

CALL FOR PROPOSAL – EXTENSION 2

GSA/GRANT/05/2017

Development of a Galileo-based timing receiver for critical infrastructures

The present call for proposals is composed of a set of Submission Documents, which form an integral part of this call:

A1-A6 Forms
B1-B2 Forms
C1 Form

The terms set out in the call for proposals document shall take precedence over those in the other parts of the Submission Documents

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INTERESTED PARTIES ARE INVITED TO READ CAREFULLY THE BELOW INSTRUCTIONS IN ORDER TO ENSURE THAT APPLICATIONS ARE COMPLETE AND COMPLIANT WITH THE INSTRUCTIONS WHEN SUBMITTED.

1. CONTEXT

1.1. Introduction

The mission of the European GNSS Agency (GSA) is to support European Union objectives and achieve the highest return on the European GNSS (E-GNSS) investment represented by the EGNOS and Galileo programmes, in terms of benefits to users and economic growth and competitiveness.

Galileo is a global navigation system under deployment in Europe. It is a civil system under civil control, intended to provide navigation services to users, including reliable services for specific user communities. With the Declaration of Galileo Initial Services, Galileo officially moves from a testing phase to the provision of live services. With Galileo satellites working together with GPS, there are more satellites available. Already at this stage the user will be able to exploit a significant improvement in terms of signal availability, especially in harsh environments, as in urban canyons, where chances to receive signals from GNSS satellites are limited due to the restricted visibility of the sky. Galileo will provide precise, reliable and robust open service, enabling other desirable properties such as better resistance against multipath. In addition, Galileo is planned to provide Authentication over its Open and Commercial Services, a feature which is unique among the various GNSS providers. This will allow to assess the authenticity of the data provided through the signal in space against attempts to spoof it and will contribute to improve the robustness of GNSS for applications in which safety/security is concerned.

The European Geostationary Navigation Overlay Service (EGNOS) is a regional satellite-based augmentation system (SBAS). EGNOS is part of an evolving multi-modal inter-regional SBAS service, and it is suitable for safety critical applications such as flying aircraft or navigating ships through narrow channels. EGNOS provides both correction and integrity information about the GPS system, delivering opportunities for Europeans to use the more accurate positioning data for improving existing services or developing a wide range of new services. EGNOS is offering three services: the Open Service provided free of charge, the Safety-of-life Service providing a valuable integrity message warning the user of any malfunction of the GPS signal within six seconds, and (EGNOS Data Access Service) providing ground-based access to EGNOS data through the Internet on controlled access basis.

GNSS systems are delivering today a free and highly accurate timing capability available worldwide, providing a way to obtain the Coordinate Universal Time (UTC). GNSS are also used in synchronisation between receivers at different locations that can be established and maintained using GNSS reference time. Precise Timing & Synchronisation (T&S) is crucial to a range of strategic activities. Applications of GNSS T&S include but are not limited to telecommunications and computer networks, energy generation and distribution, finance or other governmental functionalities. All these applications use Critical Infrastructures (CI) with different accuracy requirements that are essential for maintaining such vital societal functions as health, safety, economic and social well-being of people.

In the Joint Communication to the European Parliament and the Council on countering hybrid threats – JOIN(2016)18 final, dated 6.4.2016 - the European Commission announces the introduction of Galileo in critical infrastructures dependant on time synchronisation in the Action 8: “Within the context of the upcoming Space Strategy and European Defence Action Plan, the Commission will propose to increase the resilience of space infrastructure against hybrid threats, in particular, through a possible extension of the Space Surveillance and Tracking scope to cover hybrid threats, the preparation for the next generation of GovSatCom at European level and the introduction of Galileo in critical infrastructures dependant on time synchronisation”.

This call is launched within the EU R&D funding programme ‘Fundamental Elements’ which supports the development of EGNSS-enabled chipsets, receivers and antennas. The Fundamental Elements related projects are part of the overall European GNSS strategy for market uptake. The objectives of the Fundamental Elements can be summarised as following:

- Facilitate the adoption of the European GNSS Systems, building on their innovative services and differentiators;
- Improve the competitiveness of EU industry;
- Address user needs in priority market segments;
- Maximise benefits to European citizens.

1.2. In this context a Galileo-based timing receiver for critical infrastructure shall be developed. Background of the call

This call is based on the Delegation Agreement concluded between the European Union, represented by the European Commission, and the European GNSS Agency (GSA) on the Exploitation Phase of the Galileo Programme signed on 2 October 2014.

In this framework, and in accordance with the Galileo Grants Plan for 2017 published on the GSA website (<http://www.gsa.europa.eu/gsa/grants>), the GSA is launching a call for proposals to start using Galileo as a source of time for European critical infrastructures.

2. OBJECTIVES AND SCOPE OF THE CALL

2.1. Objective of the call for proposals

This call for proposal aims at developing, testing and assessing a Galileo-based time receiver prototype suitable to operate in critical infrastructures such as telecommunication, power distribution networks and finance, providing accurate and highly robust timing.

In particular, the objective of the call is the development and testing of a Galileo-based timing receiver prototype with the following essential requirements:

- The prototype receiver shall include as a minimum a mode of operation to obtain the Galileo System Time and UTC based on Galileo signals only, both in single frequency as well as in multiple frequency solution;
- Robust receiver solutions shall be implemented;
- The interfaces that can be implemented are: PTP, NTP, SyncE, PPS, 10 MHz, and IRIG-B, but applicants may propose alternatives.

A competitive cost scheme in the timing receiver market shall be foreseen.

2.2. Scope and areas of activities of the call for proposals

This call has the objective to fund specific activities aiming at using Galileo as time source for applications in the European critical infrastructures. “Critical infrastructures” in this context is defined as per COUNCIL DIRECTIVE 2008/114/EC [RD.1].

In order to reach the objective of this call, beneficiaries are expected to conduct the following activities within the scope of this call:

Task 1: User’s requirements

Based on the COUNCIL DIRECTIVE 2008/114/EC of 8 December 2008 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection [RD1], GSA has identified three main sub-segments for Timing & Synchronisation: Energy, Telecommunications, and Finances. The beneficiary shall identify at least two applications within the above mentioned sub-segments.

For the identified applications the beneficiary shall define, quantify and justify the user requirements. As a minimum, requirements shall be covered in terms of accuracy, availability and reliability/robustness. The requirements shall be identified, also highlighting the benefits that the implementation of the requirements will bring to the market for the identified applications.

Task 2: Timing Receiver's Requirements

Based on the user's requirements quantified in task 1, the beneficiary shall define all the receiver's requirements, including functional, interface, safety, security and performance and particularly those requirements to make the receiver relevant to the critical infrastructures. The beneficiary may for this purpose use standards available in which case they will have to be properly referenced. Such standards should be international, European, or proprietary to EU member states.

The requirements are to be used for the design, development and testing activities, based on the following considerations and technical constraints:

- The receiver shall be capable of and configurable for providing time in Galileo System time and UTC. Other additional time scales may be proposed.
- The prototype receiver shall include as a minimum a mode of operation to obtain the GST and UTC based on Galileo signals only, both in single frequency as well as in multiple frequency solution;
- An operational concept for the receiver shall be defined, including the various operational modes defined and the transition between them (e.g. if the receiver reverts to a single frequency solution in case dual frequency is no longer available).
- The primary backup solution in case of loss of tracking of Galileo signals shall be a suitable time-steering solution for keeping an accurate timing until availability of Galileo satellites returns. Other constellations (and augmentations such as EGNOS) may be used as backup solutions in case the absence of Galileo satellites tracking extends beyond the capabilities of the time steering solution.
- The receiver shall exploit the multi-frequency capabilities of Galileo satellites:
 - The receiver shall be configurable to use a single frequency. In this case, the receiver shall implement the Ionospheric Correction Algorithm for Galileo Single Frequency Users as laid out in [RD.2]
 - The receiver shall be configurable to use a multiple frequency solution (as a minimum with E1 and E5), where frequencies used for the time solution are those emitted by Galileo. Innovative solutions to implement such multi-frequency approach shall be explored (e.g. tuneable radio front-ends may be explored as a solution to optimise this key part of the receiver). In this respect the receiver shall track Galileo E6 signals foreseeing the deployment of the Galileo Commercial Service.
- If the receiver is used to determine its own position and due to visibility of the Galileo satellites a multi-constellation solution is necessary for the position determination for the initial geo-referencing phase, the receiver shall use the following methods in order of priority:
 - Positioning shall be determined using a combination of Galileo + other GNSS constellations;

- If GPS is used, the receiver shall be capable of applying EGNOS corrections received by either SIS (Signal In Space) or EDAS (EGNOS Data Access Service) analysing the related benefits;
 - Galileo-only.
- If two or more Galileo satellites are visible, the receiver shall make the best use of them. For this purpose, the candidate shall include in the proposal different approaches to implement the timing solution and perform trade-off analysis to choose the one(s) more indicated to satisfy the identified requirements. Examples of these options are 1 Space Vehicle, all in view, best selector, T-RAIM, etc. The trade-off analysis shall conclude in the description of the intended approach for timing determination.
 - The receiver shall improve the timing robustness compared to the state of the art solutions, e.g., should be capable of using OS authentication for the provisioning of authenticated time stamping. The OS Authentication service is described in the document Galileo Navigation Message Authentication Specification for Signal-In-Space Testing [RD.4]¹. The applicants shall also analyse the suitability of using the Commercial Service (CS) Authentication, as described in the Galileo Commercial Service Implementing Decision [RD.5]¹.
 - The receiver shall deliver the time in suitable protocols defined by in the requirements specifications derived from the targeted applications.
 - A recommendation whether commercially available antennas are enough to extract the maximum value of the developed receiver or if the development of a new specialised antenna shall be launched. In the second case, the recommendation shall include an initial requirements specification for the antenna.

