

**Horizon Europe Programme**

**Specific Application Form**

**HORIZON-INFRA-2025-01-SERV**

**Project proposal – Technical description (Part B)**

**Version 1.0**

**12 May 2025**

**Structure of the Proposal**

The proposal contains two parts:

• **Part A** of the proposal **is generated by the IT system. It is based on the information entered by the participants through the submission system in the Funding & Tenders Portal.** The participants can update the information in the submission system at any time before final submission.

• **Part B** of the proposal is the narrative part that includes three sections that each correspond to an evaluation criterion. Part B needs to be uploaded as a PDF document following the templates downloaded by the applicants in the submission system for the specific call or topic. The templates for a specific call may slightly differ from the example provided in this document.

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

- Step 1: Logging in the Portal

- Step 2: Select the call, topic and type of action in the Portal

- Step 3: Create a draft proposal: Title, acronym, summary, main organisation and contact details

- Step 4: Manage your parties and contact details: add your partner organisations and contact details.

- Step 5: Edit and complete web forms for proposal part A and upload proposal part B

- Step 6: Submit the proposal

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| **HISTORY OF CHANGES** |
| **Version** | **Publication date** | **Changes** |
| 1.0 | 12.05.2025 | * Initial version
 |

# **Proposal template Part B: technical description**

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

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

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

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

 **Page limit**: The title, list of participants and sections 1, 2 and 3, together, should not be longer than 100 pages. All tables, figures, references and any other element pertaining to these sections must be included as an integral part of these sections and are thus counted against this page limit. The number of pages included in each section of this template is only **indicative**.

The page limit will be applied automatically. **Please remove all instruction pages that are watermarked.**

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

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

 The following formatting conditions apply.

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

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

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

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

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

This document is tagged. Do not delete the tags; they are needed for our internal processing of information, mostly for statistical gathering. In that light, please do not move, delete, re-order, alter tags in any way, as they might create problems in our internal processing tools. Tags do not affect or influence the outcome of your application.

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| **DEFINITIONS *(Included here for convenience. Final presentation will be different).*** |
| **Critical risk** | A critical risk is a plausible event or issue that could have a high adverse impact on the ability of the project to achieve its objectives. Level of likelihood to occur (Low/medium/high): The likelihood is the estimated probability that the risk will materialise even after taking account of the mitigating measures put in place.Level of severity (Low/medium/high): The relative seriousness of the risk and the significance of its effect. |
| **Deliverable** | A report that is sent to the Commission or Agency providing information to ensure effective monitoring of the project. There are different types of deliverables (e.g. a report on specific activities or results, data management plans, ethics or security requirements).  |
| **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 some time after the end of the project. Example: *The deployment of the advanced forecasting system enables each airport to increase maximum passenger capacity by 15% and passenger average throughput by 10%, leading to a 28% reduction in infrastructure expansion costs.* |
| **Milestone** | Control points in the project that help to chart progress. Milestones may correspond to the achievement of a key result, allowing the next phase of the work to begin. They may also be needed at intermediary points so that, if problems have arisen, corrective measures can be taken. A milestone may be a critical decision point in the project where, for example, the consortium must decide which of several technologies to adopt for further development. The achievement of a milestone should be verifiable. |
| **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 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.Example: *9 European airports adopt the advanced forecasting system demonstrated during 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 destination.  |
| **Research output** | Results generated by the action to which access can be given in the form of 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. This may include, for example, 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. Most project results (inventions, scientific works, etc.) are ‘Intellectual Property’, which may, if appropriate, be protected by formal ‘Intellectual Property Rights’.Example: *Successful large-scale demonstrator: trial with 3 airports of an advanced forecasting system for proactive airport passenger flow management.* |
| **Technology Readiness Level** | See Work Programme General Annexes B |

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| **Guidance on the use of generative AI tools for the preparation of the proposal** |
| When considering the use of generative artificial intelligence (AI) tools for the preparation of the proposal, it is imperative to exercise caution and careful consideration. The AI-generated content should be thoroughly reviewed and validated by the applicants to ensure its appropriateness and accuracy, as well as its compliance with intellectual property regulations. Applicants are fully responsible for the content of the proposal (even those parts produced by the AI tool) and must be transparent in disclosing which AI tools were used and how they were utilized. Specifically, applicants are required to:* Verify the accuracy, validity, and appropriateness of the content and any citations generated by the AI tool and correct any errors or inconsistencies.
* Provide a list of sources used to generate content and citations, including those generated by the AI tool. Double-check citations to ensure they are accurate and properly referenced.
* Be conscious of the potential for plagiarism where the AI tool may have reproduced substantial text from other sources. Check the original sources to be sure you are not plagiarizing someone else’s work.
* Acknowledge the limitations of the AI tool in the proposal preparation, including the potential for bias, errors, and gaps in knowledge.
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 *Fill in the title of your proposal below.*

