



European GNSS Supervisory Authority
The Executive Director

Brussels, 06/04/2007

INVITATION TO TENDER NO. GSA/OP/01/07

Dear Sir/Madam,

1. The European GNSS Supervisory Authority (GSA) is launching an invitation to tender for the completion of a Study on a future GSA Performance Monitoring and Analysis Facility.

This invitation to tender follows the publication of a contract notice in OJEU S: 2007/S68-082359

2. Tenderers who wish to submit an offer are invited to send to the Authority a **bid duly signed** by their authorised representative, together with **three copies** of their bid, strictly identical to the original bid (total: 1 original and 3 copies). Bids can be submitted in three different ways:

(a) either sent by registered post

in this case the bid should be posted not later than 22/05/2007 (the stamp of the **post office** acting as proof) to the following address:

European GNSS Supervisory Authority
Mr Javier Perez Bartolome
L56 07/69
B-1049 Brussels
Belgium

(b) or by hand-delivery

in this case hand delivery should be made at the **Central Mail of the European Commission** not later than 16h00 (Brussels local time) on 22/05/2007. Such hand delivery should be made at the following address:

European Commission
European GNSS Supervisory Authority
Mr Javier Perez Bartolome
L56 07/69
Rue du Bourget 1
B-1140 Brussels (Evere)
Belgium

A dated and signed receipt issued by an official of the Central Mail of the European Commission **has to be requested by the person delivering the bid as** proof of delivery of the bid.

(c) or by private courier service

in this case the bid should be 'deposited' with the Private courier service not later than 22/05/2007 (the slip issued by the private courier services acting as proof) to the following address:

European Commission
European GNSS Supervisory Authority
Mr Javier Perez Bartolome
L56 07/69
Rue du Bourget 1
B-1140 Brussels (Evere)
Belgium

Please pay particular attention to the different post codes used for each of the delivery means as failure to respect this can lead to undelivered bids.

3. Bids must be submitted in two envelopes, one inside the other. Both envelopes are to be sealed. The inner envelope should be marked as follows:

<p style="text-align: center;">Call for tenders No. GSA/OP/01/07 <u>NOT TO BE OPENED BY THE INTERNAL MAIL DEPARTMENT</u> L56 07/69</p>

If self-adhesive envelopes are used, they must be closed by adhesive tape with the sender's signature written across.

Non-respect of these above instructions may lead to the exclusion of the bid.

4. The bids will be opened on 31/05/2007 at 10h00 (Brussels local time), in the offices of the European GNSS Supervisory Authority, 56 Rue de la Loi, (Office 07/100) 1000 – Brussels, Belgium.

This opening session will be public. A representative of each tenderer may attend the opening of the bids. At the end of the opening session, the Chairman of the opening committee will indicate the name of the tenderers and the decision concerning the admissibility of each offer received. The prices mentioned in the bids will not be communicated. Should you wish to attend, please send a request (at least 5 days before the date of the opening) to the following e-mail address: gsa-infos@ec.europa.eu indicating the name of the attending person and the tenderer he/she represents.

5. Submission of a bid implies full acceptance of the draft contract annexed to the present invitation letter (annex 5)
6. The technical specifications concerning this call for tenders are annexed to the present invitation letter.

7. Validity period of the tender: until 31/10/2007.
8. Tenderers will be informed by the Authority whether or not their bids have been accepted.
9. During the procedure, any contact concerning the tender between GSA and the tenderers is prohibited. However, any additional information deemed necessary for preparing an adequate bid could be requested at the latest 7 days prior to the deadline for submission of the bids. Such requests should be sent by e-mail to the following address: gsa-infos@ec.europa.eu

GSA will reply to any request for additional information in strict compliance with the equal treatment principle. Provided that they have reached GSA before the deadline, requests will be answered and be automatically published under the Procurements Section relevant to the present call to tender on the GSA webpage at the following address: <http://gsa.europa.eu>.

Tenderes are invited to consult the `question/answer` section under the above mentioned Procurement Section on a daily basis. The name of the requesting party will not appear on the website.

10. Public Procurement rules applying to calls for tender launched by GSA are contained in the GSA Financial Regulation.

Yours Sincerely,

(Signed)

Pedro Pedreira

Annex to the invitation to tender

TENDER SPECIFICATIONS

ATTACHED TO THE INVITATION TO TENDER

Invitation to tender No. GSA/OP/01/07 for

a Study on

GSA Performance Monitoring and Analysis Facility (GPMAF)



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I. SPECIFICATIONS

I.1. Introduction

The main mission of the European satellite radio-navigation programmes EGNOS and Galileo is the provision of state-of-the-art navigation services to the European and global user communities. The commercial uptake of both systems will depend, amongst many other factors, on the quality of the services provided and the end-to-end performance perceived by the users. In fact there are many user communities for which EGNOS and Galileo will only become attractive if the Signal In Space (SIS) provided by these systems guarantee minimum levels of accuracy, integrity, continuity and availability.

As part of the Public Private Partnership (PPP) business model envisaged for the EGNOS and Galileo, a private company, referred hereafter as the Galileo Operating Company (GOC) or concessionaire, will be responsible for the final deployment of the Galileo system and the operation and commercial exploitation of EGNOS and Galileo. Given the strategic importance of the European satellite radio-navigation programmes, the Public Sector shall put in place all the necessary means to guarantee that all the mission goals specified in the EGNOS and Galileo Mission Requirements Documents (MRDs) are achieved during the whole concession period.

As Public Sector's representative, the European GNSS Supervisory Authority (GSA) has been entrusted with the responsibility of ensuring that the GOC complies with the terms and conditions laid down in the concession contract, including a general Service Level Agreement (SLA). This SLA document covers the definition of the performance objectives, the ways to assess the achieved performances and the scheme of financial penalties to be applied in case of underperformance.

Both parties, the concessionaire and the Public Sector, have agreed on a common strategy for the verification of the SLA. It shall be based on the monitoring of a set of performance parameters or Key Performance Indicators (KPIs) which contribute to the characterisation of a KPI Regime. The KPI Regime is intended by the Public Sector to monitor the performances and to penalise the underperformance thereof. The GSA shall thus procure the means and tools necessary to carry out an independent evaluation of the SLA through the routine monitoring of the KPIs.

Two main performance evaluation methodologies have been identified by the GSA. On the one hand, the assessment of the EGNOS and Galileo service performances shall be solidly founded on the analysis of GNSS tracking data collected in a network of sensor stations. On the other hand, the monitoring of the KPIs cannot be effectively achieved just analysing GNSS measurements due to practical limitations in the size and density of the KPI monitoring network. The evaluation of the KPIs over the whole service volume requires to be complemented with computer simulation tools capable of extrapolating the system performance to areas which are not sufficiently covered by the KPI monitoring network. The GSA thus plans to make use of computer simulation tools in order to complement and extrapolate the performance results derived from the real GNSS data analysis activities.



It is worth to note the fact that part of the performance risk will be retained by the Public Sector. Since the origin of any underperformance will affect liabilities of the parties, it is mandatory for the GSA to develop the capabilities for conducting independent Failure Detection and Isolation analyses. The GPMF system shall thus ensure not only the monitoring of the EGNOS and Galileo services performance but also it shall guarantee the traceability of any detected underperformance.

The procurement of independent GNSS performance monitoring and analysis capabilities is considered essential by the GSA to accomplish all the tasks mentioned above. The GSA thus intends to set up the basis towards the development and implementation of its independent GSA Performance Monitoring and Analysis Facility (GPMF).

I.2. Purpose of the Contract

The aim of this contract is to procure independent expertise in key technical areas to support the definition of the GPMF.

This contract includes the execution of the following tasks:

- Task 1:** The identification of an optimal set of KPIs for the monitoring of the EGNOS and Galileo services, the definition of feasible monitoring methodologies and the characterisation of implementation and operations cost drivers.
- Task 2:** The support to the design of an independent KPI monitoring network
- Task 3:** The definition of the preliminary user and system technical requirements for the GPMF
- Task 4:** The support to the GPMF architectural design considering the suitability of the existing EGNOS and Galileo performance analysis tools, and considering different options according to the KPI monitoring detail levels
- Task 5:** The production of a suitable implementation plan for the system architecture options resulting from task 4 including costs analyses covering each of the implementation phases

The activities associated with these tasks are described in detail in the following sections.

I.3. List of Acronyms

AFS	Atomic Frequency Standard
ASQF	Application Specific Qualification Facility
CDDS	Commercial Data Dissemination Service
COTS	Commercial Off-The-Shelf



CS	Commercial Service
DCB	Differential Code Bias
DI	Deliverable Item
DJF	Design Justification File
DOC	Depth Of Coverage
DOP	Dilution Of Precision
DP	Data Pack
EC	European Commission
EDAS	EGNOS Data Access Server
EDCN	EGNOS Data Collection Network
EETES	EGNOS End-To-End Simulator
EGNOS	European Geostationary Navigation Overlay Service
ERIS	External Regional Integrity Systems
ESA	European Space Agency
ESVS	EGNOS Service Volume Simulator
ETE	Galileo Engineering Tool Environment
FDIR	Failure Detection Isolation and Recovery
FOC	Full Operational Capability
FTP	File Transfer Protocol
GALSEE	Galileo System Evaluation Equipment
GETR	Galileo Experimental Test Receiver
GMS	Galileo Mission Segment
GNSS	Global Navigation Satellite System
GOC	Galileo Operating Company
GPC	Giove Preprocessing Centre
GPMAF	GSA Performance Monitoring and Analysis Facility
GPS	Global Positioning System
GSA	European GNSS Supervisory Authority
GSS	Galileo Sensor Station
GSSF	Galileo System Simulation Facility
GSTB	Galileo System TestBed
GSVF	Galileo Signal Validation Facility
GTRF	Galileo Terrestrial Reference Frame
HW	Hardware
ICD	Interface Control Document
IGS	International GNSS Service
IMAGE	Independent Monitoring Assessment of GNSS signal in space Emission
KOM	Kick-Off Meeting
KPI	Key Performance Indicator
MSF	Mission Support Facility
MUCF	Mission Uplink scheduling and Control Facility
NOF	Navigation Overlay Frame
NRE	Non Recurring Engineering
OS	Open Service
PA	Product Assurance
PACF	Performance Assessment and Check-out Facility
PEGASUS	Prototype EGNOS Analysis System Using SAPPHIRE
PPP	Public Private Partnership
PRS	Public Regulated Service



PVT	Position, Velocity and Time
QZSS	Quasi-Zenith Satellite System
RF	Radio Frequency
RT	Real Time
RTCM	Radio Technical Commission for Maritime services
S/C	Spacecraft
SAPPHIRE	Satellite and Aircraft Database Project for System Integrity Research
SAR	Search And Rescue service
SARSIM	Search And Rescue Simulation
SIS	Signal In Space
SISA	Signal In Space Accuracy
SISMA	Signal In Space Monitoring Accuracy
SLA	Service Level Agreement
SOL	Safety of Life Service
SVS	Service Volume Simulator
SW	Software
TBC	To Be Confirmed
TBD	To Be Defined
T _o	T naught – Start of project activities
VPN	Virtual Private Network
VSAT	Very Small Aperture Terminal

I.4. Characteristics of the GPMAF

The GSA plans to carry out performance analysis tasks aimed at monitoring the level of agreement between the services provided by the EGNOS and Galileo concessionaire and the mission objectives specified in the respective MRDs. Such service monitoring will be based on the tracking of a set of KPIs still to be defined and agreed with the concessionaire.