Task 3: Detailed design of the Receiver prototype

The beneficiary shall define a detailed design of the timing receiver.

The major activities to be performed in this task are:

- Select the technical solution(s) for the receiver and their feasibility with respect to technical constrains
- Conduct a “trade-off” analysis and select the preferred system concept, together with the preferred technical solution(s) for this concept
- Define detailed design for the selected system concept and retained technical solution(s) with a justification of the performance.
- Define detailed characterisation of internal and external interfaces. The applicants can choose any of the following interfaces considering the application under development: PTP, NTP, SyncE, PPS, 10 MHz, and IRIG-B. Additional interfaces can be proposed by the applicants.

Task 4: Prototype development

The beneficiary shall develop a timing receiver prototype (on the basis of the design of task 3) to be tested and validated as described in task 5.

In particular the beneficiary shall manufacture and assembly the hardware and software of the prototype. Based on the ISO definition, the prototype shall be build and tested at Technology Readiness Level (TRL) 7 [RD.8].

¹ For the purpose of preparing the proposal, the Galileo NMA specification to be considered is [RD.4]. However this specification is subject to changes, in which case the Contractor will be provided with an up-to-date specification if necessary. The same applies also for [RD.5].

The beneficiary is free to follow any guidelines or standards for timing receivers during the development of the prototype, however those standards shall be clearly indicated during the project's implementation.

Task 5: Testing and validation of the receiver prototype

The beneficiary shall define and perform a test campaign to demonstrate that the design and the performances of the Timing Receiver prototype meet the requirements defined in task 2.

The test campaign shall respect the following requirements:

- Performance tests shall be performed either in a national Timing Laboratory in an EU Member State or in the Joint Research Centre (JRC) facilities (for more details on the latter, please see section 2.4) with simulated data.
- Also a performance testing phase with real data shall be included in the project work plan.
- The test campaign should be performed with all modes of operation of the prototype.

The duration of the tests campaign shall be commensurate with the effectiveness of the tests needed to demonstrate that the design and the performances meet the requirements. In accordance with the validation process, after the test campaign the users requirements defined shall be validated.

Task 6: Dissemination of the results

The objective of this task is to disseminate the results of the project and contribute to standardisation activities.

Throughout the implementation of the action, the beneficiary shall allocate proper resources to disseminate the project's results and contribute to the Timing & Synchronisation standardisation providing assistance, when requested by the GSA.

In particular the beneficiary shall take measures to disseminate the achievements of the project among relevant stakeholders in the appropriate phases of the project. The dissemination plan shall define the strategy to engage those stakeholders with the aim of showcasing the timing receiver performance, fostering the innovation created in the frame of the action and creating market awareness of the project's results.

The beneficiary shall submit at least two (2) technical papers to international conferences. In addition the beneficiary shall examine the possibility to also include a receiver's prototype *demonstration* involving all the main stakeholders and key players in order to optimise the benefit resulting from its execution. The applicant's decision to run a demonstration is not mandatory, however it contributes to the effectiveness of the dissemination of the results which shall be assessed against the award criteria (see section 10) and shall be included in the Dissemination Plan and Report. Other expected dissemination means are specialised magazines and sector press, presentations, leaflets and brochures, public event(s), promotional video(s), websites, social networks, etc.

In case the results obtained during the implementation of the action will be deemed satisfactory and meaningful they might be used as an input for any Timing & Synchronisation standardisation-related processes managed by the GSA or the European Commission. Therefore the beneficiaries may be requested to provide related assistance to GSA/EC during the the project.

2.3. Core Activities

For the purpose of this call the following *activities* (belonging to one or more of the six areas described above in section 2.2) are considered *core to the project*:

- Management and coordination,
- Timing Receiver's Requirements definition
- Development of a receiver prototype
- Testing and validation of the receiver prototype
- Dissemination

2.4. Deliverables

The beneficiaries are expected to submit during the implementation of the action a list of deliverables including documents and hardware. The list of deliverables shall include at least the following:

- (1) Project Management Plan including :
 - ✓ Product tree;
 - ✓ WBS;
 - ✓ WPD;
 - ✓ Schedule;
 - ✓ Configuration Management Plan
- (2) Risk Management Document including:
 - ✓ Risk Management Plan;
 - ✓ Risk Assessment Report;
- (3) User requirements Report and Justification;
- (4) Timing Requirements specification including as a minimum:
 - ✓ Functional requirements;
 - ✓ System requirements;
 - ✓ Performance requirements;
 - ✓ Interfaces' requirements;
 - ✓ Safety requirements;
 - ✓ Security requirements;
- (5) Design Definition File including:
 - ✓ Description of the architecture and of algorithms;
 - ✓ Operational concept;
- (6) Design Justification File including:
 - ✓ Performance Budget File;
- (7) Design, Development and Validation Plan;
- (8) Test Plan;
- (9) Test procedures;
- (10) Tests results report;
- (11) Receiver's documentation including, as a minimum:
 - ✓ Installation manual;
 - ✓ User manual;
 - ✓ Maintenance manual;
- (12) IPR-related documentation;
- (13) Dissemination Plan
- (14) Dissemination Report
- (15) One (1) receiver ready for mounting and use in an operational environment;
- (16) One (1) development kit.

The draft grant agreement is specifying the conditions of the ownership and right to use policy of the above deliverables.

NOTE: In case the beneficiary opts for conducting a demonstration, it shall provide to the GSA a fully functional demonstrator including prototype(s), additional hardware/software, IPRs licencing, if necessary, and any related documentation.

2.5. Project Workflow

During the 24 months of activity the project shall foresee intermediate milestones reflecting as far as possible the work flow described below.

The proposed workflow to be finally approved by GSA at kick-off meeting could in principle contain the following milestones and objectives:

1. **Kick-Off Meeting (KOM):** The primary objectives of the meeting are:
 - i. Present the review procedure and organisation
 - ii. Formally authorize the start of the activity.
2. **System Requirement Review (SRR):** The primary objectives of this review are to release the updated technical requirements specifications, the assessment of the preliminary design definition and the assessment of the preliminary verification program;
3. **Preliminary Design Review (PDR):** The primary objective of this review is the performance of the preliminary design activity for GSA approval as input for the prototype detailed design process. Exit criteria for this review shall at least include the approval of the prototype's requirements and of the preliminary design architecture. Potential risk items are highlighted and mitigation plans are evaluated;
4. **Critical Design Review (CDR):** The primary objective of this review is the completion of the prototype detailed design and architecture and to authorise the start of the prototype development. Exit criteria for this review shall at least include the approval of the detailed design in accordance with the requirements and suitable for the implementation phase, other than the closure of any open action resulting from the PDR stage. This review shall be organised at the latest 12 months after the start of the project;
5. **Test Review (TR):** The primary objective of this review is the assessment of the receiver performance with simulated data. The milestone shall be held at the end of the prototype testing phase in laboratory;
6. **Final Review (FR):** The primary objectives of this review are the exploration of the achieved performance with real data and to demonstrate that the timing receiver meets the requirements for each pre-selected operation. The receiver's performance shall be validated under real conditions and using real GNSS signals.

The following planning for the submission of the deliverables listed in section 2.4 is suggested:

Deliverable	KO	SRR	PDR	CDR	TR	FR
Project Management Plan	X	X	X			
Risk Management Document	X	X	X	X	X	X
User requirements Report and Justification		X	X	X	X	X

Deliverable	KO	SRR	PDR	CDR	TR	FR
Timing Requirements Specification		X	X	X	X	X
Design Definition File			X	X	X	X
Design Justification File			X	X	X	X
Design, Development and Validation Plan		X	X	X	X	X
Test Plan				X	X	X
Test Procedures				X	X	X
Tests Results Report					X	X
Receiver's documentation						X
IPR-related documentation						X
Dissemination Plan	X			X		
Dissemination Report						X
One (1) receiver						X
One (1) development kit						X

The applicant can propose in their offer a different project workflow to be approved by GSA at Kick-off meeting.

The beneficiary shall provide in the proposal a methodology for requirements identification, design, development and testing of the receiver.

The applicant shall consider that the activities related to the "Receiver's performance validation in a simulated environment" (see point 5. in current section) could be conducted in collaboration with the Joint Research Centre (JRC) at the European Microwave Signature Laboratory (EMSL) of the European Commission in Ispra, Italy or in a national Timing Laboratory in an EU Member State.

