**Appendix to PRODEX Funding Request: Proposal Template**

[better formatting of the template after the content is finalized]

**PART 1 - INSTITUTE PROPOSAL**

Take note the PRODEX EXPERIMENT ARRANGEMENT (PEA) and in its context address the following.

**Project DESCRIPTION and Interfaces**

General description – Objectives of the project

State the objectives of the project, provide a short description of the project and of its context (e.g. within the context of the Experiment, Instrument and/or Mission).

The work to be carried out by the institute and to be paid for by ESA under the PEA (the Project) is to be clearly separated from the work to be carried out by other parties (if the latter is mentioned at all).

Additionally, the work to be carried out during the period for which the funding is requested must be clearly separated from the work planned outside of the said period (e.g. future phases, if these latter are mentioned at all).

Proposed Developments

Hardware (software) description

Identify and describe the hardware (software) contributions.

Hardware (software) maturity

Identify the current maturity of the development (starting TRL) and expected maturity level at the end of the project (target TRL).

Development approach

Present the development approach, baseline design, alternatives, trade-offs.

Risks

Highlighting the development risks and propose for each identified risk a mitigation strategy. (including Long-Lead Items identification and risk control).

**Project Organisation and Interfaces**

Describe the project organisation, for the full project (e.g. at Instrument level) and at Contractor level (if the Contractor is not the Instrument lead); list the key interfaces (i.e. external teams) to be interacted with during the Project.

**Contact information**

Investigator title and full name: Enter the title and full name of the Investigator responsible for the Project.

Institute/University: Enter text.

Department: Enter text.

Address: Enter text.

Phone, e-mail: Enter text.

Head of Institute/Department endorsing the Project (name, function, e-mail): Enter here the Name, Function and e-mail of the Head of Institute/Department/Group endorsing the Project.

**Team members role in the Project**

Enter Name and Role of each member (at the institute/university department signatory of the PEA) assigned to the Project.

**Project term covered by the PRODEX Experiment Arrangement**

Enter the planned start and end dates of the Project.

**Applicable (AD) and Reference (RD) Documents**

**Applicable Documents**

The following documents are considered by the proposer’s team and made applicable to the project proposal.

|  |  |
| --- | --- |
| [AD 1] |  |
| [AD 2] |  |

**…**

**Reference Documents**

The following documents are considered by the proposer’s team and can be used as a reference to the project proposal.

|  |  |
| --- | --- |
| [RD 1] |  |
| [RD 2] |  |

**…**

**Work Breakdown Structure (WBS)**

Insert the WBS of the Project. WBS at Instrument or Experiment level (if the development of the full Instrument or Experiment is not the object of the present proposal) can be provided in addition, for information.

**Work Packages**

Provide detailed description of each WP. The work shall be clearly defined.

**Table 1: Work Package description** (Work Package description template to be copied as needed)

|  |  |
| --- | --- |
| **Work Package number:** | WP1 |
| **Work Package Title:** |  |
| **Responsible entity:** |  |
| **Local Managers:** |  |
| **Project phases:** |  |
| **Work Package Start and End dates:** |  |
| **Number of Full-Time Equivalent (FTE) for the Work Package:** |  |
| **Objectives:** | |
| **Inputs:**  **Description of work:**  **Excluded tasks:** | |
| **Deliverables:**  **Non-deliverables:** | |

**Standard Management Requirements**

Note the STANDARD MANAGEMENT REQUIREMENTS section of the PEA. Indicate any related input and justify deviations if any. Notably address the “PARAMETERS of MANAGEMENT REQUIREMENTS section” and identify Deliverable Documentation (using the Table 2 below), Hardware elements, Computer Programme and Models template, Operational Software and Open Source Code Software.