At the present stage, the GSA has identified a preliminary list of functionalities which could be built in the GPMAF system. Since the performance risk is shared among the private and the public sectors, the GPMAF shall enable the Authority to carry out independent performance analyses in order to isolate the causes of the underperformance and derive the responsibilities thereof. The following list shows some of the performance analysis capabilities which shall be provided by the GPMAF system

- Characterisation of the navigation signals transmitted by the constellation by analysis of the timing signals and the broadcast data (verifying conformity with the SIS ICD standard)
- Analysis of navigation service performance KPIs at each of the monitoring sites
- Analysis of SAR service performance KPIs
- Isolation of the different contributors to the KPIs service performance, according to the different Galileo operational domains
- Characterisation of the Galileo inter- and intrasystem interference (GPS, GLONASS, QZSS, etc) along the service volume
- Analysis/extrapolation of achieved service performance (accuracy, integrity, continuity and availability) to the whole service volume



1.4.1. General characteristics

As previously mentioned, the GPMAF is intended to provide the GSA with the necessary means to monitor the fulfilment of the SLA contract so that financial penalties are duly applied if the Galileo/EGNOS services provided by the MC do not meet the minimum performances levels required. The GPMAF has thus been conceived as an off-line GNSS performance monitoring system. There are no real-time constraints for carrying out the performance analyses. The only latency requirements arise from the need to have performance reports produced in a timely fashion (e.g. daily).

The GPMAF shall be capable of monitoring the provision of EGNOS and Galileo services as described in the corresponding MRDs. Most of these services are specified in terms of four overarching performance parameters: service accuracy (PVT), integrity, continuity and availability. The service performance experienced by the users will eventually depend on a large number of external and internal factors which range from the Signal-In-Space (SIS) characteristics to the local environmental conditions. Some of the error sources contributing to the performance chain are shown in Figure 1.

Given a reference user environment (ionosphere, troposphere, multipath, interference, etc) and the S/C dynamics (trajectory, velocity, acceleration and jerk), the theoretical achievable mission performances are conditioned by the system's design parameters, such as the spreading codes, the modulation schemes, and the nominal geometry of the constellation. The mission performance can be further degraded if the operation of the GNSS system is not properly managed by the concessionaire. The operation of the European GNSS shall not degrade the mission service performance beyond the thresholds stated in the MRD document.

The foundations of satellite navigation rely on the continuous tracking of navigation signals transmitted from satellites orbiting around the Earth. These navigation signals, commonly known as SIS, continuously provide the user with all the information required to determine a PVT fix and an indication of the reliability of the solution. The information disseminated by the SIS is twofold. On the one hand, the spreading codes provide precise timing information, which allow the users to estimate the distance to the transmitting satellites (one way ranging) by computing the signals' propagation delays. This timing information is useless though, if the users are not provided with additional information such as the satellites' precise ephemeris and time synchronisation data. This supplementary data are disseminated to the user segment through the SIS and are modulated in the navigation signals transmitted by the satellites. The system operator shall guarantee not only the healthy state of the signals transmitted by the satellites but also the availability of the ground segment assets so that the constellation is continuously monitored, and the accuracy of the navigation and integrity data broadcast on the SIS is enough to ensure the mission performances.

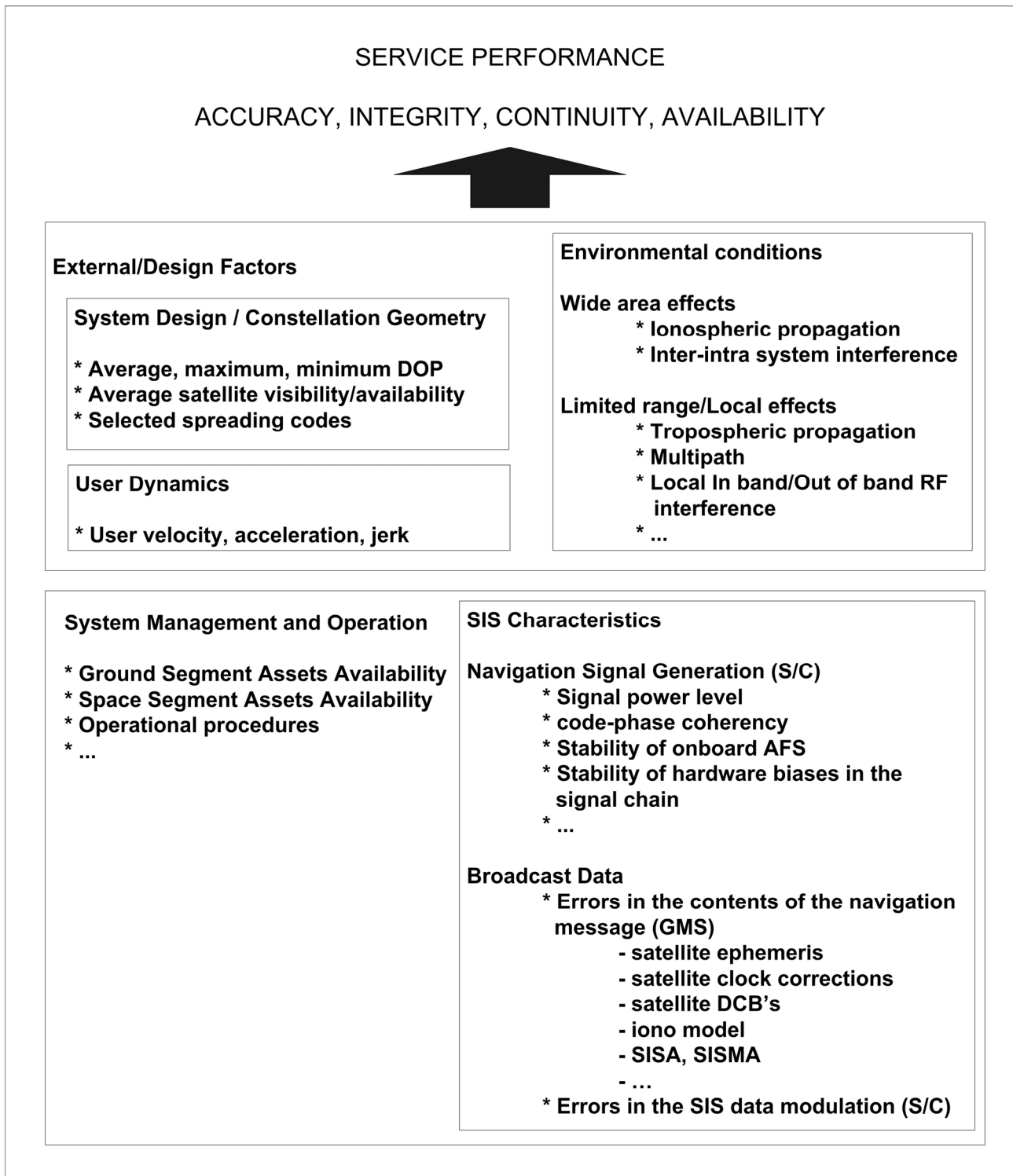


Figure 1 Contributors in the Performance Chain

1.4.2. Requirements and Constraints

The main drivers for the design&development of the GPMAF shall be:



- Modularity** The system shall be composed of independent modules each one providing a specific functionality. The interfaces amongst those modules shall be clearly defined
- Scalability** The whole functionality of the tool shall be achieved progressively by adding new elements to the system (in particular concerning the monitoring network)
- Adaptability** The architecture of the system shall be adaptable in a best effort basis. Depending on new needs that may arise, it shall be possible to add new elements not considered in the initial system without a major redesign of the tool.
- Reliability** The architecture and level of redundancy shall ensure a continuous availability of the independent performance monitoring.
- Proof-making** The GPMAF shall be recognised as a reference for establishing the KPIs effective achievements. In particular, the SW development and qualification program shall provide an excellent level of confidence in the provided results.
- Cost** The overall life cycle cost (development, maintenance and operation cost) shall be optimised.

In addition to the design drivers already mentioned the system shall be stepwise deployable, adapted to the programmatic constraints of the EGNOS and Galileo projects and to GSA's needs at each stage.

I.5. Applicable and reference documents

Reference Documents	
[RD 1]	REGULATION (EC) No 1321/2004 – Establishment of structures for the management of the European satellite radio-navigation programmes
[RD 2]	EGNOS MRD V2.0 – 8 th May 2006
[RD 3]	EGNOS SRD Issue 3.1 – 16 th September 1999
[RD 4]	Galileo MRD Issue6 – 11 th June 2004
[RD 5]	Galileo SRD Issue 4.1 – 27 th July 2004
[RD 6]	Galileo OS SIS ICD Draft – 23 rd May 2006



I.6. Tasks

Work Breakdown

The proposed task description is organised as follows:

- Task 1000 : Management
- Task 2000 : Identification of KPIs and definition of monitoring methodologies
- Task 3000 : Support to the design of an independent KPI monitoring network
- Task 4000 : Definition of technical requirements for the GPMAF system
- Task 5000 : Support to the conceptual design of the GPMAF
- Task 5500 : Survey of EGNOS/Galileo performance analysis tools
- Task 6000 : Establishment of implementation plan for the GPMAF

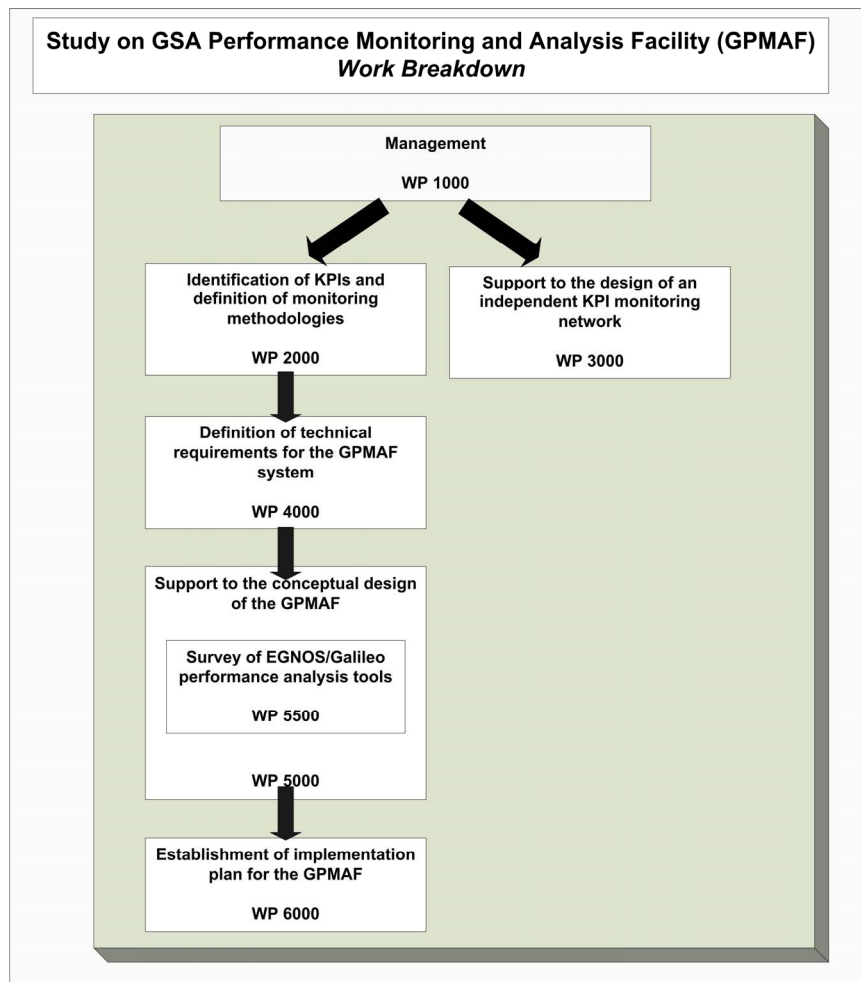


Figure 2 Summary of tasks covered by the GPMAF study

I.6.1. TASK 1000 - MANAGEMENT

I.6.1.1. Description

The task comprises the overall management for the contract. The main activities to be performed are:



- Contractual management
- Organization and coordination of internal communication flow
- Documentation management
- Monitoring of the project status
- Control of development schedule
- Tracking of action items
- Establishment and maintenance of travel and subsistence plans
- Review and verification of subcontractor's deliverables (if any)
- Organisation of progress meetings (calling notice, agenda, chairing and reporting). *Note: First level progress meetings will be chaired by the customer*
- Identify needs for interfaces with external entities
- Ensure coordination between the different tasks as necessary
- Project status reporting

I.6.1.2. Deliverables

Ref	Title	Delivery	Comments
D1100	Travel Plan	T ₀ +1 Month	
D1200	Status Report	T ₀ +3 Month	
D1300	Intermediate Report 1	T ₀ +6 Month	
D1400	Intermediate Report 2	T ₀ +9 Month	
D1500	Final Report	T ₀ +12 Month	

I.6.1.3. Meetings

Three progress meetings shall be organised at GSA premises to present the status of the work and steer the next period. Project status reports shall be submitted 2 weeks ahead of the project meetings.

