-juelich.de) before the evaluation phase with detailed justifications and will only be allowed by the Steering Committee under exceptional circumstances.

Pre-proposals that are submitted correctly and within the deadline will be checked for eligibility. The eligibility check will focus on the “General Eligibility Criteria” as laid down in the Call Announcement and “National or regional regulations, national or regional eligibility criteria (see Call Announcement Annex 2: National or regional regulations, National or regional eligibility criteria)”. **Non-eligible pre-proposals will result in rejection of the entire project.** Only proposals, which meet all eligibility criteria will be considered for evaluation. Eligible pre-proposals will be peer-review evaluated and ranked by an international panel of experts according to the following criteria:

- **Relevance** of the project to the scientific scope of the co-funded call
 - Does the proposed work use one of the expected scientific tools?
 - Synthetic biology approaches
 - Systems biology approaches
 - Use of bioinformatic tools for the identification and utilisation of metabolic pathways from genomic datasets
 - Biotechnological approaches (possibly in combination with chemical approaches)
 - Does the proposed work address the call-specific research topics?
 - Sustainable production and conversion of different types of feedstocks and bioresources into value-added products
 - New products, value-added products and supply services
 - Sustainable industrial processes
 - Does the project fall in the required TRL range of 3-6?

- **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:
 - Economic aspects by describing an envisioned plan to achieve a higher TRL of the processes and technologies developed during the project
 - Contribution, technological, innovation and exploitation capabilities of industrial partners
 - Environmental aspects to transform the global economy into a sustainable bio-based economy
 - Social aspects such as Ethical, Legal and Social Aspects (ELSA) or Responsible Research and Innovation (RRI)
 - Eco-social aspects, e.g. Life Cycle Assessment (LCA)

Each reviewer/expert will be independent of any funding organisation involved in this call. The ERA CoBioTech Call Office will ensure that no Conflict of Interest exists concerning the experts and the proposals evaluated. Each pre-proposal will be reviewed by up to three reviewers/experts.

Following this, the ERA CoBioTech Call Steering Committee (composed by representatives of all ERA CoBioTech funding organisations) will select proposals for the second application step based on the ranking proposed by an international panel of external reviewers. Applicants are informed that while performing this selection, the ERA CoBioTech Call Steering Committee will ensure that the **oversubscription factor⁴ of each funding organisation is not higher than 3.**

⁴ Oversubscription factor: the ratio between the total requested funds from all the applicants from a given country or region, and the amount available for the corresponding funding agency in that call (see [Table 3](#)).

The ERA CoBioTech Call Office will inform the project coordinators of the results of the first assessment step via e-mail by **May 22, 2017**. The coordinators of the selected pre-proposals will be invited to submit a full proposal via the ERA CoBioTech submission website (<http://www.submission-cobiotech.eu/>).

Completing the pre-proposal form

- Please fill in the pre-proposal form in the ERA CoBioTech submission system under www.submission-cobiotech.eu and check that all fields are completed with the required information.
- The project description should:
 - provide a scientific/technological overview,
 - specify the expected project impact and relevance to the call scope,
 - describe the added value for the European research and Innovation, and the necessary resources,
 - provide information on the project management and responsibilities of the project partners and,
 - give a short overview of the division of the collaborative project into work packages.
 - be in line with the requirements stated in the Call Announcement and in section 3.
- The space in the proposal part "Project description" is limited to 20,000 characters incl. space (~ 5 pages DIN A4, Arial 11pt, line pitch at least 1.15). Implementation of up to three graphics/images is allowed and possible (allowed formats are jpg, png or gif, max. resolution 600x600px, max. file size 2MB). No additional documents will be considered.

Note: Although no specific description of the data management of the proposed project is foreseen in the pre-proposal, the consortia must consider already the costs for data management and communication activities in their proposals!

4.3 Full proposal submission

The ERA CoBioTech Call Office will invite the coordinators of the selected pre-proposals via e-mail by **May 22, 2017**.

The deadline for submitting full proposals via <http://www.submission-cobiotech.eu/> is **July 20, 2017 (13:00 CEST)**. Only full proposals submitted by consortia explicitly invited by the Call Office will be accepted.

