Bridge2HE
Annotated RIA/IA Template

Recommendations by experts for a competitive Research and Innovation and Innovation Action proposal in Horizon Europe

NATIONAL CONTACT POINT HORIZON EUROPE

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Bridge2HE is a coordination exercise among the NCP networks, taking advantage of its privileged situation during the launch of Horizon Europe to build a sustainable and coherent framework for the future Horizon Europe NCP systems across the whole programme around the Horizon Europe NCP Portal.

The project established a single entry point and a common set of tools for the NCP community. Since this integration takes place within the critical timeframe between H2020 and Horizon Europe, **Bridge2HE strengthened the synergies with all the NCP thematic networks in an effort to maintain and expand the critical tools and services that these network offer to their participants**. The National Contact Point (NCP) systems are support structures established by Member States (MS) and Associated Countries (AC) and recognized by the European Commission (EC) in order to help participants to access the different EU Programme opportunities.

The NCP systems are organized nationally to provide all these functions, although their structures can vary from one country to another in terms of design (most NCPs hosted in the same organization vs. NCPs spread across many organizations), actors involved (NCPs hosted in ministries, universities, research centers, special agencies or even private consulting companies) and performance. In order to ensure cooperation among NCPs from different countries, improve mutual learning between them and develop dedicated transnational tools and services for participants, the European Commission has historically funded the NCPs through NCP networks CSA projects, in variable geometry of partners, covering typically one NCP “function” per project and renewing it, with a follow-on project, approximately at the middle of each Framework Programme.

Bridge2HE succeed not only in maintaining the transnational collaboration among national support structures across Europe for the adopted Framework Programme, (with special focus in its transition period) but also in defining a more coherent, consistent and efficient framework for such collaboration. In this sense, the project is not only tackling the expected impact set by the topic “Continuity of transnational cooperation among national support services across Europe to support first Horizon Europe calls, ensuring consistent and professional advice to participants” but also aims to go further and define such collaboration for the whole Horizon Europe Programme. In fact, Bridge2HE is the result of the co-creation process established between NCP coordinators, NCP thematic networks and the European Commission services since 2016 in order to move towards a more integrated support structures with a user centric approach around the Horizon Europe NCP Portal.

More info: horizoneuropencpportal.eu

AIM, CONTENTS AND METHODOLOGY

Bridge2HE, through the Horizon Europe NCP Portal, gives access to the tools (downloadable or online) and services useful for participants inherited from previous projects, plus the new tools developed ad hoc for Horizon Europe.
The 'Bridge2HE – Annotated Template' is a guide to assist applicants to the Research and Innovation Actions and Innovation Actions in the EU R&I Framework Programme, - Horizon Europe - to better understand the requirements of the template and better develop the innovation related issues.

The actions considered in this annotated template are RIA and IA*

Among the different types of actions funded by Horizon Europe for collaborative projects, this document will consider the RIA and IA actions, only.
Normally, the main difference between IA and RIA is primarily highlighted by a specif indication of the Technology Readiness Level (TRL). A (RIA) is expected to have an outcome within TRL 2 to 6, while a (IA) is intended for higher TRLs , averagely between 6 and 8.

Definitions of RIA and IA*:

- Research and innovation action (RIA) establishes new knowledge or explores a new or improved technology, product, process, service or solution. The EU funding covers up to 100% of the project costs.
- Innovation action (IA) produces plans or designs for new or improved products, processes or services including prototyping, testing, demonstrating, piloting, large-scale product validation and market replication. The EU funding covers up to 70% of the project costs.

The authors of the guide

The authors of this guide are Horizon Europe NCPs who interact regularly with applicants.
This document contains recommendations by NCPs and expert evaluators. NCPs collected and examined the Evaluation Summary reports (ESR) from projects submitted in the first period of 2022. Thanks to these reading exercise, NCPs were able to identify the most common positive and negative remarks coming from the evaluators by highlighting the recurring elements in their evaluations.
The main findings were used as the basis for this document and have been distributed in the different sections of the official Horizon Europe RIA/IA template. Applicants who would like to submit an RIA/IA in Horizon Europe may refer to this complete document.

The network of National Contact

The network of National Contact Points (NCPs) is the main structure to provide guidance, practical information and assistance on all aspects of participation in Horizon Europe. NCPs are also established in many non-EU and non-associated countries ("third countries").
Find your NCP here

A comprehensive list of all Horizon Europe reference documents (including legislation, work programme and templates) can be found on the Online Manual. Horizon Europe terms are explained in the provided by the Bridge2HE Glossary If you need help, you can also contact the Horizon Europe National Contact Points.

How to read this document

The text includes first the specific sections from the original Horizon Europe template. Then, it includes boxes with different icon of different colours - (PINK, GREEN and ORANGE) where some *annotations* are offered to the reader.

BOX: WHAT YOUR NCP SAYS

This section includes inputs and suggestions of the Horizon Europe NCPs.

BOX: MORE DETAILS ON THIS

The section in green includes explanations of the most relevant new features and elements in the template including the novelties of Horizon Europe compared to the previous framework programme.

WARNINGS FROM EVALUATORS

At the end of each of the three main sections – 1.Excellence, 2.Impact, 3. Quality & implementation the document shows the main findings from a set of selected Evaluation Summary Reports which have been examined by the NCPs.

INNOVATION ACTIONS

In case of an Innovation action proposal, it is important to highlight the aspects highlighted in the template. these are flagged in this document in blue text.

Have a look!

Suggestions to visit some specific web pages to go deeper on a topic.

I. BRIEFS ON HORIZON EUROPE

Horizon Europe is the EU's key funding programme for research and innovation, with a budget of €95.5 billion.

It tackles climate change, helps to achieve the UN's Sustainable Development Goals, and boosts the EU's competitiveness and growth. The programme facilitates collaboration and strengthens the impact of research and innovation in developing, supporting, and implementing EU policies while tackling global challenges.

It supports creating and better dispersing of excellent knowledge and technologies. It creates jobs, fully engages the EU's talent pool, boosts economic growth, promotes industrial competitiveness and optimizes investment impact within a strengthened European Research Area.

Horizon Europe

Pillar I	Pillar II	Pillar III
■ Excellent Science ■ European Research Council ■ Marie Sklodowska-Curie Actions ■ Research Infrastructures	Global Challenges and European Industrial Competitiveness **Clusters** ■ Health ■ Culture, Creativity and Inclusive Society ■ Civil Security for Society ■ Digital, Industry and Space ■ Climate, Energy and Mobility ■ Food, Bioeconomy, Natural Resou rces, Agriculture and Environment ■ Non-nuclear direct actions of the Joint Research Centre	■ Innovative Europe ■ European Innovation Council ■ European Innovation Ecosystems ■ European Institute of Innovation and Technology
Widening participation and spreading excellence		Reforming and enhancing the European Research and Innovation system
Part: Widening participation and strengthening the European Research Area		

I.I Evaluation criteria in Horizon Europe

The three main criteria used to evaluate the R&I aspects of a project proposal for Horizon Europe are:

- **Excellence (criterion 1)**

  assesses the extent to which the proposed solution is innovative compared to other products already developed or with respect to the problems that still do not have an adequate solution/response.

- **Impact (criterion 2)**

  must demonstrate how the project will enhance innovation, with specific focus on the integration of new knowledge. It must also assess and quantify the competitiveness and growth of enterprises based on the project, in relation to environmental/industrial/social problems (such as level of commitment to Corporate Social Responsibility).

- **Quality & Implementation (criterion 3)**

  this section must address, among other things, how the innovation will be managed. It is of particular relevance, as an effective innovation management allows the consortium to exploit new opportunities both outside and inside the project

I.II New elements in Horizon Europe

- **European Innovation Council:**

  Support for innovations with potential breakthrough and disruptive nature with scale-up potential that may be too risky for private investors. This is 70% of the budget earmarked for SMEs.

- **Missions:**

  Sets of measures to achieve bold, inspirational and measurable goals within a set timeframe. There are 5 main mission areas as part of Horizon Europe.

- **Open science policy:**

  Mandatory open access to publications and open science principles are applied throughout the programme
  Factsheet: Open science in Horizon Europe

- **New approach to partnerships:**

  Objective-driven and more ambitious partnerships with industry in support of EU policy objectives

  For more info
  Horizon Europe Strategic Plan
  European Commission presentation

I.III What are the major differences between the Horizon Europe and Horizon 2020 template?

Just like in Horizon 2020, the **RIA/IA proposal template** for Horizon Europe is split into two parts: **Part A and Part B.** Part A is based on the information entered by the participants through the submission system in the Funding & Tenders Portal. Part B is the narrative part of the proposal and is the main focus of this Annotated Template.

There are however, a few differences between the template used under Horizon 2020 and this new one for Horizon Europe.

Major changes are:

- **Part A:** a section about the individual researchers involved in the project is added to part A.
- **Part A:** an Ethics self-assessment is added to part A.
- **Part A:** a Gender Equality Plan (GEP) is asked for, for Public bodies, Higher education establishments and Research organisations. This should be organized by your organisation. Mandatory for calls with deadlines in 2022 and onwards. For a step-by-step guide for establishing a GEP, please see the Gender Equality in Academia and Research (GEAR) – Tool. The Gender Equality Strategy of the European Commission provides insights into how to achieve gender equality in European research and innovation.
- **Part B:** The standard maximum length of the B part of a proposal is reduced from 70 to 45 pages. However, in some topics a different maximum length is defined.
- **Part B:** Excellence: the Ambition paragraph is now part of Objectives and Ambition.
- **Part B:** in the Impact chapter a Summary para-graph is added; the so called 'Canvas' key elements table is the heart of this paragraph.
- **Part B:** Implementation: 'management stru-cture, milestones and procedures' paragraph is now part of 3.1 Work plan and resources.
- **Part B:** Section 4 'Members of the Consortium' and section 5 'Ethics and Security' in the Horizon 2020 RIA/IA template are now merged into part A of the Horizon Europe RIA/IA template.

For more info RIA/IA proposal template

II. THE SECTIONS OF THE ANNOTATED TEMPLATE

STRUCTURE OF THE PROPOSAL

The proposal contains two parts:

- **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 that each correspond 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.

The electronic submission system is an online wizard that guides you step-by-step through the preparation of your proposal. The submission process consists of 6 steps:

- Step 1: Logging in the Portal
- Step 2: Select the call, topic and type of action in the Portal
- Step 3: Create a draft proposal: Title, acronym, summary, main organisation and contact details
- Step 4: Manage your parties and contact details: add your partner organisations and contact details.
- Step 5: Edit and complete web forms for proposal part A and upload proposal part B
- Step 6: Submit the proposal

PROJECT PROPOSAL – TECHNICAL DESCRIPTION (PART B)

⚠ *Fill in the title of your proposal below.*

TITLE OF THE PROPOSAL

⚠ *The consortium members are listed in part A of the proposal (application forms). A summary list should also be provided in the table below.*

List of participants *[e.g. 1 page]*

Participant No. *	Participant organisation name	Country
1 (Coordinator)		
2		
3		

* Please use the same participant numbering and name as that used in the administrative proposal forms.

WHAT YOUR NCP SAYS ON THE STRUCTURE OF THE PROPOSAL

Some first practical and basic tips:

- DO NOT EXCEED the page limit (unless stated otherwise); Excess pages will be automatically made invisible, and will not be taken into consideration by the evaluators.
- Do not change the structure or order of the template proposal.
- Answer to all the section within the template proposal (they are not there for fun!)
- Make your proposal easy-to-read. Do not use (too) long sentences and help the evaluator with graphic elements.
- It is possible to emphasize important messages in bold, but don't overdo it.
- Do not wait until the end to submit! It is highly recommended to submit your proposals as early as possible and at least 48 hours before the deadline. This will avoid technical problems (system requirements, local configuration settings, system congestion, etc.). Note that you can submit the proposal as many times as you want. Every submitted version will replace the previous one.

