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Technical Proposal

1. Description of the proposed product

The following paragraph provides a top-level description of the overall product and its main sub-systems:

The role and the use of the product are provided in the following paragraph:

or

The product is an enabling item for the ... equipment. The role of this equipment is Within this equipment, the product provides the following capabilities:

- Function/capability 1.
- Function/capability 2.
- Etc.

The hardware/software deliverables at the end of the activity will be

Please present the hardware/software deliverables resulting from the proposed activity and their quality level e.g. for hardware BB, EBB, EM, EQM or FM, for software prototype, alpha version, beta version..

Please include any relevant background information and the overall objective of the activity.

1.1 Product Role

The product will be used within the ...AOCs system of a spacecraft ... to provide ...e.g. angular rates knowledge to the spacecraft computer...

1.2 Baseline architecture

Please present the overall design architecture.

Please present design trade-offs that lead to the selection of the baseline implementation and the rationale behind the selection of the baseline architecture.

Include images to show what the product and its constituent modules will look like and block diagrams to show their implementation details.

Existing technical documentation presenting the proposed product can be attached in section 6.

1.3 Functional Overview

The figure below is a functional block diagram of the product that identifies its main functional modules and external interfaces.

Insert a functional block diagram of the product

The main functional modules are described in the table below.

Functional modules

| Module | Functions/Features | Description | Development Status | Critical Technologies |
|------------------|--------------------|-------------|---------------------------------------|-----------------------|
| Name of module 1 | ... | ... | New/Modification/Unmodified Re-use | ... |
| Name of module 2 | ... | ... | | ... |

| | | | | |
|------|-----|-----|--|-----|
| Etc. | ... | ... | | ... |
|------|-----|-----|--|-----|

Please explain which of the different modules are new, modified or unmodified-(re-used). For all “new” or “modified” modules, please ensure consistency with the Development Plan (section 4.3.2 “Development of Key Product Building Blocks”)

Please explain the rationale behind the selection of the critical technologies.

Please explain the external interfaces of the product in the text below.

Please describe the external interfaces of the product, categorized by Interface type (electrical, mechanical, fluid, optical/RF, data...). Depending on the type, describe additional main characteristic parameters of the interface. Full ICD-level detail is not required, but use tables as necessary for clarity.

1.4 Product Tree

The following product tree is a hierarchical breakdown of the product into the hardware and software elements that are required to perform the product functions identified previously:

1. Product.

1.1.Element 1.

1.1.1. Sub-Element 1.1.

1.1.1.1. ...

1.2.Element 2.

1.3....

2 Third Party Products/Rights

No products or rights of third parties are planned to be used in the development of this product.

or

The following third party products/rights/export licences are planned to be used in this product development:

In particular for firmware/software: IPR status, use of Open Source components/libraries and the related licencing consequences (distribution conditions, copyleft etc.etc.).

The technical reasons for adopting a solution based on these third party products/rights/export licenses are

The impact of this approach on the technical activities and the resulting products and their usage is

3 Product Heritage and Current Development Status

The aim of this section is to identify the heritage and current state of development of the product. References can be used, however the Tenderer shall ensure that the necessary information is provided in order to give a clear view of the starting point.

3.1 Description of the Heritage and Starting Point

The product is an evolution of **existing product or product line**.

The heritage product has been ... **summary details about the heritage products.**

The new product will offer the following features over the current products.

- **Function/capability 1** (e.g. 20% mass saving, automatic level control or operation in a new frequency band).
- **Function/capability 2.**

Key details of the heritage product can be found in **document reference** if applicable.

or

The product represents a new product line for the entity,

3.2 Start and Target Technology Readiness Level of the proposed Product

The table below indicates the start and target Technology Readiness Levels (TRL) of the product, of each of its key modules/subsystems and of the technologies that are critical to the success of the development. The basis for each TRL assessment is indicated in the table.

Technology Readiness Levels are defined in the Appendix 1

Summary of the current development status

| Item | Product Tree Ref. | Start TRL | Basis of the TRL Assessment | Target TRL | Basis of the TRL Assessment |
|------|-------------------|-----------|-----------------------------|------------|-----------------------------|
| ... | ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... | ... |

4 Development

4.1 Development Objectives

The proposed development activities aim at achieving: **description of the product expected status at the completion of the proposed activities.**

In the context of this proposed activity, the following hardware deliverables will be developed: ... **(e.g. Breadboard, Engineering Model, Engineering Qualification Model).**

In the context of this proposed activity, the following software deliverables will be developed: ... **(e.g. Alpha version, Beta version, product release...).**

4.2 Development Constraints

Key Requirements

The requirements detailed in the following table are the main driving factors in the design and development. **All/...** of these are covered in the project risk register.

Key requirements are those considered essential to the success of the proposed development, or those that

are likely to significantly affect the course of the development (e.g. design drivers).

Note: The Tenderer should consider which of these key requirements should be included in the risk register. The purpose of this section is to establish the constraints that drive the development plan.

Key product requirements

| Requirement ID | Requirement | Description of criticality |
|----------------|-------------|----------------------------|
| ... | ... | ... |
| ... | ... | ... |
| ... | ... | ... |
| ... | ... | ... |

or

The performance, functional and other requirements for the product and its constituent parts are presented in **document reference(s)**, a **copy/copies** of which **is/are** attached to this proposal.