Technical coordination meetings shall be held on GSA request to progress on each specific topic as necessary.

A final review meeting shall be held at the end of the project. The final report shall be submitted two weeks prior to the final review.

I.6.2. TASK 2000 – IDENTIFICATION OF KPIS AND DEFINITION OF MONITORING METHODOLOGIES

I.6.2.1. Description

A baseline methodology for the monitoring of the SLA has been agreed between the GOC and the Public Sector. According to it, the performance shall be monitored and assessed by reference to an agreed KPI Regime which shall be included in the concession contract. The KPI Regime is intended by the Public Sector to monitor the performances of the EGNOS and Galileo systems and to adjust the level of payment to the concessionaire according to the observed performances.

Both SIS KPIs and Service KPIs shall contribute to the definition of the KPI Regime as they complement each other. The SIS KPIs intend to represent the quality of the signals output by the system, whereas the service KPIs which take into account the



reference frequency channel and the user terminal, intend to represent the end-to-end concept.

The KPI Regime as proposed by the Public Sector is mainly composed by three elements:

1. Definition of the **nominal performance** for EGNOS and Galileo systems, corresponding to the MRDs specifications and to the SIS ICDs
2. Definition of **minimum acceptable performance** levels for the Galileo system which can be observed as a result of partial failure scenarios or exceptional operational conditions. For these exceptional cases the GOC will be granted with a grace period to restore the system's performances to their nominal values. The underperformance shall only entail financial consequences if the concessionaire fails to restore the nominal Galileo performance in the grace period
3. Definition of **unacceptable performance levels** per service for both EGNOS and Galileo systems, below which financial penalties are applied promptly. Upon persistence of such degraded performance levels the Public Sector may trigger the termination of the concession contract

Three categories of services to be provided by the concessionaire have been identified, namely:

1. Galileo Navigation services and external interfaces: OS, CS, SoL, PRS, ERIS and SAR return link
2. Galileo SAR
3. EGNOS services: OS, SoL and CDDS

Specific KPI Regimes shall be needed for the monitoring each of the above mentioned service types.

The objective of this workpackage is to

- Review the different services envisaged for EGNOS and Galileo and their mission objectives described in the MRDs
- Identify the perimeter of the system for which the KPI regime needs to be put in place, and the possible observation points in the system
- Define an optimal set of SIS and Service KPIs for the first category of services (Galileo navigational services and external interfaces) and associated threshold values as described in the precedent paragraph (nominal performance, minimum acceptable performance and unacceptable performance)
- Define a set of Service KPIs for the Galileo SAR service and associated threshold values.
- Define an optimal set of EGNOS SIS and Service KPIs which are susceptible to routine monitoring and associated threshold
- Define a measurement methodology for all the KPIs identified in the course of this workpackage, considering its feasibility with currently existing tools and its practical realisation. The Contractor shall indicate which of the performance analysis tools (if any) provide the necessary functionality to evaluate a given KPI.



- Identify and analyse, for each KPI
 - what are the implementation drivers, considering in particular: which observables are needed
 - what are the time constraints
 - what is the complexity of the associated processing functions
 - which level of operation is needed
 - what are, if any, the applicable standards to be followed
 - what are the different possible levels of anomaly isolation (FDIR) and KPI lower level allocations

I.6.2.2. Duration

This activity will have a duration of 3 months starting at T_0

I.6.2.3. Deliverables

Ref	Title	Delivery	Comments
D2100	List of KPIs and threshold values (draft)	T_0+2 Month	
D2200	List of KPIs and threshold values (final)	T_0+3 Month	
D2300	Technical report on measurement methodology for KPIs and identification of implementation drivers	T_0+3 Month	

I.6.3. TASK 3000 – SUPPORT TO THE DESIGN OF AN INDEPENDENT KPI MONITORING NETWORK

I.6.3.1. Description

The monitoring of the Galileo and EGNOS KPI regimes are expected to rely primarily on the post-processing of GNSS observations measured and collected in different points of the service volume. The GSA intends to exploit the raw data collected and made available by the mission segments of EGNOS and Galileo. The access to the EGNOS RIMS raw measurements shall be possible through the EDAS server and the GSS raw measurements shall be available at the GOC service centre.

Since the aforementioned sources cannot fully guarantee the total independence of the analyses, it is essential to complement the KPI monitoring network with independent data sources, such as the IGS. However, it is not likely that the IGS tracking network will achieve global Galileo coverage at the start of the Galileo FOC phase. This will depend on the penetration of Galileo and its adoption by the scientific and professional communities.

Since there is a lack of confidence in eventual sources of independent Galileo data, the GSA shall explore possible solutions aimed at the implementation of an independent KPI monitoring network. Such independent KPI monitoring network shall be able to collect all the data broadcast by the Galileo on EGNOS systems and ideally reach a



minimum DOC value of two considering a 15° elevation mask angle, so as to provide redundancy against single station failures.

Because they have a significant and direct impact on the observed performances (and therefore on the KPI indicator building), the selection of the receiver technology and of the site environment needs to be carefully assessed. Indeed, the navigation performance of the Galileo infrastructure (as operated by the GOC) is related to the navigation service performance (as specified in the position domain) through the user receiver and its environment. It is therefore essential to be able to characterise the differences between the KPI monitoring station receiver environment and a "standard" user receiver environment.

The purpose of this workpackage is to:

- Identify the different ground receiver technologies. Assess which level of functional and performance correlation between the KPI monitoring station and a "standard" user receiver could be implemented (including the capacities for post-processing techniques). Assess whether some technologies would be best suited or on the contrary should be avoided in order to obtain the best possible correlation between the KPI monitoring station and a "standard" user receiver
- Derive recommendations for the KPI monitoring stations site characterisation and selection. Note that the EGNOS and Galileo MRDs specify different elevation masks for the assessment of the user's performance (5 and 10 degrees respectively)
- Conduct a study analysing optimal ways of complementing the GSS and RIMS networks in order to achieve the required level of independence
- Establish the preliminary functional and performance requirements which shall be applicable to each individual KPI monitoring station (several scenarios could be proposed). Note that each KPI monitoring station shall be able to collect GPS measurements (L1 and L2 frequency bands) Galileo measurements (OS, CS and PRS frequency bands and signals) and EGNOS NOF messages in the EGNOS service area
- Analyse different strategies for the secure transmission of the data and the associated bandwidth requirements. The Contractor shall consider
 - Transmission of batch measurement files using FTP protocols
 - Data streaming using standard RTCM protocols or the IGS-RT standards, for a better usage of the available bandwidth
 - other
- Propose a preliminary architecture for the KPI monitoring site, indicating hardware components (several scenarios could be proposed)
- Propose a set of candidate locations for the KPI monitoring sites. The selection of the sites shall be justified and based on the following attributes
 - Availability of local maintenance
 - Availability of local access to internet
 - Proximity to sources of interference
 - Horizon mask
 - other
- Provide a ROM cost estimate (development, maintenance and operation) based on the foreseen site architecture (indicating the cost of the hardware and software elements) and the cost of the VPN/VSAT communications service provider



I.6.3.2. Duration

This activity will have a duration of 3 months starting at T_0+1 Month

I.6.3.3. Deliverables

Ref	Title	Delivery	Comments
D3100	Study on the implementation of the KPI monitoring network (draft)	T_0+2 Month	
D3200	Study on the implementation of the KPI monitoring network (final)	T_0+4 Month	

I.6.4. TASK 4000 – DEFINITION OF USER REQUIREMENTS FOR GPMAF

I.6.4.1. Description

The GSA plans to use the information gathered during the execution of the previous tasks as the main inputs for the definition of its intended performance monitoring and analysis facility. Provided that the main objective of the GPMAF is the comprehensive monitoring of the KPIs, most of the requirements and specification will depend on the selected KPIs and the measurement methodology developed in the course of task I.6.2.

Further functionalities have been envisaged for the GPMAF. The concession contract entails a transfer of performance risk between the Public Sector and the GOC. Therefore, in the case of underperformance it shall be necessary to trace its origin in order to identify the liable party. It is thus essential to extend the scope of the GPMAF system beyond its central monitoring functionality. The GPMAF shall implement advanced performance analysis capabilities aimed to support an independent investigation on the causes of any performance degradation.

Special attention shall be paid to the SW development assurance level standard and qualification program requirements. This is indeed an important characteristic for building the trust in the results produced by the GPMAF, and also a significant cost driver. An oversight of the possible existing SW development standard shall be undertaken, and subsequent recommendations shall be made.

Special attention shall also be paid to all the security aspects during the definition of the system specifications. Some of the Galileo components have been identified as security sensitive and some of the system performance targets for the Public Regulated Service (PRS) are classified. The GPMAF shall be capable of carrying out PRS service performance analysis based on the Galileo PRS signals.

Taking into consideration the initial specifications for the GPMAF and all the information above, the Contractor shall:

- Review the outcome of task I.6.2 and the other sources with relevant information



- Assess the GPMF's data storage needs (raw input data and analysis results) according to the minimum required data storage time, considering in particular existing regulations for SoL applications
- Recommend requirements for a GNSS performance analysis system aimed to monitor the SLA of the three categories of services considered in the definition of the KPI Regimes, namely:
 - Galileo Navigation Services: OS, SoL, PRS
 - Galileo data dissemination services: SAR, ERIS, CS
 - EGNOS Services: OS, CDDS and SoL
- Propose high level operational concept and use cases
- Propose advanced performance analysis capabilities to be supported by the GPMF system aimed to trace the origin of any deviation from the expected nominal performances
- Recommend security requirements for the GPMF
- Recommend PA and SW development/qualification requirements/standards to be applied
- Consider the necessary modularity to cope with the different programmatic/schedule needs for EGNOS and for Galileo.

I.6.4.2. Duration

This activity will have a duration of 3 months starting at T_0+1 months

I.6.4.3. Deliverables

Ref	Title	Delivery	Comments
D4100	GPMF User Requirements Specification (draft)	T_0+3 Month	
D4200	GPMF User Requirements Specification (final)	T_0+4 Month	

I.6.5. TASK 5000 – GPMF CONCEPTUAL DESIGN

I.6.5.1. Description

On the basis of the results of Task I.6.4, and from further indications and constraints provided in section I.4 of this document, the Contractor shall propose high level architectural solutions and concepts for the GPMF that shall ensure the system's compliance with the user requirements and technical specifications established in the course of Task I.6.4 above.

The Contractor may propose and trade-off several architectural scenarios, corresponding to:

- Different levels of details in the KPI monitoring and anomaly investigation
- Different levels of integration/complementarity with other external performance monitoring centers
- Different scenarios for the implementation of the KPI monitoring network

The Contractor shall consider the possibility of integrating possible services offered by commercial providers when outlining his/her design if the service contracted provides



the required functionality in the most cost-effective way, and the independence of the external service provider is guaranteed.

The Contractor shall indicate the HW elements he/she has considered when defining the architecture of the system.