**Title of the Proposal**

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

[This document is tagged. Do not delete the tags; they are needed for processing.] #@APP-FORM-HERI@#

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

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

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

**1. Excellence** #@REL-EVA-RE@#

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| ***Excellence – aspects to be taken into account.**** Clarity and pertinence of the project’s objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art.
* Soundness of the proposed methodology, including the underlying concepts, models, assumptions, interdisciplinary approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.
* The extent to which the access activities (trans-national and/or virtual access) will offer access to the state-of-the-art infrastructures of European interest in the field, high quality services, and will enable users to conduct excellent research.
* The extent to which the project will contribute to facilitating and integrating the access procedures, to improve the services the infrastructures provide and to further develop their on-line services
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* *The following aspects will be taken into account only to the extent that the proposed work is within the scope of the work programme topic.*

**1.1 Objectives and ambition** #@PRJ-OBJ-PO@# *[e.g. 4 pages]*

* Briefly describe the objectives of your proposed work. Why are they pertinent to the work programme topic? Are they measurable and verifiable? Are they realistically achievable?
* Describe how your project goes beyond the state-of-the-art, and the extent the proposed work is ambitious. In particular, how the activities for the provision of trans-national and/or Virtual access will offer access to state-of-the-art infrastructures, high quality services, and will enable users to conduct excellent research to address societal challenges. Indicate any exceptional ground-breaking R&I, novel concepts and approaches, new products, services or business and organisational models. Where relevant, illustrate the advance by referring to products and services already available on the market. Refer to any patent or publication search carried out.
* Describe how the participating Research Infrastructures will be integrated to provide, at European and, where relevant, global level, an overarching Research Infrastructure service, contributing to structuring the European Research Area, and, where relevant, global cooperation on Research Infrastructures.
* Describe where the proposed work is positioned in terms of R&I maturity (i.e. where it is situated in the spectrum from ‘idea to application’, or from ‘lab to market’). Where applicable, provide an indication of the Technology Readiness Level, if possible distinguishing the start and by the end of the project.
* *Please bear in mind that advances beyond the state of the art must be interpreted in the light of the positioning of the project. Expectations will not be the same for RIAs at lower TRL, compared with Innovation Actions at high TRLs.*

#§PRJ-OBJ-PO§#

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

* Describe and explain the overall methodology, including the concepts, models and assumptions that underpin your work. Explain how this will enable you to deliver your project’s objectives. Refer to any important challenges you may have identified in the chosen methodology and how you intend to overcome them. *[e.g. 10 pages]*
* *This section should be presented as a narrative. The detailed tasks and work packages are described below under ‘Implementation’.*
* Describe any national or international research and innovation activities whose results will feed into the project, and how that link will be established; *[e.g. 1 page]*
* Explain how expertise and methods from different disciplines will be brought together and integrated in pursuit of your objectives. If you consider that an inter-disciplinary approach is unnecessary in the context of the proposed work, please provide a justification. *[e.g. 1/2 page]*
* For topics where the work programme indicates the need for the integration of social sciences and humanities, show the role of these disciplines in the project or provide a justification if you consider that these disciplines are not relevant to your proposed project. *[e.g. 1/2 page]*
* Describe how the gender dimension (i.e. sex and/or gender analysis) is taken into account in the project’s research and innovation content *[e.g. 1 page]. If* you do not consider such a gender dimension to be relevant in your project, please provide a justification.
* *Note: This section is mandatory except for topics which have been identified in the work programme as not requiring the integration of the gender dimension into R&I content.*
* *Remember that that this question relates to the content of the planned research and innovation activities, and not to gender balance in the teams in charge of carrying out the project.*
* *Sex and gender analysis refers to biological characteristics and social/cultural factors respectively. For guidance on methods of sex / gender analysis and the issues to be taken into account, please refer to* [*https://op.europa.eu/en/publication-detail/-/publication/33b4c99f-2e66-11eb-b27b-01aa75ed71a1/language-en*](https://op.europa.eu/en/publication-detail/-/publication/33b4c99f-2e66-11eb-b27b-01aa75ed71a1/language-en)
* Describe how appropriate open science practices are implemented as an integral part of the proposed methodology. Show how the choice of practices and their implementation are adapted to the nature of your work, in a way that will increase the chances of the project delivering on its objectives *[e.g. 1 page]*. If you believe that none of these practices are appropriate for your project, please provide a justification here.
* *Open science is an approach based on open cooperative work and systematic sharing of knowledge and tools as early and widely as possible in the process. Open science practices include early and open sharing of research (for example through preregistration, registered reports, pre-prints, or crowd-sourcing); research output management; measures to ensure reproducibility of research outputs; providing open access to research outputs (such as publications, data, software, models, algorithms, and workflows); participation in open peer-review; and involving all relevant knowledge actors including citizens, civil society and end users in the co-creation of R&I agendas and contents (such as citizen science).*
* *Please note that this question does not refer to outreach actions that may be planned as part of communication, dissemination and exploitation activities. These aspects should instead be described below under ‘Impact’.*
* *Proposals selected for funding under Horizon Europe will need to develop a detailed data management plan (DMP) for making their data/research outputs findable, accessible, interoperable and reusable (FAIR) as a deliverable by month 6 and revised towards the end of a project’s lifetime. The DMP should describe how research outputs (especially research data) generated and/or collected during the project will be managed so as to ensure that they are findable, accessible, interoperable and reusable.*
* *For guidance on open science practices and research data management, please refer to the relevant section in the* [*online manual*](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/om_en.pdf) *on the Funding & Tenders Portal.*