Have a look at Recipe for success Tips and Tricks while writing your Horizon Europe proposal

The excellence of the action is a top priority. To show your project it is excellent you need to express this excellence in several aspects of section

1. This section clarifies the project's objectives and their relevance to the topic. Project teams need to demonstrate that the proposed work is ambitious and goes beyond the state-of-the-art. The group should prove that the proposed methodology, including the underlying concepts, models, assumptions are sound.

In addition, in this section it should be showed that the project will undertake inter-disciplinary approaches, appropriate gender considerations in research and innovation content. It should be highlighted the quality of open science practices that will be used, including sharing and management of research outputs; and as appropriate the engagement of citizens, civil society, and end users during the project implementation.

1. EXCELLENCE

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.

⚠ *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

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.*

WHAT YOUR NCP SAYS ON RELEVANCE TO THE TOPIC (1.1)

- Show the link between your project and the Strategic Plan.
- Analyze with your main partners the whole introduction to the work programme as this introduction will set the scenario in which you will move: read carefully the specific challenge to be addressed, the scope of the topic, the expected impacts and explain as specifically as possible, item by item, and describe how your project addresses the relevance to the topic, possibly using a table where you list the requests by the topic and the related answers you propose. This section is where for the first time you have the opportunity to introduce and also raise readers expectations on the impact of your project.

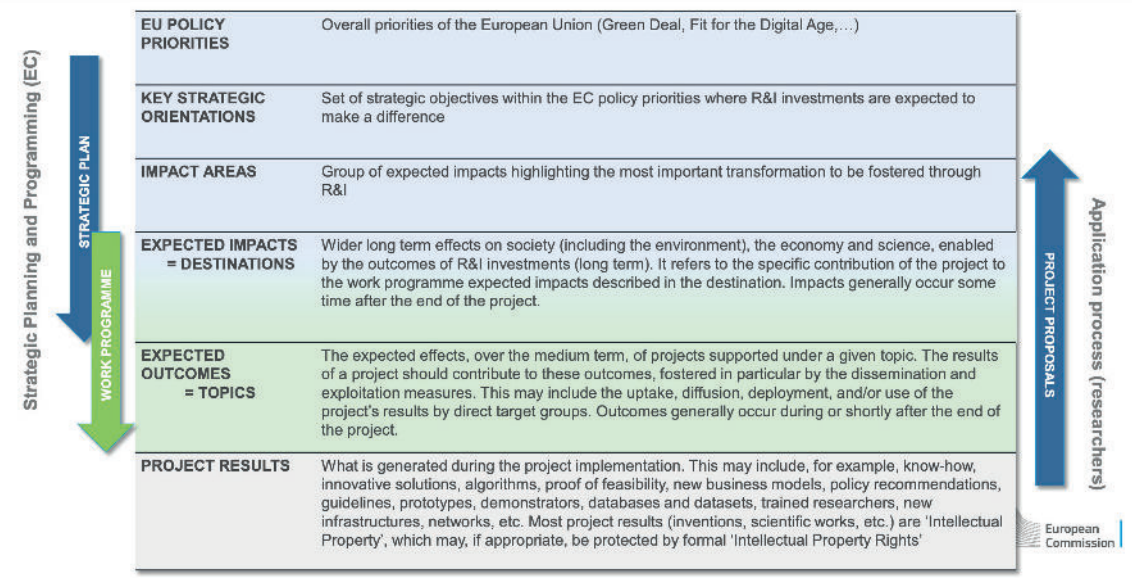
MORE DETAILS ON THIS

Read the Horizon Europe Strategic Plan along with the topic text for any of the HE calls

The strategic plan sets out four strategic orientations for research and innovation investments under Horizon Europe for four years:

- Promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains;
- Restoring Europe's ecosystems and biodiversity, and managing sustainably natural resources;
- Making Europe the first digitally enabled circular, climate-neutral and sustainable economy;
- Creating a more resilient, inclusive and democratic European society.

Link between policy priorities and project results



Source: European Commission

WHAT YOUR NCP SAYS ON TRL (1.1)

Indicate where your project starts and ends and substantiate this. Use 'Technology Readiness Levels' (TRL) for this purpose. For example TRL5 => TRL7. You don't have to indicate the start/end TRL level for the entire project. You can also specify this for separate technologies when relevant.

INNOVATION ACTIONS

Take into account whether the project is a Research and Innovation Action (RIA) or an Innovation Action (IA). RIAs are usually starting at TRL 3 and expected to achieve TRL 5 by the end of the project. *For IAs this is usually between 4-7, in some cases even up to 8.* Some topic description explicitly state where the project should start and end in terms of TRLs.

- TRL 1-3/4: basic research
- TRL 4-6: applied research
- TRL 6-9: demonstration

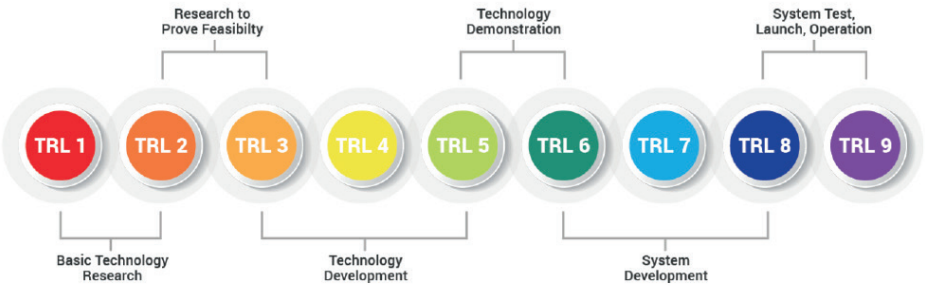
Have a look at TRL self assessment tool horizoneuropencpportal.eu/store/

MORE DETAILS ON THIS

Assess your Technology Readiness Level (TRL)

The TRL scale comprises nine technology readiness levels (TRL 1 to TRL 9). These levels indicate how far a technology is from being fully applied in its intended environment.
For example, TRL 2 to TRL 4 indicate that the concept is being developed in the laboratory, TRL 5 to TRL 7 indicate that the technology is being validated or demonstrated in a relevant environment (piloting), while TRL 8 and TRL 9 imply that the technology is fully implemented, e.g. in a commercial environment.
This TRL scale was originally developed by NASA, initially introduced in Horizon 2020 and is now fully established in Horizon Europe.

Example Technology Readiness Level (TRL)



WHAT YOUR NCP SAYS ON STATE OF THE ART (1.1)

State of the Art: here it is important to express what novelty the project will bring. The proposal is not a review article where you explain what has already been done.

- Describe the current situation, not only from the scientific perspective, but also in terms of innovative technologies and models available.
- Make clear what steps this project will take in order to bring current knowledge further.
- Do not come up with a long list.
- Emphasize where the project really will make the difference.
- Refer to current initiatives (e.g. EU projects) and quantify impacts where possible.

When describing the State of the Art, do so in the context of the problem you wish to solve. To achieve this – scan, analyze and present the field of interest to clearly show the State of the Art and its current implications. Needless to say, you should avoid missing the most recent and updated published work relating to your project, not only within academia but also in other relevant sectors such as industry, if applicable. While it is important to show you are fluent with recent updates and knowledge gaps in your field, avoid extra texts about the State of the Art and the knowledge gap that do not add real value to the evaluators.
Be sure to explain how your novel project provides a solution to these needs. Namely, how it expands the current State of the Art and closes the gap in the knowledge you have just described. It is here that you are required to clearly explain the innovative potential of your project in terms of breakthroughs, new products, services, business, organizational models, or anything else in this context.

The emphasis of this section varies per project type:

- **Research & Innovation Action**: new scientific insights, new technological possibilities, proof that a technique or approach works for a particular application or sector, etc.
- **Innovation Action:** first adoption/application or large-scale demonstration of an innovation or systemic transformation. Innovation for existing products in the market, etc.

INNOVATION ACTIONS

In this section you are requested to present your technology and innovation.
Make sure that the innovative aspect of your project is clear. You need to convince the evaluators that your innovation is excellent, that your product, process or service or business model is disruptive in the referred market(s) of interest, and that it has the potential to change the dynamic of the market.
` Please bear in mind the difference between innovation and disruption – disruptors are innovators, but not all innovators are disruptors. While innovation and disruption are similar in the sense that they are both 'makers and builders', disruption differs by the fact that it displaces an existing market, industry or technology, and produces something new, more efficient and worthwhile. It is at once disruptive and creative.
` Try not to be too technical. The evaluators might not belong to your exact field, and too many technical terms might distract them.

- **What differentiates you from your competitors or substitute solutions regarding features and traits?**
- **Why should the customers switch to your solution?**

Make sure not to compare companies but rather alternative technologies/products/approaches. Add a diagram that presents the competitive landscape and your USP (Unique Selling Points).

- **What do you do that has never been done before?**
- **Why was it not done before and why can you do it now?**
- **What is the window of opportunity you want to exploit?**

Clearly explain your competitive edge, for instance: Providing a new solution or improving what is now in the market.

Have a look at the source: access2eic.eu

MORE DETAILS ON THIS

Go beyond the state of the art

This section requires applicants to refer to and establish the need/motivation for the suggested project. This is done by clearly describing the State of the Art within the relevant field, which in turn defines and establishes the knowledge gap.

Establishing the knowledge gap is an essential step for explaining how the project plans to go beyond the State of the Art in the field. It is this leap forward beyond the State of the Art which will establish the project's novelty and enable to portray an ambitious project proposal.

1.2 METHODOLOGY

1.2 Methodology #@COM-MET-CM@# #@COM-PLE-CP@# *[e.g. 14 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'.*

⚠ *Where relevant, include how the project methodology complies with the 'do no significant harm' principle as per Article 17 of Regulation (EU) No 2020/852 on the establishment of a framework to facilitate sustainable investment (i.e. the so-called 'EU Taxonomy Regulation'). This means that the methodology is designed in a way it is not significantly harming any of the six environmental objectives of the EU Taxonomy Regulation.*

⚠ *If you plan to use, develop and/or deploy artificial intellingence (AI) based systems and/or techniques you must demonstrate their technical robustness. AI-based systems or techniques should be, or be developed to become:*

- *technically robust, accurate and reproducible, and able to deal with and inform about possible failures, inaccuracies and errors, proportionate to the assessed risk they pose*
- *socially robust, in that they duly consider the context and environment in which they operate*
- *reliable and function as intended, minimizing unintentional and unexpected harm, preventing unacceptable harm and safeguarding the physical and mental integrity of humans*

WHAT YOUR NCP SAYS ON METHODOLOGY (1.2)

Remember that evaluators are considering several proposals like yours, and it is fundamental for them to have available elements to figure out why your solution is the most promising to receive funding. In this section you might insert a **flow chart** showing the phases of your project and the **interconnection between** them.

Insert also names of **relevant initiatives or publications** you base your work on in a note. Where appropriate, mention **key milestones or potential proof for success** that led to the current stage (e.g. prototype, field trials, pilot studies with intended end-users and/or potential clients, past grants and awards for this project). If you have a **patent(s)**, you should reference it/them and explain what it covers and where. This is evidence for the evaluator that your proposal is very likely to actually deliver what it promises. Think of specific methods, techniques, approaches, theories to implement within the project. Not all the project are the same. Envisage tailored actions to reach your goal.