Other Constraints

Please summarize any other constraints that might affect the product development plan (e.g. qualification or certification requirements, time constraints, cost to commercialization...).

4.3 Development Plan

Overall Development Logic

The development logic/approach shall be provided at a level of detail appropriate for the comprehension of the actions to be performed and the final objectives in terms product maturity.

The overall development logic is The main activities are:....

Development of Key Product Building Blocks

The table below indicates which product subsystems/building blocks will require development to achieve the product development objectives. The term “modification” in the table indicates adaptations/modifications planned to be made to an existing building block. New building blocks are indicated as “to be developed”.

Summary of the product building block developments

| Subsystem/Building Block | Nature of the Development | Comments |
|--------------------------|---------------------------|----------|
| ... | modification | ... |
| ... | to be developed | ... |
| ... | ... | ... |
| ... | ... | ... |

4.4 Follow on Steps

The table below summarises the development activities required to qualify the product after this proposed activity.

Overview of Key Activities

| Development Phase | Key Activity (Brief description) | Duration (months) | Estimated Budget required (K€) |
|-------------------|-------------------------------------|-------------------|-----------------------------------|
| | | | |
| | | | |
| | | | |

5 Risk Analysis and Management

The table below identifies the technical risks associated with the development of the product based on a preliminary risk analysis.

| Description of Risk | Impact | Probability of Occurrence | Description of Impact | Domain of Impact (cost, schedule, compliance, image) | When Mitigated (WP) | Mitigation action |
|---------------------|--------|---------------------------|-----------------------|---|------------------------|-------------------|
| ... | ... | ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... | ... | ... |

Provide further information as required to properly explain the risk mitigation strategy and plans and provide a Risk Management Plan as part of the Management Proposal.

6 Technical annexes

*Please attach any **relevant existing documentation** (e.g. product datasheet, preliminary design report, mass / power / volume budgets, performance budgets) to support the evaluation of the technical proposal.*

Appendix 1: Definition of Technology Readiness Levels (TRLs)

Technology Readiness Level (TRL)

- TRL1 Basic principles observed and reported
- TRL2 Technology concept and/or application formulated
- TRL3 Analytical and experimental critical function and/or characteristic proof-of-concept
- TRL4 Component and/or breadboard functional verification in laboratory environment
- TRL5 Component and/or breadboard critical function verification in a relevant environment
- TRL6 Model demonstrating the critical functions of the element in a relevant environment
- TRL7 Model demonstrating the element performance for the operational environment
- TRL8 Actual system completed and accepted for flight ("flight qualified")
- TRL9 Actual system "flight proven" through successful mission operations.

Figure 1 – Technology Readiness Levels according to ECSS-E-HB-11A adopted on March 2017

Technology Readiness Level (TRL) for Software developments

- TRL1 First formulation
- TRL2 Algorithm
- TRL3 Prototype
- TRL4 Alpha version
- TRL5 Beta version
- TRL6 Product release
- TRL7 Early adopter version
- TRL8 General product
- TRL9 Live product.

Figure 2 – Link between Software development status and TRL according to ECSS-E-HB-11A adopted on March 2017

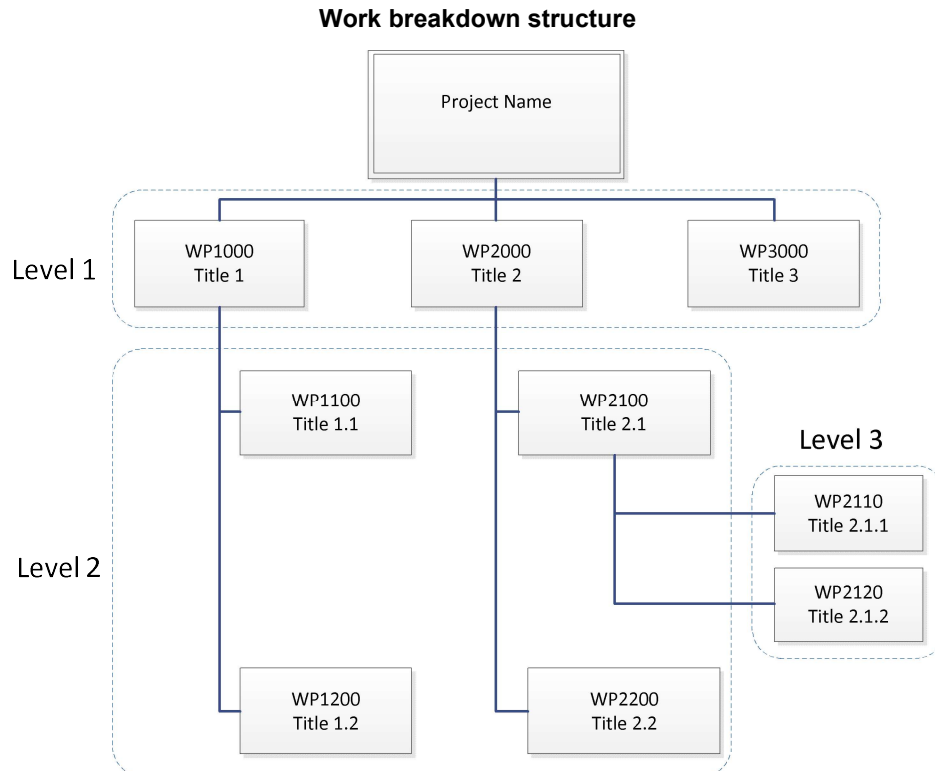
Implementation Proposal

1. Work Definition

1.1. Work Breakdown Structure

The figure below presents the work breakdown structure down to the ... level, covering the entire scope of the proposed work.