#§CON-MET-CM§# #§COM-PLE-CP§#

**2. Impact** #@IMP-ACT-IA@#

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| ***Impact – aspects to be taken into account.**** Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme, and the likely scale and significance of the contributions due to the project.
* Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.
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*The results of your project should make a contribution to the expected outcomes set out for the work programme topic over the medium term, and to the wider expected impacts set out in the ‘destination’ over the longer term.*

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

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

* Provide a **narrative** explaining how the project’s results are expected to make a difference in terms of impact, beyond the immediate scope and duration of the project. The narrative should include the components below, tailored to your project.
1. Describe the unique contribution your project results would make towards (1) the **outcomes** specified in this topic, and (2) the **wider impacts**, in the longer term, specified in the respective destinations in the work programme.
* *Be specific, referring to the effects of your project, and not R&I in general in this field.*
* *State the target groups that would benefit. Even if target groups are mentioned in general terms in the work programme, you should be specific here, breaking target groups into particular interest groups or segments of society relevant to this project.*
* *The outcomes and impacts of your project may:*
	+ - * + *Scientific, e.g. contributing to specific scientific advances, across and within disciplines, creating new knowledge, reinforcing scientific equipment and instruments, computing systems (i.e. research infrastructures);*
				+ *Economic/technological, e.g. bringing new products, services, business processes to the market, increasing efficiency, decreasing costs, increasing profits, contributing to standards’ setting, etc.*
				+ *Societal , e.g. decreasing CO2 emissions, decreasing avoidable mortality, improving policies and decision making, raising consumer awareness.*

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

1. Give an indication of the scale and significance of the project’s contribution to the expected outcomes and impacts, should the project be successful. Provide quantified estimates where possible and meaningful.
* ‘*Scale’ refers to how widespread the outcomes and impacts are likely to be. For example, in terms of the size of the target group, or the proportion of that group, that should benefit over time; ‘Significance’ refers to the importance, or value, of those benefits. For example, number of additional healthy life years; efficiency savings in energy supply.*
* *Explain your baselines, benchmarks and assumptions used for those estimates. Wherever possible, quantify your estimation of the effects that you expect from your project. Explain assumptions that you make, referring for example to any relevant studies or statistics. Where appropriate, try to use only one methodology for calculating your estimates: not different methodologies for each partner, region or country (the extrapolation should preferably be prepared by one partner).*
* *Your estimate must relate to this project only - the effect of other initiatives should not be taken into account.*
1. Describe any requirements and potential barriers - arising from factors beyond the scope and duration of the project - that may determine whether the desired outcomes and impacts are achieved. These may include, for example, other R&I work within and beyond Horizon Europe; regulatory environment; targeted markets; user behaviour. Indicate if these factors might evolve over time. Describe any mitigating measures you propose, within or beyond your project, that could be needed should your assumptions prove to be wrong, or to address identified barriers.
* *Note that this does not include the critical risks inherent to the management of the project itself , which should be described below under ‘Implementation’.*

**2.2 Measures to maximise impact - Dissemination, exploitation and communication** #@COM-DIS-VIS-CDV@# *[e.g. 5 pages, including section 2.3]*