Flow chart

MORE DETAILS ON THIS

Do not significantly harm principle

At project level, the reference to the DNSH principle in the Horizon Europe Work Programme is included in the application form (proposal part B template) to offer researchers the possibility to present the credential of their projects in relation to the DNSH principle. 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.

A sustainable activity is expected to be significantly contributing to the environmental objectives and it should also not harm any of those 6 objectives:

MORE DETAILS ON THIS

An Easy to read and understand methodology

Be as specific as possible about the methods, techniques, approaches, theories that you will use during the project. This shows that your project will be feasible. It also makes it easier to be more specific in the work plan later in the proposal. If you are concrete and specific, it builds confidence with the evaluators.
Consider using a visual of your main concept, summarizing the novel methods, techniques and approaches.
Distinguish between the methodology, which should be described here, and the concrete work plan. In this section is about the conceptual approach.

- What is the research question and with what methods/techniques are you going to approach it?
- Why did you choose this method?

This section is specifically not a 'materials and methods' paragraph, as found in a scientific article.

WHAT YOUR NCP SAYS ON ARTIFICIAL INTELLIGENCE (1.2)

When the proposal includes Artificial Intelligence systems or techniques, the applicant must demonstrate the robustness of the solution. The **first requirement** to comply with is the **technical robustness**, which is closely linked to the principle of prevention of harm. Technical robustness indeed requires the AI systems to be developed with a preventative approach to risks, minimizing unintentional and unexpected harm, and preventing unacceptable harm. An AI system is technically robust when resilient to attack and security, when accurate, reliable and reproducible, when provides safeguards that enable a fallback plan in case of problems. This can mean that AI systems switch from a statistical to rule-based procedure.

The second requirement concerns the **social robustness**, meaning that the AI solution has to consider human beings and the environment as main stakeholders. While AI systems can be used to improve human skills, they can equally contribute to their deterioration, e.g. altering our conception of well-being or impact our social relationships.

The third requirement, strictly connected to the first requirement, requests to the AI solution to be **reliable**, i.e. working correctly with a range of inputs and in a range of situations, taking into account potential changes in the operating environment or the presence of humans. Consequently ensuring the physical and mental integrity of humans. This is needed to examine an AI system and to prevent unintended harms.

Artificial Intelligence

Have a look at digital-strategy.ec.europa.eu

... 1.2. METHODOLOGY

- 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]

WHAT YOUR NCP SAYS ON THE INTERACTION WITH OTHER PROJECTS (1.2)

The evaluators like to see an overview of (inter)national projects related to your proposed project. Don't only show that you are aware of these initiatives, but also explain how your idea builds on the results of these projects, and how to collaborate with them if they are still running. To find relevant past and ongoing projects is to make use of the website 'CORDIS' of the European Commission. Here European research and innovation projects can be found.

Relevant projects from other research programs (national and international) are also useful to mention here. In addition, indicate which partners are or have been involved in these projects. This will show that you will be able to efficiently build on the knowledge from these projects. Refer to your ambition section where you have stated how this proposed project goes a substantial step further in what is already known/done.

Interaction with other projects

Have a look at the European Commission Dashboard

... 1.2. METHODOLOGY

- 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]

WHAT YOUR NCP SAYS ON INTERDISCIPLINARY APPROACH (1.2)

Describe how elements and expertise from **different disciplines** will be used in the project in a complementary and comprehensive way. This means you should not simply provide a "list of disciplines", but also illustrate why these **combined disciplines and the collaboration between** them are fitting and necessary for achieving the objectives. When doing so, bear in mind that this section is conceptual, and refer mostly to the expertise associated with each discipline rather than to its executive role.

Interdisciplinary approach

Alternatively, if you consider the inter-disciplinary approach unnecessary for your proposed project, explain why. However, it should be noted that in many cases such **interdisciplinarity** will be expected, as meeting all the requirements and fully covering the scope of a given topic often require bringing together several expertise and knowledge fields. It is recommended to dedicate up to half a page for this part.

... 1.2. METHODOLOGY

- 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]

WHAT YOUR NCP SAYS ON INTEGRATION OF SOCIAL SCIENCES AND HUMANITIES - SSH (1.2)

Some topics explicitly demand the integration of **Social Sciences and Humanities** into the application. This element is intertwined throughout the different work programmes, and will be mentioned directly in some topics. If this is your case, you should refer to it. This part should be no more than half a page. What should be detailed here is not only the disciplines included in the application, but also the way they are combined in a holistic way which contributes to the research and innovation activities of the project.

If you do not consider the involvement of SSH relevant for your project, please provide a justification.

Have a look at

- Opportunities for researchers from SSH in Horizon Europe (to be updated for 2023-2024)
- horizoneuropencpportal.eu/academy/
- horizoneuropencpportal.eu/store/

MORE DETAILS ON THIS

Social sciences and humanities (SSH)

Horizon Europe aims at including the SSH as a cross-cutting issue and consequently it is embedded into each pillar and objective of Horizon Europe. The idea is to fully integrate the STEM (science, technology, engineering and mathematics) disciplines together with the SSH tackling the complex societal issues of European societies. The Socio-economic sciences and Humanities include a wide range of disciplines, encompassing sociology and economics, psychology and political science, history and cultural sciences, law and ethics.

Social sciences and humanities (SSH)

As in Horizon 2020, the integration of Social Science and Humanities (SSH) remains a principle throughout the Horizon Europe Programme especially in the clusters, including missions and partnerships. Global challenges are very complex and cannot be solved by one disciplines but often require a collaboration between different disciplines. The disciplines in Social Science and Humanities (a list of SSH disciplines can be consulted on page 20 and 21 of the Horizon Europe Programme Guide) can play an very important role in resolving these complex challenges. Hence, when relevant contributions from Social Sciences and Humanities should be included in the proposals.

Net4Society project published a document at the end period of H2020 with a collection of success stories on SSH integration.

... 1.2. METHODOLOGY

- 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 content.*
  - *Remember 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.*
  - *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 https://ec.europa.eu/info/news/gendered-innovations-2-2020-nov-24_en

WHAT YOUR NCP SAYS ON GENDER ISSUES (1.2)

Gender issues in research concern two main levels of diversity: sex (biological level) and gender (social and cultural level). Addressing the gender dimension at the level of research and innovation content means therefore taking into account and integrating gender-related biological or cultural diversities within the project concept and throughout all projects' activities.
Properly reflecting these dimensions into problem analyses and solution approaches means being able to understand at which extent our activities and findings will affect women and men differently, and therefore what kind of generalisations are actually ethically appropriate about our results. For example, if a drug is tested only on white middle-aged men, can we say that it helps everyone? And what is an appropriate dosage for women?
Properly managing the gender dimension, therefore, will rebound in an increased scientific quality and societal relevance of the produced knowledge, technology and innovation, since we will be able to affirm that our solutions will be relevant, useful, safe, suitable, usable, and acceptable for a wider group of persons.

Have a look at Horizon Europe guidance on gender equality plans

Some important founding questions related to the exploration of the gender dimension are:

- **Does my idea take into consideration differences between men and women (from a biological and/or cultural point of view)?**
- **Is it known (or not) that men and women may have a different reaction within a certain context or culture?**
- **Will these differences and diversities influence the results of the project and how? Could the results of the research be different for women than for men? How will the project deal with these differences?**

How:

- Become aware of gender studies and debates as concerning your application sector
- Become aware of the set of supporting tools to guide you through gendered sensitive research and innovation
- Involve a partner able to conduct gender-sensitive research
- Explain the reason why a certain number of males and females will be included in the study's activities, etc. and if this proportion has been determined by some background statistics.
- Develop gender-sensitive questionnaires
- Organize data collection taking gender into account in order to avoid biases.
- use a graph to show gender presence and numbers of male or female patients involved, and also mention the age range you will target.
- Define how innovations will be tested

When:

gender is a lens and a perspective. As of the project concept you shall ask yourself if this makes sense from a gender point of view, or how the gender aspect affects such concept. If you take the gender dimension into account as early as the concept design, it will be easier to include gender in all other phases, including implementation and solution testing choices.

Measures for gender equality across Horizon Europe

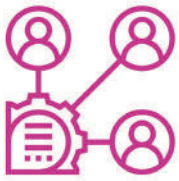
WHAT YOUR NCP SAYS ON STAKEHOLDERS ENGAGEMENT (1.2)

To reinforce the methodology used in your project you could emphasys how you will engage your main stakeholders.
It's possibility to provide a **Stakeholder Engagement** Action Plan in one of your WPs.
A dedicated WP or defined Task should be able to ensure a connection among the activities within the other WPs and provides them with the tools to engage relevant stakeholders in order to acquire feedback for the research undertaken within the project, and set the basis for targeted communications and dissemination of results.

The key objectives of the stakeholder engagement plan should:

- Ensure a holistic benchmark of current background for R&I programme and funding;
- Development of a possible SRIA is in line with current R&I objectives across Europe;
- Identify policy gaps;
- Validate the governance model proposed for the policy agenda;
- Explore capacity building needs;
- Widely disseminate the mission, vision and values of the project and increase adoption of its outcomes.

Stakeholder engagement



Identify stakeholders – All project stakeholders must be identified and prioritized in a comprehensive manner. In the proposal phase you should be able to categorized and classified key stakeholder groups that are targeted according to needs, demands and project results.

Once appropriate stakeholder engagement strategies are developed, then the proposal should envisage a strategy to engage with them with the intention of understanding their perspective towards the project and seek their support for successful completion of the activities. Continuous and positive engagement and involvement of stakeholders is critical to project success. It is important to keep assessing the actual stakeholder engagement and determine if that is as per required engagement level, if not the team will have to adjust some of the strategies so as to improve stakeholder engagement in the desired direction.

Some tools to implement stakeholder engagement:

- Workshops
- Stakeholder database
- Strategy for stakeholder interest mapping sand key messages development
- Stakeholder consultations
- Co-creation activities
- A Dedicated platform on the website
- External activities in synergy with relevant events (EU/National)

Have a look at an example of "A stakeholder engagement guideline"

MORE DETAILS ON THIS

Practice Stakeholder engagement

Stakeholders are subjects or groups or organizations, who are directly involved in a project, who are positively or negatively impacted by the outcome of the project, or who can impact the project with their influence (political and/or economical).

Stakeholder engagement is at the backbone of creating a successful proposal for ensuring activities and outputs from the project will results holistic and comprehensive. The commission ask the projects to turn their achievements into priorities for future European, national and regional programmes. Those results should lead to more synergies, sharing of results, and return on public investments in research and innovation.

Key words of engagement with stakeholders: **informing, consulting and collaborating.**

... 1.2. METHODOLOGY

- 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.

  ⚠ *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, 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).*

  ⚠ *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'.*

- 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.

  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.

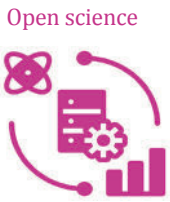
  ⚠ *For guidance on open science practices and research data management, please refer to the relevant section of the HE Programme Guide on the Funding & Tenders Portal.*

WHAT YOUR NCP SAYS ON OPEN SCIENCE (1.2)

In the **1.2** Methodology section, proposers who **generate or reuse research data** should outline briefly in 1 page at maximum how they will manage data and other research results, according to **FAIR** principles.

It would be important to include among deliverables a **Data Management Plan** scheme that will be provided within the sixth month in case project will be funded; meanwhile it constitutes an element of evaluation of the proposal.

