APRE
Agenzia per la Promozione della Ricerca Europea

UNIVERSITÀ DEGLI STUDI DI PALERMO

18 Ottobre 2023

Gli aspetti trasversali delle proposte collaborative in Horizon Europe

Serena Borgna

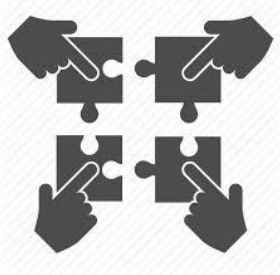
Capo Dipartimento Attività Istituzionali - APRE

Team tematici Cluster HE, APRE

borgna@apre.it

APREsoci





Idea

Topic identification

Consortium building

Proposal preparation

Submission

Evaluation & Selection

Signature of the Grant Agreement

Signature of the Consortium Agreement

Payment and Starting Date

Activities

Communication, Dissemination & Exploitation

APRE

EVALUATION PROCESS

Evaluation criteria

Same criteria as in H2020

Same three award criteria: '**Excellence**', '**Impact**' and '**Quality and efficiency of the implementation**'.

Changes introduced upon lessons learnt

- The number of '**aspects to be taken into account**' have been **reduced**, ensuring that the same aspect is not assessed twice
- **Open Science** practices assessed as part of the scientific methodology in the excellence criterion
- **New approach to impact**: Key Impacts Pathways (KIPs)
- The assessment of the **quality of applicants** is assessed under 'implementation', rather than as a separate binary assessment of operational capacity
- Assessment of **management structures** has been removed.

Evaluation criteria (RIAs and IAs)

EXCELLENCE

- ✓ Clarity and pertinence of the **project's objectives**, and the extent to which the proposed work is ambitious, and goes beyond the state-of-the-art.
- ✓ Soundness of the proposed **methodology**, including the underlying concepts, models, assumptions, inter-disciplinary approaches, appropriate consideration of the **gender dimension** in research and innovation content, and the quality of **open science practices** including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.

IMPACT

- ✓ Credibility of the **pathways** to achieve the expected **outcomes and impacts** specified in the work programme, and the likely scale and significance of the contributions due to the project.
- ✓ Suitability and quality of the **measures to maximize expected outcomes and impacts**, as set out in the dissemination and exploitation plan, including communication activities.

QUALITY AND EFFICIENCY OF THE IMPLEMENTATION

- ✓ Quality and effectiveness of the **work plan**, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.
- ✓ Capacity and role of each **participant**, and extent to which the **consortium** as a whole brings together the necessary expertise.

Proposals aspects are assessed to the extent that the proposed work is within the scope of the work programme topic

Evaluation criteria (RIAs and IAs)

EXCELLENCE

- ✓ Clarity and pertinence of the **project's objectives**, and the extent to which the proposed work is ambitious, and goes beyond the state-of-the-art.
- ✓ Soundness of the proposed **methodology**, including the underlying concepts, models, assumptions, inter-disciplinary approaches, appropriate consideration of the **gender dimension** in research and innovation content, and the quality of **open science practices** including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.

IMPACT

- ✓ Credibility of the **pathways** to achieve the expected **outcomes and impacts** specified in the work programme, and the likely scale and significance of the contributions due to the project.
- ✓ Suitability and quality of the **measures to maximize expected outcomes and impacts**, as set out in the dissemination and exploitation plan, including communication activities.

QUALITY AND EFFICIENCY OF THE IMPLEMENTATION

- ✓ Quality and effectiveness of the **work plan**, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.
- ✓ Capacity and role of each **participant**, and extent to which the **consortium** as a whole brings together the necessary expertise.

Proposals aspects are assessed to the extent that the proposed work is within the scope of the work programme topic

Ranking Criteria for ex aequo proposals

By order of priority

1. Aspects of the call that have not otherwise been covered by more highly ranked proposals
2. Scores on ‘Excellence’ then on ‘Impact’ (for IAs, scores on ‘Impact’ then ‘Excellence’)
3. **Gender balance among personnel named in the proposal who will be primarily responsible for carrying out the research and/or innovation activities, and who are included in the researchers table in the proposal**
4. Geographical diversity
5. …

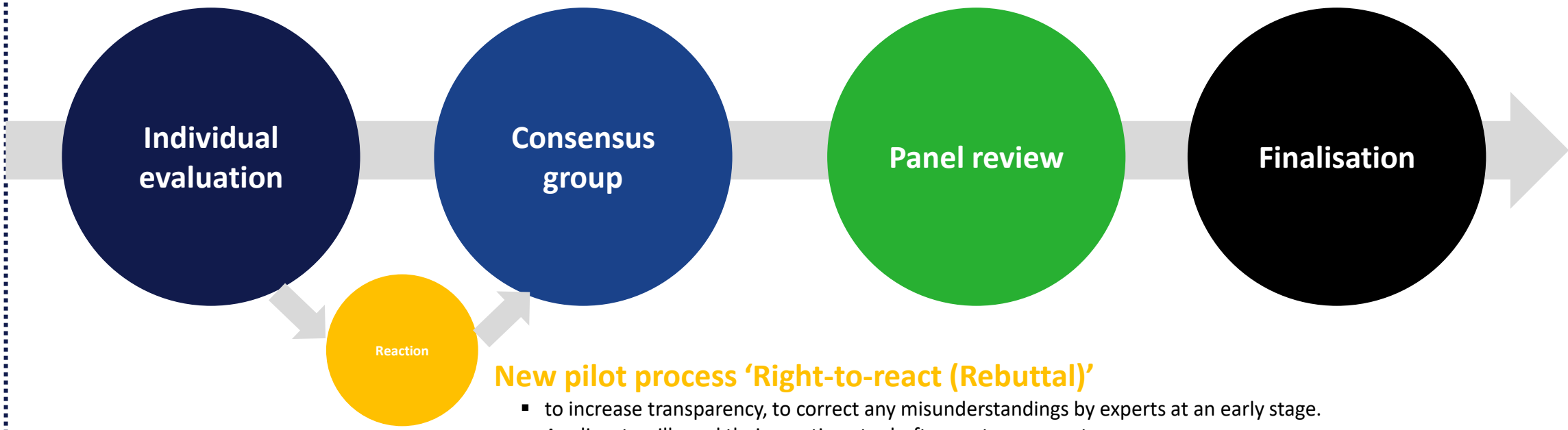
Standard evaluation process

Experts assess proposals **individually**. Minimum of three experts per proposal (but often more than three).

All individual experts discuss together to agree on a **common position**, including comments and scores for each proposal.

The panel of experts reach an **agreement** on the scores and comments for all proposals within a call, checking **consistency across the evaluations.**