Replace the following diagram with an equivalent showing the proposed work breakdown structure. The work shall be structured so that the start and end of work packages are linked to the milestone review meetings.



1.2. Work Package Descriptions

A work package description is reported in Annex 1 for the work packages at the lowest level of the work breakdown structure.

Each work package at the lowest level of the WBS shall be described in a Work Package Description. Work package descriptions shall comply with the following requirements, and shall be filled out using the PSS A20 form, available on esa-star Publication <https://esastar-publication.sso.esa.int/supportingDocumentation> under Reference documentation -> Applicable documents-> PSS forms (Issue 5).

The work package descriptions comply with the following requirements:

- There is a single work package manager for each work package, who is a member of the key personnel.
- Work packages start and end on milestone events and do not span the entire duration of the activity (except for the project management work package and the closely associated management functions).
- Inputs from other work packages are clearly identified.

- The work to be performed is described in sufficient detail for the Agency to be able to judge the value for money, including scope of work and man-hours.
- Each task is traceable with a corresponding work package output.
- Each work package has at least one traceable work package output (hardware, software and/or documentation item, deliverable to the Agency).
- All deliverable hardware, software and documentation items are traceable to the identified work packages.

[OPTION: applicable if there is processing of personal data as a task of the proposed work.]

1.3. Personal Data Processing

[In case the work to be performed entails processing of Personal Data, compliance to the Agency's Personal Data Protection Framework shall be substantiated. In this respect, the Tenderer shall present in the tender:

- 1. How and on which tools, in which location (country) the data will be processed, and for how long it will be stored (retention period)? How data will be securely deleted at the end of the Contract? Will sub-contractors be engaged?*
- 2. How consent of the subjects will be collected and managed? How Data Subjects will be informed about processing their personal data and procedures for exercising Data Subject's rights?*
- 3. How will the personal data be transferred to the Agency?*
- 4. Which organisational and security measures are put in place to protect the personal data from unauthorised disclosure (e.g. personnel trained, access management)?*
- 5. Which is the incident management procedure relevant to the protection of Personal Data?*

In view of the above, the Tenderer is requested to provide any additional information on the personal data protection they may have put in place in order to comply with the applicable laws and regulations.

[END OPTION]

1. Project Schedule

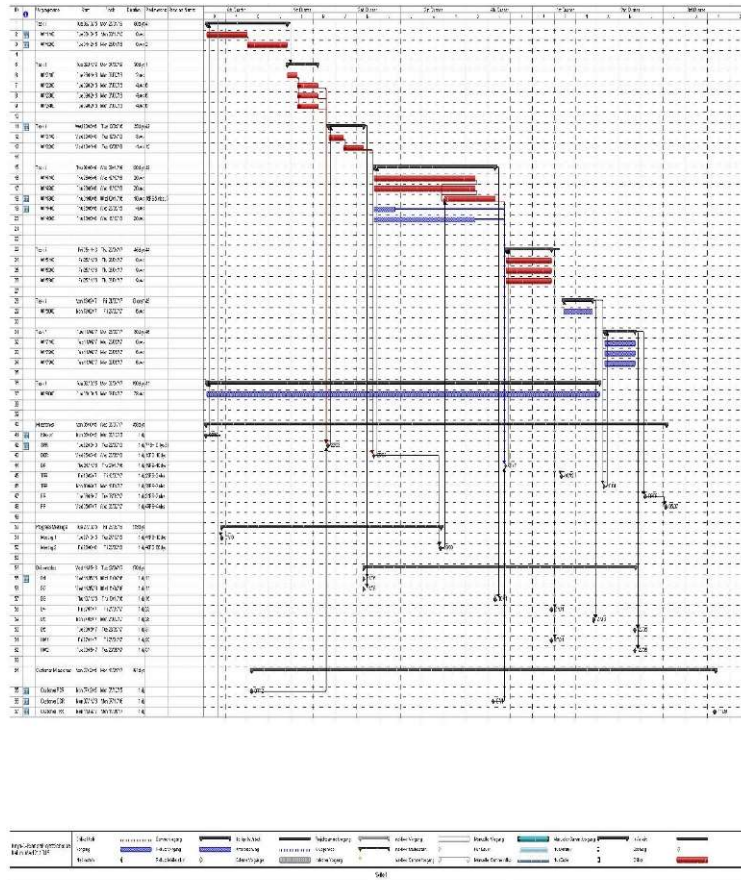
Bar charts embedded in the Proposal document should have sufficient resolution, both on screen and in print, for all elements of the bar chart to be easily read. Alternatively, the bar chart may be provided as a separate document and referenced in the Proposal.

The project schedule is illustrated in a bar chart (Gantt chart) in (**document reference**), which is attached to the proposal.

or

The project schedule is illustrated in the following bar chart.

Replace the example bar chart with your own



The project schedule shows the start date, the end date and the duration of each work package and the timing of the contractual reviews and other review meetings. It also shows how the project plan relates to the procurement plan of the customer in terms of the alignment of the key milestones and decision points.