Please note that also In the criterion **"Quality of implementation"** in point 3.2 "Capacity of participants and consortium as a whole" the participants must demonstrate the solidity of the partnership and in particular how the partnership is able to offer all the necessary skills to carry out the activities envisaged by the project, including the **ability to do Open Science**.



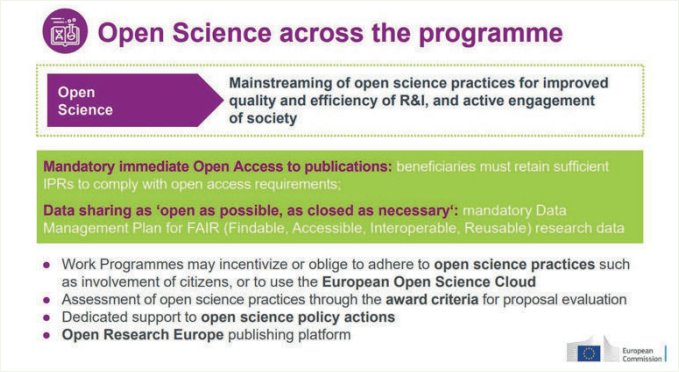
MORE DETAILS ON THIS

Show your Open science practices

This part should introduce the integration of Open Science practices in your methodology, such as early access to research results, open access to scientific publications and data, and co-creation of R&I content with stakeholders and the general public. If none of the Open Science practices are considered as relevant for your project, a proper justification should be provided. However, note that some practices are mandatory, for example providing open access to scientific publications. Furthermore, in light of the importance and emphasis given to Open Science policy in the European Commission's agenda, it is strongly recommended to implement such practices. The recommended length for this part is up to one page.

You can learn more about Open Science in Horizon Europe here.

Proposals including collection, generation or creation of data and/or other research outputs (except for publications) are obliged to provide up to one page-long Data Management plan (DMP) detailing how their research outputs will be managed in line with the FAIR principles (Findable, Accessible, Interoperable, Reusable). This includes type, findability (i.e., identifiers that would help to reach the data), accessibility, interoperability (i.e., the ability to communicate and use the data by multiple people, including relevant standards and vocabularies) and reusability (permissions and tools for reuse of the data, such as Open Science commons and availability of needed software) of the research outputs, and the way they will be stored and its cost. DMPs are updated from time to time during the implementation phase, as the project progresses. Once your proposal is selected for funding, the initial DMP should be developed into a detailed plan. It becomes a mandatory deliverable that should be submitted by month 6 and revised towards the end of a project's lifetime.



II.II WARNINGS FROM EVALUATORS ON EXCELLENCE

The project should identify **A SET OF OBJECTIVES** that are relevant and in line with the call topic. Those objectives must be clear and well described; realistically achievable within the lifetime of the project; well linked with the description of activities; verifiable and measurable based on detailed Key performance indicators (both quantitative and qualitative); ambitious and supported by a solid background.
Applicants should demonstrate a complete assessment of the **STATE OF THE ART**, supported by an adequate data flow.

The proposed work should be ambitious and beyond the state of the art and should include **NOVEL CONCEPTS AND APPROACHES.** The statements must be supported by relevant references and data, built on established methods, previous projects and experiences and taking into account both scientific literature and regulation. The expected progress must be convincing, departing from partners' positions and expertise, and properly correlated with the proposed activities within the proposal.

Applicants (when possible) should consider building their actions on top of the results of previous **EU FUNDED INITIATIVES** and/or foresee joint actions and synergies in the working plan. Evaluators consider very positively when a proposal will take into account the results of other EU-funded projects.

Regarding the technological results and the **R&I MATURITY** of the proposed work, a planned technology readiness levels (TRL) should be realistic and convincingly positioned.

The proposal should demonstrate an **INTER-DISCIPLINARY** (e.g. healthcare, engineering, economics) and **INTER-SECTORIAL** (e.g. private sector) approach. This approach should be well explained and each contribution to each discipline to the overall approach punctually described by targeting relevant range of data, knowledge, concepts, methods and models from various disciplines.

Proposers should consider including technical details in the **SCIENTIFIC METHODOLOGY** when relevant and they should be able to explain how a certain method or technology is integrated in the overall framework of the project. The **METHODOLOGY** should be sound and comprehensively described, including approaches that must be fully in line with the objectives. The work proposed should underline assumptions and models, which are credible and based on the latest knowledge and different actions should be foreseen and defined for each of the project's objectives.

The development of the planned actions should foresee a **CO-CREATION PROCESS** and involvement of all relevant stakeholders, policy makers and citizens. This must take into consideration the diversities of European and Extra-EU ecosystems, targeting and giving due attention to vulnerable and hard-to-reach groups. Finally, **SOCIAL SCIENCES AND HUMANITIES (SSH)** should be considered in the proposal and integrated throughout the planned work.

With regards to **open science** practices, the proposal must provide detailed well-adapted/specific (according to the aim of the project) information on tools and practice to evidence a commitment to data sharing and the implementation of open-source solutions. Those Open science practices should be adapted to the dissemination of results and storage of research data. A detailed research data management plan must be developed, in line with the FAIR (Findable, Accessible, Interoperable, and Reusable) principles. If relevant for the project, information must be provided for showing how the consortium will consider **AI** issues both from technical and social aspects.

The **GENDER DIMENSION** should be properly considered, and taken into account, e.g. during data collection and the analysis of the methods used, and in the exploration of cultural and socio-economic factors. Furthermore, if possible a development of gender-specific intervention tools could be envisaged. It is important that applicants bear in mind that the integration of the gender dimension into research and innovation content is a requirement by default and that ideally the project should actively contribute to increasing gender balance.

This section focuses on building credibility for the methods and procedures that will be used to achieve the expected outcomes and impacts specified in the work programme. It also demonstrates the high plausibility of the estimated scale and significance of the project's contributions.

A successful Impact section shows how your project could contribute to the outcomes and impacts described in the work programme (new approach to impact**: Horizon Europe Key Impacts Pathways - KIPs**). It's important to highlight the suitability and quality of the measures used to maximize the expected outcomes and impacts, as detailed in the dissemination and exploitation (D&E) plan; including communication activities.

2. IMPACT

2. Impact

Impact – aspects to be taken into account.

- 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 maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.

The results of your project should make a contribution to the expected outcomes set out for the work programme topic over the medium term, and to the wider expected impacts set out in the 'destination' over the longer term.

In this section you should show how your project could contribute to the outcomes and impacts described in the work programme, the likely scale and significance of this contribution, and the measures to maximise these impacts.

... 2. IMPACT

MORE DETAILS ON THIS

Expected Impact

Almost all programmes require a detailed analysis of the so-called expected impacts of each project. This can include:

- A description of how the project will contribute to a number of fields, such as the specific impact mentioned in each work programme, scientific and/or technological progress and societal and additional environmental impacts. It is important to note that in environmental related programmes (e.g. Green Deal) there is an apparent environmental impact of each project, always in alignment with the equivalent work programme. However, it is quite common these projects to have collateral environmental impacts. Finally, demonstrating how the project will improve the innovation capacity and strengthen the competitiveness of the partners in collaborative projects is a must.

INNOVATION ACTIONS

- In case of Innovation Actions it is crucial to know who is your customer and end-user of your solution. Adding a quantitative and qualitative section regarding the willingness of your potential customers to buy your final product/idea is important, as well as comparing your solution with the current State-of-the-art, using a cost-benefit analysis.
- Which is the main market you aim to enter and impact, along with its main segments, market trends and potential barriers? What is the current value of the market and its expected growth in the next five to 10 years? Which region/country is the current leader and which one is expecting to face the most rapid growth? All this data will consist a brief, but solid market analysis. Moreover, EC is keen in supporting projects that can either create new markets or re-shape the existing ones, thus providing data to justify that will always add value to your proposal.
- *F*or Innovation Actions, impact is the most important evaluation criterion, **and has a weighting factor of 1.5 relative to the other evaluation criteria.**

2.1 PROJECT'S PATHWAYS TOWARDS IMPACT

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

- Provide a **narrative** explaining how the project's results are expected to make a difference in terms of impact, beyond the immediate scope and duration of the project. The narrative should include the components below, tailored to your project.

  (a) Describe the unique contribution your project results would make towards (1) the **outcomes** specified in this topic, and (2) the **wider impacts**, in the longer term, specified in the respective destinations in the work programme.

  ⚠ *Be specific, referring to the effects of your project, and not R&I in general in this field.*

  ⚠ *State the target groups that would benefit. Even if target groups are mentioned in general terms in the work programme, you should be specific here, breaking target groups into particular interest groups or segments of society relevant to this project.*

  ⚠ *The outcomes and impacts of your project may:*

  - *Scientific, e.g. contributing to specific scientific advances, across and within disciplines, creating new knowledge, reinforcing scientific equipment and instruments, computing systems (i.e. research infrastructures);*
  - *Economic/technological, e.g. bringing new products, services, business processes to the market, increasing efficiency, decreasing costs, increasing profits, contributing to standards' setting, etc.*
  - *Societal , e.g. decreasing CO_2 emissions, decreasing avoidable mortality, improving policies and decision making, raising consumer awareness.*

  Only include such outcomes and impacts where your project would make a significant and direct contribution. Avoid describing very tenuous links to wider impacts. However, include any potential negative environmental outcome or impact of the project including when expected results are brought at scale (such as at commercial level). Where relevant, explain how the potential harm can be managed.

MORE DETAILS ON THIS

Expected Outcomes

A major innovation in the Impact Section for a Horizon Europe proposal, compared to Horizon 2020, is the new approach through nine Key Impact Pathways (KIPs). The KIPs are an essential part of the Horizon Indicator Framework. EC's key goal is to see the impact of the EU funding for Research & Innovation (R&I) to citizens, legislators and the budget authorities. Overall, there are three impact areas, with three KIPs each, namely:

SCIENTIFIC IMPACT:

(1) Creating high-quality new knowledge;
(2) Strengthening human capital in R&I;
(3) Fostering diffusion of knowledge and Open Science

SOCIETAL IMPACT:
(4) Addressing EU policy priorities & global challenges through R&I;
(5) Delivering benefits and impact via R&I missions;
(6) Strengthening the uptake of R&I in society; and

ECONOMIC / TECHNOLOGICAL IMPACT:
(7) Generating innovation-based growth;
(8) Creating more and better jobs; and
(9) Leveraging investments in R&I.

Substantiate and quantify how this project contributes to the various expected outcomes listed under the topic descriptions. Place most emphasis on these.
Also read through the wider impact goals of the respective destination and the cluster work programme. How can this project contribute to these overarching goals? These wider impacts can be found in the introduction chapter of each destination and cluster work programme. Sometimes they refer to European policies and strategy papers you should also take into account then. In addition, general benefits to Europe from this project can be indicated; how can the project results contribute to strengthening the economy/business growth, a better environment, etc.
Make clear how the project results (deliverables) will lead to impact (over time, after the project ends).

Useful links:
European Commission's priority strategies - These are the 6 Commission priorities for 2019-2024.
UN Sustainable Development Goals.
Paris Climate Agreement

... 2.1 PROJECT'S PATHWAYS TOWARDS IMPACT

(b) Give an indication of the scale and significance of the project's contribution to the expected outcomes and impacts, should the project be successful. Provide quantified estimates where possible and meaningful.

