IMPACT IN HORIZON EUROPE PROPOSALS

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NCP@UEFISCDI

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Impact in Horizon Europe proposals

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Horizon Europe Impact – the conceptual aspects

The impact-driven design of Horizon Europe aims at maximising the effects of Research and Innovation investments, ensuring their contribution to the Commission's policy priorities. It marks a paradigm change in the design of the EU R&I Framework Programmes from an activity-driven to an impact-driven programme.

One of the novelties in the implementation of the Horizon Europe programme which facilitates such an impact-driven approach is the strategic planning process, which identifies the expected impacts of the first four years of Horizon Europe (2021-2024). This represents a paradigm change also for the work programmes, that build on this strategic planning.

The structure of Horizon Europe work programmes translates this impact-driven nature: they are organised around '**Destinations**', describing the expected impacts identified in the Strategic Planning, and '**topics**', describing the related expected outcomes critical to the achievement of such impacts. This impact design is also translated at **project** level, with revamped proposal and reporting templates, allowing for a straightforward monitoring that aims at providing close-to-real-time information.

Horizon Europe groundbreaking approach to monitoring, the **Key Impact Pathways** (KIPs), aims at capturing and communicating impact around 9 key story lines during and after the Framework Programme implementation. Its objective is to allow policy makers and the wider public to get regular insights regarding the effects and benefits of the framework programme on European science, the economy and wider society.

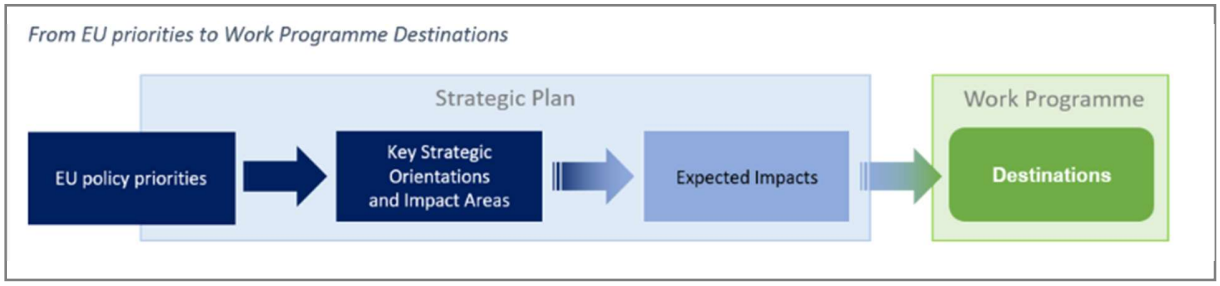


Figure 1. Horizon Europe delivers on EU policy priorities

(Source: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/experts/standard-briefing-slides-for-experts_he_en.pdf)

Note: Figure 1 applies primarily to the Clusters under Pillar II of Horizon Europe. The expected impacts and Destinations in other work programme parts are not derived directly from the Strategic Plan.

The strategic plan sets out strategic orientations and impacts areas for research and innovation investments under Horizon Europe for four years (first HE strategic plan covers the period 2021-2024). **The key strategic orientations and impact areas are formulated on the basis of expected impacts**.

- Each expected impact is targeted via dedicated packages of actions in the work programme. These are termed **destinations**, because they indicate both the specific direction and the ultimate point of arrival of the projects to be supported through Horizon Europe.
- The work programmes (WPs) include the research and innovation activities to be funded under Horizon Europe for two years (first HE WP covers the period 2021-2022). ERC and EIC WPs will be annual.
- Horizon Europe is implemented through work programmes which set out funding opportunities mainly through calls for proposals.
- A **call for proposal** will normally contain one or more topics with a common deadline. The budget of the call is distributed among topics. Where topics share a budget envelope, proposals for these topics will be competing against each other and will result in a single ranking list.
- Applicants apply to a specific call and **topic**.
- Each topic to which applicants can apply will include:
    - The topic scope
    - The topic expected outcome
    - The expected impact of the destination to which the topic belongs
    - The type of action
    - The topic budget (or budget shared by group of topics)
    - The topic conditions and documents

(Figure 2)

WORKPROGRAMME ….

Destination

……

Expected outcomes: …….

Call 1…..

Topic 1….

Scope: ……

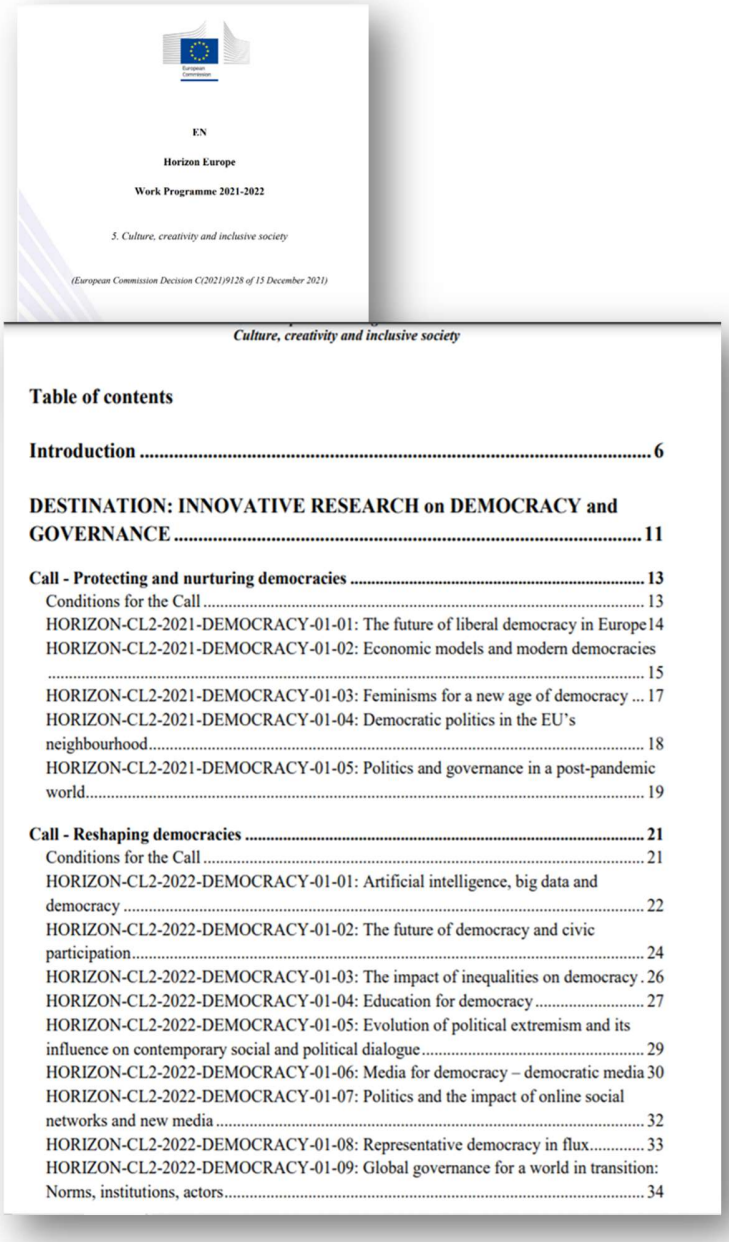
Expected outcomes: …..

Topic 2….

Scope: ……

Expected outcomes: …..

Etc.



EN

Horizon Europe

Work Programme 2021-2022

5. Culture, creativity and inclusive society

(European Commission Decision C(2021)9128 of 15 December 2021)

Culture, creativity and inclusive society

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Figure 2. Work programme - Destination, Call, Topic

The link between policy priorities and project results is shown in Figure 3.

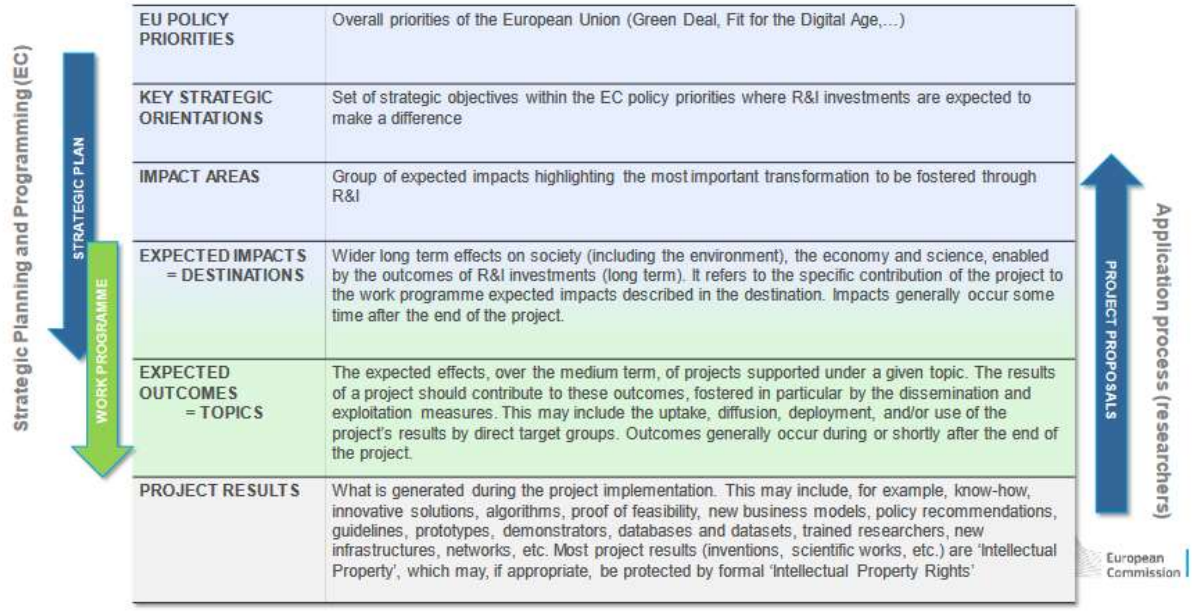

Figure 3. Link between policy priorities and project results

(Source: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/experts/standard-briefing-slides-for-experts_he_en.pdf)

We present below the definition of terms (in alphabetical order), according to the EC official documents (Table 1).

Table 1. Glossary of terms

(Source: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/experts/standard-briefing-slides-for-experts_he_en.pdf)

Term	Definition	Examples
Impacts	Wider long-term effects on society (including the environment), the economy and science, enabled by the outcomes of R&I investments (long term). It refers to the specific contribution of the project to the work programme expected impacts described in the destination. Impacts generally occur sometime after the end of the project (~ 10 years).	
Objectives	The goals of the work performed within the project, in terms of its research and innovation content. This will be translated into the project's results. These may range from tackling specific research	

Term	Definition	Examples
	questions, demonstrating the feasibility of an innovation, sharing knowledge among stakeholders on specific issues. The nature of the objectives will depend on the type of action, and the scope of the topic.	
Outcomes	The expected effects, over the medium term, of projects supported under a given topic. The results of a project should contribute to these outcomes, fostered in particular by the dissemination and exploitation measures. This may include the uptake, diffusion, deployment, and/or use of the project's results by direct target groups. Outcomes generally occur during or shortly after the end of the project.	
Pathway to impact	Logical steps towards the achievement of the expected impacts of the project over time, in particular beyond the duration of a project. A pathway begins with the projects' results, to their dissemination, exploitation and communication, contributing to the expected outcomes in the work programme topic, and ultimately to the wider scientific, economic and societal impacts of the work programme.	
Research output	Results generated by the action to which access can be given.	Scientific publications, data or other engineered outcomes and processes such as software, algorithms, protocols and electronic notebooks
Results	What is generated during the project implementation. Most project results (inventions, scientific works, etc.) are 'Intellectual Property', which may, if appropriate, be protected by formal Intellectual Property Rights.	Know-how, innovative solutions, algorithms, proof of feasibility, new business models, policy recommendations, guidelines, prototypes, demonstrators, databases and datasets, trained researchers, new infrastructures, networks,

Key Impact Pathways (KIPs)

The Commission's proposal for Horizon Europe includes a groundbreaking approach for capturing and communicating impact - the Key Impact Pathways. This approach aligns with a new level of ambition to boost the diversity of impact of EU research and innovation funding.