The information given in the pre-proposal is binding and changes (composition of consortia, objectives of the project, requested budget or other fundamental changes in the projects) between the pre-proposal and the full proposal are subject to approval by the funding organisations involved. Thus, any changes between pre- and full proposals must be communicated to the ERA CoBioTech Call Office (ptj-cobiotech@fz-juelich.de) before the evaluation phase with detailed justifications and will only be allowed by the Steering Committee under exceptional circumstances.

The basic project data, such as project title, project acronym, project area, project duration, consortium composition, project coordinator, TRL level, total requested funding, requested funding by each partner etc., provided in the pre-proposal cannot be changed in the full proposal phase.

Full proposals that are submitted correctly and within the deadline 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 proposal evaluated. Each proposal will be reviewed by at least three external reviewers/experts. The composition of the international evaluation panel is decided by the ERA CoBioTech Call Steering Committee. Full proposals are subjected to a thorough quality assessment according to the evaluation criteria:

● **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:

- Economic aspects by describing an envisioned plan to achieve a higher TRL of the processes and technologies
- Contribution, technological, innovation and exploitation capabilities of industrial partners
- Environmental aspects to transform the global economy into a sustainable bio-based economy
- Sustainability of biotechnology research and its outcomes supported by a data management (DM) plan
- An efficient Dissemination and Communication plan addressing also communication with the general public
- Social aspects such as Ethical, Legal and Social Aspects (ELSA) or Responsible Research and Innovation (RRI)
- Eco-social aspects, e.g. Life Cycle Assessment (LCA)

● **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**.

At the end of the evaluation process, the evaluators will decide on one final ranking list of proposals. Based on the ranking list and the available funding, the ERA CoBioTech Call Steering Committee will decide which projects will be funded according to national and/or regional budget availability.

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

The formal funding decision is taken at national / regional level, and projects will be funded through the relevant national / regional programmes. The ERA CoBioTech Call Office will inform the coordinators about the status of national / regional decisions.

Completing the full proposal form

- Please check the information given in your pre-proposal and make sure it is correct.
- No changes in the core data submitted with the pre-proposal are allowed. If you feel that any changes are necessary, please contact the ERA CoBioTech Call Office under ptj-cobiotech@fz-juelich.de for approval.
- Please follow the template and be aware that the project description should allow the evaluators to assess properly all evaluation criteria as laid down in the Call Announcement.
- Your full proposal must include a separate
 - Data management plan (max. 2 pages)
 - Dissemination and Communication plan, reaching out to the wider public (max. 2 pages)
 - Plan on how higher TRL's will be achieved in the long term (max. 1 page)
- Please check www.submission-cobiotech.eu for webinars on Data Management and Communication and dissemination.
- The project description is limited to a maximum of 30 DIN A4 pages (Arial 11pt, line pitch at least 1.15). Up to 1 additional DIN A4 page (Arial 11pt, line pitch at least 1.15) is foreseen for the publishable project summary. Different subsections may vary in length. Implementation of up to six graphics/images is allowed and possible (allowed formats are jpg, png or gif, max. resolution 600x600px, max. file size 2MB). No additional documents will be

considered. More details on the full proposal submission will be published on www.submission-cobiotech.de when the server is re-opened for full proposal submission.

4.4. Information, communication & further assistance for applicants

- Each funding organisation has nominated contact persons (see **Annex 1 of this document and the Call Announcement**) who will provide information about specific national or regional regulations and requirements (see “*National or regional regulations, national or regional eligibility criteria*” in **Annex 2 of the Call Announcement**). It is recommended to contact the relevant contact persons prior to the proposal submission process.
- The ERA CoBioTech Call Office is the central contact point for all official communication between the project consortium and the ERA CoBioTech Call Steering committee. The project coordinator is the only contact person for the ERA CoBioTech Call Office in all relevant questions during the application procedure. The project coordinator must provide all relevant information to the partners (see also section 3.1).
- For further assistance, please check the [ERA CoBioTech submission website](#).
- For additional information and support, please refer to the nominated contact persons (see **Annex 1 of this document and the Call Announcement**).