The work requested is as follows:

- The Contractor shall define the major building blocks of the GSA performance analysis facility indicating their functionality and their interface with the rest of the Galileo infrastructure and GPMAF components
- The Contractor shall identify amongst the surveyed GNSS performance analysis tools those that might be reused and included in his/her concept for the GPMAF. The selection of the tools shall consider in particular
 - basic functionalities of the tool
 - cost of the tool
 - cost of its customisation/adaptation
 - maintenance cost
 - obsolescence
 - license policy
 - other
- The Contractor shall define the needed external interfaces of the system
- The Contractor shall identify all the HW equipment required for the implementation of its intended design
- The Contractor shall identify functionalities that might be sub-contracted to external service providers and their suitability within his/her concept of the GPMAF system
- The Contractor shall justify his/her system design

I.6.5.2. Duration

This activity will have a duration of 5 months starting at T_0+3

I.6.5.3. Deliverables

Ref	Title	Delivery	Comments
D5100	GPMAF System Architectural Design Document (draft)	T_0+6 Month	
D5200	GPMAF System Design Justification File (draft)	T_0+6 Month	
D5300	GPMAF System Architectural Design Document (final)	T_0+7 Month	
D5400	GPMAF System Design Justification File (final)	T_0+7 Month	
D5500	Report on required HW components for the GPMAF system.	T_0+8 Month	
D5600	Report on suitability analysis of Performance COTS tools	T_0+7 Month	



I.6.5.4. TASK 5500 – SURVEY OF EGNOS/GALILEO PERFORMANCE ANALYSIS TOOLS

This Task is intended to identify possible existing performance analysis tools which may be integrated in the design of the GMPAF. It shall thus support the activities carried out in the course of Task I.6.5.

The Contractor is requested to perform a survey on performance tools developed within the frame of the Galileo and EGNOS projects with public funds.

The objective of this workpackage is to:

- Track and identify the main performance analysis tools and operational facilities which are supporting the design, development and validation of the Galileo system. Some of these tools have been already identified
 - GSSF
 - GSVF
 - GETR
 - GSTB-V1 and V2
 - GPC
 - ETE
 - MUCF
 - MSF
 - GALSEE
 - SARSIM
 - Other
- Track and identify the main performance analysis tools and operational facilities which have supported the design, development and validation of the EGNOS system including those aimed to monitor the end-to-end performance. Some of these tools have been already identified
 - EETES
 - ESVS
 - PEGASUS
 - PACF
 - ASQF
 - Tools developed within the frame of the IMAGE project
 - Other
- Perform a survey of all performance analysis tools and operational facilities identified in the previous activity
- Analyse the use cases of the tools and their functionalities
- Analyse the methodology for the evaluation of the performance
- Identify areas (performance indicators) that are poorly covered or not covered at all by the surveyed tools
- Assess the availability of the tools and the possibility of acquiring licenses
- Perform an analysis on the architecture and interfaces amongst the building blocks that constitute the tools
- Analyse the hardware needs for every tool surveyed

The GSA will provide the Contractor with the necessary inputs required to accomplish the work.



I.6.5.5. Duration

This activity will have a duration of 2 months starting at T_0+3

I.6.5.6. Deliverables

Ref	Title	Delivery	Comments
D5700	Technical report on EGNOS performance analysis tools	T_0+5 Month	
D5800	Technical report on Galileo performance analysis tools	T_0+5 Month	

I.6.6. TASK 6000 - ESTABLISHMENT OF IMPLEMENTATION PLAN FOR GPMAF

I.6.6.1. Description

Based upon the architecture of the GPMAF outlined in task I.6.5, the Contractor shall support the definition of a suitable implementation plan for the facility. The plan shall describe all the steps necessary for the completion of the GPMAF following the best cost-effective strategy.

Taking into account the EGNOS and Galileo programme schedules, the implementation plan shall consider and propose a two-step approach, where the deployment of the GPMAF assets for the purpose of EGNOS performance evaluation should occur in first place. The remaining GPMAF elements necessary for the performance assessment of Galileo should be added afterwards at a later stage.

The Contractor may propose different scenarios, corresponding to different candidate architectures of the GPMAF.

The implementation plan shall include a detailed timeline indicating the estimated starting time for each activity stated in the plan, and the estimated effort (man/days) required for its conclusion. Under the assumption of unlimited resources, the Contractor shall indicate its best estimate on the minimum time necessary to complete the task. The Contractor shall provide solid arguments supporting the feasibility of the implementation schedule.

This activity will be complemented with a study on implementation costs. This study shall include a cost estimate for each of the activities detailed in the work plan. The analysis shall include the costs

- Of the required HW components of the system (computers, communications, receivers, antennae, etc.)
- Of the licenses for the COTS tools included in the system
- NRE for tailored SW components of the system
- derived of renting external infrastructures (if any)
- derived of contracting services from commercial providers (if any)

The objective of this workpackage is to:



- Analyse programmatic constraints and the schedule of the EGNOS and Galileo projects
- Classify the GSA needs on performance analysis capabilities, identify and characterise the costs drivers and assign priorities according to the constraints analysed in the previous point
- Set deadlines for acquiring the different performance analysis capabilities
- Establish implementation plan for the GSA performance analysis facility compatible with all the constraints considered (several scenarios or options should be envisaged and analysed)
- Provide an estimation of the effort (man days) committed in any of the activities detailed in the implementation plan (this may include several options)
- Provide an estimation of the operation and maintenance costs (this may include several options).
- Provide an estimation of the overall lifecycle cost (including development, maintenance and operation) in order to ensure an adequate budget line over the entire lifecycle of the project.

I.6.6.2. Duration

This activity will have a duration of 6 months starting at T_0+6

I.6.6.3. Deliverables

Ref	Title	Delivery	Comments
D6100	GPMFAF System Implementation Plan (draft)	T_0+9 Month	
D6200	GPMFAF System Implementation Plan (Final)	T_0+12 Month	
D6300	Study on cost analysis of the GPMFAF	T_0+12 Month	

I.7. PROJECT MILESTONES

The following meetings will be held between the Contractor and the GSA

Project Milestone	Review	Venue	Objective	Schedule
Kick-Off Meeting	KOM	GSA	Authorization of the start of project activities by GSA; Clarify and settle open points and details of the project	T_0
Preliminary KPI & User requirements Review	PKR	GSA	To check the KPI Regimes and associated KPIs presented by the Contractor, to review the preliminary work on the KPI monitoring network and User requirements	$T_0 + 3$ month



User Requirements and Concept Review	URCR	GSA	To review the GPMAF user (incl. functional and operational) requirements, interfaces and check the feasibility of the proposed high level design solutions	$T_0 + 6$ month
Preliminary Implementation Plan Review	PIPR	GSA	To check the implementation plan presented by the Contractor	$T_0 + 9$ month
Final Acceptance Review	FAR	GSA	To check and accept all the output documents produced during the study	$T_0 + 12$ month

I.8. PROJECT DURATION

The project activities shall start at T_0 and will end after an estimated period of 12 months (after successful completion of the FAR).



I.9. DELIVERABLES

I.9.1. Reports and documents to produce

The precise nature of the deliverables and reports required is specified under each individual task description in section I.2 above. The GSA shall have 15 days from receipt to approve or reject the reports and documents. Within 10 days of receiving the GSA's comments or request for clarification, the Contractor will submit additional information or another report.

I.9.2. Report format and publication

Three copies of the reports shall be supplied in paper form and one copy in electronic format, either in MS Word or in HTML format.

I.9.3. Technical Documentation

Technical documentation (e.g. requirements documents, technical specifications, etc.) shall be delivered at the major milestones of the projects as described in section I.6.

In particular, the Contractor shall provide:

- Travel Plan at $T_0 + 1$ month [DI D1100]
- Preliminary List of KPIs and threshold values at $T_0 + 2$ months [DI D2100]
- Consolidated List of KPIs and threshold values at $T_0 + 3$ months [DI D2200]
- Technical report on measurement methodology for KPIs at $T_0 + 3$ months [DI D2300]
- Status Report at $T_0 + 3$ month [DI D1200]
- Preliminary Study on the implementation of the KPI monitoring network at $T_0 + 3$ months [DI D3100]
- Preliminary GPMF System Requirements Specification at $T_0 + 3$ months [DI D4100]
- Consolidated Study on the implementation of the KPI monitoring network at $T_0 + 4$ months [DI D3200]
- Consolidated GPMF System Requirements Specification at $T_0 + 4$ months [DI D4200]
- Technical report on EGNOS performance analysis tools at $T_0 + 5$ months [DI D5700]
- Technical report on Galileo performance analysis tools at $T_0 + 5$ months [DI D5800]
- Intermediate Report 1 at $T_0 + 6$ months [DI D1300]
- Preliminary GPMF System Architectural Design Document at $T_0 + 6$ months [DI D5100]
- Preliminary GPMF Design Justification File at $T_0 + 6$ months [DI D5200]
- Consolidated GPMF System Architectural Design Document at $T_0 + 7$ months [DI D5300]
- Consolidated GPMF Design Justification File at $T_0 + 7$ months [DI D5400]



- Report on suitability analysis of Performance COTS tools at $T_0 + 7$ months [DI D5600]
- Report on required HW components for the GPMAF system at $T_0 + 8$ months [DI D5500]
- Intermediate Report 2 at $T_0 + 9$ months [DI D1400]
- Preliminary GPMAF System Implementation Plan at $T_0 + 9$ months [DI D6100]
- Consolidated GPMAF System Implementation Plan at $T_0 + 12$ months [DI D6200]
- Study on cost analysis of the GPMAF at $T_0 + 12$ months [DI D6300]
- Final Review Data Pack (including Executive Summary) at $T_0 + 12$ months [DI D1500]

All final documentation foreseen in the contract shall be delivered with this DP.

I.10. PLACE OF PERFORMANCE

The task will be performed at the Contractor's premises.

Meetings between the Contractor and the GSA shall be held at GSA's premises in Brussels (unless stated otherwise). All cost foreseen in the performance of the project, including travel costs shall be borne by the Contractor.

I.11. CONTRACT VALUE

The maximum allocated budget for the contract is Eur 300.000-



II. TERMS OF CONTRACT

In drawing up his offer, the tenderer should bear in mind the provisions of the draft contract attached to this invitation to tender (Annex 5). Any limitation, amendment or denial of the terms of contract will lead to automatic exclusion from the procurement procedure.

GSA may, before the contract is signed, either abandon the procurement procedure or cancel the award procedure without the tenderers being entitled to claim any compensation.

II.1. Terms of payment

Payments shall be made in accordance with the provisions specified in Annex 5 of the draft service contract

II.2. Financial guarantees

Guarantee on pre-financing

For any pre-financing higher than 100,000 EUR, a financial guarantee equivalent to the amount of the pre-financing will be requested.

Depending on the financial situation of the tenderer, GSA may ask for the financial guarantee for amounts lower than 100,000 EUR.

II.3. Subcontracting

If the tenderer intends to subcontract part of the service, he shall indicate in his offer which part will be subcontracted and to what extent (% of the total contract value).

Tenderers must inform the subcontractor(s) that Article II.17 of the contract (Annex 5) will be applied to them. Once the contract has been signed, Article II.13 of the above-mentioned contract shall govern the subcontracting.

II.4. Legal form to be taken by the grouping of service providers to whom the contract is awarded

Groupings, irrespective of their legal form, may submit bids. Tenderers may, after forming a grouping, submit a joint bid on condition that it complies with the rules of competition. Such groupings (or consortium) must specify the company or person heading the project and must also submit a copy of the document authorising this company or person to submit a bid. If awarded, the contract will be signed by the company or the person heading the project, who will be, vis à vis GSA, the only contracting party responsible for the performance of this contract. Tenders from a consortium of firms or groups of service providers, contractors or suppliers must specify the role, qualifications and experience of



each member of the consortium or group. Each member must provide all the necessary documents for assessing the bid as a whole with regard to the exclusion criteria, selection criteria (all of them) and award criteria.

III. FORM AND CONTENT OF THE TENDER

III.1. General

Tenders must be written in **one of the official languages** of the European Union. However, and due to the technical nature of the project, tenders are invited to submit their bids (or at least the technical part thereof) preferably in English.

Tenders must be clear and concise, with continuous page numbering, and assembled in a coherent fashion (e.g. bound or stapled, etc...). Since tenderers will be judged on the content of their submitted bids, they must make it clear that they are able to meet the requirements of the specifications.

III.2. Structure of the tender

All tenders must include three sections i.e. an administrative, a technical and a financial proposal.

