

## **EU Agency for the Space Programme**

### **1<sup>st</sup> Meeting of the Administrative Board**

Prague, 17 June 2021

### **Adoption of the Annual Activity Report of the European GNSS Agency for 2020**

**DECISION OF THE ADMINISTRATIVE BOARD OF THE EUROPEAN UNION AGENCY FOR THE  
SPACE PROGRAMME OF 17 JUNE 2021**

**adopting the Annual Activity Report of the European GNSS Agency for 2020**

THE ADMINISTRATIVE BOARD OF THE EUROPEAN UNION AGENCY FOR THE SPACE PROGRAMME  
(‘Agency’ or ‘EUSPA’),

Having regard to Regulation (EU) 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the Union Space Programme and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013 and (EU) No 377/2014 and Decision No 541/2014/EU, and in particular to Articles 77(2)(c) and 84 thereof;

Whereas:

- (1) Under Article 77(2)(h) of the EU Space Regulation the Administrative Board should adopt the annual report on the activities and prospects of the Agency,
- (2) This report should incorporate without any change the section drafted by the Security Accreditation Board in accordance with point (c) of Article 80 of the EU Space Regulation,
- (3) This report should be forwarded, by 1 July, to the European Parliament, the Council, the Commission and the Court of Auditors;

HAS DECIDED AS FOLLOWS:

***Article 1***

The annual activity report of the European GNSS Agency for 2020, attached in annex, is hereby adopted.

***Article 2***

This decision enters into force on the day following its adoption.

Done in Prague, on 17 June 2021

For the EUSPA Administrative Board

SIGNED

Alberto Tuozi

Acting Chair of the Administrative Board



# **Consolidated Annual Activity Report of the European GNSS Agency Year 2020**

[In pursuance of Financial Regulation 2018/1046, Commission Delegated Regulation No 2019/715<sup>1</sup>]

---

<sup>1</sup> Commission Delegated Regulation (EU) 2019/715 on the framework financial regulation for the bodies set up under the TFEU and Euratom Treaty and referred to in Article 70 of Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council (OJ L 122, 10.5.2019, p. 1).

## Table of Contents

<b>TABLE OF CONTENTS.....</b>	<b>2</b>
ADMINISTRATIVE BOARD’S ANALYSIS AND ASSESSMENT .....	5
NOTE BY THE CHAIR OF THE SECURITY ACCREDITATION BOARD .....	7
NOTE BY THE EXECUTIVE DIRECTOR .....	10
<b>EXECUTIVE SUMMARY .....</b>	<b>12</b>
<b>1. ACHIEVEMENTS IN 2020 .....</b>	<b>14</b>
1.1 SECURITY ACCREDITATION ACTIVITIES (WBS 2.04, WBS 2.05, WBS 2.06).....	14
1.1.1 Tasks until 2022.....	14
1.1.2 Highlights for 2020.....	15
1.1.3 Tasks for 2020 .....	18
1.2 PUBLIC REGULATED SERVICE (PRS) ACTIVITIES (WBS 2.03).....	31
1.2.1 Tasks until 2022.....	31
1.2.2 Highlights for 2020.....	31
1.2.3 Tasks for 2020 .....	33
1.3 GSMC OPERATIONS AND PREPARATION (WBS 4.06) .....	39
1.3.1 Tasks until 2022.....	39
1.3.2 Highlights for 2020.....	41
1.3.3 Tasks for 2020 .....	43
1.4 PROMOTION AND MARKETING OF THE SERVICES (WBS 5.02, 5.03, 1.03.01).....	57
1.4.1 Tasks until 2022.....	57
1.4.2 Highlights for 2020.....	58
1.4.3 Tasks for 2020.....	63
1.5 AGENCY MANAGEMENT (WBS 1) .....	83
1.5.1 Highlights for 2020.....	83

1.5.2 Tasks for 2020 .....	84
1.6 DELEGATED TASKS .....	107
1.6.1 Delegation Agreement for Public Regulated Service (2011) .....	107
1.6.2 Delegation Agreement for EGNOS Exploitation .....	107
1.6.3 Delegation Agreement for Galileo Exploitation .....	110
1.6.4 Delegation Agreement for Fundamental Elements .....	112
1.6.5 Delegation Agreement to support start-ups and entrepreneurship .....	114
1.6.6 Delegation Agreement for Horizon 2020 .....	115
1.6.7 Contribution Agreement for GOVSATCOM preparatory actions .....	123
<b>2. MANAGEMENT .....</b>	<b>125</b>
2.1 MANAGEMENT BOARD .....	125
2.1.1 The Administrative Board .....	125
2.1.2 The Security Accreditation Board .....	127
2.2 MAJOR DEVELOPMENTS .....	131
2.3 BUDGETARY AND FINANCIAL MANAGEMENT .....	132
2.4 HUMAN RESOURCES MANAGEMENT .....	133
2.5 ASSESSMENT BY MANAGEMENT .....	135
2.6 BUDGET IMPLEMENTATION TASKS ENTRUSTED TO OTHER SERVICES AND ENTITIES .....	138
2.7 ASSESSMENT OF AUDIT RESULTS DURING THE REPORTING YEAR .....	138
2.8 FOLLOW UP OF RECOMMENDATIONS AND ACTION PLANS FOR AUDITS .....	139
2.9 FOLLOW UP OF RECOMMENDATIONS FROM THE DISCHARGE AUTHORITY .....	141
2.10 EXTERNAL EVALUATIONS .....	141
<b>3. ASSESSMENT OF THE EFFECTIVENESS OF THE INTERNAL CONTROL SYSTEMS .....</b>	<b>142</b>
3.1 RISK MANAGEMENT .....	142
3.2 COMPLIANCE AND EFFECTIVENESS OF INTERNAL CONTROL STANDARDS (ICS) .....	142
3.3 COST AND BENEFITS OF CONTROLS .....	143

3.4 STATEMENTS OF THE MANAGERS IN CHARGE OF RISK MANAGEMENT AND INTERNAL CONTROL .....	145
<b>4. MANAGEMENT ASSURANCE .....</b>	<b>146</b>
4.1 REVIEW OF THE ELEMENTS SUPPORTING ASSURANCE .....	146
4.2 RESERVATIONS .....	146
4.3 OVERALL CONCLUSIONS ON ASSURANCE .....	146
<b>5. DECLARATION OF ASSURANCE .....</b>	<b>147</b>
<b>ANNEXES .....</b>	<b>148</b>
ANNEX I – CORE BUSINESS STATISTICS .....	148
ANNEX II – STATISTICS ON FINANCIAL MANAGEMENT .....	149
<i>II.1 - Rate and type of implementation of appropriations .....</i>	<i>149</i>
<i>II.2 – Information on transfers and amended budgets .....</i>	<i>153</i>
<i>II.3 – Information on interest charged through late payments.....</i>	<i>153</i>
<i>II.4 – Summary information on budgetary operations.....</i>	<i>153</i>
ANNEX III – ORGANISATION CHART .....	154
ANNEX IV – ESTABLISHMENT PLAN .....	155
<i>Information on entry level grades for posts .....</i>	<i>156</i>
ANNEX V – HUMAN AND FINANCIAL RESOURCES BY ACTIVITY .....	158
ANNEX VI – CONTRIBUTION, GRANT AND SERVICE LEVEL AGREEMENTS. FINANCIAL FRAMEWORK PARTNERSHIP AGREEMENTS .....	159
ANNEX VII – ENVIRONMENT MANAGEMENT .....	163
ANNEX VIII - DRAFT ANNUAL ACCOUNTS AND FINANCIAL REPORTS.....	163
ANNEX IX – SPECIFIC ANNEXES RELATED TO PART 2 .....	164
<i>IX.1 GSA Legal Framework (as of 31 December 2019).....</i>	<i>164</i>
ANNEX X – SPECIFIC ANNEXES RELATED TO PART 3 .....	165
ANNEX XI – THE WORK BREAKDOWN STRUCTURE .....	165
ANNEX XII - LIST OF ACRONYMS.....	166

## **Administrative Board's analysis and assessment**

The year 2020 has been a challenging year for all. COVID-19 pandemic has posed problems and difficulties never encountered before to which the GSA has provided effective and timely responses.

Yet, thanks to the dedication of the GSA team, the Agency managed to deliver continuously secure EGNOS and Galileo services to an increasing number of users, in cooperation with the European Commission, the Member States and the other European stakeholders, having put in place all the necessary measures to increase the resilience of operations at the Galileo and EGNOS operational centres in Europe and remote sites, having taken into account, moreover, the consequences of Brexit on the programs.

Without being exhaustive, I will mention here some of the key milestones reached during the year.

Concerning the E-GNSS, Galileo and EGNOS, the number of users continued growing. Moreover, the main highlights of 2020 include:

- the declaration of a key Galileo differentiator – the Return Link Service
- the entry into service of the EGNOS GEO-3 payload that will augment both GPS and Galileo in the L1 and L5 bands
- the GSMC dual-site operations with our new Galileo Security Monitoring Centre (GSMC) site in Spain
- the development of an app called “Galileo Green Lane” to ease pressure at the EU’s internal borders in the COVID-19 critical situation. Border authorities, Member states and drivers welcomed this application that enables the efficient transit of critical goods, keeping EU borders open to freight at this critically important time.
- the continuous work on competitions and Prizes such as MyGalileoDrone, Geomatics on the Move, MyGalileoSolution to ensure the mission of the Agency to boost innovation and support entrepreneurs all around Europe working on ideas and applications leveraging Galileo, EGNOS and Copernicus, and the synergies between the three.
- the publication of the 3rd Technology Report
- the Galileo Search and Rescue ground facilities upgrade to support the International COSPAS-SARSAT Programme transition towards MEOSAR completion.
- the online editions of the European Union Space Week and User Consultation platforms with over 3000 participants



The EU authorities are still drafting the regulatory provisions governing the role of the European Union Agency for the Space Programme (EUSPA) within the next Multiannual Financial Framework. In combination with the future Financial Framework Partnership Agreement (FFPA) to be concluded between the European Commission, GSA and ESA, this will be instrumental for the GSA, soon to become EUSPA accomplishing effectively all of its core and delegated tasks.

2021 will see a major evolution for the Agency as it will become the European Union Agency for the Space Programme (EUSPA). Buoyed by our past successes, I know that we will succeed thanks to the ambition and determination of the Administrative Board and above all thanks to the talents and commitment of GSA's staff. Particularly let me emphasize the fact that market development should address fully "integrated applications" which makes market uptake more effective by expanding the audience and offering additional value-added satellite services and data.

In conclusion, I would like to congratulate Rodrigo da Costa, who became the new Executive Director of the GSA in October 2020. He will lead the Agency to become EUSPA. During his mandate, the Agency will have to take on board new responsibilities and I am confident that he will tackle successfully the challenges ahead with the support of an excellent team of professionals and the support of the EUSPA Administrative Board.

**Alberto Tuozi**

**Acting Chair of the Administrative Board, European Union Agency for the Space Programme**

## Note by the Chair of the Security Accreditation Board

The security accreditation activities for the EU GNSS systems were maintained during 2020 by building on the previous years and by quickly adapting the way of working of the SAB and its subordinate bodies to the COVID-19 related travel restrictions. The meetings were held mostly via teleconference following intense exchange of documentation and thorough preparation of assessments provided by the SAB secretariat to the Panel. This way the Panel, which had also adapted itself to the restrictions, was able to formulate recommendations on various topics to the SAB.

This modus operandi, based on written procedures and proper documentation, enabled the SAB to maintain continuity in its decision making process and to sustain the needed accreditation activities without gaps.

However, informed discussions on classified security accreditation files demonstrated to be very difficult in the pandemic situation as not all EU MS are equipped with appropriate secure capabilities. Also on-site independent vulnerability assessments could not take place.

### With regards to Galileo in 2020, the SAB:

- maintained the authorisation of the initial services up to and including the signal in space as well as the authorisation of the overall Galileo infrastructure and its evolutions;
- followed with particular attention the progress made by the Programme in increasing the robustness of the system following the recommendations issued after the 2018-2019 service incidents. The latest service incident in December 2020 has however triggered further analysis with a focus on the SAB assessment on critical components of the Galileo system;
- continued the evaluation of the progress made by the Programme in improving the overall security risk profile and in particular its cyber defence posture;
- maintained the ground segment sites' accreditation, including the addition of the second GSMC in Spain;
- authorised the PRS key set distribution by GSMC via the GRON network, greatly facilitating Member States' operations. The corresponding GRON network has further expanded, with 3 additional authorised sites;
- authorised first steps in the testing of the new services HAS (High Accuracy Service) and OS-NMA (Open Service Navigation Message Authentication);

- With regards to the space segment, the SAB authorised the Launch 3 (L3) satellites to be used for Open Service.
- In the context of the new setup of the flight key assurance, the SAB completed the review of the flight key assurance activities in support of the next launches, developing a proposal on the governance to be applied for launch campaigns as of 2021. The SAB Member States directly involved in the launch campaigns, supported by the SAB secretariat, have developed a set of baseline documents outlining the flight key assurance activities to be performed under the new setup. The SAB kicked off the preparation of the flight key assurance activities for Launch 11, planned in 2021.
- The SAB continued accreditation activities for the Galileo Validation (VAL) system, reaching the important milestone of the approval of the Security Accreditation Strategy and the corresponding site accreditation process. It also authorised the connection of a new site to the VAL system.

At the end of 2020, 116 EU bodies had valid SAB authorisation for developing or manufacturing PRS technology in 3 different categories. It is important to note that the SAB is awaiting the EC to provide the security requirements to be met by the PRS bodies in order to apply a simplified authorisation process aligned with the Common Minimum Standards. These requirements should also cover manufacturing, which is currently implemented by an interim authorisation process.

### **With regards to EGNOS in 2020**

The Panel drafted a Security Accreditation Strategy (EGNOS SAS). The SAB approved principles for the approach for site accreditation and in particular for the RIMS site assurance. At the end of 2020 the EGNOS SAS was ready to be sent for approval to the SAB.

### **Concerning the new Space Regulation**

The SAB stakeholders have been engaged in the preparation towards the new Regulation, expected for 2021. The new accreditation scope and activities have been analysed and the SAB issued to the Programme a proposition on the scope and vision for the accreditation activities in the period 2021 – 2027, together with a first estimation of needed resources. The SAB has worked on its new rules of procedures and has set the lines for the new subordinate bodies to be created under the new Regulation.

**Regarding the transversal services in the Agency,** I continue to work very closely with the GSA Executive Director to implement a robust working relationship between both sides of the Agency. The required secretarial resources and services for the 2021-2027 have been provided to the Executive Director.

**Regarding the GSA staff under the supervision of the SAB,** the Security Accreditation Department recruited one new staff member and one seconded national expert, adding important resources to the administrative and technical support to the SAB and its bodies.

Security Accreditation can only be successful if there is a close collaboration between security experts of all the stakeholders involved in the Galileo and EGNOS Programmes, in particular the Member States, the Commission, GSA and ESA but also the private sector. Moreover, the GSA Security Accreditation staff provide the fundamentals to this success thanks to their relentless commitment and professionalism.

***Bruno Vermeire***

***Chair of the Security Accreditation Board of the EU GNSS***

## Note by the Executive Director

Notwithstanding the challenges faced in 2020, thanks to the dedication of the GSA team and our cooperation with the European Commission, ESA, Member States, industry (upstream and downstream) and with our stakeholders throughout Europe, we delivered secure EGNOS and Galileo services to an increasing number of users around the globe and we continued increasing the adoption of European GNSS.

The year started with the declaration of a key Galileo differentiator – the Return Link Service. This important service further enhances the capabilities provided by European GNSS.

Another early success was the entry into service of the EGNOS GEO-3 payload, which will augment both GPS and Galileo in the L1 and L5 bands, provide additional satellite-based augmentation system service capabilities through a new SBAS channel on L5, and will deliver increased EGNOS service availability within and beyond the EU, supporting a growing number of users.

However, by March it was already clear that the Coronavirus situation was not going to go away any time soon. As Europe entered lockdown, across all GSA sites we started to work on ensuring business continuity. With little advance notice, and leveraging on the agility and creativity of the whole team, we quickly moved almost all our activities on-line without significant disruption. Together with the European Commission we looked into GNSS-based solutions to respond to the crisis, and developed an app to ease pressure at the EU's internal borders. The "Galileo Green Lane" app proved to be very popular with border authorities and drivers and helped enable the efficient transit of critical goods, keeping EU borders open to freight at this critically important time.

Throughout the year, we continued to work on a series of initiatives to boost innovation and support European entrepreneurs working on ideas and applications leveraging Galileo, EGNOS and Copernicus, with a particular focus on synergies between the three. Engagement with the MyGalileoDrone, Geomatics on the Move, Farming by Satellite and MyGalileoSolution competitions has exceeded expectations. In October, the Agency also issued the third edition of our eagerly awaited GNSS User Technology Report. I also had the privilege to become the Executive Director of the GSA, taking up post in mid-October 2020, and would like to take the occasion to thank Pascal Claudel for undertaking the interim period following the end of the second term of Carlo des Dorides in January 2020.

Together we have put in place all the necessary measures to increase the resilience of operations at the Galileo and EGNOS operational centres in Europe and remote sites around the world. The success of this joint effort is measured by the quality of services delivered every day by EGNOS and Galileo. We have also deployed further system updates, in cooperation with ESA and industry, and have demonstrated the GSMC dual site operations with our new Galileo Security Monitoring Centre (GSMC) site in Spain.

The Galileo Search and Rescue ground facilities have also been upgraded. The latest upgrades carried out on SAR/Galileo Local User Terminals in Spain, Cyprus and Norway are helping the International COSPAS-SARSAT Programme transition towards MEOSAR completion, which ultimately translates into more lives being saved. All our external events moved online, turning the physical restrictions imposed by Covid-19 into an opportunity to reach new user communities and go global, this was the case for example with the User Consultation Platform and our annual European Space Week online. The latter event, which was special to me since it was my first European Space Week as GSA Executive Director, was a great success with over 3000 participants from more than 100 countries.

Looking to the year ahead, the transformation of the GSA into the European Union Agency for the Space Programme (EUSPA) will finally happen, with the new regulation expected to be formally adopted in 2021. We will work together to overcome challenges and create opportunities, with a particular focus on exploiting the synergies between the different components of the programme.

As a final point, I would like to state that as Executive Director of the Agency, I am extremely proud to lead a team of excellent, dedicated professionals who together are delivering the success of the Agency.

***Rodrigo da Costa***

***Executive Director, European Union Agency for the Space Programme***

## Executive Summary

By developing and operating a new generation of Global Navigation Satellite Systems (GNSS), Europe is opening new doors for industry development, job creation and sustainable economic growth. With the European Union in the driver's seat, Galileo is now a cornerstone of the global radio-navigation positioning system. During 2020, the GSA was responsible for a range of activities, including:

- Ensuring the security accreditation of Galileo and EGNOS, through its independent Security Accreditation Board (SAB)<sup>2</sup>. To that effect it initiates and monitors the implementation of security procedures and performs system security audits;
- Ensuring the operation of the Galileo Security Monitoring Centre (GSMC);
- Performing certain tasks provided for in Decision No 1104/2011/EU on the rules for access to the Public Regulated Service (PRS) of Galileo;
- Contributing to the promotion and marketing of Galileo and EGNOS services, including the carrying out of the necessary market analysis, and establishing close contacts with users and potential users of the systems;

The GSA also performs other tasks relating to the implementation of the Galileo and EGNOS programmes, entrusted to it by the European Commission (EC) by means of delegation and contribution agreements, such as:

- Operational activities including systems infrastructure management, maintenance and continuous improvement of the systems, certification and standardisation operations and provision of the services;
- Development and deployment activities for the evolution and future generations of the systems, and contribution to the definition of service evolutions, including procurement;
- Promoting the development of applications and services based on the systems, as well as raising awareness of such applications and services, including identifying, connecting and coordinating the network of European centres of excellence in GNSS applications and services, drawing on public and private sector expertise, and evaluating measures relating to such promotion and awareness-raising;

---

<sup>2</sup> The activities related to security accreditation, described in Chapter III of Regulation No 9012/2010, including the Agency staff performing them, are fully the responsibility of the Chairperson of the Security Accreditation Board.

- Promoting the development of Fundamental Elements, such as Galileo-enabled chipsets and receivers;
- Working on preparatory activities for GOVSATCOM, including related to the GOVSATCOM hub;
- Fulfilling defined tasks related to the management of projects under the Horizon 2020 framework programme for navigation applications research and innovation.



## 1. Achievements in 2020

The Agency in 2020 performed core tasks under Regulation (EU) No 912/2010 of the European Parliament and of the Council on setting up the European GNSS Agency (“GSA Regulation”) and a number of tasks under delegation from the EC. The delegated tasks are described in section 1.6.

All activities are mapped in the Agency’s Work Breakdown Structure (WBS). Each objective is shown with its allocated WBS number to indicate how the activities are structured.

This section provides an overview of the GSA’s achievements during 2020. It is structured around the five areas of work described in the Single Programming Document (SPD) 2020-2022. The achievements for 2020 are placed within the context of the multiannual goals and are reported on against the annual objectives, performance indicators and expected outputs defined in the SPD.

### 1.1 Security Accreditation Activities (WBS 2.04, WBS 2.05, WBS 2.06)

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

#### 1.1.1 Tasks until 2022

	Tasks	Objective	Year
1	Approvals to launch	The Agency shall conduct security assurance activities, inform the SAB thereof and administer corresponding accreditation decisions for satellites launches.	2014 – 2022
2	Authorisations to operate the systems in their various configurations and for the various services	The Agency shall conduct system operations/services security assurance activities, inform the SAB thereof and administer corresponding accreditation decisions (currently for Galileo, progressive development for EGNOS).	2014 – 2022
3	Authorisations to operate sites	The Agency shall conduct site security assurance activities, inform the SAB thereof and administer corresponding accreditation decisions (currently for Galileo, progressive development for EGNOS).	2014 – 2022
4	Galileo PRS Manufacturers Authorisations	The Agency shall administer security accreditation decisions on authorisation to manufacture receivers containing PRS technology and their components.	2014 – 2022

	Tasks	Objective	Year
5	SAB Secretariat	The Agency shall ensure the SAB secretariat and shall ensure general support to the SAB chairperson and deputy chairperson in discharging their regulatory responsibilities	2014 – 2022
6	SAB Subordinate panel (and related groups of experts)	The Agency shall organize the subordinate Panel to the SAB comprised of Member State security experts in order to conduct security analysis of specific issues and provide accreditation recommendations to the SAB to assist in its decision making.	2014 – 2022
7	Communications Security (COMSEC) assurance – SAB CDA Task Force	The Agency shall facilitate the SAB CDA Task Force (CDA TF) comprised of COMSEC experts from the Member States Distribution Authorities in order to assess the conduct of European Commission (EC) COMSEC policy throughout the EU GNSS programmes and then provide COMSEC assurance to SAB, communicated as a COMSEC risk assessment, in order to facilitate successful accreditation and/or authorisation as applicable.  The CDA Task Force in particular assists the SAB with regard to questions related to flight keys.	2014 – 2022
8	New SAB regulatory responsibilities	The Agency shall support the SAB in implementing the new responsibilities entrusted to it by Regulation (EU) No 512/2014 and laid down in Article 11 thereof, in particular paragraph 3 points (c) to (l) and paragraph 4.	2015 – 2022

### 1.1.2 Highlights for 2020

The Security Accreditation Department, with the support of the rest of the Agency, provided the technical and administrative secretariat support to the SAB to reach decisions that are proportionate, appropriate and effective at the Programme milestones.

The SAB voted for its chairman in its first meeting of the year (electing Mr Bruno Vermeire), and for the deputy chairman at the last meeting of the year (electing Mr Claude Schanet).

Due to the epidemiologic situation, only the first Panel meeting could be held in presence. The rest of the meetings were held as unclassified teleconferences. The SAB maintained the continuity in the decision making by adopting a temporary way of working, defining its functioning under extraordinary circumstances during the COVID-19 crisis. A number of decisions were taken via written procedure.

The main objectives for 2020 were achieved:

- The SAB maintained (via an administrative extension) the statement regarding the authorisation for the programme to provide initial operations of the Galileo system for the provision of Initial Services up to and including the Signal in Space, released for the first time in December 2016.
- The SAB maintained (via an administrative extension) the Interim Approval to Operate (IATO) the Galileo infrastructure.
- The SAB followed up the analyses of the Programme on the recommendations issued after the Galileo service outages that happened in 2018 and 2019, in particular in July 2019. The SAB in particular focused on actions intended to increase the robustness of the system, monitoring closely critical components such as OSPF and PTF. The SAB issued a total of 9 Site Authorisations To Operate (of which 1 is new) for the Galileo system, maintaining the validity of the accreditation of the Galileo sites. The SAB authorised 3 sites to be connected to the GRON network.
- The SAB secretariat and its support contractors reviewed the accreditation files submitted by the Programme, in particular in preparation of the SAB and SAB subordinate bodies' meetings, and elaborated their findings in recommendation/decision notes.
- The SAB secretariat was involved in major Programme reviews, attended the GSA Task Force on SB 1.5.1 migration and the Programme Cyber Board, and conducted independent security assessment on GCC-I GMS SecOps with the support of its contractors.
- The SAB secretariat continued to be engaged in activities in cybersecurity, in particular with the verification of evidence submitted by the Programme for remediation of vulnerabilities and implementation of treatment plans.
- The SAB approved the distribution of the PRS key datasets from the GSMC via the GRON network.
- The SAB authorised the use of the Launch 3 (L3) satellites for provision of Open Service.
- The SAB authorised the OS-NMA (Open Service Navigation Message Authentication) testing and the CS (Commercial System) demo real-time HAS (High Accuracy Service) data broadcast.
- The SAB continued the accreditation activities linked to the Galileo Validation (VAL) system. While awaiting for the accreditation dossier by the Programme, needed to discuss the accreditation of the system, the SAB approved the Security Accreditation Strategy for the Galileo Validation system and the corresponding site accreditation process ("VAL SATO"). The SAB authorised 1 site connection to the VAL system.