The objective is to allow policy makers and the wider public to get regular insights regarding the effects and benefits of the programme or European science, the economy and wider society.

The Key Impact Pathways will allow the Commission to capture and communicate the difference we are making around 9 key story lines during and after the programme.

Note: The Key Impact Pathways are a legal requirement in Horizon Europe! Thus, all proposals/projects must describe them, according to the project topic.

The Key Impact Pathways that must be described in the proposal/project are grouped into three categories: Scientific, Societal, and Technological/Economic (Table 2).

Table 2. Key Impact Pathways in Horizon Europe

(Source: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/experts/standard-briefing-slides-for-experts_he_en.pdf)

Scientific impact	Creating high-quality new knowledge Strengthening human capital in research and innovation Fostering diffusion of knowledge and Open source
Societal impact	Addressing EU policy priorities and global challenges through research and innovation Delivering benefits and impact through research and innovation missions Strengthening the uptake of research and innovation in society
Towards technological/economic impact	Generating innovation-based growth Creating more and better jobs Leveraging investment in research and innovation

What is Impact?

Impact is the **value** the project brings about, on a short, medium and longer term.

The project must describe its 'story' under three sections:

1. Excellence = What?

2. Impact = Why?

3. Implementation = How?

(Table 3)

Table 3. The meaning of the three sections of the project

1. Excellence	2. Impact	3. Implementation
WHAT	**WHY**	**HOW?**
What is the project about?	Why should we do the project? What evidence do we collect and measure in the project to demonstrate the **project's value**?	How do we achieve the objectives?

Any research should lead to impact. However, the typical impact that many end up including in the proposal is driven by the motivation to carry out the suggested research and development project. As a direct consequence, many applicants consider the anticipated immediate results of their project to be its impact. This is the first common pitfall and usually where the problem begins. **The expectations of the impact in a Horizon Europe project proposal are in fact much broader than merely having these results**.

Impact is more than results. Look for the project's value!

While the results of a research project are very important, they do not inherently constitute the impact of the project. If the information provided in the 'Impact' section only pertains to the "results" acquired, not only will it be a very superficial presentation that does not truly explain the

impact of the project, it will also fail to align with the expectations of the European Commission as they are communicated in Horizon Europe. Therefore, and in the context of Impact – there are many other elements that should be considered in addition to the results, while some are expected to extend beyond the project's scope and lifetime.

Tip: The right formula that should eventually be manifested in the text when addressing the Horizon Europe Impact section is that **Impact is MORE THAN project's results.**

This being established, the following questions are: How do we move on from here? How can we fill in the gap which extends past the project's results?

In Horizon Europe, as opposed to previous framework programmes, the features and requirements introduced into the Impact section enable us to answer these questions.

Tip: **Replace the word "Impact" with the word "Value"**. Then, ask the following questions when drafting the 'Impact' section: "What is the value of the project?" How important and significant are the benefits expected from your project? How widespread are they?

Horizon Europe seeks out novel and groundbreaking research projects that truly tackle global challenges. For this reason, they should have profound value (=impact). Where else can researchers captivate the reviewers with the extraordinary applications of their project? Surely, it must be through the 'Impact' section! If addressed correctly – this section can be an immense push towards receiving funding for the project. It is the ultimate opportunity to "sell" the project by expressing its value and therefore its tremendous impact. If neglected, it is a huge disservice to the application efforts as a whole.

In order to assess the project's value, focus on answering questions such as:

- What will happen after we reach our target and have results?
- What will happen once the project is through?
- What may be the next steps which extend beyond the project's scope?
- What will be the project's 'legacy'?

Refer to anything which may be relevant to the specific content of the project in that regard.

The impact-driven approach in Horizon Europe

In order to maximize the impact of Horizon Europe projects, an impact-driven approach for securing and communicating impact has been introduced. These are the three Key Impact Pathways broken down into nine key storylines (mentioned above). Introducing such an impact-driven approach, the European Commission's key goal is to better convey the impact of EU funding for Research & Innovation (R&I) to citizens, legislators and budget authorities. This approach aligns with the ambition to further advance the diversity of impact of EU research and innovation funding.

As stated, **there are three Key Impact Pathways (KIPs), with three storylines each** (yes, we know we repeat them, but they are really important)**, namely:**

Scientific Impact:

(1) Creating high-quality new knowledge;

(2) Strengthening human capital in research and innovation;

(3) Fostering diffusion of knowledge and Open source;

Societal Impact:

(4) Addressing EU policy priorities and global challenges through research and innovation;

(5) Delivering benefits and impact through research and innovation missions;

(6) Strengthening the uptake of research and innovation in society; and

Economic / Technological Impact:

(7) Generating innovation-based growth;

(8) Creating more and better jobs; and

(9) Leveraging investments in research and innovation.

Addressing Impact dimensions

Having evaluated hundreds of proposals throughout various framework programmes, we are able to identify a typical mistake which is addressing too few impact dimensions (generally the ones for which receiving data and finding supporting evidence is quite “easy”). This is the second common pitfall in writing the ‘Impact’ section. By that, many applicants tend to neglect many other dimensions which are not less important. In this context, it is important to dive deep into all aspects of the project and critically assess and determine any additional dimensions that can be noted.

Tip: Proposals should try and cover as many as possible of the above-mentioned Key Impact Pathways along with their different storylines. Having said that, the opposite scenario of attempting to “cover all” the above-mentioned pathways but with very weak or vague links to the presented project should be avoided.

The ‘Impact’ section in Horizon Europe proposals

The impact section (section 2) in the Horizon Europe proposals consists of 3 sub-sections:

2.1 Project’s pathways towards impact

2.2 Measures to maximize impact (Dissemination, Exploitation, Communication)

2.3 Summary canvas

In the Impact section, your proposal should demonstrate:

- Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme, and the likely scale and significance of the contributions due to the project.

- Suitability and quality of the measures to maximize expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities

Tip: A recommended way to ensure strong pathways to impact is by involving a variety of stakeholders in the co-creation of your project plan from the beginning of the proposal writing.

Such an approach is guaranteed to deliver widespread benefits such as the ones the European Commission is looking for.

Tip: In addition, to score highly on this section you will need to include baselines, benchmarks and assumptions showing where we are now and where we will be at the end of the project and beyond. This can be in terms of, for example, expected revenues from new technologies, size of patient groups that will be affected by a new treatment, number of new jobs that will be created after a successful project, growth in the number of users of emerging technology, and so on.

2.1 Project's pathways towards impact

[e.g. 4 pages] (RIA/CSA actions)

> **Evaluation criterion** (what is evaluated under section 2.1.): 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 from to the project.

Section 2.1. (Project's pathways towards impact) may be the most important sub-section describing the impact of the project. We strongly recommend to carefully study what is expected under this subsection, understand the evaluation criteria in that regard, and to attend to all the requirements.

Section 2.1. (Project's pathways towards impact) **must** address 3 sub-sections (even if they are not specifically mentioned as such in the proposal template; trust us, this is what the evaluators assess, and your proposal must convincingly address all of them separately):

2.1.1. The project's critical pathways towards outcomes and impacts

2.1.2. Requirements and potential barriers to outcomes and impacts

2.1.3. Scale and significance of the project's contribution to outcomes and impacts

We will detail all these three sub-sections below.

2.1.1. The project's critical pathways towards outcomes and impacts

In this sub-section, the project should 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** (think 10 years after the end of the project).

The project's pathways towards impact consist of the following 3 elements:

Results – These would be the immediate, short-term outputs of the project. Examples include: know-how, innovative solutions, algorithms, proof of feasibility, new business models, policy recommendations, guidelines, prototypes, demonstrators, databases and datasets, trained researchers, new infrastructures, networks, etc. The project's results must correspond to its objectives as well as to the scope defined in the topic description.

Outcomes – These are expected effects, over the medium-term, of projects supported under a given topic. The results of a project should contribute to these outcomes fostered, in particular, by the dissemination, communication and exploitation measures. The project's outcomes should directly correspond to the expected outcomes set in the topic description.

Impacts – These are wider, long-term effects on society (environment included), the economy and science, enabled by the outcomes of R&I investments. They generally occur sometime after the end of the project. Impacts should refer to the specific contribution of the project to the Work Programme's expected impacts described in the Destination under which the chosen topic is situated.

Under section 2.1.1, the proposal text should explain how all 3 elements will stem from the project's concept and work plan. The proposal should also demonstrate how each of these elements will contribute to the relevant expected impact(s), as illustrated in Figure 4.

As the applicant, it is your goal to convince the reviewers reading the project proposal that your project can essentially meet all these expectations during its execution, on all 3 levels:

- The project's results should correspond to the requirements set in the topic's scope.
- In turn, these should lead to the medium-term outcomes that should correspond to the expected outcomes set in the topic description.
- And these, in turn, should lead to the long-term impact, which should correspond to the expected impacts set in the relevant Destination.

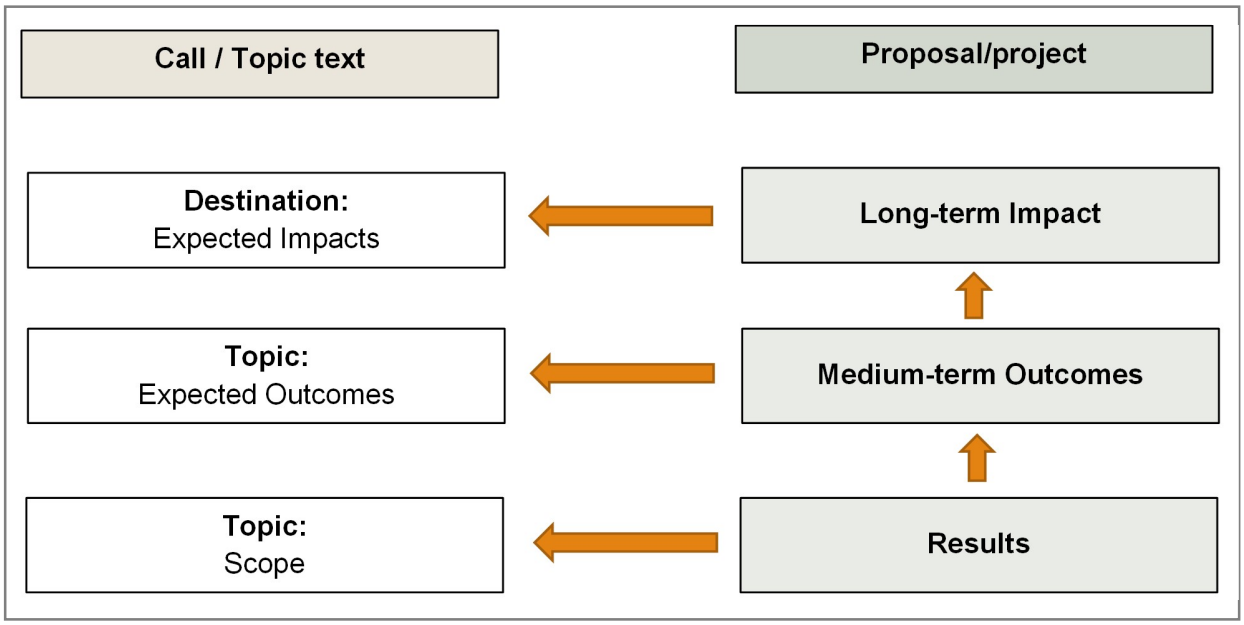

Figure 4. Results, Outcomes, Impacts in HE project proposal

In section 2.1.1. (The project's critical pathways towards outcomes and impacts), your proposal must convincingly address all these aspects below:

1. RESULTS & OUTCOMES (from the Topic): include a narrative explaining how the project's results are expected to contribute towards EACH of the outcomes (→ TOPIC EXPECTED OUTCOMES).

Tip: Here, you should be very specific, referring to the effects of your project, and not R&I in general in this field. Use Key Performance Indicators (KPIs).

2. RESULTS & OUTCOMES (from the Topic): indicate very clearly the **target groups** that would benefit if the outcomes were to be achieved. 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. **NB. These target groups should be included in the consortium (end-users).**

EXAMPLE

Unique contribution of [my project] to the call topic outcomes

i. Enhancing ownership and engagement of the society through active collaboration and empowering people and communities as actors of …. At medium term, to fulfil the growing demand for …. in market products.