III.2.1. ***Section One: administrative proposal***

This section must provide the following information, set out in the standard identification forms attached to these tender specifications (Annexes 1, 2 and 3):

- Tenderers' identification (Annex 1)
 - All tenderers must provide proof of **registration**, as prescribed in their country of establishment, on one of the **professional or trade registers** or provide a declaration or certificate.
 - If the tenderer is a natural person, he/she must provide a copy of the identity card/passport or driving licence and proof that he/she is covered by a social security scheme as a self-employed person.

Each service provider (including subcontractor(s) or any member of a consortium or grouping) must complete and sign the identification forms in Annex 1 and also provide above-mentioned documents. However, the subcontractor(s) shall not be required to fill in or provide those documents when the services represent less than 10% of the contract.

- Financial identification (Annex 2)

The **bank identification form** must be completed and signed by an authorised representative of the tenderer. In the case of a grouping, this form must only be provided by the person heading the project.



- Legal entities (Annex 3)

The legal entity form in Annex 3 must be completed in and should be accompanied by requested supporting documents. In the case of a grouping, this form must only be provided by the person heading the project.

GSA reserves the right, however, to request additional evidence in relation to the bid submitted for evaluation or verification purposes within a time-limit stipulated in its request.

III.2.2. Section Two: Technical proposal

This section is of great importance in the assessment of the bids, the award of the contract and the future execution of any resulting contract.

Some guidelines are given below, but attention is also drawn to the award criteria, which define those parts of the technical proposal to which the tenderers should pay particular attention. The technical proposal should address all matters laid down in the specifications and should include models, examples and technical solutions to problems raised in the specifications. The level of detail of the tender will be extremely important for the evaluation of the tender.

Tenderers must present in their bids a proposal on the methodology and the organisation of the work to carry out in the framework of the study. In particular, the technical proposal shall include a set of detailed work-package descriptions that identify the non-contractual outputs to be produced in the frame of the contract and will detail the interfaces to be established with external entities to perform the work required. The technical proposal shall include a detailed schedule. The technical proposal shall include a detailed allocation of task per partner. A detailed description of the deliverable shall also be presented. The technical proposal shall include a statement of compliance against all activities described in the statement of work.

Tenderers shall describe as part of their technical proposal all prior experience relevant to perform the work requested.

Tenderers shall submit, as part of the technical proposal, CVs for key personnel involved in the different tasks.

The technical proposal must provide all the information needed for the purpose of awarding the contract.

III.2.3. Section Three: Financial proposal

All tenders must contain a financial proposal. The tenderer's attention is drawn to the following points:

- Prices must be quoted in **euros**, including the countries which are not in the euro-area. As far as the tenderers of those countries are concerned, they cannot change the amount of the bid because of the evolution of the exchange rate. The tenderers choose the exchange rate and assume all risks or opportunities relating to the rate fluctuation.



- Prices must be fixed amounts and include all expenses, such as travel expenses and daily allowances.
- **Prices should be quoted free of all duties, taxes and other charges, i.e. also free of VAT**, as the Communities are exempt from such charges in the EU under Articles 3 and 4 of the Protocol on the Privileges and Immunities of the European Communities of 8 April 1965 (OJ L 152 of 13 July 1967). Exemption is granted to GSA by the governments of the Member States, either through refunds upon presentation of documentary evidence or by direct exemption. For those countries where national legislation provides an exemption by means of a reimbursement, the amount of VAT is to be shown separately. In case of doubt about the applicable VAT system, it is the tenderer's responsibility to contact his or her national authorities to clarify the way in which the European Community is exempt from VAT;
- **Prices shall be** fixed and not subject to revision during the performance of the contract.
- For each category of staff involved in the project, the tenderer must specify:
 - the total labour costs;
 - **the daily rates** and **total number of days** (man/days) each member of staff will contribute to the project;
 - other categories of costs, indicating the nature of the cost, the total amount, the unit price and the quantity.

Bids involving more than one service provider (consortium) must specify the amounts indicated above for each provider.



IV. ASSESSMENT AND AWARD OF THE CONTRACT

The assessment will be based on each tenderer's bid.

All the information will be assessed in the light of the criteria set out in these specifications. The procedure for the award of the contract, which will concern only admissible bids, will be carried out in three successive stages.

The aim of each of these stages is:

- 1) to check on the basis of the exclusion criteria, whether tenderers can take part in the tendering procedure;
- 2) to check on the basis of the selection criteria, the technical and professional capacity and economic and financial capacity of each tenderer;
- 3) to assess on the basis of the award criteria each bid which has passed the exclusion and selection stages.

IV.1. Exclusion criteria (exclusion of tenderers)

To be eligible for participating in this contract award procedure, tenderers must not be in any of the following exclusion grounds¹:

- (a) they are bankrupt or being wound up, are having their affairs administered by the courts, have entered into an arrangement with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- (b) they have been convicted of an offence concerning their professional conduct by a judgement which has the force of res judicata;
- (c) they have been guilty of grave professional misconduct proven by any means which the contracting authority can justify;
- (d) they have not fulfilled obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those of the country of the contracting authority or those of the country where the contract is to be performed;
- (e) they have been the subject of a judgement which has the force of res judicata for fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the Communities' financial interests;

¹ Article 93 of Council Regulation (EC, Euratom) No 1605/2002 of 25 June 2002 on the Financial Regulation applicable to the general budget of the European Communities (OJ L 248 of 16.9.2002)



- (f) following another procurement procedure or grant award procedure financed by the Community budget, they have been declared to be in serious breach of contract for failure to comply with their contractual obligations;

IV.1.1.Evidence to be provided by the tenderers

1. GSA shall accept, as satisfactory evidence that the tenderer is not in one of the situations described in point (a), (b) or (e) above, the production of a recent extract from the judicial record or, failing that, a recent equivalent document issued by a judicial or administrative authority in the country of origin or provenance showing that those requirements are satisfied.
2. GSA accepts, as satisfactory evidence that the tenderer is not in the situation described in point (d) above, a recent certificate issued by the competent authority of the State concerned.

Where no such certificate is issued in the country concerned, it may be replaced by a sworn or, failing that, a solemn statement made by the interested party before a judicial or administrative authority, a notary or a qualified professional body in his country of origin or provenance.

The documents referred to in paragraph 1 and 2 shall relate to legal and/or natural persons including, if applicable with regard to points b) and e), company directors or any person with powers of representation, decision-making or control in relation to the tenderer.

IV.1.2.Other cases of exclusion

Contracts will not be awarded to tenderers who, during the procurement procedure:

a) **are subject to a conflict of interest;**

Tenderers must declare:

- that they do not have any conflict of interest in connection with the contract; a conflict of interest could arise in particular as a result of economic interests, political or national affinities, family or emotional ties, or any other relevant connection or shared interest;
- that they will inform the contracting authority, without delay, of any situation constituting a conflict of interest or which could give rise to a conflict of interest;
- that they have not made and will not make any offer of any type whatsoever from which an advantage can be derived under the contract;
- that they have not granted and will not grant, have not sought and will not seek, have not attempted and will not attempt to obtain, and have not accepted and will not accept, any advantage, financial or in kind, to or from any party whatsoever, constituting an illegal practice or



involving corruption, either directly or indirectly, as an incentive or reward relating to the award of the contract.

GSA reserves the right to check the above information.

- b) **are guilty of misrepresentation** in supplying the information required by the contracting authority as a condition of participation in the contract procedure or fail to supply this information.

IV.1.3. Declaration

Tenderers must fill in and sign the forms attached to the specifications (Annex 4).

Where the bid involves more than one service provider (consortium or grouping), each provider must fill in and return the form, as well as the evidence specified in pt IV.1.1.

Subcontractors (when the subcontracted part exceeds 20% of the contract) must only provide the form in Annex 4.

Bids submitted by subcontractors which have not provided the abovementioned documents may not be taken into consideration.

GSA reserves the right, however, to request any other document relating to the proposed tender for evaluation and verification purpose, within a delay fixed in its request.

IV.2. Administrative and financial penalties

1. Without prejudice to the application of penalties laid down in the contract, candidates or tenderers and contractors who have been guilty of making false declarations or have been found to have seriously failed to meet their contractual obligations in an earlier procedure will be excluded from all contracts and grants financed by the Community budget for a maximum of two years from the time when the infringement is established, as confirmed after an adversarial procedure with the contractor.

That period may be extended to three years in the event of a repeat offence within five years of the first infringement.

Tenderers or candidates who have been guilty of making false declarations will also incur financial penalties representing 2% to 10% of the total value of the grant being awarded.

Contractors who have been found to have seriously failed to meet their contractual obligations will incur financial penalties representing 2% to 10% of the value of the grant in question.

This rate may be increased to 4% to 20% in the event of a repeat offence within five years of the first infringement.

2. In the cases referred to in points IV.1, a), c), d), the candidates or tenderers will be excluded from all contracts and grants for a maximum of two years from the time when the infringement is established, as confirmed after an adversarial procedure with the contractor.



In the cases referred to in points IV.1, b) and e), the candidates or tenderers will be excluded from all contracts and grants for a minimum of one year and a maximum of four years from the date of notification of the judgment. Those periods may be extended to five years in the event of a repeat offence within five years of the first infringement or the first judgment.

3. The cases referred to in point IV.1, e) cover:
 - a) cases of fraud as referred to in Article 1 of the Convention on the protection of the European Communities' financial interests established by the Council Act of 26 July 1995 (OJ/C 316 of 27.11.1995, p. 48);
 - b) cases of corruption as referred to in Article 3 of the Convention on the fight against corruption involving officials of the European Communities or officials of Member States of the European Union, established by the Council Act of 26 May 1997 (OJ/C 195 of 25.6.1997, p. 1);
 - c) cases of participation in a criminal organisation, as defined in Article 2(1) of Joint Action 98/733/JHA of the Council (OJ/L 315 of 29.12.1998, p. 1);
 - d) cases of money laundering as defined in Article 1 of Council Directive 91/308/EEC (OJ/L 166 of 28.6.1991, p.77).

IV.3. SELECTION CRITERIA (SELECTION OF TENDERERS)

To be eligible, the tenderers must have the economic and financial capacity as well as the technical and professional capacity to perform the tasks required in this call for tender.

IV.3.1. Economic and financial capacity – References required

Tenderers must provide proof of their financial and economic capacity by means of the following documents: the balance sheets or extracts from balance sheets for the last three financial years, and a statement of overall turnover and turnover relating to the relevant services for the last three financial years.

This rule applies to all service providers, regardless of the percentage of tasks they intend to execute, once they have chosen to submit a tender. However, if the tender includes subcontractors whose tasks represent less than 20% of the contract, those subcontractors are not obliged to provide evidence of their economic and financial capacity.

IV.3.2. Technical and professional capacity – References required

The tenderers shall have an thorough knowledge of the GNSS performance drivers. In particular, the tenderers shall demonstrate an in-depth understanding of the EGNOS and Galileo Mission Segments and the Mission and System performance targets.

The tenderers shall be familiar with state-of-the-art GNSS performance analysis tools and GNSS simulators. The tenderers shall be acquainted with GNSS performance validation and verification techniques.



Thorough competence and background is also needed in the areas of information technologies and internet based secure communications for the accomplishment of some of the tasks. This experience and skill is needed for the design of the independent KPI monitoring network and for the selection of hardware equipment and suitable operating systems and development environments.

If several service providers/subcontractors are involved in the bid, each of them must have and show that they have the professional and technical capacity to perform the specific tasks assigned to them.

Tenderers should provide with their bid detailed curriculum vitae of each staff member responsible for carrying out the work, including his or her educational background, degrees and diplomas, professional experience, research work, publications and linguistic skills.

The CV's shall be presented, preferably, in accordance to GSA Recommendation on a common European format for curricula vitae, published in OJ L79 of 22 March 2002, p. 66.

IV.4. EVALUATION OF TENDERS – AWARD CRITERIA

The contract will be awarded according to the criteria given below, on the basis of the economically most advantageous tender.

