

**CONTENT OF THE FULL PROPOSAL  
FOR GROUND SEGMENT**

## CONTENT OF THE FULL PROPOSAL FOR GROUND SEGMENT

The Full Proposal is for the development and verification of a product ready for exploitation. The activity may address completely new products, be an upgrading or improvement of an existing product or a continuation of an activity funded in a different ESA, national or own programme. Activities shall be related to improvement or development of Ground Segment system and equipment designs up to and including industrialisation.

A Full Proposal may include study activities for an amount up to 25% of the total cost of the proposal if not preceded by a separate study contract. The study activities shall be limited to the study of the overall system or parts thereof in which the product to be developed will be an element and is a means to consolidate the technical specifications, the technical baseline and the verification plan. However, the Full Proposal shall include the first issue of these documents.

Please find below for your quick reference a summary of the documents of which the Full Proposal shall consist. Further details on the content of each document are thereafter. Please note that in case you wish to claim prior work, additional/more mature documents may need to be included in your proposal (see 5.8.2 below). Furthermore, please note that prior work cannot be claimed if the Full Proposal was preceded by a study contract or includes study activities.

A Full Proposal may be divided in phases to be released upon achievement of a well defined milestone. In this case each phase shall be addressed in easily identifiable chapters. The schedule and cost information shall be provided separately for each phase.

<b><u>1.</u></b>	<b><u>COVER LETTER</u></b> .....
<b><u>2.</u></b>	<b><u>EXECUTIVE SUMMARY</u></b> .....
<b><u>3.</u></b>	<b><u>BUSINESS PLAN (BP)</u></b> .....
<b><u>4.</u></b>	<b><u>TECHNICAL PROPOSAL</u></b> .....
<b><u>4.1</u></b>	<b><u>Development Plan (DP)</u></b> .....
<b><u>4.2</u></b>	<b><u>Technical Specifications (TS)</u></b> .....
<b><u>4.3</u></b>	<b><u>Test Plan (TP)</u></b> .....
<b><u>4.4</u></b>	<b><u>Quality Plan (QP)</u></b> .....
<b><u>5.</u></b>	<b><u>CONTENTS OF THE FINANCIAL, MANAGEMENT AND ADMINISTRATIVE PROPOSAL</u></b> .....
<b><u>5.1</u></b>	<b><u>Description and Background Experience of the Company(ies)</u></b> .....
<b><u>5.2</u></b>	<b><u>Organisation and Management of the Activity</u></b> .....
<b><u>5.3</u></b>	<b><u>Facilities</u></b> .....
<b><u>5.4</u></b>	<b><u>Key Personnel</u></b> .....
<b><u>5.5</u></b>	<b><u>List of Items to be produced, to be delivered</u></b> .....
<b><u>5.6</u></b>	<b><u>Work Breakdown Structure</u></b> .....
<b><u>5.7</u></b>	<b><u>Planning</u></b> .....
<b><u>5.8</u></b>	<b><u>Cost Price Data</u></b> .....
<b><u>5.9</u></b>	<b><u>Statement of Profit</u></b> .....
<b><u>5.10</u></b>	<b><u>Conversion Rates</u></b> .....
<b><u>5.11</u></b>	<b><u>Type of Price</u></b> .....
<b><u>5.12</u></b>	<b><u>Milestone Payments Plan</u></b> .....
<b><u>5.13</u></b>	<b><u>Travel and Subsistence Plan</u></b> .....
<b><u>5.14</u></b>	<b><u>Acceptance of Contract Conditions</u></b> .....
<b><u>5.15</u></b>	<b><u>Acceptance of Management Requirements</u></b> .....
<b><u>5.16</u></b>	<b><u>Use of ESA Technical Assets</u></b> .....

## 1. COVER LETTER

The cover letter shall contain the following:

- A general paragraph introducing the proposed project with a clear indication that the proposal addresses the Ground Segment.
- An overview of the proposed team structure (Prime Contractor and Subcontractor(s) where applicable) and the respective geographical distribution.
- The full address (registered office and mailing address) and the ESA Bidder Code of the Prime and each proposed Subcontractor. The Member States of ESA have made it mandatory for the Agency to register economic entities wishing to do business with ESA. Economic entities wishing to do business with ESA that are not yet registered as potential tenderer, are requested to complete the online questionnaire on the ESA EMITS website (<http://emits.esa.int/>) under “Entity registration”. Further information on the registration process can be found at the INDUSTRY OUTLOOK pages available via: <http://www.esa.int/home-ind/>. As of the completion of the questionnaire in INDUSTRY OUTLOOK registered economic entities will have to update the questionnaire on an annual basis. Failure to do so will result in EMITS access being blocked.
- a statement that the proposal will be valid for 4 months from the date of submission
- a statement of total cost and price (equivalent up to 50% of cost) for the proposed activity.
- the name(s) and contact details (address, telephone, fax and e-mail numbers) of the person(s) to whom all communications relating to the proposal should be addressed.
- the names of the persons who will be responsible for the technical and contractual management of any resulting contract.
- the signature of the cover letter by an authorised representative.