Please note that there are no additional costs for the beneficiaries related to these validation activities for what concerns the use the JRC facilities and the involvement of the JRC experts. However, they shall take into account the travel and transportation costs and shall include in their proposal a planning of any activity requiring the JRC EMSL and/or personnel intervention.

In addition, before the validation will start, the beneficiaries may also have access to the JRC facilities in order to perform additional tests which are part of the project implementation, if the beneficiaries would consider this opportunity useful. For those tests, the access to the facilities will be also free of charge but the JRC support will be limited to assist in the use of the facilities. Should the beneficiaries consider this option, an agreement should be established with JRC for access and use of their facilities.

Concerning the final acceptance of the receiver which will be conducted in the scope of the "Receiver's performance validation under real conditions and using real GNSS signals/data" activity (see point 6. in current section), the beneficiary shall provide in the proposal a preliminary strategy for the validation of the receiver's performances.

2.6. Outputs expected from the implementation of activities

The proposals shall aim to achieve the objective of the action. All the deliverables (as listed in section 2.4), will be used by EU and GSA in accordance with Article II.9 of the Grant Agreement.

3. TIMETABLE

Scheduled start-up date for the action: **Q3 2018**, unless the applicants can demonstrate the need to start the action before the agreement is signed.

Maximum duration of the action: **2 (two) years**

This call for proposals shall be conducted according to the following indicative timetable:

	Stages	Date/time or indicative period
a)	Publication of the call	12/12/2017
b)	Deadline for request for clarifications	09/02/2018
c)	Publication of the clarifications	23/02/2018
d)	Deadline for submitting applications	13/04/2018
e)	Evaluation period	April-June 2018
f)	Information to applicants on the outcome of the evaluation	July 2018
g)	Signature of the Grant Agreement	September 2018

4. EU FINANCING

Maximum budget allocated for EU financing under this action: **EUR 3.500.000**

Maximum number of projects: 2

Indicative EU financing amount for each of the two projects: **EUR 1.750.000**

Maximum EU financing rate of eligible costs: **70%**

Publication of the call does not guarantee the availability of funds for the above action and it places no obligation on the GSA to award grants to any applicant.

GSA reserves the right to award a grant of less than the amount requested by the applicant. In such a case, the applicant(s) will be asked either to increase his co-financing, propose other co-financing means or to decrease the total costs without altering the substance of the proposal. Grants will not be awarded for more than the amount requested.

5. ROLES AND TASKS WITHIN THE CONSORTIUM

5.1. Entities involved in the activities subject to the proposal

The proposal shall clearly identify the entities (legal and/or natural persons) to be involved in the activities subject to the proposal, being the applicant²(s) (including **coordinator and co-applicants**) as well as any third parties, such as **affiliated entities and subcontractors** and their contributions to the implementation of the proposal under the grant agreement. Parties' participation in the project will be subject to the requirements as laid down in this Call for Proposals.

5.2. Single Applicant

In case the proposal is submitted by a single applicant, it will be considered as mono-beneficiary if the proposal is successful.

5.3. Coordinator

If the proposal is submitted by a group of several co-applicants they will form a consortium and will become consortium members. The consortium members (multi-beneficiaries) should choose within their midst a lead organisation, referred to as the "Coordinator".

The coordinator submits the application on behalf of the consortium and will be the intermediary for all communication between the co-beneficiaries and the GSA as well as responsible for supplying all documents and information to the GSA in due time upon request. Coordinator will also be responsible for distribution of payments received from GSA to the co-beneficiaries.

5.4. Co-applicant(s)

Each co-applicant will be considered as co-beneficiary if the proposal is successful. Before signature of the grant agreement all applicants within the consortium shall agree upon appropriate arrangements between themselves for the proper performance of the specific actions. Co-applicants are required to analyse specific liability provisions as provided in the draft grant agreement.

Co-applicants shall immediately inform the coordinator of any event liable to substantially affect or delay the implementation of the action, who will communicate with the GSA subject to grant agreement as well as clauses ensuring compliance with the requirements on ownership and usage rights of results and any pre-existing rights towards the GSA and the European Union as specified in the draft grant agreement.

When a grant is awarded, the co-beneficiaries forward to the coordinator in a timely manner all the data needed to draw up the reports, the financial statements and other documentation required by the grant agreement.

The coordinator and all co-applicants forming the consortium must satisfy the eligibility criteria.

² For the sake of clarity, the term "applicant", referred to in this call, shall encompass single applicants, co-applicants and coordinator as appropriate.

5.5. Affiliated entities

Legal persons having a legal or capital link with applicant(s), which is neither limited to the action nor established for the sole purpose of its implementation, may take part in the action as affiliated entities, and may declare eligible costs. For that purpose, applicant(s) shall identify such affiliated entities in the application forms and in the proposal.

Each affiliated entity shall have to comply with the same eligibility and non-exclusion criteria as those applying to the applicant(s) and submit the same forms, including the forms proving the financial and operational capacity (see section 9.1 and 9.2below).

Affiliated entities can be:

- a) several legal persons forming together one legal person or 'sole beneficiary' which may, or may not, have been specifically established for carrying out the action (e.g. groupings, joint ventures).
- b) legal persons having a legal or capital link with a beneficiary or co-beneficiary, which is neither limited to the action nor established for the sole purpose of its implementation (e.g. networks, federations, trade-unions).

5.6. Subcontractors

Sub-contractors are not beneficiaries to the grant, nor affiliated entities.

Subcontracting³ refers to contracts concluded for the externalisation of specific tasks or activities which form part of the action.

The beneficiaries remain solely responsible for the implementation of the action. Subcontracting is not allowed among the beneficiaries in the project. Please note that the beneficiaries must have the necessary capacity to perform the project themselves.

Subcontracting of specific tasks or activities (i.e. the externalisation) which form part of the action as described in the proposal must satisfy the conditions applicable to any implementation contract (as specified above) and in addition to them the following conditions:

- a. it may only cover the implementation of a limited part of the action and **shall in no case cover core activities as described in Sections 2.3;**
- b. it must be justified having regard to the nature of the action and what is necessary for its implementation;
- c. it must be clearly stated in the proposal.

The applicants must have operational capacity to perform the work proposed in their proposal. This operational capacity will be assessed at the time of the evaluation of the proposal (please refer to section 9.2below).

In exceptional cases, where the implementation of the action or the technical proposal (B1-B2 Forms) can be done more efficiently and effectively through the award of subcontracts (implementation contracts), the beneficiary must award the contract to the bid offering best value for money or the lowest price (as

³ Art. 137 FR, 209 RAP

appropriate), avoiding conflicts of interests and retain the relevant documentation for the event of an audit. Entities acting in their capacity of contracting authorities in the meaning of Directive 2004/18/EC⁴ or contracting entities in the meaning of Directive 2004/17/EC⁵ shall abide by the applicable national public procurement rules.

The costs of subcontracting can be eligible under the conditions indicated in the grant agreement (see also point 2.8 in section 12.2 below). The proposal should clearly specify the activities that will be subcontracted in the description of the action and the corresponding costs must be indicated in the estimated budget. The contract should be awarded in accordance with the conditions set in the grant agreement. Recourse to the award of contracts must be duly justified having regard to the nature of the action and what is necessary for its implementation.

Any justification provided by the beneficiary needs to be pre-endorsed by the GSA and subcontracting shall require GSA's approval which may be considered granted in cases where the subcontracting is already fully described in the proposal so accepted by the GSA, given that it will then be implemented accordingly and fulfilling the eligibility criteria specified in the signed Grant Agreement.

The tasks concerned must be set out in the description of the action (i.e. form B1 and Annex I to the grant agreement) and the estimated costs of subcontracting must be clearly identifiable in the estimated budget (Form C1). However, approval of subcontracting by GSA (whether at the time of the evaluation of proposal or later during implementation of the action) does not automatically mean that the related costs will be considered eligible and reimbursed. The costs will need to comply with the eligibility criteria set up in the grant agreement in order for them to be reimbursed.

Any modifications on an ad hoc basis while the action is under way must be presented for ex-ante approval of the GSA and for major items will require an amendment to the grant agreement otherwise will not be reimbursed.

It is not necessary to have already selected subcontractors at the time the proposal is submitted. However, cost of subcontractors not selected in accordance with the rules referred to in this Section will not be eligible.

6. ADMISSIBILITY REQUIREMENTS

APPLICATIONS MUST COMPLY WITH ALL OF THE ADMISSIBILITY REQUIREMENTS SET OUT IN THIS SECTION.

Applications must comply with the following conditions in order to be admissible:

- Applications must be sent no later than the deadline for submitting applications referred to in section 17,
- Applications must be submitted in writing, using the submission set described in section 16,

⁴ Directive 2004/18/EC on the coordination of procedures for the award of public work contracts, public supply contracts and public service contracts.

⁵ Directive 2004/17/EC coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors.

- Applications must be drafted in one of the EU official languages with a preference to English. For further information please refer to Section 17 below,
- Applications must respect the maximum rate for EU co-financing,
- Applications must respect the maximum amount for EU co-financing⁶.

In this context, any project directly or indirectly contrary to EU policy or against public health, human rights or against citizen's security will be rejected.