- *'Scale' refers to how widespread the outcomes and impacts are likely to be. For example, in terms of the size of the target group, or the proportion of that group, that should benefit over time; 'Significance' refers to the importance, or value, of those benefits. For example, number of additional healthy life years; efficiency savings in energy supply.*
- *Explain your baselines, benchmarks and assumptions used for those estimates. Wherever possible, quantify your estimation of the effects that you expect from your project. Explain assumptions that you make, referring for example to any relevant studies or statistics. Where appropriate, try to use only one methodology for calculating your estimates: not different methodologies for each partner, region or country (the extrapolation should preferably be prepared by one partner).*
- *Your estimate must relate to this project only - the effect of other initiatives should not be taken into account.*

WHAT YOUR NCP SAYS ON IMPACT (2.1)

Some writing tips: The potential multi-dimensional impacts of your project (scientific, societal, economic and technological) should be clearly detailed and highlighted in this section as Impact is one of the most important aspects of the evaluation criteria in Horizon Europe.
Impacts should refer to the specific contribution of your project to the Work Programme's "**expected impacts**" described in the Destination under which the chosen topic is situated.
Make reference to what is outlined in the topic text as "**expected outcomes**" (these are expected effects, over the medium-term).

- Results ≠ impact: avoid repeating your results here. Impact is more than results, and are being reached over a medium-long term timeframe, while results have to be reached on a short term.
- To be credible in reaching your impacts, describe these impacts using a timeline. To do this, ask yourself the question: to achieve a certain outcome, what steps need to be taken to achieve it?
- Reflect on who will make use of the projects results (i.e. the target group), why (what do they want) and how, and mention it using an easy to read table?
- Describe for of your target groups how your results will affect them, also in the long term. Always quantify impact where possible with percentages or numbers. Substantiate with existing market studies, policy documents (EU strategic plans), European innovation agendas, etc.

WHAT YOUR NCP SAYS ON IMPACT INDICATORS (2.1)

Be specific and identify indicators to measure the project impact; your work should lead to quantitative results.
Especially for Innovation Actions, in the impact you want to create there is a need to assess several aspects. We suggest you go through these **KEY QUESTIONS**:

- **What would be the changes brought by introducing your innovation on the market?**
- **What is the expected growth potential of your solution in terms of turnover, employment, market size, IP management, sales, return on investment and profit, etc.?**
- **What are the estimated funding requirements to reach the market?**

INNOVATION ACTIONS

You could create a scale of impact, starting from:

- **the scientific impact** on the researchers working in your field (e.g., define the scientific journals that you plan to publish this work on, as well as a timeline for this);
- the SMEs working in the related **technological field**, mentioning what is the socio-economic impact for the field/market or in general on the final users;
- and finally consider any evolution on the regulatory/policy framework that your project market might benefit from or even put in a risky situation (e.g., upcoming regulation making mandatory use of products similar to the output of your project).

Discuss also how your project can lead to **improved market** directions and if the technology/service/ product is extendable to other fields.
Discuss your impact on the **related stakeholders**. For example:

- **Why are they involved?**
- **How they will benefit from your innovation? And how they can support you?**

Remember that contributions to technical standards are also an impact. Explain how your project will **contribute to technical standards**, and which steps are already taken in this direction. For example, you could have a **standardization body** as part of your consortium or have partners involved in leading roles in national standardization committees. (e.g., for each group different subjects have already been identified and other will be identified during project activities).
Inserting a table which contains the main sector, target groups, impact and indicators will help you to clarify your work.
Last but not least: discuss how do you plan the **continuity** of the project once funding is over.

... 2.1 PROJECT'S PATHWAYS TOWARDS IMPACT

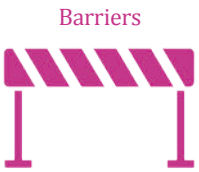
(c) Describe any requirements and potential barriers - arising from factors beyond the scope and duration of the project - that may determine whether the desired outcomes and impacts are achieved. These may include, for example, other R&I work within and beyond Horizon Europe; regulatory environment; targeted markets; user behaviour. Indicate if these factors might evolve over time. Describe any mitigating measures you propose, within or beyond your project, that could be needed should your assumptions prove to be wrong, or to address identified barriers.

⚠ *Note that this does not include the critical risks inherent to the management of the project itself , which should be described below under 'Implementation'.*

WHAT YOUR NCP SAYS ON RISKS AND BARRIERS (2.1)

The applicants should be able to demonstrate that the project will **identify, evaluate, and prevent** the potential **risks and barriers**. Elaborate what external factors could affect achieving the specific outcomes. The proposal should include a list of critical risks, relating to project implementation, that the stated project's objectives may not be achieved.
Detail any risk mitigation measures and specify how the project aims to deal with them based on evidence and using, when appropriate, specific key performance indicators for measurable targets and expected numbers/figures. You will be able to update the list of critical risks and mitigation measures as the project progresses.

For example:
Barrier > '**a lack of acceptance for the end-users, ...**'
How the project will deal with it > 'through a tailored communication to the relevant stakeholders; Co-design activities with specific target groups; considering since the initial steps to include a key player in the consortium to help in this specific issues of the project'.



2.2 MEASURE TO MAXIMISE IMPACT - DISSEMINATION, EXPLOITATION AND COMMUNICATION

2.2 Measures to maximise impact - Dissemination, exploitation and communication *[e.g. 5 pages, including section 2.3]*

- 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[1] 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.*

- 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.*

WHAT YOUR NCP SAYS ON EXPLOITATION AND DISSEMINATION PLAN (2.2)

Prepare your exploitation and dissemination plan carefully.
This must be a distinct part of your proposal (unless the call states otherwise). There is no 'one-size-fits-all' template. However, the plan should be as precise as possible. Initially, this may apply only to the first steps and the final goal. During the project, you can update the plan and make it more detailed.

- **In what area do you expect to make an impact?**
- **What needs might be solved/met thanks to the results of your project?**
- **What outputs will be created?**
- **Where will the outputs be made available during and after the project?**
- **Who are the potential users of your results?**
- **How will you contact them?**

Dissemination shouldn't be an after-thought. It should be an ongoing dialogue with potential users during your project. They may be found among fellow researchers in your field, companies, investors, standardisation bodies, regulatory bodies, patient organisations, sectoral organisations, NGOs, the education sector, the public sector, etc.

Involve potential end-users and stakeholders in your proposal. As previously said, if they're committed from early on, they may help guide your work towards applications. End-users could come from the regional, national and international networks of the partners in your consortium, or from the value chains they operate in. They could be involved as partners in the project, or, throughout its duration, as members of an advisory board or user group tasked with testing the results and providing feedback. Say how you expect the results of your project to be applied and give the main advantages of the new solution(s) you expect to emerge.

The results could be:

- **direct** - like a manual, test, model, new therapy, better product or process, or improved understanding of mechanisms
- **indirect** - like reduced material or energy usage, improved safety, or better-trained staff.

Explain how you expect results like these to be applied. This could also depend on progress elsewhere in an innovation chain, in related projects or in adjacent fields - so outline these dependencies and any progress to be made in these areas.

Think ahead. Once your research and innovation is complete, will you need to take further steps to apply it in actual practice? Examples of further steps: standards to be agreed on, financing the testing, scaling up or production, promoting acceptance by consumers or other partners in a value chain. Policymakers may also establish follow-up steps to work the results into policies.

exploitation and dissemination plan

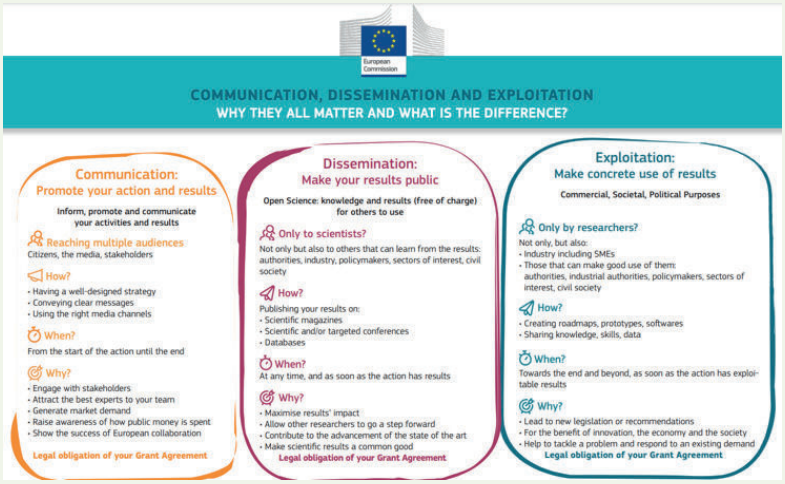
Have a look at the webinar on Dissemination & Exploitation in Horizon Europe here

MORE DETAILS ON THIS

Communication, Dissemination and Exploitation

The terms are defined under the Horizon 2020 Rules for Participation as follows:

- Communication "means 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
- Exploitation "means the use of results in further research activities other than those covered by the action concerned, or in developing, creating and marketing a product or process, or in creating and providing a service, or in standardization activities";
- Dissemination "means the public disclosure of the results by any appropriate means (other than resulting from protecting or exploiting the results), including by scientific publications in any medium".



WHAT YOUR NCP SAYS ON INTELLECTUAL PROPERTY (2.2)

Describe the IP strategy, including the intellectual property assets, knowledge management and measures taken to protect the assets and ensure freedom to operate. How IP will be developed and managed during the lifetime of the project and beyond?

What are the main intellectual property assets related to the consortium?

How are the **IP assets** protected? Provide a list of assets, including status for registration and other measures taken to ensure their protection, and including information management and contracts (i.e. employment, technology licensing, collaboration agreements, NDA's, etc.)

What measures have been taken to ensure freedom to operate? Enclose the results of the FTO analysis, including sources and conclusions. Comment on existing patents and/or regulatory issues that may limit ability to develop and (if needed) commercialize the technology, products or services.