2. Review Meeting Plan

A set of milestone review meetings shall be planned such that each represent key moments in the project (e.g. key decision points) with a set of associated deliverables (documentation, hardware and software) to the Agency. The meeting plan shall include a kick-off meeting. The number and nature of the milestone review meetings shall be in accordance with proposed development plan.

The proposed review meetings are summarised in the table below and includes a Final Review to confirm that all outputs, deliverables, final inventory and work have been successfully completed/delivered as defined in the contract. The Final Review includes a summary of the outcome of the development, including conclusions and recommendations shall be presented.

Each review meeting will be attended by the Agency's representative(s). Additionally, with due notice to the Contractor, the Agency reserves the right to invite Third Party(ies) to meetings to facilitate information exchange.

The deliverable hardware and software items due to the Agency at each milestone review are defined in section 5. Deliverable documents at each milestone review are defined in section 5.

Complete the following table as appropriate for the proposed Development Phase

Technical milestones/ Review Meetings

| Milestone | Title | Objectives | Hardware/Software Model associated to verification or qualification | Decision Point(s) |
|-----------|--------------|--|---|---|
| KO | Kick-off | 1. ... 2. ... | 1. | 1. Initiate the contract |
| PDR | ... | 1. ... 2. ... | 1. Breadboard Results | 1. ... 2. ... |
| CDR | ... | 1. ... 2. ... | 1. Engineering Model Results | 1. ... 2. ... |
| | ... | 1. ... 2. ... | 1. | 1. ... 2. ... |
| FR | Final Review | 1. To present an overview of the activities carried out during the project. 2. To present a summary of the outcome of the development, including conclusions and recommendations. 3. ... | 1. | Confirm that all outputs, deliverables and work have been successfully completed/delivered to the satisfaction of the Agency and as defined in the Contract. ... |

3. Progress Meetings

Progress meetings will be held on a monthly basis, as defined in the Project Management Plan, (insert document reference). The right for ESA to call for specific progress meetings as well as to invite relevant Third Parties to attend, is acknowledged.

The objective of each progress meeting will be to present a summary of the current status of the activity and to report on any problems and schedule slippages.

The Progress Meetings shall be held via teleconference

4. Deliverable Hardware and Software

4.1. Hardware

The hardware items that will be produced and delivered to the Agency under a resulting contract are listed in the table below.

Hardware items

| Deliverable ID | Description | Completion Milestone | Number of items delivered |
|----------------|-------------|----------------------|---------------------------|
| HW1 | ... | ... | ... |
| ... | ... | ... | ... |
| ... | ... | ... | ... |
| ... | ... | ... | ... |

4.2. Software

The software items that will be developed and delivered to the Agency of the resulting contract are listed in the table below.

Software items to be delivered to the Agency ¹

| Deliverable ID | Description | Completion Milestone | Delivery Format(s) | Deliverable Licences |
|----------------|-------------|----------------------|--------------------|----------------------|
| SW1 | ... | ... | ... | ... |
| ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... |

1. In accordance with Article 3.1.3 of the Draft Contract, if applicable, also include licences to be purchased and delivered to the Agency.

5. Documentation Delivery Plan

5.1. Deliverable Documents

Please refer to Appendix 1&2 for the definition of Milestones and expected documentation per Milestone.

The following documents will be delivered to the Agency, at the indicated milestones:

Documentation delivery plan

| Document Reference | Deliverable Document | Document content | WP | Milestone |
|--------------------|----------------------|------------------|----|-------------|
| ... | title | | | |
| ... | title | | | PDR(draft) |
| ... | title | | | CDR (final) |
| ... | title | | | ... |
| ... | title | | | ... |
| ... | title | | | ... |
| ... | title | | | ... |
| ... | title | | | ... |

The documents mentioned above have been identified as deliverables in the Work Package Description.

The documentation delivery plan shall include a Final Report and the Technology Achievement Template. For Segment 1 and Segment 2 Proposals, the documentation plan shall also include an updated Business Plan.

The Contractor shall be aware that the documents intended for publication might be made available to Third Parties (e.g. companies, institutions) through the GSTP website. These documents shall not contain any confidential or proprietary information, or confidentiality or copyright statements.

The Agency expects all documents listed in the documentation delivery plan to be delivered to the Agency unless explicitly stated otherwise.

5.2. Proprietary Documents

Include this section if, exceptionally, proprietary documents are included in the documentation delivery plan.

The table below identifies proprietary documents that will be made available for review to the Agency.

Proprietary documents

| Review Meeting | Document Reference | Document Title |
|-----------------------|---------------------------|-----------------------|
| ... | ... | ... |
| ... | ... | ... |
| ... | ... | ... |
| | | |