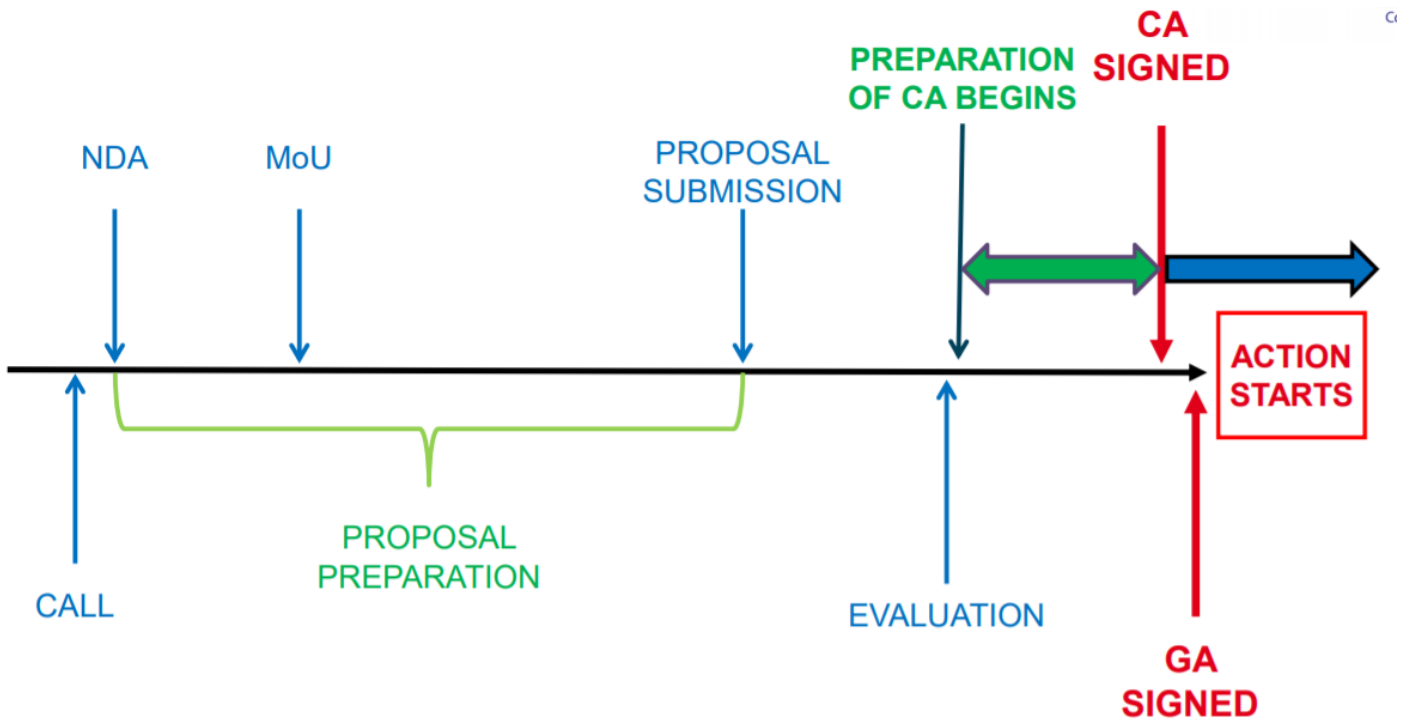
The Commission/Agency reviews the results of the experts' evaluation and puts together the **final ranking list**.



New pilot process 'Right-to-react (Rebuttal)'

- to increase transparency, to correct any misunderstandings by experts at an early stage.
- Applicants will send their reactions to draft experts comments
- Experts will take applicants' reaction into account before finalising their final assessment.

Timeline



- 5 months from submission to evaluation
- 3 months from the start of the negotiation to the signature of the Grant Agreement (GA)

PROPOSAL TEMPLATE

Application Form

- RIA/IA:

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/temp-form/af/af_he-ria-ia_en.pdf

- RIA/IA stage one:

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/temp-form/af/af_he-ria-ia-stage-1_en.pdf

- CSA:

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/temp-form/af/af_he-csa_en.pdf

Application form

- The Application Form has two parts :
  - PART A: *administrative information and budget*
  - PART B: *techicnical description of the project*
- Submission via the Funding & Tenders Portal.

Proposal page limit

Substantial reduction in maximum length:

- RIAs and IAs type of actions: limit for a full application is **45 pages**
- CSAs: limit is **30 pages**
- First stage proposals: limit is **10 pages**
- EIC Pathfinder: limit is **17 pages**
- Exceptions, if any, would be specified in the call text.

HORIZON EUROPE: elements

- **Part A** of the proposal **is generated by the IT system. It is based on the information entered by the participants through the submission system in the Funding & Tenders Portal.** The participants can update the information in the submission system at any time before final submission.
- **Part B** of the proposal is the **narrative part that includes three sections, each corresponding to an evaluation criterion**. Part B needs to be uploaded as a PDF document following the templates downloaded by the applicants in the submission system for the specific call or topic. The templates for a specific call may slightly differ from the example provided in this document.

Proposal template – Part B

1 – General information

Section 1 provides basic data on the proposal. It can be filled in by contacts of the coordinator. Other participants may view this section only. Read-only parts are marked in blue.

Topic	Type of action
Call	*Acronym is mandatory*
Proposal title	*Max 200 characters (with spaces). Must be understandable for non-specialists in your field.*
	Note that for technical reasons, the following characters are not accepted in the Proposal Title and will be removed: < > " &
Duration in months	*Estimated duration of the project in full months.*
Fixed keyword	
Fixed keyword	SDG?
Free keywords	*Enter any words you think give extra detail of the scope of your proposal (max 200 characters with spaces).*

Abstract

The abstract should provide the reader with a clear understanding of the objectives of the proposal, how they will be achieved, and their relevance to the Work Programme. This summary will be used as the short description of the proposal in the evaluation process and in communications to the programme management committees and other interested parties. It must therefore be short and precise and should not contain confidential information. Use plain typed text, avoiding formulae and other special characters. If the proposal is written in a language other than English, please include an English version of this abstract in the Part B (technical description) of the proposal.

Has this proposal (or a very similar one) been submitted in the past 2 years in response to a call for proposals under any EU programme, including the current call? *A "similar" proposal or contract is one that differs from the current one in minor ways, and in which some of the present consortium members are involved.*	○ Yes	○ No
Please give the proposal reference or contract number	XXXXX-X	

Proposal template Part B: technical description

(for full proposals: single stage submission procedure and 2nd stage of a two-stage submission procedure)

This template is to be used in a single- stage submission procedure or at the 2nd stage of a two-stage submission procedure.

The structure of this template must be followed when preparing your proposal. It has been designed to ensure that the important aspects of your planned work are presented in a way that will enable the experts to make an effective assessment against the evaluation criteria. Sections 1, 2 and 3 each correspond to an evaluation criterion.

Please be aware that proposals will be evaluated as they were submitted, rather than on their potential if certain changes were to be made. This means that only proposals that successfully address all the required aspects will have a chance of being funded. There will be no possibility for significant changes to content, budget and consortium composition during grant preparation.

⚠ **Page limit**: The title, list of participants and sections 1, 2 and 3, together, should not be longer than 45 pages. All tables, figures, references and any other element pertaining to these sections must be included as an integral part of these sections and are thus counted against this page limit.

The page limit will be applied automatically; therefore you must remove this instruction page before submitting.

If you attempt to upload a proposal longer than the specified limit before the deadline, you will receive an automatic warning and will be advised to shorten and re-upload the proposal. After the deadline, excess pages (in over-long proposals/applications) will be automatically made invisible, and will not be taken into consideration by the experts. The proposal is a self-contained document. Experts will be instructed to ignore hyperlinks to information that is specifically designed to expand the proposal, thus circumventing the page limit.

Please, do not consider the page limit as a target! It is in your interest to keep your text as concise as possible, since experts rarely view unnecessarily long proposals in a positive light.

⚠ The following formatting conditions apply.

The reference font for the body text of proposals is Times New Roman (Windows platforms), Times/Times New Roman (Apple platforms) or Nimbus Roman No. 9 L (Linux distributions).

The use of a different font for the body text is not advised and is subject to the cumulative conditions that the font is legible and that its use does not significantly shorten the representation of the proposal in number of pages compared to using the reference font (for example with a view to bypass the page limit).

The minimum font size allowed is 11 points. Standard character spacing and a minimum of single line spacing is to be used. This applies to the body text, including text in tables.

Text elements other than the body text, such as headers, foot/end notes, captions, formula's, may deviate, but must be legible.

The page size is A4, and all margins (top, bottom, left, right) should be at least 15 mm (not including any footers or headers).

Excellence – aspects to be taken into account.

- Clarity and pertinence of the project's objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art.
- Soundness of the proposed methodology, including the underlying concepts, models, assumptions, interdisciplinary approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.