- The SAB issued 14 new authorisations for bodies to develop or manufacture PRS receivers and security modules, and authorised 65 renewals/extensions and 108 authorisation scope updates. By the end of the year, 116 EU bodies had valid SAB authorisations.
- The SAB kept on hold the proposal for a simplified PRS authorisation process improving the alignment to the Commission Delegated Decision supplementing Decision No 1104/2011 of the European Parliament and the Council as regards the Common Minimum Standards to be complied with by the competent PRS authorities. In fact, the SAB is awaiting the EC to provide the security requirements to be met by the PRS bodies.
- The SAB agreed to issue authorisations also for the manufacturing phase by applying the interim process for PRS authorisations initially valid for R&D purposes. This process remains applicable until November 2021 awaiting the EC to provide the set of requirements to be met by PRS bodies.
- The SAB Crypto Distribution Authority (CDA) took care of the COMSEC activities, including governance, organisation, and identification of COMSEC assets. The SAB CDA continued to oversee the implementation of the Programme's COMSEC governance and to provide recommendations to the Programme in terms of compliance to European Council and Commission policy on COMSEC matters. One CDA Task Force meeting took place and consultation was held via written procedures, in order to issue recommendations to the SAB on the COMSEC assurance for the 2020 accreditation milestones.
- The SAB has completed the review of the flight key assurance activities in order to support the next launches, developing a proposal on the governance to be applied to launch campaigns as of 2021. The SAB Member States directly involved in the launch campaigns, supported by the SAB secretariat, have developed a set of baseline documents outlining the flight key assurance activities to be performed under the new setup.
- The SAB kicked off the flight key assurance activities in preparation of the Launch 11, planned in 2021.
- The SAB continued the accreditation activities of the EGNOS system. The Panel worked on a draft Security Accreditation Strategy. The SAB approved the principles for the site accreditation approach and in particular for the RIMS site assurance. At the end of 2020 the EGNOS SAS was ready to be sent for approval to the SAB.

### 1.1.3 Tasks for 2020

Objective 1: Operate effective administration of the SAB so as to support timely decision making (WBS 2.04.01)	
Expected results	2020 results
<ul style="list-style-type: none"> <li>• Reporting to SAB chairman</li> <li>• SAB meeting plan proposed in coordination with the Programme to anticipate possible milestones</li> <li>• Distribution of working papers in due time before each meeting</li> <li>• Establishment of minutes in due time after each meeting</li> <li>• Administrative written procedures as necessary</li> <li>• Record and transmit all SAB decisions</li> </ul>	<ul style="list-style-type: none"> <li>• Regular reports to SAB Chairman, in particular after each meeting of the technical bodies.</li> <li>• The SAB meeting plan was established at the end of 2019 and maintained in 2020 to keep it aligned with the changes in the Programme schedule. 3 SAB meetings took place in 2020.</li> <li>• Relevant documents were distributed in advance of each meeting. The SAB secretariat drafted a recommendation/decision note for each SAB decision, containing the assessment of the topic and a recommendation to the Panel/SAB.</li> <li>• Minutes were established after each meeting, submitted to the SAB chair for review and approval, and finally for SAB approval. All minutes were approved by SAB and archived.</li> <li>• Decisions that could not be taken during the meetings e.g. due to lack of quorum or time constraints were administered via silence procedures (more than 80).</li> <li>• All SAB decisions were recorded and addressed to the European Commission.</li> </ul>
Targets	2020 results

Indicator	Successful implementation of required administrative processes.	100%	100%
	<b>Planned outputs</b>	<b>Actual outputs</b>	
	Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"><li>Up-to-date register of SAB actions and decisions</li><li>SAB minutes of meeting</li><li>Yearly SAB meeting plan</li><li>Archive of Accreditation Statements</li><li>Up-to-date register of SAB membership</li></ul> Other outputs: <ul style="list-style-type: none"><li>Security Accreditation reports</li><li>Recommendations to the SAB / SAB Chair</li></ul>	<ul style="list-style-type: none"><li>Up-to date register of SAB actions and decisions.</li><li>Archive of approved SAB minutes of meetings.</li><li>2020 SAB meeting plan approved at the end of 2019 and then kept aligned to the needs of the Programme. Approval of 2021 SAB meeting plan at the end of the year.</li><li>Archive (paper and electronic formats) of accreditation statements and official communications.</li><li>Register of SAB membership kept updated.</li><li>Recommendations of SAB secretariat and technical bodies to the SAB for each decision.</li></ul>	

Objective 2: Support to SAB Management (WBS 2.04.02)	
Expected results	2020 results
<ul style="list-style-type: none"> <li>Work Programme adopted</li> <li>Budget adopted</li> <li>Establishment Plan adopted</li> </ul>	<ul style="list-style-type: none"> <li>Sections in the Single Programming Document (SPD) covering the SAB security accreditation activities were adopted by the SAB.</li> <li>Draft budget for SAB activities was prepared and integrated in the approved SPD.</li> <li>Regular reports on the implementation of the SAB Budget were made.</li> </ul>

			<ul style="list-style-type: none"> <li>Resource needs of the Security Accreditation Department communicated to the the Executive Director of the Agency.</li> </ul>
<b>Indicator</b>	<b>Targets</b>		<b>2020 results</b>
	Single Programming Document (SAB relevant sections) provided on time to SAB for approval	100%	Yes
<b>Planned outputs</b>			<b>Actual outputs</b>
Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"> <li>Draft 2020 SAB Work Programme</li> <li>Draft 2020 SAB budget</li> <li>Report on 2019 SAB budget</li> </ul>			<ul style="list-style-type: none"> <li>SPD approved by SAB.</li> <li>Budget included in the SPD and approved.</li> <li>Regular SAB budget report performed, 2019 CAAR approved by SAB.</li> </ul>
<b>Objectives 3: To provide all authorisation statements needed by the Programme (GAL) and approved by SAB</b> <b>Implemented by:</b> Security Accreditation Statements <b>(WBS 2.04.04)</b> Ground Site Security Assurance <b>(WBS 2.05.02)</b> Component Security Assurance <b>(WBS 2.05.03)</b> User Segment Security Assurance <b>(WBS 2.05.04)</b>			
<b>Expected results</b>			<b>2020 results</b>

<ul style="list-style-type: none"> <li>• Approvals to launch</li> <li>• Authorisations to operate systems in their different configurations and for the various services, up to and including the signal in space.</li> <li>• Authorisations to operate the ground stations</li> <li>• Authorisations of bodies to develop and manufacture PRS receivers or PRS security modules</li> <li>• Security accreditation statements</li> <li>• Changes to existing security accreditation statements</li> <li>• Re-accreditation statements</li> </ul>			<p>Security Accreditation statements and needed changes to them were released by the SAB for each accreditation milestone and for each request by the Programme.</p> <ul style="list-style-type: none"> <li>• Authorisation for the Programme to operate the infrastructure (IATO) and to continue to provide Initial Services for Galileo up to and including the Signal in Space.</li> <li>• Authorisations for system evolutions requested by the Programme analysed and provided according to the SAB decisions.</li> <li>• Authorisations to operate the ground stations: 1 new Site Approval To Operate (GSMC Spain), 8 renewals, 3 authorisation to operate GRON subscriber sites (Italy, Belgium, EEAS), 1 connection to VAL chain (GCC-D GRSP).</li> <li>• Authorisations of bodies to develop and manufacture PRS receivers or PRS security modules: 14 new authorisations; 65 reauthorisations/extensions; 108 Authorisation scope updates; for a total of 116 SAB authorised bodies.</li> </ul> <p>All accreditation statements were kept up to date and extended/amended when needed according to their validity. No Approval to launch was needed as there was no launch in 2020.</p>
Indicators	<b>Targets</b>		<b>2020 results</b>
	All SAB statements provided to Programme Management within two weeks after decision.	100%	100%
<b>Planned outputs</b>			<b>Actual outputs</b>
<ul style="list-style-type: none"> <li>• Approval to launch</li> <li>• Authorisations to operate the Galileo system in its different configurations and Galileo services</li> <li>• Authorisation to operate the ground stations</li> </ul>			<ul style="list-style-type: none"> <li>• Authorisation for the Programme to continue to provide Initial Services for Galileo up to and including the Signal in Space.</li> <li>• Approval to Operate (IATO) for Galileo to be operated by GSOp, maintained updated with the configuration evolution.</li> </ul>



<ul style="list-style-type: none"> <li>• Authorisation of bodies to develop and manufacture PRS receivers or PRS security modules</li> <li>• Various accreditation statements following Programme request for accreditation</li> </ul>	<ul style="list-style-type: none"> <li>• (Pre-)authorisations to operate parts of the system (or upgrades of those parts) in the Initial Services configuration (GSC 2.1, RLSP 1.1.2 enhanced monitoring).</li> <li>• Authorisation of the use of the launch 3 satellites for provision of Open Service.</li> <li>• Authorisation of OS-NMA initial testing.</li> <li>• Authorisation of the CS demo real-time HAS data broadcast.</li> <li>• Authorisation on PRS key set distribution from GSMC via GRON.</li> <li>• Authorisations to operate the ground stations: 1 new Site Approval To Operate (GSMC Spain SATO), 8 renewals.</li> <li>• Authorisations to operate 3 GRON subscriber sites (Italy, Belgium, EEAS).</li> <li>• Authorisations to manufacture PRS receivers or PRS security modules: 14 new authorisations; 65 reauthorisations/extensions; 108 Authorisation scope updates; for a total of 116 SAB authorised bodies.</li> </ul>
--	---

Objective 4: Ensure the chairmanship of the panel, its technical and organisational secretariat (WBS 2.05.05)	
Expected results	2020 results
<ul style="list-style-type: none"> <li>Propose panel meeting plan</li> <li>Organise panel meetings throughout the year</li> <li>Preparation for Panel technical discussion</li> <li>Panel's MoM approved at each meeting</li> <li>Deliver Panel's accreditation recommendations to SAB</li> </ul>	<ul style="list-style-type: none"> <li>SAB meeting plan for 2020, including the Panel meetings, was approved by SAB and subsequently maintained to take into account the changes in the Programme schedule. 2021 meeting plan was approved at the end of the year.</li> <li>3 Panel meetings were organised in 2020.</li> <li>The staff of the Security Accreditation Department (SAB secretariat) ensured the chairmanship and the technical and administrative secretariat of those meetings.</li> <li>The SAB secretariat drafted a recommendation note for each item on which the Panel had to provide a recommendation to the SAB in view of a decision. Each note was discussed by the Panel, amended if needed and provided as recommendation to the SAB in an associated decision note drafted by the SAB secretariat.</li> <li>Minutes of the Panel meetings were approved for each meeting: one at the meeting, the other two after the meeting as the travel ban in 2020 forced to hold the two meetings via videoconference.</li> <li>Minutes of the Panel meetings were provided to the SAB as timely input for decision making containing Panel recommendations for SAB decisions. Recommendations of the Panel were summarised by the Panel chairman at each SAB meeting.</li> </ul>
Targets	2020 results

Indicators	<ul style="list-style-type: none"> <li>• Successful implementation of required administrative processes.</li> <li>• Minutes of meeting submitted for approval at each meeting</li> <li>• Outcomes of GSAP meeting reported to each SAB</li> </ul>	100%	100%
			100% <sup>3</sup>
			100%
<b>Planned outputs</b> Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"> <li>• Panel's Security accreditation recommendations</li> <li>• Panel chairman's briefing to SAB and SAB chairman on the Panel's outcome</li> </ul>		<b>Actual outputs</b> <ul style="list-style-type: none"> <li>• The Panel issued a recommendation to SAB for each decision item on SAB Agenda.</li> <li>• The SAB secretariat provided in support of each Panel recommendation a note summarising the topic, providing the assessment performed by the SAB secretariat and a draft recommendation.</li> <li>• The SAB secretariat developed a decision note to SAB based on each recommendation note endorsed by the Panel.</li> <li>• The Panel chairman provided a briefing to SAB and SAB chairman for each item of relevance.</li> </ul>	

<sup>3</sup> For teleconferences, the minutes were approved by written procedure

Objective 5: Ensure independent assessment of system level security (WBS 2.05.01)	
Expected results	2020 results
<ul style="list-style-type: none"> <li>• Carry out independent security assessments and system audits/reviews and report to panel/SAB accordingly</li> <li>• Participate in security-sensitive programme reviews at system level and, where necessary, ad hoc participation in segment reviews</li> <li>• Monitor risks and treatment plans and report to panel/SAB accordingly</li> <li>• If requested by the SAB, review existing strategies to ensure consistency with the regulation/programme and propose enhancements as appropriate</li> </ul>	<ul style="list-style-type: none"> <li>• The experts of the SAB accreditation team (together with the contractors) carried out a number of security accreditation reviews in order to assess the accreditation files submitted by the Programme in support of the various accreditation requests. Recommendations to the SAB Panel, SAB CDA and SAB were made accordingly in the form of recommendation/decision notes.</li> <li>• The experts of the SAB accreditation team participated to main Programme reviews, such as OS-NMA service concept review, G2G SRR2, L3 entry into service review, HAS service concept review, SB1.7 SDQR, and service validation reviews.</li> <li>• The experts of the SAB accreditation team participated to several meetings as observers, such as meetings of Working Groups of the EU GNSS Security Board, Programme Cyber Board, and the GSA Task Force on the migration of SB 1.5.1.</li> <li>• The SAB secretariat managed the SAB consultancy contracts supporting the various accreditation reviews and security assessments.</li> <li>• The team conducted assessment of cyber-evidence data-packages and ESA/GSA cyber status reports, in order to assess the evidence for remedies to found vulnerabilities and for implementation of the treatment plans. Examples of such activities encompassed for example GMS 2.2.1, GSC 1.2, RLSP 1.1.</li> </ul>

			<ul style="list-style-type: none"> <li>• Coordination process was established between the SAB accreditation team and the Programme to monitor progress on cyber vulnerability remediation and report the status to the Panel and the SAB.</li> <li>• Independent security vulnerability assessment was performed on parts of the system (GCC-I GMS SecOPs and preparation for GSMC-FR SecOPs).</li> <li>• Risks and treatment plans were constantly monitored and discussed at Panel and SAB meetings.</li> <li>• The Security Accreditation Strategy for the Validation system was drafted and discussed by Member States. It was approved by the SAB.</li> <li>• The Security Accreditation Strategy for the EGNOS system was drafted and discussed with Member States. The principles for RIMS site assurance were agreed by the SAB.</li> </ul>
Indicators		<b>Targets</b>	<b>2020 results</b>
	Participation to security-sensitive Programme reviews when invited by the Programme.	80%	100%
	Organisation of independent security vulnerability tests and/or system audits allocated to SAB.	100%	100% (1)
<b>Planned outputs</b>			<b>Actual outputs</b>
Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"> <li>• Security accreditation recommendations</li> <li>• Recommendations to SAB and/or SAB Chair</li> </ul>			<ul style="list-style-type: none"> <li>• Reports on the outcome of the cyber meetings held among the SAB secretariat and the stakeholders, regularly submitted to the Panel.</li> <li>• Analysis of evidence of vulnerabilities remediation and feedback to Programme.</li> <li>• Deliverables of contracts, as input to the security analysis performed by the team.</li> </ul>

	<ul style="list-style-type: none"> <li>• Internal reports from participation to Programme reviews, Task Forces, Programme WGs. Briefings to SAB chair.</li> <li>• Recommendation/decision notes to Panel and SAB for each decision.</li> <li>• VAL SAS draft, EGNOS SAS draft.</li> </ul>
--	---

Objective 6: Ensure the availability of the GSA SAB CDA Task Force to support the SAB (WBS 2.06.01)	
Expected results	2020 results
<p>Assess the conduct of EC COMSEC policy throughout the EU GNSS programmes. It shall continue to achieve this through the authoritative assessment of the COMSEC experts from the Member States (NDAs) of evidence supplied to it by the European GNSS Distribution Authority regarding COMSEC activities within the EU GNSS programmes. The SAB CDA shall then provide COMSEC assurance to SAB, including for management of the flight keys, to be communicated as a COMSEC risk assessment, in order to facilitate successful accreditation.</p>	<ul style="list-style-type: none"> <li>• 1 CDA Task Force meeting held in 2020 to examine and review Programme COMSEC compliance.</li> <li>• The SAB secretariat provided the chairmanship, and the technical and administrative secretariat for each meeting.</li> <li>• Continued implementation of the new Programme COMSEC governance through scrutiny of the EU GNSS DA compliance to European Council and Commission COMSEC policy.</li> <li>• Review of the evolution of the Galileo Key Management Plan (KMP).</li> <li>• CDA Task Force recommendations for the SAB decisions with COMSEC aspects e.g. Initial Services and PRS key set distribution.</li> <li>• 4 Flight Key Cell meetings held to define the flight key assurance activities for the future launch campaigns and to develop relevant documentation to describe these activities.</li> </ul>
Targets	2020 results

<b>Indicators</b>	Successful organisation of CDA TF meetings following SAB instruction	100%	100% (1 meeting)
	All accreditation milestones and other decisions in SAB Agenda, in need of a technical COMSEC assessment, addressed by the CDA TF	100%	100%
	FKC launch campaign	1	N/A (no launch in 2020)
<b>Planned outputs</b>			<b>Actual outputs</b>
Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"> <li>• COMSEC assurance statements to SAB meetings</li> <li>• Recommendations to the SAB and/or SAB Chair</li> </ul>			<ul style="list-style-type: none"> <li>• COMSEC recommendations and statements from SAB CDA Task Force meeting and from written procedures to the respective SAB meeting, to address the accreditation milestones.</li> <li>• CDA Task Force open points on Initial Services provided to SAB.</li> <li>• CDA Task Force recommendation on PRS Operational Scenarios provided to SAB.</li> <li>• CDA Task Force recommendation on the Galileo Key Management Plan for the distribution of the PRS key set from the GSMC.</li> <li>• COMSEC risks identified and discussed at each meeting, reported to SAB.</li> <li>• Draft documents by FKC for the launch campaign such as Code of Conduct, Communication Plan, Rules of Procedures.</li> </ul>

Objective 7: Ensure SAB is informed of new SAB regulatory responsibilities (WBS 2.04.03)	
Expected results	2020 results
<p>The Agency shall support the SAB in implementing the new responsibilities entrusted to it by Regulation (EU) No 512/2014 and laid down in Article 11 thereof, in particular paragraph 3 points (c) to (l)</p>	<ul style="list-style-type: none"> <li>• The annual independent assessment of the compliance for the previous year was performed at the beginning of 2020. It showed most of the compliance recovered. During 2020 some partial compliance got solved (e.g. with the approval of the VAL system SAS), or a plan exists to cover them as we move to new regulation.</li> <li>• The Security documentation submitted to SAB as accreditation datapacks per milestone was examined by the SAB, mostly delegated to its technical bodies.</li> <li>• Security risk assessment provided by the Programme was regularly analysed by the SAB accreditation team and the Panel, and findings reported to the SAB. The conclusions on the risk assessment were provided to the EC for each accreditation milestone.</li> <li>• The implementation of security measures was regularly checked via reviews performed at site level, via participation to accreditation reviews including Programme reviews, and via security assessments. The results of these checks were reported to SAB for informed decisions.</li> <li>• The list of approved cryptographic products under scrutiny from the Panel and CDA was maintained.</li> <li>• The SAB informed the Commission about the risk assessment for each accreditation decision and advised on residual risk treatment options for a given security accreditation decision</li> </ul>
Targets	2020 results



<b>Indicators</b>	Any non-compliance with regulatory responsibilities are reported to the SAB chair	100%	100%
	Proposals for all identified non-compliances are provided to the SAB chair.	100%	100%
<b>Planned outputs</b>			<b>Actual outputs</b>
Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"> <li>• Annual independent assessment of the compliance provided to SAB chairman</li> <li>• Proposal for improvement provided to the SAB chairman</li> </ul>			<ul style="list-style-type: none"> <li>• The annual independent assessment of the compliance for the previous year was performed at the beginning of 2020.</li> <li>• An update of the SAB Rules of Procedures was drafted by the SAB secretariat and discussed in a SAB Working Group. It will be sent for SAB approval once the new Regulation enters into force.</li> <li>• The VAL system SAS was approved by SAB.</li> <li>• A proposal for key procedure verification was drafted, to be further elaborated and implemented under the new regulation.</li> <li>• SAB decisions were provided in alignment with Programme needs.</li> </ul>

## 1.2 Public Regulated Service (PRS) Activities (WBS 2.03)

### 1.2.1 Tasks until 2022

	Activity	Objective	Year <sup>4</sup>
1	PRS management plan	Define the organisational structure and rules for implementing the management of PRS items and PRS information.	2020 – 2022
2	PRS Article 14 implementation report	Submit a quarterly report summarising the management of PRS information, all movements of PRS equipment and the associated cryptographic keys, and security breaches observed in relation to the Specific Arrangement concluded between the EC and the GSA pursuant to Article 14(c) of Decision 1104/2011/EU.	2020 – 2022
3	PRS Article 14 inspections	Perform regular audits or inspections of the Agency's handling of PRS information.	2020 – 2022
4	Risk assessment	Regular and robust risk assessments of PRS activities to ensure they do not pose a risk to the security of the system, Member States or the EU.	2020 – 2022
5	Support to CPAs	Provide technical support to CPAs on the basis of specific arrangements.	2020 – 2022
6	GSA CPA implementation	Implementation of the GSA PRS Authority in support of Agency's PRS access and, when activated, of entities requesting the GSA to act as their CPA (Art.5 of Decision 1104/2011/EU).	2020 – 2022

### 1.2.2 Highlights for 2020

The Agency carried out the PRS activities entrusted to it by the arrangement concluded between the EC and the Agency pursuant Article 14 (c) of Decision No 1104/2011/EU. In particular, the Agency worked on:

- Implementation of the arrangement concluded between the EC and the Agency pursuant to Article 14(c) of Decision 1104/2011/EU. This includes the implementation and maintenance of all tasks (e.g. PRS information handling, etc.) the Agency is required to perform<sup>5</sup> to ensure compliance with the PRS framework.

<sup>4</sup> The year indicates when the Agency expects to perform that action. These dates are correct as of time of writing and are based on the current plans.

<sup>5</sup> The requirements set out in the arrangement concluded between the EC and the Agency pursuant to article 14(c) of Decision 104/2011/EU need to be enforced for both core operations (e.g. Accreditation, GSMC) and any delegated activity related to the PRS.



- The implementation and maintenance of the functionalities which would be required by the Agency for the performance of activities in support to other CPAs, including the set-up of relevant arrangements, development of relevant processes and tools and maintenance of required infrastructure (e.g. tools), in order to enable the Agency to perform those tasks (CPA functionality or CPA technical assistance) that can be entrusted to it by virtue of Article 5 of the PRS decision<sup>6</sup>.

The study for the set-up of the relevant functionalities was performed. This included an analysis of the required resources and relevant arrangements, the development of relevant processes and tools, and the maintenance of the required infrastructure (e.g. tools) to enable the Agency to perform tasks that can be entrusted to it by virtue of Article 5 of the PRS Decision.

---

<sup>6</sup> The cost of functioning is not part of the Agency's expenses.



### 1.2.3 Tasks for 2020

Objective 1: Achieve successful definition and efficient implementation of Agency's CPA functionalities (WBS 2.03.04)				
Expected results			2020 results	
<p>This objective includes all activities related to implementing the Agency's CPA functionalities in case such a need arises. This covers both the Agency's performance for its own activities and its performance acting as a CPA for third parties (if needed). The expected results are described as follows:</p> <p><u>Phase 1: preliminary analysis</u></p> <ul style="list-style-type: none"> <li>• Analysis of the activities that the Agency may need to perform as a CPA and/or provide technical assistance to CPAs in performing their tasks</li> <li>• Organisational structure for the Agency to support implementation of CPA tasks</li> <li>• Impact assessment of the Agency's implementation of CPA tasks (including resource needs)</li> <li>• Cost and financial models</li> </ul> <p><u>Phase 2: establishment</u></p> <ul style="list-style-type: none"> <li>• Preparation of the draft arrangement defining the rules and operations to be performed by the Agency for those cases that it can be designated a CPA</li> <li>• Development/acquisition/maintenance of relevant tools (including those required to perform technical assistance)</li> </ul>			<p>This objective continued from the previous year, focusing on the preliminary analysis of the activities that the Agency may need to perform as a CPA. The preliminary analysis has been performed, although limited to the internal needs of the Agency and without containing cost and financial models.</p>	
Indicators	Targets		2020 results	
	% of completion of preliminary analysis	100%	100%	
	Establishment of the GSA CPA (if required)	100%	~0% main supporting documents approved. All activities that do not require further authorisation by the Commission have been started.	
Planned outputs			Actual outputs	



Outputs relating to the multi-annual work programme objectives:

- Organisation and set-up of the Agency's CPA (if required)
- Authorisation from EC to transfer PRS equipment to GSA and use of PRS (PRS end-to-end and PRS service validation)
- Establishment of a PRS management plan (and the related PRS information management plan and PRS key management plan) defining the organisational structure and the rules for implementing the management of PRS items and PRS information
- Draft arrangement for the Agency to act as CPA for third parties (if required), to be endorsed by the Commission

Outputs relating to the multi-annual work programme objectives:

- Preliminary analysis of the organisation that the Agency should set up to perform activities as Agency's PRS Authority
- Initial set-up of the organisation of the Agency's PRS Authority (for the activities that, according to arrangement concluded between the EC and the Agency pursuant to Article 14(c) of Decision 1104/2011/EU, do not require further authorization from the Commission)
- Establishment of a set of PRS management documents (including but not limited to the PRS management plan, the PRS information management plan and the PRS key management policy) defining the organisational structure, the processes and the rules for implementing the management of PRS items and PRS information
- Request to Commission for authorisation to use PRS equipment, to handle PRS items and to be included within the list of Competent PRS Authorities, in particular for the purpose of transfer of PRS items procured by the Agency.