The relevant authorisation by the National Delegation(s) shall be attached to this Cover Letter.

## 2. EXECUTIVE SUMMARY

The Bidder shall present an Executive Summary (about 3 pages) containing in a concise and self-contained manner the major elements of the proposed project in terms of:

- overview of the opportunity and commercial strategy
- presentation of the intended development and its associated operational environment
- intended approach for the organization and execution of the development activity
- critical issues affecting the development

### **3. BUSINESS PLAN (BP)**

The Business Plan shall demonstrate that the proposed development is intended to lead to a commercial product. Consequently the Business Plan shall include:

- a. Target Customers: describe the target users/customers of the intended development
- b. Market Analysis: present the target market and segments of interest for the product and estimate the overall potential size and the realistic market share achievable
- c. Value Chain: look at the product's position in the value chain ending with the end user. Identify the business relationships that need to be created or used to create the product in this development and the businesses/partners required to get the product to the market
- d. Competition: an assessment of the competition (competitive products, competitors) and the positioning of the Bidder in the market and in the value chain
- e. SWOT Analysis: a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis for the intended development to provide information on selling factors (e.g. existing IPR, know-how, technology) against products of competitors as well as to show the Bidder understands the commercial environment and its difficulties.
- f. Sales Objectives: an analysis of the sales objectives (including the assumptions taken) in terms of sales volume with and without the proposed development.
- g. Cost and Pricing: provide an assessment of the investment and operational costs as well as of the pricing strategy. Financial indicators such as Break Even Point (with and without ESA co-funding), Net Present Value NPV and associated sensitivity analysis of main assumptions shall also be included.

The Business Plan contained in the proposal shall provide the elements listed above. It shall also provide evidence of the assumptions made. In case the market for the product is dominated by one or two customers, the BP shall include letters of intent from such customers.

### **4. TECHNICAL PROPOSAL**

The Bidder shall provide a detailed technical description of the work to be undertaken. The Technical Proposal provides the rationale for the proposed development activities and forms the contractual reference document describing the proposed scope of work. Furthermore, the Bidder shall confirm that the work proposed does not overlap with any currently running ESA contract awarded to any entity in the proposal consortium.

The Bidder shall provide the documents listed below.

#### **4.1 Development Plan (DP)**

The Development Plan (DP) shall illustrate in a concise and conceptual manner the logical execution of the proposed activities from contract award to final review. It shall define and include decision points on which the course of the development will depend.

The document shall include:

- Description of product: this shall include external interfaces and systems with which the product will interact as well as an internal physical and/or functional decomposition. Provide the rationale for how the product requirements have been derived.
- Description of the starting point and heritage: describe the starting point of the design and development. In particular, already developed products or subsystems shall be described in detail including functionality and applied technology. This allows an easy identification of the new development required to create the new product. This will not be updated after the initial release.
- Identify the development tasks to be done including:
  - Requirements analysis and specification
  - Design: simulations, proto-typing, design trade-offs, make/buy decisions, build standards followed
  - Testing and certifications
- Technical Risks: illustrate the technical risks that are associated with the proposed activities and present the measures that will be taken to keep the risks under control. A matrix including the various risks, their probability, their impact, the related mitigation plan shall be provided. In addition, an assessment of the probability of achieving the technical goals shall be provided.

#### **4.2 Technical Specifications (TS)**

This document shall list in comprehensive form the technical specifications of the product to be developed. The requirements shall be specified using unique identifiers and represent a verifiable feature of the system. If the product has a user interface, operational scenarios and use cases shall be included. When relevant, sub-system requirements shall also be provided.

These requirements shall be traced through the project documentation all the way to the test results. Traceability matrices will refer to these top level requirements indicating how they map to the design, implementation and verification.

The first draft to be submitted in the proposal shall include the user/commercial requirements and derive as a minimum functional, performance, interface and environmental requirements.

### **4.3 Test Plan (TP)**

This document shall give an overview of the tests to be performed and the test environment. A test matrix shall identify the requirements to be verified and the verification method. Test facilities and resources shall also be identified. The test plans should include a schematic(s) of the test environment to be used during testing.