* Describe the planned measures to maximise the impact of your project by providing a first version of your ‘plan for the dissemination and exploitation including communication activities’. Describe the dissemination, exploitation and communication measures that are planned, and the target group(s) addressed (e.g. scientific community, end users, financial actors, public at large).
* *Please remember that this plan is an admissibility condition, unless the work programme topic explicitly states otherwise. In case your proposal is selected for funding, a more detailed ‘plan for dissemination and exploitation including communication activities’ will need to be provided as a mandatory project deliverable within 6 months after signature date. This plan shall be periodically updated in alignment with the project’s progress.*
* *Communication[[1]](#footnote-2),[[2]](#footnote-3) measures should promote the project throughout the full lifespan of the project. The aim is to inform and reach out to society and show the activities performed, and the use and the benefits the project will have for citizens. Activities must be strategically planned, with clear objectives, start at the outset and continue through the lifetime of the project. The description of the communication activities needs to state the main messages as well as the tools and channels that will be used to reach out to each of the chosen target groups.*
* *All measures should be proportionate to the scale of the project, and should contain concrete actions to be implemented both during and after the end of the project, e.g. standardisation activities. Your plan should give due consideration to the possible follow-up of your project, once it is finished. In the justification, explain why each measure chosen is best suited to reach the target group addressed. Where relevant, and for innovation actions, in particular, describe the measures for a plausible path to commercialise the innovations.*
* *If exploitation is expected primarily in non-associated third countries, justify by explaining how that exploitation is still in the Union’s interest.*
* *Describe possible feedback to policy measures generated by the project that will contribute to designing, monitoring, reviewing and rectifying (if necessary) existing policy and programmatic measures or shaping and supporting the implementation of new policy initiatives and decisions.*
* Outline your strategy for the management of intellectual property, foreseen protection measures, such as patents, design rights, copyright, trade secrets, etc., and how these would be used to support exploitation.
* *If your project is selected, you will need an appropriate consortium agreement to manage (amongst other things) the ownership and access to key knowledge (IPR, research data etc.). Where relevant, these will allow you, collectively and individually, to pursue market opportunities arising from the project.*
* *If your project is selected, you must indicate the owner(s) of the results (results ownership list) in the final periodic report.*

#§COM-DIS-VIS-CDV§#

**2.3 Summary**

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

**KEY ELEMENT OF THE IMPACT SECTION**

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#§IMP-ACT-IA§#

1. **Quality and efficiency of the implementation** #@QUA-LIT-QL@# #@WRK-PLA-WP@#

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| ***Quality and efficiency of the implementation – aspects to be taken into account**** *Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall*
* *Capacity and role of each participant, and extent to which the consortium as a whole brings together the necessary expertise.*
 |

**3.1 Work plan and resources** *[e.g. 30 to 69 pages – including tables]*

Please provide the following:

* brief presentation of the overall structure of the work plan;
* timing of the different work packages and their components (Gantt chart or similar);
* graphical presentation of the components showing how they inter-relate (Pert chart or similar).
* detailed work description, i.e.:
	+ a list of work packages (table 3.1a);
	+ a description of each work package (table 3.1b);
	+ a list of deliverables (table 3.1c);
* *Give full details. Base your account on the logical structure of the project and the stages in which it is to be carried out.* *Each work package should be a substantial part of the work plan, and the* *number of work packages should be proportionate to the scale and complexity of the project.*
* *Structure each work package by breaking it down into tasks. If tasks are not appropriate, work packages can be organised according to other criteria (e.g., according to the type of work or thematically). For each task or element of the work package, describe all activities to be carried out and quantify them (e.g., number of protocols, tests, measurements, combinations, study subjects, conferences, publications, etc.). Provide enough detail* *to clarify who will do this work and why it is needed for the project, (e.g., the level of qualification and number of person-months for personnel, as well as the requested equipment, consumables, meetings, etc.), to justify the proposed resources and so that progress can be monitored, including by the Commission.*
* *Resources assigned to work packages should be in line with their objectives and deliverables. You are advised to include a distinct work package on ‘project management’, specific work packages for access provision activities (trans-national and/or virtual access), and to give due visibility in the work plan to ‘data management’ ‘dissemination and exploitation’ and ‘communication activities’, either with distinct tasks or distinct work packages.*
* *You will be required to update the ‘plan for the dissemination and exploitation of results including communication activities’, and a ‘data management plan’, (this does not apply to topics where a plan was not required.) This should include a record of activities related to dissemination and exploitation that have been undertaken and those still planned.*
* *Please make sure the information in this section matches the costs as stated in the budget table in section 3 of the application forms, and the number of person months, shown in the detailed work package descriptions.*
* a list of milestones (table 3.1d);
* a list of critical risks, relating to project implementation, that the stated project's objectives may not be achieved. Detail any risk mitigation measures. You will be able to update the list of critical risks and mitigation measures as the project progresses (table 3.1e);
* a table showing number of person months required (table 3.1f);
* a table showing description and justification of subcontracting costs for each participant (table 3.1g);
* a table showing justifications for ‘purchase costs’ (table 3.1h) for participants where those costs exceed 15% of the personnel costs (according to the budget table in proposal part A);
* if applicable, a table showing justifications for ‘other costs categories’ (table 3.1i).
* if applicable, a table showing in-kind contributions from third parties (table 3.1j)
* a summary of the trans-national and/or virtual access to be provided (table 3.1k).