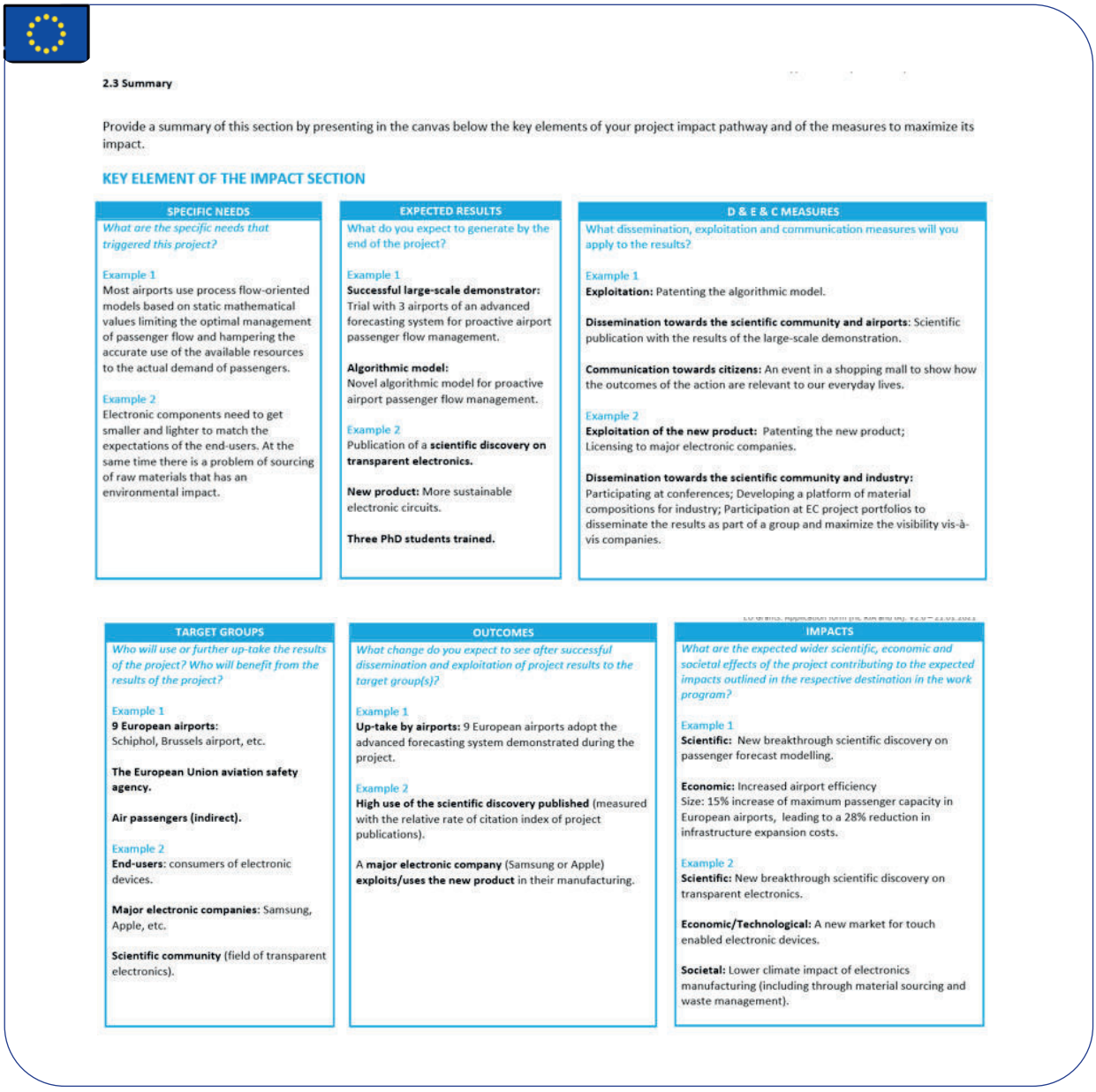
Address to regulatory and/or standards requirements.

Intellectual Property

Evidence **Knowledge-protection strategy**, including current IPR filing status, IPR ownership and licensing issues.

Free available sources of information: European Patent Office, World Intellectual Property Organization, Google patents, or address the IPR helpdesk. **Include costs for potential IP** protection in your budget planning.

2.3 SUMMARY



2.3 Summary

Provide a summary of this section by presenting in the canvas below the key elements of your project impact pathway and of the measures to maximize its impact.

KEY ELEMENT OF THE IMPACT SECTION

SPECIFIC NEEDS	EXPECTED RESULTS	D & E & C MEASURES
What are the specific needs that triggered this project? Example 1 Most airports use process flow-oriented models based on static mathematical values limiting the optimal management of passenger flow and hampering the accurate use of the available resources to the actual demand of passengers. Example 2 Electronic components need to get smaller and lighter to match the expectations of the end-users. At the same time there is a problem of sourcing of raw materials that has an environmental impact.	What do you expect to generate by the end of the project? Example 1 **Successful large-scale demonstrator:** Trial with 3 airports of an advanced forecasting system for proactive airport passenger flow management. **Algorithmic model:** Novel algorithmic model for proactive airport passenger flow management. Example 2 Publication of a **scientific discovery on transparent electronics.** **New product:** More sustainable electronic circuits. **Three PhD students trained.**	What dissemination, exploitation and communication measures will you apply to the results? Example 1 **Exploitation:** Patenting the algorithmic model. **Dissemination towards the scientific community and airports:** Scientific publication with the results of the large-scale demonstration. **Communication towards citizens:** An event in a shopping mall to show how the outcomes of the action are relevant to our everyday lives. Example 2 **Exploitation of the new product:** Patenting the new product; Licensing to major electronic companies. **Dissemination towards the scientific community and industry:** Participating at conferences; Developing a platform of material compositions for industry; Participation at EC project portfolios to disseminate the results as part of a group and maximize the visibility vis-à-vis companies.

TARGET GROUPS	OUTCOMES	IMPACTS
Who will use or further up-take the results of the project? Who will benefit from the results of the project? Example 1 **9 European airports:** Schiphol, Brussels airport, etc. **The European Union aviation safety agency.** **Air passengers (indirect).** Example 2 **End-users:** consumers of electronic devices. **Major electronic companies:** Samsung, Apple, etc. **Scientific community** (field of transparent electronics).	*What change do you expect to see after successful dissemination and exploitation of project results to the target group(s)?* Example 1 **Up-take by airports:** 9 European airports adopt the advanced forecasting system demonstrated during the project. Example 2 **High use of the scientific discovery published** (measured with the relative rate of citation index of project publications). A **major electronic company** (Samsung or Apple) **exploits/uses the new product** in their manufacturing.	*What are the expected wider scientific, economic and societal effects of the project contributing to the expected impacts outlined in the respective destination in the work program?* Example 1 **Scientific:** New breakthrough scientific discovery on passenger forecast modelling. **Economic:** Increased airport efficiency Size: 15% increase of maximum passenger capacity in European airports, leading to a 28% reduction in infrastructure expansion costs. Example 2 **Scientific:** New breakthrough scientific discovery on transparent electronics. **Economic/Technological:** A new market for touch enabled electronic devices. **Societal:** Lower climate impact of electronics manufacturing (including through material sourcing and waste management).

MORE DETAILS ON THIS

Build a Canvas

Canvas it is a section introduced with Horizon Europe. The strong accent on the impact that each HE project should prove can be highlighted by the scheme provided by the Canvas. This scheme offers the opportunity to **summarize and clarify** what has been described in the sections 2.1 and 2.2. This Canvas helps the evaluator to grasp all the elements in a clearer format. **Insert numbers**, percentages of increase or decrease level of certain actions, **quantify the result**s, mention what **stakeholders** are targeted, and indicate what **dissemination and communication** methods will be used.

II.IV WARNINGS FROM EVALUATORS ON IMPACT

The impact section of the proposal should maks clear and detailed references to the expected **outcomes** of the call text. **THE PATHWAYS** must be sound and fully considered and exploit the potential for a more wider impact across the work programme. The scale and significance of the project's contribution to the expected outcomes must be estimated and quantified.
To help the evaluators to better understand the project's **STRUCTURE AND THE WORKFLOW** is recommended using diagram, pictures and/or graphs.

The applicants should identify and fully **CONSIDER POTENTIAL BARRIERS** to the expected outcomes, which include cultural aspects, competition, regulatory aspects, cross-border collaboration, as well as a major sanitary crises pandemic-related factors, and suitable mitigation measures to overcome them based on evidence and using, when appropriate, specific **KEY PERFORMANCE INDICATORS** for measurable targets and expected numbers/figures.

The proposal should demonstrate that the **EXPECTED OUTPUTS** have a significant impact both at a scientific, innovation and implementation level, by expanding the knowledge on the targeted field, and by enabling stakeholders, users, policy makers and citizens to benefit from the results of the project. Therefore the measures to maximize the expected outcomes and impacts should be successfully capable of **mobilize THE RELEVANT STAKEHOLDERS** and provide a reliable and efficient **KNOWLEDGE TRANSFER** to end-users and target groups.
SYNERGIES AND OPPORTUNITIES FOR COLLABORATION with key initiatives can by identified and therefore adequately addressed according to the foreseen activities of the proposal.
Finally, the proposal must clearly delineates an appropriate strategy for the management of **INTELLECTUAL PROPERTY**, as well as the ownership distribution of key exploitable results including treatment of background and foreground knowledge.

Within the Impact section, it is important to show a clear distinction between **COMMUNICATION, DISSEMINATION AND EXPLOITATION**. Evaluators will positively evaluate proposal showing an understanding of the difference between those three elements which must be well detailed. The applicants should identify relevant stakeholders and target groups and propose measures tailored for each group. To this end, the consortium should identifies events such as conferences and relevant meetings (EU-Extra EU), identifies or develop specific communication tools/channels to engage with the stakeholders. Strategically demonstrate how the activities will adapt according to the need of the envisaged audience.

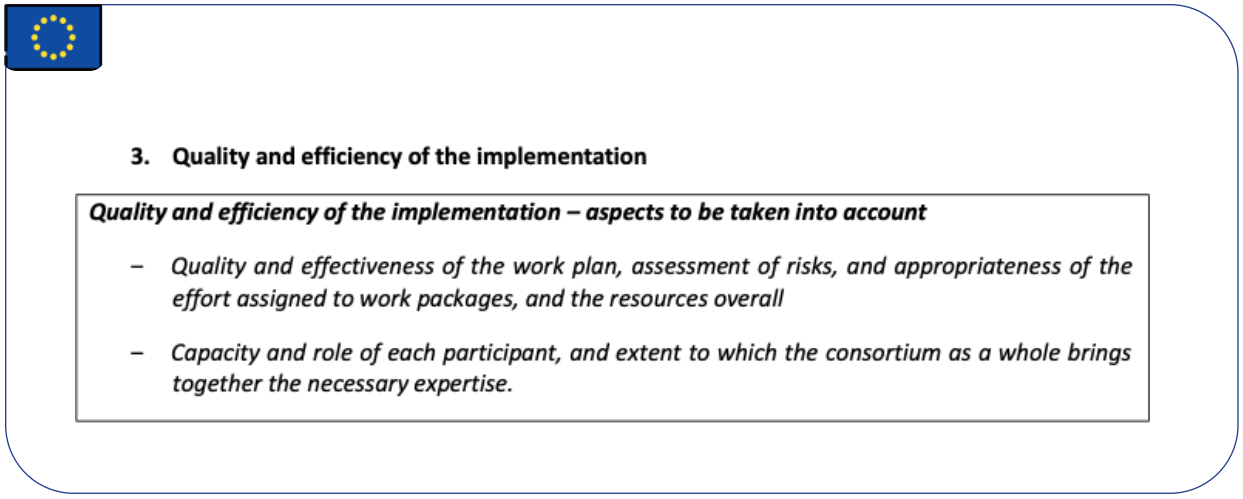
The **DISSEMINATION STRATEGY** should be able to engage with public and/or private relevant actors and scientific societal domain. It should be clearly described at the beginning of the project, by identifying partnerships and relevant future collaborations, and demonstrate its potential in successfully update and adapt throughout the project life-cycle.
Finally, the proposal must clearly delineates an appropriate strategy for the management of **INTELLECTUAL PROPERTY**, as well as the ownership distribution of key exploitable results including treatment of background and foreground knowledge.

II.V Quality and efficiency of the implementation

This section demonstrates the **quality and effectiveness** of the work plan and the **assessment of the risks**. It needs to detail the appropriateness of the overall effort and resources assigned to the work packages.

Be sure to highlight the **role and capacity of each participant**, and describe the extent to which the consortium as a whole can provide the necessary expertise.

