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# DOCUMENT

## EGEP ID 89.2 - GNSS EVOLUTION SCIENTIFIC AND INNOVATIVE TECHNOLOGY RESEARCH ANNOUNCEMENT OF OPPORTUNITY (AO)

### GUIDELINE FOR SUBMISSION OF OUTLINE PROPOSALS

#### Appendix 1 to AO/1-8034/14/NL/MM

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**Table of contents:**

<b>1</b>	<b>BACKGROUND</b> .....	<b>4</b>
<b>2</b>	<b>OBJECTIVES</b> .....	<b>4</b>
<b>3</b>	<b>SCOPE OF THE INITIATIVE</b> .....	<b>5</b>
<b>4</b>	<b>PROCUREMENT PROCESS</b> .....	<b>5</b>
4.1	Step 1-a: Preparation and Submission of Outline Proposal .....	5
4.2	Step 1-b: Assessment of Outline Proposals .....	6
4.3	Step 2-a: Submission of Complete Proposal .....	6
4.4	Step 2-b: Evaluation, Negotiation and Contract Award.....	6



## **1 BACKGROUND**

The European GNSS Evolution Programme (EGEP) is an optional programme of the European Space Agency covering technology research, development and verification activities related to GNSS with the objectives to sustain European competitiveness and to prepare for evolutions and upgrades of the European GNSS Infrastructures: EGNOS and Galileo.

The programme objectives include stimulating technical innovation for all GNSS aspects, ranging from on-board equipment research down to novel techniques at user segment level for any kind of GNSS applications. This may also include carrying out experiments exploiting test facilities, not limited to the ones already developed in EGEP.

Another objective of the programme is to stimulate an active dialogue between the scientific community and the Agency, in order to foster the scientific utilization of EGNOS and Galileo and to gather feedback from the scientists to designers and integrators of the next generation navigation satellites with a view to maximize the scientific value of the exploitation of the European GNSS signals and data.

The present GNSS Science and Innovative Technology Research Announcement of Opportunity is intended to support the above objective with a number of activities in areas of advanced GNSS science research.

## **2 OBJECTIVES**

The GNSS science and innovative technology AO is part of 2013-15 EGEP work plan. It addresses the development of innovative technologies for all aspects of future versions of Galileo and EGNOS (system architecture, space and ground components and user equipment) as well as innovative concepts for the use of signals, data, and infrastructure for all kinds of GNSS applications. Results from these activities should provide recommendations and improvements for the design of the next generations of EGNOS & Galileo.

The key goals of the present AO are:

- To elaborate concepts and/or design experiments which can improve scientific insights and foster innovation by making use of the European SatNav systems.
- To study innovative GNSS techniques and technologies (algorithms, software, hardware) in support of the preparation of future generations of EGNOS and Galileo.

The proposals should therefore demonstrate that they are addressing significant innovation issues by exploiting EGNOS or Galileo and in particular their potential evolutions.



### **3 SCOPE OF THE INITIATIVE**

The initiative will support a number of proposed innovative activities. The intention is to place several contracts.

The AO is open to proposals in all innovative areas of science and technology which show innovative features for the evolution of EGNOS and Galileo and/or scientific applications belonging to one of the following categories:

- Cat 1. Scientific applications and feasibility studies or experiments including new concepts for using: Navigation signals, new space and ground equipment or new features for future generations of Galileo and EGNOS.
- Cat 2: Innovative solutions in GNSS techniques, technologies (theory, algorithms, software, hardware, bread-boarding) and /or experimental activities supporting the evolution of EGNOS and Galileo, ranging from space to user equipment level including technology developments and experimental demonstrations.

### **4 PROCUREMENT PROCESS**

The initiative will be executed in a two-step proposal process.

The first step will require an Outline Proposal. On the basis of the Outline Proposals received, the Agency will perform a pre-selection. All bidders will be notified individually of the results of the pre-selection.

In a second step the pre-selected bidders will be invited to prepare a Complete Proposal in reply to a Request for Quotation (RFQ) to be issued by the Agency at that time. This RFQ will include the draft contract conditions.

The individual steps of the proposal submission and approval process as well as the time schedule (indicative) are described in detail in the following:

#### **4.1 Step 1-a: Preparation and Submission of Outline Proposal**

Bidders prepare and submit an Outline Proposal via a web application consisting of the following information:

- Opportunity: description of the scientific and / or technology research and its relevance to the objectives of this AO.
- Solution: description of the proposed solution as applicable, e.g. in terms of deliverable hardware/software, experimental validation, etc.
- Approach: description of the content of the activity and expected output with requested level of funding and justification.



- Experience: background and experience of the bidding team (including all scientific partners and potential partners from industry).

## **4.2 Step 1-b: Assessment of Outline Proposals**

The Agency, assesses the Outline Proposals and selects the best proposals with the help of expert panels (for CAT1 proposals by the members of the GNSS Science Advisory Committee, GSAC).

The selected bidders may be invited by the Agency to present their outline proposal, if necessary. Bidders will be informed of assessment outcome.

## **4.3 Step 2-a: Submission of Complete Proposal**

RFQ will be issued to selected bidders. The selected bidders will prepare and submit Complete Proposals in line with the RFQ.

## **4.4 Step 2-b: Evaluation, Negotiation and Contract Award**

The Complete Proposal will be evaluated. The winning bidders will be invited for contract negotiation. Upon successful negotiation, the contract will be awarded and the activity can start.