### **4.4 Quality Plan (QP)**

This document shall describe the quality standards that the Bidder will be using during the development process. The quality and screening of the components shall be defined. In case commonly known documents are used, they need not be delivered unless requested by the Agency, but the exact reference to such documents shall be included.

## **5. CONTENTS OF THE FINANCIAL, MANAGEMENT AND ADMINISTRATIVE PROPOSAL**

### **5.1 Description and Background Experience of the Company(ies)**

The Bidder shall present the company(ies) and their organisational structure. It also shall describe the background of the companies and the relevant experience of the Bidder and any proposed Subcontractor for the performance of the work.

In case any company of the bidding team has been involved in relevant ESA contracts, the Bidder shall provide a summary description of the direct and indirect results achieved through such activities and lessons learned. The Contract Outcome Data form (provided as Appendix 2 to the Draft Contract Management Requirements) can be used for this purpose.

### **5.2 Organisation and Management of the Activity**

5.2.1 The Bidder shall present the project team and the structure of the project organisation, and where it is proposed to subcontract part of the work, the structure of the industrial group. Lines of communication and reporting, and means for settling disagreements shall be described.

5.2.2 The Bidder shall present his management plans, policies and procedures for this activity including a description of the management control organisation, the procedures that will be used to exercise control over the project and the proposed subcontracting control (if any).

### **5.3 Facilities**

The Bidder shall submit a brief description of all facilities which are proposed to be used for the work offered, including those facilities which are still to be

developed/built and/or purchased, (with a statement whether the costs of developing/building/purchasing the facility are to be directly or indirectly charged to the Contract). Modifications to existing facilities are also to be described. For this purpose facilities may include, as applicable, hardware, computer software, manufacturing, test equipment, production and integration lines, service centres and infrastructures hosting the user communities.

The Bidder shall also describe what means of access to information resources he has, if these are required for the work proposed.

#### **5.4 Key Personnel**

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 Bidder's organigramme. Key personnel should be proposed to one level below the study/project manager, both for the Prime Contractor and any Subcontractors. The provisions of Article 5 of the Draft Contract (Appendix 2 to the Call for Proposals) shall apply to all key personnel. As a minimum, all Work Package Managers of Level 1 (see Section 5.6 below) shall be proposed as Key Personnel.

For each key person identified, the Bidder shall:

- 5.4.1 provide a curriculum vitae, giving in particular the work experience of the person concerned, and a brief description of the person's present job and responsibilities;
- 5.4.2 indicate the person's position in the Bidder's organisation;
- 5.4.3 define the proportion of the person's working time that is devoted to the work offered.

#### **5.5 List of Items to be produced, to be delivered**

##### **5.5.1 HARDWARE**

The proposal shall contain a complete list of all items that are to be produced under a resulting contract. Also to be shown in this list is each item to be procured under the contract if its cost exceeds 15% of the activity cost or 100 KEuro whichever the lower.

Ownership in respect of any assets (i.e. hardware) other than Intellectual Property Rights will be left to the Contractor whenever the parties agree when completing the contract that there is a further useful utilisation of such assets by the Contractor for purposes connected with the objectives of the contract.

##### **5.5.2 SOFTWARE**

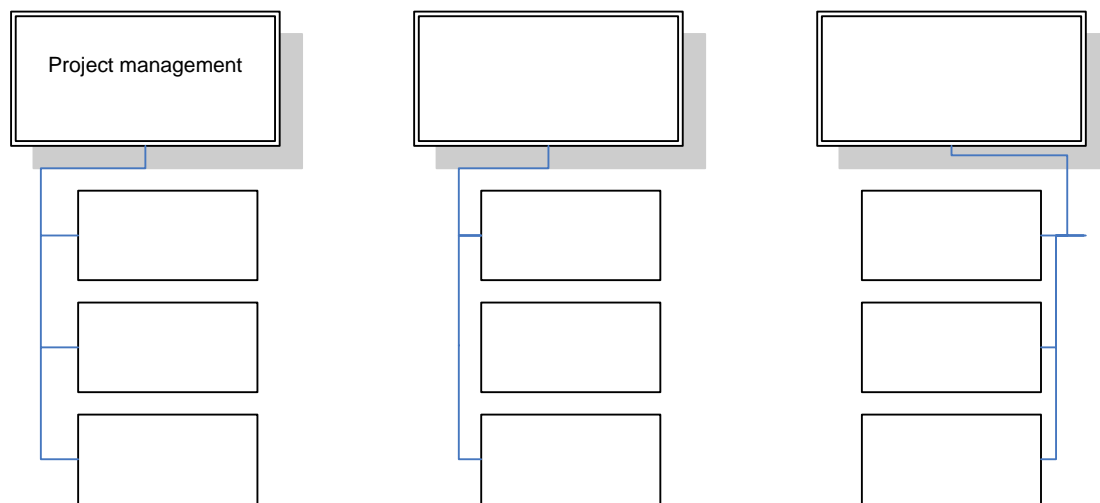
With respect to software the clauses of the draft contract (Appendix 2 to this Call for Proposals) shall apply.