3. QUALITY AND EFFICIENCY OF THE IMPLEMENTATION



3. Quality and efficiency of the implementation

Quality and efficiency of the implementation – aspects to be taken into account

- *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.*

3.1 WORK PLAN AND RESOURCES

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

Please provide the following:

- brief presentation of the overall structure of the work plan;
- timing of the different work packages and their components (Gantt chart or similar);
- graphical presentation of the components showing how they inter-relate (Pert chart or similar).
- detailed work description, i.e.:
  - a list of work packages (table 3.1a);
  - a description of each work package (table 3.1b);
  - a list of deliverables (table 3.1c);

⚠ *Give full details. Base your account on the logical structure of the project and the stages in which it is to be carried out. The number of work packages should be proportionate to the scale and complexity of the project.*

⚠ *You should give enough detail in each work package to justify the proposed resources to be allocated and also quantified information so that progress can be monitored, including by the Commission*

⚠ *Resources assigned to work packages should be in line with their objectives and deliverables. You are advised to include a distinct work package on 'project management', and to give due visibility in the work plan to 'data management' 'dissemination and exploitation' and 'communication activities', either with distinct tasks or distinct work packages.*

⚠ *You will be required to update the 'plan for the dissemination and exploitation of results including communication activities', and a 'data management plan', (this does not apply to topics where a plan was not required.) This should include a record of activities related to dissemination and exploitation that have been undertaken and those still planned.*

⚠ *Please make sure the information in this section matches the costs as stated in the budget table in section 3 of the application forms, and the number of person months, shown in the detailed work package descriptions.*

- a list of milestones (table 3.1d);
- a list of critical risks, relating to project implementation, that the stated project's objectives may not be achieved. Detail any risk mitigation measures. You will be able to update the list of critical risks and mitigation measures as the project progresses (table 3.1e);
- a table showing number of person months required (table 3.1f);
- a table showing description and justification of subcontracting costs for each participant (table 3.1g);
- a table showing justifications for 'purchase costs' (table 3.1h) for participants where those costs exceed 15% of the personnel costs (according to the budget table in proposal part A);
- if applicable, a table showing justifications for 'other costs categories' (table 3.1i);
- if applicable, a table showing in-kind contributions from third parties (table 3.1j)

WHAT YOUR NCP SAYS ON THE WORK PLAN (3.1)

In this chapter, the main question is: **how will you implement everything you have proposed above?** The focus here is on the quality and effectiveness of the work plan that you will set out. For this, a Horizon Europe project is divided into several work packages (WPs).
Here include:

- An explanation of why this division of WPs was chosen and how the WPs are related (**PERT***).
- An overview of the WPs and explain how the WPs relate to each other. The number of WPs should be proportional to the size of the project. A typical project has 6-8 ¿? Should we also refer to Lump Sum? WPs that are balanced in size (budget and person-months). For example: WP1. Management, WP2 - WPx 'content work packages' and a WP for Dissemination, Exploitation and Communication.
- Timeline of WPs: Use a **Gantt chart** to indicate chronologically what you will do when, for each WP and task within each WP.
- Collaboration within WPs: A WP has objectives, tasks and deliverables. To achieve an objective a task is defined, the deliverable is the way to show how a task will be completed.

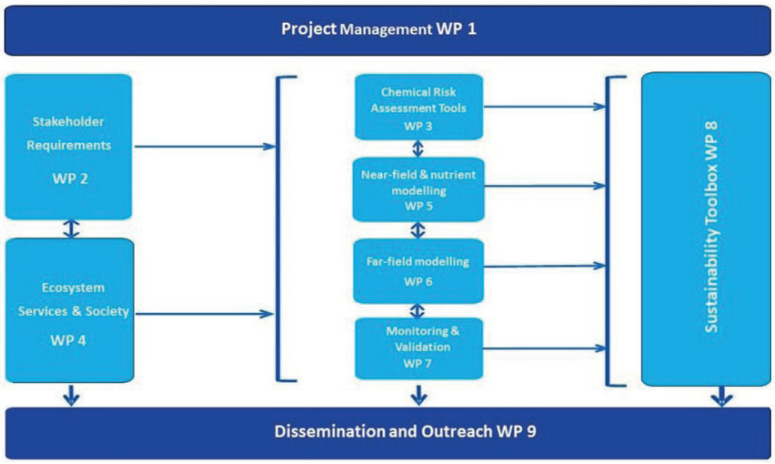
A clear elaboration of the tasks and WPs makes life considerably easier during project execution!

**PERT stands for Program Evaluation and Review Technique. This is a method to quickly understand the consistency of WPs. It is tempting to make everything interrelated, but the key is to depict the main flow of work so that an evaluator can quickly understand which main activities are being carried out.*

Doing this right ensures the budget estimations of the partners and the overall work-plan will be more accurate. Needless to say that this is good for both evaluation and execution purposes.

Although the template does not ask for information about the management and organisation of the project, we advise to describe the project organisation and how decisions are made. Visualize the project organisation (or governance) in an organisational chart. The organisation and **decision-making** should be appropriate for the project size.
The work presented in the work package is the primary justification for the requested budget. It is imperative that the work plan will be well designed in order for the reviewers to properly assess the budget request. Investing in this properly will also be beneficial to you and your partners during the execution phase. The basic (and mandatory) information provided in the work packages about the budget request is the person-months allocation per partner in each of the work packages.

TAPAS project

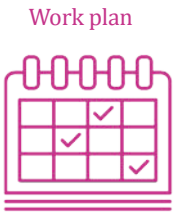


The **person-months** (more info in the section below) allocation must be well correlated to the work presented in the work package and it must make sense to the reviewers.

We would recommend enhancing this presentation by providing a higher resolution of information to the reviewers and indicating the person-months allocation at the level of tasks, on top of the basic requirement of presenting this information solely at the level of the work package.

If this is done, higher resolution of details for the work plan will be achieved. In turn, the reviewers will have a better picture that will enable them to better assess the plan. We know from experience that this will probably leave a great impression on the reviewers. They will respect your efforts in producing such higher resolution of planning.

If needed, include the presence of industrial and commercial actors in the consortium which may have good potential for further exploitation of the project results. In this case it could be important that applicants are able to provide details about the target market according to the business and/or use cases presented in the proposal (e.g. market scope, addressable market, entry strategy, scale up, etc.) that will show to the evaluators the applicant's in-depth knowledge of its business environment and market needs



3.2 CAPACITY OF PARTICIPANTS AND CONSORTIUM AS A WHOLE

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

⚠ *The individual participants of the consortium are described in a separate section under Part A. There is no need to repeat that information here.*

- Describe the consortium. How does it match the project's objectives, and bring together the necessary disciplinary and inter-disciplinary knowledge. Show how this includes expertise in social sciences and humanities, open science practices, and gender aspects of R&I, as appropriate. Include in the description affiliated entities and associated partners, if any.
- Show how the partners will have access to critical infrastructure needed to carry out the project activities.
- Describe how the members complement one another (and cover the value chain, where appropriate)
- In what way does each of them contribute to the project? Show that each has a valid role, and adequate resources in the project to fulfil that role.
- If applicable, describe the industrial/commercial involvement in the project to ensure exploitation of the results and explain why this is consistent with and will help to achieve the specific measures which are proposed for exploitation of the results of the project (see section 2.2).
- **Other countries and international organisations**: If one or more of the participants requesting EU funding is based in a country or is an international organisation that is not automatically eligible for such funding (entities from Member States of the EU, from Associated Countries and from one of the countries in the exhaustive list included in the Work Programme General Annexes B are automatically eligible for EU funding), explain why the participation of the entity in question is essential to successfully carry out the project.

MORE DETAILS ON THIS

Building a consortium

Every consortium in Horizon Europe is including at least 1 partner from an EU member state and at least 2 additional partners from 2 other different countries coming either from EU member states and/or associated countries.

In many cases, a consortium with more than 3 partners is expected (although this depends on the exact requirements set in the topic description in the work program) to guarantee that all activities are performed and all the objectives are reached.

WHAT YOUR NCP SAYS ON CONSORTIUM BULDING (3.2)

When building a consortium that is going to submit a project proposal to the highly competitive Horizon Europe program, the priorities should be different from ensuring your friends can be a part of the project.

For the Pre-Award phase, the only thing that matters is how the reviewers perceive the consortium structure: What would be the best project definition, and is the consortium perfectly tailored to execute it? In other words – what would be the composition of partners that best serve the project's definition and goals? Are there redundancies? Are there tasks that are not well-covered by the expertise of the consortium?

For the Post-Award – the execution phase – the goal is to have a manageable project structure, with a reasonable administrative burden and without having redundant and unnecessary partners. We have seen projects that were retained for funding in which partners turned out to be a burden as the project did not really need them. Experience shows that this is definitely something to avoid.

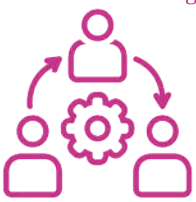
The key to building a consortium the right way is **shifting the discussion focus from partners to functions.** Looking carefully at what the EC is asking for in the Horizon Europe projects shows they want to see a composite of functions that will lead to the expected impact. The output of the "functions" planning will be a clear set of requirements for the partner search.

- A consortium is at the heart of any Horizon Europe project;
- Don't bring in "your friends";
- Do understand the project's specific needs, then bring the relevant partners;
- Always look for Competence, Balance, Complementarity, Excellence, Commitment
- Keep the partners engaged and motivated

Describe the consortium. How does it match the project's objectives, and bring together the necessary **disciplinary and inter-disciplinary knowledge**. Show how this includes expertise in social sciences and humanities, open science practices, and gender aspects of R&I, as appropriate.

- Show how the partners will have access to critical **infrastructure** needed to carry out the project activities.
- Describe how the members **complement** one another (and cover the value chain, where appropriate)
- In what way does each of them contribute to the project? Show that each has a valid role, and adequate resources in the project to fulfil that role.
- If applicable, describe the **industrial/commercial** involvement in the project to ensure exploitation of the results and explain why this is consistent with and will help to achieve the specific measures which are proposed for exploitation of the results of the project.
- **Other countries and international organisations**: If one or more of the participants **requesting EU funding** is based in a country or is an international organisation that is not automatically eligible for such funding (entities from Member States of the EU, from Associated Countries and from one of the countries in the exhaustive list included in the Work Programme General Annexes B are automatically eligible for EU funding), explain why the participation of the entity in question is essential to successfully carry out the project.

Consortium bulding



MORE DETAILS ON THIS

Other countries participation and international organizations

Participants requesting EU funding based in a country that is not automatically eligible for funding are instructed by the template to explain why the participation of the entity in question is essential to successfully carry out the project.

But even when such an explanation is included, only in exceptional cases funding to such entities will be approved. Keeping in mind this low approval chance, it is better to explore alternative funding opportunities for these participants. National funding programmes may be an alternative solution here.

Have a look at this official web page of the European Commission "international cooperation" which provides informationfor each country.

TABLE FOR SECTION 3.1

Tables for section 3.1

⚠ *Use plain text for the tables in section 3.1. If the proposal is invited to start Grant Agreement preparation, these tables will have to be encoded in the grant management IT tool, where no graphics or special formats are supported.*

Table 3.1a: List of work packages

Work package No	Work Package Title	Lead Participant No	Lead Participant Short Name	Person-Months	Start Month	End month

TABLE 3.1B: WORK PACKAGE DESCRIPTION

Table 3.1b: Work package description

For each work package:

Work package number	
Work package title	

⚠ *Participants involved in each WP and their efforts are shown in table 3.1f. Lead participant and starting and end date of each WP are shown in table 3.1a.)*

Objectives

Description of work (where appropriate, broken down into tasks), lead partner and role of participants. Deliverables linked to each WP are listed in table 3.1c (no need to repeat the information here).

WHAT YOUR NCP SAYS ON WORK PACKAGES – PERSON MONTH (3.1)

A person month (PM) = 1 month of full-time work on the project by 1 employee = x number of work hours. How many hours a person works in a month varies per organisation.
Make sure the collaboration within the work packages (WPs) is visible by distributing the PMs evenly among different organisations. Tip: Use the same order of partners for each WP, this keeps it clear.