Only bids that have reached a total score of a minimum of 70% and a minimum score of 60 % for each criterion will be taken into consideration for awarding the contract.

a) Technical evaluation criteria as weighted

N°	Award Criteria	Weighting
1	Understanding of the requirements and objectives and discussion of problem areas <ul style="list-style-type: none"> - Quality of content of the technical proposal <ul style="list-style-type: none"> .Bidder analysis of the requirements .Understanding of the environment under which the study is conducted (knowledge of GNSS performance analysis laboratories, GNSS performance drivers...) .Understanding of the GSA's needs and preliminary analysis of solutions .Critical review of the requirements .Analysis of interface requirements between the different tasks - Compliance to Statement of Work - Completeness - Relevance of proposed options 	40
2	Quality and suitability of proposed work programme and adequacy of approach <ul style="list-style-type: none"> - Quality of the Work Package Descriptions - Adequacy of the allocation of the tasks per partner 	30



	<ul style="list-style-type: none">- Adequacy of the effort related to each activity- Confidence that the work programme is appropriate to meet the requirements	
3	<p>Adequacy of management and planning for the execution of the work</p> <ul style="list-style-type: none">- Adequacy of reporting scheme- Adequacy of management level of effort- Quality of proposed planning- Heritage and experience of the team	30
Total number of points		100

b) Total price

Total number of points for price: X (Where X is the highest score for technical evaluation reached by an eligible offer).

Score for price for offer (a) will be then be computed as follows: $X * \text{lowest price among eligible offers} / \text{price of offer (a)}$

The contract will be awarded to the tenderer which offers the best quality price score as measured by the following formula:

$70\% * (\text{Total number of points for technical evaluation}) + 30\% * (\text{Total number of points for price})$



IV.5. INFORMATION FOR TENDERERS

GSA will inform tenderers of decisions reached concerning the award of the contract, including the grounds for any decision not to award a contract or to recommence the procedure.

If a written request is received, GSA will inform all rejected tenderers of the reasons for their rejection and all tenderers submitting an admissible tender of the characteristics and relative advantages of the selected tender and the name of the successful tenderer.

However, certain information may be withheld where its release would impede law enforcement or otherwise be contrary to the public interest, or would prejudice the legitimate commercial interests of economic operators, public or private, or might prejudice fair competition between them.

V. ANNEXES

1. Identification of the Tenderer
2. Financial Identification
3. Legal Entity Form
4. Declaration by the Tenderer (relating to the exclusion criteria)
5. Draft Service Contract



ANNEX 1

IDENTIFICATION OF THE TENDERER

(Each service provider, including subcontractor(s) or any member of a consortium or grouping, must complete and sign this identification form)

Call for tender GSA/OP/01/07

Identity	
Name of the tenderer	
Legal status of the tenderer	
Date of registration	
Country of registration	
Registration number	
VAT number	
Description of statutory social security cover (at the level of the Member State of origin) and non-statutory cover (supplementary professional indemnity insurance) ²	
Address	
Address of registered office of tenderer	
Where appropriate, administrative address of tenderer for the purposes of this invitation to tender	
Contact Person	
Surname: First name: Title (e.g. Dr, Mr, Ms) : Position (e.g. manager): Telephone number: Fax number:	

² For natural persons



E-mail address:	
Legal Representatives	
Names and function of legal representatives and of other representatives of the tenderer who are authorised to sign contracts with third parties	
Declaration by an authorised representative of the organisation³ I, the undersigned, certify that the information given in this tender is correct and that the tender is valid.	
Surname: First name:	Signature:

³ This person must be included in the list of legal representatives; otherwise the signature on the tender will be invalidated.

ANNEX 2 - Financial Form
(to be completed by the tenderer)

The tenderer's attention is drawn to the fact that this document is a model and that a specific **Financial Form** for each Member State is available at the following Internet address: <http://gsa.europa.eu/>, under the "Call for tender" section



FINANCIAL IDENTIFICATION

<u>ACCOUNT HOLDER</u>	
NAME	<input type="text"/>
ADDRESS	<input type="text"/>
TOWN/CITY	<input type="text"/>
POSTCODE	<input type="text"/>
COUNTRY	<input type="text"/>
VAT NUMBER	<input type="text"/>
CONTACT PERSON	<input type="text"/>
TELEPHONE	<input type="text"/>
FAX	<input type="text"/>
E - MAIL	<input type="text"/>

<u>BANK</u>	
BANK NAME	<input type="text"/>
BRANCH ADDRESS	<input type="text"/>
TOWN/CITY	<input type="text"/>
POSTCODE	<input type="text"/>
COUNTRY	<input type="text"/>
ACCOUNT NUMBER	<input type="text"/>
IBAN (optional)	<input type="text"/>

REMARKS :

BANK STAMP + SIGNATURE of BANK REPRESENTATIVE
(Both Obligatory)

--

DATE + SIGNATURE of ACCOUNT HOLDER :
(Obligatory)

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ANNEX 3 - Legal Entity Form
(to be completed by the tenderer)

The tenderer's attention is drawn to the fact that this document is a model and that a specific **Legal Entity Form** for each Member State is available at the following Internet address: <http://gsa.europa.eu/>, under the "Call for tender" section

Please note that we can only accept either original documents or certified copies, which must be less than 6 months old.

In the case of a grouping, this form must only be provided by the person heading the project.



ANNEX 4

DECLARATION BY THE TENDERER

Each service provider, including subcontractor(s) or any member of a consortium or grouping, must sign this identification form

1. In accordance with Article 93 of the Financial Regulation of the European Communities (Council Regulation 1605/2002 of 25.6.2002) published in Official Journal L 248 of 16 September 2002, I declare on my honour that I am not in any of the following situations which would exclude me from participating in this procurement procedure:
 - a) I am not bankrupt, being wound up or having my affairs administered by the courts, I have not entered into an arrangement with creditors, I have not suspended business activities, I am not the subject of proceedings concerning any such matters, and I am not in any similar situation arising from a similar procedure provided for in legislation or regulations;
 - b) I have not been convicted of an offence concerning my professional judgement by a judgment which has the force of res judicata;
 - c) I have not been found guilty of grave professional misconduct proven by any means which the contracting authority can justify;
 - d) I have not failed to fulfil obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which I am established or with those of the country or the contracting authority or those of the country where the contract is to be performed;
 - e) I have not been the subject of a judgment which has the force of res judicata for fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the Communities' financial interests;
 - f) as a consequence of another procurement or grant procedure financed by the Community budget, I have not been declared to be in serious breach of contract for failure to comply with my contractual obligations,
2. In addition, the undersigned declares on his or her honour:
 - a) that on the date of submission of the tender, the company or organisation I do represent and the staff proposed for this tender are not subject to a conflict of interests in the context of this invitation to tender; I undertake to inform GSA without delay of any change to this situation after the date of submission of the tender.
 - b) that the information provided to GSA within the context of this invitation to tender is accurate, sincere and complete.

Done at on.....

Name

Title

Signature:

ANNEX 5

DRAFT SERVICE CONTRACT

CONTRACT NUMBER – **GSA/OP/01/07**

The European GNSS Supervisory Authority (hereinafter referred to as "GSA"), which is represented for the purposes of the signature of this contract by Mr Pedro Pedreira, Executive Director in the GSA

of the one part,

and

[official name in full]

[*official legal form* (Delete if contractor is a natural person or a body governed by public law.)]

[*statutory registration number* Delete if contractor is a body governed by public law. For natural persons, indicate the number of their identity card or, failing that, of their passport or equivalent

[official address in full]

[*VAT registration number*]

(hereinafter referred to as "the Contractor"), represented for the purposes of the signature of this contract by [name in full and function,]

of the other part,

HAVE AGREED

the **Special Conditions** and the **General Conditions** below and the following Annexes:

Annex I – Tender Specifications (Invitation to Tender No [] of []) and Monitoring

Annex II – Contractor's Tender (No [] of [])

which form an integral part of this contract (hereinafter referred to as “the Contract”).

The terms set out in the Special Conditions shall take precedence over those in the other parts of the Contract. The terms set out in the General Conditions shall take precedence over those in the Annexes. The terms set out in the Tender Specifications (Annex I) shall take precedence over those in the Tender (Annex II).

Subject to the above, the several instruments forming part of the Contract are to be taken as mutually explanatory. Ambiguities or discrepancies within or between such parts shall be explained or rectified by a written instruction issued by GSA, subject to the rights of the Contractor under Article I.7 should he dispute any such instruction.



I – SPECIAL CONDITIONS

ARTICLE I.1 - SUBJECT

- I.1.1.** The subject of the Contract is the completion of a study aimed to support the development and implementation of the Agency's GNSS performance analysis system.
- I.1.2.** The Contractor shall execute the tasks assigned to him in accordance with the Tender Specifications annexed to the Contract (Annexes I & II).

ARTICLE I.2 - DURATION

- I.2.1.** The Contract shall enter into force on the date on which it is signed by the last contracting party.
- I.2.2.** Execution of the tasks may under no circumstances begin before the date on which the Contract enters into force.
- I.2.3.** The duration of the tasks shall not exceed 12 months. This period and all other periods specified in the Contract are calculated in calendar days. Execution of the tasks shall start from the day of the Kick-off meeting unless otherwise agreed in writing. The period of execution of the tasks may be extended only with the express written agreement of the parties before such period elapses.

ARTICLE I.3 – CONTRACT PRICE

- I.3.1.** The maximum total amount to be paid by GSA under the Contract shall be EUR [amount in figures and in words] covering all tasks executed.

ARTICLE I.4 – PAYMENT PERIODS AND FORMALITIES

Payments under the Contract shall be made in accordance with Article II.4. Payments shall be executed only if the Contractor has fulfilled all his contractual obligations by the date on which the invoice is submitted. Payment requests may not be made if payments for previous periods have not been executed as a result of default or negligence on the part of the Contractor.

I.4.1. Pre-financing:

Following signature of the Contract by the last contracting party, within 30 days of:

- the receipt by GSA of a duly constituted financial guarantee equal to at least EUR [amount in figures and in words]
- the receipt by GSA of a request for pre-financing with a relevant invoice



a pre-financing payment of EUR [*amount in figures and in words*] equal to 30 % of the total amount referred to in Article I.3.1. shall be made.

I.4.2 Interim payment:

Requests for interim payment by the Contractor shall be admissible if accompanied by:

- Deliverable D5300 (GPMAF System Architectural Design Document) at T+7 months and in accordance with the instructions laid down under point I.6.5.3 in Annex I.
- Deliverable D5600 (Report on suitability analysis of Performance COTS tools) at T+7 months and in accordance with the instructions laid down under point I.6.5.3 in Annex I.
- the relevant invoice

provided the above-mentioned deliverables have been approved by GSA.

GSA shall have 15 days from receipt to approve or reject the deliverables, and the Contractor shall have 10 days in which to submit additional information or a new deliverables.

Within 30 days of the date on which the deliverables are approved by GSA, an interim payment corresponding to [*amount in figures and in words*] equal to 30 % of the total amount referred to in Article I.3.1 shall be made.

I.4.3. Payment of the balance:

The request for payment of the balance of the Contractor shall be admissible if accompanied by

- the final report in accordance with the instructions laid down in Annex I
- the relevant invoice

provided the report has been approved by GSA.

GSA shall have 15 days from receipt to approve or reject the report, and the Contractor shall have 10 days in which to submit additional information or a new report.

Within 30 days of the date on which the report is approved by GSA, payment of the balance corresponding to EUR [*amount in figures and in words*] equal to 40 % of the total amount referred to in Article I.3.1 shall be made.

For Contractors established in Belgium, the provisions of the Contract constitute a request for VAT exemption No 450, provided the Contractor includes the following statement in his invoice(s): "Exonération de la TVA, article 42, paragraphe 3.3 du code de la TVA" or an equivalent statement in the Dutch or German language.



For Contractors established in Italy, the provisions of the Contract constitute a request for VAT exemption, provided the Contractor includes the following statement in his invoice(s): "Operazione non imponibile ai sensi dell'articolo 72, comma 3) paragrafo 3 del D.P.R. n. 633 del 26/10/1972 come modificato da ultimo dal D.L. n. 323 del 20/06/1996 convertito in Legge n. 425 dell'8/8/1996".