7. ELIGIBILITY CRITERIA

APPLICATIONS MUST COMPLY WITH ALL OF THE ELIGIBILITY CRITERIA SET OUT IN THIS SECTION.

7.1. Eligible applicants

- Applications by legal persons established⁷ in and/or natural person(s) who is national of one of the following countries, are eligible:
 - EU Member States
 - Switzerland, Norway
- Applicants must correspond to the definition of any of the following target organisations: **active in the development, integration and/or manufacturing of GNSS components, receivers, antennas and/or expert in the field of GNSS Research and development (R&D) and/or experts in the field of timing and critical infrastructures;**
- Corporate bodies must be properly constituted and registered under their applicable law. When an applicant does not have legal personality, a physical person must be designated to provide the legal responsibility.

The single applicant (see ref. to section 5.2) , the coordinator (see ref. to section 5.3) and all co-applicants (see ref. to section 5.4) forming the applicant consortium, as well as the affiliated entities (see ref. to section 5.5) shall satisfy the same eligibility criteria.

For British applicants: Please be aware that eligibility criteria must be complied with for the entire duration of the grant. If the United Kingdom withdraws from the EU during the grant period without concluding an agreement with the EU ensuring in particular that British applicants continue to be eligible, you will cease to receive EU funding (while continuing, where possible, to participate) or be required to leave the project on the basis of Article II.17.3.1(a) of the multibeneficiary grant agreement or Article II.17.2.1(a) of the monobeneficiary grant agreement.

⁶ Proposals exceeding the applicable maximum EU co-financing rate and allocated EU budget for this call (see section 4) shall not be considered further and will be rejected.

⁷ Established should be understood as having a registered office, central administration or principal place of business in one of these countries.

7.2. Structure of the consortium (multi-beneficiaries)

In the case of multi-applicants, the coordinator will submit the proposal on behalf of the consortium. It shall be the intermediary for all communication between the co-applicants and the GSA and responsible for supplying all documents and information to the GSA in due time upon request.

The proposal consequently must be submitted by a consortium composed of at least two (2) entities out of which:

- **the coordinator shall be a legal person;**
- **the co-applicant(s) can be either legal and/or natural person(s).**

For the sake of clarity, the term “**applicant**”, referred to in this call, shall encompass co-applicants and coordinator as appropriate.

All co-applicants in the same consortium shall agree upon appropriate arrangements (internal cooperation agreements) among themselves for the proper performance of the action.

The grant agreement shall be signed by coordinator of the successful consortium; provided that a mandate (Annex IV of the grant agreement) has been provided to it by the other co-applicants. A copy of this mandate shall be provided to the GSA.

Legal persons having a legal or capital link with applicants, which is neither limited to the action nor established for the sole purpose of its implementation, may take part in the action as **affiliated entities (see ref. to section 5.5)**, and may declare eligible costs. For that purpose, applicants shall identify such affiliated entities in the application form.

7.3. Supporting documents proving compliance with the eligibility criteria

➤ The **coordinator**, who will be receiving payments on behalf of the consortium of beneficiaries and shall be **responsible for distributing payments to the co-beneficiaries**, shall provide:

- **A duly filled Financial Identification Form (FIF)**, which can be downloaded from the following website:
http://ec.europa.eu/budget/contracts_grants/info_contracts/financial_id/financial_id_en.cfm

It must be duly filled in and signed, and if applicable be accompanied by the relevant bank statement.

➤ **All the applicants and any affiliated entities** (see ref. to section 5.5) shall provide the following supporting documents to establish their eligibility:

- **A duly filled and signed Legal Entity Form (LEF) accompanied by the relevant evidence (see below) of the applicant's legal status has to be provided at the stage of submission.**

A specific form in all official languages of the EU is available at the following internet page (use of the English forms is preferred):

http://ec.europa.eu/budget/contracts_grants/info_contracts/legal_entities/legal_entities_en.cfm

- In addition:

- **private legal person(s)** : extract from the official journal, copy of articles of association, extract of trade or association register OR a copy of the certificate of liability to VAT (if, as in certain countries, the trade register number and VAT number are identical, only one of these documents is required);

- **public legal person(s)** : a copy of the resolution, law, decree or decision establishing the public company, or as an alternative, any other official document establishing the public legal person by the national authorities may be submitted;
- **natural person(s)** : legible photocopy of identity card and/or passport OR an official VAT document (if applicable).

For the Consortium: In addition to the above supporting documents, each **applicant shall further submit letters confirming their participation to the project, their role in the consortium** (coordinator or co-applicant) **and the main task to be performed.**

- The **single applicant** and the **coordinator**⁸, who will be receiving payments, shall provide:
 - **A duly filled Financial Identification Form (FIF)**, which can be downloaded from the following website:
http://ec.europa.eu/budget/contracts_grants/info_contracts/financial_id/financial_id_en.cfm

It must be duly filled in and signed, and if applicable be accompanied by the relevant bank statement.

IMPORTANT NOTE (4): Applicant(s) may participate in multiple applicant consortia, if the actions covered in the respective Technical Proposals (B1 form) are different from each other in order to comply with the principle of non-cumulative financing and award.

8. EXCLUSION CRITERIA

APPLICATIONS MUST COMPLY WITH ALL OF THE EXCLUSION CRITERIA SET OUT IN THIS SECTION.

Article 105a, paragraphs 1 to 4, 6 and 7, except point (b) of the first subparagraph and the second subparagraph of that paragraph, paragraphs 8, 9, 11 and 13 to 17 of Article 106 and Article 108 of Financial Regulations shall apply to grant applicants and beneficiaries. Article 107 shall apply to applicants. Applicants shall declare whether they are in one of the situations referred to in Article 106(1) or Article 107 and, where applicable, whether they have taken remedial measures as referred to in point (a) of Article 106(7).

8.1. Exclusion from the participation

Exclusion criteria are specified in the standard **Declaration of Honour (A5 Form)** of this call.

The same exclusion criteria apply to all affiliated entities (see ref. to section 5.5).

⁸ The Coordinator (on behalf of the consortium of beneficiaries) shall be responsible for distributing payments to the co-beneficiaries

8.2. Exclusion from award

Applicants will not be granted EU funds if, in the course of the grant award procedure, they:

- are in an exclusion situations established in the A5 form;
- have misrepresented the information required by the GSA as a condition of participation in the grant award procedure or fail to supply this information upon request by GSA.

The same exclusion criteria apply to affiliated entities.

Administrative and financial penalties may be imposed on applicants that are guilty of misrepresentation.

8.3. Supporting documents proving compliance with exclusion criteria

All applicants and any affiliated entities (see ref. to section5.5) must sign and submit a Declaration of Honour (A5 Form).

Please note that according to this **A5 Form**, the successful applicants – subject to the outcome of the risk assessment⁹ performed by GSA on a case by case basis – may be required to send a number of supporting documents related to aspects of the Declaration of Honour before the respective grant agreement can be signed. Collecting these supporting documents may take some time and applicants shall ensure their timely availability for performing this requirement accordingly. Applicants shall approach the GSA in due time in case they are of the opinion that certain points of the declaration are not applicable to them (e.g. due to their legal structure).

9. SELECTION CRITERIA

APPLICATIONS MUST COMPLY WITH ALL OF THE SELECTION CRITERIA SET OUT IN THIS SECTION.

9.1. Financial capacity

Applicants must have stable and sufficient sources of funding to maintain their activity throughout the period during which the action is being carried out. The applicants' financial capacity will be assessed on the basis of the following supporting documents to be submitted with the application by each applicant and affiliated entity (thresholds applying by applicants):

- a) Total grant amount < EUR 750 000:
 - a declaration on their honour and,
 - the table provided for in the application form (A6 Form), filled in with the relevant statutory accounting figures, in order to calculate the ratios as detailed in the form. For newly created legal persons, a business plan might replace the above documents.
- b) Total grant amount ≥ EUR 750 000, in addition to the above:

⁹ See ref. to Art. 131.3

- an **audit report** produced by an approved external auditor certifying the accounts for the last financial year available.

On the basis of the documents submitted, if GSA considers that financial capacity is not satisfactory and in any other case GSA may deem it appropriate, it may:

- request further information;
- propose a grant agreement without pre-financing;
- propose a grant agreement with a pre-financing paid in instalments;
- propose a grant agreement with a lower percentage of a pre-financing;
- propose a grant agreement with a pre-financing covered by a bank guarantee;
- reject the application.

The verification of the financial capacity **shall not apply to public bodies and international organisations.**

9.2. Operational capacity (B2 Form)

The applicant consortia shall demonstrate a balanced expertise in areas like development, integration, testing, manufacturing, distribution of GNSS components, GNSS chipsets/receivers and/or providing expertise in the field of GNSS R&D.

Applicants must show they have the **operational (technical and management) capacity** to complete the activities to be supported by this Call for Proposal and must **demonstrate their capacity to manage the activities** corresponding to the size of the project for which the grant is requested.

In particular:

- The team responsible for the activities must have an eminent technical competence,
- Applicants must have a high degree of specialisation in areas relevant for the activities subject to the proposal,
- Applicants must have relevant experience in design, development and industrialisation of GNSS receivers and related technologies,
- Applicants must prove that they have at their disposal technical infrastructures (relevant design and validation tools and/or hardware/software tools) necessary to perform the implementation.