5. Ethical aspects

Ethics is an integral part of research activities funded by the European Union within the H2020 and ethical compliance is considered as pivotal to achieve research excellence. This ERA CoBioTech call is cofunded by the European Union therefore all proposals must describe ethical issues raised and how they will be addressed so as to conform to national, European and international regulations. Guidance on ethics within H2020 is provided in the [H2020 online manual](#) and a guideline for self-assessment can be found [here](#) and applied for this call.

The societal and ethical aspects must be addressed in the pre- and full proposal (see Annex 6 and Annex 7 of the Call Announcement). Proposals may be rejected from funding on ethics grounds if they do not comply with the European and national/regional legislation.

6. Ethical, Legal and Social Aspects (ELSA)

Ethical, Legal and Social Aspects (ELSA) approach refer to research activities that anticipate and address ethical, legal and social aspects of emerging life scientific fields like, genetics genomics, biotechnology and nanotechnology but also information and computer technologies. The basic principles of almost all ELSA methodologies are proximity, anticipation and interaction and interdisciplinarity⁵. Applicants may apply ELSA approach for studying the possible societal impact of genomics and biotechnologies in the near or distant future related to their research topics within the current call.

⁵ Zwart H., Nelis A. (2009) What is ELSA genomics? Science and Society Series on convergence research. EMBO Reports 10 (6), 1-5. <http://link.springer.com/article/10.1186/s40504-014-0011-x>

7. Responsible Research and Innovation

The [Responsible Research and Innovation](#) (RRI) is an approach of the EU Commission applied within the H2020 programme that anticipates and assesses potential implications and societal expectations in terms of research and innovation.

Responsible Research and Innovation means that societal actors (researchers, citizens, policy makers, business, third sector organisations, etc.) work together during the whole research and innovation process in order to better align both the process and its outcomes with the values, needs and expectations of society.

RRI is key action of the 'Science with and for Society' objective in H2020 and is implemented as a package that includes multi-actor and public engagement in research and innovation, enabling easier access to scientific results, the take up of gender and ethics in the research and innovation content and process, and formal and informal science education.

8. Life Cycle Assessment (LCA)

LCA is an internationally standardised methodology ([ISO 14040](#): 2006) which helps to quantify the environmental pressures related to goods and services (products), the environmental benefits, the trade-offs and areas for achieving improvements taking into account the full life-cycle of the product⁶.

The applicants in this ERA CoBioTech call are encouraged to use [LCA](#) or other internationally accepted methodology in order to assess the environmental implication and potential environmental and social benefits of products, services, processes and technologies has to be developed or improved within the project.

9. Data management issues

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 Principles⁷ 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 EU Commission promotes the [FAIR Data Management](#) approach within the H2020.

Participation in this ERA CoBioTech call requires high quality data management (DM) standards to ensure the overall sustainability of biotechnology research and its expected outcome(s). ERA CoBioTech encourages the applicants to use the DM services offered through the central data management project FAIRDOM and will provide support actions for the consortia decided to use FAIRDOM. Webinars on Data Management with FAIRDOM for the consortia passed in the full proposal phase will be organized. The applicants are free to choose data management approach different than FAIRDOM however their data management plan should be appropriate and consistent with the DM requirements for this call published in the **Annex 5 of the Call Announcement**.

⁶ <http://ec.europa.eu/environment/ipp/lca.htm>

⁷ [Wilkinson, M.D et al. The FAIR Guiding Principles for scientific data management and stewardship. *Sci Data* 3: 160018 doi: 10.1038/sdata.2016.18 \(2016\)](#)

10. Open Access

Correspondingly with the EU Commissions [Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020](#) where possible, research data and scientific publication generated with ERA CoBioTech funding should be made available in an open access repository whenever feasible, but taking account *inter alia* of European and national data protection rules.

Further to ensuring adherence with the principles of open access all beneficiaries of ERA CoBioTech funding will be encouraged to:

- As soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications.
- Aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.
- Ensure open access to the deposited publication - via the repository - at the latest:
 - on publication, if an electronic version is available for free via the publisher, or
 - within six months of publication (twelve months for publications in the social sciences and humanities) in any other case

11. Communication and dissemination

Dissemination and communication of project activities and results are essential part of the Responsible Research and Innovation approach.