### 5.5.3 DOCUMENTATION

The Bidder shall provide a list of all documents to be produced and delivered under the contract.

## 5.6 Work Breakdown Structure

The Bidder shall submit a Work Breakdown Structure on at least two levels. Depending on the size and complexity of the proposed activity, a breakdown to the third level may be necessary. A possible Work Breakdown Structure is shown below, but the Bidder is free to propose an alternative.



Work Package Descriptions shall be provided for each Work Package identified in the Work Breakdown Structure which shall cover the total programme of work being proposed.

The Agency reserves the right to have the work broken down into phases subsequent to tender submission. The Bidder may propose a phased approach in case high risks are evident in the proposed activity.

## 5.7 Planning

The Bidder shall submit his planning in the form of a bar chart.

In establishing his planning, the Bidder shall take account of the need of the Agency to review and/or approve intermediate deliverables and shall include sufficient time for the Agency to do this.

The expected total duration of a contract is between 6 and 24 months, but the Bidder may deviate from this timeframe in his planning if duly justified.

## 5.8 Cost Price Data

### 5.8.1 PSS FORMS

The following PSS forms [latest version available on EMITS (<http://emits.esa.int/>) under “Reference Documentation” → “Administrative Documents”] included in the General Conditions of Tender as Annex 5(3) shall be completed for the Prime Contractor and for each Subcontractor proposed, showing per company the total cost of the proposed work, i.e. including the Bidder’s share:

PSS-A1, issue no. 2

Company Cost Element Data Sheet (unless already supplied - see Annex 5/3 of General Conditions)

PSS-A2, issue no. 4

Company Price Breakdown Form (including reduction for company contribution).

The inclusion of Exhibit A to PSS-A2 (breakdown of external cost elements) is mandatory in all cases involving external cost elements.

PSS-A8, issue no. 4

Manpower and Price Summary at Work Package Level

#### NOTES

- (a) The Bidder shall submit a summary table showing the cost and the price (= ESA funding) in EURO per company and for the total.
- (b) Costs related to marketing activities (PR material, participation in conferences, etc.) are not allowable.
- (c) The procurement of hardware or software as such is not an objective of this programme. It may form an integral part of an ARTES Element 3-4 activity to the extent required for its execution, provided the procurement cost are not disproportionate in size.
- (d) The management effort shall not exceed about 10% of the overall effort depending on the complexity of the activity.

### 5.8.2 “PRIOR WORK”:

Expenditures incurred prior to proposal submission are acceptable provided all of the eight conditions below are met:

- 1) they were incurred for work of direct relevance for the implementation of the contract;
- 2) they were incurred within a maximum of 12 months prior to submission of an acceptable proposal and the work performed did not go beyond BDR/PDR;
- 3) they amount to a maximum of 10% of the cost of the activity;
- 4) they have not been covered by any public funding;

- 5) the proposal includes mature Technical Specifications of the product to be developed;
- 6) the proposal includes a mature Test Plan for the product to be developed;
- 7) the proposal includes a mature Development Plan;
- 8) the “Prior Work” is presented separately in the proposal with its own work packages, cost sheets, description of the work performed and of the complete outputs.

### 5.8.3 “IN KIND CONTRIBUTION” (IKC):

IKC is defined as hardware including any software, assembly, integration and test needed to make it a functional unit. IKC made available to the activity is acceptable as a cost element provided all of the six conditions below are met:

- 1) the expenditure has actually been incurred and separately recorded as being company funded research and development or procurement on a commercial project;
- 2) confirmation that the IKC has not been capitalised and depreciation has not been recovered through overhead or other cost elements;
- 3) the IKC has not been paid by any public funds;
- 4) payments related to IKC will only take place upon use of the IKC and otherwise be forfeited;
- 5) the IKC cost quoted for the proposed activity is for at least 2/3 directly attributable to hardware elements. The remainder, at the maximum 1/3, may be for the software, assembly, integration and test to make the hardware a functional unit;
- 6) the IKC cost quoted for the proposed activity amounts to 20% of the total cost at the maximum;

#### Ownership and possession of the IKC

○ Option 1:

The IKC cost quoted for the proposed activity is the IKC value at the start of the usage of the IKC. In this case the IKC is a deliverable to ESA at the end of the activity and delivery will not be waived.