….. Explain, detail, convince

….. Use those partners that are responsible for this specific impact

…... Refer to EC policy documents

…… Use figures, percentages, etc., to convince about the effectiveness of your impact

3. WIDER IMPACTS (from the Destination): include such impacts where your project would make a significant and direct contribution. Your project's contribution to the topic's expected outcomes must lead, in the longer term (~ 10 years), to the wider impacts listed in the work programme (→ DESTINATION EXPECTED IMPACT).

Key Impact Pathways (KIPs). Use separate chapters for each KIP, indicating what concrete impact your project will bring in each case.

Tip: Here, your proposal must refer to the Key Impact Pathways - KIPs mentioned in the Horizon Europe Programme Guide (we say '**must**' because these KIPs are a **legal requirement** in Horizon Europe, thus all projects must refer to them).

EXAMPLE

Unique contribution of [my project] to the Destination wider impacts

SCIENTIFIC OUTCOMES AND IMPACTS

…..

ECONOMIC AND TECHNOLOGICAL OUTCOMES AND IMPACTS

……

SOCIETAL OUTCOMES AND IMPACT

……

….. Explain, detail, convince. Be clear, concrete, specific

….. Refer to literature

….. Mention those specific work packages and Tasks where the activities will lead to these impacts

….. Use those partners that are responsible for this specific impact

…... Refer to EC policy documents

…… Use figures, percentages, etc., to convince about the effectiveness of your impact

2.1.2. Requirements and potential barriers to outcomes and impacts

Your proposal should describe here any requirements and potential barriers (in the sense of obstacles) - 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.

You should 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: This does not include the critical risks inherent to the management of the project itself, which should be described below under 'Implementation'.

EXAMPLE

Requirements and potential barriers to achieving the expected outcomes and impacts

	Potential barriers	How [my project] will address the barriers
Economic	Lack of suitable financing mechanism for further commercialization, limited access to funding.	The consortium will present the benefits generated by the project's solutions at dissemination events where industrial actors, governmental departments, national and EU authorities, funding bodies, private equity firms, and venture capital investors will be invited. The project's objectives and results will be also disseminated by the partners at conferences and trade shows
	Considerations to the cost of the solution.	Environmental / financial viability of the proposed solutions will be assessed during the project to reach competitive prices.
Market Acceptance	Acceptance by stakeholders, end users.	……
Policies	Lack of standards and legislation.	The improvement of the certification/standardization and policy measures proposed by the project will increase political, social and industrial acceptance (related WP6). Definitions will be established to be EU broadly applied, existing standards, position papers and formal documents will be reviewed to set the basis for the establishment of potential EU legislations.

2.1.3. Scale and significance of the project's contribution to outcomes and impacts

You should give here an indication of the scale and significance of the project's contribution to the expected outcomes and impacts, should the project be successful. You should 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.

The proposal should explain your baselines, benchmarks and assumptions used for those estimates. Wherever possible, quantify your estimation of the effects that you expect from your project.

You should explain also the 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 your project only - the effect of other initiatives should not be taken into account.

EXAMPLE

Scale and significance of the project's contribution to the expected outcomes and impacts

Link to	Outcomes (medium-term)
Obj.1	…… Describe the outcome …. • Scale: Relevant for all actors in the value chain in Europe • Significance: Prerequiste to further advance R&D based on a common understanding
Obj.2	…… Describe the outcome …. • Scale: European key value chains • Significance: Contributing to standards setting by establishing broadly accepted procedures …
Link to	**Impacts (long-term)**
Impact 1	…… Describe the impact …. • Scale: Companies at the European and global level • Significance: Our proposed process becomes the new norm. It will lead to …. (numbers) reduction/prevention/efficiency
Impact 2	…..

2.2 Measures to maximise impact

[e.g. 4 pages]

> **Evaluation criterion** (what is evaluated under section 2.2.): Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication

Why dissemination, communication, exploitation, IPR are connected to Impact?

Since the impact of the project is of the utmost importance, a mandatory requirement that any Horizon Europe project must meet is having a solid plan that will enable it to maximize its impact (Figure 5).

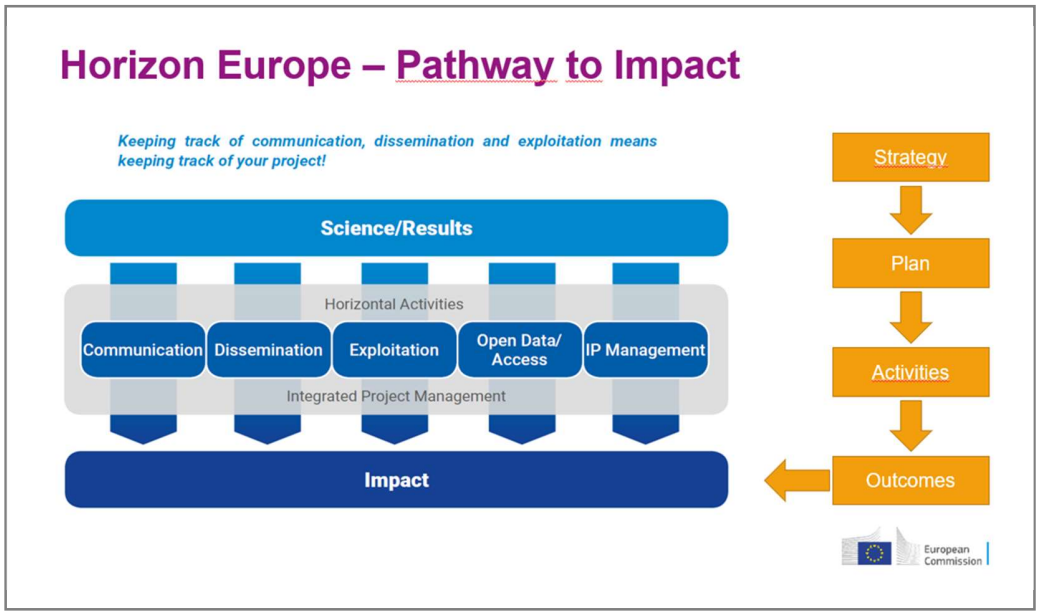

Figure 5. Measures to maximise Impact

Note: Sub-section, 2.2., also refers to IPR management and Open Access (as opposed to Open Science, which should be part of Methodology).

The application form asks for a first version of your ‘plan for the dissemination and exploitation including communication activities’. **Attention! The existence of this plan is an admissibility condition**, unless the work programme topic explicitly states otherwise (**if your proposal does not provide it, it will not be even admitted for evaluation**).

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.

Although the application form (proposal template) asks for a ‘plan for dissemination, exploitation and communication activities’, however section 2.2 Measures to maximise impact **must be split into three sub-section**s (trust us, this is how evaluators assess and score). Each subsection must be very clear and detailed, and for absolutely each sub-section you must indicate the specific **target groups and dedicated channels to reach them**.

2.2.1. Dissemination strategy and plan

2.2.2. Communication strategy and plan

2.2.3. Exploitation strategy and plan

2.2.4. New free-of-charge EC dissemination and exploitation services

2.2.5. Strategy for the management of intellectual property (IPR)

We will detail all these sub-sections below.

Typically, as applicant you are asked to mention only the plans, i.e. activities, however in some cases the evaluators are asked to distinguish between strategy and plan, and penalize the proposal that does not explicitly mention the two distinctly. That is why, when we detail the three sub-sections below, we always mention both strategy and plan, indicating what should be written for both.

Attention! Communication, dissemination and exploitation activities are **an integral part of Horizon projects** – and in Horizon Europe in particular! - to help **maximise the impacts** of EU research & innovation funding.

Rules for Participation

Article 39: Exploitation and Dissemination

Article 40: Transfer and Licensing

Article 41: Access Rights

Horizon Europe Model Grant Agreement

Article 16: Intellectual Property Rights (IPR) – Background and Results – Access Rights and Rights of Use

Article 17: Communication, Dissemination & Visibility

Annex 5 "Specific Rules"

Attention! Communication, dissemination and exploitation activities are mandatory in Horizon Europe! Beneficiaries of Horizon Europe funding **must** carry out activities to increase the impact of their project results:

- They must share research results with the scientific community, commercial players, civil society and policymakers ('dissemination').
- They must also take action to use their project results for commercial purposes, to tackle societal problems or in policymaking ('exploitation').
- Dissemination and exploitation are a requirement as per your grant agreement, in addition to your communication activities.

The communication, dissemination and exploitation activities are directly linked to the section 2.1 above, **Pathways to Impact:**

The Pathways to Impact are *"Logical steps towards the achievement of the expected impacts of the project over time, in particular beyond the duration of a project. A pathway begins with the projects' results, to their dissemination, exploitation and communication, contributing to the expected outcomes in the work programme topic, and ultimately to the wider scientific, economic and societal impacts of the work programme destination."*

What is the difference between dissemination, exploitation and communication?

(Figures 6 and 7)