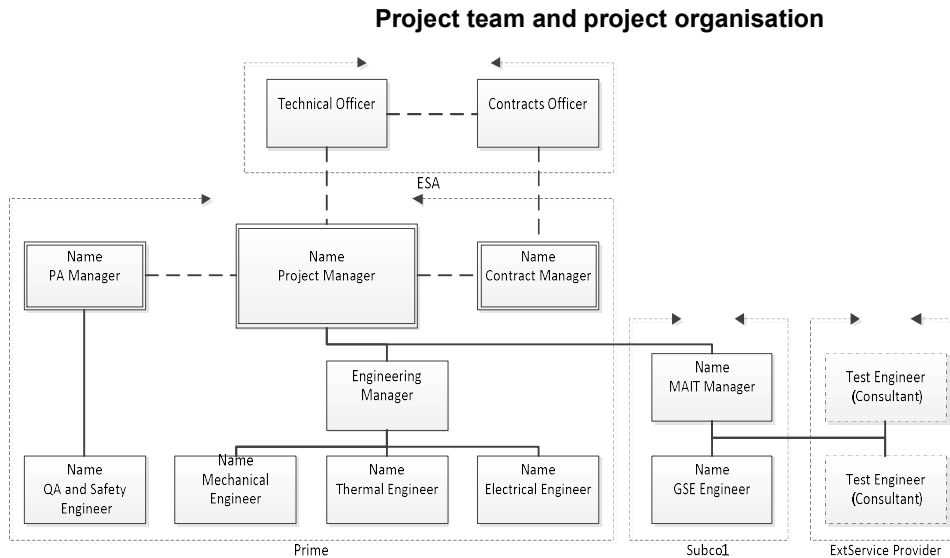
Annex 1: Work Package Descriptions

Management Proposal

1. Project Team and Structure of Project Organisation

The project team is presented in the figure below, which identifies the roles of the project team members and the names of the individuals fulfilling those roles, as well as all the Key Persons.

Provide a similar diagram for the proposed project



The lines of communication and reporting within the project team are as follows:

The means for settling disagreements within the project team are:

The proposed contractual status of each industrial partner in the project consortium shall be clearly identified (Subcontractor or external service provider).

Any entity responsible for one or more work packages shall be treated as a Subcontractor.

The Tenderer shall present the project team and the structure of the project organization and, where it is proposed to subcontract part of the work, the structure of the industrial group, including all Key Personnel.

2. Project Manager

The nominated project manager for the proposed work is **He/She** will be responsible for the management and execution of all work to be performed and for the coordination and control of the work within the industrial team.

He/She will be the official point of contact with the Agency during the execution of the work.

3. Key Personnel and Their Roles

Key Personnel are defined as persons who, because of their individual qualifications and positions, are proposed for the work and indicated as such in the Tenderer's project organizational chart.

The Key Personnel are identified in the table below.

Key Personnel

| Name | Entity | Project Role | Work Package Manager for |
|-------------|---------------|---------------------|-------------------------------------|
| ... | ... | ... | (work package IDs) |
| ... | ... | ... | ... |
| ... | ... | ... | ... |
| ... | ... | ... | ... |

Key Personnel should be proposed to one level below the Project Manager, both for the Tenderer and for any Subcontractors.

For each Key Person identified, the Tenderer shall indicate their role in the project.

For work package managers, the work packages for which they are responsible shall be listed.

The above list of Key Personnel includes all people who have been assigned work package management responsibilities.

4. Qualifications and Experience

The CVs for all Key Personnel are provided in Annex 1 to this Part of the Proposal. Each CV provides:

- a summary of the work experience of the person concerned;
- a brief description of their present job and responsibilities;
- their specific qualifications and experience of direct relevance to their role in the project.

5. Time Allocation to the Project

The time allocations of the Key Personnel to the project are summarised in the table below.

Time allocation of the Key and other Personnel to the project¹

| Name | WP ... hours (%) | WP ... hours (%) | WP ... hours (%) | WP ... hours (%) | WP ... hours (%) | Overall hours (%) |
|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| ... | 30 (5%) | ... | ... | ... | ... | 150 (10%) |
| ... | ... | ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... | ... | ... |
| Other personnel | ... | ... | ... | ... | ... | ... |

6. Facilities to be used for the Work Proposed

The following internal and external facilities are planned to be used in the proposed activity.

Facilities to be used in the proposed activity

| Facility ID | Facility Type ¹ | Description/ Capabilities | Availability (Internal/External) | Status ² |
|-------------|----------------------------|------------------------------|-------------------------------------|---------------------|
| 1 | RF Test | ... | Internal | Existing |
| 2 | ... | ... | ... | ... |
| ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... |

¹ For example, hardware, software, manufacturing equipment, test equipment, production and integration lines.

² For example, “existing”, “requires modification”, “still to be developed/built”, “purchased”.

Include the following if external facilities are planned to be used

The following table provides further details on the external facilities that are planned to be used.

¹ Percentage time allocations for work packages are expressed relative to the total man-hours of all personnel contributing to that work package. For the overall time allocation it is the percentage of the individual's time that is dedicated to the project, i.e. the ratio of the total number of hours spent on the project and the total number of hours worked over the planned project duration.

External facility owners and their project roles

| Project Resources Template | Facility Owner | Project Role (Subcontractor/external service provider) |
|----------------------------|----------------|---|
| 1 | ... | ... |
| 2 | ... | ... |
| ... | ... | ... |
| ... | ... | ... |

7. Availability of Facilities

None of the facilities identified previously will be shared with other projects and will be available for the exclusive use of the proposed project.

or

The table below identifies facilities that will be shared with other projects. The table indicates how the facilities will be managed so that they are available for use in the proposed activity when required.