Each consortium passed into the full proposal phase has to develop and submit a dissemination and communication plan, specifying how the planned activities, including dissemination, communication and stakeholder interaction, will contribute to the impact of the project. Additionally, each project proposal should go beyond dissemination and envision how it will communicate and reach out to a more general public. Proper reference must be given to ERA CoBioTech in all related publications, exhibitions, lectures and press information.

General guidance on communication planning for projects within the H2020 programme is available under:

http://ec.europa.eu/research/participants/data/ref/h2020/other/gm/h2020-guide-comm_en.pdf.

Detailed guidelines how to develop a communication plan for this ERA CoBioTech call derived with the support of CommBeBiz project can be found in the **Annex 4 of the Call Announcement**.

12. Confidentiality

ERA CoBioTech ensures complete confidentiality to applicants, i.e., the proposal will only be read by the national or regional funding organisations involved and by the international experts, and be handled by the ERA CoBioTech Call Office. All persons in charge will have signed a confidentiality agreement before they get access to the proposals.

13. Conflict of interest

In order to exclude individual conflicts of interest, the applicants are encouraged to provide a number of names of companies / research groups / individual evaluators (e.g. direct competitors, names of individuals) who should be excluded from reviewing a particular proposal, with a maximum

of five. Please send your request to the ERA CoBioTech Call Office, (ptj-cobiotech@fz-juelich.de) stating the reason for excluding the potential referees. Your request must reach the Call Office by **2 March 2017** and will be treated confidentially.

14. Project start and follow-up of the projects

Before the project begins or in any case within three months of the project start, a Consortium Agreement addressing the points listed in the *consortium agreement guidelines* should be signed by all consortium members and made available to the national or regional funding organisation on request, together with any other information required by national or regional regulations. The DESC model, recommended by the European Commission can be used, but it is not an obligation.

The follow up of each project is conducted by each of the national or regional funding organisations involved, according to national or regional regulations and to individual contracts between applicants and agencies/ministries.

For all co-funded projects a kick-off meeting (including communication workshop) will be organised. Project coordinators are required to provide a mid-term project progress report and/or presentation, publishable project summaries and a final report via the ERA CoBioTech submission website.

Coordinators are required to present the results of their projects at status seminars. There will be two seminars, at mid-term and at the end of the project. The travel and accommodation costs for attending the kick-off meeting and status seminars shall be paid from the travel budget of the project. Please note that the mid-term seminars are confidential and the final seminars non-confidential – presentations from final seminars will be disseminated and shared outside ERA CoBioTech.

