Call for Expression of Interest for High Accuracy Service (HAS) Full Service Testing

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1 Introduction

The European Union Agency for the Space Programme (hereinafter 'EUSPA', or the 'Agency') is launching a call for expression of interest (hereinafter referred to as ''the Call'') to invite external stakeholders (hereinafter referred to as 'Participant(s)') to participate in a new testing campaign of the High Accuracy Service (HAS) Signal in Space (SiS) broadcasting. This campaign prepares the HAS Full Service operational phase.

2 Background

EUSPA is the Agency formed by the European Union to accomplish specific tasks related to the European Union Space Programme as indicated in the Regulation (EU) 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the Union Space Programme and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013 and (EU) No 377/2014 and Decision No 541/2014/EU (available here https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=uriserv%3AOJ.L_.2021.170.01.0069.01.ENG&toc=OJ%3AL%3A2021%3A170%3ATOC).

Galileo is the European Global Navigation Satellite System (EGNSS), under civil control, that provides satellite positioning services to European citizens and worldwide. More information can be found in the European GNSS Service Centre website (https://www.gsc-europa.eu/).

Galileo provides the following navigation services to users:

- **Open Service (OS)**: this service is implemented through three navigation signals separated in frequency (E1, E5a, E5b). The OS provides free of charge position and timing information for its users in both single-frequency (SF) or dual-frequency (DF) mode. The Galileo OS is compatible, i.e. operates on no harmful interference basis, with the other GNSS services, such as GPS, GLONASS and BeiDou services, enabling dual constellation usage;
- **Open Service Navigation Message Authentication (OSNMA)**: this service is a data authentication function for the Galileo Open Service. OSNMA provides receivers with the assurance that the received Galileo navigation message is coming from the system itself and has not been modified. This is realised by transmitting authentication-specific data in previously reserved fields of the E1 I/NAV message. By using these fields, OSNMA does not introduce any overhead to the system, thus the OS navigation performance remains untouched;
- **Search And Rescue (SAR/Galileo)**: it is Europe's contribution to the global life-saving endeavour of the Cospas-Sarsat (C/S) Programme. Galileo satellites relay distress signals from emergency beacons to SAR crews. In addition, through the Galileo Return Link Service (RLS), it also provides an automatic acknowledgement message informing the beacon user their request for help has been received and their position computed;
- **High Accuracy Service (HAS)**: this service provides free of charge access, through the Galileo signal (E6-B) and by terrestrial means (Internet), to the information required to estimate an accurate positioning solution using a Precise Point Positioning (PPP) algorithm in real-time, enabling users to achieve decimetre-level positioning;
- **Signal Authentication Service (SAS)**: this service will provide signal authentication to all enabled receivers and is intended to help mitigate GNSS spoofing in the Position, Velocity and Time (PVT) solution. It will also be a free-of-charge service relying on the capabilities of Galileo first Generation (G1G), particularly OSNMA, the encrypted E6 signal pilot component (E6-C) and some ancillary status information;

- **Public Regulated Services (PRS)**: this service is implemented through two navigation signals separated in frequency with encrypted ranging codes and data. The Public Regulated Service is restricted to government authorised users for sensitive applications which require a high level of service continuity.

The implementation of the Galileo HAS is staggered in three phases.

Since 2019, Galileo conducted testing and experimentation activities for HAS within Phase 0. Indeed, SiS tests were executed in Q1 2021 with the involvement of stakeholders participating under a previous Call for Expression of Interest.

Phase 1 (HAS Initial Service) was declared operational in January 2023. This milestone confirmed Galileo as the first GNSS constellation able to provide a real time high-accuracy PPP service globally, directly through the Signal in Space, 24/7 operated and free.

The service is based on the provision of open format accurate satellite data and atmospheric data which is not only transmitted using the Galileo E6-B signal but also via the internet. The scope of the HAS Initial Service is limited to the provision of the HAS Service Level 1 with reduced coverage and performance with respect to the Full Service. The service is fully described in its Service Definition Document [1], available at: https://www.gsc-europa.eu/sites/default/files/sites/all/files/Galileo-HAS-SDD_in_force.pdf.