WHAT YOUR NCP SAYS ON TASK CREATION (3.1)

Divide the work into tasks, each with a task leader and duration, for example:

- Task 1.1: overall management of the project and consortium, M1-M24 (coordinator)

Notes...

- Task 1.2: internal communication, M1-M24 (task leaders + contributors)

Notes....

- Task 1.n ...

TABLE 3.1C LIST OF DELIVERABLES

Table 3.1c: List of Deliverables[2]

Only include deliverables that you consider essential for effective project monitoring.

Number	Deliverable name	Short description	Work package number	Short name of lead participant	Type	Dissemination level	Delivery date (in months)

KEY
Deliverable numbers in order of delivery dates. Please use the numbering convention <WP number>.<number of deliverable within that WP>.
For example, deliverable 4.2 would be the second deliverable from work package 4.

Type:
Use one of the following codes:

R: Document, report (excluding the periodic and final reports)
DEM: Demonstrator, pilot, prototype, plan designs
DEC: Websites, patents filing, press & media actions, videos, etc.
DATA: Data sets, microdata, etc.
DMP: Data management plan
ETHICS: Deliverables related to ethics issues.
SECURITY: Deliverables related to security issues
OTHER: Software, technical diagram, algorithms, models, etc.

Dissemination level:
Use one of the following codes:

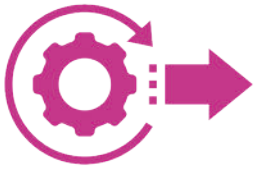
PU – Public, fully open, e.g. web (Deliverables flagged as public will be automatically published in CORDIS project's page)
SEN – Sensitive, limited under the conditions of the Grant Agreement
Classified R-UE/EU-R – EU RESTRICTED under the Commission Decision No2015/444
Classified C-UE/EU-C – EU CONFIDENTIAL under the Commission Decision No2015/444
Classified S-UE/EU-S – EU SECRET under the Commission Decision No2015/444

Delivery date
Measured in months from the project start date (month 1)

WHAT YOUR NCP SAYS ON PROJECT OUTPUTS (3.1)

Provide a list **of deliverables**. Deliverables are important outputs of your workplan (result of the work package). the result should be tangible e.g. a report, product, website, software,... Also provide the dates when they will be delivered. Give a Number to each of the deliverables and indicate which partner will be responsible for it.

Project outputs



Do not include too many deliverables (typically 3-6), but at least 1 deliverable per task. These deliverables will be checked by the Project Officer of the funding organization during the execution of the project and thus increases your workload for your reporting duties.

TABLE 3.1D LIST OF MILESTONES

Table 3.1d: List of milestones

Milestone number	Milestone name	Related work package(s)	Due date (in month)	Means of verification

KEY
Due date
Measured in months from the project start date (month 1)

Means of verification
Show how you will confirm that the milestone has been attained. Refer to indicators if appropriate. For example: a laboratory prototype that is 'up and running'; software released and validated by a user group; field survey complete and data quality validated.

Table 3.1e: Critical risks for implementation

Description of risk (indicate level of (i) likelihood, and (ii) severity: Low/Medium/High)	Work package(s) involved	Proposed risk-mitigation measures

Definition critical risk:
A critical risk is a plausible event or issue that could have a high adverse impact on the ability of the project to achieve its objectives.

Level of likelihood to occur: Low/medium/high
The likelihood is the estimated probability that the risk will materialise even after taking account of the mitigating measures put in place.

Level of severity: Low/medium/high
The relative seriousness of the risk and the significance of its effect.

MORE DETAILS ON THIS

Milestones

Milestones are **control points for the project**. At any given moment in the project, you can check whether you are ahead or behind schedule against the milestones plan of the proposal. If you are behind schedule, appropriate measures should be taken to remedy the situation.
These control points should generally be placed at the end of important work packages or tasks. Overall, it is a good practice to have 3-5 milestones per year, not more.

Milestones can however be used for any other key moment with important consequences on the rest of the project such as:

- **A key decision (generally mad during a project meeting)**
- **A key deliverable**
- **The compliance (or not) with internally defined indicators**

Contrary to deliverables, which must be linked to a specific WP (and, ideally, to a specific task), milestones can be attributed to several WPs at the same time.

Finally, because deliverables are often produced at the end of a task, they can have the same due date as milestones and serve as a proof that the milestone has been reached.

In a nutshell, **deliverables and milestones are project management tools** against which your Project Officer will assess the progress of your project. You should pay particular attention to assess their **feasibility and the resources** needed when defining them.

You therefore need to take care about deliverables and milestones quite early in the project, basically as soon as your tasks are well define. It is also recommended to highlight them in the visual representations of the work plan, typically in the **Gantt chart.**

TABLE 3.1F SUMMARY OF STAFF EFFORT

Table 3.1f: Summary of staff effort

Please indicate the number of person/months over the whole duration of the planned work, for each work package, for each participant. Identify the work-package leader for each WP by showing the relevant person- month figure in bold.

	WPn	WPn+1	WPn+2	Total Person-Months per Participant
Participant Number/Short Name				
Participant Number/ Short Name				
Participant Number/ Short Name				
Total Person Months				

Table 3.1g: 'Subcontracting costs' items

For each participant describe and justify the tasks to be subcontracted (please note that core tasks of the project should not be sub-contracted).

Participant Number/Short Name		
	Cost (€)	Description of tasks and justification
Subcontracting		

Table 3.1h: 'Purchase costs' items (travel and subsistence, equipment and other goods, works and services)

Please complete the table below for each participant if the purchase costs (i.e. the sum of the costs for 'travel and subsistence', 'equipment', and 'other goods, works and services') exceeds 15% of the personnel costs for that participant (according to the budget table in proposal part A). The record must list cost items in order of costs and starting with the largest cost item, up to the level that the remaining costs are below 15% of personnel costs.

Participant Number/Short Name		
	Cost (€)	Justification
Travel and subsistence		
Equipment		
Other goods, works and services		
Remaining purchase costs (<15% of pers. Costs)		
Total		

TABLE 3.1I "OTHER COSTS CATEGORIES"

Table 3.1i: 'Other costs categories' items (e.g. internally invoiced goods and services)

Please complete the table below for each participants that would like to declare costs under other costs categories (e.g. internally invoiced goods and services), irrespective of the percentage of personnel costs.

Participant Number/Short Name		
	Cost (€)	**Justification**
Internally invoiced goods and services		
...		

Table 3.1j: 'In-kind contributions' provided by third parties

Please complete the table below for each participants that will make use of in-kind contributions (non-financial resources made available free of charge by third parties). In kind contributions provided by third parties free of charge are declared by the participants as eligible direct costs in the corresponding cost category (e.g. personnel costs or purchase costs for equipment).

Participant Number/Short Name			
Third party name	**Category**	**Cost (€)**	**Justification**
	Select between Seconded personnel Travel and subsistence Equipment Other goods, works and services Internally invoiced goods and services		

ANNEXES TO PROPOSAL PART B

Some calls may ask to upload annexes to proposal part B. The annexes must be uploaded as separate documents in the submission system. The most common annexes to be uploaded in Horizon Europe are (standard templates are published in the Funding & Tenders portal):

- **CLINICAL TRIALS:** Annex with information on clinical trials
- **FINANCIAL SUPPORT TO THIRD PARTIES:** Annex with information on financial support to third parties.
- **CALLS FLAGGED AS SECURITY SENSITIVE:** Annex with information on security aspects.
- **ETHICS:** ethics self-assessment should be included in proposal part A. However, in calls where several serious ethics issues are expected, the character limited in this section of proposal part A may not be sufficient for participants to give all necessary information. In those cases, participants may include additional information in an annex to proposal part B.

II.VI WARNINGS FROM EVALUATORS ON QUALITY & IMPLEMENTATION

The **MANAGEMENT AND ORGANIZATIONAL STRUCTURE** should be described in detail. The **POTENTIAL BARRIERS AND RISK MITIGATION MEASURES** should be adequately described and the proposal should be able to anticipate challenges that may arise in a fast moving domain. The project must define and clearly explain **WORK PACKAGES AND TASKS** assigned to partners with a clear description of the activities. An equilibrium between "Too much" and "Not enough" details has to be found. Applicants have to provide a certain level of details on the groundwork that needs to be done. Allocating human resources **(PERSON-MONTHS)** within work packages and among project's partner should be based on the work to be produced and should remain transparent. Any distribution that looks imbalance (huge difference between work package or within partners for a perceived similar task) in the human resource allocation will raise concerns.

Therefore, it is important that the **EFFORT/RESOURCES/COSTS** allocated to the project activities are duly and evenly justified, as the applicant should explain why, how, when, how long and for what these resources will be necessary. Such resource allocation shall also be well articulated between the description of action and the relevant annexes (e.g. budget, gantt chart, etc.).

The **WORKFLOW** must describes a sound and efficient holistic approach to link the activities through that will deliver tools to contribute to addressing the threat posed by the selected targeted objectives.

When planning **ACTIVITIES AND PILOTS**, applicants should identify a credible timeline and a clear set of actions to achieve their results.

DELIVERABLES AND MILESTONES must be well defined and they must facilitate a proper monitoring of the project progress.

The applicants should identify an adequate adjustment of the resource allocation among partners and WPs in line with the objectives and deliverables foreseen. The proposal should bring together a strongly **BALANCED, MULTIDISCIPLINARY AND EXPERIENCED CONSORTIUM**, with highly complementary expertise, which must be able to address the objectives of the proposal. While describing the expertise and credentials of the partners in the consortium, it wise to limit to the expertise in direct link with the project and show their potential which will be positively evaluated by reviewers.

While describing the consortium and the involved partners, it recommended to include a description of the **AVAILABLE INFRASTRUCTURES** (Lab, facilities, equipment) among the partners. Applicants must be able to show to the evaluators how partners will have access to tools and critical infrastructure and demonstrate that the consortium has operational capacity to reach its goals.

If needed, include the presence of **INDUSTRIAL AND COMMERCIAL ACTORS** in the consortium which may have good potential for further exploitation of the project results. In this case it could be important that applicants are able to provide details about the target market according to the **BUSINESS AND/OR USE CASES** presented in the proposal (e.g. market scope, addressable market, entry strategy, scale up, etc.) that will show to the evaluators the applicant's in-depth knowledge of its business environment and market needs.

The proposal must describe how the coordinator will oversee the **MANAGEMENT OF THE PROJECT** by describing monitoring tools and activities. At the same time, the management structure should clearly show how each partner will carry out its activities within the project. To emphasize this aspect, evaluators positively consider the development of **EXTERNAL MONITORING BODIES** such as an advisory board, project manager and/or a general assembly. This ensure to the reviewers that potential issue will be identifies quickly thanks to these monitoring group and fixed quickly.

SYNERGIES AND NETWORKING with other research and innovation activities is envisaged and appropriately integrated into the work plan as well as joint activities with other projects selected from the new calls are foreseen and budgeted for.

EXPLOITATION AND/OR COMMERCIALIZATION of project results should be in line with the policy agenda of the EU, bearing in mind the main priorities in the field of the project e.g. European Technological Sovereignty, when working on technological projects.

Developing a strategy for managing **INTELLECTUAL PROPERTY** is an important element of the implementation plan. Therefore it is important that proposals clearly identify who owns which IPR to begin with, and then clearly state in the proposals how they will manage the IP of the collaborative development of new Intellectual Property (IP) resulting from the project, including how to settle any (potential) disputes that may arise.

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