ERA CoBioTech Call office

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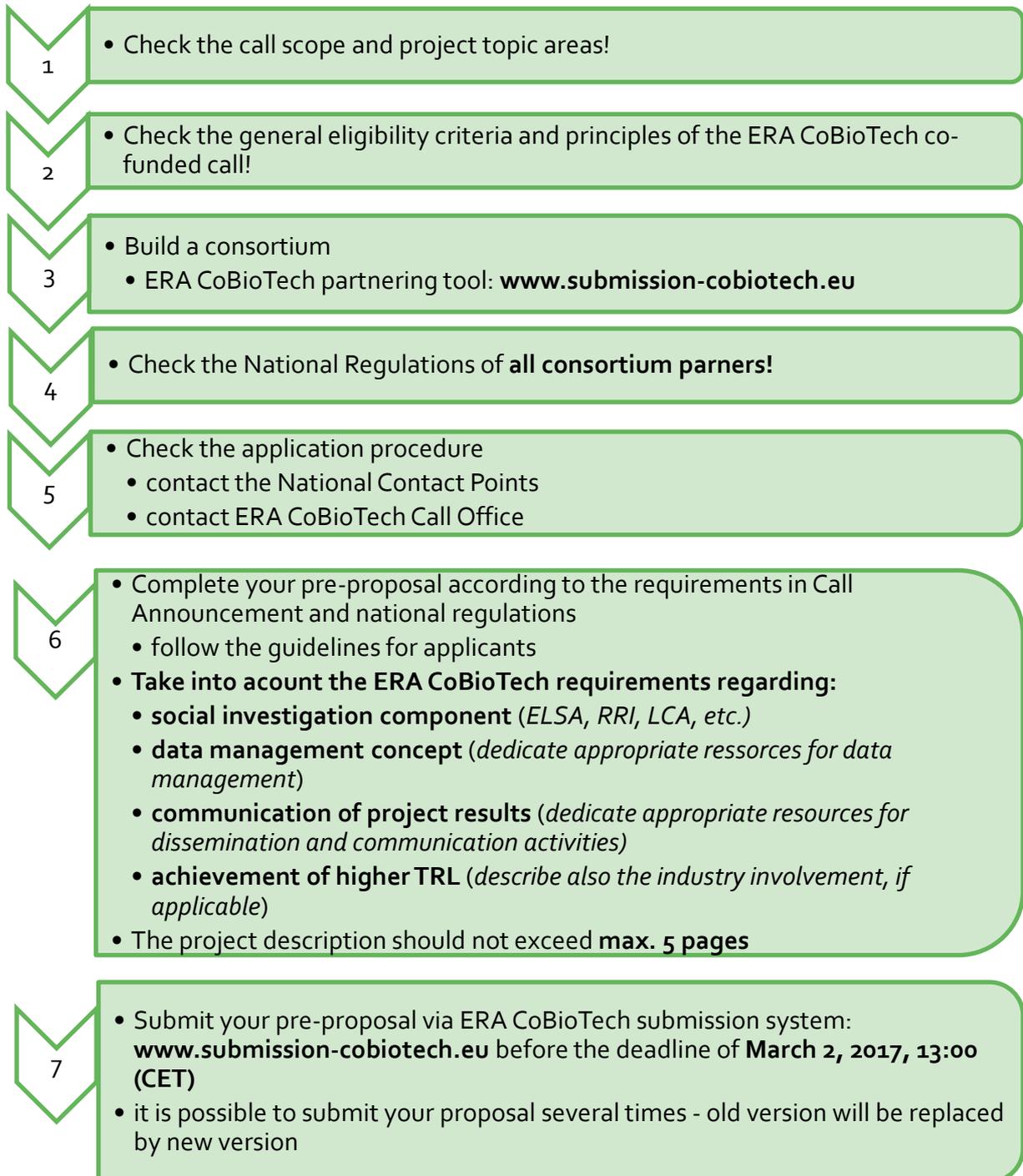
Germany