Deliverables

**Table 2: Deliverable Documentation (example, to be tailored to the activity)**

|  | Milestone (delivery event/date) | | | | |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| **Management Documentation** |  |  |  |  |  |
| Progress report |  |  |  |  |  |
| Schedule |  |  |  |  |  |
| Action Items List |  |  |  |  |  |
| Deliverable Items List |  |  |  |  |  |
| Summary report |  |  |  |  |  |
| **Technical Documentation** |  |  |  |  |  |
|  |  |  |  |  |  |
| Add specific documentation here. |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| **PA Documentation (to be tailored to the Phase of the activity)** |  |  |  |  |  |
| DCLs, LLI lists |  |  |  |  |  |
| Non-Conformance Report(s) |  |  |  |  |  |
| NCR Status list |  |  |  |  |  |
| Request for Waiver |  |  |  |  |  |
| Request for Deviation |  |  |  |  |  |
| Change Requests |  |  |  |  |  |
|  |  |  |  |  |  |

Hardware

HW-1: Hardware element and planned delivery date

HW-2: Hardware element and planned delivery date

HW-3: Hardware element and planned delivery date

HW-4: Hardware element and planned delivery date

Software

SW-1: Computer Program or model element and planned delivery date

SW-2: Computer Program or model element and planned delivery date

SW-3: Computer Program or model element and planned delivery date

SW-4: Computer Program or model element and planned delivery date

State whether Operational Software or Open Source Software is intended to be delivered, identify such software.

Shedule

Provide the project schedule (bar chart) here.

Project check points

Project progress and deliverables will be checked according to Table 3.

Table 3: Check points for deliverables readiness.

|  |  |  |
| --- | --- | --- |
| **Check-Point number** | **Planned date** | **Description** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

**Export Control**

State here any specific Export Control measures applying to the Project. In none, write N/A.

If the project is in cooperation with a Non-ESA member state, cite the state and identify the main partners (institution name, department name, point of contact, website if known):

* Scientific interface
* Technical interface
* Payload integrator
* Spacecraft provider (Platform and launcher if known)
* Mission organiser

**Background Intellectual Property Rights**

If known at this stage, declare here the registered Intellectual Property Rights, if any (e.g. patents) that will be used in the execution of the Project. If not known, leave blank, if none, write N/A.

List here any “items made available by the Agency” that may be used in the Project and state their need dates.

**EXTERNAL Items / services required for the executoin of the activity**

If known at this stage, identify in this section, the external items or services (including Customer Furnished Items - CFIs), required by the proposer in order to complete the project described in this proposal. List the providers and need dates. For example, in case of an instrument consortium, if the proposers require a stray-light analysis provided by another Czech or non-Czech institute or industry via the instrument consortium, or a sub-system, it should be listed in this section.

**COST BREAKDOWN**

Table 4: PRODEX experiment arrangement – institute costs

(double click to open the excel spreadsheet)



*Exhibits: See next pages*

*Table 4b: Manpower costs (repeat Table 4b if more than three years).*

*Delete table if not needed.*

(1): FTE = Full Time Equivalent allocation per year (1 full year of work is 1 FTE).

Salaries: for each personnel paid, state name and work category in first column below. Insert rows above "Total Manpower". Do not delete columns or lines (leave blank if not used).



*Exhibit A to Table 4: Travel plan*

Write N/A if None / Delete table. Table to be extended as needed.



*Exhibit B to Table 1 - Items purchased by the Institute.*

Append detailed list in separate page if required.

Write N/A if None / Delete table. Table to be extended as needed.



(\*) Type of item may be specified when needed: e.g. equipment, parts, components, services…

A table per type of procurement may be provided (e.g. equipment, services, parts, components, etc). In that case, label the tables as “Exhibit B1 to table 4”, “Exhibit B2 to table 4” etc. Itemised lists may be required, to be addressed on a case-by-case basis.

(\*) Proposed country of purchase: if a single supplier is identified (single source).

*Exhibit C to Table 4 – Miscellaneous costs.*

Append detailed list in separate page if required.

Write N/A if None / Delete table. Table to be extended as needed.

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*Table 5: Items to be purchased via ESA on behalf of the institute (above 5 000 Euro)*

Append detailed list in separate page if required.

Write N/A if None / Delete table. Table to be extended as needed.



(\*) Type of item may be specified when needed: e.g. equipment, parts, components, services…

(\*\*) Proposed country of purchase: if a single supplier is identified (single source).