In this respect, applicants have to submit in B2 Form, the following elements:

- description of the profile of the individuals¹⁰ primarily responsible for managing and implementing the activities;
- a description of the technical equipment, tools or facilities at the disposal of the applicant;
- description of the role of each applicant (coordinator, co-applicants and affiliated entities) in the organisational structure in general and regarding the performance of activities subject to grant agreement.

In the case of affiliated entities (see ref. to section 5.5) taking part in the project, the above requirements apply to each affiliated entity.

¹⁰ To highlight the relevant competencies for this Call for Proposal please use the Europass CV template which can be accessed from: <https://europass.cedefop.europa.eu/de/documents/curriculum-vitae/templates-instructions>

10. AWARD CRITERIA

Eligible applications will be assessed on the basis of the following criteria. When assessing the below award criteria, the evaluation committee shall use the elements indicated below for each criterion.

AWARD CRITERIA AND KEY ELEMENTS LIKELY TO BE ASSESSED BY THE EVALUATION COMMITTEE	MAX. SCORE
1. Relevance of the proposal to the objectives of the call, credibility of the proposed approach, and innovation of the solutions proposed:	40
<i>Relevance and quality of the proposed preliminary receiver's performance validation strategy (as described in Sec 2.5).</i>	
<i>Relevance and quality of the methodology for requirements identification, design, development and testing of the receiver (as requested in Sec 2.5).</i>	
<i>Overall quality of the proposal in terms of completeness, level of detail and innovation.</i>	
2. Impact in terms of economic and public benefits derived from the proposal:	15
<i>Maximisation of the benefits by the adoption of the results in the market for the identified application</i>	
<i>Coherency of the business plan for the exploitation of the results of the grant</i>	
3. Credibility and coherency of the dissemination plan for the dissemination of the results of the grant:	15
<i>Appropriateness of the methodology of dissemination plan including extent of demonstration activities</i>	
<i>Impact of dissemination plan to attract visibility of results towards stakeholders</i>	
4. Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources:	30
<i>Consistency of the work plan aiming at the maximisation of the quality and representativeness of the results.</i>	
<i>Appropriateness of the management structures and procedures, including risk and innovation management</i>	
<i>Coherence of the work plan in terms of activities' definition, schedule, effort and cost, including justification of the resources to be committed.</i>	
<i>Appropriateness of the distribution of the tasks among the proposed resources</i>	
Maximum total score	100

If a total score lower than **60** points or a score lower than **60%** for any of the above four criteria is obtained, the proposal will not be evaluated further and will be rejected.

11. LEGAL COMMITMENTS¹¹

Applicants are reminded:

The successful applicants shall be bound by the Special and General Conditions of the draft grant agreement. Submission of a grant application (proposal) by the consortium implies the acceptance of these Special and the General Conditions. This also includes the obligation of the provision of accurate, sincere and complete information within the context of this grant procedure including but not limited to filling out the provided forms with true, correct and complete data representing the real status of the applicant.

In the event of a grant awarded by the GSA following this call, a grant agreement drawn up in Euro and detailing the conditions and level of funding, will be sent to the coordinator of the consortium, alongside a description of the procedure in view to formalise the obligations of the parties.

The coordinator, representing the awarded consortium, on the basis of duly provided powers of attorney (Mandate – Annex IV of the grant agreement) shall sign 2 (two) copies of the original agreement and shall then return it to the GSA for countersignature.

In case the GSA requests the below documents¹² to be made available and if these are not submitted within the relevant deadlines, the GSA reserves the right to cancel the award and/or the grant agreement signature process and re-allocate the budget. These documents being:

- (1) Submission of all supporting documents pertaining to the Declaration of Honour (A5 form) for each co-applicant (and affiliated entity if case may be) in due time upon request by GSA after the receipt of such request;**
- (2) Submission of the signed grant agreement by the coordinator with authorisation (i.e.: Mandate - Annex IV of the Grant Agreement) for each co-applicant at latest 1 (one) month after the coordinator's receipt of the grant agreement for the signature process.**

Applicants are reminded to start immediately the collection of the supporting documents for the relevant points in the Declaration of Honour upon GSA's request, bearing in mind that particularly for large consortia, the collection of documents may be very time consuming.

12. FINANCIAL PROVISIONS

When preparing their proposal, applicants shall observe the elements described in the following sub-sections for calculating the required budget for the implementation of their project.

12.1. General principles

Non-cumulative award

Each action may give rise to the award of only one grant from the budget to any one consortium.

In no circumstances shall the same costs be financed twice by the European Union budget.

¹¹ Art. 121 FR, 174 RAP

¹² Please refer to section 8.3

Applicants have to inform the GSA immediately of any multiple applications and multiple grants relating to the same action. The applicants shall inform about sources and amounts of EU funding received or applied for the same action or for part of the action. Applicants shall indicate if they receive EU funding for their functioning during the financial year in which the action takes place.

Non-retroactivity

No grant may be awarded retrospectively for actions already completed.

A grant may be awarded for an action which has already begun, provided the applicant can demonstrate the need to start the action before the grant agreement is signed. In such cases, costs eligible for financing may not have been incurred prior to the date of submission of the grant application.

Co-financing

Grants shall involve co-financing, which implies that the resources necessary to carry out the action shall not be provided entirely by EU contribution. EU financing may not cover 100% of the total costs of the action.

Co-financing of the action may take the form of:

- the awarded beneficiary's own resources,
- income generated by the action,
- financial contributions from third parties.

Co-financing may also take the form of in-kind contributions from third parties, i.e. non-financial resources made available free of charge by third parties to the awarded consortium as the corresponding costs are not eligible.

No-profit rule

EU grant may not have the purpose or effect of producing a profit within the framework of the action.

For this purpose, **profit is defined as a surplus of the receipts over the eligible costs incurred by the beneficiary**, when the request is made for payment of the balance. Where such a surplus occurs, the GSA is entitled to recover the percentage of the profit corresponding to the EU contribution to the eligible costs actually incurred by the beneficiary to carry out the action.

Balanced budget¹³

The estimated budget of the action is to be attached in excel format to the application form following the model provided in the Form C1.

It must have revenue and expenditure in balance. The amounts must be expressed in **Euro** with maximum two decimals.

Applicants (and affiliated entities) with general accounts in a currency other than the euro must convert costs incurred in another currency into euro at the average of the daily exchange rates published in the C

¹³ Art. 196.2 RAP

series of *Official Journal of the European Union*, determined over the corresponding reporting period (available at <http://www.ecb.europa.eu/stats/exchange/eurofxref/html/index.en.html>).

If no daily Euro exchange rate is published in the *Official Journal of the European Union* for the currency in question, conversion must be made at the average of the monthly accounting rates established by the Commission and published on its website determined over the corresponding reporting period.

http://ec.europa.eu/budget/contracts_grants/info_contracts/inforeuro/inforeuro_en.cfm

Applicants and affiliated entities with general accounts in Euro must convert costs incurred in another currency into Euro according to their usual accounting practices

For awarded projects, the final payment will be based on the final financial report at the end of the project and supporting documents, taking into account any previous pre-financing and interim payment.

Financial support to third parties

The applications for this action may not envisage provision of financial support to third parties.

12.2. Funding form

GSA grants are calculated on the basis of a detailed estimated budget indicating clearly the costs that are eligible for EU funding. The grant amount may neither exceed the eligible costs nor the amount requested. Amounts are indicated in Euros.

➤ **Maximum amount requested**

The EU grant is limited to a maximum co-funding rate of 70% of eligible costs incurred in the implementation of the specific actions taking into account the maximum grant amount referred to in section 4.

Consequently, part of the total eligible expenses entered in the estimated budget must be financed from sources other than the EU grant.

➤ **Eligible costs of the grant**

Eligible costs are costs actually incurred by the beneficiary of a grant which meet all the following criteria:

- ✓ they are incurred during the duration of the action, as indicated in the grant agreement, with the exception of costs relating to preparation of the final reports and audit certificates;
- ✓ they are indicated in the estimated budget of the action;
- ✓ they are necessary for the implementation of the action, in accordance with the description of the action, attached to the grant agreement;
- ✓ they are identifiable and verifiable, in particular being recorded in the accounting records of the beneficiary and determined according to the applicable accounting standards of the country where the beneficiary is established and according to the usual cost accounting practices of the beneficiary;
- ✓ they comply with the requirements of applicable tax and social legislation;
- ✓ they are reasonable, justified, and comply with the principle of sound financial management, in particular regarding economy and efficiency.

The beneficiary's internal accounting and auditing procedures must permit direct reconciliation of the costs and revenue declared in respect of the action/project with the corresponding accounting statements and supporting documents.

The same criteria apply to the affiliated entities.

Please note that the exact scope of the eligibility of costs is defined in the grant agreement, which will be signed with the successful applicant(s).

➤ **Eligible *direct costs***

The eligible direct costs for the action are those costs which, **with due regard for the conditions of eligibility set out above**, are identifiable as specific costs directly linked to the performance of the action.

