

# **Guidelines for Preparation of Proposals Requesting ESA Science Programme Support to Nationally Led Projects**

**(July 2010)**

## **INTRODUCTION**

This document describes the procedure applicable to proposals requesting ESA Science Programme support to nationally led projects. The document is organized as follows:

- Introduction
- Section 1: Schedule of the call for proposals and related review
- Section 2: Description of the nature of ESA support
- Section 3: Conditions for the submission of proposals.
- Section 4: Content of the proposals to be submitted to ESA
- Section 5: Description of the proposals evaluation process

## **1. SCHEDULE FOR PROPOSALS SUBMISSION AND APPROVAL**

The planning of the present Call for Proposals and the related review process is as follows:

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|---|------------------------|
| - Call for Proposals by ESA:                  | 30 July 2010           |
| - Submission of proposals to ESA:             | 29 September 2010      |
| - Advisory structure review of the proposals: | end of October, 2010   |
| - Recommendations to SPC:                     | early November, 2010   |
| - Preliminary SPC discussion:                 | November 2010 meeting  |
| - Elaboration of selected proposals:          | Dec. 2010-January 2011 |
| - Proposal to SPC for decision:               | Feb. 2011 meeting      |

For efficiency reasons, the Executive intends to adopt a two-stage proposal evaluation approach. All proposals will be subject to the scientific evaluation of the Advisory Structure and to a preliminary technical and programmatic screening by the Executive. They will be presented to the November 2010 SPC meeting for a preliminary SPC decision based on the Advisory Structure scientific ranking and the outcome of the Executive's initial screening. The SPC at the

November 2010 meeting will be requested to decide if and which proposals merit to undergo detailed technical and programmatic assessment and possible negotiation. These proposals will be then further elaborated and presented to SPC at the February 2011 meeting for final approval. Proposals of limited scope (e.g. well-defined contributions to missions led by non-Member states) may, if applicable, be subject to a shortened evaluation cycle and presented for approval already at the November 2010 meeting. This will be assessed on a case-by-case basis.

## **2. NATURE OF ESA SUPPORT**

The possible content and type of ESA supports to Nationally Led Projects were initially described in ESA/SPC(2002)2, updated in ESA/SPC(2006)25 and further addressed in ESA/SPC(2008)16, and addresses only category c) requests, defined as follows:

### Category c):

Requests for support concerning external procurement by ESA of a significant level of dedicated ESA resources, with a cap of 11 M€ – equivalent to 2.5% of the Science Programme's yearly budget – including internal as well as external costs. The following non-exhaustive list describes some of the contribution categories that could be considered in this context:

- Provision of external services;
- Industrial development or procurement of well defined and contained systems/units;
- Procurement of units/systems that may be needed for future ESA missions;
- Ground segment support;
- Extensive use of technical expertise (internal and/or external to the Agency).

For any procurement funded by ESA the control and technical management shall reside with the Agency. In all cases the interface with ESA must be adequately defined.

## **3. CONDITIONS FOR THE INVOLVEMENT OF THE ESA SCIENCE PROGRAM IN NATIONALLY LED PROJECTS**

The conditions for involvement of the ESA Science Program in Nationally Led Projects (see ESA/SPC(2002)2 and the information note ESA/SPC(2006)25) are summarized here. In order for a nationally initiated and led (multilateral) space

mission to qualify for ESA support, a number of conditions and pre-requisites have been set:

- The proposal must be submitted by the SPC Delegations of the Member State leading the project or the collaborative effort (in case of missions led by third parties).
- The goals of the mission must be compatible and give added value to the ESA programme with regard to science and preferably also to technology, either as a complement or as a precursor. More specifically such mission should satisfy as many as possible of the following conditions:
  - a) Provide new scientific data of high quality complementing other missions.
  - b) Act as test bed for new technology development and preferably support small and medium size companies.
  - c) Fill “*disciplinary gaps*” between the ESA missions created by limited resources, thereby contributing to the continuity of data and of expertise in the relevant communities.
  - d) Serve as preparation, scientific and technical, for a timely and significant contribution to larger ESA missions.
- ESA participation in missions led by a non-Member State is possible provided that such a request is made by a Member State that is already taking a substantial role in such a mission.
- Nationally led projects or contributions to missions led by non-Member States should have been subject to a national evaluation procedure before submission to ESA.
- Demonstration of the project feasibility should be available before submission to ESA, preferably in the form of a system level study, or a feasibility study report.
- The request for ESA support should be self-standing and not involve co-funding of a specific item.
- To qualify for ESA support the implementation of the mission should be under full control by the requesting Member State, or the non-Member State leading the mission, and that the majority of the necessary financial resources have to be secured by the requesting Member State or the non-Member State leading the mission. The level of national funding must be concrete and committed, cover at least 90% of the total estimated cost and be transparent before any formal request for support is submitted.

- Responsibility for the overall project contingency allocation will remain with the proposing Member State and will not be part of the support request. The request for support shall explicitly include a contingency allocation, reserved only to the requested ESA contribution.
- The level or nature of any ESA contribution to a national project considered shall not diminish the management responsibility of the proposing Member States.
- Any request for ESA support must, as a baseline, be related to specific needs that might be cost-effectively filled by means of a concrete ESA involvement.

#### **4. CONTENT OF PROPOSALS FOR ESA SUPPORT**

The request for ESA support must consist of a proposal structured as discussed below. This proposal will be basis on which the proposed contribution will be assessed by the Advisory Bodies and by the Executive, and presented to the SPC.

##### **4.1 Cover Letter**

The proposal must include a cover letter (limited to 2 A4 pages, 11 pt minimum font size) containing the following information:

1. The names of the proposal's leader, with his/her institutional affiliation, with all customary contact details (including telephone, fax and email address). The proposal leader will also be the contact person for all communications related to the proposal.
2. The names of the persons who will be responsible for the management of the project and any resulting activity, together with their contact details.
3. A brief justification of the proposal with reference to the conditions for ESA involvement stated above, and to the nature of the requested ESA support.

##### **4.2 Executive summary**

The executive summary of the proposal (limited to 4 A4 pages, 11 pt minimum font size), should summarize the science background and objectives of the project, its relevance to the ESA science programme, the baseline design and the project plan. The summary will include a comprehensive description of the requested ESA support, as well as a summary of the programmatic and cost aspects.

### **4.3 Science proposal**

The science case for the proposal (limited to 10 A4 pages, 11 pt minimum font size) should describe the scientific rationale and immediate objectives of the project, emphasizing the return to Europe and the specific relevant European scientific and technical expertise. The relevance of the proposed program and of the contribution to the ESA and to the Science Programme should be explicitly addressed.

The data processing necessary to achieve the final science results should be described, including calibration, on-ground data processing, etc.

This section of the proposal should also contain a draft Science Management Plan (SMP). This should clearly define the way in which the scientific communities of the “non-participating” Member States can scientifically interact with the project and benefit from the ESA support (e.g. data policy, eventual open time, possibility for proposals, etc.).

Science requirements that are directly related to the requested ESA support should be discussed and justified in detail.

### **4.4 Technical Proposal**

This section of the proposal is not subject to explicit page limits as its content will vary depending on the proposal’s nature (i.e. whether for an ESA contribution to a national small satellite or for a contribution to a project from a non-Member State). It is however suggested that this section is limited to 20 A4 pages (11 pt minimum font size) if possible.

In this section the proposer should supply sufficient information for the technical feasibility and the financial value of the proposed contribution to be assessed. A description of the overall project and its baseline design (with a demonstration of its feasibility) should be provided, followed by a description of the proposed contribution with clear functional and performance requirements, including detailed specification of the required resources (e.g. relevant subsystem and system-level resource budgets, if applicable). A description of the interface requirements and of the required technology development (if any) will be also provided.

The proposal should include a list of the activities directly related to the proposal that have been performed prior or during the proposal submission (if any), with a short description of their relevance and of the technical results achieved, including current status and achieved Technology Readiness Level.

Specific emphasis should be given to the hardware and activities that are directly connected to the requested ESA support. The proposal should clearly discuss

required ESA support activities, including the selection of any preferred concept or solution, together with the technical evidence of its validity in terms of feasibility and development risk.