ERA CoBioTech Submission Webpage: <https://www.submission-cobiotech.eu/>

ERA CoBioTech webpage: <http://www.cobiotech.eu/>

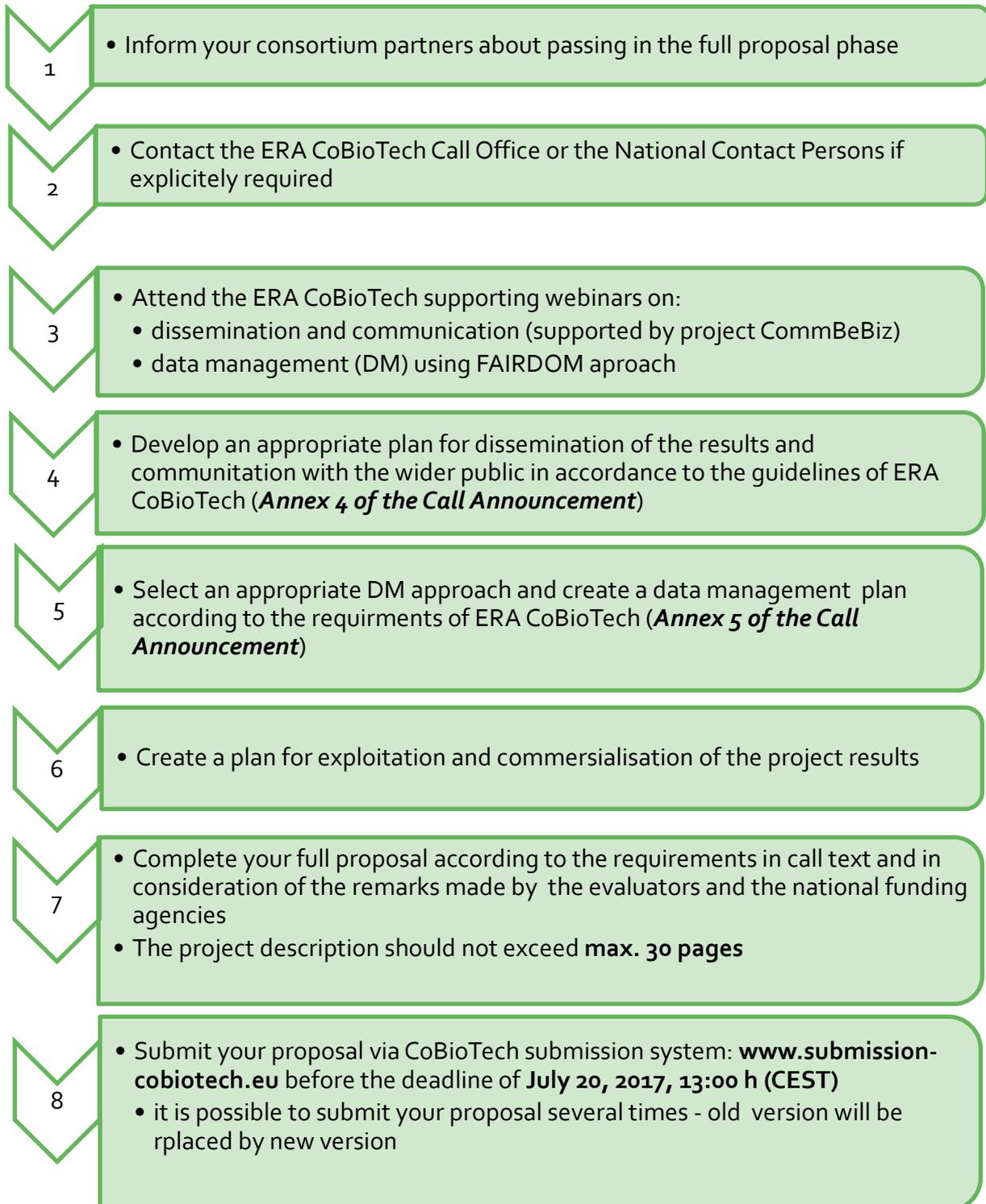
15. Quick guide “How to apply to the ERA CoBioTech call”

Pre-proposal phase



Full-proposal phase

(Only relevant for consortia explicitly invited by the ERA CoBioTech Call Office to submit full proposals)



ANNEX 1: National or regional contact persons

Country		Funding Organisation	National Contact Person (NCP)
Argentina		MINCyT	<p>Mónica Silenzi Tel.: +541148995000 ext 4084 E-mail: msilenzi@mincyt.gob.ar</p> <p>Agustina Velo Tel.: +541148995000 ext 4150 E-mail: avelo@mincyt.gob.ar</p>
Belgium-Wallonia		SPW-DGO6	<p>Mr. Nicolas Delsaux SPW-DGO6 Tel.: +32-81-334-520 Mobile: +32-473-556-174 E-mail: nicolas.delsaux@spw.wallonie.be</p>
Estonia		ETAg	<p>Margit Suuroja Tel.: +372-731-7361 E-mail: margit.suuroja@etag.ee</p> <p>Dr. Aare Ignat Tel.: +372-731-7364 E-mail: aare.ignat@etag.ee</p>
France		ANR	<p>Dr. Elise Cahard Agence Nationale de la Recherche Tel.: +33-1-73-54-82-68 E-mail: elise.cahard@anr.fr</p> <p>Dr. Liz Pons Agence Nationale de la Recherche Tel.: +33-1-78-09-80-49 E-mail: liz.pons@anr.fr</p>
Germany		BMBF/JUELICH	<p>Dr. Petra E. Schulte Tel.: +49 2461 61-9031 E-mail: petra.schulte@fz-juelich.de</p> <p>Dr. Christian Breuer Tel.: +49 2461 61-96929 E-mail: c.breuer@fz-juelich.de</p> <p>Projektträger Jülich / Projectmanagement Jülich Geschäftsbereich Bioökonomie / Division Bioeconomy PtJ BIO 7: Europäische Initiativen und Internationales / European Initiatives and International Affairs Forschungszentrum Jülich GmbH D-52425 Jülich Fax: +49 2461 61-1790</p>
Germany		BMEL/FNR	<p>Tina Hausmann Fachagentur Nachwachsende Rohstoffe e.V. Tel.: +49-3843-6930-172 E-mail: t.hausmann@fnr.de</p>