Access to shared facilities

| Facility ID | Other Facility Users | Scheduling and Access Management Principles |
|-------------|----------------------|---|
| ... | ... | ... |
| ... | ... | ... |
| ... | ... | ... |
| ... | ... | ... |

ANNEX 1: CURRICULA VITAE OF THE KEY PERSONNEL

*Provide completed CVs for all members of the Key Personnel using the following template, or equivalent
(Max 1 page per person)*

| Name | |
|--|---|
| Specific Qualifications and Experience Relevant to the Project Role: | ... |
| Entity: | ... |
| Present Position and Responsibilities in the Entity: | ... |
| Education: | |
| Year(s) | Educational details |
| Year(s) | Educational details |
| Work Experience: | |
| Year(s) | Entity, Project, Position, Responsibilities, Achievements |
| Year(s) | ... |
| Year(s) | ... |

Financial Proposal

1. Cost and Price Summary

The cost and the request for ESA contribution for the proposed development is as defined in the following table.

Cost and price summary

| Entity (ESA-STAR Entity Code - Name) | Country (ISO Code) | Role | Cost in Euro | Contribution requested to ESA |
|--|-----------------------|---------------|---------------|---------------------------------------|
| Prime | ... | Contractor | €..... | €..... |
| Subcontractor 1 | ... | Subcontractor | €..... | €..... |
| Subcontractor 2 | ... | Subcontractor | €..... | €..... |
| ... | ... | ... | ... | ... |
| | | Total: | €..... | €..... (...% of total cost) |

Our financial proposal for the proposed activities is compliant with the maximum funding levels specified in Annex 2.

It is confirmed that the proposal does not include any profit nor any costs associated with marketing or commercialization activities.

2. PSS Forms

The following PSS forms are attached in Annex 1 herewith for the Tenderer and for each of the proposed Subcontractor(s), showing, per entity, the total cost of the proposed work (i.e. including the entity's share):

PSS-A1;

PSS-A2 (including Exhibits A and B, where applicable);

PSS A8;

PSS A15.1.

All PSS forms are signed by an authorised representative of the entity concerned.

The applicable PSS forms are available for download on esa-star Publication <https://esastar-publication.sso.esa.int/supportingDocumentation> under Reference Documentation -> Administrative Documents -> PSS Forms (Issue 5). Please read carefully the "Instructions" included in each template form.

In PSS A15.1 form, the expenditures shall reflect the total cost of the activity, while the payments shall reflect the Agency's contribution. Both expenditures and payments shall be expressed in months.

The management effort should be less than 10% of the overall effort and commensurate with the complexity of the activity.

Travel and Subsistence Plan

The proposed travel and subsistence plan for the activity, including the related cost details, are submitted in Exhibit B to form PSS-A2 for each member of the project consortium.

The travel and subsistence plan should take account of the fact that the Negotiation and Kick-Off Meeting should be held via a teleconference.

4. Source of the Entity Contribution

All entities participating in the consortium demonstrate sufficient economic and financial capability to guarantee continuous and satisfactory performance throughout the envisaged lifetime of the Contract.

Evidence of the co-funding capability is provided by the Prime (**Contractor name**) and the Subcontractor(s) (**name of Subcontractor 1, name of Subcontractor 2...**) (when applicable), as part of the proposal, as follows:

1. In case of Third Party funding (excluding Public funds/organizations) (**Option 1**):
 - Supporting Letter signed by a legal representative of the Third Party, confirming the intention to fund the activity, the total amount and the timely availability of the funds (payment plan).
2. In case of self-funding (**Option 2**):
 - Supporting Letter signed by a legal representative of the Entity (ies), confirming the total funds allocated and the source: loan (providing evidence)/reserves/loss. The signed Letter is attached, as an Annex to the Financial Proposal.
 - The financial table below, covering for the current and the last three (3) business years:

| Currency: | Current year forecast | Year -1 | Year -2 | Year -3 |
|---------------------------|-----------------------|---------|---------|---------|
| Number of employees (FTE) | ... | ... | ... | ... |
| Total Personnel Cost | ... | ... | ... | ... |
| Operating Revenue | ... | ... | ... | ... |
| EBITDA | ... | ... | ... | ... |
| Net Income (Loss) | ... | ... | ... | ... |
| Total Assets | ... | ... | ... | ... |
| Shareholders funds | ... | ... | ... | ... |
| Non-current Liabilities | ... | ... | ... | ... |
| Current Liabilities | ... | ... | ... | ... |
| Cash Flow | ... | ... | ... | ... |

* FTE = Full-Time Equivalent

The Letter and the table shall be provided for all entities participating in the consortium

5. Milestone Payment Plan

The proposed milestone payment plan is detailed in the tables below. It is based on the information provided in for PSS-A15.1 and reflects the economic reality of the project.

Milestone payment plan

| Milestone Description | Schedule Date | Payments from ESA to Contractor (in Euro) | Country (ISO Code) |
|--|-----------------|---|--------------------|
| Progress (MS 1): Upon successful completion of WP ... and/or successful [review and] the Agency's acceptance of all related deliverables, including evidence of the signature of the Sub-contracts. | T0 + ... months | | ... |
| Progress (MS 2): Upon successful completion of WP ... and/or successful [review and] the Agency's acceptance of all related deliverables. | T0 + ... months | | |
| Progress (MS 3): Upon successful completion of WP ... and/or successful [review and] the Agency's acceptance of all related deliverables. | T0 + ... months | | |
| Final Settlement (MS 4): Upon the Agency's acceptance of all deliverable items due under the Contract and the Contractor's fulfilment of all other contractual obligations including evidence of the implementation of the co-funded element by the Contractor and the Subcontractors and submission of the Contract Closure Documentation | T0 + ... months | (min. 15%) | |
| Total | | | |