**3.2 Capacity of participants and consortium as a whole** #@CON-SOR-CS@# #@PRJ-MGT-PM@# *[e.g. 3 pages]*

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

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

#§CON-SOR-CS§# #§PRJ-MGT-PM§#

**Tables for section 3.1**

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

**Table 3.1a: List of work packages**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Work package No** | **Work Package Title** | **Lead Participant No** | **Lead Participant Short Name** | **Person-Months** | **Start Month** | **End month** |
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**Table 3.1b: Work package description**

**For each work package:**

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| **Work package number**  | 6 |
| **Work package title[[3]](#footnote-4)** | VA NLOAccess  |

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

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| **Objectives** **Provision of access to the following infrastructure:****Description of the infrastructure**Name of the infrastructure (and its installations, if applicable): NLOAccessLocation (town, country) of the infrastructure: Orsay, France & Louvain-la-Neuve, Belgium & Cagliari, Italy. The computation facilities are accessible via a single web portal.Web site address: <https://nloaccess.in2p3.fr/> Annual operating costs (excl. investment costs) of the infrastructure (€): 70k€ (excl. 25% overhead)Description of the infrastructure:NLOAccess gives access to automated tools generating scientific codes allowing anyone to evaluate observables such as production rates or kinematical properties of hard scatterings involving hadrons.The automation and the versatility of these tools are such that these scatterings need not to be pre-coded. In other terms, it is possible that a random user may request for the first time the generation of a code to compute characteristics of a reaction which nobody thought of before. NLOAccess allows the user to test the code and then to download it to run it on its own computer. It essentially gives access to a dynamic library.As it stands, the automated tools on which NLOAccess is based are (i) the MADGRAPH ensemble heavily used by the high-energy physics (HEP) community, but extended to deal with meson and heavy-ion beams and (ii) the HELAC-ONIA code allowing the computation of cross section for heavy-quark bound states, the quarkonia. The portal NLOAccess is conceived to deal with additional automated tools; its scope can thus be later extended. It is based on the portal of MADGRAPH@UCLouvain with necessary additions to deal with asymmetric collisions. It is also meant to feature online access to other standalone codes in the future, with a dedicated online interface or not.As of today, in contrast to HEP, no such place exists for hadronic physics where interested colleagues can go test their ideas and turn them into concrete realisations with automated Monte-Carlo tools. In addition, the available tools are limited to a reduced class of applications. For each, one needs to install them one by one, sometimes along with dedicated libraries and one needs to get familiar with their syntax. A single portal for hadron physics for hard-scattering computations will not only ease the task of the community but will give a much higher visibility to the codes included in it as well as to the hadron physics models on which they are based.Services currently offered by the infrastructure:MADGRAPH is an ensemble of computing tools developed since the early 2000’s allowing for the simulation of any elementary particle scatterings where perturbation theory is applicable. It is massively used by the community of physicists working on high-energy colliders, in particular the CERN-LHC community and in the past that of the Fermilab-Tevatron. It is widely tested and runs at the state-of-the-art accuracy for such tools, namely NLO, and is versatile enough to be extended to scatterings relevant for hadronic physics, for instance the study of perturbative reactions in nucleus-nucleus collisions. Its next upgrade, Madgraph7, both at LO and NLO, is expected to be released just before or during the proposal period with a dedicated add-on for quarkonium production. On the other hand, HELAC-ONIA is the most advanced automated tool to deal with quarkonium production as it can deal with several of them with an improved algorithm rendering its usage very fast.Whereas the original version of MADGRAPH for HEP has been used for more than a thousand of LHC studies (with a yearly citation rate of 400~600 since the publication of its latest version at NLO), we expect its hadronic physics counterpart and an on-line version of HELAC-ONIA to become essential tools for a significant fraction of the heavy-ion physics community (2000+ physicists worldwide), that of heavy-quark production at colliders and that of spin physics at colliders and high-energy fixed-target experiments. More than 30 research groups in Europe have already marked their firm interest in the Access and they are ready to further test and improve it. The NLOAccess user community currently comprises several hundred recurrent users, namely a significant part of the targeted researchers and we aim at a sustained excellent access service via an improved interaction with the community. |