Germany/ Saxony	 	SMWK	Gabriele Süptitz Sächsisches Staatsministerium für Wissenschaft und Kunst (SMWK) Tel.: +49-351-564-6422 E-mail: gabriele.sueptitz@smwk.sachsen.de cobiotech@smwk.sachsen.de
Israel		CSO-MOH	Dr. Ronit Meyuhas Chief Scientists Office, Ministry of Health Tel.: +972-2-508-2159 E-mail: ronit.meyuhas@moh.gov.il
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Romania		UEFISCDI	Adrian Asanica Unitatea Executiva pentru Finantarea Invatamantului Superior, a Cercetarii, Dezvoltarii si Inovarii (UEFISCDI) Tel: +40744.45.00.11 E-mail: adrian.asanica@uefiscdi.ro
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Slovenia		MIZS	Ms. Kim Turk Tel.: +386(1)4784705 E-Mail: kim.turk@gov.si
Spain		CDTI	Pilar de Miguel Tel: +34 915815502 E-mail: mariapilar.demiguel@cdti.es Julian Díaz Tel: +34 915815505 E-mail: julian.diaz@cdti.es

Spain		MINECO	<p>Ana Barra Project Manager Tel: +34 91 603 83 98 E-mail: era-ib@mineco.es</p> <p>Auxiliadora Prieto Scientific Advisor E-mail: era-ib@mineco.es</p>
Switzerland		CTI	<p>Alain Dietrich Tel: +41 58 464 92 87 E-mail: alain.dietrich@kti.admin.ch</p>
Turkey		TUBITAK	<p>Dilek Sahin Scientific Programs Expert / Technology and Innovation Funding Board Tel: +90-312-468-53-00 E-mail: dilek.sahin@tubitak.gov.tr</p>
United Kingdom		BBSRC	<p>Dr Anja Berndt E-mail: cobiotech@bbsrc.ac.uk</p>

ANNEX 2: Summary of funding options and restrictions

Please note that this is only a summary. Please also read the “National or regional regulations, national or regional eligibility criteria” in the Call Announcement.

The participation of an industrial partner is strongly recommended. 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 <i>total</i> national/regional funding (up to M€)	Research topics excluded from funding	Funding of: universities (HES), research organisations (REC), companies (PRC)	Maximum funding per project partner (M€)	Additional documents required	Funding of PhD students possible	Maximum project duration (years)	Any other national / regional restrictions
MINCyT	AR	0.5							
SPW-DGo6	BE	1.0	none	yes	no restrictions	SPW-DGO6 online form (for full proposals only)	no	3	See national eligibility criteria
ETAg	EE	0.1		Funding all who are normally eligible to apply for ETAg's grants	0.1	none	yes	3	See national eligibility criteria
ANR	FR	1.5	Standing alone synthetic and systemic biology based projects cannot be received as such. They have to be incorporated as tasks or WPs in projects dealing with the development of a process of bioproduction or industrial valorisation of biomass. Moreover, projects related to marine and medical biotechnologies are excluded	yes	0.25	none	yes	3	See national eligibility criteria

			from funding.						
BMBF/ JUELICH	DE	9.0	Applications in bioenergy	yes	no restrictions	see national eligibility criteria	yes	3	See national eligibility criteria; consulting with the National Contact Persons (ANNEX 1) is strongly recommended
FNR	DE	2.0	Applications in food, feed, pharmaceutical production and red biotechnology	yes	The total requested funding of German partners in a consortium shall not exceed € 0.5 M	none	yes	3	see national eligibility criteria; consulting with the National Contact Persons (ANNEX 1) is strongly recommended
SMWK	DE	1.0	none	yes	no restrictions	see regional regulations	yes	3	see regional eligibility criteria; consulting with the Regional Contact Person (ANNEX 1) is strongly recommended
CSO-MOH	IL	0.2		No funding of industrial partners possible	0.1	Prior to submission, researchers will submit to CSO-MOH an abstract approved by their research authority including budget distribution. Thus no submission of abstract can result in declaration of the consortium as ineligible	yes	3	<ul style="list-style-type: none"> - CSO-MOH will only fund research of biomedical nature. Hence, prior consulting with the contact person is essential. - Non Biomedical applications will not be approved
MIUR	IT	0.4	none	yes	0.15	yes, (see national regulations)	yes	3	See national eligibility criteria
VIAA	LV	0.3	none	Following legal persons (as defined under Latvian law) are eligible for funding, except natural persons: » R&D institutions (research institutes, universities, higher education establishments, research centres etc.) that are listed in the Registry of Research Institutions operated by the Ministry of Education and Science of the Republic of	0.21	none	yes	3	See national eligibility criteria