1. Excellence

⚠ *The following aspects will be taken into account only to the extent that the proposed work is within the scope of the work programme topic.*

1.1 Objectives and ambition *[e.g. 4 pages]*

- Briefly describe the objectives of your proposed work. Why are they pertinent to the work programme topic? Are they measurable and verifiable? Are they realistically achievable?
- Describe how your project goes beyond the state-of-the-art, and the extent the proposed work is ambitious. Indicate any exceptional ground-breaking R&I, novel concepts and approaches, new products, services or business and organisational models. Where relevant, illustrate the advance by referring to products and services already available on the market. Refer to any patent or publication search carried out.
- Describe where the proposed work is positioned in terms of R&I maturity (i.e. where it is situated in the spectrum from 'idea to application', or from 'lab to market'). Where applicable, provide an indication of the Technology Readiness Level, if possible distinguishing the start and by the end of the project.

  ⚠ *Please bear in mind that advances beyond the state of the art must be interpreted in the light of the positioning of the project. Expectations will not be the same for RIAs at lower TRL, compared with Innovation Actions at high TRLs.*

1.2 Methodology *[e.g. 15 pages]*

- Describe and explain the overall methodology, including the concepts, models and assumptions that underpin your work. Explain how this will enable you to deliver your project's objectives. Refer to any important challenges you may have identified in the chosen methodology and how you intend to overcome them. *[e.g. 10 pages]*

  ⚠ *This section should be presented as a narrative. The detailed tasks and work packages are described below under 'Implementation'.*

- Describe any national or international research and innovation activities whose results will feed into the project, and how that link will be established; *[e.g. 1 pages]*
- Explain how expertise and methods from different disciplines will be brought together and integrated in pursuit of your objectives. If you consider that an inter-disciplinary approach is unnecessary in the context

APRE

1. Excellence

1.1 Objectives and Ambition
1.2 Methodology

The What - Concept
What is the project about?

2. Impact

2.1 Project's pathways towards impact
2.2 Measures to maximise impact - Dissemination, exploitation and communication
2.3 Summary

The Impact - Value
What is the value of the project?

3. Implementation

3.1 Work plan and resources
3.2 Capacity of participants and consortium as a whole

The How - Execution
How to meet the project objectives?

HORIZON EUROPE

Part B1

EXCELLENCE

1.1 Objectives and ambition[e.g. 4 pages]

a. Objective
b. State of the art
c. TRL

1.2 Methodology [e.g. 15 pages]

a. concepts, models and assumptions
b. national or international R&I activities
c. inter-disciplinary approach
d. integration of social sciences and humanities
e. Gender dimension
f. open science practices
g. data management

Part B1

IMPACT

2.1 Project's pathways towards impact [e.g. 4 pages]

Objective

a. the outcomes and the wider impacts
b. requirements and potential barriers
c. scale and significance of the project's contribution to

2.2 Measures to maximise impact [e.g. 5 pages]

a. plan for the dissemination and exploitation including communication activities'
b. strategy for the management of intellectual property

2.3 Summary (e.g Canvas table]

Part B1

IMPLEMENTATION

3.1 Work plan and resources *[e.g. 14 pages – including tables]*

a. overall structure of the work plan;
b. WP timing and components (Gantt chart or similar);
c. graphical presentation with inter-relate (Pert chart or similar).
d. detailed work description + table

3.2 Capacity of participants and consortium as a whole *[e.g. 3 pages]*
concepts, models and assumptions

a. Describe the consortium
b. Critical infrastructure
c. Complementarity
d. the industrial/commercial involvement
e. Third countries

Proposal template Part B: technical description

1. Excellence

1.1 Objectives and ambition *[e.g. 4 pages]*

1.2 Methodology *[e.g. 15 pages]*

2. Impact

2.1 Project's pathways towards impact *[e.g. 4 pages]*

2.2 Measures to maximise impact - Dissemination, exploitation and communication *[e.g. 5 pages]*

2.3 Summary (Canvas table)

3. Quality and efficiency of the implementation

3.1 Work plan and resources *[e.g. 14 pages – including tables]*

3.2 Capacity of participants and consortium as a whole *[e.g. 3 pages]*

Cross cutting aspect in Session Excellence

- Do not significant harm – DNSH
- inter-disciplinary approach
- integration of social sciences and humanities
- Gender dimension
- open science practices
- data management

The ”Do No Significant Harm” concept

- EU Taxonomy regulation defines when an economic activity can be considered sustainable. Present focus is on climate mitigation and adaptation.
- Concepts adopted by EU Taxonomy such as “Substantial Contribution” and “Do No Significant Harm” (DNSH) to be assessed with a life cycle approach, together with the definition of the **six environmental objectives** are relevant also beyond the financial sector:
  - Horizon Europe
  - Resilience and Recovery Plan
- Guidelines published for RRP could be used also for Horizon Europe: https://ec.europa.eu/info/sites/default/files/c2021_1054_en.pdf

What is the EU taxonomy

The Taxonomy Regulation was published in the Official Journal of the European Union on 22 June 2020 and entered into force on 12 July 2020. It establishes the framework for the EU taxonomy by setting out four overarching conditions that an economic activity has to meet in order to qualify as environmentally sustainable.

The Taxonomy Regulation establishes **six environmental objectives:**

1. An economic activity is considered to do significant harm to **climate change mitigation** if it leads to significant greenhouse gas (GHG) emissions;
2. An economic activity is considered to do significant harm to **climate change adaptation** if it leads to an increased adverse impact of the current climate and the expected future climate, on the activity itself or on people, nature or assets;
3. An economic activity is considered to do significant harm to the **sustainable use and protection of water and marine resources** if it is detrimental to the good status or the good ecological potential of bodies of water, including surface water and groundwater, or to the good environmental status of marine waters;
4. An economic activity is considered to do significant harm to the **circular economy**, including waste prevention and recycling, if it leads to significant inefficiencies in the use of materials or in the direct or indirect use of natural resources, or if it significantly increases the generation, incineration or disposal of waste, or if the long-term disposal of waste may cause significant and longterm environmental harm;
5. An economic activity is considered to do significant harm to **pollution prevention and control** if it leads to a significant increase in emissions of pollutants into air, water or land;
6. An economic activity is considered to do significant harm to the **protection and restoration of biodiversity and ecosystems** if it is significantly detrimental to the good condition and resilience of ecosystems, or detrimental to the conservation status of habitats and species, including those of Union interest.

”Do No Significant Harm” in the proposals

- Applicants can refer to the DNSH principle when presenting their research methodology and the expected impacts of the project, to show that their project will not carry out activities that make a significant harm to any of the six environmental objectives of the EU Taxonomy Regulation listed above
- **Evaluators will not score applications** in relation to their compliance with the DNSH principle unless explicitly stated in the work programme

Example HE

Table 5 Neutral (0), negative (-) or positive (+) (in)direct effects on DNSH principle during project and beyond, and mitigation.