When preparing the proposal, applicants shall observe the elements described in the following sub-sections for calculating the necessary budget for the implementation of their project. The following categories of costs can be considered as **eligible direct costs**:

1. **Personnel costs** are:
 - 1.1 cost of personnel working under an employment contract
 - 1.2 costs of natural persons working under a contract with the beneficiary other than an employment contract
- 2 **Other direct costs** are:
 - 2.1 cost of travel and related subsistence allowances
 - 2.2 costs for equipment and other assets specifically procured for the action
 - 2.3 costs for equipment or other assets not procured specifically but directly used for the action – depreciation costs
 - 2.4 the costs for rental or lease of equipment or other assets
 - 2.5 the cost of using technical facilities or laboratories
 - 2.6 costs of consumables and supplies
 - 2.7 costs arising directly from requirements imposed by the grant agreement
 - 2.8 costs entailed by subcontracts
 - 2.9 costs of financial support to third parties [not-applicable]
 - 2.10 duties, taxes and charges

1. Personnel costs

- 1.1 the **costs of personnel** working under an employment contract with the beneficiary or an equivalent appointing act and assigned to the action (including civil servants and other personnel of national administrations to the extent that they relate to the cost of activities which the relevant public authority would not carry out if the project concerned were not undertaken), comprising actual salaries plus social security contributions and other statutory costs included in the remuneration, provided that these costs are in line with the beneficiary's usual policy on remuneration. Those costs may also include additional remunerations, including payments on the basis of supplementary contracts regardless of the nature of those contracts, provided that they are paid in a consistent manner whenever the same kind of work or expertise is required, independently from the source of funding used;

Personnel costs must be calculated by the applicants/beneficiaries as follows:

{(Hourly rate multiplied by number of actual hours worked on the action), plus for non-profit legal entities: additional remunerations to personnel assigned to the action}.

The total number of hours declared in EU or Euratom grants, for a person for a year, cannot be higher than the annual productive hours used for the calculations of the hourly rate. Therefore, the maximum number of hours that can be declared for the grant are:

{Number of annual productive hours for the year minus total number of hours declared by the beneficiary, for that person for that year, for other EU or Euratom grants}

The 'hourly rate' is calculated as follows:

{actual annual personnel costs for the person divided by number of annual productive hours}

The beneficiaries must use the annual personnel costs and the number of annual productive hours for each financial year covered by the reporting period concerned. If a financial year is not closed at the end of the reporting period, the beneficiaries must use the hourly rate of the last closed financial year available.

For the 'number of annual productive hours', the beneficiaries may choose one of the following:

- (i) 'fixed number of hours': 1720 hours for persons working full time (or corresponding pro-rata for persons not working full time);
- (ii) 'individual annual productive hours': the total number of hours worked by the person in the year for the beneficiary *{annual workable hours of the person plus overtime worked minus absences}*. If the contract (or applicable collective labour agreement or national working time legislation) does not allow to determine the annual workable hours, this option cannot be used;
- (iii) 'standard annual productive hours': the standard number of annual hours generally applied by the beneficiary for its personnel in accordance with its usual cost accounting practices. This number must be at least 90% of the 'standard annual workable hours'. If there is no applicable reference for the standard annual workable hours, this option cannot be used.

'Annual workable hours' - means the period during which the personnel must be working, at the employer's disposal and carrying out his/her activity or duties under the employment contract, applicable collective labour agreement or national working time legislation.

For all options, the actual time spent on parental leave by a person assigned to the action may be deducted from the number of annual productive hours.

Important:

Activities that **cannot** be deducted for the calculation of the annual productive hours and that cannot be charged to the project are: Sales and marketing; Preparation of proposals; Administrative time (often means "unsold" time).

1.2 The **costs of natural persons working under a contract with the beneficiary other than an employment contract** (e.g. in-house consultants) may be assimilated to such costs of personnel, provided that the following conditions are fulfilled:

- there must be a **direct contract** between the natural person (individual) and the beneficiary;
- the natural person works under the instructions of the beneficiary and, unless otherwise agreed with the beneficiary through a teleworking agreement, in the premises of the beneficiary;
- the result of the work belongs to the beneficiary;
- the costs are not significantly different from the costs of personnel performing similar tasks under an employment contract with the beneficiary; and
- The remuneration must be based on working hours, rather than on delivering specific outputs/products. (This implies that the beneficiary must keep records of the hours worked for the action.) Costs of natural persons working under a direct contract for a beneficiary must be calculated according to the formula: hourly rate multiplied by the number of actual hours worked on the action where hourly rate:
 - a. if the contract specifies an hourly rate: this hourly rate must be used;
 - b. if the contract states a fixed amount for the services of the natural person and the number of hours to be worked: this global amount must be divided by the number of hours to be worked for the beneficiary under that contract.

2. Other direct costs

Other costs in general: **only costs of those items which are directly linked to the performance of the operation, identifiable and assigned to the action shall be considered under this heading.**

Those costs should include the costs of implementation contracts for ancillary services, goods etc. needed to carry out the project (e.g. dissemination of information, specific evaluation, translations, reproduction...), including purchase of consumables and supplies. They do not cover contract that imply any externalisation of activities included in the action described in the proposal, which should be included as subcontracting in the relevant form.

Please note that the fact that the costs are specific to the action is the key factor that makes these costs eligible for European Union funding. More general office supplies, stamps or other stationary is comprised in the indirect costs and cannot be considered under this heading.

All documents supporting the above costs (e.g. invoices) have to be kept from the very beginning of the project. The GSA will require them to verify the request for payment validity.

2.1 **costs of travel** and related subsistence allowances for employees, provided that these costs are in line with the beneficiary's usual practices on travel;

Only the costs for the employee's travel and subsistence allowances can be introduced in the budget form. Travel costs of external service providers, if applicable, are to be included in their contracts.

Subscription fees to conferences or events, where relevant, should be included in **C1** form (section 2.1) Travel costs.

Reimbursement of travel costs can be requested for meetings, European conferences, etc. provided that they are in line with the usual practices of the beneficiary and pre-approved by the GSA. The travel policy of the beneficiary must be made in writing and apply to all business trips of the organisation. Alternatively, in case when a beneficiary has not formalised an internal travel policy or established travel practice, they should not exceed the scales approved annually by the European Commission. These European Commission rates can be consulted on this address: http://ec.europa.eu/europeaid/work/procedures/implementation/per_diems/index_en.htm

In all cases, the costs reported should comply with the principle of economy and efficiency, meaning that travelling should be performed by the most direct and most economic route;

The costs reported should comply with the following:

- travel by the most direct and most economic route;
- travel by rail: first class;
- travel by air: economy class, unless a cheaper fare can be used (e.g. Apex);
- travel by car: reimbursed on the basis of the equivalent first class rail fare.

Flat-rate subsistence allowances cover all subsistence expenses during travel, including hotels, restaurants and local transport (taxis and/or public transport). They apply for each day of a mission at a minimum distance of 100 km from the normal place of work in the context of the project forming the subject of the grant agreement.

Please note that tips will not be considered as eligible costs.

Beneficiaries who want to declare travel costs as eligible costs of the project will have to provide the following information for each travel:

- Names or functions of the people involved;
- Journey and dates (even tentative);
- Purpose of the travel (this must refer clearly to one activity of the project);
- Subsistence costs: total number of days of the travel x flat rate subsistence allowance (per diem) or an estimate of the real costs per day (per person);
- Cost of travel (estimation).

All necessary supporting documents, in accordance with the beneficiary's travel policy, have to be kept from the very beginning of the project (e.g. travel tickets, boarding passes, invoices from the travel agency, etc.) The GSA will require them to verify the validity of the request for payment. For the per diem allowances, no supporting documents are required; only a declaration of the applicant on the applicable per diem in its organisation is needed.

2.2 for equipment and other assets (new or second-hand) procured specifically for the action and in accordance with Article II.10 of the Grant Agreement]

a) the full purchase costs provided that they are treated as capital expenditure in accordance with the tax and accounting rules applicable to the beneficiary and are recorded in the fixed assets account of its balance sheet OR the purchase in itself is the purpose of the action **[not-applicable to this call]**

or

b) the respective depreciation costs provided that the asset has been purchased in accordance with the conditions applicable to implementation contracts and that it is written off in accordance with the international accounting standards and international financial reporting

standards, IAS/IFRS, regardless whether the beneficiary has to apply them or otherwise has diverging accounting practices.

- 2.3 **costs for equipment or other assets** (new or second-hand) not procured specifically but **directly used** for the action in **proportion to the usage for the action and only during its duration** as **depreciation costs** recorded in the accounting statements of the beneficiary over the period of implementation of the action, provided that the asset is written off in accordance with the international accounting standards and the usual accounting practices of the beneficiary.

Only depreciation for equipment which is strictly necessary for the purposes of carrying out the action can be charged as direct costs. This thus excludes any computer equipment, office material, furniture, etc. that the applicant needs for his daily activities and that will be normally covered by indirect costs.

Only the portion of the equipment's depreciation corresponding to the duration of the project and the rate of actual use for the purposes of the project can be taken into account by the GSA.