ARTICLE I.5 – BANK ACCOUNT

Payments shall be made to the Contractor's bank account denominated in euro, identified as follows:

Name of bank: [complete]
Address of branch in full: [complete]
Exact designation of account holder: [complete]
Full account number including codes: [complete]
[IBAN code: [complete]]

ARTICLE I.6 – GENERAL ADMINISTRATIVE PROVISIONS

Any communication relating to the Contract shall be made in writing and shall bear the Contract number. Ordinary mail shall be deemed to have been received by GSA on the date on which it is registered by the department responsible indicated below. Communications shall be sent to the following addresses:

European GNSS Supervisory Authority
Financial and Administration Unit
Rue de la Loi, 56
B-1049 Bruxelles

Contractor:

Mr/Mrs/Ms [complete]
[Function]
[Company name]
[Official address in full]

ARTICLE I.7– APPLICABLE LAW AND SETTLEMENT OF DISPUTES

I.7.1. The Contract shall be governed by the national substantive law of Belgium.

I.7.2. Any dispute between the parties resulting from the interpretation or application of the Contract which cannot be settled amicably shall be brought before the courts of Brussels, Belgium.



ARTICLE I.8 – DATA PROTECTION

Any personal data included in the Contract shall 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. It shall be processed solely for the purposes of the performance, management and follow-up of the Contract by the entity acting as data controller within GSA without prejudice to possible transmission to the bodies charged with a monitoring or inspection task in conformity with Community law. The Contractor shall have the right of access to his personal data and the right to rectify any such data that is inaccurate or incomplete. Should the Contractor have any queries concerning the processing of his personal data, he shall address them to the entity acting as data controller within GSA. The Contractor shall have right of recourse at any time to the European Data Protection Supervisor.

ARTICLE I.9 – TERMINATION BY EITHER CONTRACTING PARTY

Either contracting party may, of its own volition and without being required to pay compensation, terminate the Contract by serving 2 months formal prior notice. Should GSA terminate the Contract, the Contractor shall only be entitled to payment corresponding to part-performance of the Contract. On receipt of the letter terminating the Contract, the Contractor shall take all appropriate measures to minimise costs, prevent damage, and cancel or reduce his commitments. He shall draw up the documents required by the Special Conditions for the tasks executed up to the date on which termination takes effect, within a period not exceeding sixty days from that date.



II – GENERAL CONDITIONS

ARTICLE II.1 – PERFORMANCE OF THE CONTRACT

- II.1.1.** The Contractor shall perform the Contract to the highest professional standards. The Contractor shall have sole responsibility for complying with any legal obligations incumbent on him, notably those resulting from employment, tax and social legislation.
- II.1.2.** The Contractor shall have sole responsibility for taking the necessary steps to obtain any permit or licence required for performance of the Contract under the laws and regulations in force at the place where the tasks assigned to him are to be executed.
- II.1.3.** Without prejudice to Article II.3 any reference made to the Contractor's staff in the Contract shall relate exclusively to individuals involved in the performance of the Contract.
- II.1.4.** The Contractor must ensure that any staff performing the Contract has the professional qualifications and experience required for the execution of the tasks assigned to him.
- II.1.5.** The Contractor shall neither represent GSA nor behave in any way that would give such an impression. The Contractor shall inform third parties that he does not belong to the European public service.
- II.1.6.** The Contractor shall have sole responsibility for the staff who executes the tasks assigned to him.

The Contractor shall make provision for the following employment or service relationships with his staff:

- staff executing the tasks assigned to the Contractor may not be given orders direct by GSA;
- GSA may not under any circumstances be considered to be the staff's employer and the said staff shall undertake not to invoke in respect of GSA any right arising from the contractual relationship between GSA and the Contractor.

- II.1.7.** In the event of disruption resulting from the action of a member of the Contractor's staff working on Commission premises or in the event of the expertise of a member of the Contractor's staff failing to correspond to the profile required by the Contract, the Contractor shall replace him without delay. GSA shall have the right to request the replacement of any such member of staff, stating its reasons for so doing. Replacement staff must have the necessary qualifications and be capable of performing the Contract under the same contractual conditions. The Contractor shall be responsible for any delay in the execution of the tasks assigned to him resulting from the replacement of staff in accordance with this Article.



- II.1.8.** Should any unforeseen event, action or omission directly or indirectly hamper execution of the tasks, either partially or totally, the Contractor shall immediately and on his own initiative record it and report it to GSA. The report shall include a description of the problem and an indication of the date on which it started and of the remedial action taken by the Contractor to ensure full compliance with his obligations under the Contract. In such event the Contractor shall give priority to solving the problem rather than determining liability.
- II.1.9.** Should the Contractor fail to perform his obligations under the Contract in accordance with the provisions laid down therein, GSA may - without prejudice to its right to terminate the Contract - reduce or recover payments in proportion to the scale of the failure. In addition, GSA may impose penalties or liquidated damages provided for in Article II.16.

ARTICLE II.2 – LIABILITY

- II.2.1.** GSA shall not be liable for damage sustained by the Contractor in performance of the Contract except in the event of wilful misconduct or gross negligence on the part of GSA.
- II.2.2.** The Contractor shall be liable for any loss or damage caused by himself in performance of the Contract, including in the event of subcontracting under Article II.13. GSA shall not be liable for any act or default on the part of the Contractor in performance of the Contract.
- II.2.3.** The Contractor shall provide compensation in the event of any action, claim or proceeding brought against GSA by a third party as a result of damage caused by the Contractor in performance of the Contract.
- II.2.4.** In the event of any action brought by a third party against GSA in connection with performance of the Contract, the Contractor shall assist GSA. Expenditure incurred by the Contractor to this end may be borne by GSA.
- II.2.5.** The Contractor shall take out insurance against risks and damage relating to performance of the Contract if required by the relevant applicable legislation. He shall take out supplementary insurance as reasonably required by standard practice in the industry. A copy of all the relevant insurance contracts shall be sent to GSA should it so request.

ARTICLE II.3 - CONFLICT OF INTERESTS

- II.3.1.** The Contractor shall take all necessary measures to prevent any situation that could compromise the impartial and objective performance of the Contract. Such conflict of interests could arise in particular as a result of economic interest, political or national affinity, family or emotional ties, or any other relevant connection or shared interest. Any conflict of interests which could arise during performance of the Contract must be notified to GSA in writing without delay. In the event of such conflict, the Contractor shall immediately take all necessary steps to resolve it.



GSA reserves the right to verify that such measures are adequate and may require additional measures to be taken, if necessary, within a time limit which it shall set. The Contractor shall ensure that his staff, board and directors are not placed in a situation which could give rise to conflict of interests. Without prejudice to Article II.1 the Contractor shall replace, immediately and without compensation from GSA, any member of his staff exposed to such a situation.

II.3.2. The Contractor shall abstain from any contact likely to compromise his independence.

II.3.3. The Contractor declares:

- that he has not made and will not make any offer of any type whatsoever from which an advantage can be derived under the Contract,
- that he has not granted and will not grant, has not sought and will not seek, has not attempted and will not attempt to obtain, and has not accepted and will not accept, any advantage, financial or in kind, to or from any party whatsoever, where such advantage constitutes an illegal practice or involves corruption, either directly or indirectly, inasmuch as it is an incentive or reward relating to performance of the Contract.

II.3.4. The Contractor shall pass on all the relevant obligations in writing to his staff, board, and directors as well as to third parties involved in performance of the Contract. A copy of the instructions given and the undertakings made in this respect shall be sent to GSA should it so request.

ARTICLE II.4 – PAYMENTS

II.4.1. Pre-financing:

Where required by Article I.4.1, the Contractor shall provide a financial guarantee in the form of a bank guarantee or equivalent supplied by a bank or an authorised financial institution (guarantor) equal to the amount indicated in the same Article to cover pre-financing under the Contract. Such guarantee may be replaced by a joint and several guarantee by a third party.

The guarantor shall pay to GSA at its request an amount corresponding to payments made by it to the Contractor which have not yet been covered by equivalent work on his part.

The guarantor shall stand as first-call guarantor and shall not require GSA to have recourse against the principal debtor (the Contractor).

The guarantee shall specify that it enters into force at the latest on the date on which the Contractor receives the pre-financing. GSA shall release the guarantor from its obligations as soon as the Contractor has demonstrated that any pre-financing has been covered by equivalent work. The guarantee shall be retained until the pre-financing has been deducted from interim payments or payment of the balance to the Contractor. It shall be released the following month. The cost of providing such guarantee shall be borne by the Contractor.

II.4.2. Interim payment:



At the end of each of the periods indicated in Annex I the Contractor shall submit to GSA a formal request for payment accompanied by those of the following documents which are provided for in the Special Conditions:

- an interim technical report in accordance with the instructions laid down in Annex I;
- the relevant invoices indicating the reference number of the Contract to which they refer;
- statements of reimbursable expenses in accordance with Article II.7.

If the report is a condition for payment, on receipt GSA shall have the period of time indicated in the Special Conditions in which:

- to approve it, with or without comments or reservations, or suspend such period and request additional information; or
- to reject it and request a new report.

If GSA does not react within this period, the report shall be deemed to have been approved. Approval of the report does not imply recognition either of its regularity or of the authenticity, completeness or correctness of the declarations or information enclosed.

Where GSA requests a new report because the one previously submitted has been rejected, this shall be submitted within the period of time indicated in the Special Conditions. The new report shall likewise be subject to the above provisions.

II.4.3. Payment of the balance:

Within sixty days of completion of the tasks referred to in Annex I the Contractor shall submit to GSA a formal request for payment accompanied by those of the following documents which are provided for in the Special Conditions:

- a final technical report in accordance with the instructions laid down in Annex I;
- the relevant invoices indicating the reference number of the Contract to which they refer;
- statements of reimbursable expenses in accordance with Article II.7.

If the report is a condition for payment, on receipt GSA shall have the period of time indicated in the Special Conditions in which:

- to approve it, with or without comments or reservations, or suspend such period and request additional information; or
- to reject it and request a new report.

If GSA does not react within this period, the report shall be deemed to have been approved. Approval of the report does not imply recognition either of its regularity or of the authenticity, completeness or correctness of the declarations and information enclosed.

Where GSA requests a new report because the one previously submitted has been rejected, this shall be submitted within the period of time indicated in the Special Conditions. The new report shall likewise be subject to the above provisions.



ARTICLE II.5 – GENERAL PROVISIONS CONCERNING PAYMENTS

II.5.1. Payments shall be deemed to have been made on the date on which GSA's account is debited.

II.5.2. The payment periods referred to in Article I.4 may be suspended by GSA at any time if it informs the Contractor that his payment request is not admissible, either because the amount is not due or because the necessary supporting documents have not been properly produced. In case of doubt on the eligibility of the expenditure indicated in the payment request, GSA may suspend the time limit for payment for the purpose of further verification, including an on-the-spot check, in order to ascertain, prior to payment, that the expenditure is eligible.

GSA shall notify the Contractor accordingly by registered letter with acknowledgment of receipt or equivalent. Suspension shall take effect from the date of dispatch of the letter. The remainder of the period referred to in Article I.4 shall begin to run again once the suspension has been lifted.

II.5.3. In the event of late payment the Contractor may claim interest within two months of receiving the payment. Interest shall be calculated at the rate applied by the European Central Bank to its most recent main refinancing operations ("*the reference rate*") plus seven percentage points ("*the margin*"). The reference rate in force on the first day of the month in which the payment is due shall apply. Such interest rate is published in the C series of the Official Journal of the European Union. Interest shall be payable for the period elapsing from the calendar day following expiry of the time limit for payment up to the day of payment. Suspension of payment by GSA may not be deemed to constitute late payment.

ARTICLE II.6 – RECOVERY

II.6.1. If total payments made exceed the amount actually due under the Contract or if recovery is justified in accordance with the terms of the Contract, the Contractor shall reimburse the appropriate amount in Euro on receipt of the debit note, in the manner and within the time limits set by GSA.

II.6.2. In the event of failure to pay by the deadline specified in the request for reimbursement, the sum due shall bear interest at the rate indicated in Article II.5.3. Interest shall be payable from the calendar day following the due date up to the calendar day on which the debt is repaid in full.

II.6.3. GSA may, after informing the Contractor, recover amounts established as certain, of a fixed amount and due by offsetting, in cases where the Contractor also has a claim on the Communities that is certain, of a fixed amount and due. GSA may also claim against the guarantee, where provided for.

ARTICLE II.7 - REIMBURSEMENTS

II.7.1. Where provided by the Special Conditions or by Annex I, GSA shall reimburse the expenses which are directly connected with execution of the



tasks on production of original supporting documents, including receipts and used tickets.

II.7.2. Travel and subsistence expenses shall be reimbursed, where appropriate, on the basis of the shortest itinerary.

II.7.3. Travel expenses shall be reimbursed as follows:

- a) travel by air shall be reimbursed up to the maximum cost of an economy class ticket at the time of the reservation;
- b) travel by boat or rail shall be reimbursed up to the maximum cost of a first class ticket;
- c) travel by car shall be reimbursed at the rate of one first class rail ticket for the same journey and on the same day;
- d) travel outside Community territory shall be reimbursed under the general conditions stated above provided GSA has given its prior written agreement.

II.7.4. Subsistence expenses shall be reimbursed on the basis of a daily allowance as follows:

- a) for journeys of less than 200 km (return trip) no subsistence allowance shall be payable;
- b) daily subsistence allowance shall be payable only on receipt of a supporting document proving that the person concerned was present at the place of destination;
- c) daily subsistence allowance shall take the form of a flat-rate payment to cover all subsistence expenses, including accommodation, meals, local transport, insurance and sundries;
- d) daily subsistence allowance, where applicable, shall be reimbursed at the rate specified in Article I.3.3.

II.7.5. The cost of shipment of equipment or unaccompanied luggage shall be reimbursed provided GSA has given prior written authorisation.

ARTICLE II.8 – OWNERSHIP OF THE RESULTS - INTELLECTUAL AND INDUSTRIAL PROPERTY

Any results or rights thereon, including copyright and other intellectual or industrial property rights, obtained in performance of the Contract, shall be owned solely by the Community, which may use, publish, assign or transfer them as it sees fit, without geographical or other limitation, except where industrial or intellectual property rights exist prior to the Contract being entered into.

ARTICLE II.9 – CONFIDENTIALITY



- II.9.1.** The Contractor undertakes to treat in the strictest confidence and not make use of or divulge to third parties any information or documents which are linked to performance of the Contract. The Contractor shall continue to be bound by this undertaking after completion of the tasks.
- II.9.2.** The Contractor shall obtain from each member of his staff, board and directors an undertaking that they will respect the confidentiality of any information which is linked, directly or indirectly, to execution of the tasks and that they will not divulge to third parties or use for their own benefit or that of any third party any document or information not available publicly, even after completion of the tasks.

ARTICLE II.10 - USE, DISTRIBUTION AND PUBLICATION OF INFORMATION

- II.10.1.** The Contractor shall authorise GSA to process, use, distribute and publish, for whatever purpose, by whatever means and on whatever medium, any data contained in or relating to the Contract, in particular the identity of the Contractor, the subject matter, the duration, the amount paid and the reports. Where personal data is concerned, Article I.8 shall apply.
- II.10.2.** Unless otherwise provided by the Special Conditions, GSA shall not be required to distribute or publish documents or information supplied in performance of the Contract. If it decides not to publish the documents or information supplied, the Contractor may not have them distributed or published elsewhere without prior written authorisation from GSA.
- II.10.3.** Any distribution or publication of information relating to the Contract by the Contractor shall require prior written authorisation from GSA and shall mention the amount paid by the Community. It shall state that the opinions expressed are those of the Contractor only and do not represent GSA's official position.
- II.10.4.** The use of information obtained by the Contractor in the course of the Contract for purposes other than its performance shall be forbidden, unless GSA has specifically given prior written authorisation to the contrary.

ARTICLE II. 11 – TAXATION

- II.11.1.** The Contractor shall have sole responsibility for compliance with the tax laws which apply to him. Failure to comply shall make the relevant invoices invalid.
- II.11.2.** The Contractor recognises that GSA is, as a rule, exempt from all taxes and duties, including value added tax (VAT), pursuant to the provisions of Articles 3 and 4 of the Protocol on the Privileges and Immunities of the European Communities.



- II.11.3.** The Contractor shall accordingly complete the necessary formalities with the relevant authorities to ensure that the goods and services required for performance of the Contract are exempt from taxes and duties, including VAT.
- II.11.4.** Invoices presented by the Contractor shall indicate his place of taxation for VAT purposes and shall specify separately the amounts not including VAT and the amounts including VAT.

ARTICLE II.12 – FORCE MAJEURE

- II.12.1.** Force majeure shall mean any unforeseeable and exceptional situation or event beyond the control of the contracting parties which prevents either of them from performing any of their obligations under the Contract, was not due to error or negligence on their part or on the part of a subcontractor, and could not have been avoided by the exercise of due diligence. Defects in equipment or material or delays in making it available, labour disputes, strikes or financial problems cannot be invoked as force majeure unless they stem directly from a relevant case of force majeure.
- II.12.2.** Without prejudice to the provisions of Article II.1.8, if either contracting party is faced with force majeure, it shall notify the other party without delay by registered letter with acknowledgment of receipt or equivalent, stating the nature, likely duration and foreseeable effects.
- II.12.3.** Neither contracting party shall be held in breach of its contractual obligations if it has been prevented from performing them by force majeure. Where the Contractor is unable to perform his contractual obligations owing to force majeure, he shall have the right to remuneration only for tasks actually executed.
- II.12.4.** The contracting parties shall take the necessary measures to reduce damage to a minimum.

ARTICLE II.13 – SUBCONTRACTING

- II.13.1.** The Contractor shall not subcontract without prior written authorisation from GSA nor cause the Contract to be performed in fact by third parties.
- II.13.2.** Even where GSA authorises the Contractor to subcontract to third parties, he shall none the less remain bound by his obligations to GSA under the Contract and shall bear exclusive liability for proper performance of the Contract.
- II.13.3.** The Contractor shall make sure that the subcontract does not affect rights and guarantees to which GSA is entitled by virtue of the Contract, notably Article II.17.



ARTICLE II.14 – ASSIGNMENT

II.14.1. The Contractor shall not assign the rights and obligations arising from the Contract, in whole or in part, without prior written authorisation from GSA.

II.14.2. In the absence of the authorisation referred to in 1 above, or in the event of failure to observe the terms thereof, assignment by the Contractor shall not be enforceable against and shall have no effect on GSA.

ARTICLE II.15 – TERMINATION BY GSA

II.15.1. GSA may terminate the Contract in the following circumstances:

- (a) where the Contractor is being wound up, is having his affairs administered by the courts, has entered into an arrangement with creditors, has suspended business activities, is the subject of proceedings concerning those matters, or is in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- (b) where the Contractor has been convicted of an offence concerning his professional conduct by a judgment which has the force of *res judicata*;
- (c) where the Contractor has been guilty of grave professional misconduct proven by any means which the contracting authority can justify;
- (d) where the Contractor has not fulfilled obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which he is established or with those of the country applicable to the Contract or those of the country where the Contract is to be performed;
- (e) where GSA seriously suspects the Contractor of fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the Communities' financial interests;
- (f) where the Contractor is in breach of his obligations under Article II.3;
- (g) where the Contractor was guilty of misrepresentation in supplying the information required by GSA as a condition of participation in the Contract procedure or failed to supply this information;
- (h) where a change in the Contractor's legal, financial, technical or organisational situation could, in GSA's opinion, have a significant effect on the performance of the Contract;
- (i) where execution of the tasks has not actually commenced within three months⁴ of the date foreseen, and the new date proposed, if any, is considered unacceptable by GSA;



- (j) where the Contractor is unable, through his own fault, to obtain any permit or licence required for performance of the Contract;
- (k) where the Contractor, after receiving formal notice in writing to comply, specifying the nature of the alleged failure, and after being given the opportunity to remedy the failure within a reasonable period following receipt of the formal notice, remains in serious breach of his contractual obligations.

II.15.2. In case of force majeure, notified in accordance with Article II.12, either contracting party may terminate the Contract, where performance thereof cannot be ensured for a period corresponding to at least to one fifth of the period laid down in Article I.2.3.

II.15.3. Prior to termination under point e), h) or k), the Contractor shall be given the opportunity to submit his observations.

Termination shall take effect on the date on which a registered letter with acknowledgment of receipt terminating the Contract is received by the Contractor, or on any other date indicated in the letter of termination.

II.15.4. Consequences of termination:

In the event of GSA terminating the Contract in accordance with this Article and without prejudice to any other measures provided for in the Contract, the Contractor shall waive any claim for consequential damages, including any loss of anticipated profits for uncompleted work. On receipt of the letter terminating the Contract, the Contractor shall take all appropriate measures to minimise costs, prevent damage, and cancel or reduce his commitments. He shall draw up the documents required by the Special Conditions for the tasks executed up to the date on which termination takes effect, within a period not exceeding sixty days from that date.

GSA may claim compensation for any damage suffered and recover any sums paid to the Contractor under the Contract.

On termination GSA may engage any other contractor to complete the services. GSA shall be entitled to claim from the Contractor all extra costs incurred in making good and completing the services, without prejudice to any other rights or guarantees it has under the Contract.

ARTICLE II.16 – LIQUIDATED DAMAGES

Should the Contractor fail to perform his obligations under the Contract within the time limits set by the Contract, then, without prejudice to the Contractor's actual or potential liability incurred in relation to the Contract or to GSA's right to terminate the Contract, GSA may decide to impose liquidated damages of 0.2% of the amount specified in Article I.3.1 per calendar day of delay. The Contractor may submit arguments against this decision within thirty days of notification by registered letter with acknowledgement of receipt or equivalent. In the absence of reaction on his part or of written withdrawal by GSA within thirty days of the receipt of such arguments, the decision imposing the liquidated damages shall become enforceable. These



liquidated damages shall not be imposed where there is provision for interest for late completion. GSA and the Contractor expressly acknowledge and agree that any sums payable under this Article are in the nature of liquidated damages and not penalties, and represent a reasonable estimate of fair compensation for the losses that may be reasonably anticipated from such failure to perform obligations.

ARTICLE II.17 – CHECKS AND AUDITS

II.17.1. Pursuant to Article 142 of the Financial Regulation applicable to the general budget of the European Communities, the European Court of Auditors shall be empowered to audit the documents held by the natural or legal persons receiving payments from the budget of the European Communities from signature of the Contract up to five years after payment of the balance.

II.17.2.
from signature of the Contract up to five years after payment of the balance.

II.17.3.
Council Regulation (EC) No 1073/1999 from signature of the Contract up to five years after payment of the balance.

ARTICLE II.18 – AMENDMENTS

Any amendment to the Contract shall be the subject of a written agreement concluded by the contracting parties. An oral agreement shall not be binding on the contracting parties.

ARTICLE II.19 – SUSPENSION OF THE CONTRACT

Without prejudice to GSA's right to terminate the Contract, GSA may at any time and for any reason suspend execution of the tasks under the Contract or any part thereof. Suspension shall take effect on the day the Contractor receives notification by registered letter with acknowledgment of receipt or equivalent, or at a later date where the notification so provides. GSA may at any time following suspension give notice to the Contractor to resume the work suspended. The Contractor shall not be entitled to claim compensation on account of suspension of the Contract or of part thereof.

SIGNATURES

For the Contractor,
[Company
name/forename/surname/function]

For GSA,
[forename/surname/function]

signature[s]:

signature[s]: _____

Done at [Brussels], [date]

Done at [Brussels], [date]



European GNSS Supervisory Authority

In duplicate in English.

ANNEX I

Tender Specifications and Monitoring

ANNEX II

Contractor's Tender