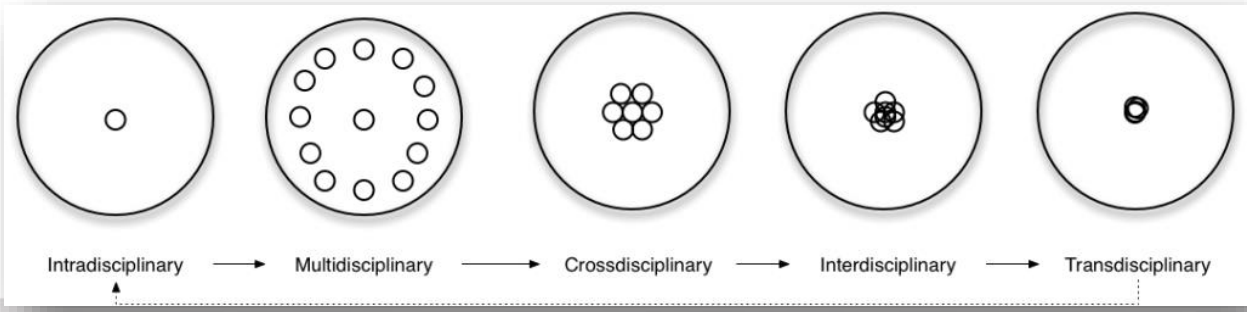
Objectives	[redacted] methodology	Long-term impact
Climate change mitigation	0/- Negligible adverse effects (GHG emissions) during research phase. Pilot facility BBEPP uses renewable energy (photovoltaic system). + According to Annex VI, Methodology for climate tracking,[40] activity contributes to objective with coefficients of 40-100%: Intervention Field (IF) 022/023: *R&I processes, technology transfer and cooperation between enterprises focusing on the low-carbon economy, resilience to climate change/circular economy.*	0/- Emissions during production phase: LCA results. TPB develops electric instead of gas-based drying. Production facility of TPB planned in Breda (local mitigation measures by replacing gas with sustainable alternatives). LDF will use i) direct heat energy recovery for temperature control of fermenters; ii) cell recycling (energy savings; lengthening fermentation runs reduces number of sterilisations); iii) anaerobic digestion of excess biomass for energy/gas recovery; iv) use of wind energy to directly compress air for fermenter aeration. + Substantial contribution by switch to the use of sustainably sourced raw materials (2G food processing side streams) for food production: TR§10-1d.[41] Significant GHG emissions savings are expected; S2.1.1. + Use of 2G biomass and MP production substantially contribute to strengthening land carbon sinks (*e.g.*, avoiding deforestation (see below), and restoration of croplands, grasslands, wetlands): TR§10-1f. + Contributes to reducing livestock farming (16.5% of global GHG emissions)[1]; MP production has far lower carbon footprint; S2.1.1. + Upon launch of [redacted]echnologies, they contribute to the green economy (green skills and jobs), with a climate coefficient of 100%.
Climate change adaptation	+ Use of 2G feestocks at pilot level, minimisation of process	+ By diversification of the food pattern, [redacted] contributes to increasing the resilience of the global food industry and avoiding

1.2 Methodology *[e.g. 15 pages]*

- Describe any national or international **research and innovation activities** whose results will feed into the project, and how that link will be established; [e.g. 1 pages]
- Explain how expertise and methods from different disciplines will be brought together and integrated in pursuit of your objectives. If you consider that an **inter-disciplinary approach** is unnecessary in the context of the proposed work, please provide a justification. [e.g. 1/2 page]
- For topics where the work programme indicates the need for the **integration of social sciences and humanities**, show the role of these disciplines in the project or provide a justification if you consider that these disciplines are not relevant to your proposed project. [e.g. 1/2 page]

Disciplinarities

- **Intradisciplinary**: working within a single discipline
- **Multidisciplinary**: people from different disciplines working together, each drawing on their disciplinary knowledge
- **Crossdisciplinary**: viewing one discipline from the perspective of another
- **Interdisciplinary**: integrating knowledge and methods from different disciplines, using a real synthesis of approaches
- **Transdisciplinary**: creating a unity of intellectual frameworks beyond the disciplinary perspectives; a shared conceptual model of the problem that integrates and transcends each of their separate disciplinary perspectives



Source. Alexander Refsum Jensenius, www.arj.no/2012/03/12/disciplinarities-2/

Social Science and Humanities

Social sciences, education, business and law

- **Social and behavioural sciences**: economics, economic history, political science, sociology, demography, anthropology (except physical anthropology), ethnology, futurology, psychology, geography (except physical geography), peace and conflict studies, human rights.
- **Education science**: curriculum development in non-vocational and vocational subjects, educational policy and assessment, educational research.
- **Journalism and information**: journalism, library and museum sciences, documentation techniques, archival sciences.
- **Business and administration**: retailing, marketing, sales, public relations, real estate, finance, banking, insurance, investment analysis, accounting, auditing, management, public and institutional administration.
- **Law**: law, jurisprudence, history of law.

Humanities and the arts

- **Humanities**: religion and theology, foreign languages and cultures, living or dead languages and their literature, area studies, native languages, current or vernacular language and its literature, interpretation and translation, linguistics, comparative literature, history, archaeology, philosophy, ethics.
- **Arts**: fine arts, performing arts, graphic and audio-visual arts, design, crafts.

Project requirements - SSH flagged topics

Applicants should ensure that:

- contributions from SSH disciplines are integrated throughout their proposed project, and
- the actions required, participants and disciplines involved as well as the added value of SSH contributions are clearly stated in the proposal

The SSH methodologies used in the projects should be described, or if the applicant consortium considers that SSH is not relevant to their particular proposal, they should explain why

- Where relevant, applicants are also encouraged to include contributions from the SSH in a project proposal under any call, even if it is not SSH-flagged

1.2 Methodology *[e.g. 15 pages]*

- Describe how the **gender dimension** (i.e. sex and/or gender analysis) is taken into account in the project's research and innovation content [e.g. 1 page]. If you do not consider such a gender dimension to be relevant in your project, please provide a justification.

Note: This section is mandatory except for topics which have been identified in the work programme as not requiring the integration of the gender dimension into R&I contentfication.

Note: Remember that that this question relates to the content of the planned research and innovation activities, and not to gender balance in the teams in charge of carrying out the project.

Note: Sex and gender analysis refers to biological characteristics and social/cultural factors respectively. For guidance on methods of sex / gender analysis and the issues to be taken into account, please refer to http://ec.europa.eu/research/swafs/gendered-innovations/index_en.cfm?pg=home

Gender dimension

- Here, it is NOT about gender balance in the consortium, but about SCIENCE.
- Are there scientific reasons for having a closer look at gender?
- How are you going to address this in your approach and methodology?

For guidance on methods of sex / gender analysis and the issues to be taken into account, please refer to

Gendered Innovations 2: How inclusive analysis contributes to research and innovation

Gender dimension

- **Integrating sex and gender analysis into R&I content improves the scientific quality and societal relevance of the produced knowledge, technologies and innovation. It:**
- adds value to research and innovation in terms of excellence, creativity, rigor, reproducibility and business opportunities
- helps researchers and innovators question gender norms and stereotypes, and rethink standards and reference models
- leads to an in-depth understanding of all people's needs, behaviours, and attitudes
- contributes to the production of goods and services better suited to new markets
- is crucial to secure Europe's leadership in science & technology and support inclusive and sustainable growth

Gender dimension in the proposals

Reflect on why sex and/or gender could matter:

- Think about and present the ways in which taking into account the gender dimension will **provide added value** in terms of creativity, excellence, and return on investment, both from public and private perspectives.
- Consider the production of new knowledge on gender: Consider what is already known in your area in terms of the gender dimension (e.g. related scientific literature) and identify **what is missing**. In many areas, gender knowledge still needs to be generated.
- Include sex and gender aspects **as part of a multidisciplinary approach**: Reflecting on sex and gender considerations in relation to health, transport, energy, security, etc. is a great opportunity to foster cooperation between scientists with gender expertise and others. It helps concepts cross the borders of scientific fields and encourages research methods to evolve.
- Consider social categories/factors intersecting with sex and gender: **the way a research problem is formulated** will determine which intersecting variables are relevant for analysis. Intersectional research should be designed to illuminate the multiplicative effects of different, but interdependent, categories and factors

1.2 Methodology *[e.g. 15 pages]*

- Describe how appropriate **open science** practices are implemented as an integral part of the proposed methodology. Show how the choice of practices and their implementation are adapted to the nature of your work, in a way that will increase the chances of the project delivering on its objectives [e.g. 1 page]. If you believe that none of these practices are appropriate for your project, please provide a justification here.