- 2.4 **the costs for rental or lease of equipment or other assets only to the portion of use and limited to the duration of the action**, provided that these costs do not exceed the depreciation costs of similar equipment or assets and are exclusive of any finance fee;
- 2.5 when **using technical facilities or laboratories the above rules (2.2) to (2.4) for eligibility of costs apply accordingly**;
- 2.6 costs **of consumables and supplies**, provided that they are purchased in accordance with the conditions applicable to the award of contracts necessary for the implementation of the action and are directly assigned to the action;
- 2.7 costs **arising directly from requirements imposed by the grant agreement** (dissemination of information, specific evaluation of the action, audits, translations, reproduction), including the costs of requested financial guarantees, provided that the corresponding services are purchased in accordance with the conditions applicable to the award of contracts necessary for the implementation of the action;
- 2.8 **costs entailed by subcontracts**, concluded for the externalisation of specific tasks or activities which form part of the action **as described in the proposal**, provided that the conditions applicable to implementation contracts are met;

Please refer to Section 5.6 for further details.

- 2.9 **costs of financial support to third parties** within the meaning of Article II.12 of the grant agreement provided that the conditions laid down in that article are met [**not-applicable to this call**];
- 2.10 **duties, taxes and charges** paid by the beneficiary, notably non-deductible value added tax (VAT), provided that they are included in eligible direct costs, and unless specified otherwise in the Agreement. In particular, **ONLY** non-deductible VAT is eligible, except for the activities which the beneficiaries that are public bodies engage in as public authorities (prerogatives of public powers under national law).

➤ **Eligible indirect costs**

A flat-rate amount of 7% of the total eligible direct costs of the action excluding subcontracting costs¹⁴ is eligible under indirect costs, representing the beneficiary's general administrative costs which can be regarded as chargeable to the action/project.

Indirect costs may not include costs entered under another budget heading.

Indirect costs are not eligible for beneficiaries that receive an operating grant.

➤ **Non-eligible costs**

In addition to any other costs which do not fulfil the conditions set out above, the following costs shall not be considered eligible:

- a. return on capital or return generated by an investment;
- b. debt and debt service charges;
- c. provisions for future losses or debts;
- d. interest owed;
- e. doubtful debts;
- f. currency exchange losses;
- g. bank costs charged by the beneficiary's bank for transfers from the Agency;
- h. costs declared by the beneficiary in the framework of another action receiving a grant financed from the EU budget (including grants awarded by a Member State and financed from the EU budget and grants awarded by the European Commission or other EU bodies than the GSA for the purpose of implementing the EU budget); in particular, indirect costs shall not be eligible under a grant for an action awarded to a beneficiary which already receives an operating grant financed from the EU budget during the period in question;
- i. contributions in kind from third parties;
- j. excessive or reckless expenditure;
- k. deductible VAT;
- l. participation by any staff of the European Union institutions in the action
- m. costs incurred during the suspension of the implementation of the action;
- n. cost categories explicitly excluded in the work programme/call.

Calculation of the final amount of the grant

The draft grant agreement annexed to this Call for proposals specifies the calculation of the final grant and the payment arrangements. Applicants' attention should particularly focus on the General Conditions of the draft agreement, where the eligibility conditions of costs are described.

The EU grant may not have the purpose or effect of producing a profit¹⁵ within the framework of the action.

The final amount of the grant to be awarded to the consortium is established after completion of the action, and upon approval of the request for payment containing the following documents¹⁶ *[including relevant supporting documents where appropriate]*:

- a final report providing details of the implementation and results of the action;
- the final financial statement of costs actually incurred,

¹⁴ Indirect costs = 7% * (total eligible direct costs - subcontracting)

¹⁵ See reference to Section 12.2 of this Call for Proposal.

¹⁶ Art. 135 FR

- [where applicable, a certificate on the financial statements of the action and underlying accounts¹⁷].

The authorising officer may also waive the obligation to provide a certificate on the financial statements and underlying accounts where an audit has been or will be directly done by the GSA's own staff or by a body authorised to do so on its behalf, which provides equivalent assurances about the costs declared.

12.3. Payment arrangements

Arrangements for pre-financing payment corresponding to 30% of the grant amount will be further detailed in the grant agreement (see ref. to Article I.5.2).

An interim payment shall be paid to the coordinator (who receives it on behalf of the consortium) and is intended to cover the consortium's expenditure on the basis of a request for payment when the action has been partly carried out.

The interim payment must clear 50% of the amount of the pre-financing payment(s) previously made. The interim payment shall not exceed 40% of the maximum grant amount. The cumulative amount of pre-financing(s) and interim payment(s) must not exceed 70% of the *maximum amount of the grant*.

Payment	Amount	Note
Pre-financing payment	30%	
Interim payment	max 40%	Based on the actual requested grant amount (i.e. actual expenditure).
Final payment	min 30%	

GSA will establish the amount of the final payment to be made to the coordinator (who receives it on behalf of the consortium) on the basis of the calculation of the final grant amount (see section 12.2 above). If the total of earlier payments is higher than the final grant amount, the consortium (represented by the coordinator) will be required to reimburse the amount paid in excess by the GSA through a recovery order¹⁸.

Please refer to the grant agreement for the terms and conditions of the payment arrangements (see ref. to Article I.5).

12.4. Pre-financing guarantee

A pre-financing guarantee for up to the same amount as the pre-financing may be requested, on a case by case basis, in order to limit the financial risks linked to the pre-financing payment. The financial guarantee, in euro, shall be provided by an approved bank or financial institution established in one of the Member State of the European Union. When the beneficiary is established in a third country, the authorising officer responsible may agree that a bank or financial institution established in that third country may provide the guarantee if he considers that the bank or financial institution offers equivalent security and characteristics as those offered by a bank or financial institution established in a Member State. Amounts blocked in bank accounts shall not be accepted as financial guarantees.

¹⁷ Art. 207.3 RAP

¹⁸ Art. 109, 110 RAP

The guarantee may be replaced by a joint and several guarantee by a third party or by a joint guarantee of the beneficiaries of an action who are parties to the same grant agreement.

The guarantee shall be released as the pre-financing is gradually cleared against interim payments or payments of balances to the beneficiary, in accordance with the conditions laid down in the grant agreement.

13. PUBLICITY

13.1. By the Beneficiaries

Beneficiaries must clearly acknowledge the European Union's contribution in all publications or in conjunction with activities for which the allocated grants are used.

In this respect, beneficiaries are required to give prominence to the name and emblem of the GSA and of the European Union on all their publications, posters, programmes and other products realised under the grant agreement.

If this requirement is not fully complied with, the grant may be reduced in accordance with the provisions of the grant agreement.

13.2. By the GSA

The GSA will publish the following information:

- a. name of the awarded consortium and its beneficiaries;
- b. address of the beneficiary (legal persons) or reference to the region (natural persons);
- c. subject of the grant agreement;
- d. amount awarded.

Upon a reasoned and duly substantiated request by the awarded consortium (represented by the coordinator), the publication shall be waived if such disclosure risks threatening the rights and freedoms of individuals concerned as protected by the Charter of Fundamental Rights of the European Union or harm the commercial interests of the beneficiary.

14. OWNERSHIP

The ownership of the results generated by the action is specified in the grant agreement.

15. DATA PROTECTION

The reply to any call for proposals involves the recording and processing of personal data (such as name, address and CV). Such data will be processed pursuant to Regulation (EC) No 45/2001 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on

the free movement of such data. Unless indicated otherwise, the questions and any personal data requested are required to evaluate the application in accordance with the specifications of the call for proposals will be processed solely for that purpose by the GSA. Applicants / beneficiaries are entitled to obtain access to their personal data on request and to rectify any such data that is inaccurate or incomplete. Applicants / beneficiaries shall address queries concerning the processing of personal data to the GSA. Applicants / beneficiaries have the right of recourse at any time to the European Data Protection Supervisor for matters relating to the processing of their personal data.

Details concerning the processing of personal data are available on the privacy statement at:

https://ec.europa.eu/info/data-protection-public-procurement-procedures_en

Applicants are informed that for the purposes of safeguarding the financial interest of the European Union, personal data may be transferred to internal audit services, to the European Court of Auditors, to the Financial Irregularities Panel and/or to the European Anti-Fraud Office (OLAF).

Your personal data may be registered in the Early Detection and Exclusion System (EDES) if you are in one of the situations mentioned in Article 106 of the Financial Regulation¹⁹. For more information, see the Privacy Statement on: http://ec.europa.eu/budget/explained/management/protecting/protect_en.cfm

16. PREPARATION AND STRUCTURE OF THE PROPOSAL

Proposals shall be prepared in accordance with the scope of the Call (section 2.2), with clear definition of the roles (Form A1), demonstrating that the consortium is composed of all the necessary competencies needed to achieve the objectives of the Call (section 2.1).

Proposals must be submitted in accordance with the formal requirements and by the deadline set out under section 17.

Applicants will be informed in writing about the results of the selection process.

