



# **European GNSS Agency**

37<sup>th</sup> meeting of the Administrative Board

Prague, 13 June 2014

# **Annual Work Programme 2014**





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#### **ADMINISTRATIVE BOARD DECISION**

#### of 13 June 2014

# concerning the adoption of the 2014 Work Programme, serving as a financing decision

GSA-AB-37-13-10-24-04

THE EUROPEAN GNSS AGENCY,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 512/2014<sup>1</sup> of the European Parliament and of the Council of 16 April 2014 amending Regulation (EU) No 912/2010 setting up the European GNSS Agency (hereinafter referred to as the "GSA Regulation"), and in particular Article 6(2)(b) of the amended Regulation (EU) No 912/2010,

Having regard to Regulation (EU) No 1285/2013 of the European Parliament and of the Council of 11 December 2013 on the implementation and exploitation of European satellite navigation systems and repealing Council Regulation (EC) No 876/2002 and Regulation (EC) No 683/2008 of the European Parliament and of the Council (hereinafter referred to as the "GNSS Regulation")<sup>2</sup>, and in particular Article 14 thereof,

Having regard to the GSA Financial Regulation (GSA-AB-WP32) and in particular Article 68 thereof;

Having regard to European Parliament and of the Council Regulation (Eu, Euratom) No 966/2012 of 25 October 2012 on the Financial Regulation applicable to the general budget of the European Union (hereinafter referred to as the "Financial Regulation") and in particular Article 84 thereof,

Having regard to Commission Delegated Regulation (EU) No 1268/2012 of 29 October 2012 on the rules of application of Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council on the financial rules applicable to the general budget of the Union (hereinafter referred to as the "Implementing Rules") and in particular Article 94 thereof,

#### Whereas:

- (1) This Decision should allow for the award of procurement contracts for the reasons and amounts set out in the Work Programme,
- (2) This Decision should allow for the payment of interest due for late payment on the basis of Article 69 of the GSA Financial Regulation,<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> OJ L 150, 20.05.2014, p.72.

<sup>&</sup>lt;sup>2</sup> OJ L 347, 20.12.2013, p.1.

<sup>&</sup>lt;sup>3</sup> Article 92 of European Parliament and of the Council Regulation (Eu, Euratom) No 966/2012 and Article 111(4) of Commission Delegated Regulation (EU) No 1268/2012.





- (3) For the application of this Decision, it is appropriate to define the term 'substantial change' within the meaning of Article 94 (4) of Commission Delegated Regulation (EU) No 1268/2012,
- (4) Pursuant to Article 11(4)(b) of the amended Regulation No 912/2010 setting up the European GNSS Agency, the Security Accreditation Board has prepared and approved the relevant parts of the work-programme.

HAS DECIDED AS FOLLOWS:

#### Article 1

The 2014 Work Programme for the implementation of the GSA Regulation (hereinafter "Work Programme"), as set out in the Annex, is adopted. For the Agency's core activities, presented in the work programme's main part (sections 1-8), it constitutes a financing decision in the meaning of Article 68 of the GSA Financial Regulation.

Tasks entrusted to the Agency by the Commission through delegation agreements are included for information purposes only in the Work Programme's appendix.

#### Article 2

The maximum contribution for the implementation of the 2014 Work Programme for the year 2014 is set at **6,741,260 EUR**, which is planned to be complemented with additional funds delegated by the European Commission.

These appropriations shall cover interest due for late payment.

The implementation of this Decision is subject to the availability of the appropriations provided for in the draft budget for 2014 after the adoption of the budget by the budgetary authority or provided for in the provisional twelfths.

#### Article 3

Procurement contracts may be awarded in accordance with the conditions and for the amounts set out in the Annex.

Done in Prague, on 13 June 2014.

For the GSA Administrative Board Ms Sabine Dannelke





## **ANNEX**

Regulation No 512/2014 of the European Parliament and of the Council of 16 April 2014 amending Regulation (EU) No 912/2010 setting up the European GNSS Agency - **Work Programme for 2014** 

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#### 1. Introduction

This Work Programme contains implementing measures for the European GNSS Agency (GSA) for the year 2014 on the basis of the tasks outlined in the GNSS Regulation, the GSA Regulation, and the relevant framework documents and guidelines.

The Work Programme 2014 describes core tasks for adoption by the Administrative Board. It equally set outs in Part I of the Appendix III tasks that have been already entrusted by the Commission while the tasks planned to be entrusted in 2014 on the basis of the new Delegation Agreements are in Part II of the Appendix III; these tasks are presented for information purpose only. The breakdown of the core tasks' operational costs per action, presented in section 8, could be reviewed after the delegation agreement 2014/2020 negotiations are finalised. Should it be the case, a specific financing decision will be submitted to the GSA Administrative Board.

Some of the activities foreseen in this work programme are based on the assumption that the Commission Proposals for a revision of the GSA Regulation, currently under approval by the EU legislator is adopted without substantial changes. If such major changes would occur in the new delegation agreements or in the revised GSA Regulation, then this document would be adjusted accordingly.

It should be noted that the term 'Galileo', as used in this document, refers to the Galileo Programme and the satellite navigation system established under the Galileo Programme.

On the basis of the objectives given in the GNSS Regulation, the GSA Regulation, and the relevant framework documents and guidelines, the budget breakdown and main actions needing a Financing Decision are as follows:

#### For grants (8.1)

There is no Basic Act authorising the GSA to launch its own Grant Scheme. Therefore, no grants are planned in 2014

#### For grants implemented under delegation from the European Commission\* (8.2)

New grants are planned to be implemented in 2014, both under the Horizon 2020 programme and under the delegation agreement on EGNOS exploitation. The description of the covered activities is added for information in Appendix III, Part II.

\* As delegated to the Agency by the European Commission. Such delegation does not require a GSA Financing Decision.

For procurement* (8.3)	For procurement* (8.3)				
Activity	Main Actions	Estimated Budget			
Security Accreditation	<ul> <li>Provision of support to the GSA for Security</li> <li>Accreditation activities – Specific Contract</li> </ul>	€1,040,000			
·	- Operational expenditure	€360,000			
GSMC operations	<ul> <li>External operational support for GSMC</li> <li>Support to Security Monitoring</li> <li>Support to Chain of Command upgrade</li> </ul>	€1,250,000 €200,000 €210,000			
Market Development	<ul> <li>Market adoption plans update for EGNOS and Galileo per market segment</li> <li>EGNOS and Galileo stakeholder management</li> <li>EGNOS and Galileo user management and service centre support per market segment</li> <li>Market monitoring and forecasting process update</li> </ul>	€2,300,000			
Quality certification	- Quality and safety certification of the GSA – "Consultancy services for ISO certification procedures"	€300,000			
Support to GSA management, organizational strategies and risk management	- Support to GSA management, organizational strategies and risk management	€281,260			
	- Communications events and Publication	€600,000			
Communication	- New website development and content for EGNOS and Galileo	€200,000			
	Total <sup>4</sup>	€6,741,260			

<sup>&</sup>lt;sup>4</sup> including contributions from Norway.





\* Implemented under GSA operational budget and subject to final consistency check with foreseen EC-GSA Delegation Agreement 2014-2020.

#### 2. Legal References for the Work programme 2014

According to Article 6(2)(b) of the GSA Regulation, the Administrative Board (GSA AB or AB) shall adopt the Work Programme of the Agency by 15 November each year, after receiving the opinion of the European Commission. A Provisional Work Programme 2014 was forwarded by the Administrative Board to the European Commission, together with the draft Statement of Estimates, by March 31<sup>st</sup> 2013 (Article 13(6) GSA Regulation).

This work programme reflects the tasks that are entrusted to the Agency in light of the GNSS Regulation, the GSA Regulation<sup>5</sup> and the PRS Decision<sup>6</sup>. Furthermore, it takes into account (1) the European GNSS Strategic Framework<sup>7</sup> and (2) the guidelines issued by the Commission in accordance with Article 16 of the previous GNSS Regulation<sup>8</sup>, including the Working Arrangement for the execution of security related tasks of the European GNSS programmes between the European Commission and the European GNSS Agency<sup>9</sup> and the PRS (Public Regulated Service) Delegation Agreement 2011<sup>10</sup>.

#### 3. Mission and Tasks of the GSA

The overall mission of the Agency is laid down in the GNSS Regulation No 1285/2013, Article 14:

- "1. In accordance with the guidelines laid down by the Commission, the European GNSS Agency shall:
  - (a) ensure, with regard to the security of the Galileo and EGNOS programmes, and without prejudice to Articles 13 and 16:
    - (i) through its Security Accreditation Board, the security accreditation in accordance with Chapter III of Regulation (EU) No 912/2010; accordingly, it shall initiate and monitor the implementation of security procedures and perform system security audits;
    - (ii) the operation of the Galileo Security Monitoring Centre, as referred to in Article 6(d) of Regulation (EU) No 912/2010, in accordance with the standards and requirements referred to in Article 13 of this Regulation and the instructions pursuant to Joint Action 2004/552/CFSP;
  - (b) perform the tasks provided for in Article 5 of Decision No 1104/2011/EU, and assist the Commission in accordance with Article 8(6) of that Decision;

<sup>&</sup>lt;sup>5</sup> Regulation (EU) No 912/2010 setting up the European GNSS Agency amended by Regulation (EU) No 512/2014 of the European Parliament and of the Council of 16 April 2014 amending

<sup>&</sup>lt;sup>6</sup> Decision No 1104/2011/EU of the European Parliament and of the Council of 25 October 2011 on the rules for access to the Public Regulated Service provided by the global navigation satellite system established under the Galileo programme

<sup>&</sup>lt;sup>7</sup> Approved by the European GNSS Programmes Committee in September 2008

<sup>&</sup>lt;sup>8</sup> "Commission guidelines to the European GNSS Supervisory Authority," C (2009)1153 final, 25 February 2009

<sup>&</sup>lt;sup>9</sup> Agreement in the form of Exchange of Letters on a Working Arrangement for the execution of security related tasks of the European GNSS programmes between the European Commission and the European GNSS Agency, Ref. ENTR/GP2 AN/am Ares (2010)1087450 dated 28 January 2011.

<sup>&</sup>lt;sup>10</sup> Delegation Agreement between the European Union and the European GNSS Agency on the development of a Standalone First Generation PRS Receiver within the frame of the PRS Pilot Project and the implementation of preparatory activities related to the setting up of the Galileo Security Monitoring Centre, signed 09/09/2011.





- (c) contribute, in the context of the deployment and exploitation phases of the Galileo programme and the exploitation phase of the EGNOS programme, to the promotion and marketing of the services referred to in Article 2(4) and (5), including by carrying out the necessary market analysis, in particular through the market report produced annually by the European GNSS Agency on the market for applications and services, by establishing close contacts with users and potential users of the systems with a view to collecting information on their needs, by following developments in satellite navigation downstream markets, and by drawing up an action plan for the uptake by user community of the services referred to in Article 2(4) and (5), comprising in particular relevant actions relating to standardisation and certification.
- 2. The European GNSS Agency shall also perform other tasks relating to the implementation of the Galileo and EGNOS programmes, including programme management tasks, and shall be accountable for them. Those tasks shall be entrusted to it by the Commission by means of a delegation agreement adopted on the basis of a delegation decision, in accordance with Article 58(1)(c) of Regulation (EU, Euratom) No 966/2012 and shall include:
  - (a) operational activities including systems infrastructure management, maintenance and continuous improvement of the systems, certification and standardisation operations and provision of the services referred to in Article 2(4) and (5);
  - (b) development and deployment activities for the evolution and future generations of the systems, and contribution to the definition of service evolutions, including procurement;
  - (c) promoting the development of applications and services based on the systems, as well as raising awareness of such applications and services, including identifying, connecting and coordinating the network of European centres of excellence in GNSS applications and services, drawing on public and private sector expertise, and evaluating measures relating to such promotion and awareness-raising;
  - (d) promoting the development of fundamental elements, such as Galileo-enabled chipsets and receivers."

A number of such other tasks are further specified in the Part I of the Appendix III - of this work programme, including the exploitation and exploitation preparation tasks of EGNOS and Galileo respectively, the implementation of FP7-related tasks, the implementation of PRS pilot projects and the provision of support on security matters, including participation in the GNSS SB and associated WGs. These tasks have been delegated to the Agency through specific agreements with the Commission<sup>11</sup>. Other tasks to be implemented from 2014 on are specified in a Delegation Agreement. They are referred to as 'Entrusted Tasks' throughout the document and can be found in Part II of Appendix III.

In addition, a revised version of the GSA Regulation (512/2014) and financial Annex, amending Regulation (EU) No 912/2010 was adopted by the European Parliament and the Council on 16 April 2014 which entered into force on 23 May 2014.

Other potential areas for delegations are given in recital n°17 of the GSA Regulation. Such activities in particular, for the Agency to play a major role in the exploitation of the systems and in maximising their socioeconomic benefits could, for example, include: following the development of coordination and consultation procedures on security-related matters, carrying out research to support the development and promotion of the programmes and providing support for the development and implementation of the PRS pilot projects.

<sup>&</sup>lt;sup>11</sup> 2012 Delegation Agreement, *Ibid* 





#### 4. Long-Term Vision and Strategic Objectives

The vision and strategy that provide the overall context in which Work Programme 2014 has been developed draws in particular on the Commission's European GNSS Strategic Framework, the Agency's experience of the programmes and the Agency's informed view of the positions the Council, European Parliament and Commission can be expected to take.

#### **Vision**

The European Global Satellite Navigation Systems are entering into a new phase. Real value and clearer roadmap to users are delivered. EGNOS is stable, operational, and successful. Galileo has four operational satellites and is preparing the achievement of its next important milestone: the declaration of "Early Services" which is foreseen in the fourth quarter 2014. This is a key intermediate milestone where Galileo is expected to provide a service declaration based on qualified, though reduced, performances which could start to provide tangible benefits to users, most significantly for the Search and Rescue (SAR) service and the Open Service (OS), which when used with existing GNSS will bring benefits especially in urban environments. This milestone is also expected to provide significant results from the pilot testing of the Commercial Service (CS) and PRS with full involvement of EU Member States. Perhaps most significantly, the declaration of Galileo Early Services by the European Commission will represent, in effect, the official 'operational birth' of the Galileo system, therefore demonstrating to Europe and the world, that Galileo services are a reality.

Indeed, 2014 will be an important milestone year for EU GNSS programme in many respects:

- The new regulatory and financial frameworks are introducing longer term financial planning for the programmes and a new governance scheme, with the GSA carrying out the exploitation phase under delegation from the EC. A prerequisite for the success of this will be strong cooperation between the public sector parties, namely the EC, ESA and the GSA.
- The "Early Services" milestone should not only witness an important step towards system deployment, but will also introduce a critical shift towards service provision with meeting the service needs of users becoming the principal guiding objective. With the advent of the new financial perspective, this should be supported through funding coming from the research framework (Horizon 2020).
- In this perspective, emphasis will be increasingly placed on the development of new applications and services based on multiple GNSS constellations, whilst focussing whenever possible on the unique benefits of EGNOS and Galileo.

### **Strategic objectives**

2014 will be the first year of the "new GSA". Major changes in terms of the operational results for the GSA will be delivered and the evolution of its internal organisation will continue. Against this picture, the main GSA Strategic Objectives in 2014 are, in no particular order:

 To find stable working approaches to interface with EC and ESA, in light of the new governance scheme;





- To complete the GSMC's operational structures in order to take up first operational responsibilities in view of the Early Services declaration envisaged toward the end of the year;
- To achieve an efficient internal organisation based on an integrated management system, ISO quality-certified;
- To foster the robustness of the efficient security accreditation process, fully sustained by the GSA security accreditation team in the context of the new GSA Regulation, in order to face the challenges of a rapid system roll-out;
- To develop GNSS markets with the primary objective to maximise value creation, capitalising on the know-how gained on EGNOS;
- To dialogue with GNSS user segments, the industrial sector and standardisation bodies, in order to better understand their needs, follow a critical assessment, and translate the information gained into program objectives;
- To communicate with different stakeholders valuing the EU GNSS market positioning;
- To understand, analyse and interpret GNSS market dynamics in order to develop a powerful tool to support programme decisions.

#### **Entrusted tasks from the European Commission:**

- To support the development of a PRS user segment capable of meeting the objectives of Member States and other EU stakeholders, taking account of the wider context of evolutions in other GNSS systems and to support a PRS pilot testing campaign and the definition of associated security requirements.
- To undertake the full set of tasks concerning EGNOS exploitation in terms of current and future service provision;
- To prepare for undertaking the full set of tasks concerning Galileo exploitation with a particular focus in 2014 on supporting the EC in achieving an Early Service declaration in the fourth quarter of 2014;
- To develop GNSS products, applications and services in line with European Commission Horizon 2020 objectives in terms of EU competitiveness, innovation and economic growth.

## 5. Main Assumptions of Work Programme 2014

This work programme is drafted based on the following assumptions:

 3 Galileo launches are made in 2014 in view of declaring Early Services towards the end of 2014

## 5.1. Applicable legislation

- Regulation (EU) No 1285/2013 of the European Parliament and of the Council of 11 December 2013 on the implementation and exploitation of European satellite navigation systems and repealing Council Regulation (EC) No 876/2002 and Regulation (EC) No 683/2008 of the European Parliament and of the Council.
- A revised version of the GSA Regulation and financial Annex, amending Regulation (EU) No 912/2010 was adopted by the European Parliament and the Council on 16 April 2014.





No request is made to the Agency for Competent PRS Authority (CPA) functions as defined in the PRS Decision (either from MS or from EU Agencies or international organisations). Should such a request materialise in the course of 2013/2014, the Agency will review with the European Commission the needs in terms of budget and resources for 2014.

#### 5.2. Galileo:

- A Delegation Agreement between EC and GSA will be established, covering activities to be carried out as from 2014.
- An agreement is reached setting out how cooperation between the GSA and ESA will be structured
- Approval of Galileo exploitation staff complement for 2014 by end of 2013.
- The GSMC equipment is deployed to the sites in France and the UK in 2014.

#### **5.3. EGNOS:**

- A Delegation Agreement between EC and GSA is established covering activities to be carried out as from 2014.
- The EC will hand-over to the GSA all the contracts and activities that are necessary for performing the tasks entrusted under the new Delegation Agreement
- A system risk analysis will be conducted by ESA in 2014 and should be concluded by the definition of System-specific Security Requirements Statement (SSRS) and the establishment of the associated complementary budget to be introduced into the EGNOS Programme if needed.
- Beyond the liability retained by the EGNOS Service Provider as specified in the contract awarded in 2013, the EC will keep the GSA harmless of any third party liability related to the EGNOS Service Provision.
- An EGNOS Security Accreditation Strategy is defined to set up the high-level principles for the accreditation of EGNOS.

#### 5.4. Market Development Related Research and Development Activities:

- FP7 activities in the Agency will be closed after the completion of the contracts awarded in the third FP7 GNSS Call (expected in 2014, 2015 and early 2016).
- A Delegation Agreement between EC and GSA is established for H2020 Market Development related R&D activities, to be carried out in 2014.

## 5.5. Delegation Agreement:

Some of the delegated tasks that are not expected to be finished during the operational implementation phase defined in the May 2012 Delegation Agreement currently in force. Therefore, in accordance with Article 1.2.2 of the May 2012 Delegation Agreement, the period of execution of certain non-exploitation related activities will end on 31 December 2014





#### 5.6. PRS Pilot Project and PRS User Segment

- The definition of Early Services with respect to PRS is defined in the first quarter of 2013 in view of the declaration of early services in late 2014/early 2015.
- The Agency provides support to the PRS Pilot Project I (P3RS-1). P3RS1 is a framework contract supporting the definition and development of the PRS Pilot Projects, awarded by the European Commission in 2013.
- The Agency provides management of PRS Pilot Project 2 (P3RS-2). This includes the procurement 20 PRS pre-operational receivers and firm price commitment for optional purchase of further batches of receivers. Development and delivery of the initial 20 PRS pre-operational receivers is foreseen within 30 months from the kick off meeting.
- The contract (end Phase III) is signed in September 2013.
- A "PRS Support Roadmap" is agreed with the European Commission and Member States and the first steps of its implementation are undertaken in late 2013/early 2014.
- A specific arrangement to access to PRS technology and the ownership or use of PRS receivers under article 14 of the PRS decision is put in place no later than 2014
- CMS are expected to enter into force in 2014 and the Agency supports the EC for their implementation, notably through audits and inspections, as well as for their evolutions.

#### Priorities in 2014

## **6.1. Priorities with regards to Core activities**

#### **SECURITY ACCREDITATION (CORE TASKS)**

Security accreditation review/authorisation to launch and operate the spacecraft

Security accreditation review/authorisation of Galileo early services

Start implementing EGNOS Security Accreditation Strategy in exploitation phase

Consolidate and implement the User Segment Security Accreditation Strategy in light of the Common Minimum Standards (CMS)

Implementation of the new GSA Regulation with regard to SAB

**Review and development of Security Accreditation Procedures** 

### SECURITY TASKS (CORE TASKS UNDER WORKING ARRANGEMENT<sup>12</sup>)

Complete the Security department organisation, including the set-up of a security requirements and standards section

Support the Commission on the PRS CMS flow-down and develop documents to  $\,$  to support the implementation of the CMS  $\,$ 

Support the Commission on the security aspects of the early services preparation, in particular on the PRS, including its user segment

Deployment of a central security office, including a secured document management system

Development and deployment of security systems/procedures, including central register (central security office)

-

<sup>&</sup>lt;sup>12</sup> Agreement in the form of Exchange of Letters on a Working Arrangement for the execution of security related tasks of the European GNSS programmes between the European Commission and the European GNSS Agency, Ref. ENTR/GP2 AN/am Ares (2010)1087450 dated 28 January 2011.





#### **GSMC (CORE TASKS)**

Continue provision of GSMC Nucleus and enhance capabilities with the objective of early service provision

**Continue design of GSMC Organisational Processes** 

**Contribute to validation of selected Operational Equipment Developments** 

**Completion of GSMC relocation** 

#### MARKET DEVELOPMENT (CORE TASKS)

Support market readiness for the launch of Galileo early services

Implement market development actions focused on receiver manufacturers and early adopters

Continue implementation of adoption roadmaps for EGNOS in priority markets

Update market information monitoring process and technology monitoring process of key players in the value chain

#### GENERAL ADMINISTRATION, IT AND LOGISTICS (CORE TASKS)

Stabilise the new ICT and Logistics infrastructure in Prague

Establish efficient communication with the GSMC in France and UK

Implement an internal Document Management System for security documentation at RESTREINT UE level

Complete the implementation of an Integrated (Quality) Management System (E.g.: ISO, TÜV)

Operational consultancy services for Office of the Executive Director

**Enhance and upgrade the new Administrative Platform** 

#### **COMMUNICATIONS (CORE TASKS)**

**Continued EGNOS Market Communication and Promotion** 

Strengthening of PRS Awareness-building

**Strengthening GSA Corporate Communications** 

**Supporting Galileo Exploitation-related Communications** 

## **6.2. Priorities with regards to Delegated activities** <sup>13</sup>

#### PRS PILOT PROJECTS AND USER SEGMENT (DELEGATED TASKS)

**PRS Pilot Projects to prepare Early Services** 

**PRS User Segment development** 

Start implementation of the PRS Technological Roadmap 2014-2020

## SECURITY STANDARDS (DELEGATED TASKS)

Develop engineering support on security requirements and standards, including the security needs for the exploitation phases of Galileo and EGNOS

-

 $<sup>^{13}</sup>$  These delegated tasks are either in the previous or will be in the future Delegation Agreements, which are presented in Part I and Part II of the Appendix III





#### MARKET DEVELOPMENT RELATED RESEARCH AND DEVELOPMENT (DELEGATED TASKS)

Keeping the projects in line with the strategic objectives

Maximising the projects' results

Producing an effective communication action for each project

#### **EXPLOITATION PREPARATION OF GALILEO (DELEGATED TASKS)**

Support the preparation and provision of Galileo Early Services from fourth quarter 2014 onwards

Support to Galileo infrastructure acceptance and Galileo infrastructure R&D activities

Prepare for the hand-over of Galileo exploitation from 1 January 2017 onwards

Ensure the on-going provision of pre-exploitation operations

#### **EXPLOITATION OF EGNOS (DELEGATED TASKS)**

**EGNOS Exploitation Programme Execution Management** 

**EGNOS Exploitation Programme Engineering** 

**EGNOS Service Provision** 

**EGNOS Infrastructure Provision** 

#### SUPPORT TO THE GNSS APPLICATION ACTION PLAN (APPAP) (DELEGATED TASKS)

Monitoring the status of APPAP execution

Support to EC activities targeting SMEs

Awareness building: events and website management

## 7. Work Programme Implementation 2014

The following section describes the activities the Agency expects to perform in 2014 under the supervision of the GSA AB and consistent with the Commission guidelines, complemented by the Commission-Agency Working Arrangement.

The Work Programme 2014 is based on the resourcing levels that the Agency expects to have in 2014, as presented in the draft Budget and Establishment Plan 2014 submitted to the GSA AB together with this Work Programme. If the expected resourcing is not achieved and/or the specific guidelines issued by the Commission entail significant changes in levels of activities the overall volume of activities will need to adjusted, in parallel to the identification of Work Programme 2014 priorities. With respect to core activities, it is noted that security accreditation and GSMC operations shall be given priority.

As stated in chapter 3 of this document, Article 14 of the GNSS Regulation is divided into four tasks: (1) security of the Galileo and EGNOS programmes; (2) contribution, in the context of the deployment and exploitation phases of the Galileo programme and the exploitation phase of the EGNOS programme; (3) other tasks entrusted by the Commission; (4) acting as contracting authority and manage the funds entrusted to the Agency; (5) entering into working arrangements with European Space Agency; (6) withing the scope of its mission provide technical expertise to the Commission commercialisation of the systems; (3) other tasks entrusted by the Commission.





This Work Programme is divided in areas of activity that can be allocated as follows:

The first three areas of activity, i.e. Security Accreditation, Security Tasks and GSMC, refer to the tasks (1), whilst the fourth activity, Market Development refers to (2) of the above quoted Article 16.

A fifth area of activity cover separately the general administration of the Agency, IT and logistics as well as the activities related to the relocation of the GSMC OPS to Saint-Germain-en-Laye and Swanwick.

The sixth area of activity is dedicated to communications and information.





#### 7.1. SECURITY

#### 7.1.1. Objectives and Priorities

The main objectives for 2014 entail security accreditation, PRS service and user segment activities, support to other departments of the Agency and support to the European Commission.

#### **Main Objectives Overview - 2014**

- 1. Security Accreditation: review/authorisations to launch and authorisations to operate the spacecraft; review/authorisation to operate the system configuration for Galileo early services; start implementation of EGNOS Security Accreditation Strategy in Exploitation phase; implementation the new GSA Regulation with regard to SAB; PRS user segment accreditation strategy update in the light of the CMS; review and further develop Security Accreditation Procedures.
- 2. PRS Implementation Plan and PRS Decision 1104/2011
- 3. GSA Central Security office
- 4. Support to Security Requirements & Standards
- 5. General Support to EC on Security
- 6. EC-GSA Working Arrangement on PRS User segment

Po See Appendix II for a summary of all actions implementing these objectives.

Details about these objectives, related tasks and priorities are provided below.

#### 1. Security Accreditation

The European GNSS Security Accreditation Authority is the GSA Security Accreditation Board (SAB), established within the Agency as a body of GSA pursuant to Article 3(1)(c) and Article 11(1) of Regulation (EU) No 912/2010. All the security accreditation decisions related to the GNSS systems are of its sole competence.

According to Article 11(11-12), the SAB has set up special subordinate bodies, acting on its instructions, to deal with specific issues. The following subordinate bodies have been set-up:

- The Galileo Security Accreditation Panel (GSAP), a panel to conduct security analysis reviews and tests to produce the relevant risk reports in order to assist it in preparing its decisions. The GSAP acts as a technical body to assist the European GNSS Security Accreditation Authority in all aspects related to the accreditation of the Galileo system.
- A Crypto Distribution Authority (CDA) to assist the Security Accreditation Board on cryptomaterial issues and for questions related to flight keys flight key cell (FKC). The CDA is a body which was created by the SAB in 2011 with a mandate refined in 2013 and implemented in 2014.

According to Article 11(9) of the said Regulation, the SAB shall have access to all the human and material resources required to provide appropriate administrative support functions and to enable it, together with the bodies referred to in paragraph 11, to perform its tasks independently, in particular when handling files, initiating and monitoring the implementation of security procedures and performing system security audits, preparing decisions and organising its meetings. It shall also have access to any information needed for the performance of its tasks in the possession of the Agency, without prejudice to the principles of autonomy and independence referred to in Article 10(i).

In order to support the SAB, the GSAP and the CDA, the Agency has established an Accreditation Team which is reporting to the SAB Chair and provides secretariat support for the SAB, chairs subordinate bodies and provides technical expertise at all stages of the accreditation process. The GSA Accreditation Team currently performs the following tasks:

 SAB secretariat: including secretariat, coordination and preparation of the relevant files for accreditation decisions.





- GSAP management: including chairmanship, secretariat, coordination and preparation of the relevant files for accreditation endorsement.
- CDA management: including chairmanship, secretariat, and organisation of FKC activities for each launch campaign, as well as standardisation, regulatory and reporting COMSEC activities.
- System level: system design review and system audits to verify that the Galileo System-specific Security Requirements (SSRS) and other applicable security requirements are met.
- Local sites level: audits and on-site inspections to ensure that local security requirements, national security rules and regulations, as well as the Galileo Programme Security Instructions (PSI), are being met by the sites hosting Galileo stations.
- System components level: security requirements reviews (security targets) of system components implementing security functions and monitoring of the component evaluation and certification process.
- PRS User Segment level: propose definition of the Galileo PRS receiver certification, evaluation and accreditation process, as well as the Galileo PRS manufacturer accreditation process to the SAB and implement its related responsibilities.

#### New tasks

In 2014, organisational and procedural changes may be necessary to adapt to the new GSA regulation.

In addition, a review of existing procedures will have to be completed to ensure that the new legal requirements are met and to foster the reliability and the efficiency of the accreditation process. Indeed, security accreditation becomes increasingly important as the IOV and exploitation phases are entered into, to assure that the intended services meet the necessary security requirements, and to address the specific risks identified in the validation and exploitation phases.

The EGNOS Security Accreditation Strategy currently under development will have to be implemented, leading to additional work which could potentially include additional activities related to system accreditation and site accreditation

Appropriate resourcing for the security accreditation team will be identified, and SAB and GSAP meetings will be organised and held in Prague.

#### 2. PRS Implementation Plan and PRS Decision 1104/2011

PRS Implementation plan and PRS Decision 1104/2011 enforced in November 2011 may require new tasks from the Agency with the PRS User Segment, Competent PRS Authorities and End Users.

#### 3. GSA Central security office

The Security Department will continue the development of a central security office, in charge of establishing security policies for the various sites and of implementing them for the Agency Headquarters in Prague.

#### 4. Support to Security Requirements & Standards

In order to ensure the performance of these activities and optimize the interaction with the European Commission, the tasks under point 4 fall within the responsibilities of the Agency under the EC-GSA Working Arrangement on GNSS Security Board and associated Working Groups.





## 5. General Support to EC on Security

The Agency will continue to provide support to the European Commission in security-related areas as specified in the EC-GSA Working Arrangement on GNSS Security Board and associated Working Groups. In addition, the Agency will develop a security engineering expertise to better support other Agency departments involved in the exploitation of the services and to better support the European Commission in the maintenance/update of security standards and requirements.

#### 6. EC-GSA Working Arrangement on PRS User segment

The Agency shall provide technical assistance to the European Commission on PRS User segment.

#### 7.1.2. Summary of the main tasks in 2014

Main	Tasks	in	2014
	Secur	itv	

#### 1. SECURITY ACCREDITATION

#### TASK 1.1: SAB SECRETARIAT TASKS

Interactions between the GSAP and the SAB are guaranteed by the GSAP chairman in periodical reports.

When specific accreditation milestone decisions are at stake, specific accreditation reports are prepared by the GSAP and submitted to the SAB for their evaluation and endorsement. This process must be carefully followed and managed. This implies the need of a general planning and schedule of the entire accreditation process involving several entities. The GSAP shall adapt its work plan to the technical milestones organised by ESA. On the other hand the SAB shall be organised in a consistent way to attain the security accreditation decisions in line with the general program schedule.

This task is broken down into the following sub-tasks 1.1.1 to 1.1.7:

Task	Indicators	Timing
Task 1.1.1 Adapt the organisation to the new GSA regulation	Revised organisation chart	3 months after the entering into force of the new GSA regulation
Task 1.1.2 Adapt the internal procedures to the new GSA regulation and the quality project	Number of procedures revised or established	50% six month after the entry into force of the Regulation, 100% before the certification
Task 1.1.3 Ensure the Secretariat of the SAB	Propose SAB meeting plan Distribution of working papers in due time before each meeting Establishment of Minutes in due time after each meeting Administrate written procedures as necessary 100% of SAB decisions recorded/updated	As required to ensure 5 SAB meetings in the year
Task 1.1.4 Security accreditation of the launches and operation of spacecraft	Decision on Authorisation To Launch (ATL)	As per the planning
Task 1.1.5 Security accreditation of Early services	Decision on Authorisation to Operate Early Services	As per the planning
Task 1.1.6 SAB Management tasks	Draft SAB Work Programme 2015, taking into account the inputs from the GSAP and CDA	Q2-Q3 2014





	Draft SAB Budget 2015, taking into account the inputs from the GSAP and CDA	Q3-Q4 2014
	Report on SAB Budget 2014	Q1-Q4 2014
	Draft the SAB Staff Establishment Plan	Q1-Q4 2014
Task 1.1.7 Administrate the Security Accreditation contracts	Administrate existing contracts Initiate a new framework contract	Q1-Q4 2014

#### TASK 1.2: GSAP MANAGEMENT TASKS

The primary mission of the GSAP is to elaborate comprehensive Galileo Security Accreditation Reports (SARs) to be submitted for examination and assessment before accreditation statements are issued and approved by the SAB.

The Panel shall prepare the Galileo Security Accreditation Reports on the basis of the outcomes of the specific Security Accreditation Tasks described hereafter and shall instruct any specific demand of the SAA and perform the relevant security analysis.

The GSAP is divided into a number of specific formations and is chaired by the European GNSS Agency, which also provides secretariat support.

The GSAP shall also instruct any specific demand of the SAB.

Reports are prepared on the basis of the outcomes of the specific Security Accreditation tasks described hereafter, undertaken by the Security Accreditation Team.

GSAP meetings will be held in GSA Prague headquarters. Preparatory work and follow-up will be held in ESA premises as appropriate.

This task is broken down into the following sub-task 1.2.1 to 1.2.3:

Task	Indicators	Timing
Task 1.2.1 Chairmanship, technical secretariat and organisational secretariat	Propose GSAP meeting plan Organise 5 GSAP meetings in the year GSAP recommendations to SAB	As required to ensure SAB decision making.
Task 1.2.2  Adapt the internal procedures to the new GSA regulation and the quality project	Number of procedures revised or established	50% six month after the entry into force of the Regulation, 100% before the certification
Task 1.2.3	Draft GSAP Work Programme	
GSAP Management Tasks	Draft GSAP budget	

#### TASK 1.3: CDA/FKC MANAGEMENT TASKS

The Crypto Distribution Authority (CDA) is an important body for the Agency under the accreditation activities. The CDA has been set up in 2011 by the SAB and CDA Terms of Reference have been defined. The Flight Key Cell (FKC) activities represent a part of the set of activities to be performed by the CDA into a specific formation, limited to the satellite launch campaigns.

CDA should become fully operational in 2014 after the recruitment of appropriate staff in 2013 and its activities are expected to ramp up during IOV and in the exploitation phases.

It should be noted that the establishment of the CDA/FKC and the performance of the related tasks imply two different levels of activities: management and operational, the latter being carried out by the GSMC (operational Tasks are described in the chapter dedicated to the GSMC).

This task is broken down into the following sub-task: 1.3.1 to 1.3.4

Task Indicators Timing	
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Task 1.3.1 Chairmanship, technical secretariat and organisational secretariat	6 CDA/FKC meetings in the year	Q1-Q4 2014
<b>Task 1.3.2</b> Definition of crypto maintenance policy	With the technical support of GSMC staff, draft a policy that would find a balance between the security needs and the operational costs	3 months after recruitment of a CDA coordinator
	Review of CDA ToR, new version approved	
	Draft CDA Work Programme	
	Draft CDA budget	
	Issue permanent executive standards, for GNSS COMSEC handling	
Task 1.3.3	Issue guidelines on the maintenance and repairs of cryptographic means	
CDA management tasks (subject to the provisions	Conduct spot checks with the support of local security authorities	Q1-Q4 2014
related to CDA in the new GSA Regulation)	Support accreditation entities (SAA, GSAP) for all aspects related to COMSEC material	
	Report to the Security Accreditation Authority all COMSEC events and up to date COMSEC status	
	COMSEC account identified by the relevant COMSEC body within the EU and the Member States	
	Establish a centralised accounting and shipment tracking (system, receivers, components) of GNSS COMSEC material	
	Draft the FKC work programme	
Task 1.3.4	Prepare the FKC budget	Q1-Q4 2014
FKC management tasks	Report to the CDA and SAB as appropriate	
	With the technical support of GSMC staff, ensure the functioning of the FKC.	As required for launches

#### TASK 1.4: SYSTEM LEVEL ACCREDITATION TASKS

The GNSS Accreditation process is strongly linked to the GNSS design, development and deployment process. For each specific Galileo technical milestone, the GSA Accreditation team is required to examine the security features of the system (according to the predefined scopes of each milestone) in order to verify the compliance to the security requirements and whether the system is sufficiently secure to allow protectively marked data to be processed by it.

This task is broken down into the following sub-tasks 1.4.1 to 1.4.6.:

Task	Indicators	Timing	
Task 1.4.1 Review existing strategies to ensure consistency with the regulation	Review of Security Accreditation Strategies and adaptations as necessary	Q1-Q4 2014	
Task 1.4.2 Security Accreditation Strategy for services, including Early Services	Recommendations to GSAP/SAB Ensure the Security Accreditation Strategy for Early Services is applied.	Q4 2014	
Task 1.4.3 Ensure EGNOS Security Accreditation Strategy is applied	Finalisation of EGNOS Security Accreditation Strategy (if not done in 2013) and Recommendations to GSAP/SAB	Q1-Q4 2014	
<b>Task 1.4.4</b> System audits/reviews	Recommendations to GSAP/SAB	As required for each GSAP meeting	
Task 1.4.5	Recommendations to GSAP/SAB	Q1-Q4 2014	





Security vulnerability analysis and system security tests		
Task 1.4.6 Security risk management	Record and monitor risks, treatment plans Recommendations to GSAP/SAB	Q1-Q4 2014

#### TASK 1.5: LOCAL SITES ACCREDITATION TASKS

Each Galileo site is subject to a specific security accreditation process. The LSAA (Local Security Accreditation Authority) is the centre of the Local Security Accreditation Process as it will perform the liaison at security level between GSA/ESA and the Hosting Entity.

For the case of European Sites, the LSAA will be the relevant National Security Authority (NSA), or any other representative authority officially appointed by the NSA, for the country where the Site is located.

This task is broken down into the following sub-task:

Task	Indicators	Timing
Task 1.5.1 Review/Adapt the Site Authorisation to Operate (SATO) procedure, including changes and auditing part	Revision of SATO procedure to ensure consistency with the regulation and include accreditation of changes and continuous audits.	Q1 2014
Task 1.5.2 Participate to Galileo site accreditation activities	Plan activities to ensure the sites meet the security requirements expected for the launches and Early Services; carry out 20-25 activities and reports to the GSAP/SAB accordingly.	Plan Q1 2014; then as required by the plan
Task 1.5.3 Plan and lead audits	0-5 activities in 2014 to verify the sites continuously meets the security requirements for exploitation (ES/IOC)	Q4 2014
Task 1.5.4 Start EGNOS site accreditation activities	0-5 activities in 2014 depending upon the adoption of the EGNOS Security Accreditation Strategy	Q4 2014
Task 1.5.5 Prepare GSA to act as LSA	Propose organisation and procedures for GSA to discharge its responsibilities as Local Security Authority.	Q2 2014

#### TASK 1.6: SECURITY COMPONENT LEVEL ACCREDITATION TASKS

Components implementing security functions in the Galileo system are subject to specific evaluation and certification processes (Crypto evaluation, TEMPEST evaluation, Common Criteria Evaluation and Certification). Although this type of activity is performed by specific and accredited national authorities, the Agency has an important role to ensure the process is consistently followed.

This task is broken down into the following sub-tasks: 1.6.1.

Task	Indicators	Timing
<b>Task 1.6.1</b> Monitoring of component first and second evaluation		Q1-Q4 2014

#### TASK 1.7: USER SEGMENT ACCREDITATION TASKS

The accreditation tasks related to the User Segment are in the definition phase, in particular on the basis of the PRS Access Policy set out by the Council, in a related Security Accreditation Strategy.

The Security Accreditation Strategy for the PRS User Segment (US SAS) is currently being submitted to the approval process through GSAP and SAB, after integration of inputs expected from the Common Minimum Standards, expected to enter into force at the end of 2013.

This task is broken down into the following sub-task: 1.7.1 to 1.7.4.





Task	Indicators	Timing	
Task 1.7.1 Establish a PRS US SAS in line with the applicable legislation.	Develop/maintain a US SAS notably to ensure compliance with the Common Minimum Standards	3 months after the entry into force of the CMS	
Task 1.7.2 Establish procedures implementing the PRS US SAS	Propose to GSAP/SAB procedures for the authorisation of PRS Manufacturers in accordance with the PRS US SAS	3 months after the adoption of the PRS US SAS	
Task 1.7.3 Implement the PRS	100% of new requests for authorisation administrated and recommendations made to GSAP/SAB accordingly	Q1-Q4 2014	
Manufacturers accreditation process	100% of valid interim authorisations reauthorised.	6 months after the adoption of the PRS Manufacturers Procedures	
	Oversee, with Local Site Accreditation Authorities, the deployment of POCPs within CPAs		
<b>Task 1.7.4</b> Contribute to the oversight of the PRS US	Support audits and inspections related to Decision N°1104/2011/EU of the European Parliament and of the Council	Q3-Q4 2014	
	Support audits and inspections of Competent PRS Authorities by EC and Member State		
2. PRS IMPLEMENTATIO	N PLAN AND PRS DECISION 1104/	2011	
Task 2.1 Acting as Competent PRS authority	Appropriate arrangements in place if GSA is designated by the Council, the Commission and the EEAS and also by other union agencies and international organization	If requested by the Council, the Commission and the EEAS or by other union agencies and international organisations	
<b>Task 2.2</b> Provide technical Assistance to Competent PRS Authorities	Provide technical assistance to CPA if needed to perform appropriate tasks, subject to specific arrangements and resourcing	If requested by the CPAs and subject to agreement with the Commission on their content in application of the CMS	
Task 2.3 CMS assistance to the EC	Ensure that CPA comply with CMS, in particular by carrying out audit and inspections	whenever requested	

## 3. GSA CENTRAL SECURITY OFFICE

The central Security Office at GSA HQ offers services to the Security department and to the other departments/locations. This office will also assume the functions of GSA Central EUCI Registry and establish and maintain a secured document management system.

This entails the following tasks: 3.1 to 3.10.

This distant the following table. The control			
Task Indicators		Timing	
Task 3.1  Develop/amend policies and procedures for the corporate security of the Agency, including for DMS, in line with the EU rules and the quality project	Number of policies/procedures established/amended	Q2	
Task 3.2 Ensure the physical security of the headquarters in liaison with the NSA  100% of facilities accredited/reaccredited 100% of reported incidents investigated and treated		Q1-Q4	
Task 3.3100% of PSC's administrated in liaisonAdministrate the GSA staffwith the MS's NSAPSC's and authorisations100% of the authorisations		Q1-Q4	





	administrated		
Task 3.4 Administrate the GSA Central EUCI Register and checking decentralised registers	100% guarantee of compliance with 2001/844/EC for the central end decentralised registers	Q1-Q4	
Task 3.5  Develop the security training plan for GSA personnel and ensure the implementation at GSA facilities	Approval of the corporate security training plan; checking the implementation at GSA headquarters, GSMC and GSC.	Plan by Q1 2014; Check by Q4 2014	
Task 3.6 Administration of keys for the various groups (GNSS SB, SAB, GSAP, etc)	Timely generation, distributing and administration of keys for all groups.	Q1-Q4	
Task 3.7 Prepare the GSA secured networks for accreditation by the SAA	Decision by the SAA to accredit the GSA secured network RUEs	Q1 2014 if IT infrastructure deployed by December 2013	
Task 3.8 Ensure the security aspects of the extension of the Prague HQ facilities	In view of the full occupation of the Prague HQ by January 2015, preparation and implementation of the security related aspects in coordination with the relevant services of the Agency and of the Czech authorities	Q1-Q4	
Task 3.9 Ensure industrial security in line with EU rules	Advising and preparing on security aspects of GSA industrial contracts. Guarantee 100% compliance with 2006/548/EC	Q1-Q4	
Task 3.10 Develop security oversight procedures and ensure the implementation at GSA facilities in compliance with 2001/844/EC	Approval of a corporate security oversight plan; implementing the plan at GSA headquarters; checking the implementation at GSA headquarters, GSMC and GSC.  100% compliance with 2001/844/EC	Plan by Q1 2014; Check by Q4 2014	

#### 4. SUPPORT TO SECURITY REQUIREMENTS & STANDARDS

In order to ensure the performance of these activities and optimize the interaction with the European Commission, the following tasks fall within the responsibilities of the Agency under the EC-GSA Working Arrangement $^{14}$  on GNSS Security Board and associated Working Groups: Task 4.1 to 4.14.

Task	Indicators	Timing	
Task 4.1  Participate in the meetings of the GNSS Security Board and its working groups , contribute to the reporting associated to the WG-PRS, the WG-NET, the WG-PCI, the TF-Control, and the TF-Launch, or any ad hoc group created under the GNSS Security Board roadmap as requested by the EC		Q1-Q4 2014, as required	
Task 4.2 Support flow-down implementation of the CMS		2014, as required	
Task 4.3 Participation in accreditation reviews under the IOV and FOC contracts		Q1-Q4 2014, as required	
<b>Task 4.4</b> Participation in Security Accreditation Quarterly Meetings convened by the Commission involving the Agency, ESA and industry as relevant, as a means to prepare and coordinate for the security accreditation of the		Q1-Q4 2014, as required	

<sup>&</sup>lt;sup>14</sup> As defined in the "Agreement in the form of Exchange of Letters on a Working Arrangement for the execution of security related tasks of the European GNSS programmes between the European Commission and the European GNSS Agency", Ref. ENTR/GP2 AN/am Ares (2010)1087450 dated 28 January 2011.





Galileo System and operations	
dames system and operations	
Task 4.5	
Consultation with the Commission, in the frame of the preparation of the Security Accreditation Board meetings, on the agenda and the roadmap of the SAB and list those decisions items that may have an impact on the program as early as possible, before the actual meetings with a view to facilitate the program impact assessment in time for the EC representative to be able to present such impact to the SAB	Q1-Q4 2014, as required
<b>Task 4.6</b> Participation as observer to the Program Change Control Board, the Program Management Meetings and, depending on the agenda, to the Quarterly Project Meetings	Q1-Q4 2014, as required
Task 4.7  Maintain the SSRS and other security requirements under a DOORS database for security accreditation purposes	Q1-Q4 2014, as required
Task 4.8 Support the EC in updating the Galileo SSRS and other security requirements, as required	Q1-Q4 2014, as required
Task 4.9 Support the EC in updating the GNSS (Galileo and EGNOS) security threats and vulnerabilities analysis and risk assessment	Q1-Q4 2014, as required
Task 4.10 Support the EC in establishing any relevant EGNOS security-related requirements	Q1-Q4 2014, as required
<b>Task 4.11</b> Update the security accreditation risk register, as required by events	Q1-Q4 2014, as required
Task 4.12 Update the plan of needed programme decisions to facilitate security accreditation decision, as required by events	Q1-Q4 2014, as required
Task 4.13 Report to the Commission the main issues/findings after each review	2014, as required
Task 4.14 Proposal for evolution of the SSRS3.9, based on an update of the Galileo Threat and Vulnerabilities study	2014, as required

#### 5. GENERAL SUPPORT TO THE EC ON SECURITY

## $ag{ASS}$ 4.1: EC-GSA WORKING ARRANGEMENT ON GNSS SECURITY BOARD AND ASSOCIATED WORKING GROUPS

In order to ensure the performance of these activities and optimize the interaction with the European Commission, the following tasks fall within the responsibilities of the Agency under the EC-GSA Working Arrangement $^{15}$  on GNSS Security Board and associated Working Groups: Task 5.1.1.

Task	Indicators	Timing
Task 5.1.1  Participate to the meetings of the GNSS Security Board and its working groups , contribute to the reporting associated to the WG-PRS, the WG-NET, the WG-PCI, the TF-Control, and the TF-Launch, or any ad hoc group created under the GNSS Security Board roadmap as requested by the EC	WG-PRS meetings inputs and outputs	As required

<sup>&</sup>lt;sup>15</sup> As defined in the "Agreement in the form of Exchange of Letters on a Working Arrangement for the execution of security related tasks of the European GNSS programmes between the European Commission and the European GNSS Agency", Ref. ENTR/GP2 AN/am Ares (2010)1087450 dated 28 January 2011.





#### TASK 5.2: SECURITY REQUIREMENTS & STANDARDS

In addition to the above the Agency can provide technical assistance to the European Commission for the following tasks: 5.2.1, 5.2.2, 5.2.3

These tasks are broken down into the following sub-tasks:

Task	Indicators	Timing
Task 5.2.1 Provide technical engineering support on security aspects to the EGNOS and Galileo exploitation teams		As required
<b>Task 5.2.2</b> Provision of technical, secretarial and logistical support to the WG-PRS and WG-NET		As required
<b>Task 5.2.3</b> Preparing documents in the form of minutes, technical notes analysis or draft DCNs, as required, depending on the topics		As required

6. EC-GSA WORKING ARRANGEMENT ON PRS USER SEGMENT		
Task 6.1 Participation to the WG-PRS	Regularly report on the progress of PRS User Segment implementation tasks and the Agency expertise support contracts	As required
Task 6.2 Technical assistance to the EC (I)	Consolidation of the concept of ultra-low cost PRS receivers (no SM)	Q1 2014
Task 6.3 Technical assistance to the EC(II)	Develop studies to minimise the complete cost of PRS receivers taking into account the price of human resources, key management, maintenance, etc. on the duration of life of receivers	Q1-Q4 2014
Task 6.4 Technical assistance to the EC(III)	Support the development of demonstrators of PRS receivers, in particular those which are adequate for the purpose of trials foreseen in the PRS Pilot Projects (e.g.   ULTRA)	Q1-Q4 2014
Task 6.5 Technical assistance to the EC(IV)	Develop roadmaps, trials, and the development of facilities particularly in support of Early Services	Q1-Q4 2014
Task 6.6 Technical assistance to the EC (V)	Prepare documents in the form of minutes, technical notes, analysis, draft Statement of works, draft contracts or draft Document Changes Minimum notices, as required, depending on the topics	As required

## 7. ORGANISATION

The Security Department will in 2014 continue its capacity-building, refine its organisation, notably to accommodate the changes stemming from the amended GSA regulation and the Quality certification project.

The Security Standards and Requirements Section will be further developed

These tasks are broken down into the following tasks: 7.1 to 7.4.

Task	Indicators	Timing
<b>Task 7.1</b> Complete the organisation of the Security Department in	New organisation chart	Q1 2014





compliance with the applicable EU legislation		
Task 7.2 Ensure the recruitment of qualified staff as per the establishment plan	100% of positions filled	Q4 2014
Task 7.3 Establish processes for the Security Department in compliance with the applicable EU legislation and the quality certification project	Establishment of procedures for all main processes of the department	Q3 2014
Task 7.4 Administrate the contracts managed by Security Department	Administrate existing contracts (except Security Accreditation)	Q1-Q4 2014





## 7.2. GALILEO SECURITY MONITORING CENTRE (GSMC)

#### **Main Objectives Overview - 2014**

- 1. Continue provision of GSMC Nucleus and enhance capabilities
- 2. Continue GSMC Organisational Processes Design
- 3. Contribute to Operational Equipment Developments selected validation
- 4. Completion of GSMC relocation

19 See Appendix II for a summary of all actions implementing these objectives.

#### 7.2.1. Objectives and Priorities

The GSMC has a broad mission to prepare itself to become capable of delivering all of its IOC GSMC missions. Four types of activities will contribute to that end:

- GSMC Nucleus: provided in the interim period until full GSMC capability is available, offering early security monitoring and reaction capabilities. The capabilities of the GSMC nucleus will be implemented following a phased approach, with incremental increases in the capabilities provided.
- <u>GSMC Organisational Design</u>: ramp-up , including organisation, processes, and getting operational validation/accreditation.
- Contribution to Operational Equipment Developments: as future user of Galileo IT operational equipment, the GSA GSMC team will contribute to design specifications and reviews in order to ensure that the GSMC equipment (and the information it can get from or modify into the rest of the Galileo system) is appropriate for the long term missions.
- <u>Hosting Infrastructure Agreement:</u> ensuring that the building infrastructure that will be provided by FR/UK is appropriate for the long term missions and establishing the long term agreements needed to that end.

These activities are based on the following framework documents:

- COUNCIL JOINT ACTION 2004/552/CFSP of 12 July 2004 on aspects of the operation of the European satellite radio-navigation system affecting the security of the European Union (2004/552/CFSP – 12/07/2004);
- France and United Kingdom offer to host the Galileo Security Monitoring Centre (CNES/2009/17 - 26/11/2009);
- Galileo High Level Schedule and Key Milestones (GAL-PL-ESA-SYST-X-0283 V1.1 30/11/2011);
- Galileo Security Monitoring Centre Infrastructure Requirements (GSMC IRD GAL-IRD-ESA-SITE-X/0002 - V2.1 - 25/03/2011);
- Statement of Work for the Procurement of Hosting Services for the Galileo Security Monitoring Centre (GSMC - ESA-D/NAV-NG-GD-SOW-GCCB-4814 - V2.1 - 25/03/2011);
- Pre-GSMC Security Monitoring: GSMC Nucleus (ENTR/GP3/PH sp ARES 667007 09/06/2011);
- Galileo High Level Operations Concept (HLOC Ares(2011)1318522 V1.0 01/12/2011);
- GSF Operations Statement of Work (Ares(2011) 746309 06/07/2011);
- Statement of Work for the Procurement of Hosting Services for the Galileo Security Monitoring Centre (GSMC - ESA-DNAV-NG-GD-SOW-GCCB-4814 - Issue 2 Rev. 1 -25/03/2011);
- Galileo Security Monitoring Centre Infrastructure Requirements (GSMC IRD GAL-IRD-ESA-SITE-X/0002 Issue 2 Rev. 1 25/03/2011).

Moreover, the Agency shall follow up on the relocation of the GSMC to France and UK achieved in 2013. In order to accomplish this objective, the Agency shall:





- 1. Finalise all the contracts and agreements required to operate the GSMC sites
- 2. Keep on deploying the necessary ICT and Logistics infrastructure in both sites
- 3. Establish and maintain efficient communications with the Agency HQ in Prague from both sites

#### 7.2.2. Summary of Main Tasks in 2014

## Main Tasks in 2014 GSMC

#### TASK 1: GSMC NUCLEUS ACTIVITIES

Since the first launch of the operational satellites the partial implementation of GSMC functionality has been considered necessary by the SAB. In this context the Agency has established the GSMC nucleus which is guarantees some GSMC functions, with reduced scope and objectives, until the GSMCs are deployed and fully operational.

The Agency will need to ensure that it continues to fulfil and strengthen this role with respect to the operation of the GSMC Nucleus in line with Galileo security requirements and arrangements agreed in the second half of 2011 with the Commission, ESA, EEAS and Member States to provide Galileo security monitoring in advance of the completion of the GSMC

Further, the GSMC Nucleus, with the support of the GSA CDA, will need to support the provision of access to PRS Keys to PRS pilot Member States who wish to access the signal in space during the IOV programme phase.

Task	Indicators	Timing
Task 1.1  Continue the operation of the GSMC Nucleu – permanent with a level of unavailability lo	Q1-Q4 2014	
Task 1.2 Prepare the GMSC security monitoring and	reaction capabilities for the early services in 2014	Q1-Q4 2014
Task 1.3 Support the access to PRS keys in accordar security and PRS	ce with the agreed operational interfaces and scenarios for	As required in 2014
	Security Chain of Command, including validation and opment, testing and qualification of related procedures, ain of command up to final configuration	Q2-Q3 2014
Task 1.5 Update GSMC CONOPS		Q4 2014
Task 1.6 Technical support in the definition of crypto maintenance policy	No policy exists as of October 2012 on the management of crypto material in normal operation, i.e. crypto period and the maintenance of the PRS Tree. The scope of this activity is to provide technical support to the CDA team in drafting a policy that would find a balance between the security needs and the operational costs	Q2-Q3 2014
	Create a GSMC COMSEC technical channel	Q1-Q4 2014
	Create a GSMC COMSEC account identified by the relevant COMSEC body within the EU and the Member States	Q1-Q4 2014
	Control and safeguard GSMC COMSEC material held by the Agency	Q1-Q4 2014
<b>Task 1.7</b> Support to the CDA (operational tasks)	Establish and periodically test general GSMC COMSEC procedures and emergency plans	Q1-Q4 2014
	Define the first immediate actions to be performed in case of an unexpected event that could affect crypto/CCI security	Q1-Q4 2014
	Centralise the accounting of GSMC COMSEC material, without prejudice to the provisions of Decision 1104/2011/EU	Q1-Q4 2014





	Centralise shipment tracking of GSMC COMSEC material (system, receivers, components), without prejudice to the provisions of Decision 1104/2011/EU  Perform periodical security briefings to guarantee the constant appropriate use of the GSMC cryptographic systems	Q1-Q4 2014 Q1-Q4 2014
	Implement CDA instructions as needed	Q1-Q4 2014
Task 1.8 Specific operational tasks of the FKC during each Launch Campaign	-Carry out FKC-Steps 1 to 11	During each launch campaign in 2014

#### TASK 2: INITIAL SITE HOSTING OPERATIONS

The GSMC team will implement the provisions of the Hosting Statement of Work. Where needed, procurements will be finalised to fully meet the Statement of Compliance<sup>16</sup> issued therefore (e.g. FR maintenance<sup>17</sup> and guarding, use of the security support services contract).

### TASK 3: GSMC ORGANISATIONAL DESIGN

Building the GSMC organisation from all perspectives will be the primary task of the GSMC team throughout the 2013-2015 horizons. Activities will gradually ramp-up in parallel with the expected delivery time frame of the building infrastructure (mid 2013-early 2014) and of the operational equipment (end 2013-2014).

These tasks are broken down into the following sub-tasks:

Task	Indicators	Timing
	All GSMC operational, technical and administrative procedures necessary for contributing, as requested by the Programme, to the integration and testing of GSMC equipment in place and operators trained on these procedures	Q3 2014
Task 3.1	All specific CDA operating procedures defined, tested and qualified	Q3 2014
Design of the operational, technical and administrative procedures	Draft rules and procedures to cover shift working, shift allowances and on call procedures	Q2-Q3 2014
	Draft emergency recovery procedures	Q2-Q3 2014
	Update GSMC Business Continuity Plan	Q4 2014
Task 3.2 Management of GSMC project	Overall GSMC project coordination	Monthly coordination meetings with all stakeholders involved

 $<sup>^{16}</sup>$  Final one to be issued as part of SAR milestone data package summer 2013

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<sup>&</sup>lt;sup>17</sup> FR will only deliver inputs at end of July 2013, so award of contracts may only be in begin of 2014.





	Update of GSMC Recruitment Plan (2014-2017)	Q1 2014
	Update GSMC Risk Register	as required in 2014
Task 3.3	Support to the PRS pilot project, including the PRS receivers development and the definition of PRS service	Q1-Q4 2014
	Support to the definition of Joint-Action implementation concepts in case of international crisis situations, as described in 2004/552/CFSP	
Support to the GSA PRS team on the preparation of PRS service provision	Define the standard to perform the technical assistance to Competent PRS authorities requesting the support of the Agency in order to perform their task	As requested
	Maintenance, exploitation, validation and update of MODAF simulator as an off-line expertise tool of the GSMC supporting PRS access.	As requested

#### TASK 4: EC-GSA WORKING ARRANGEMENT ON GSMC18

In order to ensure the performance of these activities and optimise the interaction with the European Commission, the following tasks fall within the responsibilities of the Agency under this working arrangement: **Task 4.1**, **Task 4.2**.

In addition to the above the Agency can provide technical assistance to the European Commission with the following tasks: Task 4.3, Task 4.4, Task 4.5, Task 4.6, Task 4.7, Task 4.8, and Task 4.9.

This task is broken down into the following sub-tasks:

Task	Indicators	Timing
Task 4.1 Responding in time to any EC request, for runder the IOV, IOC and FOC phases linked	eview of documentation produced by the Galileo Programme to the GSF and CMS	Q1-Q4 2014
Task 4.2 Participation as observer to the Program Ch depending on the agenda, to the Quarterly	ange Control Board, Program Management Meetings and, Project Meetings	Q1-Q4 2014
Task 4.3 Support the definition and update the GSMC required by events	development plan under the responsibility of the EC, as	Q1-Q4 2014
Task 4.4 Definition and update of the GMSC risk regineration	ster in coordination with the EC, as required by events	Q1-Q4 2014
Task 4.5 Support the definition and update of the plan of needed program decisions under the responsibility of the EC, to facilitate operation hand-over to the Agency, as required by events		Q1-Q4 2014
Task 4.6 Provide a report to the Commission of the main issues/findings after each review		Q1-Q4 2014
Task 4.7  Participate in the monitoring of the GSF (GSMC & POC-P) infrastructure development and deployment in order to prepare the recruitment, training and deployment on sites of the staff in charge of operating the Galileo Security Centre. For the POC-P to be deployed in Member States, the Agency will contribute to develop guidelines and, if needed, to develop training		Q1-Q4 2014
Task 4.8  Follow-up the GSF technical definition and procurement undertaken by ESA in order to develop the knowledge and expertise associated to its future role of operator for the Galileo Security Monitoring Centre and for contributing to the gualification of the GSF when requested by the Galileo Programme		Q1-Q4 2014
Task 4.9  Contribute to the consolidation of the operational interfaces and scenarios for security and PRS and develop the corresponding operational procedures, especially taking into account the management of the GSMC interfaces, for approval by the Commission		Q1-Q4 2014
Task 4.10 Contribute in the specification and validation	n of the "Man-Machine Interface" and develop tools, with the	Q1-Q4 2014

<sup>&</sup>lt;sup>18</sup> As defined in the "Agreement in the form of Exchange of Letters on a Working Arrangement for the execution of security related tasks of the European GNSS programmes between the European Commission and the European GNSS Agency", Ref. ENTR/GP2 AN/am Ares (2010)1087450 dated 28 January 2011.

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close cooperation of ESA for the validation of the simulations, to anticipate the installation of GSMC & POC-P and to optimize the use of the system. Some of the tools will be MS oriented

#### TASK 5: CONTRIBUTION TO OPERATIONAL EQUIPMENT DEVELOPMENTS

This task is broken down into the following sub-tasks:

Task	Indicators	Timing
	or review of documentation produced by the Galileo udes also the support to the deployment and qualification of	Q1-Q4 2014
<b>Task 5.2</b> Participation as Member in the Programme (	Change Control Board (PCCB)	As required in 2014

#### TASK 6: HOSTING INFRASTRUCTURE AGREEMENT

This task is broken down into the following sub-tasks:

Task	Indicators	Timing
Task 6.1 GSMC sites (Saint Germain en Laye and Swanwick) secured and accredited by the SAA		As required in 2014
Task 6.2  Hosting Provider contract manager: The GSA will manage the hosting agreement relationship with France and UK that have committed to deliver the building infrastructure for the GSMC.		Q1-Q4 2014
Task 6.2 Equipment 1st line Maintenance: The GSA will perform 1st line maintenance (check and spare parts exchanges only) on the building infrastructure and on the operational equipment (based on instruction manuals provided by FR/UK and ESA/WP2 provider respectively).		Q1-Q4 2014

#### TASK 7: DEPLOY THE NECESSARY ICT AND LOGISTICS INFRASTRUCTURE IN BOTH SITES

Requires the preparation of a detailed technical project, its adaptation to the actual budgetary situation and the operational requirements of the GSMC and then procurement of the equipment and the subsequent engineering work. This task is broken down into the following sub-tasks:

Task	Indicators	Timing
Task 7.1  Procure, install, configure and deploy the new infrastructure for the GSMC (support to operations, administrative network, GRUE network)	Infrastructure in place	As required in 2014
<b>Task 7.2</b> Ensure the successful accreditation of all systems (extensions of systems deployed previously in the Prague HQ)	Accreditation decision – Approval to operate or interim approval to operate	As required in 2014

## TASK 8: ESTABLISH AND MAINTAIN EFFICIENT COMMUNICATION WITH THE AGENCY HQ IN PRAGUE FROM BOTH SITES

Following the setup of the ICT infrastructure in the GSMC we will need to establish secure and reliable communication channels with the Prague HQ and with the other GSA sites. This task is broken down into the following sub-tasks:

Task	Indicators	Timing
Task 8.1 Establish/maintain connectivity with Agency HQ in Prague via GRUE WAN up to Restreint UE (voice, video, data)	Link operational and accredited	As required in 2014





Task 8.2		
Establish/maintain connectivity with Agency HQ via SINA up to Secret UE (voice, video, data)	Link operational and accredited	As required in 2014

#### TASK 9: PREPARATION OF GSMC SERVICE SUPPORT FUNCTIONS

The GSMC needs to prepare the activities and functions which are necessary to support the main services will provide. These functions are not part of the core GSMC service deliverables but are additional activities which are necessary in order to ensure the smooth delivery of PRS Access Control, Security Monitoring and Crisis Management services to the various customers of the GSMC. This task is broken down into the following subtasks:

Task	Indicators	Timing
Task 9.1 Preparation of GSMC Customer Interactions: Support EC and ESA in the interfaces with EEAS, CPA and WP6	GSMC interface procedures	Q1-Q4 2014
Task 9.2 Preparation of GSMC Service KPIs: The GSF Operations Statement of Work requires the GSMC to develop and propose a set of Key Performance Indicators for GSMC operations.	Development of a set of KPIs for GSMC Operations	Q1-Q4 2014





#### 7.3. MARKET DEVELOPMENT

#### **2014 Overview**

- 1. Support market readiness for the launch of Galileo early services (Q4 2014)
- 2. Implement market development actions focused on receiver manufacturers and early adopters
- 3. Continue implementation of adoption roadmaps for EGNOS in priority markets
- 4. Update market information monitoring process and technology monitoring process of key players in the value chain

₩See Appendix II for a summary of all actions implementing these objectives.

#### 7.3.1. Objectives and Priorities

2014 is the year of a key milestone for the Galileo programme: the declaration of Early Services. In line with the early services communication strategy, the GSA Market Development will intensify actions towards the decision makers of adoption in the value chain, such as companies and organisations involved in those market segments with long lead-time for adoption and receiver manufacturers, to support market readiness in this critical phase of the programme.

GSA Market Development support to user and value chain stakeholders' management via Galileo Service Centre will be another important priority in support of Galileo exploitation preparation activities.

The GSA Market Development activities will endeavour to translate user needs into requirements and inputs to Galileo service development in order to maximise the system competitiveness.

Actions towards strengthening the current market position and adoption of EGNOS will be continued in all priority markets. In some market segments, such as Road and Rail, a common value proposition of EGNOS and Galileo will be provided.

Finally, Market Development will continue the horizontal activities: market and technology monitoring processes.

#### 7.3.2. Summary of Main Tasks in 2014

## Main Tasks in 2014 Market Development

#### TASK 1: E-GNSS OVERALL USER ENTRY STRATEGY

This task will focus on the analysis of the overall market portfolio of EGNOS and Galileo services, defining target market sub-segments by service among the priority markets identified by EC GNSS Application Action Plan. This activity will be complemented by the development of by market segment high level adoption plans.

Already in 2013 the GSA has conducted consultations with stakeholders to review and confirm the EGNOS v3 requirements. This task will continue also at the beginning of 2014.

Sub-Task	Indicators	Timing
<b>Sub-Task 1.1</b> Early services value proposition key markets	Revised report on requirements and benefits of early services to receiver manufacturers and application and service developers	Q1 2014
Sub-Task 1.2  Development of market adoption plans in line with new EC GNSS Application Action Plan for Galileo and EGNOS	Adoption plans per segment	Q4 2014





Sub-Task 1.3  Review of user requirements for EGNOS v3, with special focus on emerging needs in maritime and rail	Final contribution to EGNOS v3 requirements per market	Q1 2014
Sub-Task 1.4  Develop an authentication service portfolio for different users categories (governmental, professional and mass market)	Consolidation of Authentication portfolio analysis, taking into account different Galileo services (PRS, CS, OS)	Q3 2014
Sub-Task 1.5 Promote user pilot projects as tool to demonstrate Galileo performances and foster adoption	Define and implement user pilot projects in priority segments, including Early Services testing	Q1-Q4 2014

#### TASK 2: GALILEO AND EGNOS USER DEVELOPMENT IN AVIATION

The GSA action plan calls for the acceleration of adoption of EGNOS in European aviation, developing roadmap for the period 2014-2016 in ECAC (Task 2.1) and provide support to stakeholders and users (Tasks 2.2 and 2.3) including short term promotion activities.

Targeted assistance to ANSPs and operators to implement LPV is needed. Some Member States are not yet ready to launch LPV implementation plans which means further action should be taken by the GSA, taking account of varying key user segment requirements and flying characteristics.

In the medium term, an adoption strategy considering EGNOS evolution and Galileo is needed to ensure penetration, via focused R&D on advanced procedures, addressing multi-constellation in relevant international groups (i.e. ICAO, RTCA).

This task is broken down into the following sub-tasks:

Sub-Task	Indicators	Timing
Sub-Task 2.1  Definition of aviation adoption roadmap in the field of aviation through EGNOS (in the short term) and Galileo (in the mid/long term) in ECAC	Aviation adoption roadmap. Evaluation of specific KPI: Target airports at national level on annual basis Target operators flying to priority aerodromes Map of decision makers at national level Strategy for Galileo market entry	Q4 2014
Sub-Task 2.2 Support to implementation of EGNOS procedures	CAA/ANSP supported, MS supported, ANSPs with EGNOS deployment plan, airports with procedures.	Q1-Q4 2014
Sub-Task 2.3 EGNOS adoption by EU Regional Airlines (RA)/Business aviation (BA), General aviation (CA)	RA Airlines, GA/BA operators equipped with EGNOS enabled receivers and operationally approved aircraft	Q1-Q4 2014
Sub-Task 2.4 Galileo SAR market development	Establish a roadmap for introduction of Galileo in aviation SAR beacons	Q3 2014

## TASK 3: GALILEO AND EGNOS STAKEHOLDERS AND USER MARKET DEVELOPMENT IN ROAD APPLICATIONS

In 2014, the GSA will focus on Road Pricing, ensuring that new road user charging schemes for trucks adopt Galileo and EGNOS and will continue implementation of the roadmap for existing schemes. In eCall, building on the adopted guidelines, the GSA will engage eCall solution providers to include Galileo and EGNOS as from the first generation of devices. Finally, following the positive experience of Road Pricing, we will implement and obtain stakeholder endorsement of Galileo and EGNOS adoption roadmap for Advanced Driving Assistance Systems (ADAS) and connected vehicles.

Sub-Task	Indicators	Timing
Sub-Task 3.1 EGNOS and Galileo adoption for Road User	EGNOS and Galileo adopted in one new truck tolling scheme (if political decision to implement the new tolling	Q4 2014





charging in new tolling schemes	scheme is confirmed)	
Sub-Task 3.2 Continuation of EGNOS and Galileo ASECAP roadmap implementation for existing tolling schemes, delivering first action in 2013	One additional action successfully implemented among the 5 agreed within ASECAP roadmap	Q4 2014
Sub-Task 3.3 EGNOS and Galileo market development for adoption in e-call call and other public emergency services	eCall products that include EGNOS and/or Galileo	Q1-Q4 2014
Sub-Task 3.4 Galileo adoption roadmap for advanced driver assistance systems and new safety applications based on connected vehicles	Roadmap endorsed by main stakeholders	Q4 2014
Sub-Task 3.5 Galileo authentication for regulated/standardised applications (e.g. digital tacograph)	Feasibility assessment for the inclusion of Galileo authentication in regulated applications	Q4 2014
<b>Sub-Task 3.6.</b> Identification of sub-segments' priorities for standardisation actions aiming at adoption	Standardisation priorities identified in consistency with the overall strategy established annually by the DG-ENTR plan.	Q4 2014

#### TASK 4: GALILEO AND EGNOS STAKEHOLDERS AND USER MARKET DEVELOPMENT IN AGRICULTURE

Market Development activities for Precision Agriculture were so far focussed mainly on EGNOS.

As Galileo adoption will start to materialise progressively from the start of Galileo Early Services in 2014, impacting Precision Agriculture, a market entry approach and its implementation will be defined.

As awarded in 2013 along with EGNOS market entry, a prize for young farmers (students and young professionals) will be developed as a proposal to complement the Galileo market entry with fresh and innovative application ideas, involving the next generation of farmers accordingly in the programme. Thus, this prize shall be renewed with a shifting emphasis on Galileo also in 2014.

Finally, the Agricultural market is positioned over application borders between GNSS and Earth Observation. Synergies with Copernicus from a precision agriculture perspective will become more tangible.

Sub-Task	Indicators	Timing
Sub-Task 4.1	Analyse impact of current and future complementary technologies to GNSS and other GNSS along the Galileo implementation timing  Analyse how Galileo will impact the different field	Q3 2014
Analysis of expected impact of Galileo	operations for Precision Farming and define the value proposition for:  • Precision Farming applications  • Galileo features (OS, dual frequency, Commercial Service)	Q3 201 <del>4</del>
Sub-Task 4.2 Galileo market entry strategy	Based on the analysis above, development of market entry plan for  Precision Farming application Value proposition per Galileo, including Commercial Service Precise Positioning, vis-à-vis other technologies (including solo EGNOS/SBAS)	Q4 2014
<b>Sub-Task 4.3</b> Launch of the 2013 EGNOS and Galileo prize for young farmers	Design and preparation of prize for young farmers(based on lessons learnt from 2013 edition)	Q4 2014
<b>Sub-Task 4.4</b> Synergies between Galileo and Copernicus from the perspective of precision agriculture	Plan for reaping synergies between the two flagship programmes from the perspective of precision agriculture	Q4 2014





## TASK 5: GALILEO AND EGNOS STAKEHOLDERS AND USER MARKET DEVELOPMENT IN SURVEYING AND MAPPING

EGNOS is having a share in bringing Mapping applications and devices foremost from a professional user community (surveying) to non-professional users. With EGNOS an affordable entry solution is now achievable and an increasing number of EGNOS-only devices are on the market. This market share needs to be consolidated.

The EC, with the advent of Galileo (along with a multi-constellation / multi-frequency environment) has new opportunities also for the professional markets, i.e. the traditional and the surveyors' community, representing the "high end" of the market, with more stringent requirements. These markets are driven not only by the devices sold but also by the accompanying services.

Especially, the Galileo Commercial Service is expected to have an impact on this market landscape

This task is broken down into the following sub-tasks:

Sub-Task	Indicators	Timing
<b>Sub-Task 5.1</b> Consolidation of market position of EGNOS in the Mapping market	Report and plan confirming the shift from market entry to market consolidation for EGNOS	Q3 2014
Sub-Task 5.2 Leverage increased EGNOS functionality based on EDAS	Report and plan on new EDAS functionality to improve the positioning and share of EGNOS in Mapping	Q4 2014
<b>Sub-Task 5.3</b> Analysis of impact of EGNOS evolution	Investigation on expected impact of EDAS evolution and matching with user requirements	Q4 2014
<b>Sub-Task 5.4</b> Analysis of gradual influence of Galileo dual frequency capabilities	Analysis of expected impact on user level of Galileo dual frequency capabilities (combined with growing GPS III constellation)	Q4 2014
Sub-Task 5.5 Impact analysis of advent of Galileo Commercial Services	Analysis of expected impact on user level of Precise Positioning Galileo Commercial Service capabilities	Q4 2014

#### TASK 6: GALILEO AND EGNOS STAKEHOLDERS AND USER MARKET DEVELOPMENT IN MARITIME

In 2013 GSA and EC developed an entry plan on how to foster adoption of Galileo and EGNOS in maritime.

In particular, EC and GSA identified that the EGNOS transmission via AIS can foster EGNOS adoption and defined a specific actions plan which will be implemented starting from 2014. GSA will also conduct consultations with stakeholders in order to finalise EGNOS evolution requirements.

To ensure that Galileo can be implemented swiftly in the maritime domain, with the minimum of hold ups due to missing standards, lack of technical documentation, etc., GSA will engage in the following activities:

- support the recognition of Galileo by the IMO as the WWRNS and development of appropriate standards;
- assist in the development of standards and guidance for the development of multi constellation shipboard GNSS receivers.

Important service of Galileo for maritime use is Search & Rescue. In 2014 GSA will finalise the roadmap for fostering the adoption of this service, an activity already started in 2013.

This task is broken down into the following sub-tasks:

Sub-Task	Indicators	Timing
<b>Sub-Task 6.1</b> Transmission of EGNOS corrections via AIS: implement plan of actions	To be defined in 2013 in the action plan of EGNOS transmission via AIS	Q4 2014
Sub-Task 6.2 Galileo SAR market development	Final roadmap agreed with maritime stakeholders	Q3 2014
<b>Sub-Task 6.3</b> Support standardization process of	Recommendation on co-funding possibilities for EU participants	Q4 2014





GPS/Galileo receivers		
Sub-Task 6.4  Manage focus group associated to ERMF	Report from meetings organized with the stakeholders	Q1-Q4 2014

#### TASK 7: GALILEO AND EGNOS STAKEHOLDERS AND USER MARKET DEVELOPMENT IN RAIL

During 2012-2013, the agency activated the key stakeholders of the rail community and started to collaborate to find ways of working together towards adoption of EGNOS and Galileo solutions mainly in the area of railway signalling and asset management. The key EGNOS and Galileo applications with high adoption potential were identified in the area of Low density line signalling, ERTMS and railway operator asset management / logistics asset management. In 2013 the agency cooperated with UNISIG (a working group of UNIFE regarding railway signalling) on the requirements of the railway community on EGNOS v.3, which needs to be adapted in order to provide requested quality of services. In 2014, the agency will continue to strive for progress in EGNOS and Galileo adoption in the three key sub-segments as well as for positioning the future version of EGNOS as a component of the rail positioning and odometry solutions compliant with the safety and integrity specifications of the railway community.

This task is broken down into the following sub-tasks:

Sub-Task	Indicators	Timing
Sub-Task 7.1  Management of regular interaction with rail users to foster EGNOS and Galileo adoption	2 focus groups in 2014	Q1-Q4 2014
Sub-Task 7.2 User management for EGNOS V.3 requirements' definition and consolidation	User requirements consolidated	Q4 2014
<b>Sub-Task 7.3</b> Promotion of Galileo testing	Installation of Galileo ready receiver at a rail test site (to be specified)	Q4 2014
Sub-Task 7.4  Analysis of EGNOS and Galileo adoption potential in ERTMS evolutions and benchmarking with other Regions using GNSS for train control	Executive report on positioning and subsequent telecommunication solutions supporting the adoption of EGNOS and Galileo in Rail.	Q4 2014
Sub-Task 7.5 Identification of segment priority standardisation actions for adoption	Establish relation with rail standardisation bodies and ERA as the EU rail standardisation coordinator	Q1-Q4 2014

## TASK 8: STAKEHOLDERS AND USER MARKET DEVELOPMENT FOR GOVERNMENTAL APPLICATIONS (PRS)

In the years 2012 and 2013, the GSA has completed the market analysis of the main 3 sub-segments for Governmental applications of PRS (defence, public safety and security, critical infrastructures). Based on this, in 2013 the GSA has defined an overall entry strategy to accelerate the adoption of PRS. In 2014, the GSA will focus on critical infrastructure timing and synchronisation, designing a specific roadmap for adoption of Galileo Early services and obtaining the endorsement of main stakeholders. The GSA will also start the implementation of priority actions in the public safety and security segment.

This task is broken down into the following sub-tasks:

Sub-Task	Indicators	Timing
Sub-Task 8.1  Roadmap definition and implementation for adoption of Early PRS services for timing and synchronization for critical infrastructures	Roadmap endorsed by main stakeholders	Q4 2014
Sub-Task 8.2  Implementation of entry strategy actions to facilitate Early PRS adoption in public security segment (e.g. police)	2 priority actions implemented	Q1-Q4 2014

#### TASK 9: GALILEO AND EGNOS STAKEHOLDERS AND USER MARKET DEVELOPMENT IN LBS





In 2013 the Agency initiated its work on Location Based Services (LBS) as preparation for Galileo Early Services. In 2014 the activities should progress towards finalising and implementing the adoption roadmap. Within the overall adoption plan some tasks have been identified to investigate in more depth specific LBS application subsegments: mobile payments, personal tracking and 112 emergency calls.

This task is broken down into the following sub-tasks:

Sub-Task	Indicators	Timing
Sub-Task 9.1 Analysis of 112 emergency call application of Galileo	Report and action plan on capturing Galileo potential for 112 emergency call service	Q2 2014
Sub-Task 9.2 Finalize overall roadmap for Galileo adoption in LBS	Final roadmap for adoption	Q3 2014
Sub-Task 9.3 Implement the roadmap for Galileo adoption in LBS	KPIs will be defined within Sub-Task 11.3	Q4 2014 - 2016
Sub-Task 9.4  Mobile payments and other applications using authentication services	Report and action plan on capturing Galileo potential for authenticated mobile payment services	Q2 2014

#### TASK 10: MARKET MONITORING AND FORECASTING PROCESS

Annual review and update of the market monitoring and forecasting process (MMFP) with 2013 data sets and analysis of each market segment scenario, involving the panels of market and technology experts. Preparatory tasks for the publication of issue 4 of the GSA GNSS market report planned in 2015. Calculation of public benefits and impact on GDP updated with latest Galileo programme schedule and market trends. Measuring the EU companies market share in the world GNSS market.

This task is broken down into the following sub-tasks:

Sub-Task	Indicators	Timing
Sub-Task 10.1 Annual review update of the MMFP	Updated results of the MMFP Updated KPI list of GALILEO AND EGNOS adoption status along user segments of Tasks 2 to 9 Update calculation of GNSS impact on world/EU economies (currently estimated at 6-7%)	Q1-Q4 2014
<b>Sub-Task 10.2</b> Update of public benefits analysis	GALILEO AND EGNOS public benefits analysis updated	Q1-Q4 2014
Sub-Task 10.3 Preparation of GSA GNSS market report issue 4	Draft GSA GNSS market report	Q4 2014

#### TASK 11: TECHNOLOGICAL SCAN AND COOPERATION WITH GNSS RECEIVER MANUFACTURERS

Perform market research to understand the latest trends in location technology. Prepare long term vision of the development of location technologies and the Galileo and EGNOS positioning in future solutions. Accelerate cooperation with receiver and handheld manufacturers to facilitate integration of Galileo inside their products in view of Early Services.

This task is broken down into the following sub-tasks:

Sub-Task	Indicators	Timing
Sub-Task 11.1  Market analysis of the latest location technologies	Report on latest location technologies	Q2 2014
Sub-Task 11.2 Long term vision of Galileo and EGNOS use within future location solutions and applications	White paper on the future of GNSS technology solutions	Q4 2014





Sub-Task 11.3	Bi-annual meetings co-organised with EC	
Cooperation with receiver and handheld manufacturers	Report on Galileo adoption at receiver level (link with adoption on specific domains)	Q1-Q4 2014

#### TASK 12: USERS MANAGEMENT VIA SERVICE CENTRE SUPPORT TO MARKET DEVELOPMENT

As for EGNOS, the new ESP, on top of the operational and provision tasks, will support Market Development in its adoption plan implementation (defined by Market Development and updated every year) and will be subject to the outcomes of the users satisfaction process management which will identify potential areas for service improvements and adaptation of service levels. Market Development will perform a periodic users' satisfaction survey and manage ESP improvement process.

As for Galileo, since Early Services, with the first Galileo satellites in orbit, the key players in the value chain, long lead-time adopters and early adopters begin to implement the Galileo signals in their products. This entails technical questions on Galileo covering a vast possible range of topics.

The GNSS Service Centre (GSC) in Madrid is the first point of contact as for the initial service provision of Galileo. As the GSC is acting as interface between the user community and the system, it contains technical, infrastructure components and offers user related services and products. The GSC will also support Market Development in its adoption plan update and implementation to ensure adoption by the value chain, long lead-time adopters and early adopters starting since Early Services.

This task is broken down into the following sub-tasks:

Sub-Task	Indicators	Timing
Sub-Task 12.1 EGNOS ESP multimodal adoption plan update and implementation management	Multimodal adoption plan defined	Q4 2014
Sub-Task 12.5 Galileo GSC support to the adoption plan and implementation management	Multimodal adoption plan defined	Q4 2014
Sub-Task 12.2 EGNOS ESP users satisfaction process management	Conduct and analyse users satisfaction survey of the ESP service including proposed plans for improvement	Q1-Q4 2014
Sub-Task 12.3 Reporting on Galileo Early Services Performance	Monthly GSC reports on the performance of Galileo early services as from declaration based on data provided by the System Operator	Q4 2014
Sub-Task 12.4 GSC users satisfaction process management	Conduct and analyse users satisfaction survey of the GSC service including proposed plans for improvement	Q4 2014
Sub-Task 12.6 GSC users' and value chain management	Collect user requests and translate into services and requirements for further GSC ramp up (such as new features)  Leverage interaction with value chain to identify additional triggers for adoption acceleration for Galileo.	Q4 2014





#### 7.4. GENERAL ADMINISTRATION, IT AND LOGISTICS

#### 2014 Overview

- 1. Stabilise the new ICT and Logistics infrastructure in Prague
- 2. Establish efficient communication with the GSMC in France and UK
- 3. Implement an internal Document Management System for security documentation at RESTREINT UE level
- 4. Complete the implementation of an Integrated(Quality) Management System (E.g.: ISO, TÜV)
- 5. Support to GSA management, organizational strategies and risk management
- 6. Enhance and upgrade the new Administrative Platform

₩See Appendix II for a summary of all actions implementing these objectives.

#### 7.4.1. Objectives and Priorities

A large part of the Agency resources will be invested in financial and human resources tasks that ultimately underpin the core activities related to the deployment and provision of the European satellite navigation services as delegated by the Commission, the proper functioning of the Agency as an EU body with legal personality and the work of the Administrative Board.

The following tasks were included in Work Programme 2013 and are expected to continue or be finalised in the course of 2014:

- Supporting the work of the SAB;
- Quality management certification according to ISO 9001
- ISMS certification according to ISO 27001

On the administrative side, the Agency intends consolidate the services that support units provide to operational units in particular due to the Agency's layout as a multiple location entity.

In 2013 GSA defined and started implementing its Integrated Management System (IMS) as a more comprehensive variation of a Quality Management System (QMS) accommodating the complex Quality Architecture of the Agency that comprises an Information Security Management System (ISMS) as well. The IMS will be in compliance with the requirements posed by the European Commission under its Internal Control Standards and will fulfil as well the requirements set by its Safety Management System (SMS) for the exploitation in particular of EGNOS.

On the basis of the IMS, the GSA intends to secure an ISO 9001 Quality certification in 2014. This certification will cover key support, management and corporate-level operational processes. Throughout 2014, the Agency also intends to continue developing the IMS and implement key processes. Moreover some units of the Agency, such as the Galileo Exploitation, will evolve substantially during this time and the Agency will have to ensure that the processes it has defined remain fit for purpose.

ISO 9001 certification will be aligned with the ISO 27001 certification that will be obtained by the ICT unit as a result of the work done documenting and implementing the Agency's ISMS. As operator of the GSMC, the Agency intends to intensify the coverage of the ISO 9001 Quality certification extending it to apply to its specific operational processes.

The IMS is horizontal in nature and as such will affect all the units within the Agency. These actions will be coordinated by the GSA Quality Manager (Office of the Executive Director). The work started in 2013 and shall be completed in 2014.





To facilitate the execution and the implementation of the GNSS regulation and the new GSA regulation, as well as the new Delegated Agreements, additional Operational consultancy services for Office of the Executive Director would be required in course 2014.

The ICT and Logistics team will continue to provide GSA staff with the most efficient and suitable tools available in order to optimise their daily work, to improve collaboration and to reduce the amount of time spent on routine tasks. All projects shall be traceable and auditable and managed properly using Prince 2.

The objectives of the ICT and Logistics Department include:

- 1. Stabilising the new ICT and Logistics infrastructure after the basic setup and integration of the two new GSMC sites. The largest part of the IT and logistics deployment for GSMCs will take place in 2014, with 2013 only meeting its most basic needs;
- 2. Deployment of an internal Document Management System for security documentation at RESTREINT UE level;
- 3. Finalisation of the ISO 27001-based ISMS certification process;
- 4. Further development of the administrative software platform (SharePoint-based) in order to increase efficiency, decrease workload, avoid repetition, improve reporting from ad-hoc to near real-time, improve collaboration, remote access to work files and contribute to the overall savings in administrative costs;
- 5. Tender procedure for a new General IT Support contract.

#### 7.4.2. Summary of Main Tasks in 2014

Main Tasks in 2014 General Administration, IT and Logistics		
TASK 1: GENERAL FINANCIAL, LEGAL AND HUMAN RESOURCES SUPPORT		
Sub-Task	Indicators	Timing
Sub-Task 1.1 Legal and financial reporting	Timely review and submission of all Agency framework documents	Q1-Q4 2014
Sub-Task 1.2 Financial support	Timely execution of financial transactions	Q1-Q4 2014
<b>Sub-Task 1.3</b> Administrative support	Timely support to all departments on mission logistics and the day-to-day running of the Agency.	Q1-Q4 2014
Sub-Task 1.5 Legal counselling and Board support	Provision of timely and accurate legal notes and opinions General support to the Administrative Board meetings	Q1-Q4 2014
<b>Sub-Task 1.6</b> Procurement and contract management	Timely management of all procurement and contractual processes	Q1-Q4 2014
Sub-Task 1.7 Analysing key GSA processes	Identification of areas of potential improvements; development of key processes work flows; etc.	Q1-Q4 2014
Sub-Task 1.8 Integrated Management System	Complete minimum set of processes required under IMS	Q1 2014
Sub-Task 1.9 Quality certification	Secure ISO 9001 Quality certification	Q3 2014
Sub-Task 1.10 Implementation of an Integrated Management System	Implement and test key processes	Q1-Q4 2014
<b>Sub-Task 1.11</b> Operational consultancy services for Office of the Executive Director	Timely implementation of the GNSS regulation, the new GSA regulation, as well as the new Delegated Agreements	Q1-Q4 2014
TASK 2: ICT & LOGISTICS ACTIVITIES		





Sub-Task	Indicators	Timing
Sub-Task 2.1 Stabilising the new ICT and Logistics	Formal SLA with users for the provision of ICT & Logistical support services	Q1 2014
infrastructure after the setup and integration of the two new GSMC sites	Full compliance with the agreed SLA	Q4 2014
Sub-Task 2.2  Deployment of an internal Document  Management System on security  documentation at RESTREINT UE level	Compliant with requirement baseline established by GSA/SD and GSA/GSMC	Q4 2014
Sub-Task 2.3 Finalisation of the ISO 27001-based ISMS certification process (process was already started in 2013)	Formal certificate	Q2 2014
Sub-Task 2.4  Further development of the administrative software platform (Sharepoint-based) in order to increase efficiency, decrease	Mid-term review with the GSA management	Q2 2014
workload, avoid repetition, improve reporting from ad-hoc to near real-time, improve collaboration, remote access to work files and contribute to the overall savings in administrative costs	Year-end review with the GSA management	Q4 2014
Sub-Task 2.5	Launch of the procurement	Q1 2014
Tender procedure for a new General IT Support contract	Signature of the contract	Q4 2014





#### 7.5. COMMUNICATION

#### 2014 Overview

- 1. EGNOS and Galileo sector-specific Market Communication and Promotion
- 2. Supporting Galileo Exploitation and Early Services Communications
- 3. Strengthening of PRS Awareness-building
- 4. Strengthening GSA Corporate Communications

13 See Appendix II for a summary of all actions implementing these objectives.

#### 7.5.1. Objectives and Priorities

In 2014 the Agency's Communication activities will fall into four main categories:

- EGNOS Market Communications and promotional actions that aim to build on the positive steps taken to date in this domain and focus on building greater awareness and confidence leading to increased uptake of EGNOS amongst more users and new sectors and to begin to introduce the many benefits that Galileo will bring to each specific sector.
- Activities that support awareness-raising and confidence-building for Galileo exploitation and early services, in line with the European Commission's early services communication strategy.
- Continue to implement PRS awareness-building communication actions that help to explain and demonstrate the service and help support the process of preparing the market and the industry to be able to positively exploit the service when it becomes available.
- Corporate Communications actions that aim to position and solidify the image of the Agency, especially given its new responsibilities, new regulation and new locations.

These activities and actions will aim at achieving the following main objectives in 2014:

#### 1. EGNOS and Galileo sector-specific Market Communication and Promotion

<u>General objectives</u> – in support to the achievement of the overall objectives of the EGNOS Programme as defined in the EC Regulation on the implementation and exploitation of European satellite navigation systems planned to be adopted in 2013:

- Raise the overall positive awareness of the existence and high performance of EGNOS and its benefits as a confidence-building measure for European GNSS in general. Position EGNOS as the first successful step in the evolution of European GNSS with Galileo poised to add another dimension of increased service for users.
- Increase the awareness and understanding of EGNOS now, and Galileo soon, as a useful feature/enabling technology for application developers requiring more precise and reliable PNT information.
- Raise awareness of the results of EU GNSS Framework Programme Research and how it supports the growth of GNSS-powered business in Europe in general, and target industry sectors in particular.

<u>Sector-specific objectives</u>- in support of the Agency EGNOS Market Entry Strategy, as defined by the European Commission's Action Plan on GNSS Applications, issued on 14/6/2010:

- Aviation: To increase the awareness, credibility, support and acceptance of the benefits that EGNOS has for aviation in Europe, encouraging its further uptake by the community.
- Road: Increase awareness of and interest in what EGNOS today, and Galileo soon, brings to road applications to support adoption in the sector. (Focus on Road User Charging (RUC), eCall, Advanced Driver Assistance Services (ADAS), Pay per Use Insurance (PPUI).
- High Precision: Increase awareness of and encourage adoption of EGNOS (and EDAS) today, and Galileo soon, by organisations relying on high precision information (focus on precision agriculture, mapping, and surveying).





- Maritime: Continue to raise awareness of how EGNOS today, and Galileo soon, can benefit
  the sector. Focus on the benefits it can offer specific segments of the market (focus on
  commercial and leisure coastal and inland waterway navigation).
- Rail: Continue to raise awareness of how EGNOS today, and Galileo soon, can benefit the sector.
- LBS: Continue to raise awareness of how EGNOS today, and Galileo soon, can benefit the sector.

#### 2. Supporting Galileo Exploitation and Early Services Communications

 Support the European Commission in raising awareness and confidence in Galileo early services.

#### 3. PRS Awareness-building

- Stimulate interest and enhance knowledge of PRS and PRS pilot projects among potential participants.
- Increase understanding of the future PRS service, how it will work, and why it is needed.
- Raise awareness of why and how potential users, as well as related industry, should start preparing now for PRS.

#### 4. GSA Corporate Communications

- Define and clarify the evolving role and responsibilities of the European GNSS Agency.
- Raise positive awareness of the Agency, its activities and achievements.

#### 7.5.2. Summary of Main Tasks in 2014

Main Tasks in 2014				
Communication				
1. EGNOS AND GALILEO SECTOR-SPECIFIC MARKET COMMUNICATION AND PROMOTION				
TASK 1.1: IDENTITY AND BRANDING				
Sub-Tack Indicators Timing				

Sub-Task	Indicators	Timing
Task 1.1.1 Continue to expand the EGNOS communications sector messages, branding and identity, using the 'EGNOS. It's there, use it.' Campaign umbrella.	Branding used on all materials	Q1-Q4 2014
<b>Task 1.1.2.</b> Begin to encourage the Galileo early services message and branding into all communications.	Branding used on all materials	Q1-Q4 2014

#### TASK 1.2: PUBLICATIONS, ADVERTISING AND VIDEO

Sub-Task	Indicators	Timing
Task 1.2.1 Update/reprint EGNOS sector leaflets as required	5 revisions & reprints	Q4 2014
Task 1.2.2  Update sectorial advertising as necessary and run in trade magazines associated with sector-specific event sponsorship packages.	8 target specific ad insertions	Q4 2014





Task 1.2.3 Create a new video showing the benefits that EGNOS offers for rail applications that can be shown at relevant conferences, events and meetings a distributed via Internet channels	1 new EGNOS sector video (long & short version)	Q4 2014
Task 1.2.4 Update existing EGNOS sector videos as needed	2 updates	Q4 2014
Task 1.2.5 Leverage 'video-friendly' EGNOS milestones, such as flight trials and new application demonstrations by producing and distributing small videos of the achievements to relevant target user sectors	Film 3-4 new video-friendly demos	Q4 2014
TASK 1.3: INTERNET		
Task	Indicators	Timing
Task 1.3.1 Cover EGNOS sector-focused success stories, project results and milestones as regular and timely news stories on the EGNOS Portal	4-6 new news stories per month	
Task 1.3.2 Add, update and refine new relevant information, tools and helpful features on the EGNOS Portal	8-10 updates per month	Q4 2014
Task 1.3.3 Leverage social media tools (Twitter, Facebook, LinkedIn) to increase awareness of EGNOS and Galileo within the specific sectors	4 – 8 updates per moth	
TASK 1.4: NEWSLETTERS/DIRECT	MARKETING	
Task	Task Indicators	
Task 1.4.1 Publish regular electronic newsletters based on content from the EGNOS Portal and GSC websites	Quarterly newsletters	
Task 1.4.2 Leverage event participation lists to send targeted communications on EGNOS and Galileo to key potential users and influencers	Quarterly targeted mailings	Q4 2014
TASK 1.5: MEDIA RELATIONS		
Task	Indicators	Timing
Task 1.5.1 Raise awareness of key sector-related EGNOS and Galileo success stories, results, milestones, FP7 project results and demonstrations, GSA ESNC EGNOS prize winning applications, etc. amongst relevant media via on-going press releases, web stories and event contacts	5-6 targeted press releases	Q4 2014
Task 1.5.2 Leverage event participation and advertising placement to negotiate positive coverage of EGNOS and EGNOS applications in associated sector-focused	<ul> <li>On-going leverage of EGNOS Portal news stories</li> <li>Related event coverage in 4-5 event media channels</li> </ul>	





media channels					
Task 1.5.3  Build and maintain comprehensive sector-specific and relevant national, Europewide and international media lists in order to deliver timely well-directed messages to key media information multipliers.	Full, undated media contact list by sector accessible via email database.	Q2 2014			
Task 1.5.4 Leveraging the list above, deliver sector and market-related news on a regular basis on EGNOS and Galileo to the relevant media channels	8 press releases (PR) and 2 video news releases (VNR) delivered	Q4 2014			
TASK 1.6: EVENTS					
Task	Indicators	Timing			
Task 1.6.1 In 2014, the Agency plans to promote EGNOS and Galileo with exhibition stands and other promotional initiatives at a range of key events	Support of 10-12 EGNOS/Galileo sector-specific events	Q4 2014			
TASK 1.7: THE EUROPEAN SATELLE	TTE NAVIGATION COMPETITION (GALILEO MASTER	S)			
Task	Indicators	Timing			
Task 1.7.1 Continue support of this communications and networking tool and continue awarding the annual GSA Special Topic Prize	Agency sponsorship of 2014 contest and the awarding of an annual GSA Special Topic Prize	Q4 2014			
TASK 1.8: THE EUROPEAN SPACE E	EXPO (ESE)				
Task	Indicators	Timing			
Task 1.8.1 Leverage the creation and placement of the ESE (in cooperation with DG Enterprise, EC)	Update existing and create 1 new application kiosk as well as the supporting the successful placement of the ESE at key locations across Europe	Q1-Q4 2014			
TASK 1.9: CONFERENCES					
Task	Indicators	Timing			
Task 1.9.1 The Agency will organise together with the EC another European Space Solutions Conference in Prague	Organisation and Support	Q2 2014			
Task 1.9.2 he Agency will organise together with the EC the ICG-9 2014 in Prague	Organisation and Support	Q3-Q4 2014			
2.SUPPORTING GALILEO EXPLOITATION AND EARLY SERVICES COMMUNICATIONS					
TASK 2.1: IDENTITY AND BRANDI	TASK 2.1: IDENTITY AND BRANDING				
Task	Indicators	Timing			
Task 2.1.1.  Begin to encourage the Galileo early services message and branding into all communications.	Branding used on all materials	Q1-Q4 2014			





TASK 2.2: PUBLICATIONS & VIDEO				
Task	Indicators	Timing		
Task 2.2.1 Create a new video showcasing/introducing Galileo 'early services' and what this milestone means for specific sectors	1 video in 5 language versions	Q2 2014		
Task 2.2.2 Develop and distribute a promotional leaflet for the European GNSS Service Centre (GSC)	Development of a GSC leaflet	Q1 2014		
TASK 2.3: INTERNET				
Task	Indicators	Timing		
Task 2.3.1 Continue to add relevant content and tools to the European GNSS Service Centre (GSC) website	6-8 updates per month	Q4 2014		
TASK 2.4: NEWSLETTERS/DIRECT	MARKETING			
Task	Indicators	Timing		
Task 2.4.1 Mailing list early services	Mailing list targeting main industry actors	Q1 2014		
Task 2.4.2 Leverage mailing and media lists to raise awareness of Galileo early services message.	Creation/distribution 2-3 info mailings	Q2-Q4 2014		
TASK 2.5: EVENTS				
Task	Task Indicators			
Task 2.5.1 Communicate Galileo early services message at all events where the Agency participates in 2014	Approximately 15-20 events during the year	Q4 2014		
Task 2.5.2 Early services declaration	Provide organisational support in the preparation of the early service milestone	Q4 2014		
3. PRS AWARENESS-BUILDING				
TASK 3.1: IDENTITY AND BRANDI	NG			
Task	Indicators	Timing		
Task 3.1.1. Utilise Galileo PRS mark on all communications materials	Branding used on all materials	Q1-Q4 2014		
TASK 3.2: PUBLICATIONS & VIDEO	)			
Task	Indicators	Timing		
<b>Task 3.2.1</b> Revise and reprint the PRS brochure that describes the service, its applications and next steps	Revise and reprint brochure	Q4 2014		





<b>Task 3.2.2</b> Create a short video promoting the future benefits and applications of the PRS	Production of 5-7 minute video in EN	
TASK 3.3: INTERNET		
Task	Indicators	Timing
Task 3.3.1  Make available PRS developments and information on the security tab of the Agency's website	2-4 updates per month	Q4 2014
TASK 3.4: NEWSLETTERS/DIRECT	MARKETING	
Task	Indicators	Timing
Task 3.4.1 Create and distribute an e-newsletter to key PRS potential users, providing status report on the development, milestones, etc. to keep them information and interested in the service	Creation/distribution 2-3 newsletters	Q4 2014
TASK 3.5: EVENTS		
Task	Indicators	Timing
Task 3.5.1 Raise awareness of the Galileo PRS at select relevant events in 2014	Promote the PRS at 2-3 events during the year	Q4 2014
4. GSA CORPORATE COMMUNICAT	ions	
TASK 4.1: IDENTITY & BRANDING		
Task	Indicators	Timing
Task 4.1.1 Update Agency documents, signage & presentation templates as needed	Refined look for the Agency	Q1-Q4 2014
TASK 4.2: INSTITUTIONAL RELATI	TONS	
Task	Indicators	Timing
Task 4.2.1 Regular direct contact with key institutional stakeholders to present and explain who the Agency is, and what it does Task 4.2.2 Refinement of the GSA	Refinement and distribution of GSA fact file	Q4 2014
Information/Presentation File for institutional partners		
TASK 4.3: INTERNET		
Task	Indicators	Timing
Task 4.3.1 Continue update and to publish regular news and information on GSA activities on the Agency website	1 GSA-related news story and 4 – 6 info updates per month	Q4 2014





Task 4.3.2 Leverage social media tools (Twitter, Facebook, LinkedIn) to increase awareness of GSA activities in key areas	3-5 updates per month			
TASK 4.4: NEWSLETTERS/DIRECT MARKETING				
Task	Indicators	Timing		
Task 4.4.1  Refine and regularly distribute an electronic news bulletin on Agency activities and updates to key Agency stakeholders (i.e. GSA Member State bodies, relevant MEPs, EC partners, etc.)	Text, layout and distribution of 3 newsletters	Q4 2014		
TASK 4.5: MEDIA RELATIONS				
Task	Indicators	Timing		
Task 4.5.1 Seize opportunities with relevant media – via press releases, meetings and contacts, and the Internet – to reintroduce the Agency, its role, the activities it is involved in, and the results	3-4 GSA related press releases	Q4 2014		
it is achieving				
it is achieving	Indicators	Timing		





#### 8. IMPLEMENTING MEASURES FOR 2014

This work programme describes core tasks for adoption by the Administrative Board. The delegated tasks presented in it are for information purposes only. The breakdown of the core tasks' operational costs per action, as presented in this section, could be reviewed after the delegation agreement 2014/2020 negotiations are finalised. Should this be the case, a specific financing decision covering the core tasks will be submitted to GSA Administrative Board.

#### 8.1. GRANTS

There is no Basic Act authorising the GSA to launch its own Grant Scheme. Therefore, no grants are planned in 2014

#### 8.2. GRANTS IMPLEMENTED UNDER DELEGATION FROM THE EUROPEAN COMMISSION

New grants are planned to be implemented in 2014, under the Horizon 2020 programme and the EGNOS exploitation agreement.

#### 8.3. PROCUREMENT

The overall budgetary allocation reserved for operational procurement contracts in 2014 amounts to 6,741,260 EUR under the Agency's own budget.

The breakdown of the core tasks' operational costs per action, as presented in this section, could be reviewed after the delegation agreement 2014/2020 negotiations are finalised. Should this be the case, a specific financing decision will be submitted to GSA Administrative Board.





#### 8.3.1. Security Accreditation

#### 8.3.1.1. Provision of support to the GSA in the Security Accreditation activities

#### **LEGAL BASIS**

. GSA Regulation 912/2010 (Art. 2) . GNSS Regulation 1285/2013 (Art. 14)

#### **BUDGET LINE**

2200

Indicative number and type of contracts envisaged

1 procurement procedure to be launched for framework contract with 3 LOTS

Subject of the contracts envisaged (if possible)

Accreditation, security support, and penetration testing

Implementation

See previous sections for details

Indicative timeframe for launching the procurement procedure

Q1-Q2

Indicative budget

€ 1,040,00.00

Specific contract [if applicable]

3 specific contracts are foreseen

#### 8.3.1.2. Security Accreditation activities: direct support to Member States participants

#### **LEGAL BASIS**

. GSA Regulation 912/2010 (Art. 2) . GNSS Regulation 1285/2013 (Art. 14)

#### **BUDGET LINE**

3300

#### Type of expenditure

Operational expenditure

Indicative timeframe for implementation

Q1-Q4

Indicative amount of the call for tenders [not mandatory]

€ 360,000





#### 8.3.2. GSMC Operations

#### 8.3.2.1. External operational support for GSMC

#### LEGAL BASIS

. GSA Regulation 912/2010 (Art. 2) . GNSS Regulation 1285/2013 (Art. 14)

#### **BUDGET LINE**

3100

Indicative number and type of contracts envisaged

1 Specific Contracts based on existing FWC for Security Support Services (GSA/OP/04/12)

#### Subject of the contracts envisaged (if possible)

WP 5.01.00 Contract Project Management: this WP corresponds to the project management activities necessary to carry out all the other WPs.

WP 5.02.00 GSMC Procedures Development: this work package is broken down into a series of tasks related to the development of GSMC procedures for different parts of GSMC Operations. Each procedure shall be mapped to the GSMC ConOps Scenarios.

WP 5.03.00 Integration of a GSMC Training Management System: the aim of this work package is the Integration (also implementation if needed) of the GSMC Training Management System into the IT architecture of GSMC premises. The TMS shall be the framework that handles all aspects of the training process for GSMC. The TMS, integrated or connected to the (GSMC | GSA) Documentation Management System, will: 1) identify and assess individual, team and GSMC training goals; 2) deliver and manage instructional content; 3) track the progress towards achieving the established goals; 4) collect data and provide reports for supervising the training process.

WP 5.04.00 Preparation of GSMC Operations Training Courses: the aim of this work package is the preparation of the GSMC Operations Training Courses and the relevant examinations to them. This is a core part of GSMC since there are: 1) On-going operations, requiring staff to be trained with respect to the GSMC Nucleus activity and soon Early Services; 2) Operations preparations, which require a full Mission Operation team to be trained and certified before the main programme milestone (IOC); 3) Need for recurrent training, both to maintain an expert knowledge within the GSMC and to follow the update to the GSF equipment.

WP 5.05.00 Support to the GSMC Technical Team: the aim of this work package is to ensure 1) update of Interface Control Document (UK and FR); 2) Update of Verification Control Document (UK and FR); 3) Upgrade of Bi weekly Working Schedule, and KPI associated; 4) GSMC Maintenance Plan (UK and FR); 5) Configuration Management Plan; 6) GSMC evolution plan. WP 5.06.00 Preparation of GSMC Threat Scenario Coverage and GSMC Sub SSRS coverage: the aim of this work package is the preparation of the GSMC contribution to the system accreditation file by providing the first coverage of the GSMC Operations Threat Scenarios and a first view on coverage of the GSMC Operations Sub-SSRS coverage.

#### Implementation

See previous sections for details

Indicative timeframe for launching the procurement procedure

Q1

Indicative amount of the call for tenders [not mandatory]

€ 1,250,000

Specific contract [if applicable]

1 Specific contract

#### 8.3.2.2. Support to Security Monitoring

#### **LEGAL BASIS**

. GSA Regulation 912/2010 (Art. 2) . GNSS Regulation 1285/2013 (Art. 14)

#### **BUDGET LINE**

3100

Indicative number and type of contracts envisaged

1 procurement procedure for 1 framework contract ( $\in$  1,500,000) and 2 specific contracts are foreseen





#### Subject of the contracts envisaged (if possible)

Support to Security Monitoring and to the back office including expertise on configuration management of security events correlation tool, support in security maintenance of the GSMC information system (e.g. patching).

#### Implementation

See previous sections for details

Indicative timeframe for launching the procurement procedure

**Q2** 

Indicative amount of the call for tenders [not mandatory]

€ 200,000

Specific contract [if applicable]

2 specific contracts are foreseen

#### 8.3.2.3. Support to Chain of Command upgrade

#### **LEGAL BASIS**

. GSA Regulation 912/2010 (Art. 2)

. GNSS Regulation 1285/2013 (Art. 14)

#### **BUDGET LINE**

3100

Indicative number and type of contracts envisaged

2 framework contracts and 3 specific contract are foreseen

#### Subject of the contracts envisaged (if possible)

As requested by Security Accreditation Board in their recommendation with regards to IOV certificate the GSMC Nucleus will support the upgrade of Chain of Command, including procurement of secured communication with Member States, procurement of GSMC CSIRT tools for security monitoring and establishement of SLA with EU-CERT.

#### Implementation

See previous sections for details

Indicative timeframe for launching the procurement procedure

Q1-Q2

Indicative amount of the call for tenders [not mandatory]

€ 210,000

Specific contract [if applicable]

3 specific contracts are foreseen





#### 8.3.3. Market Development

#### 8.3.3.1. EGNSS user adoption

#### **LEGAL BASIS**

. GSA Regulation 912/2010 (Art. 2) . GNSS Regulation 1285/2013 (Art. 14)

#### **BUDGET LINE**

3100

#### Indicative number and type of contracts envisaged

In total 19 specific contracts based on existing framework contracts

#### Subject of the contracts envisaged (if possible)

Galileo Early Services and EGNOS user development in Aviation (5 Specific contracts) € 460,000

Galileo Early Services and EGNOS stakeholders and user market development in Road application (3 specific contracts) € 250,000

User entry strategy in E-GNSS− (2 specific contracts) overall € 250,000

Galileo Early Services and EGNOS stakeholders and user market development in Agriculture (1 specific contract) € 120,000 Galileo Early Services and EGNOS stakeholders and user market development in Surveying and Mapping (1 specific contract) € 120,000

Galileo Early Services and EGNOS stakeholders and user market development in Maritime (1 specific contract) € 100,000 Galileo Early Services and EGNOS stakeholders and user market development in Rail (1 specific contract) € 100,000 Stakeholders and user market development in Governmental applications (PRS) (1 specific contract) € 200,000 Galileo and EGNOS stakeholders and user market development in LBS (1 specific contract) € 150,000 Market Monitoring and Forecasting Process (1 specific contract) € 250,000

Technological scan and cooperation with GNSS receiver manufacturers (1 specific contract) € 200,000 Galileo user management via Service Centre support to Market Development (1 specific contract) € 100,000

#### Implementation

See previous sections for details

#### Indicative timeframe for launching the procurement procedure

01-04

Indicative amount of the call for tenders [not mandatory]

€ 2,300,000

#### Specific contract [if applicable]

In total 19 specific contracts based on existing framework contracts





#### 8.3.4. General Administration, IT and Logistics

# 8.3.4.1. Quality and safety certification of the GSA – "Consultancy services for ISO certification procedures"

#### **LEGAL BASIS**

. GSA Regulation 912/2010 (Art. 2)

. GNSS Regulation 1285/2013 (Art. 14)

#### **BUDGET LINE**

3100

#### Indicative number and type of contracts envisaged

2-3 specific contracts are envisaged based on existing FWC.

#### Subject of the contracts envisaged (if possible)

- ISO 9001 Certifying Body consultancy
- GSA Integrated Management System (IMS) implementation, Work Package II
- GSA IMS corporate training

#### Implementation

See previous sections for details

Indicative timeframe for launching the procurement procedure

Q1-Q4

#### Indicative amount of the call for tenders [not mandatory]

€ 300,000

Specific contract [if applicable]

2-3 specific contracts are foreseen

#### 8.3.4.2. Support to GSA management, organizational strategies and risk management

#### LEGAL BASIS

. GSA Regulation 912/2010 (Art. 2) . GNSS Regulation 1285/2013 (Art. 14)

#### **BUDGET LINE**

3100

#### Indicative number and type of contracts envisaged

2 low value procurement procedures; and 4 specific contracts based on existing FWC

#### Subject of the contracts envisaged (if possible)

There are several areas of potential interest for one or more contracts currently under consideration. The assignment/s will pursue a strategic forward looking assessment and will target at setting mid term leads for the Agency around one or more of the following topics: (i) the Agency as a Service Organization; (ii) Corporate Structure: implications for GSA's future organizational chart of the assumption of new operational capabilities in the operation of the Galileo System; (iii) Main guidelines for a Risk Management functionality related to an active operational role in EGNOS and Galileo systems; (iv) Enhancements to GSA's Integrated Management System.

#### Implementation

See previous sections for details

Indicative timeframe for launching the procurement procedure

Q1-Q4

#### Indicative amount of the call for tenders [not mandatory]

€ 281,260

Specific contract [if applicable]





4 specific contracts are foreseen





#### 8.3.5. Communication

#### 8.3.5.1. Communications events and Publication

#### **LEGAL BASIS**

. GSA Regulation 912/2010 (Art. 2) . GNSS Regulation 1285/2013 (Art. 14)

#### **BUDGET LINE**

3100

#### Indicative number and type of contracts envisaged

6 specific contracts based on the existing FWC:

- OIB event and signage Framework contract (with the company 'Creaset')
- GSA Conference and event participation Framework Contract (Lot 1)
- GSA , Publication, advertising and video works and website maintenance Framework contract ( lot 2)

#### subject of the contracts envisaged (if possible)

support to the communication events, European Space Expo Project , basic website maintenance ,publications, advertising and video works. Implementation

See previous sections for details

Indicative timeframe for launching the procurement procedure

Q1-Q4

Indicative budget

€ 600,000

Specific contract [if applicable]

6 specific contracts

#### 8.3.5.2. New website development and content for EGNOS and Galileo

#### LEGAL BASIS

. GSA Regulation 912/2010 (Art. 2)

. GNSS Regulation 1285/2013 (Art. 14)

#### BUDGET LINE

3100

#### Indicative number and type of contracts envisaged

4 specific contracts based on the existing FWC:

- OIB event and signage Framework contract (with the company 'Creaset')
- GSA Conference and event participation Framework Contract (Lot 1)
- GSA , Publication, advertising and video works and website maintenance Framework contract ( lot 2)

#### subject of the contracts envisaged (if possible)

Website development, content and maintenance.

Implementation

See previous sections for details

Indicative timeframe for launching the procurement procedure

Q1-Q4

Indicative budget

€ 200,000

Specific contract [if applicable]

4 specific contracts





## 8.4. OTHER ACTIONS

There are no other actions planned in 2014.



## ANNEX II - BUDGET 2014 AND ESTABLISHMENT PLAN OF GSA

## Budget adopted for 2014<sup>19</sup>

Title	The Paris	Appropria	tions 2014	Appropria	tions 2013
Chapter	Heading	Commitments	Payments	Commitments	Payments
1	STAFF				
1 1	STAFF EXPENDITURE	10 325 797	10 325 797	6 945 492,42	6 945 492,42
1 2	RECRUITMENT COSTS	150 000	150 000	150 500	150 500
1 3	MISSIONS AND TRAVEL	1 440 000	1 440 000	745 792,49	745 792,49
1 4	TRAINING EXPENDITURE	180 000	180 000	123 000	123 000
1 7	REPRESENTATION EXPENDITURE	2 000	2 000	818,65	818,65
1 8	TUITION FEES	650 000	650 000	530 012,44	530 012,44
19	PRAGUE RELOCATION STAFF ALLOW-ANCES	p.m.	p.m.	88 000	88 000
	Title 1 — Total	12 747 797	12 747 797	8 583 616,—	8 583 616,—
2	BUILDINGS, EQUIPMENT AND MIS- CELLANEOUS OPERATING EXPENDI- TURE				
2 0	INVESTMENT IN IMMOVABLE PROPERTY, RENTAL OF BUILDINGS AND ASSOCIATED COSTS	3 000 000	3 000 000	1 179 079,92	1 179 079,92
2 1	DATA PROCESSING COSTS	1 630 000	1 630 000	1 168 250,35	1 168 250,35
2 2	MOVABLE PROPERTY AND ASSOCIATED COSTS	200 000	200 000	238 390,30	238 390,30
2 3	CURRENT ADMINISTRATIVE EXPENDITURE	600 000	600 000	740 431,43	740 431,43
2 4	POSTAGE AND TELECOMMUNICATION COSTS	385 000	385 000	22 000	22 000
2 5	EXPENDITURE ON MEETINGS	65 000	65 000	46 750	46 750
	Title 2 — Total	5 880 000	5 880 000	3 394 902,—	3 394 902,—

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<sup>&</sup>lt;sup>19</sup> OJ C 90, 28.03.2014. p.116.





3 31 32 33 39	OPERATIONAL EXPENDITURE  EXPENDITURE ON STUDIES  PUBLICATION AND TRANSLATION COSTS  SAB  OPERATIONAL ACTIVITIES — BATCH 1	5 341 260 0 1 400 000 —	5 341 260 0 1 400 000 —	1 380 000 — 615 000 p.m.	1 245 000 — 750 000 p.m.
	Title 3 — Total	6 741 260	6 741 260	1 995 000	1 995 000
	GRAND TOTAL	25 369 057	25 369 057	13 973 518,—	13 973 518,—

## Planned Temporary Agent posts per grade

Category	Posts filled on <b>31.12.2011</b>	Posts filled on <b>31.12.2012</b>	Posts filled on <b>31.12.2013</b>	Establishment plan in voted EU Budget <b>2014</b>
AD16				
AD15				
AD14		1	1	1
AD13				
AD12		1	2	3
AD11		3	2	3
AD10		2	5	5
AD9		4	7	10
AD8		7	14	23
AD7		15	29	37
AD6		4	7	7
AD5		2	3	2
<b>Total AD</b>	24	39	70	91
AST11				
AST10				
AST9				
AST8				
AST7				
AST6				
AST5		1	2	2
AST4		1		1





AST3		2	4	1
AST2		1		1
AST1			1	
Total AST	4	5	7	5
Total	28	44	77	96

#### **Planned Contract Agents and Seconded National Expert posts**

Category	Posts filled on <b>31.12.2012</b>	Posts filled on <b>31.12.2013</b>	Establishment plan in voted EU Budget <b>2014</b>
CA FG IV	18	21	21
CA FG III	9	9	10
CA FG II		3	2
CA FG I			
<b>Total CA</b>	27	33	33
SNE		2	2
<b>Total SNE</b>	0	2	2
Total	27	35	35

Please note the numbers in the following table in particularly for 2014 (marked with \*) would change following the completion of the review being undertaken by the GSA in light of decisions on GSA resourcing.

#### Apportionment of staff by activities with reflection to Core and Delegated tasks

		A 11	24.5 2042	E	204.4
		Allocated or	31 Dec 2013	Forecast Allo	cation 2014*
	Principle tasks of GSA:	TA	CA & SNE	TA	CA & SNE
	Security accreditation	11	1	11	1
S	Security tasks	1	2	2	2
Core tasks	GSMC operations	19	0	20	2
ē	Market Development	2	3	5	4
8	General Administration	10	15	10	14
	Communication	1	1	1	0
	Exploitation Preparation	31	10	1	1
Delegated tasks	EGNOS Exploitation	0	0	15	1
d Et	Galileo Exploitation	0	0	26	2
ate	Research & Development (FP7 &				
<u>eg</u>	H2020)	1	3	4	8
മ	PRS Pilot Projects & User Segment	1	0	1	0
	Total	77	35	96	35
			of which 2 SNE		of which 2 SNE

for MKD activities of which 2 SNE for MKD activities





## Appendix I – Definitions & Acronyms

ADAS	Advanced Driver Assistance Services
ANSP	Air Navigation Service Provider
APPAP	Application Action Plan
ARMOURS	Antenna and Front-end Modules for Public Regulated Service applications
BA	Business Aviation
CA	Civil Aviation
CAA	Civil Aviation Authority
ССВ	Change Control Board
CDA	Crypto Distribution Authority
CDR	Critical Design Review
Commission	European Commission
CONOPS	Concept of Operations
СРА	Competent PRS Authority
CS	Commercial Service
DCN	Document Change Notice
DG-ENTR	DG-Enterprise and Industry
DMS	Document Management System
DOORS	Dynamical Object-Oriented Requirements Systems
DRS	Deliverable Review Sheet
EC	European Commission
ECAC	European Civil Aviation Conference
EDAS	EGNOS Data Access System
EDCN	EGNOS Data Collection Network
EEAS	European External Action Service
EGNOS	European Geostationary Navigation Overlay Service
ERTMS	European Rail Traffic Management System
ESA	European Space Agency
ESE	European Space Expo
ESNC	European Satellite Navigation Competition
ESP	EGNOS Service Provider
ESR	EGNOS System Release
EU	European Union
Eurocae	European Organisation for Civil Aviation Equipment
EUROCONTROL	European Organisation for the Safety of Air Navigation
FKC	Flight Key Cell
FOC	Full Operational Capability
FP7	Seventh Framework Programme for Research and Development of the
	European Union
FR	France
FTE	Full Time Equivalent
GA	General Aviation
GCC	Galileo Control Centre
GCS	Ground Control Segment
GKMF	GNSS Knowledge Management Facility
GMS	Ground Mission Segment





GNSS	Global Navigation Satellite System
GNSS APPAP	GNSS Application Action Plan
GNSS Regulation	Regulation (EU) No 1285/2013 of the European Parliament and of the
	Council of 11 December 2013 on the implementation and exploitation of
	European satellite navigation systems and repealing Council Regulation
	(EC) No 876/2002 and Regulation (EC) No 683/2008 of the European
	Parliament and of the Council
GNSS Regulation	Regulation (EC) No. 683/2008 of the European Parliament and of the
(previous)	Council of 9 July 2008 on the further implementation of the European
CDC	satellite navigation programmes (EGNOS and Galileo)
GPS	Global Positioning Service
GRUE	GSA Restreint UE [Network]
GSA	European GNSS Agency
GSA Regulation	Regulation (EU) No 912/2010 setting up the European GNSS Agency
	amended by Regulation (EC) No 512/2014 of the European Parliament
CCAC	and of the Council of 16 April 2014 amending
GSAC	Galileo Security Accreditation Committee
GSAP	Galileo Security Accreditation Panel
GSB	Galileo Security Board
GSC	European GNSS Service Centre (Madrid)
GSC	GNSS Security Centre
GSF PDR	Galileo Security Facility Preliminary Design Review
GSMC	Galileo Security Monitoring Centre (part of the GSC dedicated to Galileo)
GSMC-N	GSMC Nucleus
GSTI	GNSS Service Testing Infrastructure
IATO	Initial Approval To Operate
ICAO	International Civil Aviation Organisation
ICD	Interface Control Document
ICT	Information & Communication Technology
ICT&L	Information & Communication Technology & Logistics
ILS	Instrument Landing System
IMS	Integrated Management System
IOC	Initial Operational Capability
IOV	In-Orbit Validation
IOV-SE	IOV Start Endorsement
ISMS	Information Security Management System
ISO	International Standards Organisation
IT	Information Technology
ITS	Intelligent Transport Solutions
Joint Action	Council Joint Action 2004/552/CFSP of 12 July 2004 on aspects of the
Joint Action	operation of the European satellite radio-navigation system affecting the
	security of the European Union
KPI	Key Performance Indicator
LBS	Locations Based Service
MEP	Member of European Parliament
MMFP	Market Monitoring and Forecasting Process
MS	Member States
NOTAM	Notice to Airmen
OEM	
	Other Equipment Manufacturer
OPS	Operations
os	Open Service





P3RS2	PRs receivers with EMbedded hardware Intrinsic Security Enhancements
PLB	Personal Locator Beacon
PNT	Positioning, Navigation, Timing
POCP	Point of Contact Platform
PPUI	Pay-Per-Use-Insurance
PR	Press Release
PREMISE	PRs receivers with EMbedded hardware Intrinsic Security Enhancements
PRS	Public Regulated Service
PRS4PMR	Public Regulated Service for Professional Mobile Radio
QMS	Quality Management System
R&T	Research and Technology
RA	Regional Aviation
RFI	Radio-Frequency Interference
RIMS	Ranging and Integrity Monitoring Station
RTCA	Radio Technical Commission for Aeronautics
RUC	Road User Charging
SAB	Security Accreditation Board
SAR	Search and Rescue
SARPS	Standard and Recommended Practices
SATO	Site Authorisation To Operate
SBAS	Satellite Based Augmentation System
SC	Specific Contract
SECOPS	Security Operational Procedures
SESAR	Single European Sky ATM Research
SGL	St-Germain-en-Laye
SINA	Secure Inter-Network Architecture
SIS	Signal In Space
SISRS	System Interconnection Security Requirements Statement
SLA	Service Level Agreement
SME	Small and Medium-sized Enterprise
SMS	Safety Management System
SoL	Safety of Life
SOP	Standard Operating Procedures
SSRS	System specific Security Requirements Statements
SWA	Swanwick
TBC	To Be Confirmed
TÜV	Technischer Überwachungs-Verein
ULTRA	Ultra Low Cost PRS Receiver
UNIFE	Union of European Railway Industries
UNISIG	A UNIFE working group regarding railway signalling
VNR	Video News Release
WAN	Wide Area Network
WWRNS	World Wide Radio Navigation System





## Appendix II – List of planned actions for 2014

## Financing source: GSA own budget, Title 3

N°	Title of the action	Type of Action	Tentative Budget line	Indicative timeframe of procedure launch	Indicative amount €
SEC	URITY				
1	Provision of support to the GSA in the Security Accreditation activities – Specific Contract	Procurement	3300.	Q1-Q4 2014	1,040,000.00
2	Security Accreditation activities: Direct support to Member States participants	Reinbursment of mission expenses	3300.	Q1-Q4 2014	360,000.00
GSM	IC OPERATIONS		Sub-tota	ol for SECURITY	1,400,000.00
3	External operational support for GSMC	Procurement	3100	Q1 2014	1,250,000.00
4	Support to GSMC Security Monitoring	Procurement	3100	Q2 2014	200,000.00
5	Support to Chain of Command upgrade	Procurement	3100	Q1-Q2 2014	210,000.00
		Su	b-total for GSM	C OPERATIONS	1,660,000.00
Mar	ket Development				
6	E-GNSS market development activities	Procurement	3100	Q1-Q4 2014	2,300,000.00
			-total for Marke	et Development	2,300,000.00
GEN	ERAL ADMINISTRATION, IT A	ND LOGISTICS			
7	Quality and safety certification of the GSA – "Consultancy services for ISO certification procedures"	Procurement	3100	Q1-Q2	300,000.00
8	Support to GSA management, organizational strategies and risk management	Procurement	3100	Q1-Q4	281,260.00
		NERAL ADMINIS	STRATION, IT A	ND LOGISTICS	581,260.00
COM	IMUNICATION				
9	Communications Events and Publication	Procurement	3100	Q1-Q4 2014	600,000.00
10	New website development and content for EGNOS and Galileo	Procurement	3100	Q1-Q4 2014	200,000.00
		S	ub-total for CO	MMUNICATION	800,000.00
	TOTAL				6,741,260.00





#### Appendix III - Delegated Task

#### PART I. PREVIOUSLY DELEGATED TASKS

#### Introduction

There are three Delegation Agreements between EC and GSA which are still in force:

- Delegation Agreement for the Seventh Framework Programme for Research and Development of the European Union (FP7) (signed in 2011)
- Delegation Agreement for Public Regulated Service (PRS) (signed in September 2011)
- Delegation Agreement for Implementation of tasks related to the preparation of the Exploitation Phase of the European GNSS Programmes and the Support to the Commission Application Plan (signed in May 2012)

Some of the delegated tasks that are not expected to be finished during the operational implementation phase defined in these Delegation Agreements currently in force. Therefore the period of execution of certain activities shall end on 31 December 2014.

#### WORK PROGRAMME DELEGATED TASKS IMPLEMENTATION IN 2014

The remaining activities from the Delegation Agreements are as follows:

# 1. DELEGATION AGREEMENT FOR THE SEVENTH FRAMEWORK PROGRAMME FOR RESEARCH AND DEVELOPMENT OF THE EUROPEAN UNION (FP7)

Applications development and related Research & Development (R&D) activities are indispensable for the success of the EU GNSS programmes and for capturing the return of  $\leq$ 90 Billion over a period of 20 years.

Furthermore, GNSS market development related R&D is the key to maximise Galileo competitiveness vs. GPS, GLONASS and Compass and increase the share of the EU industry in the global market. To ensure Galileo take-up, facing these competitive systems' pressure, it is necessary to prepare the users and the value chain. Therefore, primary focus should be on road transport/ITS, high precision, and mobile communication/LBS, followed by maritime, and aviation.

As outlined in the Commission guidelines, FP7 projects on applications and security R&D will be managed by the European GNSS Agency in accordance with the terms of the Delegation Agreement.

In 2014, no new activities are expected to be started from the current FP7 delegation agreement, which budget is expected to be completely committed by the end of 2013.

The activities reported below are therefore the ones already committed or about to be committed (before end of 2013) in the frame of this delegation agreement.

The following projects from FP7 will be still on-going and managed in 2014:





#### PROJECTS IN AREA OF EDUCATION AND INNOVATION

- 1. GNSS EDUCATION NETWORK FOR UNIVERSITIES AND INDUSTRIES (GENIUS)
- 2. STRENGTHENING USER NETWORKS FOR REQUIREMENT INVESTIGATION AND SUPPORTING ENTREPRENEURSHIP (SUNRISE)
- 3. GNSS USER FORUM ON NAVIGATION BASED INNOVATION FOR FARMERS (UNIFARM)

#### **PROJECTS IN AREA OF INTERNATIONAL ACTIVTIES**

- 4. AWARENESS IN AFRICA: DISSEMINATING KNOWLEDGE ON EGNOS AND GALILEO IN AFRICA TO FOSTER LOCAL AND REGIONAL DEVELOPMENT  $({\color{blue}AIA})$
- 5. GNSS FOR ASIA SUPPORT ON INTERNATIONAL ACTIVITIES (G5ASIA)
- 6. GROWING NAVIS (**G-NAVIS**)
- 7. COUNTERING GNSS HIGH ACCURACY APPLICATIONS LIMITATIONS DUE TO IONOSPHERIC DISTURBANCES IN BRAZIL ( $\underline{CALIBRA}$ )

#### **PROJECTS IN AREA OF LBS**

- 8. GALILEO SIGNAL PRIORITY (GSP)
- 9. SETTING THE PATH FOR MASS MARKET USE OF INDOOR GALILEO OPERATIONS (I-GOING)
- 10. LOW COST GNSS ATTITUDE AND NAVIGATION SYSTEM WITH INERTIAL MEMS AIDING (LOGAM)
- 11. WALKEGNOS: A SOCIAL WEB 2.0 MAPPING SOLUTION GENERATING AND LEVERAGING ON THE BRAND "EGNOS POWERED" (WALKEGNOS)

#### PROJECTS IN PROFESSIONAL AND SCIENTIFIC APPLICATIONS

- 12. GPS-EGNOS BASED PRECISION AGRICULTURE USING UNMANNED AERIAL VEHICLES (FIELDCOPTER)
- 13. GNSS-BASED PLANNING SYSTEM FOR AGRICULTURAL LOGISTICS (**GEOPAL**)
- 14. POSITION-BASED SERVICES FOR UTILITIES MAINTENANCE TEAMS (POSSUM)

#### **PROJECTS IN MARITIME APPLICATIONS**

15. COOPERATIVE SATELLITE NAVIGATION FOR METEO-MARINE MODELLING AND SERVICES (COSMEMOS)

#### **PROJECTS IN ROAD APPLICATIONS**

- 16. DEVELOPMENT OF A QUALIFICATION PROCEDURE FOR THE USAGE OF GALILEO SATELLITE RECEIVERS FOR SAFETY RELEVANT APPLICATIONS (**QUALISAR**)
- 17. TRUSTED MULTIAPPLICATION RECEIVER FOR TRUCKS (TACOT)
- 18. JOINT GALILEO OPTIMIZATION AND VANET ENHANCEMENT (GLOVE)
- 19. A NEW TAXI APPLICATION GUIDED BY SATELLITE (TAXISAT)
- 20. ENHANCED (EGNOS/EDAS) ACCURACY SYSTEM WITH GNSS OUTAGE BRIDGING UNIT (EASY-OBU)
- 21. GALILEO FOR INTERACTIVE DRIVING ( $\underline{\textbf{GAIN}}$ )

#### **PROJECTS IN AVIATION**

- 22. "FILLING THE GAP" IN GNSS ADVANCED PROCEDURES AND OPERATIONS (FILLGAP)
- 23. HELICOPTER DEPLOY GNSS IN EUROPE NEXT (HEDGE NEXT)
- 24. ACCELERATING EGNOS ADOPTION IN AVIATION (ACCEPTA)

#### **PROJECTS IN RAIL**

25. GALILEO LOCALIZATION FOR RAILWAY OPERATION INNOVATION (GALOROI)





26. SATELLITE BASED OPERATION AND MANAGEMENT OF LOCAL LOW TRAFFIC LINES (SATLOC)

#### PROJECTS IN PRS APPLICATIONS AND SECURITY

- 27. INTEGRATED PMR AND GALILEO PRS RECEIVER ARCHITECTURE (PRS4PMR)
- 28. ANTENNA AND FRONT-END MODULES FOR PRS APPLICATIONS (ARMOURS)
- 29. PRS RECEIVERS WITH EMBEDDED HARDWARE INTRINSIC SECURITY ENHANCEMENTS (PREMISE)
- 30. SECURITY TECHNOLOGIES BASED ON LOCATION (STON)

#### TASK 1: R&D MANAGEMENT

The task will focus on management and follow-up of FP7 3<sup>rd</sup> call projects, including attendance to meetings, deliverable review, management of external reviewers and administrative aspects. Bimonthly reporting to EC on the FP7 project activities managed by the GSA will be continued.

Key element of the Research and Development activity is proper communication of the results and creation of synergies with other market development activities. All FP7 projects results will be promoted on GSA website and disseminated during different conferences, workshops and other events organised or co-organized by GSA.

This task is broken down into the following sub-tasks:

Sub-Task	Indicators	Timing
Sub-Task 1.1  Overall R&D portfolio management and priority actions definition	R&D portfolio	Q1-Q4 2014
Sub-Task 1.2 Reporting to the EC	Bi-monthly reports	Q1-Q4 2014
Sub-Task 1.3 Operational project management	Number of demonstrations Number of prototypes Number of pre-commercial products Number of commercial products Quarterly reports	Q1-Q4 2014
Sub-Task 1.4 Experts' management	Deliverable Review Sheet (DRS)	Q1-Q4 2014

#### TASK 2: PRS PROJECTS UNDER 7th FRAMEWORK PROGRAMME

Concerning PRS-related FP7 3rd call activities the Security Department of the Agency is managing four projects, i.e. one tender (PRS4PMR) and three collaborative projects (ARMOURS, PREMISE, ULTRA). The three collaborative projects will end in Q1 2014, while the Tender will continue until Q3 2014.

This tasks is broken down into the following sub-task:

Task	Indicators	Timing
Task 2.1  Management of FP7 collaborative projects ARMOURS, PREMISE, ULTRA		Q1 2014
Task 2.2 Management of FP7 tender: PRS4PMR		Q3 2014





In 2014, a limited number of support activities for the management and promotion of FP7 3<sup>rd</sup> call outcomes are expected to be started from the current FP7 delegation agreement as follows:

Activity	Title/Description	Type/subject of contracts envisaged (studies, technical assistance, industrial contracts)		Existing/new contract/agreement t	of	launch/publication	Amount of funds set aside for the award of contracts
FP7 3rd call Delegation Agreement							
	FP7 3rd Call management and promotion	Ex-ante control Call monitoring and reviews by external experts  Dissemination of FP7 call results	Procurement and external experts appointment	TBD	TBD	N/A	€200K

### 2. Delegation Agreement for Public Regulated Service (PRS)

In 2014, no new activities are expected to be started from the current PRS delegation agreement.

The activities reported below are therefore the ones already committed or about to be committed (before end of 2013) in the frame of this delegation agreement.

#### 2. PRS PILOT PROJECTS

#### TASK 2.1: PRS PILOT PROJECTS

Activities to be performed by the agency for support to PRS Pilot Projects have been defined in the EC-GSA Working Arrangement on PRS Pilot Projects<sup>20</sup> and the 2011 Delegation agreement on PRS<sup>21</sup>.

Additionally some provision for the GSA to ensure full support to Member State PRS Pilot Projects has been foreseen in the 2012 Delegation agreement on the Exploitation of EGNOS and Galileo.

As detailed in the 2011 Delegation agreement on PRS, the Security Department of the Agency is managing the P3RS2 project for the procurement of a set of pre-operational PRS receivers to be available at IOC (FOC1, currently foreseen in 2016). The framework contract was signed in September 2013 and the specific contract is expected to be signed before the end of the year 2013 with the objective to procure at least 20 PRS pre-operational user receivers with dual sourcing on Security Modules. Back-ups in case of late availability will be identified and agreed with the Commission and ESA.

These tasks are broken down into the following sub-tasks:

Task	Indicators	Timing	
Task 2.1.1 P3RS2 project administrative and technical management		Q1-Q4 2014	
Task 2.1.2 Support to P3RS1 project and technical management		As required/all 2014	

<sup>&</sup>lt;sup>20</sup> As defined in the "Agreement in the form of Exchange of Letters on a Working Arrangement for the execution of security related tasks of the European GNSS programmes between the European Commission and the European GNSS Agency", Ref. ENTR/GP2 AN/am Ares (2010)1087450 dated 28 January 2011.

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<sup>&</sup>lt;sup>21</sup> Delegation agreement between the European Union and the European GNSS Agency on the development of a standalone first generation PRS receiver within the frame of the PRS Pilot Project and the implementation of preparatory activities related to the setting up of the Galileo Security Monitoring Centre, ENTR/GPI/Ares 808130, 9 Sept. 2011





Task 2.1.3 Support the preparation of calls for tenders, selection, negotiation and award of contracts related to the implementation of the PRS Pilot Project, including ensuring they meet security accreditation requirements.	As required
Task 2.1.4  Interact on a day to day basis with industry and manage the contracts of the PRS Pilot Project starting at the kick-off of the contract and ending at the final review and advises the Commission on the approval of the main documents	As required
Task 2.1.5  Provide expertise and support to the GNSS Security Board Working Group PRS (WG-PRS), especially regarding the definition of guidelines, common minimum standards and rules for the management of PRS in EU Member States and the definition and implementation of the PRS implementation plan	As required
<b>Task 2.1.6</b> Technical, secretarial and logistical support to the WG-PRS on PRS Pilot Projects, including minutes of the WG-PRS	As required
Task 2.1.7 Propose an assessment of the main performance criteria of the contracts to the EC for the main contract reviews	As required
Task 2.1.8 Support the evaluation of the proposals and ensure the secretariat of the evaluation panels, in cooperation with the EC	As required
<b>Task 2.1.9</b> Prepare documents in the form of minutes, technical notes, analysis, draft Statement of works, draft contracts or draft Document Change Notices, as required, depending on the topics	As required

# 3. DELEGATION AGREEMENT FOR IMPLEMENTATION OF TASKS RELATED TO THE PREPARATION OF THE EXPLOITATION PHASE OF THE EUROPEAN GNSS PROGRAMMES AND THE SUPPORT TO THE COMMISSION APPLICATION PLAN

The following tasks shall continue to be implemented<sup>22</sup> under this DA in 2014:

#### 3.1. PREPARATORY TASKS FOR THE EXPLOITATION OF EGNOS AND GALILEO

Main Tasks in 2014 Preparatory tasks for the exploitation of EGNOS and Galileo				
Sub-Task Indicators Timing				
TASK 1.1: Galileo exploitation preparation and early operations  • Definition of processes and operational interfaces between the operational entities EC, ESA, GSA and external entities • Documentation of processes, procedures and interfaces in the	Galileo Early Services Operations Manual Statement of Compliance to Galileo Early Service requirements baseline	Q1-Q2 2014		

<sup>&</sup>lt;sup>22</sup> At the time of adoption of the Work Programme some more potential tasks to be added after the amendment of this Delegation Agreement. Should it be the case GSA Administrative Board is going to be informed about it.





Galileo Service Operations manual <ul> <li>Analysis, contributions and maintenance of the Statement of Compliance to the Early Service requirements baseline</li> </ul>		
TASK 1.2: Development and early operations of the European GNSS Service Centre (GSC)  • Support the review of GSA proposals, received in response to ITT, and support the preparation of the GSC kick-off • Follow up of the GSC infrastructure development and GSC operations and hosting services contracts by review of documentation	Review comments of GSC documentation	Q1-Q2 2014
TASK 2.1: EGNOS exploitation preparation  Set up and management of the Anomaly Review Board (ARB)  Preparation and set-up of the new Service & System CCB  Manage the production of the EGNOS Obsolescence management plan and system evolution roadmap	Anomaly Review Board Minutes of Meeting Service & System CCB updated Terms of Reference Obsolescence Management plan and System Evolution roadmap update	Q1-Q2 2014
TASK 2.2: Activities related to EGNOS infrastructure acceptance  • Participation to the EGNOS V2 development reviews • Technical coordination of the acceptance process follow-up of EGNOS GEO satellite transponders	Review Item Discrepancies (RIDs) to the EGNOS V2 development reviews Participation to GEO progress meetings & progress reports	Q1-Q2 2014
TASK 3.1: Exploitation Management Processes and Tools  Project control activities including planning & scheduling, risk management and configuration and documentation management	Updates of working schedules, risk register and configuration status	Q1-Q2 2014

In 2014, the following activities are foreseen to be committed under the May 2012 Exploitation Preparation Delegation Agreement:

Activity	Title/Description	Type/subject of contracts envisaged (studies, technical assistance, industrial contracts)	Type of financial instrument: Procurement/Gran t	Existing/new contract/agreemen t		timetable for the	Amount of funds set aside for the award of contracts
2012 Exploitation Preparation Delegation Agreement							
	EGNOS service phase commitment partial extension EGNOS NLES G2 hardware	EGNOS service phase commitment partial extension for ESSP contract signed in June 2013 Procurement of the hardware for the new generation up-link antenna (NLES G2) through change request to GSA-ESSP contract	Procurement	Existing contract	3	N/A	€11.5M
	Exploitation engineering support SC	Engineering support activities, including service engineering support, programme control engineering support, operation & maintenance engineering support and operations evolutions engineering support		cising of options	3	N/A	CILOM





#### 3.2. SUPPORT TO THE GNSS APPLICATION ACTION PLAN (APPAP)

#### Objectives and Priorities

The European Commission issued, on 14 June 2010, an Action Plan on GNSS Applications (APPAP) encompassing 24 measures focusing on the 2010-2013 period. This plan aims to increase the EU share of the satellite navigation (GNSS) global market to 33%, as in other high-tech sectors (currently 20%) and to reduce the EU's dependency on the US (currently 6-7% of EU GDP relies on the American GPS).

The implementation of the GNSS APPAP focuses on the development of the EGNOS and Galileo user segment in priority segments such as aviation, road transport, agriculture, mapping and maritime.

The tasks and actions described in this chapter were initially delegated for the period covering 2012-2013 with some tasks to be finalised in 2014. They focus on providing support to the European Commission in execution of the GNSS APPAP and measuring its results.

In accordance with Article 1.2.2 of the May 2012 Delegation Agreement, several tasks will be executed until 31 December 2014, however no additional commitment will be made after end of 2013.

Summary of Main Tasks in 2014

## Main Tasks in 2014 Support to the GNSS Application Action Plan (APPAP)

#### TASK 1: FINALIZING THE TASKS FROM DELEGATION AGREEMENT WITH THE EC

This task is to finalize the APPAP technical annex of the Delegation Agreement signed with EC in May 2012.

Sub-Task	Indicators	Timing
Sub-Task 1.1  Implementation of APPAP in priority user segments  The following specific contracts have been signed in 2013 and will continue being executed in 2014:  • EGNOS marketing in aviation - LPV1 procedures funding • EGNOS market development in aviation • Implementation of APPAP in mapping/surveying • Implementation of APPAP in agriculture	All activities and results are reported in Quarterly Delegation Agreement report	Q1 - Q2 2014 Q1 - Q4 2014 Q1 - Q4 2014 Q1 - Q3 2014
Sub-Task 1.2  Monitoring of the status of APPAP execution  The following specific contracts have been signed in 2013 and will continue being executed in 2014:  • Characterizing the benefits of A-Galileo in multi-constellation GNSS testing • Monitoring of APPAP market results	All activities and results are reported in Quarterly Delegation Agreement report	Q1 2014- Q3 2014 Q1 2014- Q2 2014
Sub-Task 1.3  Market analysis and customer support for initial Galileo services  • PRS survey and market entry	All activities and results are reported in Quarterly Delegation Agreement report	





roadmap  2014 OS helpdesk - Spain Service Centre ramp up Business development for Galileo Commercial Service		Q1 - Q4 2014 Q1 - Q4 2014 Q1 - Q4 2014
Sub-Task 1.4  Implementation of tasks in the field of aviation  • Support to EGNOS adoption by EU operators	All activities and results are reported in Quarterly Delegation Agreement report	Q1 - Q4 2014





# PART II. ENTRUSTED TASKS FROM THE EUROPEAN COMMISSION COVERING THE PERIOD OF 2014-2020

#### 1. EGNOS EXPLOITATION DELEGATED TASKS

The EC-GSA EGNOS Exploitation Delegation Agreement was signed on 16 April 2014, delegating €1,450M to the GSA for undertaking EGNOS Exploitation tasks over the period 2014-2020, which include the provision of the Open Service, Safety of Life Service and EGNOS Data Access Service to users. This agreement defines the EC-GSA link for EGNOS Exploitation as foreseen in the GNSS Regulation, and is planned to be complemented in later 2014 by the GSA-ESA Working Arrangement, also foreseen in the GNSS Regulation. The GSA-ESA Working Arrangement will in particular address future system upgrades coming after the V2.4.1M, V2.4.1P and V2.4.2 Phase B activities being completed under the existing EC-ESA EGNOS Delegation Agreement, and the V3 activities.

In addition to the detailed tasks contained in Article 4 of the Delegation Agreement, following approval of the 2014 EGNOS Exploitation Budget, the GSA intends to carry out the following key actions in 2014:

- Financial commitment of the full service provision phase for the EGNOS Service Provision procurement contract signed in June 2013 (completed in April 2014 with signature of the Delegation Agreement);
- Contract management of the GEO-1 and GEO-2 procurement contracts signed by the Commission, once they have been novated to the GSA;
- Signature of the GSA-ESA Working Arrangement for EGNOS exploitation including ESA management costs, and initiation of EGNOS V2.4.2 Phase C/D activities and EGNOS V3 EGEP to Exploitation programme transition activities
- Signature of grants for Service Provision Member State Support (SPMS) and EUROCONTROL activities and for Acceleration of EGNOS adoption in the field of civil aviation (please see reference as Appendix III-a: EGNOS Exploitation Grant Plan 2014)

A list of the 2014 EGNOS Exploitation procurement and grant activities which are planned is included below; the detailed 2014 EGNOS Exploitation Grants Plan is included in appendix IIIb





Activity	Title/Description	Type/subject of contracts envisaged (studies, technical assistance, industrial contracts)	Type of financial instrument: Procurement/Gran t	Existing/new contract/agreemen t		Indicative timetable for the launch/publication	Amount of funds set aside for the award of contracts
ESP Operations & Maintenance							
maintenance	Full service phase commitment (indexed) (not including funding from 2012 EC-GSA Exploitation Preparation Delegation Agreement)	Commitment of full service provision phase for ESSP contract signed in June 2013					
	Disposal of TWAN equipments	Disposal of old equipments of the telecommunication network (TWAN) if confirmed to be EU property through change request to the GSA-ESSP contract					
	SDCM interference monitoring	SDCM interference monitoring mean (Signal Log and Replay) to be procured from M3 System. This is needed to improve ESSP ability to detect interferences between EGNOS and the russian system being deployed through change request to GSA-ESSP contract					
	RIMS Haifa Civil Works	Exercising of ESP BAFO Option#7 as change request					
	RIMS Haifa Hosting and Maintenance	to the GSA-ESSP contract Exercising of ESP BAFO Option#7 for 7 years from 1 January 2015 as change request to the GSA-ESSP contract	Procurement	Existing contract amendments/exer cising of options	8	N/A	€425M
	3 Additional RIMS (works, hosting and maintenance)	ESP BAFO Option#9 - 3 additional RIMS + hosting and maintenance assuming for 6 years from 1 January 2016 for 3 new sites through change request to the GSA-ESSP contract. To be committed in 2015					
	Extension of insurance to 12M€	ESP BAFO Option#18 - extension of insurance; through change request to the GSA-ESSP contract					
	Minor evolution 1	Minor system evolution#: through change request to the GSA-ESS contract. Please refer to the preliminary PCIP from ESSP (ESSP-PCIP-YSR2-0.3.pdf). This may be complemented by additional system upgrades to speed-up the correction of QR causing underperformance in degraded ionosphere conditions. To be committed in 2015.					
GEO Transponders	3						
	SES-5 payment	Payment for existing contract transferred from EC to					
	SES-5B payment	GSA Payment for existing contract transferred from EC to					
	Extension of GEO Inmarsat 3F2 duration	GSA Exercising ESP BAFO option#6 for extension of GEO satellite Inmarsat 3F2 for the whole duration of the contract, following the 18 months already secured by ESSP for 3.5 years from 1 July 2015 through a change request to the GSA-ESSP contract	Procurement	specific contracts based on existing contracts/exercisi ng of option	3	N/A	€150M
ESA activities	ESA Working Arrangement	Working arrangement to be implemented through					
	ESA management support activities	Framework Contract - TBC ESA management costs for EGNOS until end of 2021 based on the result of the GSA-ESA WA approval	TBD	New	TBD	Q4	€600M
	GSA-ESA 2.4.2 Phase C/D EGNOS V3 EGEP to exploitation programme transition activities	process (GSA, ESA, EC) GSA-ESA 2.4.2 Phase C/D procurement activities Launch of procurement activities with ESA for V3 EGEP to exploitation transition activities.					
EGNOS Programme engineering support		·					
	Engineering support SC	Engineering support activities, including service engineering support, programme control engineering support, operation & maintenance engineering support and operations evolutions engineering support	Procurement	Existing	1 specific contract	Q3	€1.2M
	New engineering support FWC	Engineering support activities. The planned ceiling is associated to the sum of engineering support for EGNOS Exploitation, Gailiee Exploitation and potentially other GSA delegated or core tasks. The foreseen budget for EGNOS will be limited to a set amount on average per year	Procurement	New	1 FWC	Q4	€20M
	EASA V3 certification support	Assistance from the aviation regulator, EASA in support of V3 activities to minimise the certification risks related to design choices made on the evolutions of the EGNOS system where new techniques are being investigated for the system development, such as virtualisation, use of FPGA etc which would need to be acceptable to the regulator	Procurement	New	1 contract	Q4	€150K
	SPMS (framework grant agreement)	Priorities, objectives pursued and expected results: (1) SBAS Service and Signal Performance Watch (addressing all SBAS: ENONS, WAS, SDCM, GAGAN, MSAS,) providing a comparative evaluation of the different SBAS and GPS-only services in terms of signal/message configuration and delivered performance; (2) EGNOS Service Performance Ahonomal Events Investigation (ad hoc) reporting on the results of investigations of GPS and EGNOS service performance sensitivity to in-service configuration or environment changes and proposing recommendations; (3) Ad hoc support to EGNOS Programme Activities contributions to the major EGNOS service provision technical reviews, service engineering working groups and contributions to the SBAS compatibility and interoperability working groups	Grant	New	1 Framework Grant Agreement	· Q3	€4M





SPMS 2014 (grant)

Priorities, objectives pursued and expected results: (1) SBAS Service and Signal Performance Watch (addressing all SBAS: EGNOS, WAAS, SDCM, GAGN, MSAS, ...) Providing a comparative evaluation of the different SBAS and GPS-only services in terms of signal/message configuration and delivered performance; (2) EGNOS Service Performance Abnormal Events Investigation (ad hoc) reporting on the results of investigations of GPS and EGNOS abnormal events and on the analyses of EGNOS service performance sensitivity to in-service configuration or environment changes and proposing recommendations; (3) Ad hoc support to EGNOS Programme Activities contributions to the major EGNOS service provision technical reviews, service engineering working groups and contributions to the SBAS compatibility and interoperability working groups

ant New 1 Specific Grant Q4 €500K

OS Service ision enablers							
	Support to EGNOS adoption in aviation 2014 (grants)	Priorities, objectivies pursued and expected results: operational implementation of EGNOS in aviation is a strategic goal to ensure the success of the programme. In this context, the objective of the formal scitivity is to foster EGNOS adoption in the European aviation, enabling on the one hand, users to equip their aircraft/toorcraft fleet with GSA/SBAS enabled avionics and, on the other hand, Air Navigation Service Providers and airports to publish APV SBAS procedures (LPV) in Europe. The priority of the activity will be implementation in regional, business (corporate) aviation, general aviation (training, emergency services) and rotorcraft, considered the main aviation market segments for EGNOS and those maximising public benefits. The result of this activity will be a wide scale operational implementation of the EGNOS based approaches throughout European airports and airspace users	Grant	New	TBD	Q3	€6М
	EUROCONTROL (framework grant agreement)	Priorities, objectives pursued and expected results: (1) the definition of mission level requirements for EGNOS and Galileo; (2) the operational introduction of European GNSS services (EGNOS and Galileo) for aviation in European Civil Aviation Conference (ECAC) area; (3) the advice on Regulatory and Standardisation aspects, including spectrum; (4) the support to European GNSS Development and Exploitation Activities (major systems reviews and Programme level activities managed by the EU); (5) the inclusion of EGNOS and Galileo in future GNSS user terminals for aviation; (6) coordination of R&D for GNSS in aviation.	Grant	New	1 Framework Grant Agreement	Q4	€6М
	EUROCONTROL 2014 (grant)	Priorities, objectives pursued and expected results: (1) the definition of mission level requirements for EGNOS and Galileo; (2) the operational introduction of European GNSS services (EGNOS and Galileo) for aviation in European Civil Aviation Conference (ECAC) area; (3) the advice on Regulatory and Standardisation aspects, including spectrum; (4) the support to European GNSS Development and Exploitation Activities (major systems reviews and Programme level activities managed by the EU; (5) the inclusion of EGNOS and Galileo in future GNSS user terminals for aviation; (6) coordination of R&D for GNSS in aviation.	Grant	New	1 specific Grant	Q4	€700K

### 2. GALILEO EXPLOITATION DELEGATED TASKS

GSA programme management reserve GSA programme management reserve for 2014 2014

The EC-GSA Galileo Exploitation Delegation Agreement was signed on 2 October 2014, delegating €490M to the GSA for undertaking Galileo Exploitation tasks. This includes budget for the Galileo service centres, a preparatory budget for the Galileo Service Operator actions and a budget for Galileo Fundamental Elements activities. This agreement defines the EC-GSA link for Galileo Exploitation as foreseen in the GNSS Regulation, and is planned to be complemented in 2015 by the GSA-ESA Galileo Exploitation Working Arrangement, also foreseen in the GNSS Regulation.





In addition to the detailed tasks contained in Article 4 of the Delegation Agreement, following approval of the 2014 Galileo Exploitation Budget, the GSA intends to carry out the following key actions in 2014:

- Launch of Galileo Service Operator actions
- Contract management of the GNSS Service Centre contracts signed by the Commission, once they have been novated to the GSA

A list of the 2014 Galileo Exploitation activities which are planned is included below; there are no grants activities planned in 2014.

Activity	Title/Description	Types/subject of contracts envisaged (studies, technical assistance, industrial contracts)	Type of financial instrument: Procurement/Gran t	Existing/new contract/agreemen t	Indicative number of contacts/agreeme nts/amendments/ exercising of options	Indicative tinetable for the launch/publication	Amount of funds set aside for the award of contracts
Operations					•		
	Galileo exploitation service provision	Galileo service operator activities	Procurement	New	TBD	Q4	TBD
Service Centres							
<b>GNSS Service Centre</b>							
	GSC Operations and Hosting activities	Transfer of existing contracts from EC to GSA		Existing contracts and new specific			
	GSC SC3 Nucleus ops and user management	New SC for GSC nucleus operations and user management Jan-Dec 2015	Procurement	contracts based on existing framework	6	Q4	€38M
	GSC V1 Infrastructure activities	Transfer of existing contracts from EC to GSA		contracts			
PRS activities							
	PRS Engineering Support SC3 (GSA SSS lot1)	Activities including support to PRS standardisation, PRS user segment related documentation and Document Management System, ad hoc technical reports, update of PROPHET, contribution to risk analysis of PRS user segment	Procurement	new specific contract based on existing framework	1	Q4	€1M
	New engineeting support FWC (PRS/Security Expertise)	Security & PRS engineering activities covering PRS service provision and user segment related tasks	Procurement	new specific contract based on existing framework	1	Q4	€8M
	FRAME FWC - Framing the definition and development of new PRS use cases based on innovative technologies	The provision of tools to support GSA in:  • Establish a framework for ensuring that any PRS user segment developments financed by EU funds meet Galileo and PRS Security Objectives  • Address in particular potential new use cases of PRS (e.g. integration in PMR, remote server, etc.) which were not factored in in the early design of Galileo system and interfaces  • Ensure the co-existence of the new use cases with "traditional" use of secure GNSS	Procurement	New	1	Q4	€20M
External Support							
	Engineering Support SC	Engineering support activities for Galileo Exploitation including support to the preparation of the GSOp and Service Facilities ITT data packages and their updates during the tender process. Some limited support is foreseen to cover the preparation of the infrastructure procurements.	Procurement	new specific contracts based on existing framework	1	Q4	€1.8M
	New engineering support FWC	Engineering support activities. The planned ceiling is associated to the sum of engineering support for EGNOS Exploitation, Galileo Exploitation and potentially other GSA delegated or core tasks. The foreseen budget for Galileo will be limited to a set amount on average per year		New	1	Q4	€20M
Galileo GSA programme management reserve for services							
	GSA programme management reserve for services 2014	GSA programme management reserve for services 2014	Procurement	TBD	TBD	TBD	€4M
Fundamental Elements							
	FRAME - Specific Contract 1	The first activities of Frame will cover a subset of the full set of activities identified in the FWC	Procurement	New	1	Q4	€5M





#### 3. H2020 RELATED DELEGATED TASKS

The European Comission delegated to the European GNSS Agency the implementation of Horizon 2020 - Framework programme for research and innovation, based on the Delegation Agreement signed in April 2014. The maximum amount of the Union contributions to the Agency for the duration of the Agreement shall be EUR 87 million (eighty seven million EURO).

According to the general provisions of Delegation Agreement the Agency is entrusted with the implementation of tasks under the following part of the 2014-2015 Work Program of DG Enterprise and Industry implementing the Horizon 2020 Specific Programme: Galileo-related activities within the activity "Space" of the specific objective "Leadership in Enabling and Industrial Technologies" of Part II "Industrial leadership".

For the implementation of the entrusted tasks under the Transfer of funds agreement for the year 2014 the maximum amount of the European Union contribution is set for an indicative amount of EUR 60 milion (sixty million EURO) which is broken down as follows

Topics of Call Applications in Satellite Navigation - Galileo - 2014<sup>23</sup>:

- GALILEO-1-2014-2015: EGNSS applications
- GALILEO-2-2014-2015: Small and Medium Enterprise (SME) based EGNSS applications
- GALILEO-3-2014-2015: Releasing the potential of EGNSS applications through international cooperation
- GALILEO-4-2014: EGNSS awareness raising, capacity building and/or promotion activities, inside or outside the European Union

Overal indicative budget is EUR 38 million for 2014:

Topic	2014 EUR million
GALILEO-1-2014	15-20
GALILEO-2-2014	5-10
GALILEO-3-2014	5-8
GALILEO-4-2014	5-10

Indicative budget for evaluation, reviews, audits is EUR 2 million.

The Agency's main tasks include, first of all, the management of grant award procedures for the call for proposals, as well as the grants' awarded management without a call for proposals covered by a Transfer of funds agreements such as the publication of the call<sup>24</sup>. Moreover, the Agency should manage all of the stages in the lifetime of actions supported by grants awarded under a Transfer of funds agreement, using the IT tools developed for the purpose of managing Horizon 2020.

In this connection, the GSA shall be responsible for monitoring the projects, making the necessary checks and recovery procedures, and for performing budget implementation tasks covering revenue and expenditure within the meaning of the Financial Regulation. The Agency is also called

 $\frac{http://ec.europa.eu/research/participants/portal/doc/call/h2020/common/1597689-part\_05iii\_space\_v1.1\_en.pdf}{(GNSS~Applications:~page~6~to~13)}$ 

 $\underline{\text{http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-galileo-2014-1.html\#tab2}$ 

<sup>&</sup>lt;sup>23</sup> See reference to the link of Space Work Programme:

<sup>&</sup>lt;sup>24</sup> See reference to Calls:





to conclude public procurement procedures and manage the ensuing contracts-including the operations required to launch public procurement procedures-and last but not least, to provide support to the Commission in implementation of the Galileo-related activities.

Research and Development activities related to Galileo Public Regulated Service (PRS)<sup>25</sup>

Indicative budget to be allocated in 2014 is EUR 20 million.

#### Procurement topics:

- Development of enabling technologies for PRS (indicative timing: Q2 2014, targeted contracts: 3-4)
- Development of low-end PRS enabled technologies (indicative timing: Q4 2014, targeted contracts: 2 contracts)

Concerning the obligations in the implementation of the entrusted tasks, the Agency shall apply the Financial Regulation and Horizon 2020 rules for participation for the award of such grants. In the meantime, it shall also provide any information requested by the Commission in order to verify compliance with the Agreement and the Transfer of funds Agreement such as annual reports, quarterly reports, ad-hoc and final reports.

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<sup>&</sup>lt;sup>25</sup> See reference to the link of Space Work Programme: http://ec.europa.eu/research/participants/portal/doc/call/h2020/common/1597689-part\_05iii\_space\_v1.1\_en.pdf (Research and Development activities related to Galileo Public Regulated Service (PRS): page 72 to 74)





## Appendix III a - EGNOS Exploitation Grant Plan - 2014

## 1.1 Support to the continuous development of EGNOS and Galileo programmes in the field of Aviation

**LEGAL BASIS: Regulation (EU) No 1285/2013** 

Framework Partnership to be awarded to EUROCONTROL without a call for proposals on the basis of article 190(1)f) RAP

One specific grant to be awarded to EUROCONTROL under the Framework Partnership

#### **BUDGET LINE:**

020502-EU Satellite Navigation programmes (EGNOS and Galileo)

BACKGROUND: Following the recommendations of the Joint EU-EUROCONTROL Task Force on GNSS of 28 June 2013, the GSA intends to sign a Framework Partnership Agreement (FPA) with EUROCONTROL for the period 2014-2020 on the grounds of Article 190(1)(f) of the Rules of Application establishing a long-term cooperation between the GSA and EUROCONTROL necessary for the continuous development of the European GNSS Programmes (EGNOS and Galileo), particularly for the aviation community. EUROCONTROL is the only entity in Europe which possesses the technical expertise to understand, reflect and preserve the needs of the civil and military aviation relation users, in particular in to Air Traffic Management (ATM) Communication/Navigation/Surveillance (CNS), including space applications. Moreover, EUROCONTROL possess unique knowledge about EGNOS system since it is one of the main institutional actors, along with the European Commission and the European Space Agency, that have steered the EGNOS programme in its early days (ESA ARTES 9 initiative back in the early 90s) and played an important role in stabilizing the user requirements for EGNOS and maintaining a close link with the civil aviation community during the development phase of the programme.

The EUROCONTROL-GSA Framework partnership Agreement will contribute to the objectives of the Union policy in the field of GNSS.

The indicative overall budget of the grants to be awarded for the entire duration of the FPA is estimated to reach up to €6.000.000.

In 2014, a Specific Grant based on the framework partnership Agreement is planned to be awarded to EUROCONTROL.

#### Priorities, objectives pursued and expected results:





- The definition of mission level requirements for EGNOS and Galileo;
- The operational introduction of European GNSS services (EGNOS and Galileo) for aviation in European Civil Aviation Conference (ECAC) area;
- The advice on Regulatory and Standardisation aspects, including spectrum;
- The support to European GNSS Development and Exploitation Activities (major systems reviews and Programme level activities managed by the EU);
- The inclusion of EGNOS and Galileo in future GNSS user terminals for aviation:
- Coordination of R&D for GNSS in aviation.

## Description of the activities to be funded by the specific grant directly awarded under the framework partnership:

(1) Definition of aviation users' needs to support the definition of mission level requirements for EGNOS and Galileo

EUROCONTROL will support the discussions on the definition of mission requirements for EGNOS and Galileo systems and their evolutions (including NOTAMs) relevant to the aviation user needs also by performing ad-hoc mission studies.

(2) Operational introduction of European GNSS services (EGNOS and Galileo) for aviation in European Civil Aviation Conference (ECAC) area

The scope of this action is limited to ECAC States. The activity consists in performing analyses of the deployment factors (Airborne and Ground) of EGNOS and Galileo-based applications, targeting specific actions areas such as incentives programmes, training initiatives and guidance material.

(3) Advise on Regulatory and Standardisation aspects, including spectrum

EUROCONTROL will contribute to the development of EGNOS and Galileo standards in accordance with regulatory requirements and frequency management aspects such as licensing rules, ban on jammers, regulation of pseudolites, protection of GNSS spectrum, compatibility between GNSS and other aviation systems, etc. and related regulation supporting the operational use.

(4) Support to European GNSS Development and Exploitation Activities

EUROCONTROL will participate in major system reviews (managed by ESA in accordance with working arrangements with EU) and Programme level activities managed by the EU/GSA.

(5) Coordination of R&D for GNSS in aviation

EUROCONTROL will contribute to ensure that there are neither gaps nor overlaps between R&D activities on GNSS funded by different (European and National) public programmes, with the objective to develop a consistent R&D Programme for GNSS in aviation. EUROCONTROL will perform the analysis of relevant R&D Programmes outside Europe (e.g. Next Gen by FAA) and provide recommendations applicable to EGNOS.

(6) Inclusion of EGNOS and Galileo in future GNSS user terminals for aviation

EUROCONTROL will support the planning of the GNSS user terminal capabilities for the coming





10, 15 and 20 years	10	15 an	d 20	vears.
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## Essential selection and award criteria for the award of the FP and the subsequent specific grant:

#### Main selection criteria:

The financial capacity of the applicant to perform the proposed activities
 The applicant's technical capacity in understanding, reflecting and preserving the needs of Civil and State Aircraft Aviation users in Europe

#### Main award criteria:

- Relevance of the proposal to the objectives of the programme and, for the specific grant, of the FP and credibility of the proposed approach
- Quality of the proposal (completeness, understanding of the tasks, allocation of resources)
- Cost-effectiveness

## Indicative timetable and indicative amount of the specific grant directly awarded under a framework partnership:

- Estimated Amount: € 700.000

	Stages	Date and time or indicative period	
a)	Invitation to submit the proposal	Mid July 2014	
b)	Deadline for submitting the proposal	29 August 2014	
c)	Evaluation period	September 2014	
d)	Information to applicants on the outcome of the evaluation	October 2014	
e)	Signature of Framework Partnership Agreement	October- November 2014	
f)	Signature of Specific Grant Agreement	October- November 2014	

Maximum possible rate of co-financing of the eligible costs:





**Financial contribution for the specific grant:** Up to 100% of the total eligible costs. The co-financing principle is ensured through the participation of EUROCONTROL in the indirect costs of the action, which exceed the rate of 7% of the eligible direct costs to be funded by the GSA

#### 1.2 EGNOS Service Performance Monitoring Support from Member States

**LEGAL BASIS: Regulation (EU) No** 1285/2013

Call for proposals for the award of one Framework Partnership

One specific grant to be awarded under the Framework Partnership

#### **BUDGET LINE:**

020502-EU Satellite Navigation programmes (EGNOS and Galileo)

**BACKGROUND:** GSA envisages launching a call for proposals open to national agencies and institutions or bodies of EU Member States and Norway competent in the space sector in order to support technical assistance activities (in line with article 30 of the GNSS Regulation 1285/2013) for the management of the EGNOS in-service performance.

The objective is to guarantee independence of analyses and investigations, to establish relationship with partners which are not profit-oriented organisations but provide access to a wide range of key expertise and to benefit and contribute to long term key expertise continuity and competences for the EGNOS program (the GSA will be responsible for the EGNOS exploitation phase 2014-2021). Additionally, this activity will benefit from the past public investments and from the existing capacities available at Member States level.

Through the call for proposals the GSA intends to establish a Framework Partnership Agreement (FPA) with a consortium of national entities and institutions and bodies for the period 2014-2020 to be implemented through specific grants awarded annually. The indicative overall budget covering the grants to be awarded for the entire duration of the FPA is estimated at €4.000.000.

#### Priorities, objectives pursued and expected results:

The objectives are to support technical assistance activities in the following areas:

- (1) <u>SBAS Service and Signal Performance Watch</u> (addressing all SBAS: EGNOS, WAAS, SDCM, GAGAN, MSAS, ...): comparative evaluation of the different SBAS and GPS-only services in terms of signal/message configuration and delivered performance and delivery of periodic reports (monthly). One priority of 2014 is the SDCM Service and Signal Performance Watch for the satellite Luch-5B PRN125: report on any change in its operational conditions that may impact on EGNOS Service Provision.
- (2) <u>EGNOS Service Performance Abnormal Events Investigation</u> (ad-hoc): report on the results of investigations of GPS and EGNOS abnormal events (e.g. signal anomalies, service underperformance, etc.) and of the analyses of EGNOS service performance sensitivity to in-service configuration or





environment changes (e.g. RIMS network changes, signal interferences) and recommendations.

(3) Ad hoc support to EGNOS Programme Activities: punctual technical contributions to the major EGNOS service provision technical reviews, service engineering working groups (put in place by GSA, ESA and the ESP) with preparation of RIDS and contribution to review reports (analyses of service performance reports, provision of measurement or test analyses results, contributions to SBAS compatibility and interoperability analyses, etc.).

#### Description of the activities to be funded under the call for proposals:

- (1) <u>Monitoring of EGNOS competitors</u>: to monitor GNSS/SBAS infrastructure in order provide information on other SBASs performance, underperformance and operational conditions.
- (2) <u>Autonomous grid of stations (consistent with Galileo Reference Centre)</u>: to monitor the EGNOS In-Service performance (SiS Availability, Timing and Position Accuracy, Integrity, Continuity, Availability and Coverage) separated from the EGNOS Network.
- (3) Ad hoc investigation and return of experience: to investigate the decomposition between the performance' contributors (infrastructure, signal, propagation, receivers) in order to derive lessons learnt for future optimization of EGNOS signals and messages as well as for SBAS standards elaboration.

#### Essential eligibility, selection and award criteria for the award of FP and the specific grant:

#### Eligibility criteria:

- The proposal is submitted by:
  - National agencies competent in the space sector, or independent experts or bodies of the EU Member States, Switzerland and Norway active in the field of space sector and independent from the industry (Article 30 of the GNSS regulation);
  - o A minimum of three (3) Member States shall be represented in each participating consortium;

### Non-exclusion criteria

- Applicants shall not be in one of the situations referred to in Articles 106(1) and Articles 107, 108 and 109 of the EU Financial regulation.

### Main selection criteria:

- The financial capacity of the applicants to perform the proposed activities
- The applicants shall have an eminent technical competence, a high degree of specialisation and several years of experience in the GNSS sector (with particular focus on the SBAS systems).
- The applicants shall be capable of providing impartial analyses and opinions on the EGNOS inservice performance.





 The applicants shall possess technical infrastructures (data collection network, data processing capacities, service performance analyses tools) that enable him to monitor all SBAS service performance worldwide and to perform detailed investigations on EGNOS service anomalies using tools or simulators representative of the real EGNOS system

## Main award criteria:

- Relevance of the proposal to the objectives of the call and credibility of the proposed approach
- Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources
- Readiness to undertake the activity
- Cost-effectiveness

## Indicative timetable of the call for proposals and indicative amount of the specific grant:

Indicative amount: € 500.000

	Stages	Date and time or indicative period
a)	Publication of the call	Mid July 2014
b)	Deadline for submitting applications	15 September 2014
c)	Evaluation period	September – October 2014
d)	Information to applicants on the outcome of the evaluation	November 2014
e)	Signature of Framework Partnership Agreement	November – December 2014
f)	Signature of Specific Grant Agreement	November – December 2014

## Maximum possible rate of co-financing of the eligible costs:

Financial contribution: Up to 70% of the eligible costs.





### 1.3 Acceleration of EGNOS adoption in the field of civil aviation

**LEGAL BASIS** Regulation (EU) No 1285/2013

Call for proposals

#### **BUDGET LINE:**

020502- EU Satellite Navigation programmes (EGNOS and Galileo)

**BACKGROUND:** The European Global Navigation Satellite System (EGNSS), operated under civilian control, encompasses satellite radio-navigation system established under the Galileo programme and European Geostationary Overlay System (EGNOS). The EGNOS Safety of Life service was certified for use in aviation in March 2011 and today all European Air Navigation Service Providers (ANSPs) are enabled to implement EGNOS based approach procedures.

To meet the overall objectives of the EGNOS programme, the uptake in civil aviation is vital. This call should result in the implementation of EGNOS based operations, increasing safety and reducing distortions for the benefit of European aerodromes and airspace users.

#### Priorities of the year, objectives pursued and expected results:

Operational implementation of EGNOS in aviation is a strategic goal to ensure the success of the programme. In this context, the objective of this activity is to foster EGNOS adoption in the European aviation, enabling on the one hand, users to equip their aircraft/rotorcraft fleet with GPS/SBAS enabled avionics and, on the other hand, Air Navigation Service Providers and airports/heliports to publish APV SBAS (LPV), including PinS procedures and development of low level IFR routes in Europe.

The priority of the activity will be implementation in regional, business (corporate) aviation, general aviation (training, emergency services) and rotorcraft, considered the main aviation market segments for EGNOS and those maximising public benefits. Commercial operators and OEMs interested in benefitting from EGNOS may also apply to the call.

The result of this activity will be a wide scale operational implementation of the EGNOS based approaches throughout European airports and airspace users.

#### Description of the activities to be funded under the call for proposals:

Proposals submitted to the call should cover one or more of the activities described below:

 The design, development and implementation of EGNOS LPV approach procedures, PinS and low level IFR routes at different European airports/heliports/routes and publication in the national AIP.





- The approval of Air Operator Certificate for LPV operations of aircraft already equipped with SBAS capabilities.
- The installation of GPS/EGNOS enabled avionics and granting of airworthiness certification for RNP APCH procedures down to LPV minima, including PinS..
- Preparation for implementation of approach procedures benefitting from the LPV 200 capabilities provided by EGNOS in the near future.

#### Essential eligibility, selection and award criteria:

- 1. Eligibility and non-exclusion criteria
- The proposal is submitted by:
  - o legal entities established in an EU Member State or Norway or Switzerland;
  - o <u>for implementation of LPV procedures</u>: entities representing Air Navigation Service Providers ANSPs, Aerodromes/heliports/helipads.
  - for avionics upgrade or AOC approval : entities representing airspace users;
- Applicants shall not be in one of the situations referred to in Articles 106(1) and Articles 107, 108 and 109 of the EU Financial regulation.
- 2. The applicants must fulfil the following selection criteria:
- The financial capacity of the applicant to perform the proposed activities
- The technical capacity of the applicant to perform the proposed activities
- 3. Main award criteria:
- Relevance of the proposal to the objectives of the call and credibility of the proposed approach
- Impact in terms of economic and public benefits derived from the proposal
- Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources

## Indicative timetable and indicative amount of the call for proposals:

- Indicative amount: € 6,000,000

	Stages	Date and time or indicative period
a)	Publication of the call	July 2014
b)	Deadline for submitting applications	15 September 2014





c)	Evaluation period	September – October 2014
d)	Information to applicants on the outcome of the evaluation	November 2014
e)	Signature of the Grant Agreements t	November – December 2014

## Maximum possible rate of co-financing of the eligible total costs:

Up to 60% funding of the eligible total costs.