*Note: **Open science** is an approach based on open cooperative work and systematic sharing of knowledge and tools as early and widely as possible in the process. Open science practices include early and open sharing of research (for example through preregistration, registered reports, preprints, or crowd-sourcing); research output management; measures to ensure reproducibility of research outputs; providing open access to research outputs (such as publications, data, software, models, algorithms, and workflows); participation in open peer-review; and involving all relevant knowledge actors including citizens, civil society and end users in the co-creation of R&I agendas and contents (such as citizen science).*
Note: Please note that this question does not refer to outreach actions that may be planned as part of communication, dissemination and exploitation activities. These aspects should instead be described below under 'Impact'

Example HE

1.2.8 Open Science practices relevance for our proposal

Our project fully complies with the principles of open science: **(A) Systematic sharing of knowledge and tools as early and widely as possible**: i) preregistration, registered reports and preprints, will be used whenever applicable; ii) measures to ensure reproducibility of research outputs: pending the need of confidentiality and IPR, we will ensure a timely access to research results including (meta)data, to ensure re-use and reproducibility (S1.2.9). Open access journals will be preferred, *e.g.,* Open Research Europe, and other open access repositories (*e.g.,* Zenodo). Data, protocols, software and other tools underlying the publications will be released at the same time, either via Zenodo or in discipline-specific repositories, providing the DOI to the publication. **(B) Involving all relevant knowledge actors**: we will apply an anticipatory approach, to favour that the needs, expectations, and key features relevant for stakeholders in the full value chain are considered during the development strategy, in line with a Responsible Research and Innovation (RRI) approach. This will allow to better align the process and its results with the values, needs and expectations of society and will help the consortium to ensure broader social support during the development of food ingredients and products. We will enable citizens to contribute their time, observations, and expertise to assist and inform the scientific research process, for example, via participation in tastings panels. Open collaboration within the scientific community will be ensured via joint activities with other funded projects and initiatives. Sections 1.2.2 and 2.1.1 describe stakeholder engagement in detail. In the workplan, stakeholder feedback is actively considered in WP3 (consumers), WP4 (value chain stakeholders) and WP6 (policymakers).

Open science in Horizon Europe

- Open science is an approach based on open cooperative work and systematic sharing of knowledge and tools as early and widely as possible in the process. It has the potential to increase the quality and efficiency of research and accelerate the advancement of knowledge and innovation by sharing results, making them more reusable and improving their reproducibility. It entails the involvement of all relevant knowledge actors.
- **Horizon Europe moves beyond open access to open science** for which it features a comprehensive policy implemented from the proposal stage to project reporting.

Open science in Horizon Europe

- **Open science practices include** early and open sharing of research (for example through preregistration, registered reports, pre-prints, or crowd-sourcing); research output management; measures to ensure reproducibility of research outputs; providing open access to research outputs (such as publications, data, software, models, algorithms, and workflows); participation in open peer-review; and involving all relevant knowledge actors including citizens, civil society and end users in the co-creation of R&I agendas and contents (such as citizen science).

Mandatory open science practices

Some **open science practices** are mandatory for all beneficiaries per the grant agreement. They concern:

- **open access** to scientific publications under the conditions required by the grant agreement
- **responsible management of research data** in line with the FAIR principles of 'Findability', 'Accessibility', 'Interoperability' and 'Reusability', notably through the generalised use of data management plans, and open access to research data under the principle 'as open as possible, as closed as necessary', under the conditions required by the grant agreement
- **information about the research outputs/tools/instruments** needed to validate the conclusions of scientific publications or to validate/re-use research data
- **digital or physical access to the results needed** to validate the conclusions of scientific publications, unless exceptions apply
- **in cases of public emergency**, if requested by the granting authority, immediate open access to all research outputs under open licenses or, if exceptions apply, access under fair and reasonable conditions to legal entities that need the research outputs to address the public emergency

Recommended open science practices

Non-exhaustive list of practices:

- involving all relevant knowledge actors, including citizens
- early and open sharing of research
- output management beyond research data
- open peer-review

Citizen, civil society and end-user engagement

- Provide clear and succinct information **on how citizen, civil society and end-user engagement will be implemented** in your project, where/if appropriate. The kinds of engagement activities will depend on the type of R&I activity envisaged and on the disciplines and sectors implicated.
- **This may include**: co-design activities (such as workshops, focus groups or other means to develop R&I agendas, roadmaps and policies) often including deep discussion on the implications, the ethics, the benefits and the challenges related to R&I courses of action or technology development; co-creation activities (involving citizens and/or end-users directly in the development of new knowledge or innovation, for instance through citizen science and user-led innovation); and co-assessment activities (such as assisting in the monitoring, evaluation and feedback to governance of a project, projects, policies or programmes on an iterative or even continual basis).
- The extent of engagement in the proposal could range from one-off activities alongside other methodological approaches to being the primary focus or methodological approach of the project itself. Engagement will require **resources** and **expertise** and is therefore often conducted by dedicated interlocutor organisations or staff with relevant expertise.

Important documents and resources

- **Model grant agreement** (MGA), article 17 –lists the obligations you have, i.e. the requirements of the policy
- **Work Programme General Annexes**, evaluation criteria described; open science- a couple of additional obligations outlined there (access for validation and public emergency).
- **Proposal template -** shows where and how to address open science- definition of open science practices
- **Annotated Grant Agreement** (AGA), article 17- offers explanations and guidance for open science requirements
- **Horizon Europe Programme Guide** – presents what is required at proposal stage and how open science is evaluated; open science practices analysed and resources provided-useful for proposers and evaluators

1.2.6 Open science

Within FOODCoST principles of Open Science will be implemented. Beyond the strict research community, FOODCoST follows **a multi-actor approach** (see previous sections) Regarding consumers, FOODCoST focuses on inclusiveness and takes into account differences in culture, gender, SEP, and geographic aspects (WP2, 3, 5). Regarding policy makers, actors in the value chain (farmers, food industry, retail and caterers) and NGO's at the international, national, regional level will be involved discussing designs and assumptions of studies and outcomes and results (WP4) and in the case studies (WP5). Networking with other projects and aligned organisations working on internalisation of externalities is seen as essential for the project (WP4, and WP7). FOODCoST website will have a dedicated section to share research with researchers outside the project, which will be advocated via the network of the FOODCoST community. After registration, researchers can enter this dedicated section. They 1) can provide feedback on the scientific approach, ethical aspects and social inclusiveness of research designs or concept surveys, before the experimental work is done, 2) have access to methods aiding the harmonisation of research, and 3) have access to the data after publication. Announcements, when new research is available, will be made via Twitter and LinkedIn. Open Science will be embedded throughout the whole scientific process. For **the management of research data** a DMP will be developed (see 1.2.6 and WP8). To realize **the early and open sharing of the** FOODCoST partners will Open Access pre-register protocols and when feasible publish registered reports through preprints (by using servers like bioRxivor for Life sciences or multidisciplinary like Preprints, Zenodo). Furthermore, stakeholders will discuss the design of case studies (WP5), scenarios (WP6) in dedicated workshops (WP4). **Digital access to the results** will be organised via DANS-EASY, EOSC or FNH-RI depending on the type of data/results. Regarding **the open access** to "increase the circulation and exploitation of knowledge" (European Parliament, 2013): all outcomes will be made accessible in Open Access and free of charge, as under the terms and conditions laid down in the Model grant agreement. FOODCoST chooses the "gold" Open Access model as first preference and will make all reports and datasets Open Access and freely available upon publication through the trusted repository. Connection to the tools proposed by the European Commission (e.g. Open Research Publishing Platform), which will grant access to the publications and to a bibliographic metadata in a standard format including information will be part of the publication procedure. Protection of knowledge will be ensured by adopting licenses which enable free circulation of documents while safeguarding authors' (and the project's) IPR; for peer-reviewed articles the CC-BY, CC-BY-NC or CC-BY-ND licence. Adequate protection of project, Commission's image and the content integrity will be ensured. Metadata of deposited publications will be open under a Creative Common Public Domain Dedication or equivalent, in line with the FAIR principles and provide information about: publication (author(s), title, date of publication, publication