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

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

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

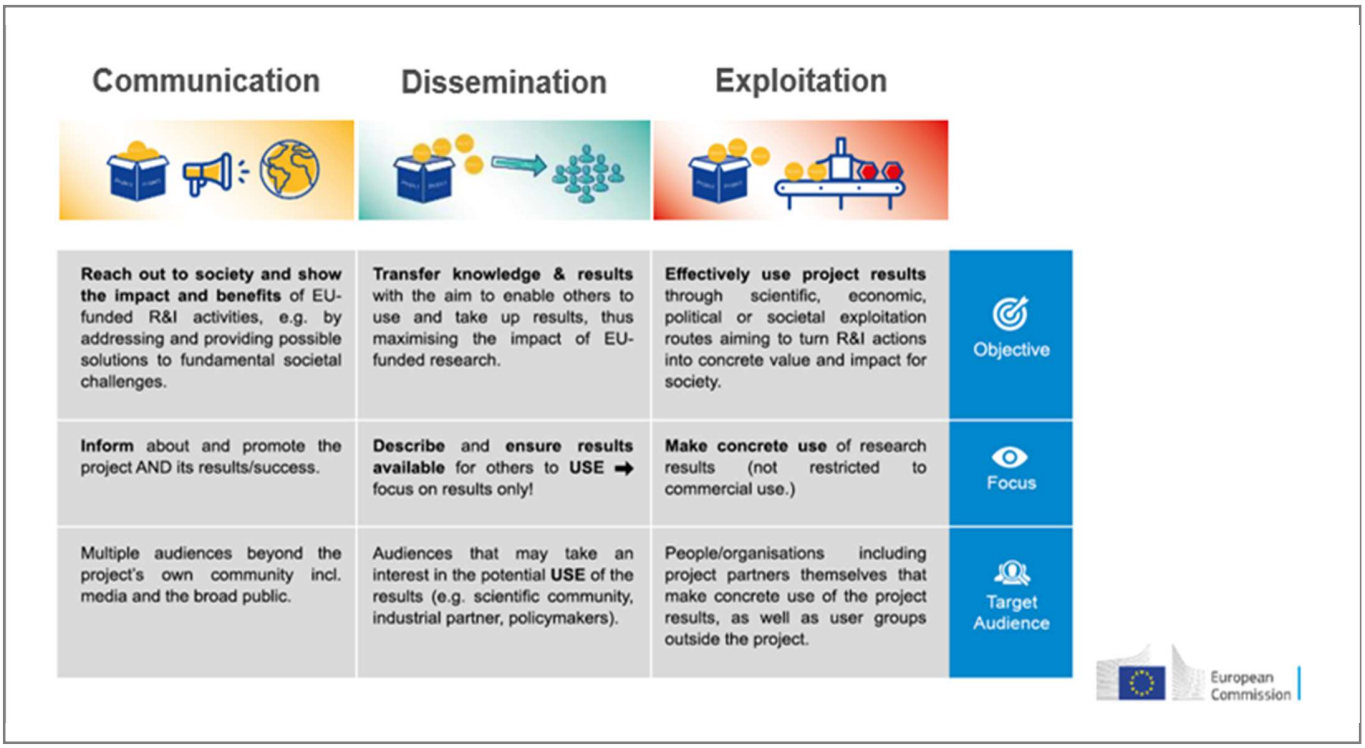

Figure 6. Communication, dissemination, exploitation

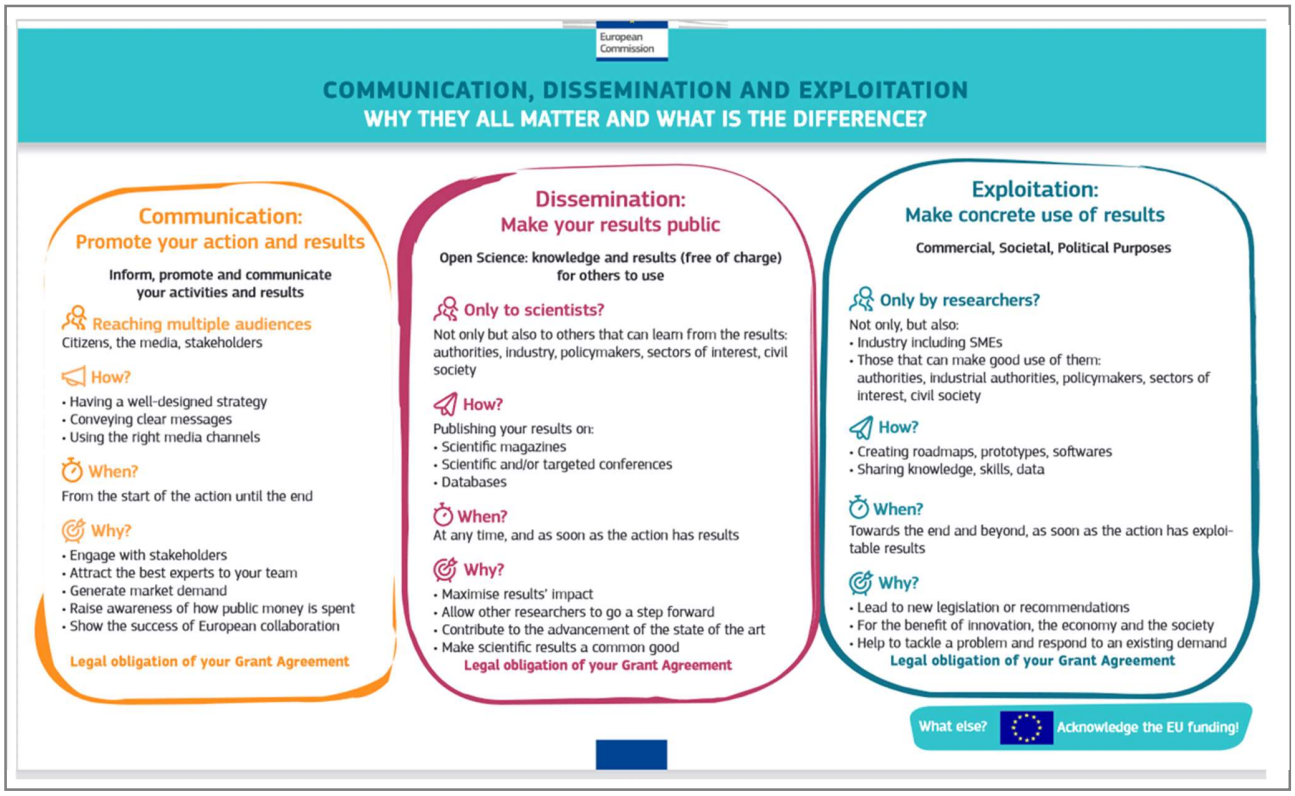

Figure 7. Communication, dissemination, exploitation

How to plan all these activities in your project? The s**trategic planning** of communication, dissemination and exploitation activities **already starts before the project** at the proposal stage (Figure 8).

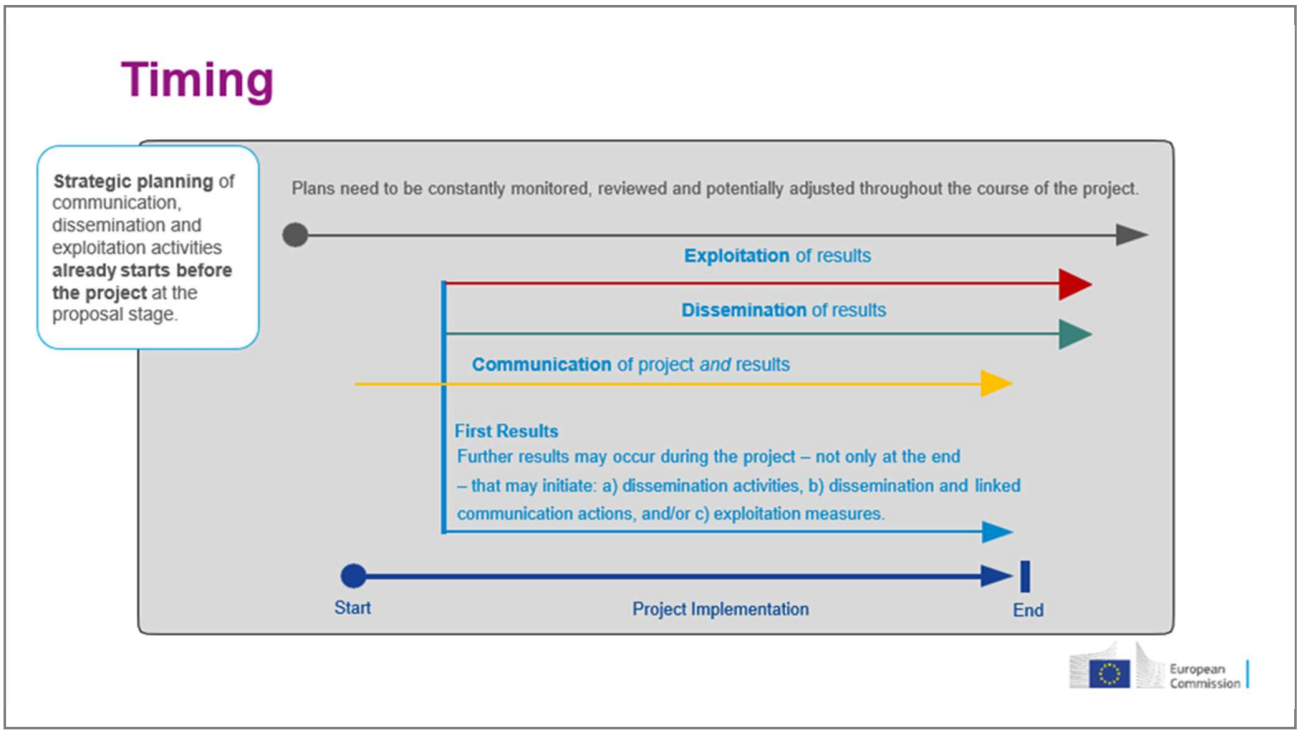

Figure 8. Planning the communication, dissemination and exploitation activities in time

To develop **each** (!) of these plans, you may consider helping questions (detail them, and plan concrete actions, with indicators for measuring the efficiency and effectiveness of each action) (Figure 9).

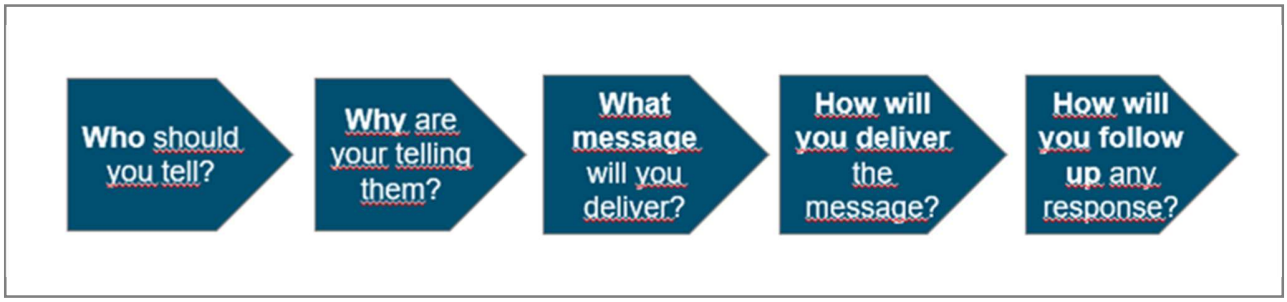

Figure 9. How to develop a plan

In this dissemination, communication and exploitation plan, you will explain the measures you will take to ensure the proper dissemination and exploitation of the project, and how they will help you to maximize the impact of your project. Here, most of the time, the applicants simply mentioned that the outcomes of the project will be either published in peer reviewed papers, or protected by patents. This is clearly insufficient! Of course, patenting and publication will be part of your plan, but you have to think about other measures and give more detail.

2.2.1. Dissemination strategy and plan (actions)

The dissemination plan in Horizon Europe ensures scientific results created during the project are being published and disseminated among the research community. To do so, various means can be used and should be defined at the very beginning of the project.

Dissemination - A process of promotion and awareness-raising during which a project's results are made available and presented – via any medium – to targeted stakeholders (e.g., research peers, industry, policymakers etc.). Stakeholders can then exploit the results for further activity such as research, policy-making, or training (see the following section on exploitation).

The dissemination activities intend to make the results available for use, enabling their use and uptake by specific audiences, which they may use the results in their own work (e.g. scientific community, industrial or other commercial actors, policymakers, professional organizations).

Dissemination strategy

While developing a dissemination and communication strategy, it is important to keep in mind that the budgetary resources for such activities are limited and must be used wisely. The aspects below will help you ensure that your dissemination plan achieves its ultimate goal of maximizing the impact of the project, all within a limited budget:

Objective(s) – Activities should have concrete objectives. Some activities will aim at only informing about the project and its progress, while others will strive to engage target groups and stakeholders, or call them to take on specific actions. Make sure that each activity in the plan has a justified contribution towards the main goal of maximizing the impact in Horizon Europe projects.

Target audience(s) – Identify the audiences and communities that are most relevant for the project activities, and focus on reaching out to them. If the project is related to a specific population (e.g.,

professional, demographic, geographical, sectorial, etc.), think about that population first. When there is more than one target audience, prioritize them according to the expected impacts of the project, from most important to least, but still make sure to address all of them.

Channel(s) – After identifying the audiences and communities for your dissemination plan, it is important to identify the relevant platforms to effectively convey the message to them. Choosing the wrong channels can yield very low exposure of your messaging and dissemination activities. If you are addressing the scientific community, use platforms that are popular for this audience type, such as scientific journals and/or workshops. Consider matters of usage patterns (for example who uses each platform, when it is used, etc) and accessibility when deciding where to disseminate project information and activity. Finally, after identifying the most relevant channels for your audience type, be sure to carry out your dissemination activities through several channels, rather than choosing only one. This can help to increase potential exposure of your research project.

Messaging – The messaging of the dissemination activities should be adapted both to the target audience and to the specific channel used. On the one hand, you'll need to consider the specific language and visual content that will appeal to them, and on the other – the rules and requirements posed by each marketing or communications platform. In the case of several audience groups, adjust the messaging accordingly, but try to keep a single general story that can be identified with the project.

Dissemination plan

To draft your plan, answer the following questions (https://rri-tools.eu/toolkit):

- **Who are the stakeholders** that will use the outcomes of our project?
- **Which media will you use to reach them** (during and after the project)?
- **What will be your dissemination activities?**
- **How will these activities support the impacts listed in the 2.1 subsection?**

The plan lists the activities that should be considered to lead to the achievement of the strategy. It is important to choose the activities that carry the greatest potential to achieve the objectives and reach out to the right audience. Here are some examples for such activities:

Dissemination activities. Scientific activities are one type of dissemination activities. These are aimed at defusing the project's results to the scientific community. For example, scientific publications and books, organizing and participating in conferences and workshops, enabling open access to databases, or releasing reports describing the progress of the research. Other potential dissemination activities are those aiming to engage specific groups that can benefit from the results of the project. For example, projects developing novel health technologies can disseminate the results among health professionals and hospitals who, in turn, can adopt these results. Another example refers to results from projects on tackling social inequalities that can be presented to relevant policymakers, who can potentially adjust policies in accordance with the new knowledge.