**Objective 2: Achieve successful definition and efficient implementation of arrangements with third parties for the provision of CPA functionalities (WBS 2.03.03)**

Expected results	2020 results
<p>This objective includes all activities related to implementing the Agency's CPA functionalities for third parties. These activities, once activated, and corresponding outputs will require additional resources. The expected results are:</p> <ul style="list-style-type: none"> <li>• Establishment of the agreement to become a PRS participant (if needed)</li> <li>• Tailoring of draft arrangement developed under Objective 1 (WBS 2.03.03) for the entity requesting the Agency to be its CPA</li> <li>• Approval of the arrangement by the Commission</li> </ul>	<p>This objective continued from the previous year, and it is noted that no requests from third parties were received during the reporting period. Should activation be necessary to define and implement arrangements, it would require the implementation of new tasks and functions for which resources are required.</p>



<ul style="list-style-type: none"> <li>Establishment of the arrangement to set up the Agency as CPA of the involved entity</li> <li>Start performance of the tasks required by the CMS for that CPA</li> </ul>			
Indicators	<b>Targets</b>		<b>2020 results</b>
	Level of compliance with the CMS and the PRS agreement when performing CPA tasks for third parties (if required)	100%	There were no requests from third parties for the Agency to act as a CPA.
<b>Planned outputs</b>			<b>Actual outputs</b>
Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"> <li>Agreement between the Agency and third parties for performing CPA tasks (for approval)</li> <li>Notification to the EC of the signature of an agreement to act as a CPA and of the start of activities</li> </ul>			Outputs relating to the multi-annual work programme objectives:  N/A

Objective 3: Achieve successful definition and efficient implementation of arrangements with CPAs for the provision of technical assistance (WBS 2.03.05)			
Expected results		2020 results	
This objective includes all activities related to the implementation of Article 5(9) of the PRS decision, according to which a CPA may request technical assistance from the Agency to perform its tasks. The expected results are: <ul style="list-style-type: none"> <li>Drafting a generic template (including administrative and technical details) for the provision of technical assistance to a CPA</li> <li>Interface with requesting CPA on tailoring technical assistance arrangement</li> <li>Elaborate specific arrangement with each CPA requesting assistance to ensure its approval from the Commission</li> <li>Sign arrangement</li> <li>Implement technical assistance tasks as specified in the arrangement</li> </ul>		This objective continued from the previous year, even though no requests from CPAs were received in the scope of Art.5.9 of Decision 1104/2011. Should a request for technical assistance be made, it would require the GSA to provide technical support to other CPAs. However, doing so would require additional resources.	
<b>Targets</b>		<b>2020 results</b>	



<b>Indicator</b>	Timely delivery of support for technical assistance agreement (both admin and technical) – if required	100%	During the reporting period, there were no requests from third parties for technical assistance. Nevertheless the Agency regularly provides technical assistance to CPAs in the context of the Joint Test Activities and of recurrent programme-level initiatives like the Working Group Special PRS.
<b>Planned outputs</b>			<b>Actual outputs</b>
Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"> <li>Draft (generic) technical assistance agreement to be endorsed by the EC</li> <li>Specific agreement between the Agency and CPA for performance of technical assistance (for approval)</li> </ul>			Outputs relating to the multi-annual work programme objectives:  N/A

<b>Objective 4: Implement PRS Article 14c arrangement (WBS 2.03.06)</b>	
<b>Expected results</b>	<b>2020 results</b>
<p>This objective includes all activities related to managing the implementation of the EC-GSA arrangement pursuant to Article 14(c) of the PRS Decision, in particular regarding the different reporting streams, compliance checks and associated risk assessments. This objective also implements the provisions related to the Agency's access to PRS information.</p> <p>This activity includes:</p> <ul style="list-style-type: none"> <li>Preparing and maintaining the PRS management plan (and the related PRS information management plan (PIMP) and PRS key management plan (KMP)) defining the organisational structure and the rules for implementing the management of PRS items and PRS information</li> <li>Reviewing the Article 14(c) arrangement (if required)</li> <li>Preparing Article 14 quarterly implementation reports and delivering them to the Commission</li> <li>Carrying out regular inspections of the departments within the Agency dealing with PRS items and PRS classified information</li> <li>Performing regular risk assessments (monthly)</li> </ul>	<p>This objective continued from the previous year.</p> <p>A review of the PRS management plan (and related PRS Information Management Plan and Key Management Policy) has been performed with the aim of covering an enlarged set of activities related to the handling and using of PRS items by the Agency. An authorisation request to activate those functions by the Agency has been sent to the EC in compliance with the Article 14 arrangement.</p> <p>The high level of compliance with the Article 14 arrangement has been maintained throughout 2020. A process has been drafted for the performance of the regular review and update of the risk analysis related to the handling of PRS items and it has been included in the new PRS management plan. The new set of document has been approved by the Agency, including the PRS Management Plan, PRS Information Management Plan and Key Management Policy.</p>



<ul style="list-style-type: none"> <li>Analysing those GSA activities requiring the processing of PRS items and PRS information to ensure compliance with Article 14(c) arrangement</li> <li>Maintaining PRS items and PRS information database and drafting a report summarising movements, requests and security breaches associated with the PRS items/PRS information under the responsibility of the Agency</li> </ul>			
Indicators	<b>Targets</b>		<b>2020 results</b>
	Timely review of PRS information management plan	100%	1. The Agency reviewed the PRS information management plan internally for approval.
	Level of compliance with Article 14	100%	Compliance: 94% Partial Compliance: 6% Non Compliance: 0%
<b>Planned outputs</b>			<b>Actual outputs</b>
Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"> <li>Quarterly Article 14 implementation report sent to the EC</li> </ul>			Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"> <li>Quarterly Article 14 implementation reports sent to the EC summarising management measures, movements and security breaches associated with the PRS items/PRS information under the responsibility of the Agency</li> </ul>

Objective 5: Maintain the PRS entities database (WBS 2.03.07)	
Expected results	2020 results
This objective includes all activities related to the implementation of Article 6 of the Article 14(c) arrangement for the management of a database of entities authorised to carry out PRS activities. This database, the structure of which needs to be approved by the Commission, must be constantly updated and shall include: <ul style="list-style-type: none"> <li>A complete list of the PRS entities</li> </ul>	The Agency has streamlined this activity by relying on the analogous SAB-related task. As a consequence the Work Package 2.03.07 has been removed.





<ul style="list-style-type: none"><li>• The scope of the activities pursued by those entities (unless the Member State objects)</li><li>• The date of authorisation and expiry</li></ul> <p>It is important to note how this activity, which is performed on behalf of the Commission, is independent from (although linked to) the activities of a similar nature that are carried out by the SAB.</p>			
Indicators		Targets	2020 results
	Timely update of the PRS entities database after notification	100%	N/A
Planned outputs			Actual outputs
Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"><li>• PRS entities database</li></ul>			Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"><li>• PRS entities database</li></ul>



## 1.3 GSMC Operations and Preparation (WBS 4.06)

### 1.3.1 Tasks until 2022

ID	Activity	Objective	Year <sup>7</sup>
M1	Management of the organisation and communication (Management Process)	Define the GSMC Operations strategy and objectives.	2020 - 2022
		Prepare and implement the GSMC's operations by scheduling milestones and main activities.	
		Report to programme stakeholders on the GSMC operations activities.	
		Provide an overview on the GSMC internal communication (top-down and bottom-up approaches) and team organisation.	
		Ensure the development and implementation of project management processes, methodologies, tools, and reporting.	
M2	Integrated Management System (Management Process)	Guarantee maintenance of the GSA's ISO 9001 certification, including adaptation to ISO 9001 evolutions.	2020 - 2022
		Ensure Product Assurance (PA) and Quality Assurance (QA).	
M3	Risk and business continuity management (Management Process)	Identify and manage risks that could impact Galileo.	2020 - 2022
		Ensure the maintenance and readiness of a Business Continuity Plan.	
M4	Health & Safety management (Management Process)	Maintain the responsibilities for health and safety at work and maintain a safe environment on both GSMC sites in line with GSA policy.	2020 - 2022

<sup>7</sup> The year indicates when the Agency expects to perform listed action. These dates are correct as of the time of writing and are based on the current plans.

ID	Activity	Objective	Year
M5	Resolution and continuous improvement management (Management Process)	Ensure that problems and improvements are identified, recorded and handled.	2020 - 2022
C1	Engineering and requirement management (Core Process)	Identify, analyse and implement the requirements applicable to the GSMC and track evolutions of the applicable baseline.	2020 - 2022
		Ensure and report on the GSMC's compliance with programme requirements.	
		Design, validate and deploy Standard Operating Procedures (SOP) and Operational tools in support to the operations.	
		Define processes, tools and plans for system development activities, including maintenance for the two sites.	
		Ensure the security accreditation of sites and IT systems	
C2	Operations, expertise and analysis (Core Process)	Ensure the security accreditation of sites, Services and IT systems	2020 - 2022
		Provision of expertise on PRS and Galileo security to the European Commission and Member states	
		Enable PRS access to authorised stakeholders, in compliance with PRS access rules.	
		Maintain the GSMC IT Operational Systems required to meet the GSMC's core missions in both GSMC sites (master and backup).	
C3	Crisis management (Core Process)	Be ready for specific operations in case of a crisis affecting the Galileo system, including supporting the Council decision (joint action) process.	2020 - 2022
S1	Administrative processes (Support Process)	Ensure support to the GSMC management with regards to onsite HR, procurement, legal and financial management	2020 - 2022



ID	Activity	Objective	Year 7
S2	Local security (Support Process)	Prepare for, ensure, and maintain local security operational support to protect EU classified information present on GSMC sites and its assets.	2020 - 2022
S3	Hosting support and configuration management (Support Process)	Provide facilities services to support GSMC operations	2020 - 2022
		Implement, ensure, and maintain Configuration Management	

### 1.3.2 Highlights for 2020

The Agency ensures the operation of the GSMC. As part of the Agency, the GSMC operationally interfaces with the Galileo Control Centres (GCCs), the Competent PRS Authorities (CPAs), the Council and the High Representative of the Union for Foreign Affairs and Security Policy. It acts under Council Decision 2014/496/CFSP and must inform the EC of any event that may affect the expected operations of the PRS.

With respect to GSMC operations, in 2020 the Agency demonstrated its capability – despite the Covid-related working conditions – to sustain the 24/7 service provision of Galileo Security Monitoring and PRS Access Management whilst executing the migration to the new Galileo Security Facility for Enhanced Services. With this service version, the Galileo Robust Operational Network (GRON) first phase is currently fully integrated and operational.

For Operations Engineering, the focus in 2020 was on the activities in view of the preparation for the service transition for the GSF P2.2.1.1, Security Operational and Intelligence Facility (SOIF) 2.2.1.c+.

In addition, the GSA supported the main programme activities, including:

- The back-up site operations to ensure dual site capability readiness following the Hosting Agreement signature between Spain, the European Commission and the GSA in 2019. The early configuration site, namely E2 building, was fully operated during 1 month in October 2020;



- The back-up site evolution on which GSA supports the preparation of the Final configuration, namely the E6 building. The Final configuration civil works, will be followed by an accreditation in 2021;
- The construction of the GSMC-FR extension, namely Building 132, has progressed at steady rate. The outer shell of the building envelope is progressing.



### 1.3.3 Tasks for 2020

Objective 1: Ensure that European GNSS services and operations are thoroughly secure, safe and accessible (WBS 4.06.01)	
Expected results	2020 results
<p><b>1. [Operations, Expertise and Analysis]:</b></p> <ul style="list-style-type: none"> <li>a. [Security and System Status Monitoring]: monitor system security and health, detecting, containing, investigating and reacting to security incidents (System Incident Management)</li> <li>b. [PRS Access Management]: enable access to PRS to authorised stakeholders, in compliance with PRS access rules (including the Common Minimum Standards) within the limit of the system design. Manage the lifecycle of PRS access in order to assure service continuity, including through service support and secure communication interfaces.</li> <li>c. [Cyber Security Management]: Galileo vulnerabilities management by consolidating the cyber vulnerabilities present in the Galileo operational systems, linking them to the current threat landscape (i.e. threat intelligence) and monitoring their lifecycle until their effective correction</li> <li>d. [IT OPS Sysadmin support]: Ensure on-going L1 maintenance of the IT operational and validation systems in both GSMC sites (FR and ES). Support to configuration and asset management, escalation to Level 2, and liaison with Supporting ICT systems.</li> </ul> <p><b>2. [Crisis Management]:</b> specific activities and configuration of the GSMC to respond to the needs and requirements of a crisis affecting the Galileo system, including supporting any Council Decisions. This will be activated only under specific conditions.</p>	<p><b>Operations, expertise and analysis:</b></p> <ul style="list-style-type: none"> <li>• <b>Security and system status monitoring</b> The number of actions related to security and processed by the GSMC increased significantly during 2020 as a result of the Galileo security monitoring perimeter increase consistent with the GSMC v3.1 upgrade and associated migration. Moreover, the Service Level Agreements (SLAs) were met demonstrating the resilience of the GSA and the commitment and capability to comply with defined KPIs, despite the working conditions generated by the COVID pandemic outbreak.</li> <li>• <b>PRS access management</b> The access to the PRS has been successfully ensured following the standard operational procedures, and in compliance with the PRS access rules. The SLAs were fully met, demonstrating the resilience of the GSMC activities. This achievement was performed while migrating the GSMC v3.1 and performing the Service Validation in the midst of the COVID-19 pandemic outbreak. The Agency has seen its role increase in the Galileo PRS operations.</li> <li>• <b>Cyber Security Management</b> The implementation of the GSMC Cyber OPS Team took place during 2020, in order to support the cyber-activities by appointing the GSMC Cyber Security Coordinator and the underlying Cyber experts. The Agency kicked off the implementation of EC Cyber Policy and Requirements at the GSMC by</li> </ul>



			<p>interacting with the Galileo Cyber Security Managers for vulnerability identification, assessment and mitigations. In addition, the Agency has run its initial Cyber Threat Intelligence (CTI) mission supported by the CERT-EU cyber alerts and threats. Final assessment took place on the creation of an OPS Cyber Review Board chaired by the Agency.</p> <ul style="list-style-type: none"> <li> <b>IT OPS support</b>  Maintenance activities have been ensured for GSF on both GSMC sites during 2020 with the activities reported on a monthly basis. Preventative maintenance activities are planned on a monthly basis using a scheduling tool. The tool identifies the correct procedure to execute and the frequency. Issues are raised, as per process, through the GSF Anomaly Review Board. Observations on the GSF system have been raised and escalated to L2 and coordinated on a weekly basis. The implementation of GSMC Dual Site Operations was achieved by carrying out the operations from GSMC-ES (during October 2020) in the midst of the COVID-19 pandemic outbreak and the associated governmental restrictions. </li> <li> <b>Crisis management</b>  Joint EEAS (European External Action Service)/GSA CD496 activities with the the Agency were performed in 2020 during the GSMC v3.1 Service Validation. These exercises confirmed the implementation of the previous lessons learnt and highlighted new areas for improvement. In addition successful COVID-19 crisis management was achieved enabling the compliance to the above mentioned SLAs/KPIs. </li> </ul>
			<b>2020 results</b>
<b>Indicators</b>	Incident handling / defined SLA	Increase of the Galileo Security Monitoring Perimeter	Service Level Targets (R-UE/UE-R)
	PRS access service within agreed response time	Transfer of the PRS management capabilities from the GCCs	Service Level Targets (R-UE/UE-R)
<b>Planned outputs</b>			<b>Actual outputs</b>
Outputs relating to the multi-annual work programme objectives:			Outputs relating to the multi-annual work programme objectives:

- System status and security monitoring: incident handled, escalation of Member States or to Joint Action, resolution of security incident, assessment of vulnerabilities and recommendations, security reports, anomalies and requests for change/deviation/waiver, Service Level Agreement chart
- PRS access management: availability of PRS access, workarounds, PRS security reports, Notification to Galileo Users, anomalies and requests for change/deviation/waiver, Service Level Agreement chart
- Crisis management: Council Decision (JA) instructions implementation report, Notification, Council Decision assessment report, Acknowledgement of the cancellation of a Council Decision
- Security Expertise and Analysis
- [IT OPS Sysadmin support]: IT Maintenance reports for preventive and corrective activities. KPI reports on system availability.

- **System status and security monitoring**

Security reports (Security Monthly report, ad-hoc Security Incident reports);  
Standard operating procedures;  
Report on Service Levels (R-UE/UE-R).

- **PRS access management**

The PRS access availability was fulfilled and the PRS service was successfully provided to the external stakeholders.  
Report on Service Levels and security monthly reports/ PRS annex (R-UE/UE-R).

- **Cyber Security Management**

Initial phase of the vulnerability management process: Requests for vulnerability assessment (following procedures) based on Open Sources advisories, vulnerability assessment reports, assessment of GSO proposals for mitigations in operations. First review of Statement of Compliance with EC Cyber Requirements. Signature of FWC for Cyber Monitoring Services as the main tool for building a GSMC OPS Cyber Team (with 4 cyber-experts).

- **IT OPS support**

Monthly report provided for preventative maintenance activities.  
Corrective maintenance activities reported monthly via the Anomaly Review Board and Change Control Board monthly activity report.  
The Service level targets for system (GSF) availability is reported on a monthly basis in the GSMC Monthly Report SLAM chart (R-UE/EU-R). The SLT metric is Report on Service Levels (R-UE/UE-R) however it can be confirmed that in 2020 the SLT was achieved.

## Objective 2: Ensure the maintenance and development of the Operations Engineering processes (WBS 4.06.02)





Expected results			2020 results
<b>Engineering and requirement management:</b> <ul style="list-style-type: none"> <li>• <i>Requirement management:</i> <ul style="list-style-type: none"> <li>○ Identification, analysis and flow-down of requirements that could impact the GSMC and the maintenance of the applicable baseline</li> <li>○ Ensure and report on GSMC compliance with programme requirements over time</li> </ul> </li> <li>• <i>Operations and supporting activities engineering:</i> design, validate and deploy in support to the operations, as well as the related business continuity plans.</li> <li>• <i>Technical engineering:</i> <ul style="list-style-type: none"> <li>○ Identify and define the processes, methods, tools and logic of system development activities, including maintenance and support capabilities for the two sites</li> <li>○ Manage the lifecycle of the technical processes that lead to the in-production setting of new technical supporting assets and processes</li> <li>○ <i>Workload engineering:</i> establish, validate and maintain (mostly people) workload budgets for GSMC's activities and in line with operations/ICT systems/infra evolutions.</li> </ul> </li> </ul>			<ul style="list-style-type: none"> <li>• <b>Requirement management</b> The Agency was involved in the programme review for the PRS and SECMON engineering milestones. A flow-down of the systems new versions started and will continue to be implemented on time for respective System Baselines with requirements traceability within Doors (a requirement management software). Regarding the GSMC Operating Procedures V3 (based on SB1.5.1) the GSA provided the required compliance level with programme requirements to the SAB.</li> <li>• <b>Operations engineering</b> The GSA designed, reviewed and validated a new set of operational procedures in line with SB1.5.1 to support the enhanced service milestones, trained 11 operators, among them 8 were newly certified. In general, 3 training campaigns were conducted. The GSMC V3 main activities have been the migration to GSMC OPS V3.</li> <li>• <b>Technical engineering</b> The GSA was highly involved in the hosting enhancement to cope with the SB2.0 system deployments with the deployment of a modular Datacentre and of 20 additional workpositions in GSMC-FR not to block the Galileo roadmap pending the readiness of the future building.</li> </ul>
Targets			2020 results
Indicators	Delay DRB_EA and DRB_OVR of GSF 2.2.1.1	GSMC OPS v3.0 migration	Achieved
Planned outputs			Actual outputs
Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"> <li>• Requirement management: service level management, statement of compliance with SSRS</li> </ul>			<b>Outputs relating to the multi-annual work programme objectives:</b> <ul style="list-style-type: none"> <li>• <b>Requirement management</b></li> </ul>



- Operations engineering: validation reports, new catalogue of operations procedures, anomalies, change requests
- Technical engineering: new catalogue of maintenance procedures, anomalies, change requests
- Hosting engineering: lead in follow-up of new buildings deployments by France and Spain. Establish requirements for upgrades or changes to existing infrastructure as necessary for deployment of operational IT systems or hosting availability. Contribute to monitoring or validating the implementation of such changes.

GSA inputs to Galileo Service Development, Deployment and Validation Plan and GSMC service roadmap.

- **Operations engineering**

- Engineering Process

- GSMC Engineering Procedure

- Validation

- Operations Readiness Review Validation Plan and report

- Statement of Compliance

- Supporting Documents: test cases, weekly status report, weekly schedule of testing, Operational Readiness Review Test Readiness Review report, Operations Readiness Review Kick Off Report, Operations Readiness Review Closeout Report, Launch & Early Operations Phase (LEOP) Validation Plan, LEOP Validation Report

- Certification (multiple)

- Training Needs Analysis, Training Material, Practical and Theoretical, Exam questions, Certification Plan, Certification Board report, Operator Certificates

- GSF Anomaly Review Board (ARB) & Change Control Board (CCB)

- Process definition documents, weekly agendas and minutes of meetings, Responses to actions

- **Technical engineering**

- Full set of documentation associated with the following:

- GRON v1: Final deployment for sites;
    - Hosting extension deployed (IT modular Datacentre and modular temporary office);
    - GSMC-ES Early Configuration: preparation of the accreditation process. Site Accreditation Milestone (SAM) concluded in early 2020.



### Objective 3: Ensure the availability of Hosting Services (WBS 4.06.03)

Expected results	2020 results
<p><b>Local security:</b> prepare for, ensure and maintain the local security operational support needed to protect EU classified information present on site and its assets.</p> <ul style="list-style-type: none"> <li>• <i>Site and system security accreditations:</i> <ul style="list-style-type: none"> <li>○ Ensure the definition and implementation of the appropriate security accreditation activities for achieving the approval to operate communications, information systems and sites, as well as the maintenance of extant accreditations.</li> <li>○ Monitor the implementation of SECOPs for CIS and auditing the systems.</li> </ul> </li> <li>• <i>Registry control management:</i> handling and storage of classified documents, management of EUCI registry, ensuring the timely on- and off-site EUCI back-ups, briefings on EUCI handling.</li> <li>• <i>Local security management:</i> ensure the physical security of people, properties, facilities, activities and information; manage access control; and coordinate with guarding support, services contractors, site and local authorities</li> <li>• <i>COMSEC management and crypto management and operations:</i> Manage COMSEC/crypto procedure evolutions and validations. Ensure reception, preparation and shipment of crypto items to or from crypto accounts and users, destroying crypto material, performing PKI, non-PRS keys and SINA VPN management and operations.</li> </ul> <p><b>Hosting and configuration management:</b> prepare for, ensure and maintain technical operations support to provide site hosting and ICT means necessary for the core missions of the GSMC and its staff. Provide a continuity of hosting services through building maintenance and extra request management related to the evolution of the facilities and IT:</p> <ul style="list-style-type: none"> <li>○ Facilities management (Hosting Services)</li> <li>○ Supporting ICT systems (Operational Systems First Line Maintenance)</li> <li>○ GSF equipment management (Technical Operations General).</li> </ul>	<p><b>Site and system accreditation</b> Existing accreditation certificates were maintained and a growing pipeline of future systems was managed:</p> <ul style="list-style-type: none"> <li>- GSMC-FR renewed the Site Accreditation Milestone (SAM) certificate and obtained from SAB the Site Approval To Operate (SATO) certificate for GSF P2.2.1.1 and SOIF 2.2.1;</li> <li>- GSMC-ES received the SAM certificate from the Local Site Accreditation Authority (LSAA) and the SATO certificate for GSF P2.2.1.1 from SAB;</li> <li>- The Modular Data Centre and modular temporary offices in GSMC-FR received the Security Acceptance Review certificate from the LSAA;</li> <li>- Produced the GSF and SOIF inputs for the SB 1.5.1 ATO;</li> <li>- GRON v1.1 received the Pre-ATO certificate and Subscribers' sites authorisation to connect from SAB;</li> <li>- The Secure Inter-Network Architecture (SINA) Mission Network, Cyber Security Incident Response Tool, GSMC Secret UE (GSUE) PCs ATO certificates renewed by the GSA SAA on both GSMC sites;</li> <li>- Management of access control for all users of OPE and VAL chains of GSF, the SINA MN, the GSUE, the CSIRT, the GRON;</li> <li>- Security incident management for the IT systems.</li> </ul> <p><b>Local security management</b> maintained throughout the year. Procurement of guarding framework contract FR done. The local security is maintained 24/24 and 7/7. This task is assumed by the LSO and the security guards (team of 2 or 3 guards – H24). The framework contract is done and consecutively a new guarding contract has been launched in February 2019 for 4 years (4 specific contracts of 1 year each).</p>

**EUCI registry management** maintained throughout the year, with delegated actions performed by GSMC operators for all actions requiring operational 24 hour reactivity.

**COMSEC:**

- COMSEC procedures version update and validation for P2.2.1.
- As part of the PRS Key Management – PRS deliveries to CPAs were successfully performed.
- GRON SINA COMSEC procedures have been performed.
- GSMC COMSEC transportations ensuring secure transfers of COMSEC items;
- SPECTRA phones key renewal and replacement.
- L1 COMSEC maintenance of COMSEC items located on both sites in accordance with the COMSEC Maintenance Plan.
- COMSEC briefing and authorisation renewed.

**Hosting and configuration management:**

Facilities management (relevant hosting services)

- GSMC-FR
  - o **Building 123: Ongoing hosting services** maintained throughout the year. Three new framework contracts with their first specific contracts were launched (Lot 1 = Multi-technical (maintenance and transformation works), Lot 2 = Cleaning, Lot 3 = Multi-Services).
  - o **Building 123 Electrical systems:** The French Ministry of Defence implemented major changes to fix the no-break service incident issues occurred in 2019. Pre-installation works were done in July 2020, and connections were done when the operations were run from Spain during the BCP. At the same time, upgrades were made by GSA to enable additional racks deployments to the limit of the Faraday cage available space and in view of planned 2021 SECMON deployments.
  - o **Building Extension 132:** Participation of the French Ministry of Defence to the new building project for GSMC master site in Saint-



Germain-en-Laye. The Site Design Review was successful in March 2020. A new and larger parking was built and the building foundation and construction started in Q3 2020 where the former parking was located. The GSMC supported detailed design activities, in particular related to security and building management systems, and started to prepare the GSA's contributions to the deliveries expected in 2022.

- Installation of temporary modular offices to mitigate lack of office space completed in 2020 – and **modular Data centre** to allow additional racks deployments fully operational by Q3 2020.
- The four temporary modules have been removed following the end of the lease, (August 2020).

- GSMC-ES:

- **Building E2:** Ongoing services maintained throughout the year. INTA continued to upgrade and fix some initial incidents. INTA signed and initiated a contract in Q2 for maintenance services covering E2.
- **Building E2 adaptations:** Activities continued in the Early configuration building where adaptations were made in order to support the site to become active as an operational Back-up in Q1 and as the operational master during the Business Continuity site handover in Q4.
- **Final Configuration building E6:** The GSMC supported INTA regarding progress questions and answers. The TECH SAR milestone originally planned in 2020 has been postponed to 2021 due to delays in deployment of some interior building systems.

		Targets	2020 results
Indicators	Number of accreditation certificates in valid standing.	19	19
	Number of expected accreditation requests.	10	10



Percentage of data-packs timely released for accreditation requests (new or renewals) against annual plan baseline schedule.	100%	100%
Other indicators for this objective are marked as RESTREINT-UE/EU RESTRICTED.	Same as previous year	100%
Planned outputs	Actual outputs	
Outputs relating to the multi-annual work programme objectives: <ul style="list-style-type: none"><li>• Registry control management<ul style="list-style-type: none"><li>○ Up-to-date registry<sup>8</sup> (successfully audited)</li><li>○ Classified information managed according to procedures – incidents managed</li><li>○ Staff EUCI briefed</li><li>○ EUCI backed up (on- and off-site)</li></ul></li><li>• COMSEC and crypto management<ul style="list-style-type: none"><li>○ Up-to-date account registry (successfully audited)</li><li>○ Transportation plan executed</li><li>○ Crypto assets and keys managed according to procedures – incidents managed</li><li>○ Key and certificates timely renewed</li></ul></li><li>• Site and system security accreditation<ul style="list-style-type: none"><li>○ Security Risk Analysis, CIS and sites security accreditation data-pack followed by Authorisation to Operate, security accreditation plan updated, SECOPs maintained, periodic audit reports</li><li>○ Access granted or denied to staff, staff security briefed</li></ul></li><li>• Hosting ICT: ICT systems used for GSMC operations (and validation) maintained in operational conditions<ul style="list-style-type: none"><li>○ Hosting facilities: services delivered to users and in support of ICT, in-line with expected service levels</li></ul></li></ul>	<ul style="list-style-type: none"><li>• <b>Registry control management</b><ul style="list-style-type: none"><li>○ Up to date registry and destruction of classified documents when necessary according to EU Classified Information Ordinary Destruction Plan.</li><li>○ Audits (yearly)/inspections (monthly): successfully completed.</li><li>○ Contribution to bi-monthly security report: done.</li><li>○ Training/certification of operators for Records Control Officer delegated role: carried out as planned.</li></ul></li><li>• <b>COMSEC &amp; crypto account management</b><ul style="list-style-type: none"><li>○ GSMC Crypto Account audit, audit report(s) and inventories every three months– done for GSMC France and GSMC-ES.</li><li>○ COMSEC incidents reported.</li><li>○ COMSEC authorisations renewed.</li><li>○ Transfer of the COMSEC items performed in accordance with the approved Transportation Plans.</li><li>○ destruction of crypto material performed.</li><li>○ Chiasmus keys replaced and distributed to the concerned users.</li><li>○ Contribution to bi-monthly security report.</li></ul></li></ul>	

<sup>8</sup> Regarding CONFIDENTIEL UE/EU CONFIDENTIAL or SECRET UE/EU SECRET.

- **Site and system security accreditation**

- Local Site SecOps produced/updated for the GSMC-ES E2 building Security Site Milestone.
- Prepared the data pack for the GSMC-FR Site Accreditation Milestone & Site Approval To Operate (SATO) renewal.
- Prepared the datapacks for the SATO certificates for the GSF P2.2.1.1 and SOIF for the GSMC FR and ES.
- Prepared the data pack for the ATO renewal for the systems deployed on the GSMC-FR site (requests, SecOps implementation reports, residual risks reports).
- Prepared the data pack for the GRON v1.1 pre-ATO (security needs, business impact assessment, security risk analysis, SecOps, security policies) and for the subscribers authorisation to connect
- Prepare the data packs for the security accreditation systems deployed on the GSMC-ES site.
- Contribution to the periodic reports.
- IT systems users access management.
- IT systems security incidents management and reporting.

- **Local security office**

- Access control System (ACS) managed continuously, access control reports summaries, access control list maintained. All actions concerning the ACS are done in compliance with the rules.
- Monthly reports of guarding support services contractors.
- This task is done each month and an annual report is also written. The reports are uploaded each month in order to assure the effective payment of the invoice concerning the guarding contract.

- **Hosting**

- France and Spain Early Configuration buildings: Facility maintenance ensured in 2020.



- France: FWC for facilities management, maintenance and services achieved (signature and initiation in 2020).
- France: Electrical incidents triggered an investigation, electrical works undertaken in 2019 were completed in 2020, with the addition of isolated transformers and replacement of electrical devices in electrical panels.
- Spain: Early Configuration accreditation process support. Final configuration: coordination for building preparation.
- Records on GSF maintenance: Data restricted.

#### Objective 4: Ensure achievement of GSMC management processes (WBS 4.06.04)

Expected results	2020 results
<p><b>Management of the organisation and communication:</b></p> <ul style="list-style-type: none"> <li>Organise activities to ensure the GSMC milestones are achieved on time using available resources while also ensuring the reliability of information and its timely dissemination</li> <li>Lead the organisation by providing a clear strategy</li> </ul> <p><b>Integrated Management System and Product Assurance:</b></p> <ul style="list-style-type: none"> <li>Guarantee maintenance of GSA ISO 9001 certification, including adaptation to ISO 9001 evolutions</li> <li>Coordinate PA/QA RAMS activities related to EC-GSA Delegation Agreements in line with GSOp, GSC and GRC requirements</li> <li>Support the activities of the ARB, NRB, and CCB</li> </ul> <p><b>Risk and business continuity and disaster management:</b></p> <ul style="list-style-type: none"> <li>Risk management: identify potential risks that could impact the proper functioning of the Galileo programme and undertake relevant actions to mitigate those risks</li> </ul>	<p><b>Management of the organisation and communication</b></p> <p>A strategy has been defined to comply with objectives of the deployment of new GSMC versions according to the future enhanced services declaration. As a consequence, engineering and operations activities were reinforced to ensure the preparation and implementation of these related milestones and activities.</p> <p>Weekly team meetings and coordination meetings were held throughout 2020 to coordinate activities within and between teams, and an accurate reporting process was put in place to ensure efficient communication and coordination. GSMC Weekly report was regularly delivered throughout 2020, to highlight the progress in the work programme and ensure full alignment between the different teams at GSMC, also providing an overview of the ongoing activities to Management.</p> <p>A regular Monthly reporting process was also ensured, to inform GSA and EC stakeholders on advancement of all activities at GSMC.</p>





- Business continuity and disaster: in case of service breach, ensure availability and continuity of services in a reduced functionality mode

#### **Health and safety management:**

- Implement GSA policy relating to health and safety at work, provide and maintain a safe work environment for staff, visitors and contractors

#### **Resolution and continuous improvement management:**

- Ensure that problems and actions for improvement are identified and handled until the business cases are delivered to the Change Approval Board for implementation and/or the non-conformance is solved

#### **Integrated Management system**

A quality system at GSMC is compliant with the GSA IMS. The quality system was part of the successful GSA ISO 9001 recertified was performed in September 2020.

- Anomaly Review Board (ARB), Change Control Board (CCB): 48 ARBs and 14 CCBs were performed in 2020.

#### **Risk and business continuity and disaster management**

Ongoing: Risk management contributions into overall GSA managed risks anomaly review process.

#### **Risk and business continuity and disaster management**

- Risk management: potential risks identified, actions to mitigate defined;
- The Business Continuity Plan was updated in 2020.

#### **Health & Safety management:**

The GSA Occupational Health & Safety Policy and the Fire Safety Policy were adopted in 2020. Throughout 2020 a safe work environment for staff and visitors was assured despite the unexpected public health emergency related to Covid-19. Extraordinary measures to prevent clusters and to avoid severe consequences on staff health were implemented. Teleworking mode was activated, in full alignment with host country regulations and mandatory requirements. Access to GSMC sites was drastically reduced with main concern on staff health and at the same time, with the aim of ensuring business continuity. Provision of gel, wipes, surgical masks and FFP2 masks was ensured. Additional cleaning measures and office policies were adopted. Staff was properly trained, newcomer training established, floor wardens for a fire safety organisation were appointed. Complete documentation was updated and dedicated SharePoint site populated with relevant documents and legislation. Improvement of HQ fire safety measures (fire stoppers complete reconstruction) were implemented in 2020.

Consolidated Annual Activity Report 2020

- Gepa: 03/03/2020
- WP2: CGI 03/0317; TAS 13/06/19
- Altempo: 12/02/2020
- IP Energy: 12/02/2020
- Document Unique d'Évaluations des Risques professionnels
  - Updated: 30 November 2017
  - *Plan de prévention*: 100% implemented with Covid updates
  - *Ad-hoc* documents (*protocole sécurité; visites préalables*)
- **Risk and business continuity disaster management**
  - Risks are monitored and controlled.
  - Business continuity plans were drafted and validation simulations were completed.
- The continuous improvement is done through the Operating Procedures Working Group for the GSF part and the internal GSMC CCB concerning all the improvement proposed in term of processes or tools.

## 1.4 Promotion and Marketing of the Services (WBS 5.02, 5.03, 1.03.01)

### 1.4.1 Tasks until 2022

Activity	Objective	Year
1	Market and technology monitoring, including cooperation with receiver manufacturers.	2020 - 2022
	<p>Be the source of competence in GNSS market and technological developments. Output of the objective is the publication of GNSS market and technology report.</p> <p>Support chipset and receiver manufacturers in implementing EGNSS. Outputs and/or actions of the objective are:</p> <ul style="list-style-type: none"> <li>○ List of receiver manufacturers with Galileo and EGNOS capability.</li> <li>○ List of Non-Disclosure Agreements (NDAs) with receiver manufacturers.</li> </ul> <p>Management of EGNOS-enabled and Galileo-enabled labelling schemes</p>	
2	<p>User satisfaction monitoring, process and customer assistance.</p> <p>Build user experience and satisfaction; implement user feedback in the evolution of EGNSS. Actions to be undertaken are:</p> <ul style="list-style-type: none"> <li>○ Report findings of user satisfaction survey.</li> <li>○ Include user input in the evolution of the mission requirements document.</li> <li>○ Definition of EGNOS user support improvement plan based on feedback from downstream user sectors and their value chains.</li> <li>○ Monitor of user satisfaction of EGNOS services and performance.</li> </ul> <p>Definition of a Galileo GSC support improvement plan based on feedback from downstream user sectors and their value chains.</p>	2020 - 2022
3	<p>Market development by user segment (Aviation, Road, Location Based Services (LBS), Agriculture, Maritime, Rail, Mapping and Surveying, Timing &amp; Synchronisation and Governmental)</p> <p>Identify needs and opportunities for services and applications. Actions to be undertaken are:</p> <ul style="list-style-type: none"> <li>○ Management of user fora and consultation platforms on user needs per segment.</li> <li>○ Co-fund H2020 projects</li> </ul> <p>Support standardisation and certification activities.</p> <p>Maximise adoption of EGNSS by value chain and its availability to users.</p>	2020 - 2022

Activity	Objective	Year
4 Development and implementation of targeted, as well as general public oriented, communication activities.	<p>Management of effective and efficient communications strategy and initiatives. Actions to be undertaken are:</p> <ul style="list-style-type: none"> <li>○ Monitor and scout on a yearly base new events and initiatives covering new markets, services or target audiences or proposing innovative formats. Create and disseminate high quality, tailored content.</li> <li>○ Manage active, internet-based communications via websites, social media, newsletters, etc.</li> <li>○ Production and targeted distribution of informative, timely and relevant print, video and multi-media materials.</li> </ul> <p>Seize opportunities for creating synergies, organising effective and tailored public, media and stakeholder relations activities.</p>	2020 - 2022

### 1.4.2 Highlights for 2020

In 2020 the Agency continued working to further strengthen Galileo and EGNOS market uptake all over the Union and worldwide with almost 2 billion users reached by the end of the year.

Galileo penetration in the mass market grew constantly, capitalising on the partnership established by GSA with leading manufacturers and focused testing campaigns. By the end of 2020, there were in the market 579 different Galileo compatible smartphone/tablet models, over 100% more than those available by end of 2019 (272). Even more sharp was the increase registered in the number of dual frequency enabled smartphones models passing from 41 models in 2019 to 125 in 2020 consolidating the success of the Galileo differentiator second frequency E5. Leading GNSS suppliers representing more than 95% of the GNSS chipset market produce Galileo-ready chips and Internet of Things (IoT) modules.

Within the road segment, EGNOS and Galileo are activated in 9 Mill cars in Europe, more than 100 car models from 32 car brands, powered by the EU eCall regulation, with the vast majority of automotive suppliers having solutions in the market. Besides, Galileo was tested worldwide in more than 25 autonomous vehicle prototypes with the future goal to test the emerging Galileo high accuracy service and OS-NMA once available in view of the first generation of the level-4 autonomous cars to be commercialised from 2022. In commercial vehicles, 73% of EU tolled roads are GNSS-based in seven EU countries: DE, SK, BE, HU, CZ, BG and PL. The last three countries implemented such a system during 2020. Within those roads, EGNOS is activated in 94% of total GNSS receivers and Galileo is already enabled in 92%. With this, the EU tolled roads that operate with EGNSS currently reaches more than 85,000 Km.

With regards to the rail segment, Galileo continues to celebrate adoption success within non-safety critical railway applications, with more than 100,000 telematic devices already mounted on the railway wagons in EU. In addition, the European Rail Traffic Management System (ERTMS) user group submitted a change request aiming to introduce EGNOS corrections data in the European Train Control System (ETCS). This is another major milestone towards future adoption of EGNSS in the ERTMS driven by GSA that capitalised the results of H2020 projects.

In public transport, an important achievement was announced by the Prague Public Transit Company (DPP) that intend to procure Galileo-enabled, multifrequency, multi-constellation receivers for its entire tramway fleet. With this action DPP expects to significantly improve tram localization accuracy, enabling improved performance of passenger, information services and automatic speed limitation systems.

Although the aviation sector is the one most impacted by the COVID-19 pandemic, the use of EGNOS has continued to grow as available operational procedures resulted in 741 in 365 airports and 24 waypoints for helicopter route at the end of the year, covering close to 55% of instrument runways in Europe.

In EU 28, Switzerland and Norway, 15.55% aircraft were flying with LPV capability on board (+1.81% increase from last year) during March 2020 as well as 6.77% flights with EGNOS for LPV approaches were flying on the same month. The country that declared the highest % of EGNOS aircraft flying in March 2020 was Latvia with 63.64% . Due to COVID-19 situation, commercial flights dropped by an average 86.6% during all 2020 but on the other side EGNOS capable flights were operated also during emergency and cargo operations. In fact, helicopter transport, air ambulance and the deployment of drones equipped with EGNSS played a vital role to support the recovery process from the COVID-19 impact. An example of this is Jetcall, an air ambulance operator based in Germany and cofunded in aviation adoption grants, through a GSA delegated task, which has been providing emergency services during the crisis. In addition, Finnair obtained the operational approval for flying with EGNOS on A350 aircrafts, confirming the great interest of commercial airlines in EGNOS.

The drone market has been unaffected by the crisis and over 182 drone receiver models from 44 manufacturers with EGNOS and/or Galileo capabilities are already available in the market, representing 30% of receiver models used for drone's navigation.

On search and rescue, GSA supported many EU manufacturers in the development of new beacons. Among others, the Galileo SAR Return Link Service (RLS) Personal Locator Beacon manufactured by the European company Orolia was the first one to complete the Cospas-Sarsat type approval process in June 2020 for both Maritime and Aviation applications. This was a very important milestone that opened the way to the market

for EU manufacturers who invested in Galileo differentiators. This milestone has been achieved using an integrated approach that leveraged the H2020 and Fundamental Elements projects to reach adoption.

In the maritime domain, after Galileo recognition as part of Worldwide Radionavigation Systems (WWRNS), the number of Galileo-enabled receiver's models further increased with 21 global manufacturers.

In 2020, the SBAS Guidelines for Shipborne Receivers were finalised and approved by EC and GSA in cooperation with representatives of ESA, EMSA (European Maritime Safety Agency), EMRF (European Maritime RadioNavigation Forum) and maritime authorities. GSA also progressed in the development of a new EGNOS Maritime service with the support of the EMRF and IALA (International Association of Lighthouse Authorities) in the definition of the Service Requirements.

In the agriculture domain, almost all new tractors in Europe using GNSS are now equipped with EGNOS, the preferred low-cost entry technology for precision farming in Europe, while around 69% of GNSS receiver models for agriculture applications are Galileo capable.

In September 2020, GSA mobilised agriculture experts, leading farmers associations, and MEPs to participate in a demonstration of how the EU Space Programme is delivering value in the frame of "farm to fork" initiative. This confirms that Galileo, EGNOS and Copernicus are game changers for a sustainable agriculture, a key element of the Green Deal. In 2020, the new edition of the Farming by Satellite Prize, the GSA initiative that aims to increase the use of Galileo, EGNOS and Copernicus in European agriculture and to raise awareness on the benefits the EU Space Programme, was held and attracted many young teams with innovative ideas.

Regarding Geomatics, even more augmentation service providers are upgrading their networks to support Galileo, with 11 additional European augmentation providers identified. In addition, over 80% of surveying and mapping receiver models are Galileo-capable with around 98% of mapping and GIS receiver models being EGNOS compatible.

Moreover, the GSA organised the first edition of the Geomatics on the Move competition in collaboration with the CLGE (Comité de Liaison des Géomètres Européens). The competition attracted a good number of innovative ideas in the areas of Geomatics and awarded 8 prizes.

For the Timing and Synchronisation market, the development of a European Galileo based multi frequency receiver suitable for the critical infrastructure reached the development phase and started the testing and validation phase. Moreover, the Agency is progressing with strategy for the implementation of added-value application offerings within the Galileo infrastructure leveraging the OS in the short term and then upgraded

to the Open Service Navigation Message Authentication (OS-NMA). In parallel, GSA continued working closely with the market community (users, operators, receiver manufacturers). As a result the E-GNSS market penetration is constantly increasing.

The Galileo differentiators progressed further in 2020. In addition to SAR Return link, the OS-NMA has been prototyped in several platforms, including the first close-to-market user terminal and prepared for the testing of the OS-NMA in the signal-in-space. Many users and receiver manufacturers declared the intention to be involved in the upcoming public observation phase. Moreover, this year STMicro, Septentrio and uBlox built the first OS-NMA compatible receivers ready to be launched in the market.

With the Galileo High Accuracy Service (HAS), Galileo will pioneer a worldwide, free high-accuracy positioning service benefitting several markets as geomatics, agriculture or consumer solutions.

The first HAS project for the development of the algorithm and the user terminal started in order to be ready to test the service once available in 2022.

The third edition of the GNSS User Technology Report was published in October as joint cooperation of the Market Development and Communication Departments. The report is a reference for European investors and entrepreneurs. It takes an in-depth look at the latest state-of-the-art GNSS user and receiver technology, along with providing expert analysis on the evolutionary trends that are set to define the global GNSS landscapes in the coming years. In this edition, the Agency prepared and edited a special on Space Data for Europe that are becoming fundamental supporting the digital transformation of our society.

In December 2020 the 3rd edition of the User Consultation Platform (UCP) took place, as part of the European Space Week with more than 1000 users joining the event, 400 speakers and 48 hours of discussions. New market segments panels such as Emergency Response, Public transports, Space and Governmental were introduced and chaired by GSA. The UCP was a unique opportunity to discuss the users' needs, the main market trends, the evolution of the Galileo and systems, and new developments in R&D. But what is more important, also Copernicus and GovSatCom users participated to each session and a special focus was given to the synergies among all EU Space programmes anticipating the future role of EUSPA.

The results of the UCP were shared during the 2020 European Space Week, a global online event with over 3.500 registrants, from over 100 countries, attending an event with 52 hours of live broadcast. The event was an opportunity to explore further ideas around the start of EUSPA and to share EU Space progress and E GNSS success stories across a broad range of services and applications. Participants interacted on line with the speakers and within the virtual exhibition area generating over 1200 messages.



In the area of market communications, the GSA continued to support E-GNSS market uptake and awareness via an active website and web news service, an expanding targeted social media presence, media/press information/relations activities and regular newsletter distribution. The GSA promoted Galileo and EGNOS through the online participation at various conferences, and virtual exhibitions and workshops across Europe, and increased the number of webinars and online outreach activities together with the production and distribution of digital content, videos and animations designed to support EGNSS market development objectives.

### 1.4.3 Tasks for 2020

Objective 1: E-GNSS market development in Aviation (WBS 5.02.03 and 5.03.03)	
Expected results	2020 results
<ol style="list-style-type: none"> <li>1. Aviation market and user technology understood and fully analysed;</li> <li>2. Aviation user needs updated and analysed;</li> <li>3. Penetration of Galileo in receiver models for aviation;</li> <li>4. Large network of aviation stakeholders cooperating with GSA;</li> <li>5. Technical support and feasibility assessment to airports/heliports, Air Navigation Service Providers (ANSP), airspace users on implementing LPV/LPV 200/PinS/RNP 0.3, in support of the implementation of EU Regulation 2018/1048, which lays down airspace usage requirements and operating procedures concerning performance-based navigation and towards an integrated CNS strategy;</li> <li>6. Demonstrate EGNOS/Galileo's added value for drone navigation performance;</li> <li>7. Galileo differentiators "SAR Return Link" implemented in the beacons;</li> <li>8. EGNOS user satisfaction survey completed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Annual market and technology monitoring, analysis and forecasting performed. New Technology Report published in October 2020 with focus on Dual Frequency Multi Constellation (DFMC) receivers including Ground-Based-Augmentation-System (GBAS) and ARAIM (Advanced Receiver Autonomous Integrity Monitoring) and Galileo Return Link Service. In addition, also the drone regulatory status was included;</li> <li>2. User relationship management strengthened. Aviation user needs have been collected during the whole year through regular meetings and targeted working groups with aviation stakeholders and users, especially with regional airlines, general aviation, helicopter and drones community. In addition, the User Consultation Platform took place on 2<sup>nd</sup> December 2020 where user needs have been discussed;</li> <li>3. Report on increased Galileo penetration completed and published on the Technology Report;</li> <li>4. Cooperation consolidated with aviation stakeholders such as EASA (European Union Aviation Safety Agency), contributing to regulatory activities, SESAR (Single European Sky ATM Research) Joint Undertaking on Research and Development, and Eurocontrol on adoption;</li> </ol>

			<p>5. New GNSS Working group for general aviation established with the objective to facilitate GNSS based Instrument flight procedures for general aviation;</p> <p>6. The EGNOS/Galileo added value for drone navigation has been demonstrated in several projects;</p> <p>7. The first aviation distress beacon in the market (ELT-DT) includes Galileo positioning and RLS;</p> <p>8. EGNOS and Galileo Satisfaction survey for 2019 completed and survey for 2020 launched.</p>
			<b>2020 results</b>
<b>Indicators</b>	1. Endorsement of market and technology analysis by main stakeholders	1	1
	2. Validation of user needs by users as User Consultation Platform (UCP) outcomes	1	1
	3. % of Galileo receivers in overall number of models for aviation	10	30% Galileo penetration in drone receiver models. No operational Galileo capable receivers for navigation in manned aviation until augmentation services (EGNOS V3, ARAIM, GBAS) is completed.
	4. Number of companies cooperating with GSA	95	145 companies that integrated EGNOS and/or Galileo composed of manned aviation and drones listed on Use Galileo database
	5a) Annual tracking of EGNOS based procedures	850	862 procedures. During 2020, 133 EGNOS based procedures has been implemented with the total number of 741 EGNOS based procedure operational by the end of 2020. Additional, 121 planned EGNOS procedures are monitored with the estimated publication in 2021
	5b) Annual tracking of EGNOS capable airlines and avionics	65	70 EGNOS capable airlines with 534 units of commercial, regional, business, general aircraft and helicopters

6. Number of flight demonstrations with EGNOS/Galileo	3	3
7. Development of the first aviation SAR beacon including Galileo RLS complete	1	1
8. Completion of annual EGNOS User Satisfaction survey	1	1
Planned outputs		Actual outputs
<b>Outputs relating to the multi-annual work programme objectives:</b>		<b>Outputs relating to the multi-annual work programme objectives:</b>
<ol style="list-style-type: none"> <li>Aviation section of the market report published in 2019/2021 and technology report published in 2018/2020;</li> <li>Report on aviation user needs and requirements published in 2018 and 2020;</li> <li>Report on Galileo penetration in aviation receivers;</li> <li> <ol style="list-style-type: none"> <li>Industry database for aviation;</li> <li>Coordinated work plans to foster EGNOS and Galileo in aviation with key stakeholders: EASA, SESAR JU, SESAR Deployment Manager (SDM);</li> </ol> </li> <li> <ol style="list-style-type: none"> <li>EGNOS approach procedures;</li> <li>Report on Galileo and EGNOS penetration in EU airspace users, report on available avionics;</li> </ol> </li> <li>Updated list of receivers with EGNOS and Galileo for drones published on Galileo websites;</li> <li>Aviation SAR beacon that includes Galileo Return Link Service (RLS) ready for type approval. Concept of operations for remote beacon activation using GAL RLS;</li> <li>Results of User Satisfaction surveys.</li> </ol>		<ol style="list-style-type: none"> <li>GNSS Technology Report published in October 2020, including DFMC solutions such as GBAS and ARAIM, Galileo Return Link Service and drone regulatory status;</li> <li>Report on aviation user needs and requirements is under finalization following the User Consultation Platform in December 2020 with final version to be published on the GSA website;</li> <li>Galileo receivers for drones, general aviation and SAR updated, EGNOS penetration in aviation receivers updated;</li> <li> <ol style="list-style-type: none"> <li>Industry database publicly available in the useGalileo website;</li> <li>GSA coordinates the Aviation Taskforce with EASA, DG-MOVE and DEFIS and work closely with Eurocontrol and SESAR Joint Undertaking;</li> </ol> </li> <li> <ol style="list-style-type: none"> <li>Annual tracking of EGNOS approach procedures (741 by end of 2020);</li> <li>Galileo penetration of aviation receivers updated;</li> </ol> </li> <li>List of Galileo and EGNOS avionics available on EGNOS and UseGalileo portal;</li> <li>ELT-S (Emergency Locator Transmitter-Survival) and ELT-DT (Emergency Locator Transmitter - Distress Tracking) ready for type approval; Eurocae ED-277 finalised: Operational concept for remote aviation beacon activation with Return Link Service finalised;</li> <li>EGNOS and Galileo user satisfaction survey results published.</li> </ol>

Objective 2: EGNSS Market development in Road (WBS 5.02.04 and 5.03.04)			
Expected results		2020 results	
<ol style="list-style-type: none"> <li>Road market and user technology understood and fully analysed;</li> <li>Road user needs updated and analysed;</li> <li>Penetration of Galileo in receiver models for road;</li> <li>Large network of road stakeholders cooperating with GSA;</li> <li>Technical support (including plan and testing) to smart (digital) tachograph industry for EGNSS adoption, in cooperation with the Joint Research Centre (JRC);</li> <li>Initiate standardisation/certification process implementation for EGNSS in Cooperative Intelligent Transport Systems (C-ITS) and autonomous vehicles, in cooperation with EC</li> <li>Implement adoption roadmap in Connected and Automated Driving (CAD);</li> <li>Support for implementation of Galileo differentiators fostering E5 as second frequency and OS-NMA in road receivers and exploring the usability of HAS in the urban environment.</li> </ol>		<ol style="list-style-type: none"> <li>Annual market and technology monitoring, analysis and forecasting performed. New Technology Report published in October 2020;</li> <li>User relationship management strengthened and updated user needs validated in the Road panel of the User Consultation Platform with the cooperation of 120+ road experts from key EU companies;</li> <li>Galileo penetration increase in automotive with 30+ car brands and 100+ models;</li> <li>Cooperation consolidated with road stakeholders;</li> <li>Technical support provided to smart (digital) tachograph industry for EGNSS adoption, including cabotage activities;</li> <li>European Telecommunications Standard (ETSI TS 103 300) published on location/timing techniques for the detection of Vulnerable Road Users; CEN/TR 17447:2020 published on GNSS error models for road &amp; automotive applications; the development of positioning standards in CEN focusing on autonomous driving needs (CEN EN16803 series) is in progress. Galileo compatibility accepted in the draft Commission Delegated Regulation on Intelligent Speed Adaptation; preparatory actions to launch a GNSS standard for automotive at ISO;</li> <li>Adoption Roadmap in CAD implemented;</li> <li>Co-marketing activities with key stakeholders (uBlox, HERE Technologies, IRU etc.) to promote Galileo differentiators.</li> </ol>	
		Targets	2020 results
Indicators	1. Endorsement of market and technologies analysis by main stakeholders	1	1

2. Validation of user needs by users as User Consultation Platform (UCP) outcomes	1	1
3. % of Galileo receivers in overall number of models for road	75	74
4. Number of companies cooperating with GSA	65	140
5. Number of smart (digital) tachograph receiver models tested, in cooperation with JRC	4	1
6. % development of standardisation/certification procedures for GNSS in C-ITS and CAD functions	50%	50
7. Car makers including Galileo in autonomous vehicles prototypes	5	9
8. Number of receiver models implementing OS-NMA	1	1
<b>Planned outputs</b>		<b>Actual outputs</b>

Outputs relating to the multi-annual work programme objectives:

1. Road section of the market report published in 2019/2021 and technology report published in 2018/2020;
2. Report on road user needs and requirements published in 2018 and 2020;
3. Report on Galileo penetration in road receivers;
4. Industry database for road;
5. Test plan and testing campaigns;
6. Draft standards for C-ITS and CAD applications;
7. Adoption roadmaps and updated strategy entry plan;
8. Report on Galileo penetration in road receivers with focus on OS-NMA.

Outputs relating to the multi-annual work programme objectives:

1. GNSS Technology Report published in October 2020;
2. Report on road user needs and requirements is under finalization following the User Consultation Platform in December 2020 with final version to be published on the GSA website;
3. Report on Galileo and EGNOS penetration in receivers and chipsets models in road segment updated;
4. Industry database publicly available in the useGalileo website;
5. Test plan agreed for the Annex IC of the Smart Tachograph EU regulation;
6. Standards ETSI TS 103 300 and CEN/TR 17447:2020 published
7. Strategy on Road and Automotive (focus on Autonomous driving) under implementation;
8. Report on OS-NMA with test plan defined in road receiver.

Objective 3: EGNSS market development in Maritime (WBS 5.02.05 and 5.03.05)				
Expected results			2020 results	
1. Maritime market and user technology understood and fully analysed; 2. Maritime user needs updated and analysed; 3. Penetration of Galileo and EGNOS in maritime receiver models; 4. Large network of maritime stakeholders cooperating with GSA; 5. Galileo tested in ship-borne receivers; 6. Main beacon manufacturers implementing SAR return link.			1. Annual market and technology monitoring, analysis and forecasting performed. New Technology Report published in October 2020; 2. User relationship management strengthened and updated user needs validated in the Maritime panel of the User Consultation Platform; 3. Analysis on Galileo and EGNOS penetration in shipborne receivers finalised in Q4 2020 with 34% and 90% penetration respectively; 4. Cooperation consolidated with maritime stakeholders; 5. Galileo ship-borne receivers tested with 5 manufacturers involved; 6. Five SAR beacons developed with RLS. 1 SAR beacon with type-approval certificate published in usegalileo.eu	
Targets			2020 results	
Indicators	1. Endorsement of market and technologies analysis by main stakeholders	1	1	
	2. Validation of user needs by users as User Consultation Platform (UCP) outcomes	1	1	
	3. % of Galileo and EGNOS receivers in overall number of maritime models	15 for Galileo 85 for EGNOS	37% and 90% maritime Rx models currently Galileo and EGNOS enabled respectively in the market	
	4. Number of companies cooperating with GSA	26	30 companies are in the Use Galileo Database	
	5. Number of ship borne receiver manufacturers engaged in Galileo testing	5	5	



6. Number of SAR beacons including Galileo RLS ready for type approval	5	5
Planned outputs		Actual outputs
<p>Outputs relating to the multi-annual work programme objectives:</p> <ol style="list-style-type: none"> <li>1. Maritime section of the market report published in 2019/2021 and technology report published in 2018/2020;</li> <li>2. Report on maritime user needs and requirements published in 2018 and 2020;</li> <li>3. Report on Galileo and EGNOS penetration in maritime receivers;</li> <li>4. Industry database for maritime;</li> <li>5. Agreement with ship-borne receiver manufacturers interested in testing campaign;</li> <li>6. Maritime SAR beacon that includes Galileo RLS developed and published on usegalileo.eu.</li> </ol>		<p>Outputs relating to the multi-annual work programme objectives:</p> <ol style="list-style-type: none"> <li>1. GNSS Technology Report published in October 2020;</li> <li>2. Report on maritime user needs and requirements is under finalisation following the User Consultation Platform in December 2020 with final version to be published on the GSA website;</li> <li>3. Report on Galileo and EGNOS penetration in receivers and chipsets models in maritime segment updated;</li> <li>4. Industry database publicly available in the useGalileo website;</li> <li>5. Agreement with 5 with ship-borne receiver manufactures involved in testing finalised;</li> <li>6. Five SAR beacons developed with Return Link Service (RLS). One SAR beacon with type-approval certificate published in usegalileo.eu.</li> </ol>

Objective 4: EGNSS market development in Rail (WBS 5.02.06 and 5.03.06)				
Expected results			2020 results	
<ol style="list-style-type: none"> <li>Rail market and application potential understood and fully analysed;</li> <li>Penetration of Galileo and EGNOS in rail receiver models;</li> <li>Cooperation and coordination with public rail stakeholders (ERA, UNIFE, CER, EUG);</li> <li>Consolidation of user requirements for safety relevant applications and analysis of their impact on EGNSS services;</li> <li>GSA roadmap for rail signalling implemented and updated;</li> <li>EGNSS-based signalling solution on low density lines demonstrated.</li> </ol>			<ol style="list-style-type: none"> <li>Annual market monitoring, analysis and forecasting performed and Annual Technology monitoring update performed; Cost Benefit Analysis (CBA) for the mature virtual balise concept finalized;</li> <li>Analysis on Galileo and EGNOS penetration in rail receivers finalised in Q4 2020 with 91% of rail Rx models (non-safety of life) currently at the market were Galileo enabled (end of Q3 2020);</li> <li>User relationship management strengthened – Change request 1368 for EGNOS Augmentation inclusion in ERTMS prepared together with stakeholders;</li> <li>User requirements for safety relevant applications provided as input for study on modification of EGNSS services and receiver prototype development;</li> <li>Implementation of the EGNSS in rail signalling roadmap performed and update encompassing upcoming initiatives prepared;</li> <li>Virtual balise concept use on low density lines demonstrated and architecture agreed by Rail stakeholders in Shift2Rail.</li> </ol>	
			Targets	
Indicators	1. Endorsement of economical KPI's and CBA results by main stakeholders, users etc		1	
	2. Validation of user needs by users as User Consultation Platform (UCP) outcomes		1	
	3. % of Galileo receivers in overall number of rail models		75	
			2020 results	
			1	
			1	
			91	

4. Number of companies cooperating with GSA	22	22
5. Architecture of EGNSS-based train positioning subsystem for ETCS agreed by main industrial stakeholders	1	1
6. Demonstrator / pilot operational low-density line with EGNSS-based train positioning system launched	1	1
Planned outputs		Actual outputs
Outputs relating to the multi-annual work programme objectives: 1. Cost/benefit analysis for railway signalling application available; 2. Rail section of the market report published in 2019/2021 and technology report published in 2018/2020; 3. Report on rail user needs and requirements published in 2018 and 2020; 4. Report on Galileo penetration in rail receivers; 5. EGNSS based train positioning system architecture documentation available; 6. EGNSS in rail signalling roadmap partially implemented.		Outputs relating to the multi-annual work programme objectives: 1. GSA Cost Benefit Analysis (CBA) results confirmed business case for EGNSS. Results were shared at several conferences and adopted also within Shift2Rail X2RAIL2 by main stakeholders and users; 2. Rail section of GNSS Market and Technology report published in October 2020; 3. Report on rail user needs and requirements is under finalisation following the User Consultation Platform in December 2020 with final version to be published on the GSA website; 4. Report on Galileo and EGNOS penetration in rail receivers and chipsets updated; 5. Architecture documentation for the Virtual balise concept available; 6. EGNSS in rail signalling roadmap partially implemented and updated based on progress towards the EGNSS inclusion in ERTMS and the associated new R&D initiatives.

**Objective 5: EGNSS market development in Agriculture and Geomatics applications (WBS 5.02.01, 5.03.01, 5.02.02 and 5.03.02)**

Expected results			2020 results
<ol style="list-style-type: none"> <li>1. Agriculture and Geomatics applications market and user technology understood and fully analysed;</li> <li>2. Agriculture and Geomatics applications user needs updated and analysed;</li> <li>3. Penetration of Galileo and EGNOS in receiver models for agriculture and geomatics;</li> <li>4. Large network of agriculture and geomatics stakeholders cooperating with GSA;</li> <li>5. Support EGNSS adoption through dedicated awards for innovative integration of EGNSS in high-precision segment;</li> <li>6. Accelerate upgrade to Galileo in private and public reference networks;</li> <li>7. Support for implementation of Galileo differentiators with focus on High Accuracy Service.</li> </ol>			<ol style="list-style-type: none"> <li>1. Annual market and technology monitoring, analysis and forecasting performed. New Technology Report published in October 2020;</li> <li>2. User relationship management strengthened and updated user needs validated in the agriculture and geomatics panels of the User Consultation Platform;</li> <li>3. Galileo and EGNOS penetration increased in both market segments;</li> <li>4. Cooperation consolidated with Agriculture, Geomatics stakeholders, paying agencies, CLGE (Council of European Geodetic Surveyors), EUPOS (European Position Determination System), etc.</li> <li>5. Execution and award of the Geomatics on the Move competition organised by the GSA in collaboration with CLGE; Execution and award of the Farming by Satellite competition.</li> <li>6. Eleven new European augmentation providers upgraded to Galileo during 2020. Visual map tool implemented will be published at the Galileo Service Centre (GSC) website during Q1 2021.</li> <li>7. Execution of activities in preparation of the High Accuracy Service testing campaign, including a dedicated Information Note.</li> </ol>
Targets			2020 results
Indicators	1.Endorsement of market and technology analysis by main stakeholders	1	1
	2.Validation of user needs by users as User Consultation Platform (UCP) outcomes	1	1
	3. % of Galileo and EGNOS receivers in overall number of models for agriculture and mapping & surveying	55 (Agri) 56 (M&S)	70% for Galileo and 97% of EGNOS penetration for Agriculture 81% for Galileo and 98% of EGNOS penetration for Geomatics

4.Number of companies cooperating with GSA	140	187 (91 for Agriculture and 96 for Geomatics)
5.Award of dedicated prizes for innovative integration of EGNSS in high precision, agriculture and surveying applications and/or devices	2 (taking into account that Farming by Satellite is awarded every 18 months)	2 prizes awarded: - Farming by Satellite. - Geomatics on the Move
6.New RTK network providers confirming upgrade to Galileo in Europe	5	11
7 Number of receiver models implementing HAS	1	0, due to the unavailability of HAS service, although several models implement E6 tracking
<b>Planned outputs</b>		<b>Actual outputs</b>
Outputs relating to the multi-annual work programme objectives: <ol style="list-style-type: none"> <li>1. Agriculture and mapping &amp; surveying section of the market report published in 2019/2021 and technology report published in 2018/2020;</li> <li>2. Report on agriculture and mapping &amp; surveying user needs and requirements published in 2018 and 2020;w</li> <li>3. Report on Galileo penetration in agriculture and mapping &amp; surveying receivers;</li> <li>4. Industry database for agriculture and mapping &amp; surveying;</li> <li>5. Report describing the metrics and statistics of participant success after award;</li> <li>6. Report on Galileo implementation in the reference networks;</li> <li>7. Report on Galileo penetration in agriculture and mapping &amp; surveying receivers, with focus on High Accuracy Service.</li> </ol>		Outputs relating to the multi-annual work programme objectives: <ol style="list-style-type: none"> <li>1. GNSS Technology Report published in October 2020;</li> <li>2. Report on agriculture and geomatics user needs and requirements is under finalisation following the User Consultation Platform in December 2020 with final version to be published on the GSA website;</li> <li>3. Report on Galileo and EGNOS penetration in receivers and chipsets models in agriculture and geomatics segments updated;</li> <li>4. Industry database publicly available in the useGalileo website;</li> <li>5. Information from awarded prizes published and statistics published;</li> <li>6. Report on Galileo implementation in the reference networks issued.</li> </ol>

<b>Objective 6: EGNSS market development in Location Based Services (LBS), Machine-to-machine (M2M) and other Mass Market segments (WBS 5.02.07 and 5.03.07)</b>	
<b>Expected results</b>	<b>2020 results</b>

<ol style="list-style-type: none"> <li>1. LBS market and user technology understood and fully analysed</li> <li>2. LBS user needs updated and analysed</li> <li>3. Penetration of Galileo and EGNOS in LBS receiver models</li> <li>4. Large network of LBS stakeholders cooperating with GSA</li> <li>5. Development of innovative mobile applications leveraging Galileo differentiators</li> <li>6. Support for implementation of Galileo differentiators, focusing on E5 as second frequency and Open Service Navigation Message Authentication (OS-NMA)</li> </ol>			<ol style="list-style-type: none"> <li>1. Annual market and technology monitoring, analysis and forecasting performed. New Technology Report published in October 2020;</li> <li>2. User relationship management strengthened and updated user needs validated in the Mass Market panel of the User Consultation Platform;</li> <li>3. Report on Galileo penetration completed and published on the Technology Report;</li> <li>4. Cooperation consolidated with LBS stakeholders;</li> <li>5. Innovative mobile applications developed within the dedicated Raw Galileo 24-hour hackathon aimed at developing solutions that leverage Galileo raw measurements and high accuracy in Android-based mobile devices;</li> <li>6. Report on Galileo penetration including usage of E5 as second frequency and OS-NMA finalised and published on the Technology Report.</li> </ol>		
<b>Indicators</b>		<b>Targets</b>	<b>2020 results</b>		
	1. Endorsement of market and technology analysis by main stakeholders	1	1		
	2. Validation of user needs by users as User Consultation Platform (UCP) outcomes	1	1		
	3. % of Galileo and EGNOS receivers in overall number of mass market models	60	70		
	4. Number of companies cooperating with GSA	50	141		

5.Number of hackathons and dedicated events targeting innovative application developers	2	2
6.Number of receiver models implementing OS-NMA	1	2
Planned outputs		Actual outputs
Outputs relating to the multi-annual work programme objectives:		Outputs relating to the multi-annual work programme objectives:
<ol style="list-style-type: none"> <li>1. Location Based Services (LBS) section of the market report published in 2019/2021 and technology report published in 2018/2020</li> <li>2. Report on LBS user needs and requirements published in 2018 and 2020</li> <li>3. Report on Galileo penetration in mass market receivers</li> <li>4. Industry database for mass market</li> <li>5. New items published on GSA website summarising hackathon results</li> <li>6. Report on Galileo penetration in LBS receivers with focus on E5 as second frequency and Open Service Navigation Message Authentication (OS-NMA)</li> </ol>		<ol style="list-style-type: none"> <li>1. GNSS Technology Report published in October 2020;</li> <li>2. Report on mass market user needs and requirements is under finalization following the User Consultation Platform in December 2020 with final version to be published on the GSA website;</li> <li>3. Report on Galileo and EGNOS penetration in receivers and chipsets models in mass market segment updated;</li> <li>4. Industry database publicly available in the useGalileo website;</li> <li>5. News items summarising hackathon results published on GSA website;</li> <li>6. Report on Galileo penetration including usage of E5 as second frequency and OS-NMA finalised and published on the Technology Report.</li> </ol>

Objective 7: EGNSS market development in Critical Infrastructure (WBS 5.02.08 and 5.03.08)				
Expected results			2020 results	
<ol style="list-style-type: none"> <li>1. Critical Infrastructure (CI) market and user technology understood and fully analysed;</li> <li>2. Critical Infrastructure user needs updated and analysed;</li> <li>3. Penetration of Galileo in T&amp;S receiver models;</li> <li>4. Large network of T&amp;S stakeholders cooperating with GSA;</li> <li>5. Support Commission in regulatory actions or technical studies for adopting Galileo in Critical Infrastructures;</li> <li>6. Galileo based multi-frequency receiver tested and validated in real environment;</li> <li>7. Provision plan of emerging Timing &amp; Synchronisation (T&amp;S) application offerings (i.e. time integrity, trusted time distribution and remote audit, etc.) defined.</li> </ol>			<ol style="list-style-type: none"> <li>1. Annual market and technology monitoring, analysis and forecasting performed. New Technology Report published in October 2020;</li> <li>2. User relationship management strengthened and updated user needs validated in the Infrastructure panel of the User Consultation Platform;</li> <li>3. Report on Galileo penetration completed and published on the Technology Report;</li> <li>4. Cooperation consolidated with Critical Infrastructure stakeholders;</li> <li>5. Support to EC provided via program management support to EC projects, standardisation activity and other regulatory actions to increase the adoption of Galileo in Critical Infrastructure</li> <li>6. Galileo based multi-frequency receiver developed and partially tested;</li> <li>7. Plan of emerging T&amp;S application offerings (i.e. time integrity, trusted time distribution and remote audit, etc.) defined.</li> </ol>	
			Targets	
Indicators	1.Endorsement of market and technology analysis by main stakeholders		1	
	2. Validation of user needs by users as User Consultation Platform (UCP) outcomes		1	
	3. % of Galileo and EGNOS receivers in overall number of T&S models for Critical Infrastructure		60	
			2020 results	
			1	
			1	
			55% for Galileo and 36% for EGNOS	



4. Number of companies cooperating with GSA	15	36
5. Specific support to EC on CI related activities and studies	100 %	100 %
6. Results of Galileo based multi-frequency receiver validation tests endorsed by stakeholders	2	2 receivers developed and partially tested
7. Architecture definition for the provision on emerging T&S application offerings	1	1
<b>Planned outputs</b>		<b>Actual outputs</b>
Outputs relating to the multi-annual work programme objectives:		
<ol style="list-style-type: none"> <li>1. CI section of the market report published in 2019/2021 and technology report published in 2018/2020;</li> <li>2. Report on CI user needs and requirements published in 2018 and 2020;</li> <li>3. Report on Galileo penetration in T&amp;S receivers;</li> <li>4. Industry database for T&amp;S;</li> <li>5. Deliver supporting materials or review of documents on EGNSS in CI to Commission (on request);</li> <li>6. Validation of Test Report;</li> <li>7. T&amp;S Application Offerings Implementation Plan.</li> </ol>		<ol style="list-style-type: none"> <li>1. GNSS Technology Report published in October 2020;</li> <li>2. Report on mass market user needs and requirements is under finalization following the User Consultation Platform in December 2020 with final version to be published on the GSA website;</li> <li>3. Report on Galileo and EGNOS penetration in receivers and chipsets models in mass market segment updated;</li> <li>4. Industry database publicly available in the useGalileo website;</li> <li>5. Inputs provided to EC when requested;</li> <li>6. Test plans developed and test reports under finalisation in 2021</li> <li>7. T&amp;S Application Offerings Implementation Plan developed.</li> </ol>

Objective 8: EGNSS market development in Governmental use (WBS 5.02.09 and 5.03.09)				
Expected results			2020 results	
<ol style="list-style-type: none"> <li>1. PRS Market analysis and forecasting in the area of governmental use</li> <li>2. Deliver necessary information to support Member States in promoting Galileo PRS within their user communities</li> </ol>			<ol style="list-style-type: none"> <li>1. PRS Market Analysis and forecasting performed;</li> <li>2. Many workshops were held to disseminate the general Galileo status and in particular PRS information to relevant governmental stakeholders. In addition, the Governmental user requirements were discussed during the Governmental panel held during the User Consultation Platform in December 2020. Specific dissemination material was also produced (leaflet, presentation) and preliminary synergies at user level were identified.</li> </ol>	
Targets			2020 results	
Indicators	1. Report on potential market size of Galileo in governmental applications	1	1	
	2. Specific support on PRS user related activities.	100%	100%	
Planned outputs			Actual outputs	
Outputs relating to the multi-annual work programme objectives: <ol style="list-style-type: none"> <li>1. Report on Galileo's potential penetration in receivers and chipsets for governmental use</li> <li>2. Material about Galileo PRS status and supportive actions</li> </ol>			<ol style="list-style-type: none"> <li>1. PRS Market Analysis (RUE doc) including Analysis of synergies among the secure services of the EUSPA</li> <li>2. Dissemination and UCP material</li> </ol>	

Objective 9: Services, Applications and R&D Communications (WBS 1.03.01)				
Expected results			2020 results	
<p>Communication activities relating to EGNOS and Galileo services and applications for research and development comprise of the following items:</p> <ul style="list-style-type: none"> <li>Increased awareness of EGNOS and Galileo, their high performance and many benefits</li> <li>Increased awareness and understanding of EGNOS and Galileo as a useful feature and enabling technology for application developers, in particular those requiring more precise and reliable Positioning, Navigation and Timing (PNT) information</li> <li>Strengthened communication with user networks and communities</li> <li>Increased awareness amongst innovative enterprises, with a focus on SMEs, who can benefit from leveraging EGNOS and Galileo in their applications, products or services or who can increase the functionality within existing applications by enabling it with EGNSS functionality</li> <li>Increased awareness of the Galileo programme, its role within the global multi-constellation satellite navigation system, and the benefits of its services</li> </ul>			Achieved	
Targets			2020 results	
Indicators	YoY (Year on Year) increase of traffic to key event/ media/ social media/ internet touchpoints	15 % increase	Achieved	
	YoY increase in SME base across all GNSS markets and their components	15 % increase	Achieved	
	YoY expansion of EGNOS and Galileo market	15 % increase	Achieved	
Planned outputs			Actual outputs	
<p>Outputs relating to the multi-annual work programme objectives:</p> <ul style="list-style-type: none"> <li>Annual communications plan</li> <li>Website creation, maintenance and management</li> </ul>			<p>Outputs relating to the multi-annual work programme objectives:</p> <p><b>2020 Communications Plan published and implemented, all communication activities were moved online and to digital products.</b></p>	

- Social media campaigns; publications
- Video and multi-media production and distribution
- Event creation, participation and management
- Media, public relations and stakeholder initiatives
- Newsletter production and distribution
- Feedback surveys and studies

- **Websites:** The GSA published 110 web news articles and 23 press releases that generated 480 press pickups. The Agency maintains directly [www.gsa.europa.eu](http://www.gsa.europa.eu) and [www.Usegalileo.eu](http://www.Usegalileo.eu), [www.euspaceweek.eu](http://www.euspaceweek.eu) and supports and contributes to [www.gsc-europa.eu](http://www.gsc-europa.eu) and [www.egnos-portal.eu](http://www.egnos-portal.eu). In response to the Covid-19 pandemic GSA also developed a database of GNSS-based apps for COVID-19 response <https://www.gsa.europa.eu/GNSS4Crisis>

**GSA Social Media presence:** In 2020, the GSA continued expanding its social media presence, with 15,316 users in LinkedIn, 12,410 in Twitter, 6,342 on Facebook, and 2577 in Instagram, supporting the production of content and multimedia products tailored for social media.

**Publications:** The release of the “White Paper on Power-efficient Positioning for the Internet of Things”, Galileo Definition Document updates, Galileo services Quarterly Performance Reports, and the SAR/Galileo Service were also widely promoted .

- **Video Production:** In 2020 we added 45 new videos to GSA YouTube channel, including:
  - short animations for social media to promote initiatives and competitions such as EUSPA Logo competition, User Consultation Platform, EUSW 2020, post EUSW 2020 event, MyGalileoSolution, MyGalileoDrone.
  - Interviews for news and events, including “Meet Rodrigo da Costa”, the new GSA Executive Director (in 2 versions: 1 for the press and 1 for internal purpose
  - Live demos such as “From Space to Farm to Fork”
  - Additional 3 EGNOS success stories

- 20 videos created especially for the promotion of the start-ups pitching their ideas during the Investor Forum of the EUSW 2020 and for the H2020 success stories.
- **Virtual events, participation and management:** In 2020, most of the traditional events went online or were cancelled.
  - During the pandemic we increased the number of webinars (16 including IoT, raw measurements, EGNOS approaches for robust helicopter emergency services,) for the promotions of calls and competitions. GSA attended 18 virtual events/ exhibitions including InfoShare, ITSF and several hackathons including the #EUDatathon and #EUVsVIRUS.
- **GSA organised several flagships events online, including:**
  - EU Space Programme: from Space, to Farm, to Fork
  - From Space to Farm to Fork (live demo, webinar and press event)
  - GNSS Raw Measurement Taskforce meeting
  - User Consultation Platform
  - 2020 EU Space Week
- **Media, public relations and stakeholder initiatives:** Multiple press initiatives on all key developments which created more than 650 news on the offline and online press in multiple languages.
- **Newsletter production and distribution:** The GSA continues to publish weekly newsletter called *'Watch this Space'*. 40 issues were published in 2020 to +9 000 subscribers.
- **Feedback surveys and studies:** In 2020 GSA launched and promoted . the annual EGNOS user satisfaction survey, GSC and Galileo user survey.

## 1.5 Agency Management (WBS 1)

### 1.5.1 Highlights for 2020

This activity supported the Agency's core (and delegated) mission by providing state-of-the-art services to all operations in the areas of legal, procurement, grants, contracts, finance and budget, human resources management, ICT, facility management and logistics. The main 2020 achievements can be described as follows:

- Strong response to COVID-19 pandemic across all sites ensuring the Health & Safety of staff and the continuity of operations
- Efficient undertaking and awarding of procurement processes.
- Continued ensuring effective management of the Administrative Board.
- Development and deployment of the Agency Enterprise Content Management System, which supports Configuration and Document Management activities, on the Agency's restricted network.
- Continued improvement of the IMS, and re-certification, in accordance with the latest release of the ISO 9001 standard, was achieved in October 2020.
- Continued development of risk management capability, including quarterly Corporate Risk Management Boards.
- Improved communications and interactions (managed by the Central Security Office) with the NSAs of the Member States related to the classified contracts managed by the Agency.
- Improvement of the security training plan and increased security awareness briefings. A plan for cyber security awareness has been prepared covering different levels of trainings to be delivered in 2020.
- The Accreditation Panel of Internal Systems (APIS) continued its activity as the main supportive body to the Agency's Security Accreditation Authority. Throughout 2020, 11 accreditation reviews related to internal Agency systems and areas were performed.
- Continued to raise awareness to promote the Agency work via a range of communications activities targeting national and European Stakeholders, industry, user communities and citizens.
- The Agency continued to engage and expand its internal communication efforts to help support an informed, motivated and connected team located in multiple sites.
- Identification and implementation of network of Agency Site Managers, including for implementation of H&S measures across all sites.

### 1.5.2 Tasks for 2020

Objective 1: Implement efficient management of all legal arrangements for the GSA, in-line with the service delivery needs (WBS 1.01.02)				
Expected results			2020 results	
<ul style="list-style-type: none"> <li>Procurement management: planning, preparing and executing procurement file up to signature of legal commitment</li> <li>Grant management: planning, preparing and executing grant file up to signature of legal commitment</li> <li>Legal commitments management: drafting, negotiating, signing, amending, assigning and other support throughout the lifetime of a legal commitment</li> <li>Legal advisory services: identification, verification, assessment and provision of legal opinions</li> </ul>			As planned	
Targets			2020 results	
Indicators	Procurement and contract award: % of contracts in place and on time	90 %	100% - achieved	
	Contract management: % of exceptions linked to legal department performance compared to total number of contracts signed in a year	< 5%	1 exception report attributable to LEG on 364 signed legal commitments - achieved	
Planned outputs			Actual outputs	
<ul style="list-style-type: none"> <li>Executive Director documentation (incl. decisions, letters, guidelines)</li> <li>Policies</li> <li>Documents relating to court decisions</li> </ul>			As planned	

<ul style="list-style-type: none"> <li>• Institutional agreements (delegation agreements, working arrangements, regulatory documents)</li> <li>• Acquisition documentation (tenders, calls for proposal)</li> <li>• Legal commitments (contracts, grant agreements, non-disclosure agreements, licenses, etc.)</li> <li>• Reporting (on procurement, grants, contracts on core and delegated tasks)</li> </ul>	
--	--

Objective 2: Identifying, developing and implementing activities leading to a workforce capable of delivering GSA's business needs (WBS 1.01.03)	
Expected results	2020 results
<ul style="list-style-type: none"> <li>• Planning and allocation of resources and establishment plan management</li> <li>• Selection, recruitment and on-boarding of the most suitable candidate(s) for each vacant post/reserve list and in accordance with applicable requirements, Staff Regulations and CEOS</li> <li>• Relocation support</li> <li>• Work-life balance initiatives</li> <li>• Staff administration and services</li> <li>• Staff performance management: staff objectives consistent with the Agency's objectives</li> <li>• Learning and staff development: maintain and develop staff competencies required to successfully perform the assigned job</li> <li>• Human resources management: ensure compliance with legal framework; sound financial management; new administrative notes/policies/guidelines/ED decisions on issues that require (re)enforcement or introduction of human resources tools for effective and efficient staff management; co-ordination of complaints/appeals process; promotion and maintenance of professional working environment; inter-agency cooperation and reporting</li> <li>• Relations to staff and counterpart to Staff Committee</li> </ul>	<p>As planned, including the following measures taken due to pandemic:</p> <ul style="list-style-type: none"> <li>• Remote selections procedures</li> <li>• Remote onboarding processes on newcomers</li> <li>• Mandatory teleworking as nominal working mode introduced</li> <li>• Staff administration and services delivered mostly online</li> <li>• Learning and staff development services delivered online</li> </ul>
Targets	2020 results



Indicators	% execution of the Establishment Plan	98%	100%
	Number of annual leave carried over	9 days	7,9
	Average rating of quality of training	8.5	8,87
<b>Planned outputs</b>		<b>Actual outputs</b>	
<ul style="list-style-type: none"> <li>• Identification/planning of necessary resources in accordance with operational requirements and execution of establishment plan</li> <li>• Vacancy notices, selection of most suitable candidates, recruitment guidelines to the Selection Board members and FAQ for candidates</li> <li>• Induction training, Agency social events, work-life balance support</li> <li>• Processing entitlements of staff</li> <li>• Set annual objectives, annual staff performance appraisal and annual reclassification exercise</li> <li>• Learning and development strategy, individual training maps, organisation of learning activities, feedback/evaluation management</li> <li>• Draft, communicate and implement the Commission's implementing rule proposals for adoption by the Agency; draft, communicate and implement Executive Director's decisions; draft Agency administrative notes and policies</li> <li>• Various metric and narrative reports</li> </ul>		<p>As planned and in addition:</p> <ul style="list-style-type: none"> <li>• No disruption of selection and recruitment due to pandemic</li> <li>• Selection procedures carried out fully online</li> <li>• Implementation of video-recorded interviews as an additional step for pre-selection of candidates</li> <li>• Expansion of dissemination channels for vacancy notices, eg. obtaining Linked In recruiter licence</li> <li>• Detailed description of the selection process published online</li> <li>• Entitlements of staff processes carried out online and without delays</li> <li>• Continuity of induction and other training activities, including remote delivery</li> <li>• New ED decisions on contracts duration and on traineeships implemented</li> </ul>	

Objective 3: Effective and efficient process for certifying staff working directly on GSMC operations (primarily Security Incidents Handlers and PRS Access Officers) (WBS 4.06.05)			
Expected results		2020 results	
<p>The Agency has a number of administrative processes that support the workings of the GSMC. Although most are common for the entire Agency, some are GSMC-specific. The expected results for administrative processes are as follows:</p> <ul style="list-style-type: none"> <li>• Provision of internal training to respective staff and organisation of tests</li> <li>• Certification Board meetings and administration of conclusions</li> </ul> <p>Certificates obtained by the end of probationary period and clearance approved</p>		<ul style="list-style-type: none"> <li>• <b>Certification Management:</b> Ensure the appropriate certification of the staff (PRS Access Officer, SIH, etc.) on time <ul style="list-style-type: none"> <li>○ 4 Certification Boards</li> </ul> </li> <li>• <b>GSMC specific training:</b> Cyber training 2020 postponed due to COVID-19 outbreak.</li> </ul>	
Indicators	Targets		2020 results
	% of success rate of operator training (certification)	100%	Achieved
Planned outputs		Actual outputs	
<ul style="list-style-type: none"> <li>• Operators' certificates</li> </ul>		<ul style="list-style-type: none"> <li>- Operators' certifications maintained and for some expanded (dual PRS/SECMON)</li> <li>- 14 operators certified for SIH v3.0 (100% contractors included)</li> <li>- 12 operators certified for PRS v3.0 (100%)</li> </ul>	

**Objective 4: Plan, manage and report on the GSA budget and process all financial transactions (WBS 1.01.04)**

Expected results			2020 results
<b>Budgeting and regular financial management:</b> <ul style="list-style-type: none"><li>Budgeting, monitoring and reporting on level of budget execution to all internal and external clients</li><li>Daily management of Agency financial transactions</li><li>Provide Commission with report on the financial management of Delegation Agreements (quarterly and annually) and cash management of all Delegation Agreements</li><li>Cash flow status (twice a year) and cash management of the EU subsidy</li><li>Management of Value Added Tax (VAT) exemption for all Agency sites and personal VAT reimbursement for Prague-based staff</li><li>General finance and VAT-specific training as they pertain to EU financial procedures</li><li>Manage paperless tool</li></ul> <b>Administration and control of grants:</b> <ul style="list-style-type: none"><li>Support and/or manage preparation of calls for proposals, grant agreements, amendments, payments, and reporting</li><li>Detailed ex-ante verification of all grant payments in-line with European Court of Auditors' recommendations</li><li>Management of external experts in relation to evaluation of grant calls and supervision and review of deliverables produced by beneficiaries of the EU grants under Agency management</li><li>Drafting of policies on ex-ante and ex-post checks for grants and on expert rules</li><li>Ex-post controls of grant payments</li><li>Report to the Commission and internal clients on execution of grants and cash flow needs</li></ul>			As planned
Indicators	Targets		2020 results
	Commitment rate and rate of payment within prescribed time limits	98%	Commitment rate 100% Payments within prescribed time limits 98,7%
Planned outputs			Actual outputs

<ul style="list-style-type: none"> <li>• Monthly financial reporting</li> <li>• Draft budget document</li> <li>• Official budget documents and amendments for publication in the Official Journal</li> <li>• Annual Budget Implementation Report</li> <li>• VAT exemption certificates and reimbursement claims</li> <li>• Quarterly and annual financial reports for delegated budget</li> </ul>	As planned
---	------------

Objective 5: Provide a secure core digital working environment for GSA departments within the ICT-related domains of ICT security, ICT operations, ICT user support and ICT project management (WBS 1.01.05)			
Expected results		2020 results	
<p>The Agency's ICT activities are split along four fundamental lines:</p> <ol style="list-style-type: none"> <li>1. Systems and infrastructure management: ensure all systems operate within optimal parameters and are reliable and available to Agency users as required</li> <li>2. User management: ensure the appropriate provision of technical assistance and support</li> <li>3. Project management of all ICT projects</li> </ol> <p>ICT security: ensure the confidentiality integrity and availability of GSA systems</p>		<p>ICT services were provided in requested quality and timing and all infrastructure was managed and monitored to ensure sufficient level of security.</p> <p>During the COVID-19 crisis, GSA was not technically dependent on external communication services, the internal infrastructure was able to support the teleworking of all staff and contractors without noticeable problems and exceeded expectations.</p> <p>There was no successful attempt to compromise GSA systems in 2020 despite about 20,000 attempts every quarter.</p>	
		Targets	2020 results
Indicators	L1/L2 support responsiveness	85 %	80% L1 / 97% L2
	Core System availability	95 %	99.85%

Detection of attempts to compromise core systems	100 %	100%
Projects/delivery schedule respected	80 %	7 completed (3 of them delayed), 18 on-going
Planned outputs		Actual outputs
<ul style="list-style-type: none"> <li>• Execution and control of core ICT projects (following PM2 project management methodology)</li> <li>• Implementation of IT security policy following the development of the IT Security Policy Framework</li> </ul>		<ul style="list-style-type: none"> <li>• Change management, incident management and problem management was successfully implemented and continues improvement for set processes is defined and followed.</li> <li>• All ICT projects follow project management methodology and process is governed by ICT Steering Committee.</li> <li>• ICT related In/Out processing of GSA users is managed by ICT Helpdesk including hardware handovers with 100% efficiency.</li> <li>• We keep improving alignment between ICT and business needs</li> <li>• Definition and approval of a new ICT Strategy and ICT Security Strategy</li> <li>• Definition of a way how to achieve full business continuity capabilities</li> <li>• Preparation of a comprehensive package leading to the closure of the IAS audit started in 2018</li> <li>• Preparation of an EUSPA Digital Transformation project</li> <li>• Success of important high-level meetings such as the Admin Board and SAB</li> <li>• Migration of GSA websites to MS Azure under a new FWC of the EC</li> <li>• Introduction of secure e-mail (SECEM) capabilities</li> <li>• Completion of Mobile Device Management project</li> <li>• Active day-to-day collaboration and interaction with CERT-EU, follow-up on the recommendations and warnings, sharing information with CERT-EU, penetration testing, continuous monitoring and analysis of system logs in coordination with CERT EU.</li> </ul>

- New FW contracts in place for audio-visual equipment maintenance, cloud services, telephony services;

Objective 6: Maintain operational capability of GSA premises in Prague to support GSA activities (WBS 1.01.06)				
Expected results			2020 results	
<ul style="list-style-type: none"><li>• Timely facility management and logistical support to internal customers;</li><li>• Accurate asset and inventory management;</li><li>• Timely building management;</li><li>• Good cooperation with the building owner and representatives.</li></ul>			<ul style="list-style-type: none"><li>• Facility management and logistical services were provided in requested quality and timing;</li><li>• Inventory management updated and according to policy.</li><li>• Obligatory inventory check executed according to regulations and policies</li><li>• Cooperation with buildings owners ongoing on a good level.</li></ul>	
Targets			2020 results	
Indicators	Operational capability monitored (i.e. number of days building operability capability was maintained expressed as a percentage of days required)	100%	100%	
Planned outputs			Actual outputs	
<ul style="list-style-type: none"><li>• On demand facility services report</li><li>• Activity report for building maintenance</li><li>• Bi-weekly activity reports to the Head of Administration</li><li>• Execution report on, for example, cleaning services to Supervisor</li><li>• Specific feedback to requesting party as part of the escalation procedure for reception services, building management, etc.</li></ul>			<ul style="list-style-type: none"><li>• Monthly facility services reports provided as main support documents for management and invoicing, together with monthly operational reports and time sheets;</li><li>• Facility Management contract is in place for years 2019 – 2023;</li><li>• Ticketing tool records in electronic version;</li><li>• HQ utilities consumption records in electronic version;</li></ul>	

<ul style="list-style-type: none"> <li>• Updated records of solutions found, or information provided to internal customers, procurement officers or contract managers</li> <li>• Monthly report based on ticketing tool outputs</li> <li>• On demand facility management satisfaction survey (or feedback based on day-to-day business)</li> <li>• Quarterly quality report on cleaning for supplier's internal control</li> <li>• Updated inventory system based on movement and inventory checks</li> <li>• Inventory committee reports</li> </ul>	<ul style="list-style-type: none"> <li>• Facility Management satisfaction management feedback during an appraisal exercise;</li> <li>• ABAC ASSETS database up to date;</li> <li>• Building improvements – A/C, electricity distribution, hygiene;</li> <li>• Frequent communication with the building owner (mails, ED letters);</li> <li>• HQ extension project preparation phase (letters, mails, meetings);</li> <li>• GSMC extension project planning phase (project documentation)</li> <li>• Identification and implementation of network of Agency Site Managers, including for implementation of H&amp;S measures across all sites.</li> <li>• In addition to the planned activities, extensive work was done on the management of COVID-19 countermeasures, ensurance of hygiene and procurement and supply of special material, such as individual protective equipment, disinfection etc.</li> </ul>
--	--

Objective 7: Strategic Planning and Administrative Board Management (WBS 1.01.07)	
Expected results	2020 results
<p>In-line with the Agency's regulation and the Rules of Procedure for the Administrative Board (Board). During this period, the Agency intends to hold a minimum of two scheduled Board meetings. The Agency will also provide the Board with the necessary secretariat over the course of the year.</p> <p>The Agency's strategic planning function is a combination of several activities that are required to support the management team and, indirectly, the Administrative Board. In particular, this function focuses on:</p>	<p>As planned</p>

<ul style="list-style-type: none"> <li>Ensuring the development of the programme documents, including the Single Programming Document and the Annual Activity Report</li> </ul>			
<b>Targets</b>			<b>2020 results</b>
<b>Indicators</b>	Schedule of meetings for year are not altered	4 meetings	5 meetings (additional meeting needed to allow the election of the new Executive Director)
	Timely preparation of programming documents and corresponding reporting	100%	100%
<b>Planned outputs</b>			<b>Actual outputs</b>
<ul style="list-style-type: none"> <li>Agenda and minutes of each meeting.</li> <li>Board decisions, including written procedures.</li> <li>Programming document</li> <li>Annual activity report</li> </ul>			As planned

<b>Objective 8: Achieve GSA-wide capability for Records and Information Management (RIM) (WBS 1.01.08)</b>	
<b>Expected results</b>	<b>2020 results</b>
Smooth implementation of an enterprise content management system (ECM), comprising of a Document Management System (DMS) and a Records Management System (RMS), its integration with other GSA tools, and compliance with CADM and documents and records management policies and processes to enhance value, improve efficiency and comply with legal obligations.	The DMS was deployed in October 2018.
<b>Targets</b>	<b>2020 results</b>



<b>Indicators</b>	RIM (Records Management) governance definition: policies, processes and procedures	100%	10% (Documents and Records Management Policy)
	Implementation of the ECM	100%	DMS development: 100% as defined by management; DMS implementation: 100%; RMS design, development and implementation: 0%
	Number of staff, including trainees and in-house consultants trained	100%	DMS: 100% RMS: 0%
<b>Planned outputs</b>			<b>Actual outputs</b>
<ul style="list-style-type: none"> <li>Enterprise content management system</li> <li>RIM governance: relevant policies, processes and procedures</li> <li>Document baselines and CADM functionality for core tasks</li> <li>Members of staff, trainees and in-house consultants trained</li> </ul>			<ul style="list-style-type: none"> <li>ECM – the part managing documents is in place. It includes CADM functionalities, e.g. baseline management.</li> <li>Available documentation: Documents and Records Management Policy; Documents Management Process; Documents management procedures and video tutorials;</li> <li>All Agency's employees are trained via induction training sessions for new comers, monthly training sessions offered to all users, training sessions requested by users as needed.</li> </ul>

<b>Objective 9: Successful compliance with personal data protection rules applicable to the GSA (WBS 1.01.09)</b>	
<b>Expected results</b>	<b>2020 results</b>
Full Agency compliance with data protection rules (Regulation (EC) 45/2001)	Full compliance

		Targets	2020 results
Indicators	% of compliance with data protection rules	100%	100%
Planned outputs		Actual outputs	
At the Agency / departmental level there are no further outputs.		No further outputs	

Objective 10: Successfully undertake risk management activities (WBS 1.02.01)			
Expected results		2020 results	
Ensuring that the corporate risk management process is implemented		Risk was managed at corporate level with the risk and opportunities register being reviewed and updated although not with the expected frequency.	
		Targets	2020 results
Indicators	Timely preparation of programming documents and corresponding reporting	100%	100%
	Quarterly Corporate Risk Boards held	4	50%
Planned outputs		Actual outputs	
Outputs relating to the multi-annual work programme objectives:		<ul style="list-style-type: none"> <li>2020 Internal Audit report</li> <li>Risk register</li> </ul>	
<ul style="list-style-type: none"> <li>Risk register</li> </ul>			

Objective 11: Measure and improve the quality of GSA processes (WBS 1.02.02)		
Expected results		2020 results
Appropriate quality management and the related ISO 9001 certification of the Agency, the development of an Integrated Management System (IMS) for other standards that the Agency intends to be certified for in future.		<p>The GSA WBS was updated and release as Ver. 2021 in December 2020. The Agency closed a 3-year certification audit in 2020 which implied that a recertification had to take place. <b>Recertification was successfully achieved in October 2020</b>, supported by an extensive agency-wide internal quality audit programme.</p> <p>The IMS manual was reissued reflecting the continue development of the IMS of the agency and to align it for the ISO 9001 recertification.</p> <p>.</p>
Targets		2020 results
Trend of open actions in the continuous improvement database	30	41 (25 corporate + 16 from GSMC, the latter are the result of an internal quality audit conducted in the centre in July 2020).
Planned outputs		Actual outputs
<p>Outputs relating to the multi-annual work programme objectives:</p> <ul style="list-style-type: none"> <li>• ISO 9001 required activities (annual quality audit plan and reports, management review)</li> <li>• Continuous improvement database, including suggestions for improving non-conformances</li> <li>• GSA WBS and WPDs</li> <li>• Quarterly review of core tasks and performance indicator tracing</li> <li>• Performance indicator flow-down from SPD to work packages and staff annual objectives</li> <li>• IMS document libraries (including policies, processes, procedures and work instructions)</li> <li>• Staff training on quality, IMS and best practices</li> </ul>		<ul style="list-style-type: none"> <li>• Annual Quality Audit plan approved and released (Q1 2020); internal quality audit reports released (Q2 2020); annual management review presentation held in September 2020.</li> <li>• GSA WBS and WPDs kept up to date throughout the year and baseline for 2021 established;</li> <li>• Regular KPI tracking and quarterly review meetings (3 out of 4);</li> <li>• A comprehensive review of policies, process, procedures, and work instructions for each department was conducted as part of the recertification preparations.</li> <li>• Continuous improvement database regularly updated, tracked and actions followed up;</li> </ul>

	<ul style="list-style-type: none"> <li>• IMS document libraries maintained on the DMS with access via Publication Centre for all the Agency;</li> <li>• 1 quality breakfast held.; further such events derailed by COVID-19. Staff training held as required. Monthly Quality Officers meetings held.</li> </ul>
--	--

Objective 12: Ensure GSA fulfils statutory obligations (WBS 1.04.01 and 1.04.02)	
Expected results	2020 results
<p>The Agency's internal control coordination and risk management activities are on-going tasks that help fulfil its statutory obligations. These include:</p> <ol style="list-style-type: none"> <li>1. Liaising with, and reporting to, the EC Internal Audit Service and with internal and external stakeholders on internal control issues</li> <li>2. Evaluating the compliance and effectiveness of the internal controls of the organisation by assessing the implementation of 16 Internal Control Standards (to be substituted by the EC Internal Control Framework)</li> <li>3. Reporting on the follow-up of all open recommendations and action plans (from the Internal Audit Service, Internal Audit Capability, external auditors, the Court of Auditors and the Parliament's discharge)</li> <li>4. Coordinating the Agency's Internal Audit Capability in the preparation, execution, reporting and monitoring of recommendations relating to internal audit activities</li> <li>5. Coordinating the Agency's external auditors, as required under Delegation Agreements in the procurement of the audit services and the preparation, execution, reporting and monitoring of recommendations related to these audits</li> <li>6. Management of and reporting on all actions related to the Gifts and Hospitality Policy, including the gift registry</li> <li>7. Managing all actions relating to the Agency's Anti-Fraud Strategy</li> </ol>	<ul style="list-style-type: none"> <li>• The recommendations stemming from the IAS audit on "GSA ICT governance, 2018" were fully implemented. The implementation of IAS audit on "GSA EGNOS Exploitation" was partially completed, to be finalised in 2021. An IAS audit on "GSA Galileo Exploitation" was completed in Q4 2020;</li> <li>• GSA developed GSA Internal Control Framework, that was approved by GSA Administrative Board in Q1 2021;</li> <li>• We followed up on pending recommendations from the European Parliament, and particularly on those related to Conflict of Interest;</li> <li>• An audit by the GSA Internal Audit Capability has been completed on the handling GSA SAB access rights;</li> <li>• Three audits on the use of EC delegated funds in 2019 were planned and procured in 2020 and executed in 2021;</li> <li>• The Gifts and Hospitality Policy, including the GSA gifts registry has been maintained;</li> <li>• A GSA review report on the implementation of the GSA Anti-Fraud Strategy was executed in 2020 and approved in Q1 2021;</li> </ul>

8. Assessing requirements for developing and implementing the GSA Conflict of Interest Policy			<ul style="list-style-type: none"><li>Active management of Anti-Fraud Strategy topics led to the issuance of the Conflict of Interest Implementing Rules finally reviewed by EC;</li><li>GSA’s Business Continuity Strategy, Plan and Procedure finalised and approved.</li></ul>
9. Execute a business continuity impact analysis and develop the different elements of the GSA’s corporate business continuity management			
Targets			2020 results
Indicators	Timely execution of the corresponding yearly audits	7 audits	2 audits executed. Effort associated with one IAC audit changed into consultancy support. 3 DA audits planned but executed in 2021 following prioritisation considerations. Support to investigations provided as required.
	% of key elements of the Anti-Fraud Strategy defined and implemented	100%	100%
	Timely issuance of the Internal Control Standards compliance report	100%	Internal Control Framework prepared.
	Timely issuance of the Declarations of Compliance (15/Feb)	100%	100%
Planned outputs			Actual outputs
<ul style="list-style-type: none"><li>GSA internal audit capability audit report</li><li>EC internal audit service audit report</li><li>External auditors audit reports for delegated funds</li><li>Declaration of assurance and management declarations under Delegation Agreements</li><li>EC Internal Control Standards compliance report</li><li>Anti-fraud internal information and support</li><li>Gifts and conflict of interest registries</li><li>Business continuity management framework documentation</li></ul>			<ul style="list-style-type: none"><li>An audit report from the IAC, a consultancy report on GSA ICF;</li><li>One audit report from the IAS;</li><li>Three external auditors audit reports for delegated funds postponed until 2021;</li><li>Declaration of assurance and management declarations;</li><li>GSA Internal Control Framework upgrade;</li><li>Anti-fraud internal information and support, Anti-Fraud implementation status report;</li><li>Gifts and conflict of interest registries maintained;</li></ul>

- GSA corporate Business Continuity Strategy, Plan and Procedure completed.

Objective 13: Develop Corporate Communications for the GSA (WBS 1.03.02)			
Expected results			2020 results
<ol style="list-style-type: none"> <li>1. Strengthened and recognised corporate identity for the Agency</li> <li>2. Enhanced overall awareness of the Agency and better understanding of its mission, vision and values</li> <li>3. Increased awareness of the Agency's Work Programme and achievements</li> <li>4. Consolidated and strengthened relationships with key European players in the space sector and key GNSS user communities</li> <li>5. Strategic partnerships built and/or strengthened</li> <li>6. Increased awareness of and appreciation for the Agency's work by relevant EU stakeholders in the Member States</li> <li>7. Increased partnership and appreciation for the Agency's contribution by GSA facility host countries</li> <li>8. Established GSA crisis communications procedures</li> </ol>			Achieved
Targets			2020 results
Indicators			
YoY increase in traffic to key event/ media/social media/internet touchpoints	15 % Increase		Achieved

YoY increase in user base across all GNSS markets and their components	15 % increase	Achieved
YoY expansion of Galileo Initial Services market	15 % increase	Achieved
Planned outputs		Actual outputs
<ul style="list-style-type: none"> <li>Annual Communications Plan</li> <li>Crisis Communications Manual</li> <li>Website creation, maintenance and management</li> <li>Social media campaigns</li> <li>Production and dissemination of publications</li> <li>Production and dissemination of videos</li> <li>Event creation, participation and management (exhibition creation, advertising, promotion and presentation)</li> <li>Media and public relations initiatives</li> <li>Newsletter production and distribution</li> <li>Feedback surveys and studies</li> </ul>		<ul style="list-style-type: none"> <li><b>2020 , all activities were transferred online</b></li> <li><b>Website creation, maintenance and management:</b> in 2020 there were 402,646 page views on the GSA website, 56,477 on useGalileo.eu, 43,842 on the GSC Help Desk site and 366,954 on the EGNOS portal user support site.</li> <li><b>Social media campaigns:</b> GSA intensified the number of online campaigns combining organic and paid promotion to launch several competitions (MyGalileoSolution, MyGalileoDrone, Geomatics on the move, Farming by Satellite, and Galileo Masters) and assisted as well several H2020 projects with the promotion of their progress and products release. Social media were used extensively also to strengthen GSA recruitment capacity, and its ability to reach industry and service providers in calls and other initiatives. Throughout the year, GSA ran about 25 main campaigns, publishing and engaging continuously on 5 social media networks. In addition GSA has managed to consolidate channels with DG-COM, DG-DEFIS, and other EU insitutions to create joint campaigns and boost visibility.</li> <li><b>EUSPA preparation:</b> during the second half of 2020 the Agency started with the preparatory work for GSA-EUSPA transition and related corporate communication activities.</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Production and dissemination of videos:</b> Production of ‘several videos including “Meet Rodrigo da Costa, the new GSA Executive Director” (in 2 versions: 1 for the press and 1 for internal purpose)</li> <li>• <b>Event creation, participation and management:</b> 10 events, including but not limited to: the 12th Space Policy Conference, and the full organisation and implementation of the EU Space Week 2020 on line for the 1<sup>st</sup> time together with the German Presidency of the Council</li> <li>• <b>Media, public relations initiatives:</b> In addition, press initiatives including but not limited to: <ul style="list-style-type: none"> <li>– 13 press releases have been published</li> <li>– New Executive Director of the European GNSS Agency (GSA – future EUSPA) takes up office in all the EU languages</li> <li>– Galileo Green Lane – easing pressure at the EU’s internal borders in several EU languages</li> <li>– 4 interviews have been given to the major European press</li> </ul> </li> </ul>
--	--

Objective 14: Develop internal communications for the GSA (WBS 1.03.03)	
Expected results	2020 results



<p>The Agency uses internal communications to empower its staff and to ensure they remain ‘on brand’. This objective is meant to:</p> <ul style="list-style-type: none"> <li>• Foster a culture of positive team spirit and customer service</li> <li>• Promote better staff understanding and awareness of the Agency’s mission, team and objectives</li> <li>• Enable staff to project a correct and consistent message about the Agency’s key objectives to the outside world, allowing them to serve as “communication ambassadors”</li> <li>• Improve the working environment by increasing communication flow across departments and by enhancing information sharing</li> </ul>			As planned	
			<b>2020 results</b>	
Indicators	YoY increase of traffic to key media/ social media/ internet touchpoints for internal staff	Targets 15% Increase	Achieved	
	YoY increase in positive response to internal communications strategy	15% Increase	Achieved	
<b>Planned outputs</b>			<b>Actual outputs</b>	
<ul style="list-style-type: none"> <li>• Annual communications plan</li> <li>• Event creation, participation and management</li> <li>• Newsletters production and distribution</li> <li>• Feedback surveys and studies</li> </ul>			<ul style="list-style-type: none"> <li>• Expansion and production of 45 issues of weekly GSA Internal newsletter ‘CONNECT’ including more than 100 articles specifically drafted for the staff and partly by the staff and a survey to receive feedback from staff on the newsletter.</li> <li>• During teleworking, an additional “stay at home” Connects were issued, creating opportunities for staff support and engagement.</li> <li>• Support of internal communications of quality control, ISO certification, cyber security, newcomer support, etc.</li> </ul>	

Objective 15: Develop stakeholder communications for the GSA (WBS 1.03.04)				
Expected results			2020 results	
The Agency maintains and improves stakeholder liaison and communications to: <ul style="list-style-type: none"><li>• Increase dialogue and strategic partnerships aimed at fulfilling mutually-shared goals</li><li>• Enhance positive and open working relationships, exchange information and facilitate communications and liaison</li><li>• Increase the visibility of and appreciation for the Agency’s work and its role within the EGNSS programmes</li><li>• Build trust and engage stakeholders as partners who can act as multipliers and further share key information and actively participate in the Agency’s work and success</li><li>• Better awareness amongst key stakeholders of the Agency’s vision, mission and what it needs to succeed</li><li>• Increase understanding and appreciation for the Agency’s work, especially amongst the Commission, DG DEFIS colleagues, members of the GSA Administrative Board and relevant members and committees in the European Parliament</li></ul>			As planned	
Targets			2020 results	
Indicators	YoY increase of traffic to key media/ social media/ internet touchpoints	15% Increase	Achieved	
	YoY increase in profile and awareness by the stakeholder base across all Target Audience entities	15% Increase	Achieved	
Planned outputs			Actual outputs	

<ul style="list-style-type: none"> <li>• Annual communications plan</li> <li>• Website creation, maintenance and management</li> <li>• Social media campaigns</li> <li>• Production and dissemination of publications</li> <li>• Production and dissemination of videos</li> <li>• Event creation, participation and management (exhibition creation, advertising, promotion and presentation)</li> <li>• Media and public relations initiatives</li> <li>• Newsletter production and distribution</li> <li>• Feedback surveys and studies</li> </ul>	<ul style="list-style-type: none"> <li>• 2020 Communications plan published and implemented, switching all activities online;</li> <li>• Organised a number of VIP visits to the Agency's headquarters, including hosting visits of EC Commissioner, EU Space Agencies (Italy, Romania, Germany), European Ministers (French, Czech, Italian) ;</li> <li>• In 2019, a GSA delegation was invited to speak at a meeting of the ITRE Committee in Brussels, to participate to the Space Working Party under an invitation of the Finnish Presidency of the Council</li> <li>• Preparation of ad hoc briefings on space benefits for the different EU Parliament Committees</li> <li>• Distribution of 4 editions of a targeted newsletter to GSA Admin Board members: 'AB CONNECT';</li> <li>• Ongoing communications and information provision to key stakeholders as needed.</li> </ul>
---	---

Objective 16: Ensure full compliance with the Commission Security Rules for the GSA (WBS 2.02.01)	
Expected results	2020 results
<ul style="list-style-type: none"> <li>• Management of authorisations to access EU Confidential Information (EUCI);</li> <li>• Management and maintenance of COMSEC accounts held by the Agency;</li> <li>• Issuing security incident reports;</li> <li>• Maintaining records of entries/exits to secured areas;</li> <li>• Issuing security intervention reports;</li> </ul>	<p>The GSA has ensured the handling of EUCI and COMSEC material in compliance with the applicable rules and regulations.</p>

<ul style="list-style-type: none"> <li>Delivery of EUCI data pack.</li> </ul>			
		<b>Targets</b>	<b>2020 results</b>
<b>Indica</b>	% of compliance with Commission decisions 2015/444 and 2015/443	100%	100 %
<b>Planned outputs</b>			<b>Actual outputs</b>
<ul style="list-style-type: none"> <li>Authorisations to access EUCI</li> <li>Security incident reports</li> <li>Records of entries/exits to secured areas</li> <li>Security intervention reports</li> <li>Delivery of EUCI data pack</li> <li>COMSEC transfers and transportations</li> <li>Policy governance and authorisation of GSMC Operational COMSEC activities as defined in GSMC Operations and Preparation Objective 3.</li> </ul>			<ul style="list-style-type: none"> <li>111 authorisations to access EUCI;</li> <li>3 security incident reports;</li> <li>Records of entries/exits to secured areas (N/A);</li> <li>Delivery of EUCI data pack;</li> <li>100% of all necessary and planned COMSEC transfers were successfully performed.</li> <li></li> </ul>

<b>Objective 17: Assure the annual accreditation reviews of internal Agency systems/areas (WBS 2.05.06)</b>			
<b>Expected results</b>			<b>2020 results</b>
<ul style="list-style-type: none"> <li>Organisation of the accreditation review of internal Agency systems/areas and reporting accordingly to the Agency's security accreditation authority;</li> <li>Accreditation statements for internal systems signed by the system accreditation authority.</li> </ul>			The Agency has ensured the maintenance of internal systems for the handling of EUCI and COMSEC material in compliance with the applicable rules and regulations, through regular review and release of valid accreditation statements
		<b>Target</b>	<b>2020 results</b>
<b>Indica</b>	Number of internal accreditation reviews	10	11

Planned outputs	Actual outputs
<ul style="list-style-type: none"><li>• Security accreditation report;</li><li>• Recommendations to the SAA;</li><li>• SAA decision / authorisation to operate Agency areas/systems.</li></ul>	<ul style="list-style-type: none"><li>• Security accreditation report: 5</li><li>• Recommendations to the SAA: 13;</li><li>• SAA decision / authorisation to operate Agency areas/systems: 8</li></ul>

## 1.6 Delegated Tasks

There were various delegation agreements in place during the reporting period to cater to specific activities. The list below shows which delegation agreements and contribution agreements were in force:

- PRS delegation agreement, signed in 2011.
- EGNOS Exploitation Delegation Agreement signed in 2014.
- Galileo Exploitation Delegation Agreement signed in 2014.
- Horizon 2020 Delegation Agreement, signed in 2014.
- GOVSATCOM preparatory actions Contribution Agreement, signed in 2020

### 1.6.1 Delegation Agreement for Public Regulated Service (2011)

The Agency managed the Commission's PRS Pilot Project 2 (P3RS-2) which started in December 2013. This included the procurement of 20 PRS pre-operational receivers in two batches of 10 units each, with each batch equipped with a different security module.

The first batch was certified in 2018 according to Council security rules. The Agency expects the second batch to be certified in Q2 of 2021. During the reporting period, the Agency delivered these receivers to three consortia of Member State entities under the Joint Test Activities grant.

### 1.6.2 Delegation Agreement for EGNOS Exploitation

The Delegation Agreement for EGNOS Exploitation was signed on 16 April 2014. The agreement includes the provision of the Open Service, Safety of Life Service and the EGNOS Data Access Service to users through to 2021. In November 2020, this Delegation Agreement was amended a further time, reducing the total delegated budget from EUR 1.552 billion to EUR 1.514.

2020 was the year of the COVID-19 pandemic. The EGNOS services were maintained and remained resilient to the crisis, but impacts on the Programme did appear. In particular:

- V3 sites preparation activities: sites security visits could not be performed (at least 6 sites are delayed directly due to restricted access) and several RIMS sites raised a Force Majeure;
- V242A: Thales Alenia Space (TAS)/ESA declared a first schedule impact of 2 months;
- V3: Airbus/ESA declared a first schedule impact of 3 months.

The Agency expects more impact to materialise in 2021.

Because of BREXIT, at the end of 2020 and due to the fact EGNOS is not part of the new EU-UK relationships agreements, the UK users of the SoL and EDAS services were notified, with a 6 months advance notice, about service delivery termination on 25 June 2021.

Throughout 2020, EGNOS service performances were delivered in line with the service definition document, with the exception of some peripheral areas, in particular the South-East EU impacted by the unavailability of RIMS Alexandria (Egypt) and the North-East EU during the period where the GPS PRN23 satellite was unusable and GPS-III satellites were not yet integrated into EGNOS operations. More precisely, on 9 March, the US declared the PRN23 satellite unusable, resulting in an impact on Safety of Life service availability over a North-East part of the service area. The impact on performance did not lead to any missed operations reported by any user, though the number of degradation events increased over time due to the combination of the degraded GPS geometry with other system events. This situation was solved thanks to the implementation by GSA of a fast-track System upgrade process that led to the integration on 27 July of the two new GPS III satellites into EGNOS V2 system configuration.

During the reporting period, intensive negotiation for the next Multi-Financial Framework started.

Some other key Agency activities undertaken in 2020, in the main areas of the Programme include:

- For the preparation of the next EGNOS Service Provision phase:
  - The Next EGNOS Service Provider Initial Offer evaluation started and GSA sent invitations to dialogue;
  - EGNOS V2 Maintenance contract negotiations took place and GSA expects a consolidated offer Q1/2021.
- For EGNOS V3 System Evolution:
  - A delay of 18 months for EV3.1 and EV3.2 QR dates, and of about 1 year on most of the Customer Furnished Items (CFI) dates, was formalised by an ESA unsolicited Change Proposal. GSA tackled the major impacts this represents for the Programme, specifically by introducing the new release V243 and by integrating GEO-4 into EGNOS V3.1;
  - From the 43 RIMS procurement Invitations To Tender (ITTs) which were sent, 20 contracts were signed. For the sites for which contract is in place, a total of 13 sites passed the Infrastructure Acceptance Review Step 1 milestone.
- For EGNOS V242 System Evolutions and Operational Transition:
  - V242-A Acceptance Review between GSA and ESA was concluded and the Hand Over process with ESSP started. V242-A will solve issues of the CPF obsolescence;
  - GSA issued a Request for Proposal to TAS for a system release V243 which will tackle NLES G2 obsolescence and the introduction of GEO-3 in EGNOS V2.

- For GEOs:
  - Entry into Service Provision Phase for GEO-3 for a duration of 15,25 years;
  - GEO-4 contract awarded.
- For EGNOS Security:
  - Support to the Commission continued in order to obtain the EGNOS V3 RIMS Sites Assurance process approved at the Security Accreditation Board;
  - Work has started to prepare information to the SAB about the first site inter-connections of UNCLA sub-systems and about the first test signal transmissions through GEO-3, both planned in 2021.
- For EGNOS safety:
  - Continuous coordination with stakeholders in particular EASA, to ensure EGNOS Safety requirements are followed. In 2020, it included the use of INMARSAT 4F2 in operations during the testing of EGNOS V242-A and the use of GPS III into the operational EGNOS service;
  - Contingency plan under development to tackle the risk of having less than 3 CPFs operational and decrease its impact on continuity of service;
  - GSA worked closely with WG-C to explore the development of the A-RAIM safety case for the “Integrity Support Message” (ISM) generator, ensuring that the A-RAIM service provision is proportional to the safety requirements.
- For EGNOS Mission, User Segment and Standardisation development:
  - Continuous organisation and/or involvement in key meetings, in particular the AEOLUS meetings and EUROCAE WG62. Continuous support to the EC for the tender evaluation process of the H2020 mission study call for an integrity service complementing EGNSS High Accuracy;
  - Successful kick-off of ERGO (rail panel for EGNSS service for rail safety) meeting and successful kick-off of EGNOS Maritime Service M2 Review dealing with Maritime Service Requirements;
  - Endorsement of Dual Frequency Multi Constellation and Galileo SARPS at the ICAO Navigation Systems Panel;
  - Development of a proposal for an E-GNSS service demonstrator, which could allow to deliver DFMC demonstration signals in 2023, to be presented to EC early 2021.
- For Service Adoption:
  - By the end of December 2020, 741 EGNOS based procedures were implemented at 365 airports and 24 waypoints for helicopter route in 31 European countries/regions (including Guernsey, Jersey, Montenegro, Norway, Serbia, Switzerland and UK);
  - The overall number of new Localiser Performance with Vertical guidance procedures published in 2020 is 129.



### 1.6.3 Delegation Agreement for Galileo Exploitation

In 2020, the Galileo services were provided in line with the service declaration. The Delegation Agreement was amended in November 2020 increasing the funding from XX to €2.94B. The number of Galileo users continued growing, approaching now 2 billion users worldwide. The Galileo performances continued being published in the GNSS Service Centre (GSC) website. The Galileo Reference Centre (GRC) continued monitoring the Galileo service performance, and to act as the main source of input KPIs reporting (complemented with MS reports).

On 14 December, the Galileo service provision was affected by a service incident that resulted in a temporary unavailability of the service in the early hours of the day. During the incident, the Galileo signal in space automatically changed to notify immediately the users that the data being transmitted is potentially unreliable. Following the outage, the incident review board was set up, under GSA leadership and participation of EC, ESA, and industry, to review the circumstances of the incident and draw recommendations. In addition, an independent Advisory Board is being set up by the European Commission, with the objective to review and assess quality and completeness of outcome of Incident Review Board (IRB) and to provide guidance for the implementation of recommendations stemming from such IRBs, in particular on what concerns improvement to strength the failure tolerance of the system.

Furthermore, the main highlights of 2020 include:

- the Galileo service provided with outstanding performances despite COVID-19, thanks to strong commitment from all industrial partners and the support from the Members States
- the Return Link Service was declared in early 2020, and this life-saving service already demonstrated its added value during the French skipper rescue mission at the Vendée Globe yacht race
- the implementation of the actions stemming from the lessons learned from the Service Incident of July 2019 continued,
  - increasing the Service and System Robustness
  - preparing the ground for the forthcoming evolution with the contracting of the development of the pre-Operational chain for GMS 3.0 migration and the expansion of the hosting capability of the GCCs
- under GSA leadership of the Task Force set-up after the July 2019 service incident, the deployment of System Build 1.5.1 continued throughout the last quarter of 2020

- a key milestone was achieved in the fourth quarter with the handover of the rest of the maintenance activities, including evolutive maintenance for the VAL and OPE chain from the ESA/WP3x to the GSA/GSOp
- the full operational capability was re-baselined relaying on the GSA Services Roadmap and Service Implementation Plans (OS/Open Service Navigation Message Authentication (OS-NMA), PRS, SAR, HAS)
- GSA-produced the service requirements documents (SvRD) which will service as a corner-stone for the establishment of the Galileo Second Generation technical baseline
- the internal OS-NMA testing campaign has started with the first signal authentication performed in November 2020.
- the High Accuracy Data Generator, GSC v1.3 Critical Design Reviews were completed
- the HAS Phase 0 was authorised by the Security Accreditation Board and preparation activities are ongoing
- the implementation of new the Galileo services (RLS Remote beacon activation, Early Warning Service, and Ionospheric Prediction Capability) was initiated under GSA leadership
- all fundamental elements projects aiming at developing receivers and associated technologies for autonomous driving, mass market, high-precision, digital tachograph, maritime, SAR, timing & synchronization and transversal markets were contracted, and several of these projects are producing concrete results.

These highlights were sustained by regular activities in the areas of project management, project control, contract and procurement management, operations, accreditation preparation, service and security engineering, market uptake, and quality.

Also, in 2020 the deployment of the system build 1.7 (necessary for launch 11) progressed through the year despite significant delays on the ground segment development. The deployment of the system build 1.7 is under careful monitoring.

Lastly, several outreach and communications activities were delivered, including but not limited to the User Consultation Platform, the European Space Week and MyGalileoSolution (the biggest Galileo competition ever, scouting for Location-Based Service solutions).

#### **1.6.4 Delegation Agreement for Fundamental Elements**

Fundamental Elements is an EU Research and Development funding mechanism supporting the development of E-GNSS-enabled chipsets, receivers and antennas and fostering the competitiveness of EU industry. The Fundamental Elements activities are included in the delegation agreements for Galileo and EGNOS exploitation, and are coordinated as an integrated activity.

In 2020, the Fundamental Elements projects related to all the E-GNSS services focused on the main market segments and, in particular:

- Aviation with two ARAIM projects, one concluded in May, second one still ongoing. Under EGNOS activities there are two ongoing projects (EDG2E, MUGG) focused on DFMC SBAS receiver development.
- Aviation and Maritime with five MEOSAR projects in the last phases of testing.
- Maritime with the Satellite Based Augmentation System (SBAS) shipborne receiver (MAREC project) successfully concluded in March.
- Road with one project (ACCURATE) kicked off in September focused on OBU for autonomous driving, OS-NMA user terminal (PATROL project) running and on-track.
- OS-NMA exploitation supported by two ongoing projects (ARGOS, OSNMA+) developing enhanced user terminals.
- Timing and Synchronisation with the Galileo timing receiver for critical infrastructures projects (GIANO and GEARS) running and on track.
- Mass Market with six projects (APOLLO, eMAPS, Galileo of Things, H-GEAR, OSCAR, PROLONG) running their second halves.
- Transversal activities, such as development of multi-frequency multipurpose antenna (two projects GAMMA and MAGICA kicked off and running).
- The Public Regulated Service (PRS). There was only one project for PRS called FRAME. No activity was carried out during the reporting period except for the internal preparation of a new specific contract expected to be launched in the next calendar year.

In summary, in 2020 under Fundamental Elements program are running 20 projects (financed by grants) and two procurements. Four projects have been successfully concluded.

All ongoing and concluded projects are listed below:

	<b>Name of the project</b>	<b>Market segment</b>	<b>Status</b>	<b>Expected output</b>
1	ACCURATE	Road	On-going	On-Board-Unit for fully automated driving.
2	AMETRINE	Maritime	On-going	Personal Locator Beacon including GNSS receiver with Return Link Services.
3	APOLLO	Mass Market	On-going	GNSS software receiver for Internet of Things (IoT), Technology Readiness Level (TRL) 7.
4	ARGOS	Transversal	On-going	GNSS User Terminal implementing OS-NMA, TRL 7.
5	COBALT	Maritime	On-going	Personal Locator Beacon including GNSS receiver with Return Link Services.
6	DARP	Aviation	On-going	Advanced ARAIM receiver prototype.
7	EDG2E	Aviation	On-going	DFMC SBAS receiver prototype.
8	eMAPS	Mass Market	On-going	Localisation Based Service (with receiver) for smart cities and autonomous driving.
9	ESCAPE	Road	Concluded in 2019	GNSS Engine for autonomous driving prototype.
10	FANTASTIC	Agriculture, Surveying	Concluded in 2019	High-precision professional receiver and antenna prototypes.
11	Galileo of Things	Mass Market	On-going	GNSS software receiver for IoT, TRL 7.
12	GAMMA	Transversal	On-going	Multi-frequency, multi-constellation antenna, TRL 7.
13	GEARS	Timing & Synchronization	On-going	Timing Receiver prototype TRL 7
14	GIANO	Timing & Synchronization	On-going	Timing Receiver prototype TRL 7
15	GLAD	Aviation	Concluded in 2020	Advanced ARAIM receiver prototype.
16	H-GEAR	Mass Market	On-going	eCall and anti-theft system, including a device, TRL 7.
17	iSAAR	Aviation	On-going	MEOSAR beacon for aviation.
18	MAGICA	Transversal	On-going	Multi-frequency, multi-constellation antenna, TRL 7.
19	MUGG	Aviation	On-going	DFMC SBAS receiver prototype.

	Name of the project	Market segment	Status	Expected output
20	MAREC	Maritime	Concluded in 2020	SBAS-enabled Shipborne Receiver, TRL 7.
21	OSCAR	Mass Market	On-going	GNSS receiver for premium mass market.
22	OSNMA+	Transversal	On-going	GNSS User Terminal implementing OS-NMA, TRL 7.
23	PATROL	Road	On-going	User Terminal implementing OS-NMA capability for digital tachograph.
24	PHOENIX	Maritime	On-going	Personal Locator Beacon including GNSS receiver with Return Link Services.
25	PROLONG	Mass Market	On-going	Prototype of a receiver for Premium Mass Market (IoT).
26	TAUCETI	Aviation	On-going	MEOSAR ELT beacons for aviation.
27	FRAME	Public regulated service	On going	Analysis, standards and risk assessments.

In 2021 are expected to be initiated 15 projects (under grant financing) and two procurements.

#### **1.6.5 Delegation Agreement to support start-ups and entrepreneurship**

The Agency has been delegated actions to support start-ups and entrepreneurship.

Based on the experience of MyGalileoApp competition, a new initiative called MyGalileoSolution was launched this year. With a prize pool of almost € 1.5 million, MyGalileoSolution is the largest competition ever organised by the GSA developing ideas until the final products with different levels of maturity. The 6 winners of the competition were announced in March 2021 on a dedicated online event called the Entrepreneurship Day. The winning ideas were focused on the use of GNSS in the innovative areas of robotics, Internet of Things, enhanced human, professional sports monitoring, smart anchoring and mobile gaming.

Also, GSA launched MyGalileoDrone competition to design, develop, test and prepare for commercial launch a drone-based application and/or service able to provide a position and/or time fix by using Galileo-enabled receiver. In December 2020, the prize entered the final phase with many teams selected from 19 EU countries (including Switzerland) reaching a wide participation from SMEs and Start-ups. My GalileoDrone mobilised start-ups from all over Europe contributing to the new pioneer effort of the Agency to support entrepreneurship in space downstream.

### 1.6.6 Delegation Agreement for Horizon 2020

The EC delegated activities for implementing the Horizon 2020 - Framework Programme for Research and Innovation to the Agency via the Delegation Agreement signed in April 2014.

In 2020, the Agency managed a portfolio of 79 projects from Horizon 2020's first, second, third and fourth calls. By the end of 2019:

- 1<sup>st</sup> call: all technical activities of 27 projects were closed,
- 2<sup>nd</sup> call: 12 out of 13 projects were closed from the technical point of view,
- 3<sup>rd</sup> call: 12 out of 18 projects were closed from the technical point of view ,
- 4<sup>th</sup> call: all 12 projects are running,
- 5<sup>th</sup> call: all 9 projects are running.
- 

The following is the portfolio of projects managed by the Agency in 2020, including the projects of the 5<sup>th</sup> Call:

Name of the Grant	Market Segment	Status	Description
5LIVES	Aviation	Closed	Product and services within the rotorcraft sector, and in particular for handling Aerial Mission Critical operations.
BELS	Awareness Rising	Closed	Coordinated supporting actions to enhance the presence of EGNSS and of European enterprises in South East Asia.
BEYOND	Aviation	Closed	Coordination and support action in Eastern Europe and Mediterranean countries.
CaBilAvi	Aviation	Closed	Bridging activity for production, update and revision of education and training materials on new GNSS-based avionics.
COREGAL	Surveying & Mapping	Closed	Fixed-plane unmanned aerial platform equipped with GNSS-based biomass sensor.
DEMETRA	Timing & Synchronisation	Closed	Common Core Infrastructure supporting nine Time Services, composed by a Time Service Generator and User Terminals.

e-Airport	Aviation	Closed	Integrated ICT application based on EGNSS empowering airport operators, ground handlers, and Air Traffic Control (ATC).
E-KnoT	Awareness Rising	Closed	Concrete and effective set of actions in the field of education in GNSS.
ELAASTIC	Location Based Services (LBS)	Closed	Proposal of a variety of technological enablers to be exploited both in the LBS and the road markets.
ERSAT EAV	Rail	Closed	Unified GNSS based solution for a safe localization that can be tailored to the needs of individual railway applications.
FOSTER ITS	Road	Closed	Design and develop the first secured GNSS Module.
G MOTIT	Road	Closed	Innovative electric scooter sharing service, in which users may pick up and drop off vehicles wherever and whenever they want.
GALENA	Road	Closed	Develop equipment, information system, and supervision platform for cross supply chain orchestration for freight pooling in urban areas.
GEO VISION	LBS	Closed	Software for field observation, communication, data sharing, and operations support for the overlap of humanitarian and financial market.
GHOST	LBS	Closed	Intelligent transport system on vehicles of the public network with, automatic snapshots collection operations.
GMCA	Aviation	Closed	Enhanced GNSS Performance Monitoring System to include EGNSS and other constellations and augmentations for use beyond Europe.