Example

1.2 Methodology *[e.g. 15 pages]*

- **Research data management** and management of other research outputs: Applicants generating/collecting data and/or other research outputs (except for publications) during the project must provide maximum 1 page on how the data/ research outputs will be managed in line with the **FAIR principles** (Findable, Accessible, Interoperable, Reusable), addressing the following (the description should be specific to your project): [1 page]

- **Types of data/research outputs** (e.g. experimental, observational, images, text, numerical) and their estimated size; if applicable, combination with, and provenance of, existing data.
- **Findability of data/research outputs**: Types of persistent and unique identifiers (e.g. digital object identifiers) and trusted repositories that will be used.
- **Accessibility of data/research outputs**: IPR considerations and timeline for open access (if open access not provided, explain why); provisions for access to restricted data for verification purposes.
- **Interoperability of data/research outputs**: Standards, formats and vocabularies for data and metadata.
- **Reusability of data/research outputs**: Licenses for data sharing and re-use (e.g. Creative Commons, Open Data Commons); availability of tools/software/models for data generation and validation/interpretation /re-use.
- **Curation and storage/preservation costs**; person/team responsible for data management and quality assurance.

1.2 Methodology *[e.g. 15 pages]*

*Note: Proposals selected for funding under Horizon Europe will need to develop a detailed **data management plan** (DMP) for making their data/research outputs findable, accessible, interoperable and reusable (FAIR) as a deliverable by **month 6** and revised towards the end of a project's lifetime.*
Note: For guidance on open science practices and research data management, please refer to the relevant section of the HE Programme Guide on the Funding & Tenders

Data Management Plan Template

Accessible via Funding and Tender>Reference Documents>Project Reporting Templates:
https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/reference-documents;programCode=HORIZON

Example HE

1.2.9 Data management

Data quality assurance measures and data management are at the heart of creditable scientific practice. This is acknowledged by the endorsement of the FAIR data principles (Findable, Accessible, Interoperable, and Re-usable) and their enforcement by the European Commission, also in the frameworks of Open Science practices. A Data Management Plan (DMP, WP1) based on the principle "as open as possible, as closed as necessary" will be prepared by M6 and continuously updated. The data management procedure should maximise the internal re-use of data as well as facilitate the process of sharing them outside the consortium, if applicable. **The DMP will also offer a clear process to decide which data can be released in open access and when.**

Table 7 Data Management – compliant with FAIR data principles endorsed by the European Commission.

Types of data/ research outputs	APPETITE uptakes raw data (primary data) from various data streams and partners as part of its data harvesting activity. Data will be either in the format of numerical values, in *e.g.,* excel sheets, text, or images. We estimate that the generated data will be within 1TB (Terabytes) per partner.
Findability	Data repository that provides a DOI upon deposition will be selected – discipline-specific repository will be preferred, *e.g.*, Uniprot (proteins), GenBank (genomes), Gene Expression Omnibus (transcriptomes); or community-recognised; alternatively, OpenAire recognised repository Zenodo.
Accessibility	We will make data open as early as possible. For IP sensitive data, it will be made available after 5 year of project closure (unless IP rights are claimed by any partner within this time). Data **underlying publications** (data that are mentioned or used to derive conclusions in scientific publications) should always be shared upon the paper publication.
Inter-operability	The Dublin core standard will be considered as a guideline.

Proposal template Part B: technical description

1. Excellence

1.1 Objectives and ambition *[e.g. 4 pages]*

1.2 Methodology *[e.g. 15 pages]*

2. Impact

2.1 Project's pathways towards impact *[e.g. 4 pages]*

2.2 Measures to maximise impact - Dissemination, exploitation and communication *[e.g. 5 pages]*

2.3 Summary (Canvas table)

3. Quality and efficiency of the implementation

3.1 Work plan and resources *[e.g. 14 pages – including tables]*

3.2 Capacity of participants and consortium as a whole *[e.g. 3 pages]*

2.2 Measures to maximise impact - Dissemination, exploitation and communication [e.g. 5 pages]

- Describe the planned measures to maximise the impact of your project by providing a first version of your '**plan for the dissemination and exploitation including communication activities**'. Describe the dissemination, exploitation and communication measures that are planned, and the target group(s) addressed (e.g. scientific community, end users, financial actors, public at large).

Please remember that this plan is an admissibility condition, unless the work programme topic explicitly states otherwise. In case your proposal is selected for funding, a more detailed 'plan for dissemination and exploitation including communication activities' will need to be provided as a mandatory project deliverable within 6 months after signature date. This plan shall be periodically updated in alignment with the project's progress.

Communication measures should promote the project throughout the full lifespan of the project. The aim is to inform and reach out to society and show the activities performed, and the use and the benefits the project will have for citizens. Activities must be strategically planned, with clear objectives, start at the outset and continue through the lifetime of the project. The description of the communication activities needs to state the main messages as well as the tools and channels that will be used to reach out to each of the chosen target groups.

All measures should be proportionate to the scale of the project, and should contain concrete actions to be implemented both during and after the end of the project, e.g. standardisation activities. Your plan should give due consideration to the possible follow-up of your project, once it is finished. In the justification, explain why each measure chosen is best suited to reach the target group addressed. Where relevant, and for innovation actions, in particular, describe the measures for a plausible path to commercialise the innovations.

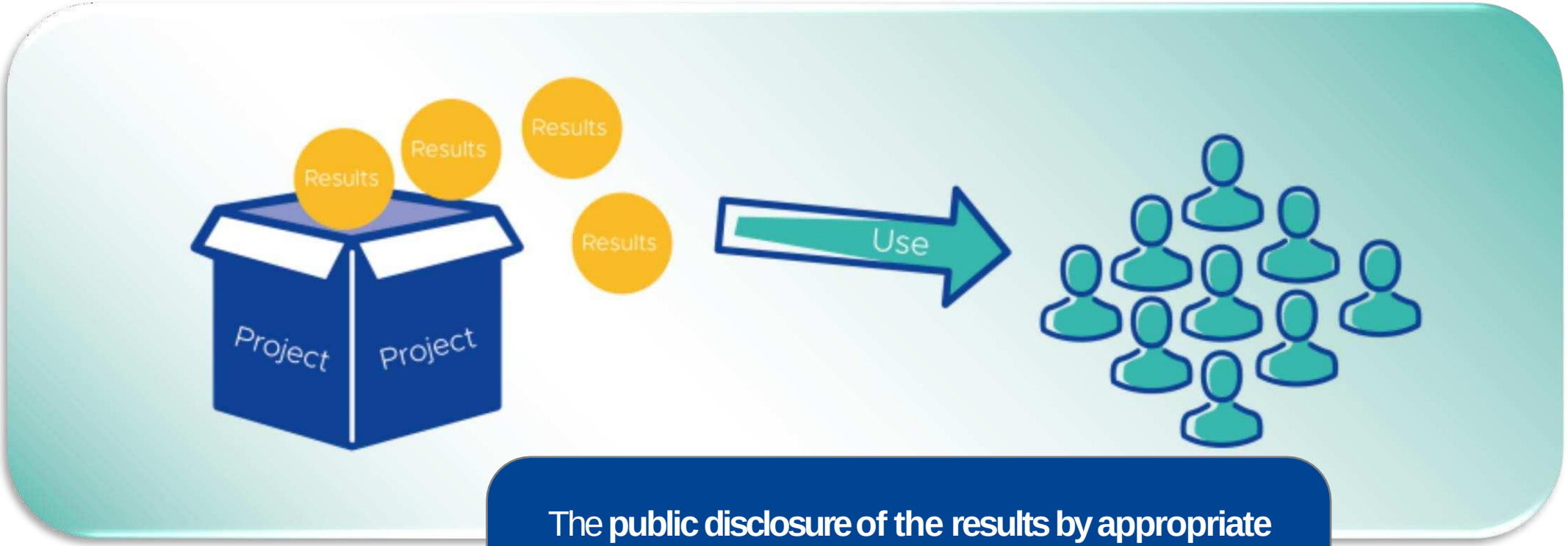
If exploitation is expected primarily in non-associated third countries, justify by explaining how that exploitation is still in the Union's interest.