The main tools, among others, to achieve that are (i) scientific publications in relevant journals (**Tip:** Having academic entities in a collaborative project can constitute a key asset in this regard); (ii) share results on online media (research data, software, reports) and (iii) organize training and workshop sessions, as well as (iv) a final project event to demonstrate to customers.

Below we list of the most important actions your dissemination plan should include:

Publication of scientific articles: Scientific articles are the cornerstone of dissemination. Obviously, the number of articles published will depend on the amount of research activities performed during the project and on the field of research. Try to be ambitious but realistic. Benefits are triple, as this will benefit the career of the scientists, the reputation of the organization and the impact of the project.

Oral presentations: Presenting the results of your research activity during a congress can also have a significant impact. Target the appropriate conferences according to topic, target and outreach. With a high-quality content, aim to attend the most important ones in the field. Try to make your presentations more visual by incorporating graphs, charts and infographics.

Presentation of posters: Poster are usually easier to create and publish than oral presentations or articles. Nevertheless, the same rules apply regarding where posters will be published. Select the most appropriate events where you will maximize the impact and make sure you will reach the largest and most appropriate audience. For posters, the support of a designer can significantly improve the aspect and thus the understanding. Often, the information is not well organized or badly represented. Diagrams are a good way to simplify the information visualization.

Patents: Being able to patent a process or a technology is a high point in research. This points out that your research distinguishes itself from others, that it shows real excellence and a strong

market potential. Patents are difficult to obtain but they are the best element to make sure the project will continue and lead to further tangible economic and scientific results.

Organization of events: To convey a strong message and to make sure your audience receives it and understands it well, events with face-to-face discussions have a much stronger impact. They often allow you to establish long term relationships with future partners, customers or providers and to learn insightful information about the field. Although these events gather a relatively small number of attendees, around 50-100 on average, the links established are strong. Furthermore, such events provide attractive content for your communication channels. Try to couple your event to a larger one such as conferences and fairs. The benefits will be mutual. Events can be held physically or online; each type has different advantages. Combining both might be a good option.

Networking with other projects: To benefit from synergies with other researchers in the field, it is important and recommended to develop joint activities. There are often other projects developing fairly similar knowledge with whom certain synergies might appear. Although most of the work is confidential, common activities can be organizes such as public workshops or conferences that could reach a critical size much easier and thus have a far larger impact

Put all the listed items in a synthetic and clear manner together in the work package description and excellence part to distinguish your proposal. Also, prepare the adequate budget. When executing these tasks, use the communication tools such as the logo and do not forget to mention the funding sources adequately!

2.2.2. Communication strategy and plan (activities)

A good communication plan in Horizon Europe makes the difference between an excellent proposal and a **winning** proposal.

Communication - Strategic and targeted measures taken in order to promote the project and its results to the public at large, while possibly engaging in a two-way exchange. The aim is to reach out to society while demonstrating how EU funding contributes to tackling societal challenges.

Tip: Starting with the communication part while drafting the project, it is important to think what activities and what materials will best suit the project. It is crucial if you are the coordinator to lead this part even though you can rely on one or two key partners to help you execute the tasks. As

a coordinator, you are the most informed organization in the consortium and information is the key for a successful communication. Take into account that you will be the spokesperson of the project and the main contact point for journalists.

Communication strategy

While developing a communication strategy, it is important to keep in mind that the budgetary resources for such activities are limited and must be used wisely. The aspects below will help you ensure that your communication plan achieves its ultimate goal of maximizing the impact of the project, all within a limited budget:

Objective(s) – Activities should have concrete objectives. Some activities will aim at only informing about the project and its progress, while others will strive to engage target groups and stakeholders, or call them to take on specific actions. Make sure that each activity in the plan has a justified contribution towards the main goal of maximizing the impact in Horizon Europe projects.

Target audience(s) – Identify the audiences and communities that are most relevant for the project activities, and focus on reaching out to them. If the project is related to a specific population (e.g., demographic, geographical, sectorial, etc.), think about that population first. When there is more than one target audience, prioritize them according to the expected impacts of the project, from most important to least, but still make sure to address all of them.

Channel(s) – After identifying the audiences and communities for your communication plan, it is important to identify the relevant platforms to effectively convey the message to them. Choosing the wrong channels can yield very low exposure of your messaging and communication activities. If you aim at engaging the elderly, perhaps social media will not be the best way to reach out to large segments of this specific target audience. Consider matters of usage patterns (for example who uses each platform, when it is used, etc) and accessibility when deciding where to disseminate project information and activity. Finally, after identifying the most relevant channels for your audience type, be sure to carry out your communication activities through several channels, rather than choosing only one. This can help to increase potential exposure of your research project.

Messaging – The messaging of the communication activities should be adapted both to the target audience and to the specific channel used. On the one hand, you'll need to consider the specific language and visual content that will appeal to them, and on the other – the rules and

requirements posed by each marketing or communications platform. In the case of several audience groups, adjust the messaging accordingly, but try to keep a single general story that can be identified with the project.

Communication plan

You should give answers to the following questions:

- What are your **objectives and messages**?
- What **audience** are you targeting? Of course, you can have several targets but be sure to target specific specific stakeholders which are consistent with your project, don't be too general.
- How you will reach your audience (your **means of communication** = website, social networks, videos, conferences, press release, etc.)?

The communication plan should include informing activities – these activities can raise awareness about the project and engage the public you are addressing. It includes, for example, active social media presence and social networks activities, events, project website, press releases, engaging forums, advertisement and campaigns.

The communication plan should include a basic communication toolbox that will support researchers in their daily work, foster the identification with the project and create an external brand awareness. This toolbox comprises the following items:

Logo: it should not only be visually appealing but also have a strong meaning behind it. Explain why you choose this font, this color, this icon, this shape, this visual effect, etc. The logo should reflect what the project is about but also the story and the meaning that goes with it. It is important to explain this to the consortium.

Templates: Based on this logo and respecting the visual identity defined with it, the main communication tool will be document templates such as presentations, deliverables and posters. Although this might sound surprising, researchers and project managers will spend a lot of time on these documents and many people will read or see them. Hence, put efforts into these templates!

Website: As a main information portal in the digital age, a website is essential. It is a marketing manager working 24/7 at minimum cost. Maintain it one or two years after the project ends. Get a domain that includes the acronym of the project with a top level domain .eu if it is funded by European funds. It should be responsive, optimized for search engines, be visually attractive including various images or videos. Basic sections include extensive project description, consortium presentation, news and contact section. The website should be updated regularly and publish as many news items as possible related to the project activities (once a month). Make sure you do not publish any confidential information!

Leaflet: A handy and old-school material that still has utility is the leaflet. 4-8 pages are usually enough to present what the project is about. Make sure to put attractive headlines, limit the amount of text and use visually appealing pictures or infographics. Icons are also very helpful. Usually, the leaflet can be updated every year.

Infographics: They are extremely useful in order to represent in a simple and beautiful way the project as a whole or a specific process/activity. They can then be used in the website, leaflet, presentations and more. This is a key item between a standard communication and an outstanding one!

Roll-up: When going to fairs, conferences or other promotion events, a roll up is very useful. Put the project logo, a brief sentence about the activity and objectives, an infographic, contact details, logos, consortium and funding sources. The objective is to understand in 5 seconds what the project is about.

Video: A video is also a very good way to present the project. Here there are two possibilities: make it at the beginning to raise awareness around the project presenting the objectives, or at the end to present the project results and achievements. Animation or filmed, both options are good, depending on the topic. But keep it short and condensed! Punchy!

Press release and conference: For the kickoff or when you have a big result (usually at the end of the project) a press release sent directly to journalists (especially local ones) is a very good way to get media coverage. If the content is exceptional, a press conference can be organized. You can ask for support to the local representation of the European Commission. They are experts in this field as the staff is working in DG COMM!

Social media: A must in the 21st century, social media are a powerful amplification channel. You can reach news audiences, interact and convey simple and informal messages. However, limiting activity to Twitter and LinkedIn might be sufficient in order to avoid the risk of leaving accounts

empty. These two networks are the most important for the professional environment. A project Twitter account is a must although on LinkedIn, sharing news items published on the project website through the account of researchers has more impact than creating a dedicated company page or group.

Be aware: For Horizon Europe projects, all communication items shall have the EU emblem, sources of funds and disclaimer.

Include these items in your proposals in a clear and synthetic way while adapting it as much as possible to your project and adding any further item. This is only the minimum! Of course, the support of a good graphic designer is essential!

Practical tip: Relating each potential tool with a target date within the project timeline (e.g. website to be launched by month 3) and with a target value (e.g. attend at least four conferences during the project's duration) will show to the evaluators that you have at least conduct a preliminary communication plan for your project.

Practical tips:

- Reach out to society as a whole and in particular to specific audiences.
- Demonstrate how EU funding contributes to tackling societal challenges (also from a socio-economical point of view), highlighting the environmental approach where applicable.
- In our current Covid-19 era, any (in)direct relevance of the project with the pandemic can be highly valued.

Tip: Target events in the primary geographical target markets and achieve commercial publications in online/offline magazines and blogs.

EXAMPLES

Communication and Dissemination plans

https://tuntwin.org/wp-content/uploads/2021/05/D4-1_DCS_v02-H_R.pdf

https://www.projectdiva.eu/wp-content/uploads/2018/09/D6.1.-Dissemination-Communication-Plan.pdf

https://ec.europa.eu/research/participants/documents/downloadPublic?documentIds=080166e5b16e72bb&appId=PPGMS

2.2.3. Exploitation strategy and exploitation plan

Exploitation - The future utilization of a project's results is another useful measure for maximizing impact. Exploitation activities are those concerning further development, creation and marketing of a product or process, based on the project's results. Exploitable results are those that can be further used by a range of people, including the scientific community, industry, policy-makers, governmental authorities, and the public.

Exploitation strategy

As before, you should think about the following:

Objective(s) – Activities should have concrete objectives. Some activities will aim at only informing about the project and its progress, while others will strive to engage target groups and stakeholders, or call them to take on specific actions. Make sure that each activity in the plan has a justified contribution towards the main goal of maximizing the impact in Horizon Europe projects.

Target audience(s) – Identify the audiences and communities that are most relevant for the project activities, and focus on reaching out to them. When there is more than one target audience, prioritize them according to the expected impacts of the project, from most important to least, but still make sure to address all of them.

Channel(s) – After identifying the audiences and communities for your exploitation plan, it is important to identify the relevant platforms to effectively convey the message to them. Choosing the wrong channels can yield very low exposure of your messaging and exploitation activities.

Exploitation plan

To plan the exploitation activities, it might be useful to think to the following questions:

- **What are your exploitable results** (knowledge, know-how, technologies, software, products, services…)?
- **What measures will you take to ensure their actual exploitation?** (patenting, licensing, registered designs…)? Remember that patenting is good and useful, but it is not a "must-have". You should mention it only if it makes sense and if you really plan to patent your research. You can develop innovations and keep the know-how secret instead of patenting for example.
- **How will you ensure that your results will meet the end-users needs?** How will you involve them in your project?

For each aspect, precise the specific roles and responsibilities of each partner.

A good exploitation plan in Horizon Europe has to be precise about the impact of the results of your project on science, industry, society and governments mostly after its end.

Results are any tangible or intangible output of the project, such as data, knowledge and information whatever their form or nature, whether or not they can be protected.

Stakeholders should be targeted with specific results according to the desired impact the project aims to have. We present below a summary (Table 4).

Table 4. Exploitation measures and activities

(Source: https://eufunds.me/what-makes-a-good-exploitation-plan-in-horizon-europe/)

Stakeholder	Results	Impact
Research community	Publications (Papers, Books) Posters, Presentations, Data, Softwares	● Further research activities and publications containing new insightful results
Industry	● Patenting ● Pilot plants and prototypes ● Transfer agreements ● Joint venture/Start-ups ● New products and services ● Development of standard tests and procedures ● Codes of conduct	● Generate economic growth ● Development of a new product or service ● Improvements of production processes and competitiveness ● Improve product quality and consumer protection
Civil society	● New products, services or technology ● Trainings, presentations and visits ● Educational materials ● Skills and knowledge	● Increase quality of life ● Improve living environment ● Improve urban and rural services ● Improve healthcare ● Reduce energy consumption ● Increase product quality control ● Improve employability
Policy makers	● Reports ● Policy papers and recommendations ● Roadmaps ● Operational guidance	Revision or creation of a new directive or regulation (EU Law)

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

Attention! Policy-makers. 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.