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| **Description of work** Leadership: CNRSCo-leadership: UCL & INFNSpokesperson: Jean-Philippe Lansberg (CNRS)Deputy spokesperson: O. Mattelaer (UCL) & C. Pisano (INFN)Technical coordinator: C. Flore (INFN)Modality of access under this proposal:As requested for a VA, the usage of the portal will not be restricted. However, to allow the users to store a history of his/her request and some preferences, we ask him/her to register. Such a registration could later be used to allow the users to run the code on their own computer facilities through remote identification, for instance the GRID.2 types of accesses will be offered:• generation of a code and its download• generation of plots from a restricted sample of evaluated MC pointsand a third type will be considered• generation of a code and its remote execution on their own national facilities with the credential of the user.Support offered under this proposal:The access webpage includes a section with explanations of the codes to be accessed, recent updates and we will set up a forum to ask questions and advice, to give feedback and to express wishes for extensions. A scientific support should be provided to make sure that the user can generate the code they wish, but also to lift any interrogation they may have about their understanding of the tool behind. The portal may indeed generate the right code to compute correct cross sections, but these may not be accurate any more for specific applications. This is particularly important for users for the experimental community who may not have the opportunity to continuously update their knowledge on what the state-of-the-art nuclear and meson Parton Distribution Functions (PDFs) or quarkonium parameters are or whether a specific channel may be dominant in a given part of the probed phase space.Along these lines, we have devised the following tasks to be undertaken:1. Setting-up an international assessment board of 8 researchers and regular (remote) meeting with them;2. Hardware and software maintenance of the existing portal;3. Elaboration of online user manuals for the main current application: (i) nuclear beams, (ii) meson beams and (iii) quarkonium-related reactions and an online forum;4. Extension of the existing portal with the inclusion of the forthcoming version of Madgraph at LO, Madgraph7;5. Extension of the existing portal with the inclusion of the forthcoming version of Madgraph at NLO, Madgraph7\_aMCatNLO;6. Extension of the existing portal with the inclusion of a selection of standalone codes selected by the assessment board to motivate the community to propose the addition of other codes;7. Organisation of a workshop and of yearly meetings to improve the portal based on the feed-back of users;8. Realisation of some key studies to advertise the performance offered by the portal; publications of these studies and delivery of communications among the community;9. Publication of a scientific article related to the hadronic add-ons of the MADGRAPH ensemble;10. Investigation of the possibility for some users to use their credentials to log in to the Access to remotely and automatically run the generated codes on their own computing facilities; All the tasks will involve all the partners. All the tasks (but T1) are expected to take about one semester. Outreach to new users:First, we will submit abstracts for oral communication in multiple international scientific meetings. In addition, we will organise a workshop aiming at, on the one hand, collecting suggestions and help for improvements and additions for advanced users, and, on the other hand, to introduce other colleagues to both the automated codes behind the portal and the best usage of the portal. We expect NLOAccess to further increase the number of users. As is customary in our community, this will be monitored, in addition to the interpretation of the portal statistics, by the number of citations of the papers describing the accessed tools in other scientific publications.Review procedure under this proposal:An international assessment board of 8 researchers will be named. Half will be from the experimental community, half from the theory community; half from the EU, half from outside the EU. They will be given all the access statistics as well as a summary of the user’s feedback through the wiki. A remote meeting via videoconferencing will be set up to exchange with the review panel when requested by the panel. The panel will write an assessment report. |