In this context, the implementation of Galileo HAS is currently evolving, through its Phase 2, to achieve the provision of its Full Service in >2027. More information on the HAS roadmap can be found in the HAS Information Note [2], available at: https://www.gsc-europa.eu/sites/default/files/sites/all/files/Galileo-HAS-Info-Note_in_force.pdf.

3 Purpose of the Call

EUSPA is launching a call for expression of interest (hereinafter referred to as ''the Call'') to invite external stakeholders (hereinafter referred to as 'Participant(s)') to participate in the **HAS Full Service testing campaign**, including Signal in Space (SiS) broadcasting. This campaign supports the uptake of the improvements brought by the HAS Full Service.

The testing campaign is planned according to the following three steps:

- **Step 1:** early sharing (i.e. before official publication) of the Phase 2 HAS SiS ICD (**Galileo High Accuracy Service E6-B Signal-In-Space Message Specification for Phase 2**), supporting the development of Galileo HAS Full Service receivers;
- **Step 2:** sharing of HAS Full Service datasets, supporting receivers' development and early testing; and
- **Step 3**: broadcast of Phase 2 HAS SiS, targeting receivers' testing.

Subject to the terms and conditions provided here below, the Call targets receiver manufacturers developing Galileo HAS Full Service receivers.

The Participants will be required to sign a Non-Disclosure Undertaking (hereinafter referred to as ''NDU'') (Annex I of the present Call) having as scope:

1) the Phase 2 HAS SiS ICD; and
2) datasets incorporating changes related to the HAS Full Service.

The most relevant changes incorporated by the Phase 2 HAS SiS ICD and relevant datasets affect:

- The broadcast of signal phase biases;
- The broadcast of atmospheric/ionospheric corrections;
- ERP/SAGA block definition;
- HAS Authentication.

The purpose of providing the Participants access to the Phase 2 HAS SiS ICD and relevant datasets is to enable their participation in the testing campaign of the HAS SiS broadcasting, which aims to prepare the HAS Full Service operational phase.

As part of the testing campaign, the Participants may perform tests covering:

1. Tracking and processing of Galileo and GPS signals relevant for HAS, as well as decoding and processing of the HAS broadcast corrections (orbit, clock, biases -code and phase- and atmospheric corrections);
2. Successful authentication of High Accuracy data;
3. User positioning performance evaluation: accuracy and convergence time.

To support the assessment of the testing campaign results and the preparation of the HAS Full Service operational phase, the Participants are invited to provide EUSPA – by the end of the testing campaign – with relevant information resulting from the tests performed, including (1) a summary document with the results of the tests; and (2) feedback in aspects such as:

- if any Phase 2 HAS SiS ICD implementation improvement areas are identified (e.g., refresh rates, processing impact, message definition, authentication aspects)
- in case of failure or compatibility issue identified in the tracking, reception and processing of the HAS SiS subject to the testing activities.

It is highlighted that under no circumstances the tests performed and results obtained can be understood as representing the performance of the final service. Furthermore, the selected Participants shall consider that some of the Phase 2 HAS SiS ICD sections may vary in the final version of the document.

4 Assessment of applications

EUSPA will assess the applications based on the below-mentioned criteria and only if they are all met, EUSPA will provide the Participants with the proprietary information, as per section 3 above.

4.1 Eligibility criteria

Participation conditions

Considering that the scope of the HAS Full Service commitment (and thus the testing campaign scope) is expected to cover the European Region, participation in this Call shall be open in equal terms to all economic operators (natural and legal persons) established in the territory of following countries:

- Member States of the European Union;
- Switzerland;
- Norway.

Economic operators referred to above are considered established in any of the above-mentioned countries when they are formed in accordance with the law of one of those countries and have their central administration or registered office or principal place of business in one of those countries (if legal persons), or they are nationals of one of those countries (if natural persons).

4.2 Exclusion criteria

Participation in this procedure is only open to interested parties who will be able to sign the Declaration of Honour (Annex II to the present Call).

Supporting evidence requested as part of the declaration of honour shall be submitted only upon request by EUSPA.

4.3 Selection criteria

The assessment of expressions of interest will be based on the cumulative selection criteria defined below, which all Participants shall meet regardless of which test they will perform.

Ref.#	Professional Capacity Criteria	Evidenced by
P.1	Capability of tracking and processing:	Description of the proposed GNSS receivers.