○ Option 2:

The IKC cost quoted for the proposed activity is the difference between the value of the IKC at the start of the usage of the IKC and the residual value at the end of the usage of the IKC; and the residual value at the end of the usage of the IKC is at least 20% of the value at the start of the usage. In this case the IKC is not deliverable to ESA at the end of the activity.

### 5.8.4 SOURCE OF COMPANY CONTRIBUTION

The source of the company contribution shall be explicitly stated in the Bidder’s proposal. In this context, the “company contribution” shall be deemed to include Third Party sources, if any. The company contribution can be treated as a loss against

the contract or may be contributed by a Third Party private source. Accordingly, the contribution shall not be allowed from third party public funds. The Bidder is not allowed to include his contribution in overheads included in rates charged to the Agency for the contract or any other contract with the Agency, or sub-contract award under an Agency contract.

## 5.9 Statement of Profit

The offer must be exclusive of profit.

## 5.10 Conversion Rates

For the purpose of currency conversions, Bidders are required to clearly indicate the exchange rate(s) and other factors on which their calculations are based.

Paragraphs C.4 and C.5 of the General Conditions of Tender are replaced by the following:

Paragraph C.4 - Quotation in National Currency

Prices shall be expressed in EURO, including those of any Subcontractor. The geographical distribution shall only be expressed in the total EURO per country.

Paragraph C.5 - Conversion Rates is deleted.

## 5.11 Type of Price

The type of price is defined in Article 2 of the Draft Contract (Appendix 2 to this Call for Proposals).

## 5.12 Milestone Payments Plan

The payments plan shall be proposed in accordance with the following table. All claims for payment (with the exception of the Advance payment) shall be linked to the achievement of well defined milestones (e.g. conclusion of Work Packages, Review Milestones).

<b>Milestone Description</b>	<b>Schedule Date</b>	<b>Amount in Euro</b>	<b>Company</b>
Advance: upon signature of Contract by both parties ( <i>35% of total price</i> )			
Progress: upon TBD milestone(s) and / or deliverables			
Final: upon the Agency's acceptance of all deliverable items due under the contract and the Contractor's fulfilment of all other contractual obligations ( <i>10% of total price</i> )			

### 5.13 Travel and Subsistence Plan

The Bidder shall submit a brief description of the travels he envisages for the execution of the Contract together with the related cost details. This shall preferably be given in the form of the following matrix:

Time (To + ...)	Meeting / Purpose	Destination	Travel duration	Participants per company	Travel Cost (A)	Subsistence Cost (B)	Total Cost (A+B)

The Bidder should take into account in his planning that the Negotiation/Kick-off Meeting should be attended by the Bidder and as far as possible by all Subcontractors. The Kick-Off Meeting and the Final Presentation will normally be held at ESTEC.

### 5.14 Acceptance of Contract Conditions

The Bidder shall confirm that the conditions of the draft contract (Appendix 2 to this Call for Proposals) are read, understood and accepted and that any sales conditions of the Bidder do not apply.

### 5.15 Acceptance of Management Requirements

The Bidder shall confirm his acceptance of the Management Requirements in Appendix 2 to the draft contract (Appendix 2 to this Call for Proposals).

### 5.16 Use of ESA Technical Assets

For the purpose of supporting contractual activities, ESA can provide, on a best effort basis and free of charge, access to a pool of Technical Assets that can be used by projects originated by the present tender action.

More information about such ESA Technical Assets and the associated conditions of access and utilisation can be found under the Telecom User Support Office at: <http://telecom.esa.int/uso/technicalassets/>

Whenever the use of such ESA Technical Assets is compatible with the technical, operational and strategic objectives of the proposal (clear evidence of which has to be provided in the proposal) the Bidder is invited to consider the utilisation of the ESA Technical Assets as an alternative to the procurement of corresponding external services. In this case, an outline utilisation plan of the ESA Technical Assets shall be provided in the proposal.

Bidders who plan to use the ESA Technical Assets are requested to perform a preliminary verification of their availability before including the option within the proposal. In this respect, the Bidder is invited to contact the ESA Telecom User Support Office to verify if the proposed utilisation of the ESA Technical Assets is compatible with their global utilisation plan. Coordinates for accessing the User Support Office can be found at: <http://telecom.esa.int/uso/>

As the provision of the ESA Technical Assets cannot be guaranteed by the Agency, the Bidder shall include in his proposal an option for the commercial procurement of such Technical Assets and associated cost.

Decisions whether to grant access to the ESA Technical Assets will be notified to the Bidder at the time of the Negotiation Meeting.