[Project Name]

ESA Phi-Lab NET Spain

Research Proposal

[Company Logo(s)]

\*\*Please delete the guidance notes associated with each section prior to submitting\*\*

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1. **Executive Summary**

The Executive Summary shall provide the following information in **maximum 1 page**:

* Entities involved in the activity.
* Potential targeted market segment, customers/users, the need/problem to be addressed; significance of serving this need in enabling or disrupting the market, and socio-economic impact.
* Brief description of the proposed activities; the new capabilities they aim to achieve, and how significantly those contribute to solve or alleviate the problem addressed; relevance of the proposed activities for the objectives of the Open Call.

1. **R&D and Potential Impact Proposal**

All sub-sections included within the R&D and Potential Impact Proposal should be completed in a **maximum total of 10 pages.**

* 1. **Background and Experience** 
     + 1. ***Team composition:***

Please describe the overall team composition, including participants from all subcontractors, if any, including all key personnel (i.e. having a major role within the team and/or being responsible for one or more tasks) and their position within his/her own entity’s structure. Present the role of each team member in the activity and their credentials to fulfil that role.

* + - 1. ***Background of the entities involved:***

Please describe briefly the relevant experience of the Applicant and consortium partners for the performance of the proposed work. Please provide the rationale for the involvement of the proposed consortium partners in the activity.

* + - 1. ***Partnerships and Support Entities:***

Please describe briefly the partnerships that are required (at the time of the project execution or after its completion). Please add as annex any Support Letter received from relevant Entities. These may include potential customers or commercial partners.

* + - 1. ***Vision:***

Please describe how this activity fits into the vision of the Applicant and proposal partners (e.g. alignment with medium- or long-term objectives, synergies with other activities, etc.).   
Please provide an overview of the broader implementation plan of the product/service (including the key steps to have a fully-fledged offer and roll-out the product/service to the potential market, as well as follow-up actions to this activity (e.g. apply for further ESA or non-ESA funding, spin-off creation, licencing, commercial efforts, etc.).

* 1. **Research and Technology Developments**
     + 1. ***R&D objectives, scope and significance:***

Please describe the new (market disrupting) capabilities that are enabled as the result of this project;

Summarize the scope and objectives of the proposed research; briefly describe the approach and steps to achieve those objectives, incl. research, development and verification / validation;

Explain how (and how significantly) this project contributes to achieving the target capabilities.

* + - 1. ***Relevance for the Call:***

Please clearly discuss how the activity is in line with the objectives of the Phi-Lab and more specifically with the objectives of the Call.

* + - 1. ***Understanding of and leveraging on the State of the Art, novelty of the proposed research:***

Please present the current State of the Art (SoA) related to the proposed research activities.

Please discuss the novelty of the proposed activity; how the proposed activity leverages on Sate of the Art; how it represents a progress with respect to the State of the Art.

Please include an explanation if and how the proposed research is related to past and ongoing ESA R&D activities (<https://nebula.esa.int> , <https://activities.esa.int>).

* + - 1. ***Maturity of the technology, feasibility of the proposed research:***

Please present the maturity of the technology, including current TRL; discuss the challenges of the proposed research, and assess the feasibility of achieving the new targeted capabilities. Please provide information on the means of access to data/asset/facilities needed for the proposed developments.

* 1. **Commercial Opportunities and Potential Socio-Economic Impact**

The following subsections are intended as a valuable but preliminary analysis. If Selected the Applicants will be supported by the Phi-Lab to mature this analysis during the Activity

* + - 1. ***The potential target market:***

Please provide information of the potentially targeted market, presenting the characteristics of the market (e.g. commercial/institutional, mass/niche, applicable regulations, entry barriers, etc.), including, as much as possible, a quantitative assessment of the addressable market.

* + - 1. ***Product/service:***

Please describe the product/service that the proposed research activities contribute to enable;

Provide the main (critical) requirements that this product / service must achieve;

* + - 1. ***Customers/users, current situation, and their needs:***

Please present the customers/users that will be (potentially) targeted and include a brief description of their essential and driving needs/pains that the intended product/service will satisfy.

Provide an overview of the status of the customer/user interest and commitment to participate in the proposed activity. Letter(s) of interest from the major customer(s) / user(s) shall be included indicating why they are interested, how they intend to contribute to the activity, and if they are interested to engage beyond the project in case the activity shows satisfactory results.