**Table 3.1c: List of Deliverables[[4]](#footnote-5)**

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

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| **Number** | **Deliverable name** | **Short description** | **Work package number**  | **Short name of lead participant**  | **Type** | **Dissemination level** | **Delivery date****(in months)** |
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| **KEY** Deliverable numbers in order of delivery dates. Please use the numbering convention <WP number>.<number of deliverable within that WP>. For example, deliverable 4.2 would be the second deliverable from work package 4.**Type:** Use one of the following codes: R: Document, report (excluding the periodic and final reports) DEM: Demonstrator, pilot, prototype, plan designs DEC: Websites, patents filing, press & media actions, videos, etc.DATA: Data sets, microdata, etc.DMP: Data management planETHICS: Deliverables related to ethics issues. SECURITY: Deliverables related to security issuesOTHER: Software, technical diagram, algorithms, models, etc.**Dissemination level:** Use one of the following codes: PU – Public, fully open, e.g. web (Deliverables flagged as public will be automatically published in CORDIS project’s page)SEN – Sensitive, limited under the conditions of the Grant Agreement Classified R-UE/EU-R – EU RESTRICTED under the Commission Decision No2015/444Classified C-UE/EU-C – EU CONFIDENTIAL under the Commission Decision No2015/444Classified S-UE/EU-S – EU SECRET under the Commission Decision No2015/444**Delivery date**Measured in months from the project start date (month 1) |

**Table 3.1d: List of milestones**

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| --- | --- | --- | --- | --- |
| **Milestone number** | **Milestone name** | **Related work package(s)** | **Due date (in month)** | **Means of verification** |
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| **KEY****Due date**Measured in months from the project start date (month 1)**Means of verification** Show how you will confirm that the milestone has been attained. Refer to indicators if appropriate. For example: a laboratory prototype that is ‘up and running’; software released and validated by a user group; field survey complete and data quality validated. |

**Table 3.1e: Critical risks for implementation** #@RSK-MGT-RM@#

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| **Description of risk (indicate level of (i) likelihood, and (ii) severity: Low/Medium/High)** | **Work package(s) involved** | **Proposed risk-mitigation measures** |
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| **Definition critical risk:** A critical risk is a plausible event or issue that could have a high adverse impact on the ability of the project to achieve its objectives. **Level of likelihood to occur: Low/medium/high**The likelihood is the estimated probability that the risk will materialise even after taking account of the mitigating measures put in place.**Level of severity: Low/medium/high**The relative seriousness of the risk and the significance of its effect. |

#§RSK-MGT-RM§#

**Table 3.1f: Summary of staff effort**

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

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

**Table 3.1g: ‘Subcontracting costs’ items**

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

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

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

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

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

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

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

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

**Table 3.1j: ‘In-kind contributions’ provided by third parties**

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

If the contributions are research infrastructure services, please specify the estimated number of units of access to be provided under the project (even if this can vary depending from the users’ requests), whether the cost of the services will be calculated on the basis of a unit cost, as actual costs or as a combination of the two, and the related total costs that will be charged by the participants which use them to provide access

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| **Participant Number/Short Name** |
| **Third party name** | **Category** | **Cost (€)** | **Justification** |
|  | **Select between**Seconded personnelTravel and subsistenceEquipmentOther goods, works and servicesInternally invoiced goods and services  |  |  |
|  |  |  |  |

**Table 3.1k: Summary of trans-national/virtual access provision**

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| ***Access provider short name[[5]](#footnote-6)*** | ***Short name of infrastructure*** | ***Installation*** | ***Installation Country code[[6]](#footnote-7)*** | ***Type of access[[7]](#footnote-8)*** | ***Unit of access*** | ***Estimated quantity of access to be provided*** | ***Unit cost (UC) (€)[[8]](#footnote-9)*** | ***Access costs[[9]](#footnote-10)*** | ***Estimated number of users*** | ***Estimated number of applications\**** |
| ***Nr[[10]](#footnote-11)*** | ***Short name*** | ***On the basis of UC*** | ***As actual costs*** |
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*\* Column to be mandatorily filled in for trans-national access only. Not to be filled in for virtual access.*

*Please calculate your access costs as follows:*

***Access costs for trans-national access provision*** *can be supported on the basis of unit costs calculated according to the methodology indicated in the relevant sections of the ‘*[*Decision authorising the use of unit costs for the costs of providing trans-national and virtual access in Research Infrastructures actions under the Horizon Europe Programme*](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/unit-cost-decision-research-infrastructures_horizon-euratom_en.pdf)*’, through the reimbursement of the actual eligible costs specifically incurred for providing access to the research teams selected for support under the project, or through a combination of the two previous modalities. Only one method of reimbursement may be used for one installation. For facilitation purposes, the unit cost for an installation may be calculated by using the first part of the Excel table available on the topic page. Where reimbursement is based on actual costs, these costs may be estimated by using the second part of the same Excel table. Where reimbursement is based on a combination of a unit cost and actual costs, both parts of the table may be used. In this case, the Excel table will also show which costs are to be reimbursed under which method.*