	• Galileo E6 signal[1](mandatory); • At least one of the following signal combinations is mandatory: - E1/E5a; - E1/E5b; - E1/E5a/E6-B. • The following signal combinations are optional: - E1/E5a + L1/L2C - E1/E5b + L1/L2C - E1/E5a/E6-B + L1/L2C	
P.2	Capability to decode and process the HAS broadcast corrections. Desktop tools and/or experimental firmware versions of the selected receivers may serve this purpose.	Description of the proposed performance evaluation activities.
P.3	Capability to authenticate the High-Accuracy data.	Description of the proposed authentication evaluation activities.
P.4	Capability to compute a user positioning solution in real-time and/or post-processing based on the HAS broadcast corrections.	Description of the proposed performance evaluation activities, including the identification of the PPP engine.

[1] Considering the envisaged provision scheme for the High Accuracy Service, tracking of E6-B alone, without E6-C support is needed to be applied for the receivers to the used during the testing phase.

5 Submission of expression of interest

In order to be given access to the Phase 2 HAS SiS ICD and datasets as defined in section 3, the interested parties shall submit a request to the Agency via email to tenders@euspa.europa.eu including:

a) Filled and signed Legal Entity Form and the attachments requested in (available here: https://ec.europa.eu/info/publications/legal-entities_en);

b) Declaration of compliance with the eligibility and exclusion criteria (sections 4.1 and 4.2), as dated and signed by the applicant's authorised representative as per Annex II;

c) Description of:

- the proposed GNSS receiver/s;
- the proposed performance evaluation activities, including the identification of the PPP engine;
- the proposed authentication evaluation activities.

d) a duly dated and signed scan of the NDU according to the template provided in Annex I. The NDU may be also signed electronically with a qualified electronic signature (QES) of the interested party. This electronic signature must be provided by a provider which has a qualified status granted by a national competent authority of an EU Member State and which is listed in the national eIDAS Trusted Lists and the EU List of eIDAS Trusted Lists (LOTL) (available at https://webgate.ec.europa.eu/tlbrowser/#/). Please note that in case the interested parties do not sign the NDU electronically with a QES, they shall send the original of the duly signed NDU by post to the following address:

Janovskeho 438/2

170 00 Prague 7

Holesovice, Czech Republic

Attention to: Legal and Procurement Department

e) Evidence proving that the person signed the documents under points a, b and d above is applicant's authorised representative (e.g. power of attorney, entity's extract from commercial registry etc.).

The deadline for submissions of expression of interest is ~~13/11/2026~~ 27/11/2026 (23:59, Prague local time, CZ).

Requests for clarification shall be submitted no later than ~~05/11/2026~~ 19/11/2026 (23:59, Prague local time, CZ). The last date on which clarifications are issued by EUSPA is ~~06/11/2026~~ 20/11/2026 (23:59, Prague local time, CZ).

6 Reference documents

[1] Galileo High Accuracy Service Service Definition Document (HAS SDD), Issue 1.0, January 2023.

[2] Galileo High Accuracy Service (HAS) Info Note, Issue 1.1, December 2025.

7 Annexes

Document	Annex reference
Template Non-Disclosure Undertaking	Annex I
Template Declaration of honour on exclusion criteria	Annex II

8 Acronyms and Abbreviations

Table 1 - Abbreviations

Abbreviation	Definition
C/S	Cospas-Sarsat
DF	Dual Frequency
EGNSS	European Global Navigation Satellite System
ERP	Earth Rotation Parameters
EU	European Union
EUSPA	European Union Agency for the Space Programme
G1G	Galileo first Generation
GLONASS	GLObal'naya NAvigatsionnaya Sputnikovaya Sistema
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
HAS	High-Accuracy Service
ICD	Interface Control Document
MDI	Market Downstream and Innovation
NDU	Non-Disclosure Undertaking
OS	Open Service
OSNMA	Open Service Navigation Message Authentication
PPP	Precise Point Positioning
PRS	Public Regulated Service
PVT	Position, Velocity and Time
QES	Qualified Electronic Signature

Abbreviation	Definition
RLS	Return Link Service
SAGA	Solar Activity and Geomagnetic Activity
SAR	Search And Rescue
SAS	Signal Authentication Service
SDD	Service Definition Document
SF	Single Frequency
SiS	Signal in Space

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