To create good results and to make sure these have a large impact, a series of accompanying tasks should be carried out during the project execution and should be included in the exploitation plan.

Examples of common exploitation practices:

Scientific advances/re-use – Scientific outputs such as models, methods, prototypes, and any available data generated throughout the course of the project can be utilized by the scientific community for future research. For example, data collected for the purpose of studying lung cancer can be used by the scientific community to explore other lung diseases and/or other types of cancers.

Commercial – Technological foundations, prototypes, and research data are some of the products that can be exploited for commercialization reasons. Simply put, these are outputs that can be used to create, expand, or influence markets. New technologies or methods that are developed as part of the project can serve as the first step towards creating a new start-up and entering the market.

Policy-making – Project results may provide policy-makers and regulators with evidence-based information that can be useful in the process of forming new policies or changing existing ones. Results and new knowledge emerging from the projects can serve decision-makers while forming strategies in various fields such as health, environment, security and industry.

Training and education – Some of the results can be used to develop education and training programs for professionals and/or the general public. They can provide skills and knowledge, and bring about societal transformation. For example, projects dealing with trustworthy online information can develop training for citizens on identifying and assessing the quality of health information online.

Below we present a list of possible exploitation activities. This list is not exhaustive as each project has different needs and exploitation possibilities.

Technological Watch: After having defined clearly the extent of the technological field of the project, create a global database of existing knowledge including patents, papers and public releases. The partner in charge should send every 6 months a summary to the consortium to stay updated about the latest developments, follow market trends, and plan the possible patenting or publication of project results. The world changes rapidly and competition is tough!

Intellectual Property Rights Management: Linked to the task above, partners should protect their intellectual property developed during the project from possible external threats. This encompasses also the development of mitigation strategies in case of internal disagreements between partners that might occur following the rules defined in the Consortium Agreement.

Exploitable Results Identification: Around the middle of the project, the consortium should start to map the potential results that could be exploited, meaning that this result will be used and further developed after the end of the project. This mapping is ideally done during dedicated sessions including all members of the consortium such as Exploitation Strategy Seminars offered by external consultants. Concentrate on the most promising results and develop them as much as possible by engaging with potential users and obtaining feedback.

Market Analysis: Once the key exploitable results are defined, perform a market analysis to assess the potential of each result. It encompasses a quantitative and qualitative assessment looking into the size of the market both in volume and in value, the various customer segments and buying patterns, the competition, and the economic environment in terms of entry barriers and regulation.

Business Model: To design the business model for a specific result, frameworks such as the Business Model Canvas and the Value Proposition Canvas are recommended. Define target users, identify and evaluate the potential sales strategies (direct sales, licensing, joint venture, spin out…), assess the requirements for further technology development/scale-up to support market entry.

Tip: The project partners are the first to exploit the project results themselves, by their own efforts or facilitate exploitation by others (e.g. through making results available under open licenses). This can take place via innovation management actions, copyright management, data management plan and stakeholder/users engagement, among others. Common tools towards these directions are:

- patent publications
- establishment of spin-off or start-up companies
- license practices (open, copyleft)
- use of the results for academic purposes (PhD, post-PhD).

EXAMPLES

Plan for dissemination and exploitation of results

https://www.greencharge2020.eu/deliverables/d8-2-dissemination-and-exploitation-plan-v1/

https://eeradata-project.eu/wp-content/uploads/2021/07/EERAdata-explotation-plan_M18-update_FINAL.pdf

Additional exploitation obligations

Article 39 of Horizon Europe legislation gives the possibility to add exploitation obligations. The additional exploitation obligations are useful to tailor some additional obligations to specific needs in a given work programme (please check if this is the case with your work programme).

For example, Horizon Europe puts more emphasis on **standardization.**

Standardisation. What is standardisation?

A standard is a document that sets the technical requirements of a product, service or process and its use. Standards are adopted by recognised standardisation bodies (such as ISO, CEN, CENELEC, ETSI, and many more). In these organisations, representatives from industry, research, governments and civil society, discuss and agree on what should be a standard. Once a standard is published, its use is normally voluntary but in some cases certain specific standards can be made mandatory by law.
In other words, standards form a common language that allows researchers, people, public institutions and industry to communicate, produce and commercialise products and services in a harmonised manner. This is especially important in the European single market.

Why is it important to consider standardisation when drafting a proposal?

Standards play an important role in the valorisation of research & innovation results: They help researchers bring their innovation to the market and spread technological advances by making their results transparent. In spreading the diffusion of new technologies, standards provide both economic opportunities, facilitate realisation of

SDGs and give confidence to consumers that an innovative technology is safe. They codify the technology requirements and inform both manufacturers and consumers on what to expect. They allow technologies and materials to be interoperable: since a standard provides details on the use and content of a technology or a material, it is much easier to know when and how it can be used in combination with other technologies.

If the project is relevant for standardisation you should involve standard development organisations in the consortium in order to facilitate the valorisation of project results through standardisation.

2.2.4. New free-of-charge EC dissemination and exploitation services

The European Commission offers various free-of-charge services to support your dissemination and exploitation activities:

Open Research Europe platform: An open access, publishing platform for scientific papers for Horizon 2020 and Horizon Europe beneficiaries, including an open peer review and article revision. This tool was officially launched only a few days ago. If you have any scientific publications, you may want to explore this more in detail. Open Research Europe is an open access publishing platform that beneficiaries can use to publish any research results coming from R&I funded programmes and it's in line with the EU's open science policy. An editorial team will review the article upon submission to ensure that policies and ethical guidelines are adhered to, and an open peer review and article revision will follow.

Horizon Results platform: A platform for showcasing your research results, finding collaboration opportunities and getting inspired by the results of others. It's a place for beneficiaries to upload and promote the Key Exploitable Results (KER) of their projects, and it can be used as a matchmaking tool, making it easier for you to meet people who are interested in your results. When uploading your KERs, you may also add what type of support you are looking for.

Horizon Results Booster: Free consulting services including a portfolio dissemination and exploitation strategy, business plan development and go-to-market support. The Horizon Results Booster is a free tool that the European Commission offers beneficiaries, and it is aimed at maximising the impact of R&I projects. You can apply as one single project or as a project group. You just need to select which service you need and submit your expression of interest. Within the Booster, the beneficiaries can find three services:

- Portfolio Dissemination & Exploitation Strategy
- Business plan development
- Go to Market

Innovation radar: An initiative that identifies high-potential innovations, based on a data-driven methodology, and assists EU-funded researchers and innovators in reaching the market with their innovation.

2.2.5. Recommendation from the EC regarding the dissemination and exploitation plan

The Horizon Europe Programme Guide makes specific recommendations about drafting the dissemination and exploitation plan. We outline them below, for the example used by the EC (a project involved in water treatment).

1. Prepare your planned summary for exploitation and dissemination activities carefully.

1) Identify the problem/need to address

Example: in a context of pandemic, the current sand water treatment does not filter against viruses. It requires the use of iodine and chlorine which in large quantity may have an impact on health and the environment.

2) Check what is the current offer (e.g. competition)

Example: The market usually offers:

- Reverse Osmosis (R.O.) Membranes
- Ultrafiltration (U.F.) Membranes
- Micro-Filtration (M.F.) Membrane
- Nano-Filtration (N.F.) Membrane.

3) What is the added value of your research/technology/methodology

Example: using techniques issued from biomimetics, to filter the water and combat the viruses like live organisms do in nature.

4) Identify the Key Exploitation Result(s) (KER)

This aspect is extremely important since all beneficiaries have an obligation to define the expected key results and their strategy for exploitation and dissemination.

Hence the following information must be included:

A list of key expected results (KERs) that might be exploited (i.e. with commercial or industrial applicability) including their:

- description
- ownership status – basis for **Research Ownership List** to be included in the final report
- sector of application,
- protection measures - geographical coverage (if applicable).

Example: our KER will be an eco-friendly biomimetic membrane for filtering water thereby removing 99% of viruses in water treatment plants.

5). Explain what the outcome is (do not confuse it with the expected impact to be addressed in the canvas of the application)

Example of the outcome: We would like to create a filtering membrane to treat tap water. At the end of the project, the technology should be used by 10 water treatment plants.

The expected impact will be: For companies and water treatment plants, our technology is expected to reduce the costs in the long run (after the initial investment) and the use of chemical product to treat the water. We plan on testing the technology in X region(s) of the EU and this environmentally friendly technology should encourage help reducing the use of plastic bottles by consumers who would then drink tap water.

6) Identify the target groups (early adopters)

Example:

Target group: water treatment equipment manufacturers (filter manufacturers).

End users: water treatment plants that have been approached by the consortium and agreed to test the technology.

7) Describe some dissemination measures and channels to reach out to your target audience

Example of dissemination measures:

- Organising visits for potential investors and/or B2B to the demo plant
- Participation in events such as trade fair dissemination to increase awareness of our project amongst target user base, including international conferences on water management & environment.

8) Describe some exploitation measures

Realize a Demo plant to show the UVP (Unique Value Proposition) of the novel solution:

• Establish contacts with industry (B2B) e.g. scan main players in the water treatment and gather information about the dynamics of each of the target markets

• Reach out to end-users (regional water authorities, consumers) identified during the dissemination activities to redefine/improve features of the product

• Organise testbeds with end users (public authorities, companies in water treatment, citizens).

9) How your results can feed back to policy making and how it contributes to EU priorities

Example:

Water treatment would contribute to higher quality of tap water at a lesser cost with a better taste and the guarantee of a safer product (free of viruses), thereby encouraging citizens to drink tap water instead of bottled water, and reducing the impact on the environment, thereby contributing to the green deal. We will reach out to the local authorities to raise their awareness and get their support. We will implement a mapping of stakeholders at the local governmental level. For that we can rely on indicators as level of interest in water management but also Go-to-market service from Horizon Results Booster. We will create a white paper to be distributed to regional water authorities from the region of A and B (where we intend to run the tests).

2. Involve potential end-users and stakeholders in your proposal.

Stakeholders should be committed from early on, they may help guide your work towards specific qualities and applications of your results. 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 co-creating and testing the results and providing feedback. In the case your project aims at providing policy recommendations, you may want to approach policy makers from local/regional/national authorities, or regulatory bodies in order to design your research project bearing in mind their needs from the start, and to actively involve them during the project to integrate their feedback and know their potentially evolving policy needs.

3. Say how you expect the results of your project to be exploited/further developed and give the main advantages of the new solution(s) you expect to emerge.

The results could be for example: a manual, test, model, new therapy, better product or process, or improved understanding of mechanisms and advantages for reduced material or energy usage, improved safety, or better-trained staff. Explain how you expect results like these to be exploited. 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.

4. Link your proposal to the policy context of the call for proposals.

Think of how your project's results will contribute to the outcomes specified in the calls and topics and how they are linked with the wider impact, in the longer term, specified in the respective destinations in the work programme.

Consider the following questions:

• What are the objectives of your project?

• Why and how can they be important in view of work programme?

• What target audience (user communities? Parts of the society?) would benefit?

• Is it clear how the effects of your project can contribute to the outcomes or wider impact?

5. Implement open science/open access practices.

Think of use, ownership and access rights. Open science practices are addressed and evaluated under ‘excellence’ as they are considered a part of the methodology. However, open access in particular also results in the broad dissemination of knowledge and is relevant in the context of dissemination.

Providing open access to peer-reviewed publications is mandatory in Horizon Europe, when peer-reviewed publications are produced. Open access to generated research data is required under the premise ‘as open as possible as closed as necessary’, meaning that there can be exceptions to this. Data management plans are mandatory for all projects generating or reusing data and should be aligned with the D&E plan. Additionally, we recommend that you provide open access to research outputs beyond publications and data (e.g. software tools, models, apps, etc.) and share them as early and openly as possible providing guidance for potentially interested users. Costs for providing open access to publications and data are eligible and should be budgeted in the proposal.