				Latvia. » Private entities that are registered in the Registry of Enterprises of the Republic of Latvia and provide most of their R&D&I activities in the Republic of Latvia.					
NWO	NL	1.0	Only themes mentioned in the Call Announcement can be addressed.	Funding of Dutch universities and selected Dutch institutes. TO2 institutes and universities of applied sciences can also receive (part of) the grant applied for. See National Annex of NWO	0.25	none	no	3	See National Annex of NOW (ANNEX 2)
RCN	NO	1.5	none	yes	0.5 (Limit per project if more than one partner)	none	yes	As general guidelines	See national regulations and criteria
NCBR	PL	0.7	none	yes	0.2	See national regulations	no	3	See national regulations
UEFISCDI	RO	0.5	none	Eligible entities for funding are universities, public institutions, R&D national institutions, joint-stock companies, SME's and Large companies, NGOs (associations, foundations, etc.), others. Funding rates vary in accordance with state aid legislation. See http://uefiscdi.gov.ro/articole/4536/Pachet-de-informatii-ERANETERANET-Cofund.html	0.20 / 0.25	none	yes	3	See national regulations http://uefiscdi.gov.ro/articole/4536/Pachet-de-informatii-ERANETERANET-Cofund.html
FASIE	RU	1.0	none	Universities are not eligible for funding. The main applicant should be an SME (defines as such in accordance with Article 4 of Federal Law 209)	0.2 per project	Yes, all applicants must provide a national application	no	2	See national eligibility criteria
MIZS	SI	0.63	n/a	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)	as in the COFUND call	See national regulations and criteria
CDTI	SP	0.53	none	Only industrial partners can be funded, universities and research institutions can take	No maximum funding per partner but there	National documents have to be submitted to CDTI. For additional information,	no	3	See national eligibility criteria

				part as subcontractors	is a minimum budget per partner of 0.175	please see National Annex (ANNEX 2).			
MINECO	SP	1.0		No funding of industrial partners possible	0.15	See national regulations	yes	3	See national eligibility criteria
CTI	CH	0.92 – 1.38 (exchange rate in Oct. 2016; equals 1.0-1.5 CHF)	none	Only Universities and Research Organisations allowed for contributions according separate list	no restrictions	See national regulations	yes	3	See national regulations and criteria https://www.kti.admin.ch/kti/en/home/unsere-foerderangebote/Unternen/f-e-projekte.html
TUBITAK	TK	1.0	none	Only industrial partners can be funded, universities and research institutions can take part as subcontractors	no restrictions	will be announced in the national call text	no	max the international project's duration	See national/regional requirements
BBSRC	UK	2.21 (exchange rate in Oct. 2016; equals £2M) The BBSRC contribution is capped at £2M.	UK aspects of projects must be within the remit of BBSRC; http://www.bbsrc.ac.uk/research/science-remit.aspx . Food, animal feed and medical applications are excluded (pharmaceutical precursors, antibiotics and recombinant biologics are acceptable)	Only Higher Education Institutions (HEIs), Research Council Institutes (RCIs) and selected Independent Research Organisations (IRO) which are normally eligible to apply for BBSRC grants. No funding of industrial partners possible.	no restrictions	UK applicants invited to prepare a full proposal will also be asked to complete a BBSRC proforma to ensure their proposal complies with the requirements of full economic costs.	no	3	See BBSRC grants guide (http://www.bbsrc.ac.uk/web/FILES/Guidelines/grantsguide.pdf)