Describe possible feedback to policy measures generated by the project that will contribute to designing, monitoring, reviewing and rectifying (if necessary) existing policy and programmatic measures or shaping and supporting the implementation of new policy initiatives and decisions.

Communication

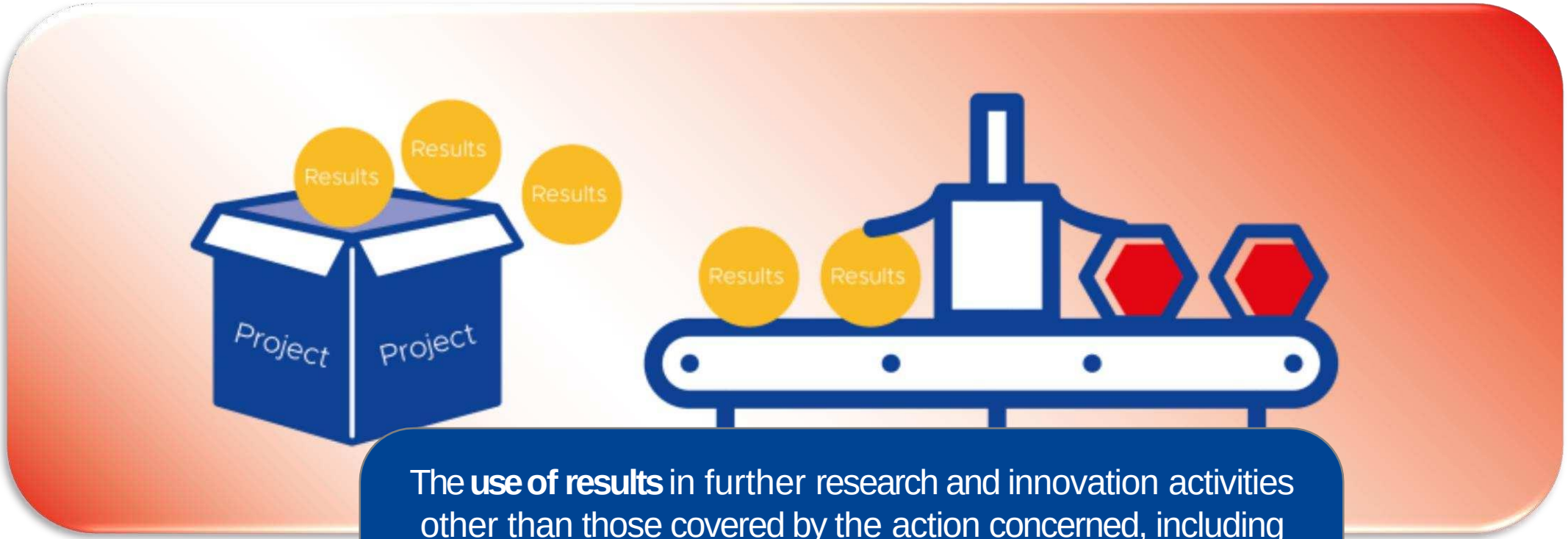
Communication measures should promote the project throughout the full lifespan of the project. The aim is **to inform and reach out to society and show the activities performed, and the use and the benefits the project** will have for citizens.

Dissemination



The **public disclosure of the results by appropriate means**, other than resulting from protecting or exploiting the results, including by scientific publications in any medium.

Exploitation



The **use of results** in further research and innovation activities other than those covered by the action concerned, including among other things, commercial exploitation such as developing, creating, manufacturing and marketing a product or process, creating and providing a service, or in standardisation activities.

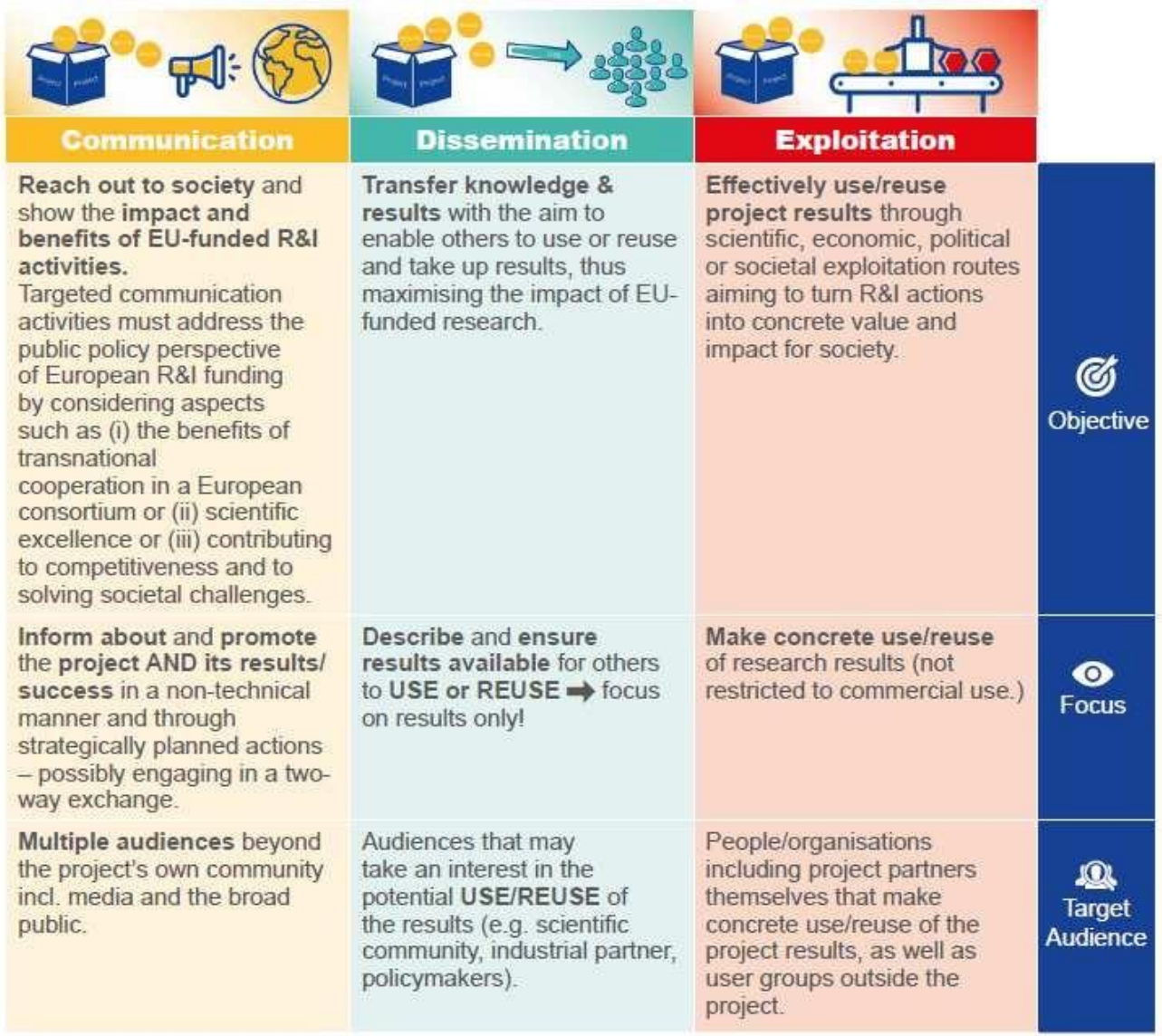
Definizioni

Communication	Dissemination	Exploitation
Taking strategic and targeted measures for promoting the action itself and its results to a multitude of audiences, including the media and the public, and possibly engaging in a two-way exchange*	Making the results of aproject public, not only by scientific publications in any medium*	The utilisation of results in developing, creating and marketing a product or process, or in creating and providing a service, or in standardisation activities.*