6. Show you understand the barriers to any exploitation of your results. How will you tackle them?

Possible obstacles may include:

- inadequate financing
- skills shortages
- other R&I work within and beyond Horizon Europe
- regulation that hinders innovation
- intellectual property right issues
- traditional value chains that are less keen to innovate
- incompatibility between parts of systems (lack of standards)
- mismatch between market needs and the solution
- user behaviour.

Your proposal should show you understand these impediments and how you will tackle them. You may involve in your project experts in economics, business, marketing and public administration that could help to overcome barriers.

2.2.6. Recommendation from the EC regarding the communication plan

Since EU grants are financed by public funds, beneficiaries are generally expected to actively engage in communication activities, to promote the projects. Communicating and promoting the project

What does communication involve?

Communication activities must already be part of the proposal and be described in the draft Dissemination and exploitation plan including communication activities which is an admissibility criterion.

A good communication plan should define clear objectives (adapted to various relevant target audiences) and set out a description and timing for each activity. With your communication activities you should draw the attention of general and specialised audiences to the EU policy area addressed by the call. Good communication

- Starts at the outset of the action and continues throughout its entire lifetime.
- Is strategically planned and not just ad-hoc efforts.
- Identifies and sets clear communication objectives (e.g. have final and intermediate communication aims been specified? What impact is intended? What reaction or change is expected from the target audience?).
- Is targeted and adapted to audiences that go beyond the project's own community, including the media and the public.
- Chooses relevant messages (e.g. how does the action's work relate to our everyday lives? Why does the target audience need to know about the action?).
- Uses the right medium and means (e.g. working at the right level — local, regional, national, EU-wide; using the right ways to communicate — one-way exchange (website, press release, brochure, etc.) or two-way exchange (exhibition, school visit, internet debate, et.); where relevant, include measures for public/societal engagement on issues related to the action).
- Is proportionate to the scale of the action.

2.2.7. Strategy for the management of intellectual property (IPR)

Your proposal should 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.

What the IPR sub-section is about?

Each Horizon Europe beneficiary shall use its best efforts to exploit the **results it owns**, or to have them exploited by another legal entity, in particular through the transfer and licensing of results. In this respect beneficiaries are required to adequately **protect their results** – if possible and justified – taking account of possible prospects for commercial exploitation and any other legitimate interest.

Please note that the provision of a **results ownership list (ROL)** is **mandatory** at the end of each Horizon Europe project.

Consortium Agreement. As an applicant, it is useful to keep in mind the following:

- At the stage of forming the consortium, before submitting your proposal, attention should already be paid to eventual and expected results, ownership issues and the associated intellectual property rights (IPR) with a view to disseminating and exploiting the results efficiently.
- The consortium agreement sets the framework for successful project implementation and results exploitation including intellectual property management, and is meant to settle where already possible all issues that might hamper the smooth and seamless cooperation of the different actors for the different parts of the project.
- Having a consortium agreement with clear IPR management and ownership rights between the consortium members can maximise the exploitation potential of the project's results.
- The consortium agreement should in principle be negotiated and concluded before signing the grant agreement, and should complement the grant agreement but must not contain any provision contrary to it.
- The consortium agreement is a private agreement between the beneficiaries setting out the rights and obligations amongst themselves, and does not involve the Commission/Agency.

Note: Although this does not come as an evaluation sub-criterion, it WILL be assessed during the evaluation. It is not scored, per se, however if this issue is not at all addressed in the proposal, the evaluators will consider it a shortcoming, and may penalize it. Trust us.

According to the Horizon Europe Programme Guide, particularly in the case of projects aimed at economic and societal exploitation, the strategy for IP management must be commensurate with the desired outcomes and impacts. Hence, a weakness or failure to submit such a strategy would also need to be reflected in the proposal evaluation (scoring) with view to the 'credibility' of the envisaged impact pathways.

Therefore, we suggest addressing the IPR sub-section by answering to the following questions:

- Does the proposal present a comprehensive and feasible strategy for the management of the intellectual property generated in the project, including protection measures (if relevant)?
- Is the IP strategy commensurate with the described impact pathways to outcomes and impacts and therefore underpins the 'credibility' of these pathways?
- Does it consider 'freedom to operate' regarding background owned by consortium members or third parties (if relevant)?
- Does the IP approach give due thought to balancing between publication of results and plans to protect IP, e.g. in terms of timing the respective activities, involvement of IP experts?
- If relevant (work programme), have additional exploitation obligations in relation to IP been considered?

What the IPR management sub-section should address in your proposal?

It is not sufficiently to say that IPR issues are covered in the Consortium Agreement. You must detail at least some aspects related to IP management, that show you understand the topic and, more importantly, you will manage it very well in the project. We indicate some of these IP-related topics below.

Your proposal can also show its awareness related to IPR issues by considering the following stages for IP management (Figure 10).

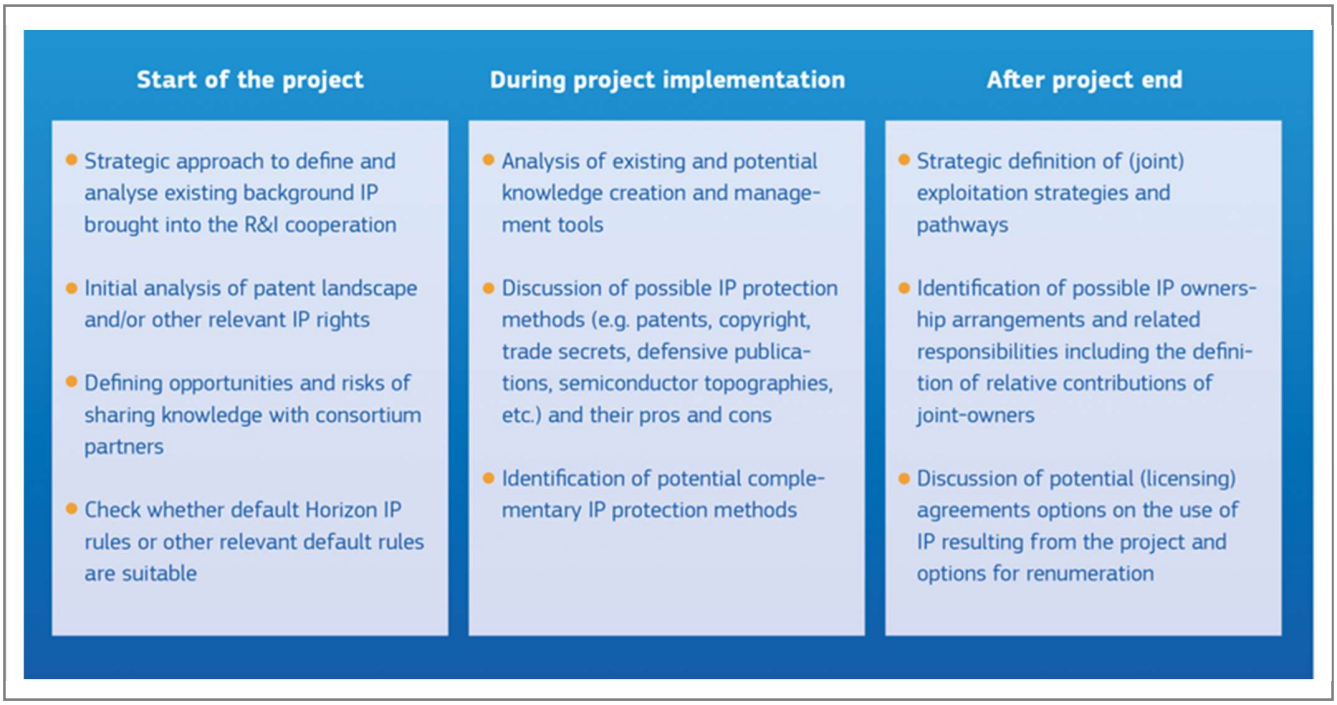

Figure 10. IPR issues at proposal stage and in the project

Ownership of Results/ Joint Ownership

Results are owned by the beneficiaries that generate them.

Given the collaborative nature of most projects, some results can be jointly developed by several participants. Hence, situations of joint ownership might arise.

Joint Ownership Agreements define relative contributions, specific conditions for granting licenses or issues related to costs of protection and sharing of potential revenues. There is a default rule on Joint Ownership in Consortium Agreement, however, separate joint ownership agreements are considered to be more appropriate to respond to each specific co-ownership situation- particularly when commercial exploitation is envisaged.

What is the ownership of results?

The owner of results is the natural or legal entity that has generated the results. Results are defined as any tangible or intangible effect of the action, such as data,

know-how or information, whatever its form or nature, whether or not it can be protected, as well as any rights attached to it, including intellectual property rights.

When do you have to address the ownership of your results?

The ownership of potential results should be addressed very early by the consortium members when preparing the proposal.

Horizon Europe has the specific objective to strengthen the deployment and exploitation of innovative solutions. This objective calls for transparency and clarity in terms of results ownership.

The lack of clarity on the ownership of results can be one of the main obstacles for exploitation and commercialisation, especially for SMEs. Clarity of results ownership is a critical factor for attracting investors. Beneficiaries should also clarify their freedom to operate without infringing on intellectual property owned by third parties that might require specific action (e.g. licensing) to fully exploit the own intellectual property. More practically speaking, it is important that potential future consortium members decide on the ownership of results when drafting the proposal to simplify their lives as beneficiaries. Indeed, beneficiaries must indicate the owner(s) of the results in the final periodic report of the Horizon Europe project in the so-called Results Ownership List. If the ownership of results has not been carefully thought through at the proposal phase, beneficiaries may face difficulties in filling in the Results Ownership List at the reporting stage. Knowing that failure to fill in the Results Ownership List will block the submission of the final periodic report and hence the payment, dedicating sufficient time on the allocation of the ownership of results at the proposal phase will avoid hurdles at the end of the project.

Access Rights

Each project partner has the right to request access rights to the other project partners' background and results as long as it needs them in order to carry out its work under the project or to exploit its own results (these are minimum access rights: additional ones can always be negotiated!).

The access rights shall be requested in writing. They are to be requested/granted throughout the duration and up to 1 year (or as otherwise agreed in the CA) after the end of the project for

exploitation needs. Once requested, access rights may be exercised as long as they are needed for exploiting the results (e.g. until the background patent expires) (Table 5).

Table 5. Grant of minimum access rights

(note: additional Access Rights can always be agreed upon!)

	Access to background	Access to results
Project implementation	Royalty-free (unless differently agreed before the signing of the GA)	Royalty-free
Exploitation of results	On fair and reasonable conditions	On fair and reasonable conditions

Obligation to protect

Each participant must **examine the possibility of protecting its results and must adequately protect them** — for an appropriate period and with appropriate territorial coverage — if:

(a) the results can reasonably be expected to be commercially or industrially exploited and

(b) protecting them is possible, reasonable and justified (given the circumstances).

When deciding on protection, the beneficiary must consider its own interests and the interests (especially commercial) of the other beneficiaries.

Protection can be secured by IPR or other means (e.g. trade secret protection).

Obligation to exploit

Beneficiaries receiving EU funding must – up to four years after the end of the action – use their best efforts to exploit their results directly or to have them exploited indirectly by another entity, in particular through licensing or transfer.

If, despite a beneficiary's best efforts, the results are not exploited within one year after the end of the action, the beneficiaries must (unless otherwise agreed in writing with the granting authority) use the Horizon Results Platform to find interested parties to exploit the results.

Open access

Offer specific information on how you will meet the open access requirements, that is deposition and immediate open access to publications and open access to data (the latter with some exceptions and within the deadlines set in the DMP) through a trusted repository, and under open licenses. You may elaborate on the (subscription-based or open access) publishing venues that you will use. You may also elaborate on the trusted repository/repositories through which open access to publications and research data will be provided (article 17). Open access to research data and other research outputs should be addressed in the section on research data management of your proposal. Research data should be open as a default, unless there are legitimate reasons for keeping them closed. On open access to data and the legitimate reasons for restricting access, consult the AGA (article 17).