The proposed payment plan shall take into account Article 3 and Appendix 1 to the Draft Contract and the following provisions:

- All claims for payment shall be linked to the achievement of defined schedule technical milestones.*
- These milestones are to be in the form of significant events in the programme, to be selected on the basis of providing a check point for progress of the work performed.*
- Examples of such milestones are the satisfactory completion of design reviews (e.g. a critical design review), satisfactory completion of tests, hardware deliveries and closure of the Contract.*
- The payment plan shall consist of progress and final payment milestones only, adding up to the total Contract price.*
- The final payment shall not be less than 15% of the total Contract price.*
- Advance payment(s) may be proposed if the Tenderer can demonstrate a significant need for cash disbursement at the beginning of the execution of the Contract. Advance payment(s) will not be granted automatically.*

- *The amount of any proposed advance payment and the corresponding amount(s) to be offset against the relevant milestone payment(s) shall be clearly stated in Euro, along with a justification for the need for cash disbursement at the beginning of the execution of the Contract.*
- *Proposed advance payments shall, under no circumstances, exceed 15% (35% for SMEs) of the total Contract price.*

6. “In Kind Contribution” (IKC)²

This proposal does not include any in kind contribution.

or provide the following statements, completed as appropriate

An in kind contribution comprising of is needed to make the product a functional unit and will be made available for use in the **proposed Development Phase**. The benefits of its use to the proposed activity are

IKC is proposed for a total amount of €, representing% of the overall cost of the proposed Development Phase. The IKC amount does not exceed 15% of the overall activity cost.

The cost of the IKC is based on the difference between the values below:

| Value of the IKC at the start of the proposed activity | Residual value at the end of the usage of the IKC |
|--|---|
| €..... (100%) | €..... (..... %) |

The proposal is compliant with the requirement that the residual value of the item is >20% of the value at the start of the current activity.

The proposed IKC is compliant with all of the conditions below:

1. The expenditure has actually been incurred and separately recorded as being company funded product development.
2. The IKC has not been paid with any public funds.
3. Contributions such as but not limited to materials, information, equipment and services obtained by the Contractor free-of-charge do not qualify as eligible costs and therefore cannot be claimed as in-kind contributions.
4. **The item cost/Depreciation related to the item (in case the item has been capitalised)** has not been recovered through the rates (including overhead rates) or other cost elements.
5. The item has not been subject to revaluation in the two calendar years before that of the start of the current activity.
6. The maximum depreciation for IKC shall not exceed 20% of the overall cost of the activity.
7. The IKC is of direct benefit to the proposed activity, as described above. Payments related to the IKC shall only take place upon use of the IKC and shall otherwise be forfeited.

² Please refer to the General Clauses and Conditions for ESA Contracts (ESA/REG/002 rev. 3) Annex 1, Section 4 for the eligibility rules for in-kind contributions

8. The IKC cost quoted for the proposed activity is at least 2/3 directly attributable to hardware elements. The remainder, at the maximum 1/3, is for **software/assembly/integration/test** to make the hardware a functional unit.

Annex 1: SIGNED PSS FORMS

Please enclose following signed forms for each member of the project consortium:

PSS A1;

PSS A2 (including Exhibits A and B, where applicable);

PSS A8;

PSS A15.1

Annex 2: MAXIMUM ESA FUNDING LEVELS FOR GSTP ELEMENT 2 “MAKE”

| TRL of development | | Univ. and Institutions* | SME (up to) | Non-SME (up to) |
|--------------------|-----|-------------------------|-------------|-----------------|
| Min | Max | | | |
| 3 | 6 | 100% | 80% | 75% |
| 6 | 8 | 100% | 80% | 50% |

*Note: Universities and research institutes are invited to support industry driven developments, however their participation shall be limited to 30% of the overall effort. Under this Element, universities and research institutes are not eligible to lead a consortium as prime contractors. Examples of university or research institute's support to an Element 2 activity could include for example access to labs, dissemination of research results that can be commercialized by the industry.

ANNEX 2: SME SELF-CERTIFICATION STATEMENT:

[NOTE: The self-certification(s) have to be provided on letterhead of the corresponding entity as per model hereunder]:

“I confirm that the company I am representing satisfies all the criteria for SME qualification as per definition given in the recommendation 2003/361/EC of the European Commission. ”

[+ date, name and signature of authorised representative]”

Part 6

Contractual Proposal

1. Compliance with the Contract Conditions

The Contract conditions have been read, are understood and accepted. No sales conditions of our own are applicable.

(Full and unconditional compliance is expected. Any remarks regarding the Draft Contract's terms and conditions shall be strictly limited to drawing the Agency's attention to objectively manifest (typing) errors or contradictions in the contractual text. Any other request or proposal to modify the Draft Contract may result in your proposal being marked down under Evaluation Criterion 4. Furthermore, the Agency reserves the right to disregard remarks, proposals or requests regarding the Draft Contract which it considers as being irrelevant).

1.1 Personal Data Processing

[OPTION A or OPTION B to be chosen]

[Option A: the PDCC Annex is to be made applicable in case the only personal data exchanged/processed in the frame of the Contract are the contact details of the representatives/contact points of the Parties and the personal data of the Key personnel (e.g. CVs)]

We hereby explicitly state that we have read, understood and accepted the Personal Data "Controller to Controller" Annex (PDCC) to the Draft Contract.