* + - 1. ***Value proposition***

Please explain how (and how well) the product / service satisfies the needs/ alleviate the pains of the customer.

Describe the main benefits, both quantitative (e.g. price, performance of service) or qualitative (e.g. safety, customer experience), and discuss how unique this value proposition is relative to competitive commercial offerings.

* + - 1. ***Market disruption and Socio-Economic Impact***

Please explain how this product / service would enable or disrupt the target market.

Please provide a preliminary analysis of the potential Socio-Economic Impact of delivering the targeted product / service to the market.

* + - 1. ***IPR strategy:***

Please describe the initial plans (if any) for protecting the innovation resulting from the activity.

The background Intellectual Property Rights (IPR) status of the technology/asset(s) involved shall be identified and described incl. ownership, type of protection, rights of use by 3rd parties, etc.).

If applicable, applicants should include (a) letter(s) from the owner(s) of the background IPR confirming that the Applicant will have access to the relevant IPR during the project.

A description of any limitation or condition in the access and exploitation of the background IPR (for this project, follow up developments, and the commercialization phase) shall also be presented.

1. **Activity and Management Proposal**

All sub-sections included within the R&D and Potential Impact Proposal should be completed in a maximum total of 12 pages.

* 1. **Milestone Planning**

Please, present in chart form (Gannt or similar) the initial planning of the activity, including the overall duration, the planning and duration of each tasks, and the major milestones (e.g. kick-off, progress updates with Local ESA Phi-Lab Manager, Preliminary, Mid-Term and Final Review). Note: The duration of the Phi-Lab activity shall not exceed 24 months, unless otherwise specified in the Open Call.

* 1. **Work Breakdown**

Please provide an overview of the Tasks planned within the activity, the expected outputs, and illustrate how the tasks justify the funding requested. Duplicate the table below for each individual Task.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task #** |  | | **Start date:** | | DD/MM/YY |
| **Task Title** |  | | **End date:** | | DD/MM/YY |
| **Task Manager** |  | | | | |
| **Objective(s)** |  | | | | |
| **Inputs** |  | | | | |
| **Sub-tasks** |  | | | | |
| **Output & Deliverables** |  | | | | |
| **Cost** | **Total Amount** | **ESA Seed Innovation Funding** | | **Other Sources [source and amount]** | |
|  |  | |  | |

* 1. **Cost Planning**

Using the table below, present the total costs for the execution of the activity, and the contribution asked from the ESA Phi-Lab initiative. The value and source(s) of co-funding to be provided can be found in the Open Call for ESA Phi-Lab.

|  |  |  |  |
| --- | --- | --- | --- |
| **Overall Cost** | | | |
| **Task** | **Total Amount** | **ESA Seed Innovation Funding** | **Other Sources [source and amount]** |
| **Task 1 + Title** |  |  |  |
| **Task 2 + Title** |  |  |  |
| **Task ….** |  |  |  |
| **Total** |  |  |  |

Please anticipate, if possible, any hardware that is intended to be purchased for the purpose of this R&D activity by using the ESA Innovation Seed Fundings:

|  |  |  |  |
| --- | --- | --- | --- |
| **Hardware** | **Total Cost** | **ESA Seed Innovation Funding** | **Other Sources [source and amount]** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

* 1. **Need of ESA Phi-Lab support expertise and facilities.**

Describe specifically the support (and associated expertise) that you would like to receive from the Phi-lab. This includes technical advisory, as well as research mentoring, business coaching and/or IP support (as relevant). Provide an estimate of support time required.

If applicable, explain which tasks or sub-tasks of your workplan you request the Phi-lab to perform. Provide an estimate of the task execution time.

Describe the facilities (e.g. laboratory, instruments, workspace, etc.) that you would like to gain access to in order to carry out the proposed R&D activity (if applicable).

Describe the IPR from the Phi-lab that you would need to leverage on to carry out your R&D activity.

Conclude by explaining how the Phi-lab environment is beneficial to carrying out the proposed R&D activity.

* 1. **Management**

The Management section should be **maximum 1 page.**

Please present how the management (including the coordination with partners), reporting, meetings and deliverables will be organized during the activity. Provide information on the activities of the Project Manager, the reporting lines within the team and the means for settling disagreements.

1. **Annexes**

* Letter(s) of support
* Any other relevant information about the activity or the Applicant, as necessary.