Proposals shall be prepared along the following structure:

Administrative Proposal (A1-A6):

A1 – Proposal Overview

A2 – Proposal Summary

A3 – Coordinator profile including:

- a) Legal Entity Form (LEF) together with supporting documents as described in Section 7.3
- b) Financial Identification Form (FIF) signed by the coordinator plus signed and stamped by the bank
OR a bank statement relating to the bank account

A4 – Co-Applicant profile (+ LEF) together with supporting documents as described in Section 7.3

A5 – Declaration of honour

A6 – Financial capacity ratios (A6 Form shall not apply to public bodies and international organisations)

Technical Proposal (B1-B2):

¹⁹ Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002 (OJ L 298 of 26.10.2012, p. 1) as amended.

B1 – Technical proposal (additional documents can be annexed to this form to complement the information)

B2 – Operational capacity

Financial Proposal:

C1 – Preliminary Budget

The technical proposal (B1-B2 Forms) constitutes the core of your proposal. These forms shall be submitted by and along with the various and duly completed templates provided with this call, consisting of a list of headings. It is recommended to follow this structure when presenting the technical content. The templates are designed to highlight those aspects that will be assessed against the evaluation criteria. They cover, among other things, the nature of the proposed work, the participants and their roles in the proposed project, and the impact that might be expected to arise from the proposed work. Additional information or descriptive document may be provided by applicants as an annex.

Overview of Forms (as presented below in the table) shall be **submitted by the applicant** (coordinator on behalf of the consortium) and every **related actor specified below is responsible to fill them duly in** (coordinator and/or co-applicants and/or affiliated entity). The table below reflects on who has to fill out what kind of forms. Please note each that actor (including the coordinator, the co-applicants and affiliated entity) has to fill certain forms as described below in the table, and this information shall be reflected in the A1 Form prepared by the single applicant/coordinator.

Responsibility / Forms	Single applicant/Coordinator	Co-applicant	Affiliated entity
A1 – A2 – A3 – B1	X		
A4		X	
A5 – A6 – B2 – C1	X	X	X
FIF and supporting docs	X		
LEF and supporting docs	X	X	X

17. SUBMISSION OF PROPOSALS

Proposals must be submitted in accordance with the formal requirements and by the deadline set in this section.

The beneficiaries are not allowed - in any respect - to change the scope and the content of the proposal(s), till the signature of the grant agreement. However, if there is a need to clarify certain aspects or for the correction of clerical mistakes, the GSA may contact the applicant for this purpose during the evaluation process.

The proposal may be submitted in any of the official languages of the European Union but **English version** would be appreciated. If the proposal is not in English, the applicant should provide a translation of the full proposal or of an extract of it, in particular to the supporting documents requested, such as registry

excerpts etc. Costs incurred by the applicant for providing the translation shall not be subject to reimbursement by the GSA.

The proposal shall always be submitted in a paper version (please see the important note below).

IMPORTANT NOTE (5): The mandatory submitted proposals shall always also contain 2 (two) copies of USB storage devices containing the full set of proposal documents in machine readable format (standard Office 2003 and Adobe PDF 2008 or later). In case of doubt or outright divergence between the physically submitted proposal and the content provided in electronic format (on the USB-storage devices or via the platform) the physical documents shall always take precedent.

Unless notified otherwise by the GSA, the proposals (including USBs) shall be submitted by letter:

- a) either by post or by courier not later than **14/03/2018**, in which case the evidence of the date of dispatch shall be constituted by the postmark or the date of the deposit slip, to the address indicated below;
- b) or delivered by hand not later than **14/03/2018 at 17:00** Prague local time to the address indicated below. In this case, a receipt must be obtained as proof of submission, signed and dated by the GSA official who took delivery.

The GSA is open from 09.00 to 17.00 Monday to Thursday, and from 9.00 to 16.00 on Fridays. It is closed on Saturdays, Sundays and national holidays.

Proposals must be placed inside a sealed envelope. The envelope, addressed as indicated below, should be marked as follows: "**CALL FOR PROPOSALS GSA/GRANT/05/2017 – NOT TO BE OPENED**". If self-adhesive envelope is used, it must be sealed with adhesive tape and the sender must sign across this tape.

CALL FOR PROPOSALS

GSA/GRANT/05/2017

DEVELOPMENT OF A GALILEO-BASED TIME RECEIVER FOR CRITICAL INFRASTRUCTURE

GSA – Legal and Procurement Department

Janovského 438/2

170 00 Prague 7- Czech Republic

18. EVALUATION OF PROPOSALS, AWARD AND RESERVE LIST

18.1. Evaluation of Proposals

All applications will be examined and assessed by an Evaluation Committee. The assessment of each proposal will be based on the information provided by the applicants in the proposal submitted in reply to the call for proposals. In addition, the GSA reserves the right to use any other information from public or specialist sources. The information will be assessed in light of the admissibility, eligibility, exclusion, selection and award criteria set out in the Call for Proposals.

The Evaluation Committee may ask an applicant to provide additional information or to clarify the supporting documents submitted in connection with the application, in particular in the case of evident material errors.

- At the end of the evaluation, the best proposal(s) will be proposed for award,
- Placed on the reserve list in case of not available funding,
- Rejected, stating the reasons for rejection.

After the completion of the evaluation, applicants will be informed in writing about the results of the evaluation.

18.2. Award of the grant agreement

The GSA may decide to request the applicant(s), whose proposal has been recommended for award by the Evaluation Committee, to make minor adaptations and/or corrections to the proposal. In that case, applicant will receive a letter setting out the requested modifications which must stay within the limits of the request. This phase will not lead to a re-evaluation of the proposal.

A decision to reject an application can be based on the following grounds:

- the application was submitted after the closing date;
- the application is incomplete or otherwise non-compliant with the stated administrative conditions or in any other way does not comply with the eligibility criteria as set out the call for proposals;
- the coordinator or one or more co-applicants are ineligible;
- the technical capacity is considered insufficient;
- the financial capacity is considered insufficient;
- the proposal has not reached the minimum scores as indicated in the award criteria detailed in the call for proposals;
- the score obtained by the proposal is not ranked amongst the best proposal considered for the award.

The GSA's decision to reject an application is final.

18.3. Reserve list

The GSA may place proposals – which were not considered for award of the grant due to inferior score or lack of budget – on a reserve list. Should additional budgetary appropriations become available, the applicants will be informed according to their ranking on the reserve list for potential award of the grant.

19. REFERENCE DOCUMENTS

- [RD.1]. COUNCIL DIRECTIVE 2008/114/EC of 8 December 2008 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection
<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008L0114>
- [RD.2]. Ionospheric Correction Algorithm for Galileo Single Frequency Users, European Commission, 2016
https://www.gsc-europa.eu/system/files/galileo_documents/Galileo_Ionospheric_Model.pdf
- [RD.3]. Signal In Space Interface Control Document, European Union, 2015
https://www.gsc-europa.eu/system/files/galileo_documents/Galileo-OS-SIS-ICD.pdf
- [RD.4]. Galileo Navigation Message Authentication Specification for Signal-In-Space Testing – v1.0, European Commission, 2016²⁰

²⁰ RD4 is attached as Annex1 to the Call for Proposal

[RD.5]. Commission Implementing Decision (EU) 2017/224 of 8 February 2017 setting out the technical and operational specifications allowing the commercial service offered by the system established under the Galileo programme to fulfil the function referred to in Article 2(4)(c) of Regulation (EU) No 1285/2013 of the European Parliament and of the Council

<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017D0224>

[RD.6]. ECSS-M-ST-10C Rev. 1 Project planning and implementation²¹

[RD.7]. ECSS-M-ST-80C Risk management²¹

[RD.8]. ECSS-E-AS-11C Rev 1 October 2014 Adoption Notice of ISO 16290, Space systems - Definition of the Technology Readiness Levels (TRLs) and their criteria of assessment²¹

20. CONTACTS

Contacts between the GSA and potential applicants can only take place in certain circumstances and under the following conditions only:

Before the final date for submission of proposals:

- At the request of the applicant, the GSA may provide additional information solely for the purpose of clarifying the nature of the call. The request cannot be done after 14 February 2018.
- Any requests for additional information must be made in writing only to the coordinates stated below.
- The GSA may, on its own initiative, publish corrigenda in case of inaccuracy, omission or other clerical error in the text of the call for proposals.
- Any additional information including that referred to above will be published on the GSA internet page (<http://www.gsa.europa.eu/gsa/grants>) on which the call for proposals is published.

After the deadline for submission of proposals:

- If clarification is requested or if obvious clerical errors in the proposal need to be corrected, the GSA will contact the applicant provided the terms of the proposal are not modified as a result.
- If the GSA finds that the proposal, chosen for award, could be improved by limited adaptations. In such case, these applicants will receive a formal letter setting out the proposed modifications.

Contact coordinates for the call:

GSA: Legal and Procurement Department

E-mail address: gnss.grants@gsa.europa.eu

Office address: GSA, Janovského 438/2, 170 00, Prague 7, Czech Republic

REMINDER: when sending any correspondence to GSA, please refer in the subject (of the email or of the letter) to the relevant reference number of the Call: **GSA/GRANT/05/2017** – failure of doing so – might delay the timely response of GSA.

²¹ ECSS reference documents can be downloaded at the following link: <http://ecss.nl/>.