#### **4.5 Financial, Management and Administrative Proposal**

##### **Organization and Management**

The proposal must include a management plan, describing the structure of the project team, the corresponding interfaces and responsibilities, and, when applicable, the role and responsibility of any involved industrial group according to the project work break-down structure. The structure of the project team and of the individual institutes and companies must be shown clearly, with a list of the persons who will carry out the activities, with their tasks, position, and authority. Lines of communication and reporting, and means for settling disagreements must be described.

##### **Work Break-down Structure**

The proposal must contain a Work Break-down Structure (WBS), including all major activities to be performed in the project and highlighting those activities to be conducted within the frame of the ESA support request proposal.

##### **Planning**

The proposal must contain a detailed project plan, matched to the WBS described above, including all major activities to be performed in the project and highlighting those activities to be conducted within the frame of the ESA support request proposal. The plan should describe the overall development logic and how the requested ESA support is included in the overall work flow.

##### **Background experience of the organization(s), institute(s) or company(ies)**

The proposal should describe the relevant experience that the leading institute and any other involved institutions, have for the successful implementation of the project which is subject of the proposal.

##### **Key Personnel**

In addition to the project manager, any staff having specific responsibilities in the project need to be indicated as key personnel, both for the leading organization and any collaboration, contractor or sub-contractors. For each key person identified, the proposal must include a brief Curriculum Vitae and indicate his/her position and responsibilities in the project. The proportion of working time devoted to the project must be stated. It must be clearly identified which positions are to be funded through the ESA participation and which are covered by national funding.

##### **Facilities**

The proposal must include a description of all facilities proposed to be used for the project, including those that are still to be developed, modified, built and/or

purchased (with a statement whether the costs of developing, building, purchasing the facility are directly or indirectly part of the proposal). Indications on the availability of any of the required facilities in relation to the project planning should be given.

### **Summary of requested ESA support**

The proposal must include a complete list and description of all items and services that are to be produced or delivered under the requested ESA support (internal services, external services, personnel, facilities, procurement of equipment, etc). The list must be mapped against the WBS and the technical proposal. An estimated cost must be attributed against each item or service.

### **Cost estimates report**

The proposal must include a description of the national funding (including its status) and a detailed description and justification of request for ESA funding. The estimated expenditure profile must be described and payment milestones specified. All assumptions made to estimate costs must be clearly mentioned in the document. The cost estimates for the requested ESA support shall include an explicit contingency allocation.

The proposal should also include an explicit statement on the allocated, project level contingency that will remain under responsibility of the proposing Member State. Economic conditions of the cost estimate should be specified.

## **5. EVALUATION OF THE PROPOSALS**

A preliminary screening of the proposals will be carried out on the basis of compliance to the conditions for submission listed in Section 3 and to the required proposal content described in Section 4.

The proposal's review by ESA and by the advisory bodies will be based on the proposal as delivered to ESA by the submission deadline. Specific requests for clarifications can be issued by ESA if required and consequently taken into account for the evaluation of the proposals. These clarifications will be provided mainly through e-mail exchanges and teleconferences, no dedicated meetings are envisaged before selection.

A parallel independent review of the proposals is planned by the Advisory Bodies and by the Executive.

The Advisory Bodies will be requested to assess the proposal, specifically addressing:

- Scientific content and excellence in both a European and world-wide perspective;
- Timeliness of the project;

- Scientific, technical and strategic benefit to and impact on the long-term ESA Science program;
- Relevance of the project for the European science communities;
- Proposed scientific involvement of the European science community;
- Priority among the requests.

In the context of the technical evaluation the Executive will:

- Evaluate the technical and strategic benefits for and impact on the long-term ESA science program;
- Evaluate the technical, financial and programmatic feasibility and associated risks of the request;
- Comment on any technology synergies with other planned science projects;
- Comment on the proposed project schedule;
- Judge the programmatic impact and affordability of the requested support;
- Propose any required legal agreements (such as LOA and / or MOU);
- Debrief and advise the competent ESA advisory bodies.