(\*\*\*) Specify when the procurement should be started, considering the potential long lead times.

**PART 2 - INDUSTRIAL ACTIVITY ROM COST SUPPORTING ELEMENTS**

The boundary conditions considered by the institute when consulting industry to obtain a cost estimate should be indicated below in section 1) and the justified cost estimates in section 2).

In case industrial contracts are foreseen to be placed by ESA, institute shall contact 2 to 3 Czech companies or consortia and provide the following information for each industry or consortium. This may result in describing 2 to 3 baseline technical solutions and 2 to 3 financial and management plans, using the template here after.

At this stage there is no selection of the industrial consortium made. Selection will be made according to ESA procurement rules.

The information will be used to complement the assessment of the technical feasibility, relevance of proposed software and hardware to professional interest of the proposer, benefits for the Czech Republic and adequacy of the project management and financial matters

**Consortium 1.**

Identify the industrial consortium, background and experience.

**1. Technical & Management**

Indicate in this section the boundary conditions considered by the companies/consortia consulted for obtaining a cost estimate for the present activity.

**1.1 Industrial Activity objectives**

Provide the objective of the activity object of the present proposal.

Provide a short description of the industrial development, how it interfaces with the payload/platform development (e.g. full instrument / platform, subsystems etc.)

Indicate whether the activity is for the development of an instrument or subsystem for an ESA mission or for a non-ESA mission; identify the mission.

**1.2 Requirements of the activity**

Identify the applicable requirements (including functional, performance, technical, interface, Product Assurance, schedule, and, when applicable, export control requirements). Consider the requirements owned by the mission and/or the consortium (ESA or non-ESA).

**1.3 Design outline and points of feasibility for industrial work**

Provide the baseline design, feasibility analysis, options, alternatives and trade-offs.

**1.4 Programme of Work**

**Work Package Description (WPD)**

Insert the WBS of and identify the main work-packages (using the same tables as above) and main tasks and deliverables per work-package.

|  |  |
| --- | --- |
| **Work Package number:** | WP1 |
| **Work Package Title:** |  |
| **Responsible entity:** |  |
| **Local Managers:** |  |
| **Project phases:** |  |
| **Work Package Start and End dates:** |  |
| **Number of Full-Time Equivalent (FTE) for the Work Package:** |  |
| **Objectives:** | |
| **Inputs:**  **Description of work:**  **Excluded tasks:** | |
| **Deliverables:**  **Non-deliverables:** | |

**Risks**

Provide risk description and mitigation strategies (main risks).

**Deliverables:**

List the hardware, software and documentation deliverables per phase of the activity for the development phases covered by the present proposal / ROM cost estimate.

**1.5 Schedule**

Provide a schedule (bar chart), including the major reviews and meetings.

**2. Financial**

**2.1 Total cost of Phase(s) for which the funding is requested as per present proposal**

Present the total cost estimate of the Industrial development activity and its breakdown by major cost elements (i.e. manpower, procurements (including EEEs), and external services) and by work package. Each cost element must be dully justified.

Identify the company/consortium. If more than one consortium/company has been consulted provide the cost estimates provided by each industrial consortium.

Companies should use the ESA PSS forms for their cost estimates, notably the PSS A2 and its Exhibits A and B and the PSS A8.

**PART 3 - ESTIMATED COST AT COMPLETION (FUTURE PHASES)**

If follow-up phases are planned, not part of the present project submission, outline the next development steps/activities that would be needed AFTER COMPLETION OF THIS ACTIVITY and their ROM costs, both for industry and institute.

The cost estimate shall be broken down per major work package and has to be duly justified. The following shall be considered: major procurements of material, EEE components, parts, equipment, licenses, services, and other cost elements, including the processes qualification costs, PA/QA etc.

Identify clearly procurement within the Czech Republic and from abroad.

In addition to the list of work packages (but not necessarily the work package descriptions) list the deliverables considered (HW, SW and documentation) and the schedule.

The major developments risks shall be identified and risk mitigation (outline) proposed.