(This Annex forms an integrated part of the Contract and the Tenderer's attention is drawn to the fact that it will not be subject of separate signatures. Should the tender lead to a Contract award, the PDCC will enter into force upon signature of the Contract by both Parties.)

[END OPTION A]

[OPTION B: the PDP Annex is to be made applicable in case the proposed work foresees processing of personal data as part of the work to be performed under the Contract. It addresses as well the exchange/processing of the contact details of the representatives/contact points of the Parties and the personal data of the Key personnel (e.g. CVs)]

We hereby explicitly state that we have read, understood and accepted the Personal Data Processing Annex (PDP) to the Draft Contract.

(This Annex forms an integrated part of the Contract and the Tenderer's attention is drawn to the fact that it will not be subject of separate signatures. Should the tender lead to a Contract award, the PDP will enter into force upon signature of the Contract by both Parties. Special attention is drawn to section 1.3. Personal Data Processing of Part 3 Implementation Proposal)

[END OPTION B]

1.2 List of Background Intellectual Property Rights identified for the Execution of the Work

The Tenderer shall list the Background Intellectual Property Rights identified for the execution of the work.

All pre-existing proprietary Intellectual Property Rights or Intellectual Property Rights not funded under previous ESA Contracts, shall be listed in the Full Proposal, since they will impact the Agency's rights of further sub-licensing/ dissemination of the deliverables.

| Exact name of BIPR Item | Owner | Description | Patent # or Ref. / Issue / Revision / Version # | Contract / Funding Details under which the IPR was created | Date of creation of the version of the BIPR listed here | Licence | Affected deliverable with comments | Protected Format (Y/N) |
|-------------------------|-------|-------------|---|--|---|---------|------------------------------------|------------------------|
| ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | ... | ... | ... | ... | ... | ... | ... | ... |

1.3 List of Third Party Products identified for the Execution of the Work

The Tenderer shall list Third Party Products necessary for the execution of the work

All Third Party Products shall be listed in the Full Proposal, since they will impact the Agency's rights of use of the deliverables.

| Exact name of Third Party product | Owner | Intended use | Version | Price in € | Affected deliverable with comments |
|-----------------------------------|-------|--------------|---------|------------|------------------------------------|
| ... | ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... | ... |

- A Full and complete copy of the Licence Agreement, under which the above listed Third Party(ies) Product is licensed, is attached in Annex to this Contractual Proposal.

1.4 Third Party Commitments

The Tenderer shall indicate if he has entered into any arrangements or licence agreements as to Intellectual Property rights concerning the subject of the development.

If such arrangement or agreement could result in costs to be borne by the Agency, these must be separately identified and included in the total amount of the price quoted in the tender.

| Name/ title of the arrangement/ agreement | Purpose of the arrangement/ agreement | Affected deliverables | Restrictions to the Agency's rights of use and distribution |
|---|---------------------------------------|-----------------------|---|
| ... | | ... | ... |
| ... | | ... | ... |
| ... | | ... | ... |

- A copy of the document recording the commitment, or an appropriate part thereof, is attached in Annex to this Contractual Proposal.

1.5 Other Inputs to Enter into the Blanks in the Draft Contract

Several other inputs in the Draft Contract are left blank. They should be known to the Tenderer at the time of preparing the Full Proposal, and shall be filled out according to the below sub-sections.

1.5.1 Signature Preference

The Tenderer shall indicate its preference for Clause 4 of the Draft Contract. Electronic signature encompasses both simple electronic signature (handwritten scanned) or the use of e-signing digital tools. Digital signature means the Contract signature can only be executed by using e-signing digital tools.

[OPTION A or OPTION B to be chosen]

We prefer **[Option A: electronic signature using digital signature only]** **[Option B: electronic signature]** for the signature of the Contract.

1.5.2 The Contractor's Representatives

The Tenderer shall indicate its representatives for Sub-Clause 5.2 of the Draft Contract.

We confirm that the persons who will be responsible for technical management ("Technical Officer"), contractual management ("Contracts Officer") and personal data protection matters ("Data Protection contact point") are as indicated in the Cover Letter.

1.5.3 Applicable Law and Place of Arbitration

The Tenderer shall provide its preferences for Clause 35 of the Draft Contract.

Our preference for the Applicable Law referred in Clause 34 of the GCC is the law of [INSERT COUNTRY] and our preference for the arbitration proceedings to take place is [INSERT CITY], [INSERT COUNTRY], referred in the same Clause of the GCC.

1.5.4 Other Remarks on the Draft Contract

The Tenderer may provide any other input or remark on the Draft Contract it may deem fit.

....
....

2 Statement Relating to Export/Import Licences/Authorisations and Related Documentation

There are no export or import restriction issues and thus no need to obtain specific licences or authorisations.

or include and complete the following statements as appropriate

Export or import restrictions and/or a need of adequate licences or authorisations exist, and the status regarding such requirements is at present the following:

- the **Tenderer/Subcontractor ... (name)** has obtained the following authorisation(s) in order to submit this tender:

and/or

- the **Tenderer/Subcontractor ... (name)** will need to obtain, prior to the placing of a Contract, the following authorisation(s):

and/or

- the **Tenderer/Subcontractor ... (name)** will need to obtain the following authorisation(s) for the implementation of the Contract: