



European
Global Navigation
Satellite Systems
Agency

European GNSS Agency

Written Procedure No. 39

Prague, 19 March 2015

Decision to Adopt the Annual Work Programme 2015

ADMINISTRATIVE BOARD DECISION
of 19 March 2015
concerning the adoption of the 2015 Work Programme, serving as a financing decision
GSA-AB-WP-39

THE EUROPEAN GNSS AGENCY,

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

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

Having regard to Regulation (EC) 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"), and in particular to Article 14 thereof,

Having regard to Commission Delegated Regulation (EU) No 1271/2013 of 30 September 2013 on the Framework Financial Regulation for the bodies referred to in Article 208 of Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council,

Having regard to the GSA Financial Regulation 2014 (GSA-AB-38-14-03-20-04) and in particular Article 68 thereof,

Having regard to the Commission's formal opinion on the 2015 Work Programme, adopted on 18 March 2015;

¹ OJ L 150, 20.5.2014

Whereas:

- The Security Accreditation Board for the European GNSS programmes, hereinafter the SAB, has adopted the section of the 2015 Work Programme related to the activities described under chapter III of the GSA Regulation
- This decision should allow for the award of procurement contracts for the reasons and amounts set out in the Work Programme for the Agency's core tasks.
- This decision should allow for the payment of interest due for late payment.
- For the application of this decision, it is appropriate to define the term 'substantial change' within the meaning of Article 53 of Commission Delegated Regulation (EU) No 1268/2012.
- Pursuant to Article 6(2) (f), of Regulation (EU) No 512/2014, the Security Accreditation Board has prepared and endorsed the relevant parts of the work-programme.

HAS DECIDED AS FOLLOWS:

Article 1

The 2015 Work Programme for the implementation of the GNSS Regulation and GSA Regulation (hereinafter "Work Programme"), as set out in the Annex, is adopted without modification to the section of the 2015 Work Programme related to the activities described under Chapter III of the GSA Regulation. For the Agency's core tasks it constitutes a financing decision in the meaning of Article 68 of the GSA Financial Regulation.

Article 2

The maximum contribution for the core tasks under 2015 Work Programme is set at 7,986,300 EUR. The implementation of tasks delegated by the Commission shall be financed by additional funds delegated to the Agency under various delegation agreements.

These appropriations shall cover interest due for late payment.

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 19 March 2015

For the GSA Administrative Board

Ms Sabine Dannelke



European
Global Navigation
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Annual Work Programme 2015

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01 - Introduction

The 2015 Annual Work Programme represents the Agency's activity plan for 2015 financed from operational appropriations. In addition it presents for information purposes the tasks entrusted to the Agency by the Commission (Article 8 of the GSA Financial Regulation). Finally, this information is complemented by a short description of support activities.

The activities over the course of the planning period is consistent with the Agency's strategic objectives and further developed within the draft Multi Annual Work Programme which at the time of writing has yet to be adopted by the Administrative Board, and with the main GNSS Programme milestones for 2015 which are: Early services provision for PRS (Public Regulated Service), OS (Open Service), Search and Rescue and demonstration activities in the area of CS (Commercial Services); Follow-up of tenders and procurements for Galileo service provision and operations for post-2016, the Galileo Reference Centre, Time Service Provider, Geodetic Reference Service Provider and the GNSS Service Centre and the hand-over of the search and rescue operations cooperation agreement between the Commission and CNES to the Agency; and follow up of EGNOS service provision activities and the procurement of future EGNOS system activities.

The main activities foreseen to be implemented under GSA operational budget (title III) are:

1. Preparation for the commercialisation and awareness of the European GNSS

The above requires intense market development in order to continue and enhance the engagement of user communities and actors in the value chain, such as chipset, receiver manufacturers and application developers. This will strengthen EGNOS market position and enable Galileo market entry. The Early Service value proposition will be leveraged to engage the value chain and prepare for Galileo adoption in consumer, transport, professional and governmental segments. An effective market communication will be key to support these actions. Market and technology monitoring, cost benefit analysis and the update of the value proposition based on actual performance will be at the basis of these activities. This will contribute to informed choices towards adoption of the Early Services. The user satisfaction survey, already in place for EGNOS, will enable a continuous improvement process of the user service experience.

These items of operational expenditure under which the Agency has a mandate (market development, contribution to the commercialisation and awareness of Galileo and EGNOS, communication activities) require at least a similar budget to that of 2014 in a time of launch of Early Services and consolidation of EGNOS in which the Agency should focus on adoption, ensuring a return in terms of socio-economic benefits.

2. Security Accreditation

As far as the Galileo Security Accreditation activities are concerned, out of a total budget request of 1,400,000 EUR, approximately 360,000 EUR is foreseen to reimburse Member States' representatives for missions and meetings related to Security Accreditation, Flight Key Cell and Crypto Distribution Authority actions. The remaining budget will be used for accreditation support contracts to perform technical activities linked to the security accreditation process and, in particular, to the on-going preparation of the upcoming Galileo system accreditation milestones e.g. Authorisations to Launch.

This includes:

- Review of technical security documentation
- Analysis of system security risks and of risk treatment plans
- Analysis of the compliance to system security requirements
- Contribution to the drafting of accreditation documents and reports
- Development of independent security test plans and procedures
- Support for site accreditation.
- Access to independent experts for in-depth technical reviews
- Support to the setting of new tasks of the Security Accreditation Board (SAB) associated with the modification of the GSA regulation
- Monitoring of the security perception and performance of the EU GNSS in the public domain and user communities

These support activities are essential in order to provide the expected level of support to the Security Accreditation Board, as stipulated by the GSA Regulation. The operational costs of the security accreditation activities will overall remain stable.

3. Galileo Security Monitoring Centre Operations

For the Galileo Security Monitoring Centre (GSMC) Operations, operational support contracts will be required in 2015 to assist the Agency in the gradual deployment of the GSMC at its two sites in support of GSMC Operations, which is to be fully achieved by September 2015. The contracts will be necessary to cover the following essential actions:

- Operational engineering of the GSMC Operations
- Support to the GSMC operations for covering advanced security expertise related to security monitoring

4. Tasks related to the Public Regulated Service (PRS) Decision No 1104/2011/EU

In 2015, the Agency will continue to support the Member States' Competent PRS Authorities (CPAs), notably through the organisation of regular CPA workshops.

Delegated tasks

In 2015, in addition to its own operational core budget, the Agency will manage a significant volume of tasks delegated by the European Commission to be implemented by procurements and grants. The volume of delegated tasks and the associated budget is increasing significantly, as the Agency becomes entrusted with the exploitation of the GNSS programmes (EGNOS exploitation and Galileo exploitation, both including Fundamental Elements) and with the management of Horizon 2020 grants and contracts.

In accordance with Article 8 of the GSA Financial Regulation, the tasks entrusted to the Agency by the Commission should be referred to in the annual work programme of the Agency for information purposes only. Accordingly, the present Work Programme 2015 is divided in two parts: (i) Core tasks and (ii) Delegated tasks complemented by the information on the support activities.

Support activities

Support activities in 2015 will include:

1. Contract management and Procurement services:

The Agency will launch or award more than 100 new procurements and contracts in 2015. The most challenging activities will be linked to the Galileo operation and service provision linked procurement procedures (delegated task) and the PRS procurements (delegated task).

2. Legal services:

In 2015 specific guidance on legal matters will be provided as required to support the Agency's operations.

3. Project control:

In 2015 the project control activities will be further developed, in particular concerning planning (budget, schedule) and risk management activities for EGNOS exploitation and Galileo exploitation. New project control tools will be developed and introduced progressively, and the Document Management System will reach maturity.

4. ICT & Logistics

In 2015, the Agency will be taking over the entire building in Prague, which it currently shares with the Czech Ministry of Finance. This means that the available office area will increase by approximately 30%. Facility management and security services will have to be properly developed and brought up to the proper standard for routine operation; additional investment into furnishing new offices will be necessary.

The GSMC sites will be appropriately resourced in terms of ICT needs, and will be maintained and guarded.

The Agency will invest significant amounts into data processing for all sites during the course of 2014 and many new projects were put in the 2014 pipeline. In general, after three years of intensive work on the infrastructure and applications (2012 - relocation and basic setup, 2013 - addition of GSMC and improvements of infrastructure, 2014 - development of applications) the year 2015 is expected to be a year of consolidation.

5. Communications:

In 2015, the Agency's Communication activities will fall into four main categories:

- EGNOS and Galileo Market Communications and promotional actions that focus on building greater awareness and confidence leading to increased uptake of EGNOS amongst more users in target sectors and to continue introducing the many benefits that Galileo (including Early Services) brings to each sector.
- 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 strengthen the image of the Agency.

6. Quality:

In 2015, the Agency will undertake activities to continue to benefit from the work done for the ISO 9001 certification exercise.

7. Internal Control Coordination & Audit:

In 2015, the function on Internal Control Coordination will be strengthened in terms of capacity and independence towards the Administrative Board. Moreover, the Agency will seek added audit assurance by performing internal audits with the support of Internal Audit Capabilities of other EU Agencies within the same policy area (planning subject to approval by the Administrative Board and all relevant stakeholders).

8. Human Resources

The Agency has approximately 130 staff members located in different sites and will recruit 25 new staff members, trainees and interim agents in 2015.

During the previous three years, the Agency successfully managed its Human Resources (HR) tasks while faced with many developments focusing on the recruitment and on-boarding of newcomers (the Agency increased from 70 staff in 2012 to 130 staff in 2014) including three relocations (2012 from Brussels to Prague, 2013 from Brussels to Saint-Germain-en-Laye and 2014 from Brussels to Prague). The establishment of many new services to compensate the loss of Commission-provided services which the Agency had previously benefited from in Brussels had also induced a significant work load (e.g. training courses, welcome office, relocation support, medical office, social and well-being support available for staff members and their families).

During 2015, the administrative workflow will remain considerable due to the growth of the staff population and to the change of the regulatory framework stemming from the 2014 Staff Regulations. The implementation of all rules will be completed in the course of 2015. One major change will be the implementation of the decision on working time and the provision of guidance to staff and management on this matter.

Grade and career development policies, competency mapping and internal communication tailored to the Agency's strategy and organizational needs will represent a major contribution to fostering the Agency's corporate spirit and to enhance retention of the workforce.

The Agency will further consolidate the provision of relocation support services for all new and existing staff members. In 2015, the Agency will launch new initiatives in staff networking areas and for the benefit of family members in order to foster staff retention and enhance a common culture for the Agency.

9. Central Security:

The Agency's central Security Office offers services to the entire Agency in all its locations. This office will also assume the functions of the Agency's Central EUCI Registry, and will establish and maintain a secured document management system for classified information.

01.01 Legal references for the Work Programme

According to Article 6(2) (b) of the GSA Regulation, the Administrative Board shall adopt the Agency's Work Programme 2015 by 15 November 2014, after having incorporated, without any change, the section drafted by the SAB, in accordance with point (b) of Article 11(3a), and after having received the Commission's opinion. The section of this document that details the security accreditation activities shall be adopted by the SAB before the Administrative Board adopts the complete document.

This work programme reflects the tasks that are entrusted to the Agency in light of the GNSS Regulation², the GSA Regulation³ and the PRS Decision⁴.

² OJ L 347/1 of 20.12.2013

01.02 Main Assumptions

The Agency has drafted this work programme based on the following assumptions, which are correct as of time of writing:

- No consideration is made by the Agency concerning the potential implementation of Article 5(1) b and c of the PRS decision 1104/2011 unless such request materialises in the course of the year.
- The Agency assumes that the deployment of the space segment will take place at an accelerated rate and that there will be 3 launches in 2015
- The Agency assumes that the Early Services will be declared in 2015.
- The Commission will ensure the necessary coverage of support services from work package (WP) 2 to GSMC over the period 2014-2016
- The Commission will ensure the necessary coverage of support services from work package 6 in order to evaluate GSF deployed by WP2:
- The mandate of the Crypto Distribution Authority (CDA) is confirmed and implemented in 2014 to ensure the independence of its Programme role for the Commission as the EU GNSS Crypto Distribution Authority and assurance role for the SAB, CDA Task Force. The EU GNSS CDA is set the target of declaring Initial Operating Capability and full integration into the Programme by the declaration of Galileo Early Services.
- The Agency supports the European Commission on the definition and implementation of the security requirements in line with the new exploitation delegation agreements.
- The system risk analysis performed by ESA will 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

³ Regulation (EU) 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

⁴ 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

- The definition of Early Services with respect to PRS is defined in the PRS implementation plan and the Early Services Security and PRS operational Scenarios and Interfaces document⁵
- PRS pilot projects are defined jointly with the European Commission and will start only after Early Services have been declared.
- The Agency provides support to the European Commission PRS Pilot Project I (P3RS-1). This is a framework contract supporting the definition, management and development of the PRS Pilot Projects. It was awarded in 2012 and the implementation started before Q2 2014. Delivery of the initial 20 P3RS2 PRS pre-operational receivers is not foreseen before Q1 2016 (30 months from kick-off), so initial tests will start with system tools (e.g. Test User Receiver – PRS).
- A specific arrangement to access PRS technology and the ownership or use of PRS receivers under article 14 of the PRS decision is put in place no later than Q4/2014
- The Galileo service operations contract (for post-2016 activities) is aimed to be awarded in Q2-2016.

⁵ GAL-TN-ESA-SEC-X-0157-X, "ES Security and PRS operational Scenario and Interfaces", issue 2.1, May 2014

02 - Budget

This section highlights the budget split between the various areas of activities. For more precise details on procurement, please see Appendix I – Foreseen Procurement.

N°	Title of the action	Type of Action	Tentative Budget line	Indicative amount €
SECURITY				
1.	Provision of support to the Agency in the Security Accreditation activities – specific contract(s)	Procurement	03.3300	1,040,000.00
2.	Security Accreditation activities: Direct reimbursements to Member States participants	Missions Cost Reimbursement	03.3300	360,000.00
Sub-total for SECURITY				1,400,000.00
GSMC OPERATIONS				
3.	Service Level Agreement with the EU CERT	Agreement	03.3100	65,000.00
4.	Support services for GSMC operations activities	Procurement	03.3100	3,280,000.00
Sub-total for GSMC OPERATIONS				3,345,000.00
MARKET DEVELOPMENT				
5.	User Market Development support contract(s)	Procurement	03.3100	2,090,000.00
QUALITY CONTROL				
6.	Quality management support services	Procurement	03.3100	300,000.00
COMMUNICATION				
7.	Communications Events support services	Procurement	03.3100	850,000.00
TOTAL				7,985,000.00

02.01 Grants

There is no Basic Act authorising the Agency to launch its own Grant Scheme. Therefore, no grants are planned in 2015 from the Agency's core budget.

The Agency does plan to implement new grants in 2015, under the Horizon 2020 programme, the EGNOS exploitation delegation agreement, and the Galileo exploitation delegation agreement. The EGNOS grant plan is annexed to this document for reference.

03 - Activities

03.01 Agency Management

- The implementation of the Agency's Integrated Management System and the design of the Internal Audit Capability

Task	State ⁶	Name	KPI/Deliverable	Timing
1.	N	Implementation of the GSA Integrated Management System (IMS)	<ul style="list-style-type: none"> IMS periodically assessed and maintained IMS documentation upgraded and made available internally Meetings for GSA Quality Officers (QO) & Quality Management Board (QMB) meetings coached. QO & QMB actions agreed, executed and documented. IMS related training (Quality management and Quality Audit) made available and delivered. 	Periodically throughout the year
2.	N	Design and implementation of the Internal Audit Capability (IAC)	<ul style="list-style-type: none"> Develop IAC Audit Processes Present IAC Annual Work Plan Implement IAC Annual Work Plan IAC Annual Activity Report 	<ul style="list-style-type: none"> 15 Feb 2015 15 Mar 2015 Q2-Q3 2015 End 2015

⁶ As per Regulation 512/2014, Article 8a (2), each task is marked as C (Changed), N (New) or O (On-Going) compared to last year's Annual Work Programme.

03.02 Security Related Activities

The Agency's security related activities, outside those falling under chapter III of the GSA Regulation, can be grouped under the following two headings:

- Central Security Office
- Tasks related to the PRS Decision No 1104/2011/EU

The sections below expand these activities further; the list of deliverables and Key Performance Indicators (KPIs) follows.

03.02.1 Central Security Office (CSO)

The Agency's central Security Office offers services to the entire Agency in all its locations. This office will also assume the functions of Agency's Central EUCI Registry, and will establish and maintain a secured document management system for classified documents.

03.02.2 Tasks related to the Decision No 1104/2011/EU (PRS Decision)

As part of the technical assistance task to the Member States' Competent PRS Authorities (CPAs), the Agency will continue the support to these CPAs, notably through the organisation of regular CPA workshops. These workshops shall discuss in particular a guide for the establishment of the CPA and other PRS related assistance tasks.

The Agency is ensuring that all its activities are in line with the PRS Decision as specified through the PRS arrangement with the Commission under Article 14 of the PRS Decision.

The table on the next page shows the related deliverables and KPIs for all CSO related activities.

03.02.3 Tasks: Central Security Office

Task	State ⁷	Name	KPI/Deliverables	Timing
1.	O	Develop/amend policies and procedures for the corporate security of the Agency, including for a classified Document Management System, in line with EU rules and the quality project	Number of policies/procedures established/amended	Q2
2.	O	Ensure the physical security of the headquarters in liaison with the NSA	<ul style="list-style-type: none"> 100% of facilities accredited/reaccredited 100% of reported incidents investigated and treated 	Q1-Q4
3.	O	Administrate the Agency's staff Personal Security Clearances and authorisations	<ul style="list-style-type: none"> 100% of Personal Security Clearances administrated in liaison with the Member States' NSAs 100% of the authorisations administrated 	Q1-Q4
4.	O	Administrate the Agency Central EUCI Register and checking decentralised registers	100% guarantee of compliance with 2001/844/EC for the central end decentralised registers	Q1-Q4
5.	O	Develop the security training plan for Agency personnel and ensure the implementation at Agency facilities	Approval of the corporate security training plan; checking the implementation at Agency headquarters, GSMC and GSC.	Plan by Q1 Check by Q4
6.	O	Administration of keys for the various groups (GNSS SB, SAB, GSAP, etc.)	Timely generation, distributing and administration of keys for all groups	Q1-Q4
7.	O	Prepare the Agency secured networks for accreditation by the SAA	Decision by the SAA to accredit the Agency secured network RUEs	Q1 2015 if ICT infrastructure deployed by December 2014
8.	O	Ensure the security aspects of the extension of the Prague facilities	In view of the full occupation of the Prague building 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

⁷ As per Regulation 512/2014, Article 8a (2), each task is marked as C (Changed), N (New) or O (On-Going) compared to last year's Annual Work Programme.

Task	State ⁷	Name	KPI/Deliverables	Timing
9.	O	Ensure industrial security in line with EU rules	Advising and preparing on security aspects of Agency industrial contracts. Guarantee 100% compliance with 2006/548/EC	Q1-Q4
10.	N	Develop security oversight procedures and ensure the implementation at Agency facilities in compliance with 2001/844/EC	Approval of a corporate security oversight plan; implementing the plan at Agency headquarters; checking the implementation at the headquarters, GSMC and GSC. 100% compliance with 2001/844/EC	<ul style="list-style-type: none"> Plan by Q1 Check by Q4
11.	N	Develop in cooperation with the HR department and in coordination with the Commission DG HR, the HR policies with security related content	Finalised policy (determined by HR)	<ul style="list-style-type: none"> Plan by Q1; Check by Q4

03.02.4 Tasks related to the PRS Decision

Task	State ⁸	Name	KPI/Deliverables	Timing
1.	O	Organise 2-3 CPA workshops	Agenda and decisions/actions lists	Q1-Q4
2.	O	Develop the guide for the establishment of the CPA	CPA guide	Q3
3.	O	Develop other assistance tasks to CPA	List of assistance tasks	Q3
4.	O	Develop a PRS information dissemination an awareness policy	PRS information dissemination an awareness policy	Q4

⁸ As per Regulation 512/2014, Article 8a (2), each task is marked as C (Changed), N (New) or O (On-Going) compared to last year's Annual Work Programme.

03.03 Security Accreditation Activities

In accordance with point (b) of Article 11(4) of the GSA regulation, the Security Accreditation Board (SAB) prepared this section. It is being incorporated into this work programme, without any change.

The European GNSS Security Accreditation Authority is the Agency's Security Accreditation Board (SAB), established within the Agency as an autonomous body pursuant to Article 11 of Regulation (EU) No 512/2014 amending Regulation 912/2010. All the security accreditation decisions related to the GNSS systems are of its sole competence.

According to Article 11(11), the SAB has set up special subordinate bodies, acting on its instructions, to deal with specific issues. These are:

- A panel (currently named GSAP but which may be renamed pursuant to the adoption of new Rules of procedures of the SAB) to conduct security analysis reviews and tests to produce the relevant risk reports in order to assist it in preparing its decisions. It 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 manage EU GNSS cryptographic material and assist the Security Accreditation Board on COMSEC issues; particularly for questions related to PRS keys and flight keys – flight key cell (FKC). The SAB created the CDA in 2011 with a refined mandate in 2013 and is to be implemented in 2014. The mandate of the CDA is confirmed and implemented in 2014 to ensure the independence of its Programme role (for the Commission, i.e. the EU GNSS DA) and assurance role (for SAB, i.e. the SBA CDA Task Force). The EU GNSS DA is set the target of declaring Initial Operating Capability and full integration into the Programme by the declaration of Galileo Early Services; this includes supervision of the management of PRS cryptographic material. Full CDA capability is planned to be ready by the hand over to the exploitation phase.

According to Article 11(10) of the Regulation, the Agency provides the appropriate human and material resources required to the SAB to enable it and its sub-ordinate bodies to perform their tasks independently.

In order to support the SAB, the Panel and the CDA, the Agency established within the Security Department a Security Accreditation Team and Crypto Distribution Authority team which report to the SAB Chair and, together with security department overall support, provides secretariat support for the SAB, chairs subordinate bodies and provides technical expertise at all stages of the accreditation process. These support tasks include:

- SAB secretariat: including secretariat, coordination and preparation of the relevant files for accreditation decisions. SAB meetings should be planned in order to allow a timely decision for each programme milestone, after due consultation of the relevant expert groups (GSAP/CDA). Specific documents should be prepared and submitted to the SAB to support the decision-making.
- Support to SAB management: including drafting the Work Programme, the Budget, the Staff Establishment Plan, day-to-day management of the Security Accreditation resources (staff and resources).
- Panel management: including chairmanship, secretariat, coordination and preparation of the relevant files for accreditation endorsement. 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. These reports are drafted on the basis of the outcomes of the specific Security Accreditation Tasks described hereafter, taking into account any specific demand of the SAA and the result of the relevant security analysis. The GSAP is divided into a number of expert groups and is chaired by GSA, which also provides secretariat support.
- CDA management: including chairmanship of the CDA Task Force (group of Member States COMSEC experts who provide oversight and governance of CDA activities), secretariat, and organisation of Flight Key Cell (FKC) activities for each launch campaign, as well as standardisation, regulatory and reporting COMSEC activities.
- The Flight Key Cell activities represent a vital part of the set of activities performed by a dedicated formation of the CDA responsible for the security of COMSEC items during satellite launch campaigns.

- 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. The GNSS Accreditation process is strongly linked to the GNSS design, development and deployment process. For each specific Galileo technical milestone, the Agency's 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 includes the performance of independent security tests.
- 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. 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.
- System components level: security requirements reviews (security targets) of system components implementing security functions and monitoring of the component evaluation and certification process. 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.
- 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. The accreditation tasks related to the User Segment are in the definition phase, in particular on the basis of the PRS Access Rules 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 during 2014.

The table on the next page shows the related deliverables and KPIs for all security related activities.

Task	State ⁹	Name	KPI/Deliverable	Timing
1.	O	SAB Secretariat	<ul style="list-style-type: none"> Report to SAB chairman; 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; Record/update all SAB decisions. 	As required to ensure 5 SAB meetings in the year
2.	N	Support to SAB Management	<ul style="list-style-type: none"> Draft SAB Work Programme 2016, taking into account the inputs from the GSAP and CDA; Draft SAB Budget 2016, taking into account the inputs from the GSAP and CDA; Report on SAB Budget 2015; Draft the SAB Staff Establishment Plan 	Q1/2015
3.	O	Authorisations to launch and authorisations to operate the system under a given configuration;	Accreditation Statement	T0 + 2 months (T0 being the date of the accreditation request including all relevant information)
4.	O	Authorisation to operate the Galileo sites	Site Authorisation To Operate	T0 + 2 months
5.	O	PRS Manufacturer Authorisations	PRS Manufacturer Authorisations	T0 + 2 months
6.	O	Ensure the GSAP chairmanship, technical secretariat and organisational secretariat	<ul style="list-style-type: none"> Propose GSAP meeting plan Draft reports in order to prepare GSAP reviews Organise 5 GSAP meetings in the year Deliver GSAP reports and recommendations to SAB 	As required to ensure SAB decision making

⁹ As per Regulation 512/2014, Article 8a (2), each task is marked as C (Changed), N (New) or O (On-Going) compared to last year's Annual Work Programme.

Task	State ⁹	Name	KPI/Deliverable	Timing
7.	O	System level accreditation tasks	<ul style="list-style-type: none"> Review existing strategies to ensure consistency with the regulation / the programme and propose enhancements as appropriate; Carry out system audits/reviews and report to GSAP/SAB accordingly; Carry out security vulnerability analysis and system security tests and report to GSAP/SAB accordingly; Monitor risks, treatment plans and report to GSAP/SAB accordingly; 	As required to ensure GSAP/SAB decision making
8.	O	Site level accreditation tasks	Plan activities to ensure the sites meet the security requirements expected for the launches and Services; carry out 20-25 activities on-site and report to the GSAP/SAB accordingly.	As required to ensure GSAP/SAB decision making
9.	O	Component level accreditation tasks	Monitoring of component first/second evaluation and report to the GSAP/SAB accordingly	As required to ensure GSAP/SAB decision making
10.	O	User segment accreditation tasks	100% of requests for PRS manufacturer authorisation administrated and recommendations made to GSAP/SAB accordingly	As required to ensure GSAP/SAB decision making

03.04 GSMC Operations

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

- **GSMC Nucleus:** provided in the interim period until full GSMC operations 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.
- **GSMC Organisational Design:** ramp-up, including organisation, processes, and getting operational validation and accreditation.
- **Contribution to Operational Equipment Developments:** as future operator of Galileo IT operational equipment, the GSMC operations 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.
- **Hosting Infrastructure Agreement:** ensure the building infrastructure provided by France and the UK is appropriate for long term missions and establish the long term relationship agreements.

It is to be noted that the Agency is assuming the following GSMC timeline:

- December 2014: GMS v2 Acceptance Review 1
- June 2015: GMS V2 Acceptance Review 2
- June 2015: OSRR3 including GSF Acceptance Review
- 30 September 2015: Operational Readiness Review of the GSF P2.0
- 30 June 2016: Operational Service Readiness Review of the GSF P2.1
- Progressive evolution of applicability of SSRS 3.9 from delivery of early services consistent with the number of PRS receivers

The table on the next page shows the related deliverables and KPIs for all GSMC operations activities.

Task	State ¹⁰	Name	KPI/Deliverable	Timing
1.	N	GSF Operations Validation Readiness Review (OVRR) ¹¹	<ul style="list-style-type: none"> Decision from the programme to start GSMC operations validation. Updated version of all GSF Key Point 2 documentation Full list of detailed procedures Detailed Validation Plan (including test cases) Traceability between Validation Plan and ORD SoC for OVRR 	GSMC OVRR successfully passed in line with the Programme Schedule.
2.	N	GSF Operations Readiness Review (ORR) ¹²	<ul style="list-style-type: none"> Acceptance by the programme of the GSMC evidence that GSMC is able to operate the GSF equipment to meet the operational requirements of the GSMC. 	GSMC ORR successfully passed in line with the Programme Schedule.
3.	N	GSF Operations Service Readiness Review (OSRR)	<ul style="list-style-type: none"> Validation of the KPIs applicable to the GSMC operations. Declaration by the programme that the GSMC is fully operational 	GSMC OSRR successfully passed in line with the Programme Schedule.
4.	N	SAMS for GSMC France ¹³	<ul style="list-style-type: none"> This review ends with a formal authorisation of the accreditors and the programme to connect the GSMC France site to the Galileo Operations Chain. 	GSMC France SAMS successfully passed in line with the Programme Schedule
5.	N	SAMS for GSMC UK ¹⁴	<ul style="list-style-type: none"> Formal authorisation of the accreditors and the programme to connect the GSMC UK site to the Galileo Operations Chain. 	GSMC UK SAMS successfully passed in line with the Programme Schedule

¹⁰ As per Regulation 512/2014, Article 8a (2), each task is marked as N (New), C (Changed) or O (On going) compared with last year's Annual Work Programme 2014.

¹¹ This formal programme review marks the start of the GSF Operations Validation Campaign and represents the acceptance by the programme of the design of GSMC operations.

¹² This review occurs after the validation of GSMC operations and marks the start of Service Validation Campaign.

¹³ This review process will cover the suitability of the GSMC France site infrastructure, local security operations, local hosting operations and site maintenance to allow long-term GSMC operations from this site.

¹⁴ This review process will cover the suitability of the GSMC UK site infrastructure, local security operations, local hosting operations and site maintenance to allow long-term GSMC operations from this site.

Task	State ¹⁰	Name	KPI/Deliverable	Timing
6.	N	GSF Equipment Anomaly Reporting	<ul style="list-style-type: none"> Establishment of a GSMC Anomaly Reporting Regime. Report of all anomalies on GSF equipment to the programme to ensure they are patched or corrected in future evolutions. Ensuring the resolution of anomalies reported by CPAs regarding their use of the PRS Service. 	GSMC ORR successfully passed in line with the Programme Schedule
7.	N	GSF Operations	<ul style="list-style-type: none"> Establishment of an associated KPIs Regime Continuous availability of GSMC operations that meet the KPIs applicable to the GSMC. 	GSMC ORR successfully passed in line with the Programme Schedule
8.	N	GSMC Administration and Classified Systems Deployment and Maintenance ¹⁵	<ul style="list-style-type: none"> Procurement and configuration of the necessary IT infrastructure so GSMC sites can connect to the Agency's administrative IT networks. Contribution to accreditation and maintenance of GRUE and GSUE systems for processing EUCL. Establishment of an associated KPIs Regime Continuous availability of GSMC Administration and Classified Systems that meet the KPIs applicable to the GSMC. 	GSMC ORR successfully passed in line with the Programme Schedule
9.	N	GSMC Staff Training and Certification ¹⁶	<ul style="list-style-type: none"> Operations Training Needs Analysis document. Operations Training Plan Set up and maintain a Training Management System From GSF OSRR all GSMC Operators are certified within 4 months of arrival From GSF OSRR All GSMC Operators are re-certified annually 	GSMC OSRR successfully passed in line with the Programme Schedule

¹⁵ This work covers the administrative work necessary to setup two centres of the GSMC, a master and a backup

¹⁶ As part of its role as the operator of the GSMC, the Agency will need to ensure that a suitable training programme is put in place for the GSMC staff. In defining the Operations Training Plan, the Agency shall consider the coordination of operations team training. The Agency shall also consider the participation of personnel from the Commission & ESA, Member State POCs and the GSF Segment Contracts personnel.

03.05 Market Development

The Early Services provision that is planned to start in early 2015, and gradually improve in terms of user performance, is a key milestone for the acceleration of Galileo adoption in the market. In order to be fully effective, this milestone requires significant intensification of market development activities to influence market decision makers. A similar effort shall be spent on the entire value chain (e.g. chipsets and receiver manufacturers, service providers, etc.) to enable users to enjoy Galileo services. The main user communities (e.g. mobile operators for consumer, automotive industry for road, etc.) must be kept engaged in roadmaps towards Galileo adoption, recognising the benefit of the European GNSS programme.

In 2015, the Agency will continue to pursue a set of very intensive actions to maximise the penetration of the overall EGNSS portfolio of services in target market segments, thus positioning, in the most appropriate way, the most attractive services of EGNOS and Galileo to users. In doing this, the Agency will especially focus on the integration of Galileo Early Services within chipsets and receivers and the market entry in priority market segments, where Galileo has a stronger value proposition, such as in automotive (Road User Charging, Advanced Driver Assisted Service and current and future connected navigation), high precision, rail, maritime and for governmental uses. The EGNSS services portfolio market position will be further strengthened via the consolidation of EGNOS market penetration, especially in aviation.

This systematic approach will continue along the following lines:

- Vertically by market segment:
 1. Engagement with users and decision makers, including the development and implementation of adoption roadmaps;
 2. Engagement with key actors in the value chain such as application developers and service providers.
 3. Support the integration of Galileo in receivers in key market segments (especially road and location based services; driving mass-market adoption and benefits of EGNSS will continue to be a priority).

4. Support, directly and with technical and market expertise, the European Commission with on-going regulated applications (e.g. eCall and Digital Tachograph) and new upcoming legislative initiatives.
 5. Maintain and improve the efficient support provided to stakeholders and users in priority markets to ensure continuous growth of EGNOS adoption.
- Horizontally:
 1. Continue to translate user needs into requirements and inputs for Galileo service development with careful monitoring of the user communities and emerging trends in complementary and substitute technology.
 2. Continue to provide market and technology monitoring, using socio-economic benefits and cost benefit analysis as main tools to drive strategic decisions.
 3. Conduct a user satisfaction survey for EGNOS and initiate a similar process for Galileo, enabling improvement of the user service experience.
 4. Update the EGNSS value proposition, capitalising on knowledge of the market and of the performance at user level, and use this as the basis for communication-related activities about EGNSS.

The table on the next page shows the related deliverables and KPIs for all Market Development activities.

Task	State ¹⁷	Name	KPI/Deliverable	Timing
1.	O	EGNOS stakeholder and user market development in aviation	<ul style="list-style-type: none"> Support aviation operators regarding EGNOS operational implementation, including LPV200, performing business cases Promotion contacts for new operators and airports implementing the procedures and operations Annual update of aircraft database of SBAS capabilities in EU, including integration and cross-check with flight plans analysis Definition of Galileo market entry strategy as EU contribution to multi-constellation in aviation, including Search and Rescue Adoption status and 2015-2018 forecast in terms of airports, procedures and operators Management of EGNOS Service Provider actions to achieve aviation objectives defined in the multimodal adoption plan 	<p>Q4</p> <p>Q4</p> <p>Q4</p> <p>Q4</p> <p>Q4</p> <p>Q1-Q4</p>
2.	O	Galileo and EGNOS market development in agriculture, with a special focus on Early Services	<ul style="list-style-type: none"> Overall market assessment of EGNSS in high precision/agriculture; this is already the most mature segment for EGNOS, focusing on Galileo OS dual frequency and CS which deliver improved accuracy to users Update of integrated Galileo market entry plan, leveraging the experience gathered on EGNOS, to ensure fast Galileo penetration by market segment e.g. Variable Rate Technology, automatic steering, logistics Organisation of key technical workshops to promote Galileo with high precision service providers and early adopters 	<p>Q4</p> <p>Q4</p> <p>Q1-Q4</p>

¹⁷ As per Regulation 512/2014, Article 8a (2), each task is marked as C (Changed), N (New) or O (On-going) compared to last year's Annual Work Programme.

Task	State ^{1/}	Name	KPI/Deliverable	Timing
			<ul style="list-style-type: none"> Innovative high precision application contest involving young entrepreneurs and researchers to deliver new solutions Report on the high precision service providers, involved in trials, via the Galileo CS demonstrator Management of EGNOS Service Provider actions to implement market-relevant actions defined in the multimodal adoption plan 	<p>Q3</p> <p>Q3</p> <p>Q1-Q4</p>
3.	O	Galileo and EGNOS market development in surveying and mapping, with a special focus on Early Services	<ul style="list-style-type: none"> Cooperation report with public reference network providers in order to push for Galileo adoption convincing them to anticipate investment in network receivers. Overall market assessment of EGNSS in surveying, focusing on Galileo OS dual frequency and CS which deliver improved accuracy to users Implementation report of integrated E-GNSS market penetration by sub-segment in i.e. EGNOS in mapping and Galileo in surveying (e.g. geodesy, construction, machine control) Analysis of EGNOS mapping applications in international markets Management of EGNOS Service Provider actions to implement market-relevant actions defined in the multimodal adoption plan 	<p>Q4</p> <p>Q3</p> <p>Q4</p> <p>Q4</p> <p>Q1-Q4</p>
4.	O	Galileo and EGNOS market development in road applications, with a special focus on Early Services	<ul style="list-style-type: none"> Provision of necessary inputs and assistance to the delegated acts or technical annexes for on-going regulatory processes (i.e. eCall and Enhanced Digital Tachograph), as well as to market/users consultations Technical support to the In Vehicle Devices manufacturers for the qualification of their Galileo and EGNOS compatible solutions. Technical and market EGNSS awareness with public authorities and industry on new GNSS tolling schemes 	<p>Q1-Q4</p> <p>Q1-Q4</p> <p>Q1-Q4</p>

Task	State ^{1/}	Name	KPI/Deliverable	Timing
			<ul style="list-style-type: none"> Key implemented actions for adoption of Galileo in advanced driver assistance systems and new safety applications based on connected vehicles Hold three technical sessions with decision makers and bodies influencing the market to promote EGNSS in Intelligent Transport Solutions, Advanced Driver Assistance Services and Road User Charging Management of EGNOS Service Provider actions to implement market-relevant actions defined in the multimodal adoption plan 	<p>Q4</p> <p>Q1-Q4</p> <p>Q1-Q4</p>
5.	O	Galileo and EGNOS market development in maritime applications with special focus on Early Services	<ul style="list-style-type: none"> Provision of required inputs and assistance to the Commission during the last phase of recognition of Galileo by the International Maritime Organisation, and related standardisation process of multi-constellation receivers Hold a technical session with decision makers and bodies influencing the market to increase market uptake of Galileo Search and Rescue Preparation of campaign to increase market uptake of Galileo/EGNOS in recreational and leisure sub-segment Management of EGNOS Service Provider actions to implement market-relevant actions defined in the multimodal adoption plan 	<p>Q1-Q4</p> <p>Q1-Q4</p> <p>Q1-Q4</p> <p>Q1-Q4</p>
6.	O	Galileo and EGNOS market development in rail applications with special focus on Early Services	<ul style="list-style-type: none"> Contribution to the virtual balise definition: methodology, specification and start-up of GNSS performance testing in a typical, European Rail Traffic Management System -ready railway environment Support to the Commission in Shift 2 Rail activities for the inclusion of GNSS in European Rail Traffic Management System evolution and low-density lines. Implementation of actions of EGNSS in asset management roadmap defined in 2014 Hold two technical sessions with decision makers and bodies influencing the market to increase market uptake of EGNSS in the rail sector Management of EGNOS Service Provider to implement market-relevant actions defined in the multimodal adoption plan 	<p>Q3-Q4</p> <p>Q1-Q4</p> <p>Q4</p> <p>Q4</p> <p>Q1-Q4</p>
7.	O	Stakeholders & user market development for governmental applications (PRS)	<ul style="list-style-type: none"> Implementation of the Galileo adoption plan for PRS, following approval by the Commission, as a result of the work carried out in the frame of a specific contract on a PRS roadmap definition in 2014 Support provided to the Commission in preparation of Galileo use in critical infrastructure and for security related applications 	<p>Q4</p> <p>Q4</p>
8.	O	Galileo stakeholders and user market	<ul style="list-style-type: none"> Co-marketing activity with one key mass market chipset manufacturer towards telecom operators and final users Technical sessions for LBS application developers to stimulate innovative solutions 	<p>Q2</p> <p>Q1</p>

Task	State ¹⁷	Name	KPI/Deliverable	Timing
		development in Location Based Services (LBS)	<ul style="list-style-type: none"> Sponsor initiatives identifying innovative application developers (e.g. Galileo Master), taking part in the selection process of EGNSS solutions, and support small businesses via the funding guide Identification of Galileo market champions among smartphone manufacturers Support provided to the Commission to prepare Galileo and EGNOS use in E112 	Q4 Q4 Q4
9.	O	Integrated EGNSS user and value chain based market approach	<ul style="list-style-type: none"> EGNSS value proposition by market and by service, identifying key differentiators and benefits for communication to users and the value chain 	Q4
10.	O	EGNSS user satisfaction independent monitoring process	<ul style="list-style-type: none"> Conduct EGNSS user satisfaction independent monitoring process by market segment (e.g. aviation, rail, maritime, high precision, rail) Analyse user satisfaction monitoring process results and identify areas for improvement for EGNSS services 	Q1-Q4 Q4
11.	O	Galileo User Management ¹⁸	<ul style="list-style-type: none"> GNSS Service Centre Nucleus monthly performance reports Ensure availability of market and information to users and the value chain responding to the requests emerging in customer contact Track the user and value chain EGNSS experience in all contacts of the service cycle with the GSC Nucleus 	Q1-Q4 Q4 Q4
12.	O	Technological scan and cooperation with GNSS receiver manufacturers	<ul style="list-style-type: none"> Annual monitoring of Galileo penetration in chipsets and devices per market segment Monthly digest on technical news for Agency newsletter Coordination of annual meetings with receiver manufacturers Management of testing with receivers and clarification on technical issues 	Q1-Q4 Monthly Q3 Q1-Q2

¹⁸ This assumes that the current 2 SNEs, who are currently working on Agriculture, Surveying and Mapping as well as supporting the GSC Nucleus will still be available

Task	State ^{1/}	Name	KPI/Deliverable	Timing
			<ul style="list-style-type: none"> Co-marketing with chipset and receiver manufacturers 	Q1-Q4
13.	O	Market monitoring and forecasting process	<ul style="list-style-type: none"> Annual update of Market Monitoring and Forecasting Process database Publication of Market Report issue 4 Provision of specific analysis on request of the Commission and member states, including support to impact assessment of policies 	Q2 Q2 Q1-Q4
14.	O	Open Service authentication preparation	<ul style="list-style-type: none"> Technical and market analysis in support of the Commission implementation Preparation of enablers for adoption of OS authentication in the domains identified in the market study of 2013-2014 (only specific activities will be outsourced) 	Q2 Q4
15.	O	Commercial service early services preparation	<ul style="list-style-type: none"> Consolidation of business case for CS (High Precision and authentication) after feasibility confirmation (e.g. uplink capacity, real-time interface latency) Involvement of Service Providers in real-time testing of the CS signal via the GNSS Service Centre 	Q3 Q4
16.	O	Support to mission evolution (EGMER)	<ul style="list-style-type: none"> Gathering of market inputs to mission evolution strategy Market sizing and quantifications of socio-economic benefits for different options of system evolutions Validation of system evolution concept with users. 	Q1 Q1 Q3-Q4

03.06 Communications

In 2015 the Agency Communications will achieve the following main objectives:

EGNOS and Galileo sector-specific Market Communication and Promotion

General objectives – supporting the achievement of the EGNOS Programme’s overall objectives as defined in the Commission Regulation on the implementation and exploitation of European satellite navigation systems which was adopted in 2014:

- 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.
- Promote participation in Horizon 2020 research and 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.

Sector-specific objectives—supporting the Agency’s Market Development Strategies:

- 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 brings today, and what Galileo will soon bring, to road applications to support adoption in the sector. (Focus on Road User Charging (RUC), eCall, Advanced Driver Assistance Services, 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/Consumer applications: Continue to raise awareness of how EGNOS today, and Galileo soon, can benefit the sector.

Supporting Galileo Exploitation and Early Services Communications

- Support the European Commission in raising awareness and confidence in Galileo Early Services.

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 prepare now for PRS.

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.
- Increase and improve internal communications within the Agency.

03.06.01 Tasks: Communications

Task	State ¹⁹	Name	KPI/Deliverable	Timing
EGNOS and Galileo sector-specific Market Communication and Promotion				
1.	O	Continue to support and expand EGNOS branding and identity, using the 'EGNOS. It's there, use it' campaign umbrella.	Branding used on all materials	Q1-Q4
2.	N	Support the Galileo Early Services message and branding into all communications.	Branding used on all materials	Q1-Q4
3.	O	Update/reprint EGNOS sector-targeted leaflets as required	4 revisions & reprints	Q4
4.	O	Update sectorial advertising as necessary and run in trade magazines associated with sector-specific event sponsorship packages.	5 target specific ad insertions	Q4
5.	N	Create a new video showing the benefits that EGNOS offers for rail applications that can be shown at relevant conferences, events and meetings and distributed via Internet channels	1 new EGNOS sector video (long & short version)	Q4
6.	O	Update existing EGNOS-Galileo sector- specific videos as needed	2 updates	Q4
7.	N	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
8.	O	Cover EGNOS/Galileo sector-focused success stories, project results and milestones as regular and timely news stories on the EGNOS Portal and the GSC site	4-6 new news stories per month	Q4

¹⁹ As per Regulation 512/2014, Article 8a (2), each task is marked as N (New), C (Changed) or O (On going) compared to last year's Annual Work Programme.

Task	State ¹⁹	Name	KPI/Deliverable	Timing
9.	N	Add, update and refine new relevant information, tools and helpful features on the EGNOS Portal and the GSC site	8-10 updates per month	Q4
10.	O	Leverage social media tools (Twitter, Facebook, LinkedIn) to increase awareness of EGNOS and Galileo within the specific sectors	4 – 8 updates per month	Q4
11.	O	Publish regular electronic targeted newsletters based on content from the EGNOS Portal and GSC websites	Quarterly newsletters	Q4
12.	N	Leverage mailing lists to send targeted communications on EGNSS and Horizon 2020.	Quarterly targeted mailings	Q4
13.	O	Raise awareness of key sector-related EGNOS and Galileo success stories, results, milestones, Horizon 2020/FP7 project results and demonstrations, GSA ESNC EGNSS prize winning applications, etc. amongst relevant media via on-going press releases, web stories and event contacts	5-6 targeted press releases	Q4
14.	O	Leverage event participation and advertising placement to negotiate positive coverage of EGNOS and EGNOS applications in associated sector-focused media channels	On-going leverage of EGNOS Portal news stories Related event coverage in 4-5 event media channels	Q4
15.	N	Build and maintain comprehensive sector-specific and relevant national, Europe-wide and international media lists in order to deliver timely well-directed messages to key media information multipliers.	Full, updated media contact list by sector accessible via email database.	Q2
16.	N	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 and 2 video news releases delivered	Q4
17.	O	Promote EGNOS and Galileo with exhibition stands and other promotional initiatives at a range of key events	Support of 10-12 EGNOS and Galileo sector-specific events	Q4
18.	O	Continue support of the European Satellite Navigation Competition (ESNC), leveraging this communications and networking tool and continue awarding the annual GSA ESNC Special Topic Prize	Agency sponsorship of 2015 contest and the awarding of an annual GSA Special Topic Prize	Q4

Task	State ¹⁹	Name	KPI/Deliverable	Timing
19.	O	Continue to support the European Space Expo (ESE), in cooperation with the Commission, leveraging its communications potential for EGNSS	Update existing and create 1 new application kiosk as well as support the successful placement of the ESE at key locations across Europe	Q1-Q4
20.	O	Organise, in cooperation with the Commission, the annual European Space Solutions Conference	Organisation, support and promotion	Q4
Supporting Galileo Exploitation and Early Services Communications				
21.	N	Placement of the Galileo Early Services message and branding into all communications.	Branding used on all materials	Q1-Q4
22.	N	Update promotional materials for the European GNSS Service Centre	Revision of GSC leaflet	Q1
23.	O	Continue to add relevant content & tools to the European GNSS Service Centre (GSC) website	6-8 updates per month	Q4
24.	N	Leverage articles and content on the other Agency managed websites (GSA & EGNOS Portal) to send the Early Services message	On-going references	Q1-Q4
25.	N	Leverage mailing and media lists to raise awareness of Galileo Early Services message.	Creation/distribution 2-3 info mailings	Q4
26.	N	Communicate Galileo Early Services message at all events where the Agency participates in 2015	Approximately 15-20 events during the year	Q4
27.	N	Produce and distribute a video promoting Galileo Early Services	1 Galileo Early Services Video (long and short version)	Q4
PRS Awareness-building (All of these activities involve working jointly with the Commission)				

Task	State ¹⁹	Name	KPI/Deliverable	Timing
28.	N	Production of promotional material (print and audio-visual) on PRS, in close cooperation with the Commission	<ul style="list-style-type: none"> • Revise and reprint brochure • Production of 5-7 minute EN video • 2-4 updates per month • Creation/distribution 2-3 newsletters 	Q1-Q4
29.	O	Promotion of PRS in selected events, in close cooperation with the Commission	Promote the PRS at 2-3 events during the year	Q4
GSA Corporate Communications				
30.	N	Incorporate new GSA logo/branding into all Agency documents, signage & presentation templates as needed	Refined, consistent, evolved look for the Agency	Q1-Q4
31.	O	Regular direct contact with key institutional stakeholders to present and explain who the Agency is, and what it does	Refinement and distribution of GSA fact file	Q4
32.	N	Refinement of the GSA Information/Presentation File for institutional partners	Refinement and distribution of GSA fact file	Q4
33.	O	Continue to 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
34.	O	Leverage social media tools (Twitter, Facebook, LinkedIn) to increase awareness of GSA activities in key areas	3-5 updates per month	Q4
35.	O	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, Commission partners, etc.)	Text, layout and distribution of 3 newsletters	Q4
36.	O	Seize opportunities with relevant media – via press releases, advertising, meetings and contacts, and the Internet – to raise awareness and understating of the Agency, its role, the activities it is involved in, and the results it is achieving	3-4 GSA related press releases	Q4
37.	O	Leverage event participant to increase Agency visibility	Agency promotion at GSA-managed communication events	Q4

Task	State ¹⁹	Name	KPI/Deliverable	Timing
38.	N	Implement Agency Internal Communications Plan	GSA staff communications actions as defined in 2015 plan	Q4

03.07 Support Services

Note that the support services are financed out of Title 1 or Title 2 of the Agency's budget and therefore do not need a separate financing decision. The Agency's Administrative Board is not being asked to approve this section; it is provided for information only.

03.07.1 ICT & Logistics

Following the stabilisation of the Agency's ICT systems in the Prague headquarters, the Agency will now need focus on improvements, new features and projects supporting the business. A framework contract for ICT security support is planned, reflecting the increased importance that the Agency assigns to this function; three of the four tasks listed below are security related:

- Task 1 shall deliver a new communication system allowing classified communication between the headquarters and the GSMC sites.
- Task 2 shall provide cover for risks linked to a theoretical loss of the Agency's headquarters in case of a major disaster.
- Task 4 shall provide major improvements in the security of unclassified information systems.

Task 3 is a project requested by the Human Resources department in order to implement online recruitment and to improve the daily management of routine activities. There is little satisfaction with the current system - Allegro - but there is a possibility that the Commission will allow regulatory agencies to use its system - SYSPER2.

Task	State ²⁰	Name	KPI/Deliverable	Timing
1.	N	Implement an internal communication system (HQ-GSMC) up to Secret UE	Working system	Q4-2015
2.	N	Disaster recovery site	Working site in case of major failure in the HQ	Q4-2015
3.	N	New HR system replacing Allegro (provided that Sysper2 is not made available by the EC)	New system working (or migration to Sysper2)	Q2-2015
4.	N	Improvements in IT Security	Intrusion detection and prevention systems in place	Q4-2015

03.07.2 Human Resources

The HR Department contributes to the achievement of the Agency's goals and challenges by providing services that promote a work environment characterized by fair treatment, solid moral attitude, effectiveness, flexibility, transparency, trust and mutual respect in the context of principles and rules of the European Union.

The main priorities for 2015 are the implementation and compliance with the regulatory framework related to the 2014 revision of the staff regulations, introducing a comprehensive assessment of candidates during the hiring process and implementation of grade and career development policies. The ultimate aim is to foster the Agency's corporate spirit, increase retention of the workforce and increase the attractiveness of the Agency as an employer.

²⁰ As per Regulation 512/2014, Article 8a (2), each task is marked as N (New) or C (Changed) compared to last year's Annual Work Programme.

Task	State ²¹	Name	KPI/Deliverable	Timing
1.	O	Conduct a yearly analysis of learning and development needs and offer a variety of development opportunities, enabling staff to maintain and expand the skills, competences and experience necessary to effectively contribute to the achievement of individual, divisional and organisational goals and the Agency's expectations.	<ul style="list-style-type: none"> Learning and Development Framework 2015 drafted and implemented Agency and department development activities as well as personal learning and development maps implemented effectively and efficiently. 	Q1-4
2.	N	Competency management - Develop a map of existing competences	<ul style="list-style-type: none"> Agency competencies mapped 	Q4
3.	O	Implement HR software fully in order to improve efficiency in HR processes management such as recruitment, absences, probation period, personal files, job profiles etc.	<ul style="list-style-type: none"> First modules of HR software implemented, Agency staff trained to use it. Gradual implementation of new modules. Appropriate automation for every HR task and function. Streamlined management of personnel files. Improved compliance and secure, instant access to information offered. Support of the decision processing with the accurate, timely, and accessible data needed to enable informed judgment. Integration of all HR processes to minimize redundancy. 	Q4
4.	O	Efficient workforce planning Efficiently recruit new posts and replace vacant positions	<ul style="list-style-type: none"> 95% execution of Establishment Plan Send a job offer to successful candidates within 4 months from publication or after staff members leave. Succession planning Audit on workload Compliance to GSA grade harmonisation plan Introduction of psychometric tests Introduction of Assessment Centres 	Q1- Q4

²¹ ibid

Task	State ²¹	Name	KPI/Deliverable	Timing
5.	O	Relocation support services	<ul style="list-style-type: none"> • Complying with the legal requirement stemming from the Host Agreement (Identity and car registrations) • Practical support • Home search • School and nursery search • Utilities support • Removals advice • Continued support after the move • Support programmes for family members (job search support, language courses, networking etc.) 	Q1-Q4
6.	O	Performance management	<ul style="list-style-type: none"> • All annual appraisal reports, annual objectives reports, probation period objectives reports and staff reclassification exercises completed • 360 degree evaluation 	Q2
7.	O	Organise Agency social and well-being activities and events	<ul style="list-style-type: none"> • Activities and events carried out • Social audit 	Q1-Q4
8.	O	Contract management	<ul style="list-style-type: none"> • Medical services in Prague • Medical advisor in Prague • Provision of interim services in Prague • HR consultancy services • All contracts drafted, amended, signed and processed accurately in a timely manner 	Q1- Q4
9.	N	Internal communication	<ul style="list-style-type: none"> • An internal communication plan developed and implemented. • Activities and events organised, initiatives supported. 	Q1-Q4
10.	N	Grade policy	<ul style="list-style-type: none"> • Strategy on harmonisation of grades within the Agency drafted and approved 	Q4
11.	N	Career policy	<ul style="list-style-type: none"> • Career path policy and staff development strategy. • Career development advisor services. 	Q4

Task	State ²¹	Name	KPI/Deliverable	Timing
12.	N	HR regulatory framework implementation	<ul style="list-style-type: none"> • Flexitime policy introduction and implementation. • Reclassification policy. • Agency policy protecting the dignity of the person and preventing psychological and sexual harassment and its implementation through confidential counsellors' network. • Agency policy on administrative enquiries and disciplinary procedures. • Health and safety policy and its implementation. 	Q4

03.07.3 Legal and Procurement

The Agency's Legal and Procurement Department is responsible for providing legal, procurement and contract management services for the Agency, for both its core and delegated tasks. During 2015 the main challenges will relate to the management of legal and procurement issues relating to the EGNOS Exploitation, Galileo Exploitation and Horizon 2020 Delegation Agreements, together with the stabilisation of the Legal and Procurement Department.

Task	State ²²	Name	KPI/Deliverable	Timing
1.	O	Provide legal advice and support for all Agency tasks.	Ensure overall legal coverage.	Q1-Q4
2.	O	Provide legal support to the Administrative Board.	Effective running of Administrative Board.	Q1-Q4
3.	O	Substantially contribute to inter-institutional relations (Commission-ESA...).	Effective cooperation with other institutions.	Q1-Q4

²² As per Regulation 512/2014, Article 8a (2), each task is marked as N (New) or C (Changed) compared to last year's Annual Work Programme.

Task	State ²²	Name	KPI/Deliverable	Timing
4.	O	Stabilise the legal and procurement team.	Balanced work distribution	Q1-Q4
5.	O	Achieve planned procurements and flexibility for additions.	Contracts signature and budget execution	Q4
6.	O	Stabilise procurement processes and templates and complete integration of full admin procurement.	Streamlined (high-standard) working methods	Q4
7.	O	Earlier planning and conduct of procurements.	Planning initiated in N-1 and increased commitments in first half of year.	Q1-Q2

03.07.4 Project Control

The Agency's Project Control department, alongside its main EGNOS Exploitation and Galileo Exploitation tasks, is responsible for ensuring the effective management of the Administrative Board and associated programming documents, in particular the Annual Work Programme and Annual Activity Report, in cooperation with the Legal Department.

Task	State ²³	Name	KPI/Deliverable	Timing
1.	O	Prepare Administration Board and associated programming documents in cooperation with Legal.	Effective running of Administrative Board.	Q1-Q4
2.	O	Establish new Project Control team, especially in support of EGNOS Exploitation and Galileo Exploitation tasks	Effective team organisation put in place	Q1-Q4

²³ As per Regulation 512/2014, Article 8a (2), each task is marked as N (New) or C (Changed) compared to last year's Annual Work Programme.

03.07.5 Finance and Internal Controls

The Agency's Finance department is responsible for all financial management, budgeting, reporting and controls. Two specific challenges for 2015 will be the implementation of the new Horizon 2020 Agency grant scheme and the set-up of adequate Activity Based Budgeting and Reporting.

Task	State ²⁴	Name	KPI/Deliverable	Timing
1.	O	Managing & processing about 4000 transactions in 2015 (commitments, payments, recovery orders, transfers, reimbursements, cash requests, etc.)	All transactions documented properly and processed within the appropriate operational and legal deadlines	Q1-Q4
2.	N	Implementing, in cooperation with other departments, Activity Based Budgeting and Activity Based Reporting	System in place during Q1	Q1
3.	O	Budgetary and statutory external and internal reporting	All reports delivered on time	Q1-Q4
4.	O	Management of all administrative, financial and contractual provisions for Horizon 2020, FP-7, FP-6 and any other grant schemes (e.g. EGNOS delegated grants)	Grant processes handled on time and with a high degree of quality. No observations from the European Court of Auditors or the Internal Audit Service in relation to grant management	Q1-Q4
5.	O	Grants ex-post audits launched and concluded on time in order to provide assurance to our external auditors	All audit reports finalised before the Agency's financial statements are closed. Grants error rate to remain below the Commission average	Q2
6.	O	Management of all internal control functions, including relations with the Internal Audit Service and implementation of the Anti-Fraud Strategy	No critical observations raised by the Internal Audit Service or the European Court of Auditors	Q1-Q4

²⁴ As per Regulation 512/2014, Article 8a (2), each task is marked as N (New) or C (Changed) compared to last year's Annual Work Programme.

Appendix I – Foreseen Procurement

The overall budgetary allocation reserved for operational procurements and subsequent contracts in 2015 amounts to 7,986,300.00 EUR under the Agency's own budget. Please note that the budgetary figures listed in the following tables are all indicative, as are the launch dates for the procurements.

I.01 Security Activities

Task	Name	Legal Basis	Procurement Launch Date (Indicative)	Budget (Indicative)	Type of contract	Number of contracts
1.	Support services to accreditation files preparation	GSA Regulation	Q1	220,000	Specific Contract(s)	1-5
2.	Support services penetration testing	GSA Regulation	Q1	220,000	Specific Contract(s)	1-5
3.	Support services to new tasks of the SAB	GSA Regulation	Q2	200,000	Specific Contract(s)	1-5
4.	Independent experts services	GSA Regulation	Q2	200,000	New Procurement	1
5.	Security threats assessment services	GSA Regulation	Q2	200,000	New Procurement	1

I.02 GSMC Operations

Task	Name	Legal Basis	Procurement Launch Date (Indicative)	Budget (Indicative)	Type of contract	Number of contracts
1.	Service Level Agreement with the EU CERT	GSA Regulation	Q1	65,000	Agreement	1

2.	GSMC external operational support services	GSA Regulation	Q1-Q2	2,347,922	Specific contract, New framework contract & specific contract	3
4.	GSMC external technical support services	GSA Regulation	Q1-Q2	871,578	As for GSMC external operational support services	2

I.03 Market Development

Task	Name	Legal Basis	Procurement Launch Date (Indicative)	Budget (Indicative)	Type of contract	Number of contracts
1.	EGNOS stakeholder and user market development in transport (aviation, road, maritime and rail)	GSA Regulation	Q2-Q4	540,000	Specific Contract	4
2.	Galileo early services and EGNOS stakeholders and user market development in high precision	GSA Regulation	Q4	150,000	Specific Contract	2
3.	Stakeholders and user market development for governmental applications (PRS)	GSA Regulation	Q4	100,000	Specific Contract	1
4.	Galileo stakeholders and user market development in Location Based Services	GSA Regulation	Q2	150,000	Specific Contract	1
5.	EGNSS user satisfaction independent monitoring process and Galileo User Management, including integrated EGNSS value chain based market approach	GSA Regulation	Q4	200,000	Specific Contract	3
6.	Technological scan, cooperation with GNSS receiver manufacturers and update of market monitoring and forecasting process, including specific CBA support	GSA Regulation	Q2-Q4	450,000	Specific Contract	3
7.	Commercial service and OS authentication preparation	GSA Regulation	Q4	250,000	Specific Contract	2
8.	Technical Consulting support	GSA Regulation	Q3	250,000	Specific Contract	1

I.04 Communications

Task	Name	Legal Basis	Procurement Launch Date (Indicative)	Budget (Indicative)	Type of contract	Number of contracts
1	Event Support (conferences, exhibition stands, workshops and related activities); European Space Expo Project; website development and content management; publication, advertising and video support services	GSA Regulation	Q1	750,000	Specific Contracts	5
2	ESNC (Galileo Masters Prize)	GSA Regulation	Q1	100,000	Direct Contract	1

I.05 General Administration, IT and Logistics

Task	Name	Legal Basis	Procurement Launch Date (Indicative)	Budget (Indicative)	Type of contract	Number of contracts
1	Quality Management support services	GSA Regulation	Q1	300,000	Specific contracts	6

Appendix II – Delegated Tasks

The Delegation Agreements between the Commission and the Agency which will be in force during 2015 are:

- 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)
- Delegation Agreement for EGNOS Exploitation
- Delegation Agreement for Galileo Exploitation
- Delegation agreement for the management of Horizon 2020 projects.

II.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 €90 Billion over a period of 20 years.

Furthermore, GNSS market development related Research & Development 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 and intelligent transport systems, high precision, mobile communication and location-based services, followed by maritime, and aviation.

As outlined in the Commission guidelines, the Agency will manage FP7 projects on applications and security research and development in accordance with the terms of the delegation agreement.

In 2015, the Agency does not expect to start new activities from the current FP7 delegation agreement.

The following projects from FP7 will be still on-going and managed in 2015:

- GNSS Education Network For Universities And Industries (GENIUS)
- Strengthening User Networks For Requirement Investigation And Supporting Entrepreneurship (SUNRISE)
- Countering GNSS High Accuracy Applications Limitations Due To Ionospheric Disturbances In Brazil (CALIBRA)
- Integrated PMR and GALILEO PRS Receiver Architecture (PRS4PMR)

II.2 Delegation Agreement for Public Regulated Service (2011)

The Agency provides management of the European Commission PRS Pilot Project 2 (P3RS-2) that was kicked-off in December 2013. This includes the procurement of 20 PRS pre-operational receivers and a firm price commitment for optional purchase of further batches of receivers. Delivery of the initial 20 PRS pre-operational (accredited) receivers is not foreseen before Q1 2016 (30 months from kick-off)

II.2.01 Tasks

Task	State ²⁵	Name	KPI/Deliverable	Timing
1.	O	Follow up design implementation as defined in the CDR and qualification	<ul style="list-style-type: none"> Design and justification files 	Q1-Q4
2.	O	Following equipment evaluation and accreditation	<ul style="list-style-type: none"> Security target and protection profile and justification files 	Q1-Q4
3.	N	Implementation of additional P3RS2 activities (such as the purchase of additional receiver boxes and/or additional receiver units or the implementation of additional tasks) if required)	<ul style="list-style-type: none"> Additional receiver boxes and/or additional receiver units as required Technical deliverables associated to the specific tasks 	Q1-Q4

II.3 Delegation Agreement for the Preparation of the Exploitation Phase

In 2015, the Agency will not commit any funds under this agreement. However, ongoing activities will continue until 31 December 2015 when the period of execution of this delegation agreement will end.

²⁵ As per Regulation 512/2014, Article 8a (2), each task is marked as C (Changed), N (New) or O (On-Going) compared to last year's Annual Work Programme.

II.3.01 Preparatory Tasks for the Exploitation of EGNOS and Galileo

Task	State ²⁶	Sub-Task	Indicators	Timing
1.	O	TASK 1.1: Galileo exploitation preparation and early operations: <ul style="list-style-type: none"> Definition of processes and operational interfaces between the operational entities Commission, ESA, GSA and external entities Documentation of processes, procedures and interfaces in the Galileo Service Operations manual Analysis, contributions and maintenance of the Statement of Compliance to the Early Service requirements baseline 	<ul style="list-style-type: none"> Galileo Early Services Operations Manual Statement of Compliance to Galileo Early Service requirements baseline 	Q1-Q2 2014
2.	O	TASK 1.2: Development and early operations of the European GNSS Service Centre (GSC) <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Review comments of GSC documentation 	Q1-Q2 2014
3.	O	TASK 2.1: EGNOS exploitation preparation <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Anomaly Review Board Minutes of Meeting Service & System CCB updated Terms of Reference Obsolescence Management plan and System Evolution roadmap update 	Q1-Q2 2014
4.	O	TASK 2.2: Activities related to EGNOS infrastructure acceptance <ul style="list-style-type: none"> Participation to the EGNOS V2 development reviews Technical coordination of the acceptance process follow-up of EGNOS GEO satellite transponders 	<ul style="list-style-type: none"> Review Item Discrepancies (RIDs) to the EGNOS V2 development reviews Participation to GEO progress meetings & progress reports 	Q1-Q2 2014

²⁶ As per Regulation 512/2014, Article 8a (2), each task is marked as C (Changed), N (New) or O (On-Going) compared to last year's Annual Work Programme.

Task	State ^{2b}	Sub-Task	Indicators	Timing
5.	O	TASK 3.1: Exploitation Management Processes and Tools <ul style="list-style-type: none"> Project control activities including planning & scheduling, risk management and configuration and documentation management 	<ul style="list-style-type: none"> Updates of working schedules, risk register and configuration status 	Q1-Q2 2014

II.3.02 PRS Pilot Projects definition and implementation and General Support to the Commission on PRS User Segment

The Agency will continue to provide support to the European Commission in PRS user segment-related activities including:

- Logistical, technical and secretarial support to GNSS Security Board and associated Working Groups in particular to WG-PRS and WG-NET (with additional support to CSI for PRS related issues).
- Provision of general technical assistance to the Commission for PRS user segment implementation
- Support to the Commission to maintain GNSS Security Board documentation (e.g. PRS Implementation Plan and annexes), and of PRS User Segment documentation (in coordination with ESA)
- PRS Pilot Project implementation support including (but not limited to) support in the implementation of the Call-for engagement launched by the GNSS SB in March 2013, support the coordination of "engaged" PRS Participants, liaison with new PRS participants, organisation of workshops and awareness sessions on PRS, lessons learnt, etc.
- Acting as the main interface with PRS end-users and industry (in liaison with Competent PRS Authorities)

These tasks will be continued and completed by additional tasks under the new Galileo exploitation delegation agreement (section II.5)

II.4 Delegation Agreement for the EGNOS Exploitation

The EGNOS Exploitation Delegation Agreement between the Commission and the Agency was signed on 16 April 2014, delegating €1,450M to the Agency 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 Commission-Agency link for EGNOS Exploitation as foreseen in the GNSS Regulation, and is planned to be complemented later in 2015 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.

The full detail of these tasks are contained within the relevant delegation agreements and related documentation. For ease of reference, the EGNOS Exploitation Grant Plan is annexed to this document. The 2015 EGNOS Exploitation Acquisition Plan will be annexed to this document once it is finalised with the Commission.

II.5 Delegation Agreement for Galileo Exploitation

The GALILEO Exploitation Delegation Agreement between the Commission and the Agency was signed on 2 October 2014. The new agreement provides a framework and budget for the development of services and operations through 2021 and serves as an initial step towards the full Galileo Exploitation Phase. Specifically, the Agency's responsibilities include:

- Provision and marketing of the services;
- Management, maintenance, continuous improvement, evolution and protection of the space and ground infrastructure;
- Research and development of receiver platforms with innovative features in different application domains;
- Development of future generations of the system;
- Cooperation with other GNSS;
- All other required activities to ensure the development and smooth running of the system.

The European Commission remains responsible for the overall programme supervision, while the European Space Agency (ESA) is entrusted with the deployment phase. It is planned to complement the Delegation Agreement later by the GSA-ESA Working Arrangement. The GSA-ESA Working Arrangement will in particular address future system upgrades.

The Galileo exploitation phase will be progressively rolled out starting in 2014 – 2015, with full operability scheduled for 2020. The implementation period of the Agreement runs until 2021, with a comprehensive review of its functioning before the end of 2016. The maximum current EU contribution amounts to EUR 490 million, which will cover procurement and grant activities, including the GSA-ESA working arrangements and a programme management reserve, along with related research and development activities. The financing of the full exploitation phase will be confirmed during a mid-term review before the end of 2016.

The full detail of these tasks are contained within the delegation agreement and related documentation. To complement this part of the Annual Work Programme 2015, the Galileo Exploitation Acquisition and Grant Plans will be annexed to this document once it is finalised with the Commission.

II.6 Delegation Agreement for Horizon 2020

The European Commission 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 Commission entrusts the Agency with the implementation of tasks under the following part of the Commission's 2014-2015 Work Program implementing the Horizon 2020 Specific Programme: Galileo-related activities within the activity "Space" of the specific objective "Leadership in Enabling and Industrial Technologies" of the pillar "Industrial leadership".

The Agency's main tasks include, first of all, the management of grant award procedures for the call for proposals, as well as for grants awarded without a call for proposals covered by a transfer of

funds agreement²⁷. Moreover, the Agency shall 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 Agency 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 Regulations. The Agency is also called 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 within the activity "Space" of the specific objective "Leadership in Enabling and Industrial Technologies" of the pillar "Industrial leadership" of the Horizon 2020 Specific Programme.

The list of projects that the Agency shall manage is:

Acronym	Title
SAT406M	An EGNSS application providing an end-to-end solution based on the SAR/Galileo service and particularly using the Return-Link-Message (RLM), to improve the mobility and safety of citizens
GMCA	GNSS Monitoring for Critical Applications
mapKITE	EGNOS-GPS/GALILEO-based high-resolution terrestrial-aerial sensing system.
PARADISE	Precise and Robust Navigation enabling Applications in Disturbed Signal Environments

²⁷ See reference to Calls: <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-galileo-2014-1.html#tab2>

G MOTIT	Galileo-Enhanced MOTIT: an electric scooter sharing service for sustainable urban mobility
MISTRAL	Monitoring of Soil moisture and water-flooded Areas for agriculture and Environment
MAGNIFIC	Multiplying In Africa European Global Navigation Initiatives Fostering Interlaced Cooperation
COREGAL	Combined Positioning-Reflectometry Galileo Code Receiver for Forest Management
LARA	LBS Augmented Reality Assistive System for Utilities Infrastructure Management through Galileo & EGNOS
ERSAT EAV	ERTMS on SATELLITE – Enabling Application Validation
GALENA	Galileo-based solutions for urban freight transport
DEMETRA	Demonstrator of EGNSS Services based on Time Reference Architecture
FOSTER ITS	First Operational, Secured and Trusted galileo Receiver for ITS
ELASTIC	European Location As A Service Targeting International Commerce
e-Airport	Increase airport capacity, safety and security using European GNSS
UKRAINE	UKraine Replication, Awareness and INnovation based on EGNSS
GHOST	Galileo Enhancement as Booster of the Smart Cities
GEO VISION	GNSS driven EO and Verifiable Image and Sensor Integration for mission-critical Operational Networks
spyglass	GALILEO-BASED PASSIVE RADAR SYSTEM FOR MARITIME SURVEILLANCE

E-KnoT	E-GNSS Knowledge Triangle
JUPITER	Joint EUropean Project for International ITS/EGNSS awareness Raising
GNSS.asia2	Industrial cooperation across continents
BEYOND	Building EGNSS capacity On EU Neighbouring multimodal Domains.
POSITION	POLish Support to Innovation and Technology IncubatiON
CaBiAvi	Capacity building for aviation stakeholders, inside and outside the EU

Appendix III – Draft Budget 2015 and Establishment Plan 2015

III.1 Draft Budget 2015²⁸

EXPENDITURE	Commitment appropriations			
	Executed Budget 2013	Budget 2014	Draft Budget 2015	
			Agency request	Budget Forecast
Title 1: Staff Expenditure	8,583,616	12,747,797	14,307,000	
1.1 Salaries & allowances	7,563,505	10,975,797	12,585,000	
1.2 Expenditure relating to Staff recruitment	150,500	150,000	100,000	
1.3 Mission expenses	745,792	1,440,000	1,440,000	
1.5 Training	123,000	180,000	180,000	
1.7 Receptions and events	819	2,000	2,000	
Title 2 Infrastructure and operating expenditure	3,394,902	5,880,000	4,546,700	
2.0 Rental of buildings and associated costs	1,179,080	3,000,000	2,288,700	
2.1 Information and communication technology	1,168,250	1,630,000	975,000	
2.2 Movable property and associated costs	238,390	200,000	173,000	
2.3 Current administrative expenditure	740,431	600,000	720,000	
2.4 Postage / Telecommunications	22,000	385,000	325,000	
2.5 Meeting expenses	46,750	65,000	65,000	
Title 3 Operational expenditure	1,995,000	6,741,260	7,986,300	
TOTAL EXPENDITURE	13,973,518	25,369,057	26,840,000	

²⁸ Draft budget as presented at March 2014 Admin Board (GSA-AB-38-14-03-20-03)

EXPENDITURE	Payment appropriations			
	Executed Budget 2013	Budget 2014	Draft Budget 2015	
			Agency request	Budget Forecast
Title 1 Staff Expenditure	8,583,616	12,747,797	14,307,000	
1.1 Salaries & allowances	7,563,505	10,975,797	12,585,000	
1.2 Expenditure relating to Staff recruitment	150,500	150,000	100,000	
1.3 Mission expenses	745,792	1,440,000	1,440,000	
1.5 Training	123,000	180,000	180,000	
1.7 Receptions and events	819	2,000	2,000	
Title 2 Infrastructure and operating expenditure	3,394,902	5,880,000	4,546,700	
2.0 Rental of buildings and associated costs	1,179,080	3,000,000	2,288,700	
2.1 Information and communication technology	1,168,250	1,630,000	975,000	
2.2 Movable property and associated costs	238,390	200,000	173,000	
2.3 Current administrative expenditure	740,431	600,000	720,000	
2.4 Postage / Telecommunications	22,000	385,000	325,000	
2.5 Meeting expenses	46,750	65,000	65,000	
Title 3 Operational expenditure	1,995,000	6,741,260	7,986,300	
TOTAL EXPENDITURE	13,973,518	25,369,057	26,840,000	

Title 3 expenditure is further detailed in Chapter 02 – Budget.

III.2 Establishment Plan 2015

The breakdown of the Agency staff, as per the published Multi-Annual Staff Policy Plan is as follows:

Staff population		Staff population in 2015
Officials	AD AST	
Temporary	AD	97

Agents	AST	5
Total Temporary Agents		102
Contract Agents GF IV		20
Contract Agents GF III		8
Contract Agents GF II		2
Contract Agents GF I		
Total Contract Agents		30
Seconded National Experts		2
Structural service providers ²⁹		15
TOTAL		134

Overall, most of the staff employed is in operational activities, namely 78% of the total employees.

The Agency has refined the approach used to determine the split of resourcing between operational and general administrative tasks to give a more accurate representation of the Agency. In particular it developed a model based on an examination of the main operational tasks of the Agency, and an appropriate allocation of staff resourcing in the Director's Office, Legal and Procurement, ICT & Logistics, Human Resources and Finance teams to these operational tasks and to general administration.

The following charts show the staff distribution according to key operational and administration support functions forecast to be achieved by end 2014 and end 2015:

	Forecast Allocation 2014*			Forecast Allocation 2015*		
	TA	CA & SNE ³⁰	Total	TA	CA & SNE ³¹	Total
Principle tasks of GSA						
Security accreditation	10	1	11	10	1	11
Security tasks	3	1.3	4.3	3	1.0	4
GSMC operations	18.1	2.5	20.6	18.0	2.5	20.5
Market Development	6.3	3.5	9.8	6.6	1	7.6

²⁹ Service providers are contracted by a private company and carry out specialised outsourced tasks of horizontal/support nature, for instance in the area of information technology. At the Commission the following general criteria should be fulfilled: 1) no individual contract with the Commission; 2) on the Commission premises, usually with a PC and desk; 3) administratively followed by the Commission (badge, etc.) and 4) contributing to the value added of the Commission.

³⁰ of which 2 SNE for MKD activities

³¹ of which 2 SNE for MKD activities

Delegated tasks	General Administration	10.0	13.5	23.5	11.0	10.5	21.5
	Communication	1.1	0.0	1.1	1.1	0.5	1.6
	Exploitation Preparation	1.1	1.7	2.8	0.0	0.0	0.0
	EGNOS Exploitation	15.0	2.5	17.5	15.4	4.5	19.9
	Galileo Exploitation	25.5	2.5	28.0	31	7.5	38.5
	Research & Development (H2020 & FP7)	4.8	6.5	11.3	5.9	3.5	9.4
	PRS Pilot Projects & User Segment	1.1	0.0	1.1	0.0	0.0	0.0
	Total	96	35	131	102	32	134

*The estimated figures for CA & SNE are currently under internal review and are subject to possible changes, with the objective to optimise and align available resources with new tasks delegated to the Agency in the on-going transition phase.

Appendix IV – Definitions & Acronyms

Acronym	Definition
ARB	Anomaly Review Board
CA	Contract Agent
CDA	Crypto Distribution Authority
CERT	Computer Emergency Response Team
CMS	Common Minimum Standards
CNES	Centre National d'Etudes Spatiales (The French Space Centre)
COMSEC	Communications Security
CPA	Competent PRS Authority
CS	Commercial Service
CSI	Compatibility Signal and Interoperability
CSO	Central Security Office
DG	Directorate General
DG-HR	DG-Human Resources
EC	European Commission
EDAS	EGNOS Data Access System
EGMER	E-GNSS Mission Evolution Roadmap
EGNOS	European Geostationary Navigation Overlay Service
EGNSS	European GNSS
ES	Early Services
ESA	European Space Agency
ESE	European Space Expo
ESNC	European Satellite Navigation Competition
ESP	EGNOS Service Provider
EU	European Union
EUCI	EU Classified Information
FKC	Flight Key Cell
FP7	Seventh Framework Programme for Research and Development of the European Union
GMS	Galileo Mission Segment
GNSS	Global Navigation Satellite System
GRUE	GSA EU Restricted Network
GSA	European GNSS Agency
GSAP	Galileo Security Accreditation Panel
GSC	GNSS Security Centre
GSF	Galileo Security Facility
GSMC	Galileo Security Monitoring Centre
GSUE	GSA EU Secret Network
HR	Human Resources
IAC	Internal Audit Capability
ICT	Information & Communication Technology
IMO	International Maritime Organisation
IMS	Integrated Management System
IOC	Initial Operational Capability
ISO	International Standards Organisation
IT	Information Technology
ITS	Intelligent Transport Systems
ITT	Invitation to Tender
KPI	Key Performance Indicator
LBS	Locations Based Service
LPV	Localizer Performance with Vertical guidance
LSAA	Local Security Accreditation Authority
MEP	Member of European Parliament

Acronym	Definition
MKD	Market Development
MS	Member States
NSA	National Security Authority
OPS	Operations
ORR	Operations Readiness Review
OS	Open Service
OSRR	Operational Service Readiness Review
OSSR	Open System Security Resources
OVR	Operations Validation Readiness Review
PNT	Positioning, Navigation, Timing
POCP	Point of Contact Platform
PPUI	Pay-Per-Use-Insurance
PRS	Public Regulated Service
PSI	Programme Security Instructions
QMB	Quality Management Board
QO	Quality Officer
RID	Review Item Discrepancy
RUC	Road User Charging
RUE	EU Restricted
SAA	Security Accreditation Authority
SAB	Security Accreditation Board
SAM	Site Accreditation Milestone
SAR	Security Accreditation Reports
SAS	Security Accreditation Strategy
SB	Security Board
SBAS	Satellite Based Augmentation System
SECOPS	Security Operational Procedures
SNE	Seconded National Expert
SoC	Statement of Compliance
SSRS	System specific Security Requirements Statements
SUE	EU Secret
TA	Temporary Agent
TF	Task Force
UK	United Kingdom
US	User Segment
WG	Working Group
WP	Work Package

Galileo Exploitation

Grant Plan 2015 v1.1

**28 Jan.2015
V1.1**

**Reference
210778**

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1.1 2015 Grant Plan

The 2015 Galileo Exploitation Grant Plan as approved by the Commission is presented here after in two sections, one dedicated to Fundamental Elements and another dedicated to Member States and other EU Institutions support.

1.1.1 Fundamental Elements Grants

The Fundamental Elements annual Grant Plan foresees five individual projects to be implemented through grants. The details for each initiative, including the objectives, the foreseen results, the essential eligibility, selection and award criteria, the maximum possible rate of co-financing and the indicative amount of the calls for proposals are specified below as well as the priorities of the Grant Plan for 2015.

The Grant Plan for 2015 pertaining to Fundamental Elements has following priorities for 2015 to be implemented through the various activities:

- Development of non-payment and non-regulatory based applications for use by the automotive sector, including car/truck makers and tier 1 suppliers as target market.
- Development of payment and regulatory based applications for use by the automotive sector, including car/truck makers and tier 1 suppliers as target market.
- Development and test of Dual Frequency (E1/E5) automotive / M2M / consumer receivers that make use of advanced hybridisation techniques, e.g. signal of opportunities, cellular network, etc.
- Development and test of High Precision multi (incl. triple) frequency multiconstellation receivers for professional applications
- Development an Advanced RAIM (Receiver Autonomous Integrity Monitoring) prototype, following the lines as defined by the ARAIM US-EU ARAIM Technical Sub-Group (TSG). The developed prototype may be used in a demonstration campaign

1.1.1.1 Safety critical E-GNSS engine

LEGAL BASIS

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 and Delegation Agreement between the European Union, represented by the European Commission and the European GNSS Agency on the Exploitation Phase of the Galileo Programme signed on 2 October 2014.

Call for proposals

BUDGET LINE:

GEX.0029

BACKGROUND:

- Connected vehicles and autonomous / automatic driving vehicles is the most relevant trend in the automotive sector, with giants such as Google entering the game in addition to the traditional actors, such as car makers and their suppliers.
- The need to provide accurate and reliable positioning information is clearly emerging, and the current approach is to use different sources of information, including still expensive radar based sensors, infrastructures based sensors, differential techniques, etc.
- As previously proven by recent FP7 projects (e.g. COVEL, GAIN, TAXISAT and GENEVA) European GNSS and its differentiators (e.g. the signal characteristics, services such as authentication, integrity service, etc.) can be essential for accurate positioning.
- However, it is necessary to design a dedicated reliable and accurate engine, instead of simply adapting one from already existing, non-automotive specific consumer applications.
- This project aims to answer to this emerging demand, building on European GNSS differentiators.
- The project will build on the on-going standardisation work at European Telecommunications Standard Institute (ETSI) and European Committee for Standardisation (CEN): for example, the European Commission funded project SAGITER that proposes the "horizontal standardisation" concept which is represented by the Minimum Performance Standard (MPS): a set of clear minimum performance values defined for a group of applications.

Objectives pursued and foreseen results:

Objectives of the project:

- The first and main objective of the project is to support the development of a safety critical E-GNSS based engine, to be embedded on vehicles and to be potentially connected with the (Controller Area Network) CAN bus and other sensors using hybridisation techniques, i.e. interaction and with non-GNSS based positioning technologies.

- The engine must be adapted to serve different safety critical applications, such as Advanced Driver Assistance Systems, anti-collision based on V2X, autonomous vehicles, etc.
- Data fusion with vehicle sensors and communication devices shall be included.
- The second objective is to valorise the E-GNSS differentiators in the emerging segment of autonomous and connected/automated vehicles. This may include the feature of the signal on different frequencies, the authentication, especially on E1 frequency band, and assess the potential use of PPP (e.g. from the Galileo commercial service).
- The third objective of the project is to complete the ongoing standardisation process, where required, and to initiate a certification approach.
- The engine shall interface with the standard data exchange system on board the vehicle, e.g. developing an interface with the CAN-bus.
- The engine's software and algorithm shall be portable and scalable.

Foreseen results

- The foreseen results of the project are technical specifications for the GNSS use in Safety Critical multi-applications in road traffic, the prototype and the demonstration for the E-GNSS engine for Safety Critical multi-applications in road traffic, agreements on standard interfaces with other GNSS engines (liability and payment) to allow easy building of a multiple-system platform, if required by the market, as well as a pre-commercial product for such engine.

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

The call for proposal is intended to fund one project.

The activities to be funded under this call for proposal shall be the development of highly accurate and highly reliable E-GNSS engine for Safety Critical multi-applications in road traffic, supporting applications that not only make use of GNSS position but that are critical for the safety of the drivers and other passengers, such as Advanced Driver Assistance Systems, anti-collision based on V2X, autonomous vehicles following the above mentioned objectives, leading to the foreseen results.

Essential eligibility, selection and award criteria:

1. Eligibility and non-exclusion criteria

- The proposal may be submitted by entities fulfilling all the criteria below:
 - being any legal entity with the technical and financial capability to perform the proposed activities;
 - the applicants are from the EU 28 member states, third countries: Switzerland or Norway.
 - 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:
- Excellence: relevance of the proposal to the objectives of the call, credibility of the proposed approach, and innovation of the solutions proposed;
 - Impact in terms of economic and public benefits derived from the proposal including but not limited to a coherent business plan for the exploitation of the results of the grant;
 - Credible and effective dissemination plan for the results in the best interest of the Union linked to a minimum passing requirement;
 - Quality of the implementation: 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:

- Allocated budget: €4,500,000

	Stages	Date and time or indicative period
a)	Publication of the call [T0]	April 2015
b)	Deadline for submitting applications [T0+ 3 months]	July 2015
c)	Evaluation period [T0+ 6 months]	October 2015
d)	Information to applicants on the outcome of the evaluation	October 2015
e)	Signature of the Grant Agreements [T0+ 8 months]	December 2015

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

Up to 60-70% funding of the eligible total costs.

1.1.1.2 Liability and payment critical E-GNSS engine

LEGAL BASIS

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 and Delegation Agreement between the European Union, represented by the European Commission and the European GNSS Agency on the Exploitation Phase of the Galileo Programme signed on 2 October 2014.

Call for proposals

BUDGET LINE:

GEX.0030

BACKGROUND:

This call is covering two projects to be awarded each with a maximum indicative budget of 3,000,000€.

Each of the projects should focus mainly on either Liability critical or Payment critical, but it should address the other one as well.

- In contrast to other GNSS systems, Galileo is a civil system under civil control, intended to provide direct support to users, and intended to be guarantee a user oriented service. In addition, it is intended to include some important differentiators, such as the robustness of the signal, the authentication, and in the future the integrity service via EGNOS. The project will leverage these differentiators to build a competitive engine that can serve the new range of payment and liability critical applications.
- Today, GNSS is used in some emerging payment applications, such as road charging.
- The potential of using the accurate location in payment critical applications is much higher than the currently emerging applications using GNSS as road charging, and includes examples as pay-as-you-drive insurances, payment and monitoring of limited traffic areas, new concepts such as “mobility as a service”, up to a new mobility model no more based on the vehicle ownership but on the actual use.
- Other recent developments include a certain number of liability critical and/or regulated applications : an enhanced digital tachograph including a GNSS function will be introduced by into legislation from 2018, improving the means of enforcing the legislation on time restrictions for truck driving in Europe. Another example is accident reconstruction and monitoring of special cargo transport. This is complemented by a number of emerging ITS applications fostered by the EU directive, such as emergency call, secure parking, traffic information system, etc.
- This project aims to answer this new demand and to create European market leaders that can propose on the market an E-GNSS engine that is not a simple commodity but a real liability critical tool.

Objectives pursued and foreseen results:

This call is covering two projects to be awarded each with a maximum indicative budget of 3,000,000€.

Each of the projects should focus mainly on either Liability critical or Payment critical, but it should address the other one as well.

- The first and main objective of the project is to support the development of a liability and payment critical GNSS-based engine for vehicles (personal, cargo, etc) and for the two scopes: "payment based" and "regulation based".
- The second objective is to valorise the E-GNSS differentiators, especially the ones that may contribute to a more robust and acceptable liability critical positioning, such as authentication.
- The third objective of the project is to investigate the necessary approach to achieve a legal value of the position and any certification information and type approval necessary to obtain this objective.
- The engine must be flexible to be embedded in dedicated on board units, on the vehicle or in consumer devices, supporting applications for which a high level of liability risk ensues in case of a malfunction or non-availability of GNSS signals, for example: speed control and enforcement, digital tachograph, accident reconstruction, dangerous and other sensitive cargos tracing, etc.
- The engine must be designed to fulfil existing regulated applications and upcoming one, referring also to on-going ETSI and CEN standardisation categories.
- The engine must be able to process regulatory relevant use of GNSS positioning data in several regulated road applications, and the project should include an end-to-end demonstration. Standard interfaces must be agreed with other GNSS engines (safety and payment) so that a multiple platform could be easily built, if required by the market. The project should work in synergy with Open Service authentication users' terminal project, and the engine should be prepared to host chipsets enabled for Open Service authentication.

Foreseen results

- The results of the project are technical specifications, the prototype and the demonstration for the E-GNSS engine on payment and regulatory based applications - , as well as a pre-commercial product of such an engine.

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

The call for proposals is intended to fund 2 projects.

The activities to be funded under this call for proposal shall encompass:

- the development of a robust E-GNSS engine for Liability Critical multi-applications in Road in line with the above listed objectives.
- the development of standardisations and related requirements for payment critical applications, such as road and congestion charging, pay-as-you-drive products and new "mobility as a service" concepts in which EGNSS is used as a main information source to evolve from ownership to usage based vehicle applications.

Essential eligibility, selection and award criteria:

1. Eligibility and non-exclusion criteria
 - The proposal may be submitted by entities fulfilling all the criteria below:
 - o being any legal entity with the technical and financial capability to perform the proposed activities;
 - o the applicants are from the EU 28 member states, Switzerland or Norway.
 - o 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:
 - Excellence: relevance of the proposal to the objectives of the call, credibility of the proposed approach, and innovation of the solutions proposed;
 - Impact in terms of economic and public benefits derived from the proposal including but not limited to a coherent business plan for the exploitation of the results of the grant;
 - Credible and effective dissemination plan for the results in the best interest of the Union linked to a minimum passing requirement;
 - Quality of the implementation: 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:

- Allocated budget in total for the 2 projects: € 6,000,000

	Stages	Date and indicative period
a)	Publication of the call [T0]	April 2015
b)	Deadline for submitting applications [T0+ 3 months]	July 2015
c)	Evaluation period [T0+ 6 months]	October 2015
d)	Information to applicants on the outcome of the evaluation	October 2015
e)	Grant Agreements Signature [T0+ 8 mths]	December 2015

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

Up to 60-70% funding of the eligible total costs.

1.1.1.3 Dual Frequency Automotive / M2M / consumer receiver including innovative hybridisation techniques

LEGAL BASIS

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 and Delegation Agreement between the European Union, represented by the European Commission and the European GNSS Agency on the Exploitation Phase of the Galileo Programme signed on 2 October 2014.

Call for proposals

BUDGET LINE:

GEX.0033

BACKGROUND:

- In GNSS chipset market , just as in chipset silicon industry, the market is dominated by a few suppliers only and GNSS chipsets are becoming a commodity even in market segments where performant GNSS applications are needed, such as automotive industry, Machine 2 Machine (M2M). Currently, the tendency is to simply upgrade consumer singles frequency chipset designed for the smartphones to accommodate highly specialised applications.
- The only few European GNSS chipsets manufacturers that still have a leading position in the mass market act mainly in the automotive industry and they are trying to enter into emerging M2M applications (e.g. “internet of things” related to everyday household appliances but also to highly specialised manufacturing plants and processes).
- It is not possible to create new European players in consumer market because the competition is more focused on other areas related to the silicon chipset). However, it is still possible to support the existing players to innovate more/better chip sets and to increase their competitiveness, possibly expanding from automotive industry to M2M and maybe in the future to consumer market.
- This project aims to support this process and, at the same time, to foster the exploitation of Galileo features such as dual frequency on the open service, the pilot tone, etc.
- In addition, the project encourage the introduction of advanced techniques, such as sensor fusion, cooperative positioning, advanced network fusion techniques and signal of opportunities approach.

Objectives pursued and foreseen results:

The call for proposals is intended to fund 1 project.

Objectives of the project:

- The first and main objective of the project is to support the development of dual/multi frequency receiver for automotive, M2M and other consumer segments including innovative techniques (see below in description of activities).
- The second objective is to valorise the E-GNSS differentiators, including smart approaches to the dual/multiple frequency and multiconstellation, the modulation and intrinsic feature of the Galileo signal, the optimisation of the receiver to give more value to Galileo in multi-constellation approach.

The third objective of the project is to favour European market leaders in the field of mass market receiver, despite some of the limitations explained in the background.

Foreseen results:

- The foreseen results of the project are prototype receivers that will have to integrate innovative techniques (e.g., positioning Based on Signals of Opportunity, advanced hybridisation with cellular networks and other wireless sources, cooperative positioning, smart approaches to multi-frequency and multiconstellation) and to be designed and tested in significant application scenarios.

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

The call for proposals is intended to fund 1 project with the following activities:

- The design and development of the dual/multi frequency receiver as described above including the testing of the receiver.
- The development will have to include the following techniques:
 - positioning Based on Signals of Opportunity;
 - advanced hybridisation with cellular networks and other wireless sources;
 - cooperative positioning;
 - smart approaches to multi-frequency and multiconstellation.

Essential eligibility, selection and award criteria:

1. Eligibility and non-exclusion criteria

- The proposal may be submitted by entities fulfilling all the criteria below:
 - being any legal entity with the technical and financial capability to perform the proposed activities;
 - the applicants are from the EU 28 member states, Switzerland or Norway.
 - 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:

- Excellence: relevance of the proposal to the objectives of the call, credibility of the proposed approach, and innovation of the solutions proposed;

- Impact in terms of economic and public benefits derived from the proposal including but not limited to a coherent business plan for the exploitation of the results of the grant;
- Credible and effective dissemination plan for the results in the best interest of the Union linked to a minimum passing requirement;
- Quality of the implementation: 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:

- Allocated budget: € 5,500,000

	Stages	Date and indicative period
a)	Publication of the call [T0]	April 2015
b)	Deadline for submitting applications [T0+ 3 months]	July 2015
c)	Evaluation period [T0+ 6 months]	October 2015
d)	Information to applicants on the outcome of the evaluation	November 2015
e)	Signature of the Grant Agreements [T0+ 8 months]	December 2015

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

Up to 60-70% funding of the eligible total costs.

1.1.1.4 High Precision multi (incl. triple) frequency multiconstellation receivers for professional applications

LEGAL BASIS

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 and Delegation Agreement between the European Union, represented by the European Commission and the European GNSS Agency on the Exploitation Phase of the Galileo Programme signed on 2 October 2014.

Call for proposals

BUDGET LINE:

GEX.0032

BACKGROUND:

This grant will be published in december 2015 and granted in 2016.

The objectives and activities will be clarified with EC in the course of the year 2015.

Objectives pursued and foreseen results:

Objectives of the 2 projects to be granted will be clarified with EC in the course of 2015.

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

The call for proposals is intended to fund 2 projects to be clarified with EC in 2015.

Essential eligibility, selection and award criteria:

4. Eligibility and non-exclusion criteria

- The proposal may be submitted by entities fulfilling all the criteria below:
 - o being any legal entity with the technical and financial capability to perform the proposed activities;
 - o the applicants are from the EU 28 member states, Switzerland or Norway.
 - o 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.

5. 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

6. Main award criteria:

- Excellence: relevance of the proposal to the objectives of the call, credibility of the proposed approach, and innovation of the solutions proposed;
- Impact in terms of economic and public benefits derived from the proposal including but not limited to a coherent business plan for the exploitation of the results of the grant;
- Credible and effective dissemination plan for the results in the best interest of the Union linked to a minimum passing requirement;
- Quality of the implementation: 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:

- Allocated budget: € 7,300,000 for the 2 projects

	Stages	Date and indicative period
a)	Publication of the call [T0]	December 2015
b)	Applications submission deadline [T0+3 mths]	March 2016
c)	Evaluation period [T0+ 6 months]	June 2016
d)	Applicants' information on the outcome	July 2016
e)	Grant Agreements Signature [T0+ 8 mths]	August 2016

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

Up to 60-70% funding of the eligible total costs.

1.1.1.5 Advanced RAIM Multiconstellation Receiver

LEGAL BASIS

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 and Delegation Agreement between the European Union, represented by the European Commission and the European GNSS Agency on the Exploitation Phase of the Galileo Programme signed on 2 October 2014.

Call for proposals

BUDGET LINE:

GEX.0025

BACKGROUND:

- Integrity is one of the essential qualities of service to be provided by the Galileo safety of life service. Advanced (A) RAIM (Receiver Autonomous Integrity Monitoring) is a possible concept to which much effort is being devoted with the intention to provide a global integrity service based on multiple satellite constellations.
- In this respect, cooperation with the United States of America was formally established through the creation of a specific EU-US ARAIM Technical Sub-Group (TSG) in Working Group C of the EU-US cooperation agreement. The ARAIM TSG has been developing the concept with a focus on Civil Aviation, including possible architectures for its implementation as well as the reference user algorithm to be implemented at the airborne receivers.
- ARAIM has different characteristics compared to current SBAS such as: using of the dual-frequency ionosphere-free pseudorange combination, not using differential corrections, enabling the use of all GNSS constellations that provide a reliable and proven Integrity Support Message (ISM).
- Two constellations are required to meet minimum availability requirements globally for LPV-200 using ARAIM, which is the initial target considered by the ARAIM TSG. In addition, the possibility to achieve a less stringent performance to support Horizontal navigation only, and which can be implemented in shorter term is also being analysed.

Objectives pursued and foreseen results:

- The main objective of the project is to develop an Advanced RAIM (Receiver Autonomous Integrity Monitoring) prototype, following the lines as defined by the ARAIM TSG.
- The developed prototype may be used in a demonstration campaign.
- The second objective of the project is to assess ARAIM in:
 - Aviation Domain: enabling global Horizontal Navigation as well as Vertical (LPV-200) operations including threat allocation and mitigation.
 - Maritime Domain: enabling marine global general navigation providing integrity, especially when the receiver is outside coverage of IALA Beacon Differential GNSS transmissions.
- The third objective of the projects is to test the performance in number of test scenarios for safety critical applications (aeronautical, maritime, rail and road).

Foreseen results:

- The expected results are a prototype for an ARAIM fulfilling all the abovementioned requirements. The prototype will be accompanied by the corresponding documentation.

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

The call for proposals is intended to fund 1-2 project(s).

The project(s) will include the following activities:

- analysis of already defined operations ARAIM concepts and resulting needs in terms of on-board prototype architecture definition of ARAIM scenarios (at least for aeronautical, maritime, rail and safety critical road users) with and without Galileo SIS modifications,
- development of ARAIM receiver prototype:
 - for aviation horizontal navigation and LPV-200 operations
 - for marine general navigation
- execution of in a demonstration campaign the prototype,
- assess the receivers' performance in the different test scenarios
- provide inputs for the development of GNSS receiver standards and test specifications that include A-RAIM
 - For aviation: ICAO, RTCA
 - For maritime domain: IMO, IEC, RTCM

Essential eligibility, selection and award criteria:

1. Eligibility and non-exclusion criteria

- The proposal may be submitted by entities fulfilling all the criteria below:
 - being any legal entity with the technical and financial capability to perform the proposed activities;
 - the applicants are from the EU 28 member states, Switzerland or Norway.
 - 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:

- Excellence: relevance of the proposal to the objectives of the call, credibility of the proposed approach, and innovation of the solutions proposed;
- Impact in terms of economic and public benefits derived from the proposal including but not limited to a coherent business plan for the exploitation of the results of the grant;
- Credible and effective dissemination plan for the results in the best interest of the Union linked to a minimum passing requirement;
- Quality of the implementation: 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:

- Allocated budget: € 2,500,000

	Stages	Date and indicative period
a)	Publication of the call [T0]	November 2015
b)	Deadline for submitting applications [T0 + 3 months]	February 2016
c)	Evaluation period [T0+ 6 months]	April 2016
d)	Information to applicants on the outcome of the evaluation	May 2016
e)	Grant Agreements Signature [T0+7 mths]	June 2016

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

Up to 60-70% funding of the eligible total costs.

1.1.2 Member States and other EU Institutions support

1.1.2.1 GRC Support from MS

LEGAL BASIS:

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 and Delegation Agreement between the European Union, represented by the European Commission and the European GNSS Agency on the Exploitation Phase of the Galileo Programme signed on 2 October 2014.

To be implemented through call for proposals.

BUDGET LINE:

GEX.0054/55 Service Centres - GRC Development, OPS & Maintenance

BACKGROUND:

- In 2013, EC has commissioned a Galileo Reference Centre Working Group (GRC-WG) composed of Member States and third countries participating in the GNSS Programme (hereafter referred to as "MS": Member States and third countries participating in the GNSS Programme). The members of the WG support the GRC Definition Phase and support the coordination MS contributions to the Galileo Early Services.
- During GRC WG meetings, MS have expressed explicit interest in contributing not only to the Galileo Early Services but also to the GRC. In the GRC WG meeting held on the 2nd of July, MS made proposals for their potential contributions.
- In 2014, the GSA has launched, in line with article 30 of the GNSS Regulation 1285/2013, a call for proposals (GSA/GRANT/EGNOS/01/2014) open to national agencies and institutions of MS for EGNOS Service Performance Monitoring Support (SPMS). Based on this experience the GSA plans to launch a call for proposals for the MS support to GRC activities.
- For MS contributions to the GRC, the GSA is considering to provide a number of grants (or contracts depending on the applicable conditions) in order to integrate and steer these contributions into the direction where the GRC could use support. These grants are expected to ensure support for a limited duration under a Framework Partnership Agreement (FPA). The approach is to be consolidated based on the outcome of the ongoing EGNOS grant process.
- The objective of the GRC grants is to establish long-term relationships with partners (non profit-oriented organisations of the MS) to provide access to a range of facilities and expertise at MS level. This will enable the GRC to benefit from the existing capacities and expertise developed under past public investments by MS. Technically, the MS contributions to the GRC could build on MS contributions to Early Services, an activity under responsibility of the EC with GSA support.

- Through the call for proposals, the GSA will establish Framework Partnership Agreement or Agreements with a consortium (or consortia) of national entities and institutions for the period of 2016-2020, which is going to be implemented through specific grants. The indicative overall budget for the entire duration of the FPA is estimated at €4.000.000. The FPA and the first Specific Grant based on the FPA are planned to be awarded in 2016.

Priorities of the year, objectives pursued and expected results:

Priorities of the year:

- Integrate and steer MS contributions in the areas where the GRC could use support;
- Benefit from existing capacities at MS level, built on significant past public investments;
- Continuation of MS support for Early Services monitoring;

Objectives pursued

To establish long-term relationships with partners (non profit-oriented organisations of the MS) to provide access to a range of facilities and expertise at MS level for service performance monitoring, taken into account that

- (1) GRC stand-alone capability is essential: contributions from other entities should be utilised to improve performance, but the GRC should be capable of carrying out its core tasks without these additional inputs;
- (2) supporting activities must be independent from the Galileo system;
- (3) benefitting from but also contributing to maintaining the long term competences and expertise at the level of MS;
- (4) interfaces are defined by the GRC, MS contributions must comply with these;

Expected results

The activity itself will start in 2016, in 2015 the call for proposals will be released. In the longer term, enhanced performance of the GRC.

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

The anticipated support activities are:

- (1) GNSS data provision through national or international networks: data collected with networks of reference stations situated inside MS, regional (covering more than one MS) and international networks (including reference stations outside MS) should continuously be provided to the GRC. Priority is Galileo and GPS but the GRC will address all GNSSs: Glonass, Beidou, regional systems, ...;
- (2) Provision of products: Products such as KPIs, reference orbits and clocks, ionospheric products generated by the MS should be provided to the GRC, according to agreements on a case-by-case basis;
- (3) Signal in Space Monitoring: Campaign-based SiS monitoring and analysis using antennas with large aperture;
- (4) GNSS Performance investigations: Campaign-based GNSS performance investigations using other than the above assets available in MS;
- (5) Other support to GRC Activities: Consultation on the definition of GRC products, GRC and MS product comparison, expertise, etc.

Essential eligibility, selection and award criteria for the Framework Partnership Agreement:

1. Eligibility and non-exclusion criteria
 - The proposal may be submitted by entities fulfilling all the criteria below: being any legal entity (national agencies, research institutes, or any other similar organisations or bodies) which can demonstrate their independence of judgement from the industry involved with the Galileo System (development and operations) and the absence of conflict of interest in providing impartial performance monitoring services to the GSA:
 - the applicants are from EU 28 member states, Switzerland or Norway;
 - 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
 - Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources
 - Cost-effectiveness

Indicative timetable of the call for proposals:

	Stages	Date and indicative period
a)	Publication of the invitation to submit a proposal	November 2015
b)	Deadline for submitting applications	February 2016
c)	Evaluation period	March 2016
d)	Information to applicants on the outcome of the evaluation	April 2016
f)	Signature of Framework Partnership Agreement	May 2016

Annual Work Programme 2015: for information only

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 2015 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 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 2015 EGNOS Exploitation Budget, the GSA intends to carry out the following key actions in 2015:

- 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), EUROCONTROL activities and for Acceleration of EGNOS adoption in the field of civil aviation

A list of the 2015 EGNOS Exploitation procurement activities which are planned is included below; the detailed 2015 EGNOS Exploitation Grants Plan is included in appendix

Activity	Title/Description	Type/subject of contracts envisaged (studies, technical assistance, industrial contracts...)	Type of financial instrument: procurement/grant	Existing/new/contract/agreement	Indicative number of contracts/agreements/amendments/exercising of options	Indicative timetable for publication/launch	Funds set aside for the award of contracts (k€)
ESP customer provision (including GEO3)	3 RIMS moves	Provision for identified changes to ESSP contract (foreseen options, changes due to new Major/minor releases, new RIMS, GSA changes on NOTAM/EDAS/EWA upgrades,...). ESP BAFO Option#11 taking the assumption that 3 RIMS are moved for the good of the programme rather than using the option proposed by ESSP; through a change request to the GSA-ESSP contract	Procurement	Existing and new contract amendments/exercising of options	9	S2 2015	51,705
	Entry in operations of System Release 2.4.1N	Provision for identified changes to ESSP contract (foreseen options, changes due to new Major/minor releases, new RIMS, GSA changes on NOTAM/EDAS/EWA upgrades,...). Entry in operations of ESR 2.4.1N; through change request to the GSA-ESSP contract; not currently included as an option				S2 2015	
	Extension of insurance to 12MC	Provision for identified changes to ESSP contract (foreseen options, changes due to new Major/minor releases, new RIMS, GSA changes on NOTAM/EDAS/EWA upgrades,...). ESP BAFO Option#18 - extension of insurance; through change request to the GSA-ESSP contract				S1 2015	
	NOTAM Service Level 5	Provision for identified changes to ESSP contract (foreseen options, changes due to new Major/minor releases, new RIMS, GSA changes on NOTAM/EDAS/EWA upgrades,...). ESP BAFO Option#12 - NOTAM Service Level 5 (fully automatic NOTAMing) through change request to the GSA-ESSP contract				S2 2015	
	Minor evolution 1 (YSR2, including EC request to accelerate the coverage extension)	Provision for identified changes to ESSP contract (foreseen options, changes due to new Major/minor releases, new RIMS, GSA changes on NOTAM/EDAS/EWA upgrades,...). Minor system evolution#1; through change request to the GSA-ESSP contract				S1 2015	
	Activity for GEO3	According to the GEO roadmap approved at S3-CCB on 18 Sept 2014, a new GEO transponder service shall be available in 2018-19 to support 3F2/4F2 replenishment and EGNOS V2/V3 testing				S2 2015	
ESP Security	System Security Risks analyses and treatment plans	Security analyses (pentest), Changes to ESSP, Risks treatment plans. Risk Treatment Plan implementation change to ESSP contract.	Procurement	Existing contract amendments	1	S1 2015	4,000
GSA-ESA EGNOS WA activities	ESA management support activities	ESA management costs for EGNOS until end of 2021 based on the last ESA cost structure update	Procurement	TBC	TBC	S1 2015	TBC
	GSA-ESA 2.4.2 Phase C/D	Through GSA-ESA WA	Procurement			S1 2015	
	GSA-ESA V3 Bridging Phase	1. RIMS V3 industrialisation and early tests (procurement plan to be defined through GSA-ESA WA) 2. Survey and study EGNOS V2 sites re-use for EGNOS V3 3. EGNOS V3 Design complements (procurement plan to be defined through GSA-ESA WA)	Procurement			S1 2015	
	GSA-ESA V3 Phase C/D	Through GSA-ESA WA	Procurement			S1 2015	
EGNOS Programme engineering support	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	S1 2015	2,350
	Maritime Service Engineering technical study	Support the apportionment of the user requirements to mission requirements for EGNOS V3+ and definition of the operational conditions and support to the standardization activities	Procurement	New	TBC	S1 2015	
	Rail service performance engineering support	Support the apportionment of the rail user requirements to mission requirements for EGNOS V3+ and definition of the operational conditions.	Procurement	New	TBD	S1 2015	
	New Exploitation Support FWC	New GSA Support procurement procedure with an indicative framework contract ceiling of ~€50M covering delegated tasks for exploitation of EGNOS and Galileo, including security and legal tasks.	Procurement	New	1	S1 2015	
	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	S1 2015	
	SPMS 2015-2017 (grant)	Priorities, objectives pursued and expected results: (1) SBAS Service and Signal Performance Watch (addressing all SBAS: EGNOS, WAAS, SDGM, 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 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	Grant	New	1	S1 2015	1,500

Activity	Title/Description	Type/subject of contracts envisaged (studies, technical assistance, industrial contracts...)	Type of financial instrument: procurement/ grant	Existing/new/contract/agreement	Indicative number of contracts/agreements /amendments/exercising of options	Indicative timetable for publication/launch	Funds set aside for the award of contracts (k€)
EGNOS Service Provision enablers (MMAP projects, Standardisation studies, Safety&certification studies)	AIS (Automatic Identification System) stations upgrade to retransmit EGNOS corrections received via EDAS	Enabling regulated vessels to receive EGNOS corrections via AIS receivers is the simplest option to provide differential corrections as a complement to DGNSS infrastructure, since regulated vessels are already equipped with AIS Receiver. AIS stations will receive EGNOS corrections via EGNOS/EDAS without additional infrastructure and will retransmit them via VHF using message 17. This project will upgrade selected inland and coastal AIS stations in Europe, assess the added value of EGNOS and EDAS for maritime users obliged to use AIS receiver in their operation and demonstrate the benefits to pioneer users.	Procurement	New	1	S1 2015	2,450
	Analysis of EGNOS based operations 2015	Annual update of the SBAS capabilities in EU aircraft database, in order to trace EGNOS enabled equipped and certified aircraft, retrofit solutions available and demanded by EU operators. The analysis will include comparison/integration with flight plans analysis.	Procurement	New	1	S1 2015	
	Technical support for multimodal standards	Technical studies and simulations to support standardisation efforts at system-level and receiver-level in the aviation, maritime and rail domains with dedicated modules per domain and a workpackage for provision of ad-hoc support	Procurement	New	1	S1 2015	
	Training and analysis of aviation users' needs 2015	The need for adequate training has been recognised by ICAO (International Civil Aviation Organization) ANC (Air Navigation Conference) 12 as one of the key needs to reap PBN benefits. With respect to approach operations, the lack of procedure designers with adequate training on PANS-OPS criteria for LPVs is one of the identified obstacles for EGNOS implementation in several ANSPs of ECAC. This activity encompass the following activities: (i) training to ANSP, CAAs, procedure designers and operators: specific workshop addressing LPV implementation, operational approval and airframe upgrade to LPV capabilities. Training activities should mainly target countries with limited or no LPV implementation and operators; (ii) collaborate with relevant bodies to include the possibility for examiners to work on SBAS approaches and into the program for the IFR rating. Also for the PPL licence, a general knowledge of the SBAS systems should be added to the program; (iii) preparation for implementation of LPV 200 and advanced operations benefitting from EGNOS • Support to regulators to implement EGNOS based helicopter operators; (iv) analysis of other users' needs in aviation	Procurement	New	1	S2 2015	
	Training and analysis of aviation users' needs FWC	The need for adequate training has been recognised by ICAO ANC 12 as one of the key needs to reap PBN benefits. With respect to approach operations, the lack of procedure designers with adequate training on PANS-OPS criteria for LPVs is one of the identified obstacles for EGNOS implementation in several ANSPs of ECAC. This activity encompass the following activities: (i) training to ANSP, CAAs, procedure designers and operators: specific workshop addressing LPV implementation, operational approval and airframe upgrade to LPV capabilities. Training activities should mainly target countries with limited or no LPV implementation and operators; (ii) collaborate with relevant bodies to include the possibility for examiners to work on SBAS approaches and into the program for the IFR rating. Also for the PPL licence, a general knowledge of the SBAS systems should be added to the program; (iii) preparation for implementation of LPV 200 and advanced operations benefitting from EGNOS • Support to regulators to implement EGNOS based helicopter operators; (iv) analysis of other users' needs in aviation	Procurement	New	1	S1 2015	
	EUROCONTROL 2015-2017 (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	S1 2015	2,300
	Support to EGNOS adoption in aviation 2015 (grants)	Priorities, 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 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 approached throughout European airports and airspace users.	Grant	New	TBD	S2 2015	6,000
EGNOS GSA Programme Management Reserve for 2015	GSA Programme Management Reserve 2015	GSA Programme Management Reserve for 2015	Procurement	New	12	S1-S2 2015	17,000
Fundamental elements	EGNOS and SoL Activities - Aviation Receiver Development, Test and Validation	to define the architecture and the specification of the New Generation SBAS GPS+Galileo Dual Frequency Receivers for Aeronautical users; to analyse the operational benefits derived by the use of these new receivers and to analyse potential impacts on relevant standards; to develop the receiver ready for standardisation in the aeronautical domain	Procurement	New	1	S1 2015	9,250
	Engineering support for EGNOS User Segment	Through new GSA support FWC (see EEX.0024)	Procurement	New	1	S1 2015	

2. GALILEO EXPLOITATION DELEGATED TASKS

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 2015 Galileo Exploitation Budget, the GSA intends to carry out the following key actions in 2015:

- Further preparation of the Galileo Service Operator actions, initiated in late 2014, including the procurement of Galileo Control Centre hosting services
- Signature of the GSA-ESA Working Arrangement for Galileo exploitation, and initiation of the future Work Package 1 procurement activities
- Signature of a series of grants in particular for Fundamental Elements activities, and the launch of grants for GRC support from Member States

A list of the 2015 Galileo Exploitation activities which are planned is included below; the detailed 2015 Galileo Exploitation Grants Plans is included in appendix.

Activity	Title/Description	Type/subject of contracts envisaged (studies, technical assistance, industrial contracts...)	Type of financial instrument: procurement/grant	Existing/new/contract/agreement	Indicative number of contracts/agreements/amendments/exercising of options	Indicative timetable for publication/launch	Funds set aside for the award of contracts (k€)
System support, ground segment	GSA-ESA Working Arrangement	GSA-ESA Working Arrangement; TBD	TBC	TBC	TBC	S2 2015	TBC
	Future WP1 procurement	Procurement of the future WP1 through GSA-ESA Working Arrangement; approach TBD					
	Ground segment future major release developments procurement	Procurement of the future ground segment major release developments through GSA-ESA Working Arrangement; approach TBD				TBD	
Operations	Galileo exploitation service provision	Galileo Control Centre hosting services	Procurement	New	TBC	S1 2015	TBC
GNSS Service Centre	GSC V2 Infrastructure SC2	New SC for GSC V2 Infrastructure Development	Procurement	New	1	S2 2015	3,000
GSMC sites	GSMC sites upgrade study	GSMC sites upgrade study	Procurement	New	1	S1 2015	300
PRS activities	Up-to SECRET-UE Communication Network	Framework contract (ceiling ~€2.5M) for the establishment, continuation and maintenance of up-to SECRET UE network	Procurement	New	1	S1 2015	3,500
	Up-to SECRET-UE Communication Network	First SC of the framework contract to cover the initial installation and including the maintenance for 2 years	Procurement	New	1	S1 2015	
	ESA integration of GSA tools in PRS user test benches	Integration of P3RS2 (ZSM) (and possibly other GSA assets/tools, e.g. PROPHET) into the PRS user test benches (at the PRS lab) to ensure future compatibility with system evolutions and the support to PRS user segment industrial activities. This will include also training on the test benches	Procurement	TBC	1	S2 2015	
	PRS Engineering Support SC4 (GSA SSS lot1)	New SC (including supporting PRS standardisation, PRS user segment related documentation and DMS, ad hoc technical reports, update of PROPHET, contribution to risk analysis of PRS user segment)	Procurement	New	1	S1 2015	
	Exploitation Support SC (Security)	Galileo Exploitation security support including: - security engineer for PRS SSRS related security activities - security engineer for support to service centres (not GSMC) security - GSOp related security operations support - PRS and security documentation support and configuration control - PRS technical and standardisation support - Crypto Distribution operations engineering support	Procurement	New	1	S1 2015	
GRC	GRC equipment procurement FWC	Framework contract with ceiling of ~€15M for the development of GRC Equipment	Procurement	New	1	S2 2015	20,000
	GRC equipment procurement SC1	First Specific Contract for the development of GRC V1 Equipment. Scope: - OS Monitoring (SDD and SIS-ICD compliance) - Initial PRS Monitoring (Navigation) TBD	Procurement	New	1	S2 2015	
	GRC ops & maintenance FWC	Procure the GRC Operations and Hosting Services for normal office hours. Operations contract shall ensure some overlap with the equipment contract for consistency. TBC if separate contracts for OPS and Hosting Services. Framework contract value TBC of €18M	Procurement	New	1	S2 2015	
	GRC ops & maintenance SC1	Procure the GRC Operations and Hosting Services for normal office hours. Operations contract shall ensure some overlap with the equipment contract for consistency. TBC if separate contracts for OPS and Hosting Services. First Specific Contract	Procurement	New	1	S2 2015	
	GRC Support from MS	Provide funding to MS for contributing to the GRC. Expected contributions include provision of data, products or campaign-based analyses. TBC if all contributions can be managed under a single procurement action.	Grant	New	TBC	S2 2015	
Exploitation and standardisation support	Tools Procurement	Procurement of a GNSS Receiver and related equipment in support of the GSA-led Service Monitoring activities	Procurement	New	1	S1 2015	6,545
	Engineering Support SC	Engineering support activities for Galileo Exploitation, covering continuation of existing support contracts and new support. The external consultants will support 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	1	S2 2015	
	Exploitation Support SCs	Galileo: to provide support in the following main areas - Early service engineering support - GSOp operations support related engineering - GDDN telecommunications engineering - Ground Segment operations support - Service facilities operations engineering - Infrastructure evolution engineering - System support and Ground Segment procurement support - Security operations support - Service standardisation support - Receiver engineering support - PA/QA/RAMS engineering - Technical tasks for non-PRS Galileo User Segment - Schedule and risk management engineering - Cost control engineering - Configuration & document management and assets management - Legal, procurement and contract management support	Procurement	New	3	S2 2015	
	New Exploitation Support FWC	New GSA Support procurement procedure with an indicative framework contract ceiling of ~€50M covering delegated tasks for exploitation of EGNOS and Galileo, including security and legal tasks.	Procurement	New	1	S1 2015	
Galileo GSA programme management reserve for services	GSA programme management reserve services 2015	GSA programme management reserve for 2015	Procurement	New	12	S1-S2 2015	9,000

Activity	Title/Description	Type/subject of contracts envisaged (studies, technical assistance, industrial contracts...)	Type of financial instrument: procurement/grant	Existing/new/contract/agreement	Indicative number of contracts/agreements/amendments/exercising of options	Indicative timetable for publication/launch	Funds set aside for the award of contracts (k€)
Fundamental Elements	Integration	The objective is to maximise the impact of the fundamental elements developed in the program on EGNSS user adoption, creating synergies among all the projects and granting the proper optimization of the products and technologies developed. The project will analyse the technical developments, identify synergies, perform cross fertilisation and recommend, via independent assessment, the potential improvements to inject in the projects. It will support the verification and validation of the products in order to broader at the maximum extent the applicability of the results. This task will also include the management of IPRs developed in the context of fundamental elements.	Procurement	New	1	S1 2015	6,200
	Advanced RAIM Multiconstellation Receiver	This project is complementary to a H2020 project and linked to a later one to be Kicked-Off in Q4 2016. Advanced (A) RAIM (Receiver Autonomous Integrity Monitoring) is a concept to which much effort is being devoted intending to provide a global integrity service based on multiple satellite constellations. The project will: -develop an Advanced RAIM prototype, following the lines defined by ARAIM TSG. Developed prototype may be used in a demonstration campaign. - analyse a possibility to achieve less stringent performance to support Horizontal navigation only -assess ARAIM in aviation domain: enabling global Horizontal Navigation as well as Vertical (LPV-200) operations including threat allocation and mitigation and second, -assess ARAIM in maritime Domain: enabling marine global general navigation providing integrity, especially when receiver is outside coverage of IALA Beacon Differential GNSS transmissions. -test the performance in a number of test scenarios for safety critical applications (aeronautical, maritime, rail and road).	Grant	New	1 or 2	S2 2015	2,500
	PMR Server	The objective of this procurement is the development of a demonstrator of a server for the integration of PRS into PMR network. The project will conclude with a CDR currently scheduled in Q2 2018 from which a continuation activity will start.#	Procurement	New	2	S2 2015	6,000
	Safety critical E-GNSS engine	Development of highly accurate and highly reliable E-GNSS engine for Safety Critical multi-applications in Road: the GNSS engine shall support applications that make use of GNSS position and that are critical for the safety of the drivers and other passengers, such as Advanced Driver Assistance Systems, anti-collision based on V2X, autonomous vehicles. The project shall refer to the standardisation work on-going at ETSI and CEN and foresee a certification process. The engine shall interface the standard data exchange system on board the vehicle, e.g. developing an interface with the CAN-bus. Data fusion with vehicle sensors and communication devices shall be included. The engine software and algorithm shall be portable and scalable; standard interfaces must be agreed with other GNSS engines (liability and payment) so that a multiple platform could be easily built, if required by the market.	Grant	New	1	S1 2015	4,500
	Liability and payment critical E-GNSS engine	Development of a robust E-GNSS engine for Liability Critical multi-applications in Road: the engine shall support applications for which a high level of liability is based on GNSS, for example: speed control and enforcement, digital tachograph, accident reconstruction, dangerous and other sensitive cargos tracing, etc.. A specific part of the project shall also be dedicated to payment critical applications, such as road and congestion charging, pay as you drive products and new "mobility as a service" concepts in which EGNSS is used as a main information source to go from vehicle ownership to usage. The engine shall be designed to fulfil existing regulated applications and upcoming one, referring also to on-going ETSI and CEN standardisation categories. The final goal is to build the technology and the process for a legal use of GNSS position in several regulated road applications, and the project should include an end-to-end demonstration. Standard interfaces must be agreed with other GNSS engines (safety and payment) so that a multiple platform could be easily built, if required by the market. The project should work in synergy with OS authentication users terminal project, that may provide chipsets enabled for OS authentication to be included in the final GNSS engine.	Grant	New	2	S1 2015	6,000
	High Precision Multi (including triple) Frequency Multi constellation receivers for professional applications	Development and test of High Precision Triple Frequency Multi constellation receivers for professional applications. The objective is to develop receivers to work on 3 frequencies and on Carrier Phase based positioning techniques (e.g. TCAR), focusing on new concepts for signal processing, smart approaches for multi-constellation multi-frequency signals, improvement in acquisition and innovative SDR approaches. The project shall build on already available results from previous FP7 projects and shall integrate hybridisation with inertial sensors and other available information and augmentation available on professional receivers. Customisation and qualification of different application domains (e.g. surveying, agriculture, meteorological networks, ...) will be carried out. The antenna will be developed as part of the common project area # 5. Additionally, the project shall allow understanding the requirements and to push for the qualification of EGNOS (incl. EDAS) and Galileo terminals (dual frequency, CS) under the new conditions imposed by the changes to the Common Agriculture Policy (CAP): the CAP field boundary measurement is being reshaped and within this CAP reform, a so called "greening" chapter will impact the requirements for receivers to be certified.	Grant	New	2	S2 2015	7,300
	Dual Frequency Automotive/M2M/consumer receiver including innovative hybridisation techniques	Development and Test of Dual Frequency (E1/E5) automotive / M2M / consumer receivers that make use of advanced hybridisation techniques, e.g. signal of opportunities, cellular network, etc.. The project will have to develop around innovative techniques, such as: - positioning Based on Signals of Opportunity - advanced hybridisation with cellular networks and other wireless sources - cooperative positioning - smart approaches to multi-frequency and multiconstellation	Grant	New	1	S1 2015	5,500