As a general rule, open access to other research outputs such as software, models, algorithms, workflows, protocols, simulations, electronic notebooks and others is not required but strongly recommended. Access to 'physical' results like cell lines, biospecimens, compounds, materials, etc. is also strongly encouraged. Open peer review: Anytime it is possible, you are invited to prefer open peer review for your publications over traditional ('blind' or 'closed') peer review. When the case, you should provide specific information regarding the publishing venues you envisage to make use of and highlight the venues that would qualify as providing open peer review.

Open access to research outputs

Open access is online access at no cost for the end user of research outputs such as scientific publications, data or other engineered outcomes and processes (e.g. software, models, algorithms, protocols and electronic notebooks). Open access often carries less restrictive copyright and licensing barriers than traditionally published works, for both the users and the authors.

Open access enables increased quality and efficiency of research and accelerates the advancement of knowledge and innovation by making results reusable and by improving their reproducibility. It also offers the means for more creativity, more trust in science and greater impacts by building on collective intelligence, facilitating cross-disciplinary research and involvement of all relevant knowledge actors, including citizens.

Horizon Europe requires deposition of scientific peer-reviewed publications and research data and open access (with exceptions for research data) following specific requirements.

While it is not mandatory to publish (if a project intends to exploit its results, it may decide not to publish), if scientific peer-reviewed publications are produced then they must be open access immediately at publication time under open licenses (such as Creative Commons), providing specific minimum sets of rights of reuse (CC BY for articles and book chapters in edited books and CC BY, CC BY-NC, CC BY-ND, CC BY-NC-ND or equivalent for long-text formats. The following checklist shows what users can do with publications and other outputs licensed under the following Creative Commons licenses.

It is important to be aware that Horizon Europe requires that enough intellectual property rights are maintained by beneficiaries or authors to ensure the required open access to scientific publications.

You, as an applicant, should be aware that beneficiaries are required to retain sufficient intellectual property rights (IPR) to comply with their open access obligations.

2.3 Summary (Impact canvas)

[e.g. 1-2 pages]

You will find the Impact Canvas in Section 2.3, under the name of *Summary*. The Summary is one of the stars of the new proposal template, proving clarity of vision and substance to the proposal. The Canvas is a table in which you will have to 'summarise' what you wrote in sections 2.1 and 2.2. You're expected to clearly explain which Dissemination, Exploitation and Communication measures you have decided to adopt to maximise impact (Figure 11).

The goal of sub-section 2.3 is to hand over an effective summary of the messages included in the 'Impact' section to the reviewers. This is a classic way of educating the evaluator, by pinpointing the most important messages in a highly efficient manner. The Horizon Europe proposal template

dictates a table structure for this section, and it is our recommendation to fully conform to this structure, without any deviations.

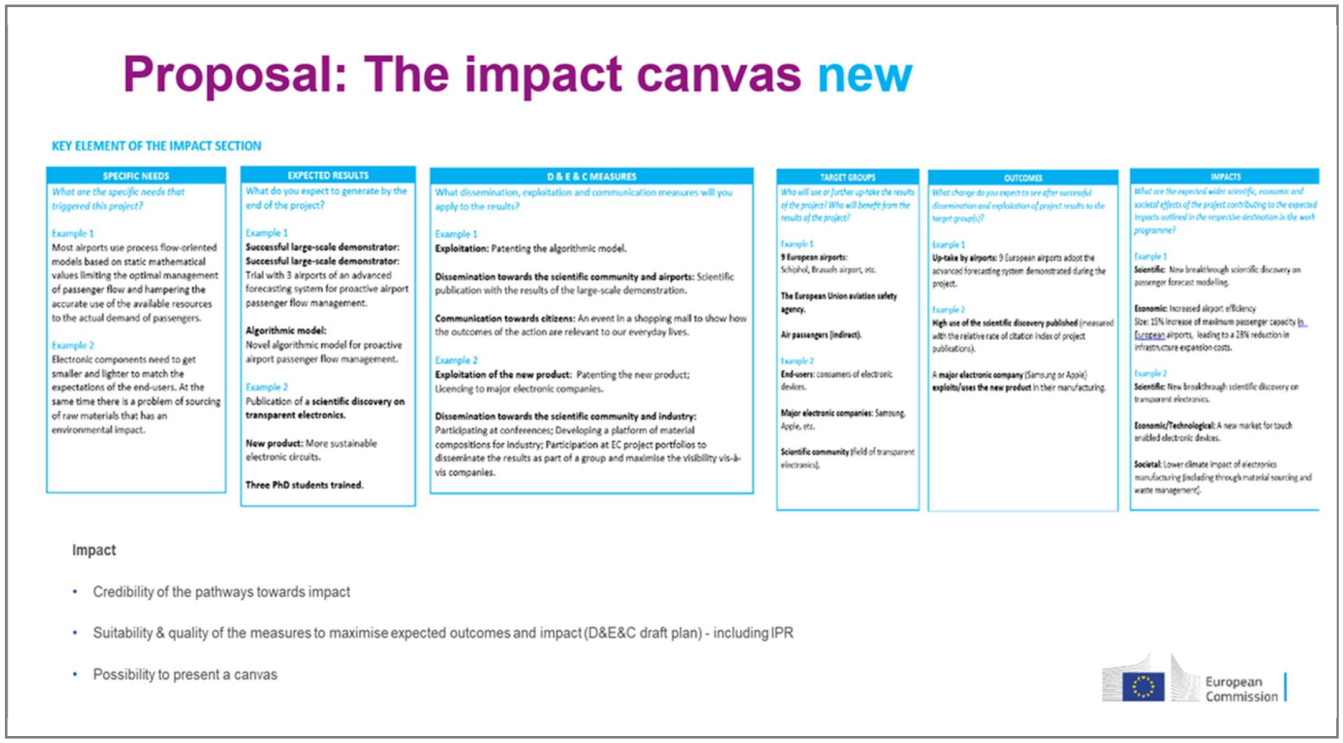

Figure 11. The Summary Impact (canvas)

Tip: When approaching the actual writing of the 'Impact' section, consider starting with sub-section 2.3 – Summary canvas. Pinpointing the most important messages you wish to convey in this section can assist you later on to flesh them out into a robust, coherent narrative, as requested in sub-section 2.1 ("project's pathways towards impact").

In the application form (proposal template), the Impact canvas looks a little different, but it includes the same information as presented in Figure 11.

2.4. 'Do No Significant Harm' principle

In Horizon Europe, there is a number of new things to consider (e.g. gender dimension, open science, citizens involvement, etc). The 'Do No Significant Harm' – DNSH principle is one of them.

The DNSH principle is also evaluated in the Impact section of the proposal (even if it is not explicitly mentioned in the evaluation criteria!).

When thinking about the impacts of your project, you should also consider the DNSH principle and mention if this is relevant to your project; if it is not, you should explain why not.

The DNSH principle needs to be taken into consideration in the scientific methodology and impact of the project. However, compliance is not mandatory unless explicitly stated.

Note: The DNSH principle should also be considered in Section 1 (Excellence), when describing the overall methodology of the project. There, you should show that the project will not carry out activities that do significant harm, and explain why your research complies with the DNSH principle.

In your proposal, you should show/demonstrate that your expected outcomes and impacts do not make a significant harm to the six Environmental objectives (EU Taxonomy Regulation):

1. Climate change mitigation
2. Climate change adaptation
3. Pollution prevention and control
4. Sustainable use & protection of water and marine resources
5. Transition to a circular economy
6. Protection and restoration of biodiversity and ecosystems.

If your project has a negative effect on any of these areas, then you have to explain the mitigation plan you think of, so that this part of the proposal is not scored negatively.

Annex 1. Application form RIA/IA

The latest template for application form (21 Jan 2022): https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/temp-form/af/af_he-ria-ia_en.pdf

Always, always use the application form indicated in the Funding & Tenders portal, corresponding to your topic.

Annex 2. Evaluation form RIA/IA

The general evaluation form for RIA/IA proposals: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/temp-form/ef/ef_he-ria-ia_en.pdf

Always refer to the evaluation form indicated in the Funding & Tenders portal, corresponding to your topic.

Annex 3. Feedback from evaluators on Section 2. Impact

Below are presented some comments of evaluators in Horizon Europe addressing Section 2 – Impact. They refer to different proposals, hence some comments may seem redundant. However, we put them here for a general sense of how the evaluation goes.

The '-' indicates a negative comment. The '+' marks a (somewhat) positive comment.

Please note the wording used. A 'good' (adequately, sufficiently, well) means score 3 or 3.5. A 'very good' (very convincing, very well demonstrated) means a 4 or 4.5.

2.1. Project's pathways towards impact

- Barriers and challenges to achieving the expected outcomes and impacts are insufficiently addressed. This is a shortcoming.
- Performance indicators for outcomes and impacts are not sufficiently described. This is a weakness.

- The proposal insufficiently explains the scalability of its expected outcomes and impacts. For example, it is not adequately considered how the proposal can efficiently contribute to the impact. This is a minor shortcoming.

+ The pathways described to achieve the expected outcomes and impacts are appropriate and credible. - However, the development of relevant verification methods is not convincingly addressed. This is a shortcoming.

+ The proposal demonstrates well how it intends to achieve expected outcomes and impacts in terms of scientific, economic and technological dimensions, as well as societal.

+ The proposal has the potential to contribute to impacts.

- The specific impact in the Destination is partially addressed because the proposal is targeted to characterisation of some common materials, but it excludes activities related to testing materials in the targeted sector. This is a shortcoming.

- Moreover, the proposal does not fully explain how relevant, in the context, is the proposed impact. This is a shortcoming.

+ Barriers and challenges to achieving the expected outcomes and impacts are very well addressed.

+ The likely scale and significance of the technologies used in the project are well formulated for different expected outcomes and impacts.

2.2. Measures to maximise impact

+ The dissemination plan is good.
+ The communication plan is very good, it includes specific target audiences and KPIs.

+ This exploitation plan is described in general terms.

+ The exploitation strategy is adequate. However, the business case is insufficiently elaborated. This is a weakness.

+ The IPR strategy and management are well addressed.

+ The dissemination plan is adequate, including key messages to be disseminated and specific dissemination channels.

+ The communication plan is good, and it includes specific target audiences and KPIs.

+ The exploitation plan is adequate.

- The exploitation strategy is not fully developed, only a draft form of individual exploitation intentions is provided. This is a shortcoming.

- Moreover, a business case is not sufficiently developed in the proposal. This is a shortcoming.

+ The inclusion of relevant European associations is beneficial for maximizing the impact of the project and disseminating the results to a wide group of stakeholders.

- The IPR strategy and management are only briefly mentioned. This is a shortcoming.

Resources

Horizon Europe Programme Guide,

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf

How to approach the Horizon Europe Impact section for Collaborative Projects,

https://enspire.science/how-to-approach-the-horizon-europe-impact-section-for-collaborative-projects/

Horizon Europe proposal evaluation. Standard Briefing,

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/experts/standard-briefing-slides-for-experts_he_en.pdf

What makes a good communication plan in Horizon Europe?,

https://eufunds.me/what-makes-a-good-communication-plan-in-horizon-europe/

Webinar session: Dissemination & Exploitation in Horizon Europe (9 June 2021),

https://ec.europa.eu/research/participants/docs/h2020-funding-guide/other/event210609.htm

Dissemination & Exploitation in Horizon Europe,

https://www.youtube.com/watch?v=gyXlYDkXQ2E

Communication, dissemination and exploitation. Why they all matter and what is the difference?, https://rea.ec.europa.eu/system/files/2021-11/Communication%2C%20Dissemination%20and%20%20Exploitation-2021.pdf

Creating an outstanding dissemination and exploitation plan for your proposal,

https://www.emdesk.com/horizon-2020-horizon-europe-basics-guide/creating-horizon-europe-dissemination-and-exploitation-plan

Measures to maximize impact in Horizon Europe,

https://enspire.science/measures-to-maximize-impact-in-horizon-europe/

Horizon Europe – Impact section,

https://www.elveflow.com/microfluidics-research-horizon-europe/european-fundings/horizon-europe-impact-section/

Horizon Europe – Dissemination and exploitation,

https://rea.ec.europa.eu/horizon-europe-dissemination-and-exploitation_en

IMPACT IN HORIZON EUROPE PROPOSALS

March 2022

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