* http://ec.europa.eu/research/participants/portal/desktop/en/support/reference_terms.html

In a nutshell

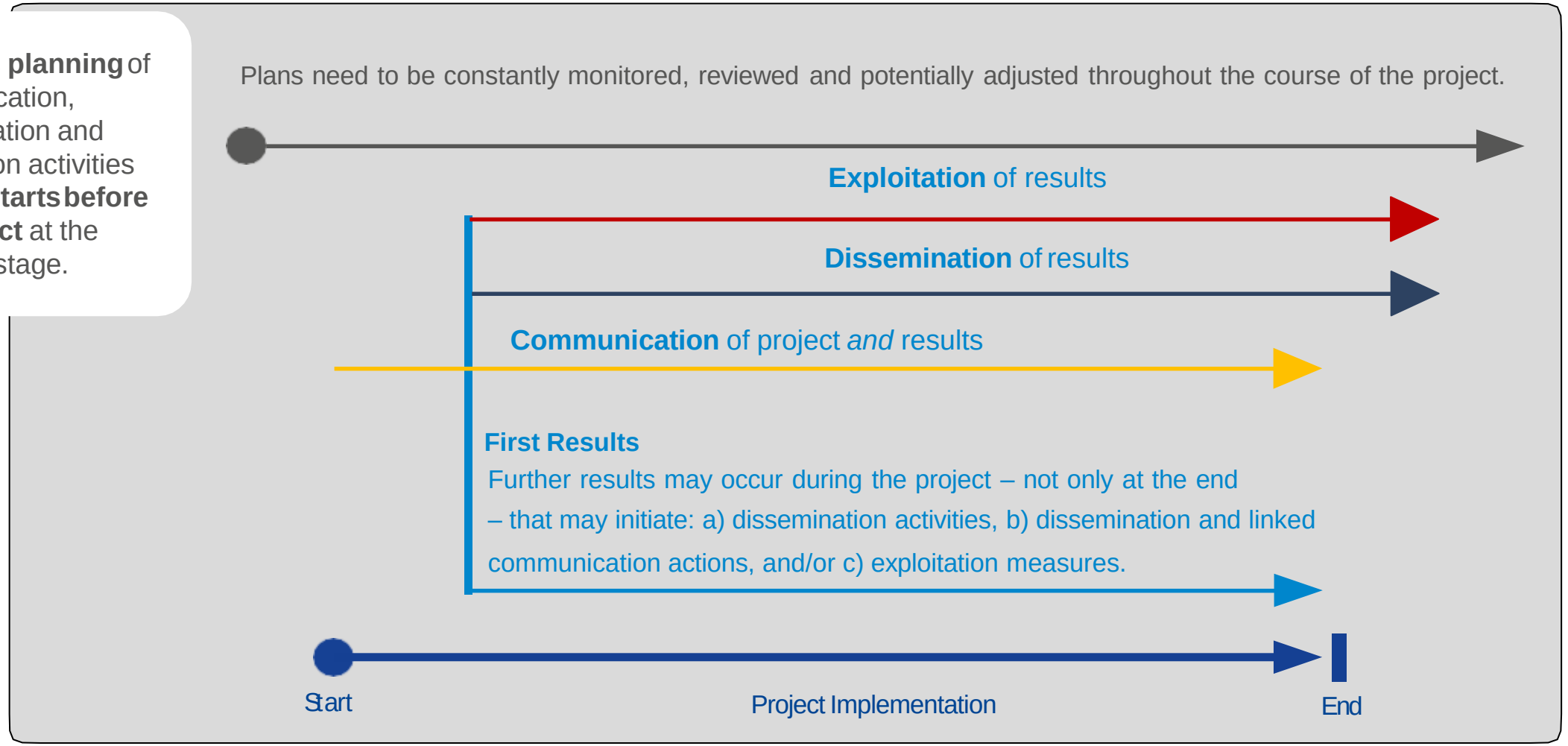
***certain tools and activities can oscillate between communication and dissemination, depending on the target group and content



Communication	Dissemination	Exploitation	
Reach out to society and show the **impact and benefits of EU-funded R&I activities.** Targeted communication activities must address the public policy perspective of European R&I funding by considering aspects such as (i) the benefits of transnational cooperation in a European consortium or (ii) scientific excellence or (iii) contributing to competitiveness and to solving societal challenges.	**Transfer knowledge & results** with the aim to enable others to use or reuse and take up results, thus maximising the impact of EU-funded research.	**Effectively use/reuse project results** through scientific, economic, political or societal exploitation routes aiming to turn R&I actions into concrete value and impact for society.	Objective
Inform about and **promote** the **project AND its results/ success** in a non-technical manner and through strategically planned actions – possibly engaging in a two-way exchange.	**Describe** and **ensure results available** for others to **USE or REUSE** ➡ focus on results only!	**Make concrete use/reuse** of research results (not restricted to commercial use.)	Focus
Multiple audiences beyond the project's own community incl. media and the broad public.	Audiences that may take an interest in the potential **USE/REUSE** of the results (e.g. scientific community, industrial partner, policymakers).	People/organisations including project partners themselves that make concrete use/reuse of the project results, as well as user groups outside the project.	Target Audience

Timing

Strategic planning of communication, dissemination and exploitation activities **already starts before the project** at the proposal stage.



2.2 Measures to maximise impact - Dissemination, exploitation and communication [e.g. 5 pages]

- Outline your strategy for the **management of intellectual property**, foreseen protection measures, such as patents, design rights, copyright, trade secrets, etc., and how these would be used to support exploitation.

*If your project is selected, you will need an appropriate consortium agreement to manage (amongst other things) the **ownership and access to key knowledge (IPR, research data etc.)**. Where relevant, these will allow you, collectively and individually, to pursue market opportunities arising from the project.*

If your project is selected, you must indicate the owner(s) of the results (results ownership list) in the final periodic report.

Before Project Start

Exploitation and dissemination planning

- Draw a convincing outline of **exploitation strategies** at individual/consortium level
- IP exploitation issues are subject to evaluation regarding **impact and implementation**. Identifying **relevant bodies/competences** within the consortium should demonstrate the potential of addressing IP management properly
- Include relevant tasks/**deliverables**: PDEC, Innovation-related workshops, Market Analysis, Business Plans, Risk-Analysis, Freedom-to-Operate analysis, Specific contracts/agreements

Proposal template Part B: technical description

1. Excellence

1.1 Objectives and ambition *[e.g. 4 pages]*

1.2 Methodology *[e.g. 15 pages]*

2. Impact

2.1 Project's pathways towards impact *[e.g. 4 pages]*

2.2 Measures to maximise impact - Dissemination, exploitation and communication *[e.g. 5 pages]*

2.3 Summary (Canvas table)

3. Quality and efficiency of the implementation

3.1 Work plan and resources *[e.g. 14 pages – including tables]*

3.2 Capacity of participants and consortium as a whole *[e.g. 3 pages]*

THE EIGHT HORIZONTAL TOPICS

- Relevant to all programme components
- Identified in Strategic Plan
- Should be addressed appropriately