***Access costs for virtual access provision*** *can be supported on the basis of unit costs calculated according to the methodology indicated in the relevant sections of the ‘*[*Decision authorising the use of unit costs for the costs of providing trans-national and virtual access in Research Infrastructures actions under the Horizon Europe Programme*](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/unit-cost-decision-research-infrastructures_horizon-euratom_en.pdf)*’, through the reimbursement of the actual eligible costs specifically incurred for providing under the grant the expected quantity of access indicated in this table, or through a combination of the two previous modalities. Only one method of reimbursement may be used for one installation. For facilitation purposes, the unit cost for an installation may be calculated by using the first part of the Excel table available on the topic page. Where reimbursement is based on actual costs, these costs may be estimated by using the second part of the same Excel table. Where reimbursement is based on a combination of a unit cost and actual costs, both parts of the table may be used. In this case, the Excel table will also show which costs are to be reimbursed under which method.*

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**ANNEXES TO PROPOSAL PART B**

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

* **CLINICAL TRIALS:** Annex with information on clinical trials.
* **FINANCIAL SUPPORT TO THIRD PARTIES:** Annex with information on financial support to third parties.
* **CALLS FLAGGED AS SECURITY SENSITIVE:** Annex with information on security aspects.
* **ETHICS:** ethics self-assessment should be included in proposal part A. However, in calls where several serious ethics issues are expected, the character limited in this section of proposal part A may not be sufficient for participants to give all necessary information. In those cases, participants may include additional information in an annex to proposal part B.
1. ###  *See the Funding and Tenders Portal FAQ on how to address* [*communication activities*](https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/faq/930)

 [↑](#footnote-ref-2)
2. For further guidance on communicating EU research and innovation for project participants, please refer to the [Online Manual](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/om_en.pdf) on the Funding & Tenders Portal [↑](#footnote-ref-3)
3. The title of work packages focusing on access provision must be preceded by the indication of the type of access activity (TA for transnational access, VA for virtual access, TA/VA for both) and the number of work package for that activity; TA1, TA2, …., VA1, VA2,. [↑](#footnote-ref-4)
4. You must include a data management plan (DMP) and a ‘plan for dissemination and exploitation including communication activities as distinct deliverables within the first 6 months of the project. The DMP will evolve during the lifetime of the project in order to present the status of the project's reflections on data management. A template for such a plan is available in the [Online Manual](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/om_en.pdf) on the Funding & Tenders Portal. [↑](#footnote-ref-5)
5. Short name of the beneficiary, affiliated entity or associated partner. It can be the infrastructure owner or, if the owner of the infrastructure is another third party contributing resources, the beneficiary/affiliated entity to whom the infrastructure owner provide resources in Annex I and who coordinates access to the service of this research infrastructure. [↑](#footnote-ref-6)
6. Give the ISO two-letter code of the country where the installation is located, or ‘IO’ if the access provider (the beneficiary or linked third party) is an international organization, an ERIC, or a similar legal entity. When the installation is mobile (e.g. a research vessel) give the country of its usual location (e.g. the home port). [↑](#footnote-ref-7)
7. “TA-uc” for trans-national access with access costs declared on the basis of unit costs, TA-ac for trans-national access with access costs declared as actual costs, or “TA-cb” for trans-national access with access costs declared as a combination of actual costs and costs on the basis of unit costs. “VA-uc” for virtual access with access costs declared on the basis of unit costs, VA-ac for virtual access with access costs declared as actual costs, or “VA-cb” for virtual access with access costs declared as a combination of actual costs and costs on the basis of unit costs. Associate partners, as they cannot charge costs, must indicate actual cost (TA-ac or VA-ac) and put 0 in the actual cost column. [↑](#footnote-ref-8)
8. To be filled in only for installations providing trans-national access or virtual access declaring access costs either on the basis of unit costs (TA-uc or VA-uc) or as a combination of actual costs and costs on the basis of unit costs (TA-cb or VA-uc). The unit cost must be calculated through the specific excel table provided in the submission system. Leave blank in case of or trans-national access with access costs declared as actual costs (TA-ac), or virtual access with access costs declared as actual costs (VA-ac). [↑](#footnote-ref-9)
9. Cost of the access provided under the project. For trans-national access and virtual access fill in one of the two columns or both according to the way access costs are declared. The trans-national and virtual access cost on the basis of unit costs must be computed by multiplying the unit cost by the quantity of access to be provided. [↑](#footnote-ref-10)
10. Number the installations of the same infrastructure consecutively. An *installation* is a part or a service of an *infrastructure* that could be used independently from the rest. [↑](#footnote-ref-11)