GNSS.asia2	Awareness Rising	Closed	Outreach activities promoting EGNSS in Asia through a professional communication software suite and presence at industry events in Europe and Asia.
JUPITER	Road	Closed	Implementation and delivery of support activities for the breakthrough of EGNSS in Information Technology Solutions (ITS) worldwide.
LARA	LBS	Closed	Mobile solution for underground utility management making use and integrating mobile Augmented Reality (AR) interfaces.
MAGNIFIC	Awareness Rising	Closed	Field trials to valorise GALILEO and to promote EGNOS in Africa in a wide range of business and scientific applications.
mapKITE	Surveying & Mapping	Closed	Mature prototype of a tandem terrestrial-aerial mobile mapping system (geodata acquisition and post-mission processing).
GRIMASSE	Aviation	Open	Prototype of a Emergency Locator Transmitter of a Distress Tracking beacon, a set of applications to optimize SAR information transmission and collection, and MEOLUT algorithms.
PARADISE	Surveying & Mapping	Closed	GNSS receiver to make GNSS-based positioning available in challenging situations.
POSITION	Awareness Rising	Closed	Integrated innovation support stimulating sustainable uptake in Poland.
SAT406M	SAR	Closed	Improved Personal Locator Beacon (PLB) and a new communication method between SAR/Galileo and the PLB.



spyGLASS	Maritime	Closed	Passive Bistatic Radar (PBR) based on Galileo transmissions for maritime surveillance.
UKRAINE	Aviation	Closed	Set of coordinated supporting actions for EGNSS penetration in aviation.
GRICAS	SAR	Closed	Innovative operational procedures for inflight activation of SAR (Search And Rescue) beacons onboard aircraft.
ENSPACE	Space	Closed	Innovative Space GNSS software platform supporting multi-applications and multi-missions in LEO, MEO, GEO, interplanetary missions, and launchers.
EASY Pv	Surveying & Mapping	Closed	Thermal cameras installed on board a Remotely Piloted Aircraft System (RPAS) in order to detect thermic anomalies on defective photovoltaic modules.
MOBNET	LBS	Closed	Unmanned Aerial Vehicle (UAV)-based Search and Rescue (SAR) system for the location of isolated victims in the case of natural or man-made disasters.
INLANE	Road	Closed	New generation, low-cost, lane-level, precise turn-by-turn navigation application through the fusion of EGNSS and Computer Vision technology.
STRIKE3	Signal processing	Closed	New international standards for the monitoring, reporting and testing of GNSS threats.
LOGIMATIC	Maritime	Closed	Advanced automated navigation solution based on the integration of GNSS and sensors onboard the vehicles, and a GIS-based control module.
STARS	Rail	Closed	Measurement campaign to evaluate the railway environment.
RHINOS	Rail	Closed	Train Location Detection System (LDS) and supporting infrastructure.

ARIADNA	Awareness Rising	Open	Outreach activities to spread Galileo awareness and to support Public Transport Authorities and Operators interested in EGNSS.
BLUEGNSS	Aviation	Closed	Training and Required Navigation Performance (RNP) approach procedures.
InDrive	Road	Closed	Automotive enhanced positioning platform, based on the integration of GNSS and other on-board sensors.
AUDITOR	Agriculture	Closed	Improved GNSS ground-based augmentation system and services in precision agriculture based on it.
MOLIERE	Road	Open	Open data commons for mobility services, a Mobility Data Marketplace (MDM) underpinned by blockchain technology.
ESRIUM	Road	Open	EGNSS-based digital map of road damages and safety risks at centimeter-level resolution.
MISTRAL	Agriculture	Closed	Prototype of a GNSS Reflectometry sensor integrated on a dedicated Remotely Piloted Aircraft System (RPAS).
ERSAT GGC	Rail	Closed	Process and toolset for classifying tracks in terms of characteristics and reception of the GNSS signal.
HELIOS	SAR	Open	Second Generation range of Beacons (SGB) and antennas designed to operate with the full capability of the new Meosar Cospas/Sarsat International Programme.
PRoPART	Road	Closed	High-availability positioning solution for connected automated driving applications.
DELOREAN	Aviation	Open	Integrity monitoring techniques for safe Urban Air Mobility (UAM) and Urban Air Delivery (UAD) while demonstrating EGNSS-specific services like accurate, reliable, high-precision postal delivery.

GNSS.asia3	Awareness Rising	Closed	Outreach activities promoting EGNSS in Asia through a professional communication software suite and presence at industry events in Europe and Asia.
SARA	SAR	Closed	Semi-automatic deployable RPAS (Remotely Piloted Aircraft System) tethered to a ship architecture.
BroadGNSS	Timing & Synchronisation	Open	First procurement steps to exploit EGNOS and Galileo differentiators for operational advantages in public safety.
BELS-PLUS	Awareness Rising	Closed	Promotion activities to EU companies, within EU clusters and at conferences.
CLUG	Rail	Open	Multi-sensor train-localization system combining EGNSS and other sensors.
HELMET	Rail	Open	Advanced prototype able to provide integrity and augmentation data for road, rail and Unmanned Aerial Vehicle (UAV) applications.
GALILEO 4 Mobility	Road	Closed	Four demonstrations held across Europe to test how the integration of GALILEO technology could improve urban mobility.
GREENPATROL	Agriculture	Closed	Robotic solution for Integrated Pest Management in crops, capable of autonomously navigating greenhouses.
RADIUS	Rail	Open	Drone platform interacting with Traffic Management System and Intelligent Asset Management System.
RAILGAP	Rail	Open	High accuracy, high precision ground truth and digital maps for rail mobility.
GISCAD-OV	Surveying & Mapping	Open	Integrated solution combining GNSS and local augmentation with the whole value chain of cadastral mapping.

FLAMINGO	LBS	Closed	Data and positioning services for high accuracy positioning and navigation on Smartphones, IoT and wearables.
<u>AIOSAT</u>	LBS	Closed	Combination of a portable system for firefighters in rescue interventions and a Mobile Coordination Centre.
GALIRUMI	Agriculture	Open	Integrated solution for dairy farming composed of 2 EGNSS-powered electrocuting and laser-based defoliating weeding robots and software for mission planning and control.
SCORPION	Agriculture	Open	Safe and autonomous precision spraying tool integrated into a modular unmanned tractor which will focus on steep slope vineyards.
GIMS	Surveying & Mapping	Open	Low-cost system based on EGNSS, Copernicus SAR and other in-situ sensors, to monitor landslides and subsidence.
SINSIN	SAR	Open	Enhanced Personal Locator Beacon (PLB), embedded EGNSS receiver, and enhanced MEOLUT station.
PREPARE Ships	Maritime	Open	Integrated solution with new precise positioning system based on the features of Galileo and EGNSS signals within merchant ships.
GAMBAS	Maritime	Open	A modernized anti-piracy Ship Security Alert System (SSAS) beacon leveraging Galileo's return link, MEOSAR independent location capability, and solutions for rescue operators and vessels.
GOEASY	LBS	Open	Pilot applications, ApesMobility and AsthmaWatch.
POINT.IoT	Awareness Rising	Open	Coaching support to find, mentor, and develop 20 GNSS applications in IoT.

TransSec	Road	Open	Security truck with precise positioning and navigation, movement monitoring, communication security, pre-crash detection, and autonomous emergency manoeuvring.
GNSS.asia 4	Awareness Rising	Open	Outreach activities promoting EGNSS in Asia through a professional communication software suite and presence at industry events in Europe and Asia.
SIA	Rail	Open	4 ready-to-use new services for the rail sector: iWheelMon, iRailMon, iPantMon and iCatMon.
GAUSS	Aviation	Open	High-performance positioning system for drones within U-Space framework, focusing on Very Low Level and Unmanned Aircraft System operations.
GEONAV IoT	LBS	Open	Positioning algorithms leveraging EGNSS and Ultra Wide Band (UWB) beacons.
HUUVER	LBS	Open	Highly integrated drone prototype combining air and ground-based propulsion to address the existing limitations of autonomous systems.
PASSport	Maritime	Open	Fleet of automated aerial (rotary wings and fixed wings) and underwater drones.
ROOT	Timing & Synchronisation	Open	Analysis from the stage of the received GNSS signals, their processing, and exploitation in the network architecture.
SKYOPENER	Aviation	Closed	Coordination-as-a-service for all stakeholders that are taking part in Remotely Piloted Aircraft System (RPAS) operations.
H2H	Maritime	Open	Implementation of a pilot sensor package, to be demonstrated in Norway and Belgium.

AMPERE	Surveying & Mapping	Open	Semi-automated drone with LiDAR, optical, and thermal cameras to gather information on electrical power networks, processed by a GIS cloud platform.
--------	---------------------	------	--

#### 1.6.5.1 PRS Procurement under H2020

In total, five procurements (one under H2020 PRS Item 1, four under H2020 PRS item 2) were contracted in 2016 and managed between 2017 and 2020.

- The DISPATCH project planned under H2020 PRS is expected to be closed in 2021.
- The PRISMA project had four contracts, all of which were successfully closed.

The following is a list of PRS user segment projects managed in 2020:

Acronym	Title	Comments
DISPATCH	Development of Innovative PRS server based TeCHnologies to support future applications	H2020- PRS Item 1 One contract
PRISMA	Development of low end operational PRS receivers including security modules architectures	H2020-PRS Item 2 Four contracts

#### 1.6.7 Contribution Agreement for GOVSATCOM preparatory actions

The Contribution Agreement for EGNOS Exploitation was signed on 7 April 2020. The agreement includes a set of tasks for the preparation of the GOVSATCOM component of the Space Regulation.

The tasks included in the Contribution Agreement are the interfacing with the users, the support in the definition of operational user and security requirements, the procurement of the secure operational ground segment studies and the legal and finance support of the tasks.

Within 2020 an initial network of GOVSATCOM users was built, consisting of nominated representatives of twelve (12) Member States and seven (7) EU Agencies, under the GSA lead, contributed to the consolidation of the GOVSATCOM Horizon 2020 Coordination and Support Action (CSA) grant project ENTRUSTED. The ENTRUSTED Grant Agreement No. 870330 was signed on 21 August 2020. The ENTRUSTED kick-off meeting took place on 15 September 2020, following an on-line format due to the travel restrictions imposed by the pandemic. Regular coordination meetings related to each active ENTRUSTED Work Package were held (monthly project management meetings and bi-weekly thematic meetings associated to each operational Work Package). A further successful milestone was achieved on 2<sup>nd</sup> December 2020, when the first

ENTRUSTED Workshop with Users took place, being integrated in the Governmental session of the GSA User Consultation Platform 2020. The event attracted over 200 participants representing both governmental stakeholders and industry and allowed to increase the visibility on the CSA project and its objectives, thus preparing the users for the wide survey which will be hosted by the ENTRUSTED Consortium in 2021.

The GSA has been working to ensure the timely availability of ENTRUSTED deliverables which will allow to define, among others, the GOVSATCOM user requirements. Such deliverables are planned in 2022. However, a first draft for internal use of the deliverable 'D2.3 - Users' Requirements document' will be produced at the end of Q3 2021, which will serve for this purpose.

In frame of preparation of ENTRUSTED proposal, the Agency ensured timely and efficient coordination between consortium and the contracting authority and DG DEFIS, in area of security requirements elements. In frame of the ENTRUSTED project, the Agency SEC ensures proper management of classified information, including support to the members of the consortium, distribution of cryptographic materials and supports in preparation of technical documentation and, on top of that, the Agency acts as a bridge for security and classified matters. In the frame of Govsatcom HUB procurement, the Agency ensures proper reflection of the security requirements technical requirements and set up of the project security framework by definition of Project Security Instructions and Project Security Classification Guide. On top of that, the Agency assisted the Commission in discussion with Govsatcom and EEAS experts, resulting in reaching common agreement on the text of mentioned documents.

Regarding the procurement of secure operational ground segment design studies, the innovation partnership procurement was published on 12 October 2020, with an initial deadline to submit the Requests to Participate in Phase I on 9 November 2020. Following a number of requests received from interested candidates, the deadline was first extended to 30 November 2020, and subsequently to 11 January 2021. Finally, following the significant changes made in the GOVSATCOM Hub Project Security Instructions and Security Aspects Letter, as a result of the negotiations between the Commission and the Member States, the deadline for submission was extended to 31 January 2021. During this time, the GSA published 7 clarification notes, addressing questions posed by interested candidates.

## 2. Management

### 2.1 Management Board

The Agency has an Administrative Board that is described in section 2.1.1. It also has a separate SAB, which is responsible for accreditation matters, described in section 2.1.2.

#### 2.1.1 The Administrative Board

The Administrative Board brings together representatives of the Member States, EU Institutions, Norway and the ESA. The Administrative Board is responsible for defining the Agency's priorities, establishing the budget and monitoring the Agency's operations.

##### 2.1.1.1 Composition

<b>Voting Members</b>	EU Member States (27 representatives) and EC (4 representatives). A detailed list of Board Members is available on the <a href="#">Agency website</a> .
<b>Non-Voting Members</b>	European Parliament (1 representative with 1 alternate), Norway
<b>Observers</b>	Chair of the SAB High Representative for Foreign Affairs and the Security Policy (1 representative) ESA (1 representative)
<b>Chair</b>	Mr Jean-Yves Le Gall (until 23 June 2020) / vacant
<b>Deputy Chair</b>	Mr Alberto Tuozi (from 24 June 2020 Acting Chair)

##### 2.1.1.2 List of Administrative Board Decisions

The Administrative Board met five times in 2020: January, April, June, September, and October. These meetings, numbered 58 through 62, decided upon the following items:



Mtg	Date	Decision number	Title
58	29/01/2020	58-20-01-01	Adoption of the agenda
58	29/01/2020	58-20-01-02	Minutes of the AB 57 meeting
58	29/01/2020	58-20-01-03	Decision for implementing provisions regarding Article 54 of the Conditions of Employment of Other Servants of the European Union (reclassification of Temporary Agents)
58	29/01/2020	58-20-01-04	Decision for implementing provisions regarding Article 54 of the Conditions of Employment of Other Servants of the European Union (reclassification of Contract Agents)
58	29/01/2020	58-20-01-05	Application of EC implementing rules on procedures for dealing with professional incompetence
58	29/01/2020	58-20-01-06	Decision on non-automatic carryover of payment appropriations for 2019 Budget
58	29/01/2020	58-20-01-07	Decision on the first amendment of 2020 Budget
58	29/01/2020	58-20-01-08	Decision on adopting the draft 2021 Budget
58	29/01/2020	58-20-01-09	Endorsement of the provisional Single Programming Document 2021-2023
59	24/04/2020	59-20-04-01	Adoption of the agenda
59	24/04/2020	59-20-04-02	Minutes of the AB 58 meeting
59	24/04/2020	59-20-04-03	Implementing rules on non-application of the EC decision on maximum duration for recourse to non-permanent staff
59	24/04/2020	59-20-04-04	Second amendment of 2020 Budget
60	18/06/2020	60-20-06-01	Adoption of the agenda
60	18/06/2020	60-20-06-02	Minutes of the AB 59 meeting
60	18/06/2020	60-20-06-03	Decision adopting the Annual Activity Report of the European GNSS Agency for year 2019
60	18/06/2020	60-20-06-04	Adoption of the Annual Accounts for 2019
60	18/06/2020	60-20-06-05	Implementing rules on duties of drivers
60	18/06/2020	60-20-06-07	Adoption of the complaints committee rules of procedure
61	15/09/2020	61-20-09-01	Adoption of the agenda
62	31/10/2020	62-20-10-01	Adoption of the agenda
62	31/10/2020	62-20-10-02	Minutes of the AB 60 meeting
62	31/10/2020	62-20-10-03	Minutes of the AB 61 meeting
62	31/10/2020	62-20-10-04	Adoption of the rules on special leave for newborn child
62	31/10/2020	62-20-10-05	Adoption of the rules on transfer of pension rights

The Administrative Board made the following decisions based on written procedures:

WP	Date	Reference:	Title
73	30/04/2020	GSA-AB-WP-73	Decision on the appointment of the acting Executive Director
74	19/10/2020	GSA-AB-WP-74	Decision on the appointment of members of the Complaints Committee
75	30/10/2020	GSA-AB-WP-75	Decision approving the annual work plan of the Internal Audit Capability for 2020-21
76	15/12/2020	GSA -AB-WP-76	Decision of the Administrative Board approving commitment and payment appropriations in excess of provisional twelfths automatically inscribed in case of late adoption of 2021 budget

### 2.1.2 The Security Accreditation Board

The SAB is the European GNSS Security Accreditation Authority and is responsible for the security accreditation of the European GNSS. It is established within the Agency as an autonomous body pursuant to Article 3 of the GSA Regulation and takes its decisions independently and objectively, including with regard to the EC and other bodies responsible for the implementation of the programmes and for service provision, as well as with regard to the Executive Director and the Administrative Board of the Agency. Security accreditation is a core task of the Agency, and all security accreditation decisions related to the GNSS systems are SAB sole competence.

SAB objectives include verifying that the systems comply with the applicable security rules and regulations as established by the Council and the EC. They also include ensuring the GNSS systems continuously comply with applicable security requirements, identifying possible new risks and, where appropriate, complementing the system security plan. In addition to the focus on infrastructure, since 2016 the Galileo security accreditation activities have progressively embraced services in anticipation of the Programme gradual evolution during the exploitation phase. Similar activities are foreseen for EGNOS, whose next version (v3) has to be accredited.

#### 2.1.2.1 Composition

The SAB brings together representatives of the Member States, EC, the High Representative for Foreign Affairs and the Security Policy, ESA and Norway.

<b>Members</b>	EU Member States (27 representatives) EC (1 representative) High Representative for Foreign Affairs and the Security Policy (1 representative)
<b>Non-voting Members</b>	Norway (1 representative)
<b>Observers</b>	ESA (1 representative)
<b>Chair</b>	Mr Bruno Vermeire
<b>Deputy Chair</b>	Mr Radovan Klima (until 11 December, 2020), Mr Claude Schanet (as of 15 December, 2020)

### 2.1.2.2 List of Accreditation Board Decisions

The Security Accreditation Board met three times in 2020: March, October and December. These meetings, numbered 43 through 46, decided upon the following items:

Mtg	Date	Decision Number	Title
SAB#43	24-26/03/2020	D1	Agenda
SAB#43	24-26/03/2020	D2	Adoption of Minutes
SAB#43	24-26/03/2020	D3	Decision on extraordinary way of working under covid 19 circumstances
SAB#43	24-26/03/2020	D4	Chairman election (Mr Bruno Vermeire)
SAB#43	24-26/03/2020	D5	Decision on pre-ATO GSC 1.2
SAB#43	24-26/03/2020	D6	Decision on OS-NMA initial testing
SAB#43	24-26/03/2020	D7	Decision on SAS for the Galileo VAL System
SAB#43	24-26/03/2020	D8	Updated meeting calendar for 2020
SAB#45	14/10/2020	D1	Agenda
SAB#45	14/10/2020	D2	Adoption of Minutes
SAB#45	14/10/2020	D3	Decision on the use of the launch 3 satellites for provision of Open Service
SAB#45	14/10/2020	D4	Activation of Flight Key Cell for Launch 11
SAB#45	14/10/2020	D5	Administrative extension of the accreditation statements for Interim Approval to Operate the Galileo System and for provision of Initial Services
SAB#45	14/10/2020	D6	Decision on GSS Wallis connection to VAL system and preliminary SATO certificate for GSS Wallis to connect to OPE
SAB#45	14/10/2020	D7	Decision for the internal testing phase for OS-NMA
SAB#45	14/10/2020	D8	Decision on the site accreditation process for the VAL system (VAL SATO)
SAB#45	14/10/2020	D9	Meeting calendar for 2021
SAB#45	14/10/2020	D10	Decision on use of Chiasmus in 2021
SAB#46	15/12/2020	D1	Agenda
SAB#46	15/12/2020	D2	Adoption on Minutes
SAB#46	15/12/2020	D3	Deputy SAB Chairman election (Mr Claude Schanet)
SAB#46	15/12/2020	D4	Decision on principles for an approach for RIMS assurance
SAB#46	15/12/2020	D5	Decision on the setup and organisation of a special subordinate body on flight keys (SB-FK) and the governance to be applied to launch campaigns as of 2021
SAB#46	15/12/2020	D6	Decision on maintenance upgrades on OSPF and PTF
SAB#46	15/12/2020	D7	Decision on the third OSPF instance
SAB#46	15/12/2020	D8	Decision on input needed to authorise OSPF 2.2.1.1
SAB#46	15/12/2020	D9	Decision on CS demo real-time HAS data broadcast
SAB#46	15/12/2020	D10	Decision on the use of IPA/LTS test tools in VAL
SAB#46	15/12/2020	D11	Decision on PRS key datasets delivery from the GSMC via the GRON
SAB#46	15/12/2020	D12	Decision on GRON v1.1
SAB#46	15/12/2020	D13	Decision on four PRS authorisation
SAB#46	15/12/2020	D14	Decision on the Single Programming Document 2022-2024

In addition, the SAB took the following decisions in 2020 via written procedure:

Date	Decision Number	Title
24-26/03/2020	SAB#43 D9	Decision on OS-NMA testing (SAB#43 D6)
24-26/03/2020	SAB#43 D10	SAB authorisation of PRS body
24-26/03/2020	SAB#43 D11	SAB authorisation of PRS body
24-26/03/2020	SAB#43 D12	SAB authorisation of PRS body
24-26/03/2020	SAB#43 D13	Decision on PRS keys distribution from the GSMC
24-26/03/2020	SAB#43 D14	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D15	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D16	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D17	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D18	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D19	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D20	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D21	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D22	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D23	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D24	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D25	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D26	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D27	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D28	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D29	SAB authorisation of PRS body
24-26/03/2020	SAB#43 D30	SAB authorisation of PRS body
24-26/03/2020	SAB#43 D31	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D32	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D33	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D34	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D35	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D36	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D37	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D38	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D39	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D40	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D41	Approval of POS
24-26/03/2020	SAB#43 D42	SAB authorisation of PRS body
24-26/03/2020	SAB#43 D43	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D44	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D45	Extension of SAB authorisation of PRS body

24-26/03/2020	SAB#43 D46	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D47	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D48	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D49	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D50	Extension of SAB authorisation of PRS body
24-26/03/2020	SAB#43 D51	Extension of SAB authorisation of PRS bodies
24-26/03/2020	SAB#43 D52	Extension of SAB authorisation of PRS bodies
24-26/03/2020	SAB#43 D53	Extension of SAB authorisation of PRS bodies
24-26/03/2020	SAB#43 D54	Extension of SAB authorisation of PRS bodies
24-26/03/2020	SAB#43 D55	Extension of SAB authorisation of PRS bodies
24-26/03/2020	SAB#43 D56	SAB authorisation of PRS body
24-26/03/2020	SAB#43 D57	Decision on SATO IOT ESEC (Redu)
24-26/03/2020	SAB#43 D58	SAB authorisation of PRS body
24-26/03/2020	SAB#43 D59	SAB authorisation of PRS body
24-26/03/2020	SAB#43 D60	Extension of SAB authorisation of PRS bodies
24-26/03/2020	SAB#43 D61	Extension of SAB authorisation of PRS bodies
24-26/03/2020	SAB#43 D62	Extension of SAB authorisation of PRS bodies
24-26/03/2020	SAB#43 D63	Extension of SAB authorisation of PRS bodies
24-26/03/2020	SAB#43 D64	Decision on GRON connection CPA IT
14/10/2020	SAB#45 D11	Decision on PRS manufacturing
14/10/2020	SAB#45 D12	SAB authorisation of PRS body
14/10/2020	SAB#45 D13	SAB authorisation of PRS body
14/10/2020	SAB#45 D14	Establishment of WG on EUSP SAB RoP
14/10/2020	SAB#45 D15	Adoption of the amended version of Single Programming Document (SPD) 2021
14/10/2020	SAB#45 D16	Decision on PRS manufacturing
14/10/2020	SAB#45 D17	Extension of SAB authorisation of PRS bodies
14/10/2020	SAB#45 D18	Extension of SAB authorisation of PRS bodies
14/10/2020	SAB#45 D19	Extension of SAB authorisation of PRS bodies
14/10/2020	SAB#45 D20	Extension of SAB authorisation of PRS bodies
14/10/2020	SAB#45 D21	Extension of SAB authorisation of PRS bodies
14/10/2020	SAB#45 D22	Extension of SAB authorisation of PRS bodies
14/10/2020	SAB#45 D23	SAB authorisation of PRS body
14/10/2020	SAB#45 D24	Extension of SAB authorisation of PRS bodies
14/10/2020	SAB#45 D25	Decision on GRON connection EEAS site Brussels
14/10/2020	SAB#45 D26	Decision on SATO renewal Kerguelen (France)
14/10/2020	SAB#45 D27	Decision on RLSP 1.1.2 enhanced monitoring
14/10/2020	SAB#45 D28	Decision on connection of the GRSP at GCC-D to the VAL system
14/10/2020	SAB#45 D29	Decision on GRON connection CPA BE
15/12/2020	SAB#46 D15	Extension of SAB authorisation of PRS bodies
15/12/2020	SAB#46 D16	Adoption of Minutes

### 2.1.2.3 Support provided by the Agency

According to Article 11(9) of the Regulation, the Agency provides the appropriate human and material resources required by the SAB and its subordinate bodies to perform their tasks independently.

The Agency conducts security accreditation activities defined in chapter III of the Regulation, ensures the technical and administrative secretariat to the SAB, and provides the underlying security assurance to enable the SAB to take proportionate, appropriate and cost effective security accreditation decisions at the programme milestones.

## 2.2 Major Developments

Over the reporting period, several programme and administration developments took place in the Agency.

These are described throughout this document, but a few of them are highlighted below:

- Strong response to COVID-19 pandemic across all sites ensuring the Health and Safety of staff and the continuity of the operations
- Almost 2 Bln Galileo-enabled devices globally
- Declaration of a key Galileo differentiator, the SAR Return Link Service
- The entry into service of the EGNOS GEO 3 payload
- The GSMC dual site operations with our new Galileo Security Monitoring Centre (GSMC) site in Spain is connected.
- ISO 9001 recertification
- Launch of ENTRUSTED project for the creation of a network of European governmental users and the definition of the user requirements kicked-off, first consultation to GOVSATCOM users
- Launch of MyGalileoDrone and MyGalileoSolution competitions for supporting innovation and entrepreneurship
- Third edition of the GNSS User Technology Report published
- 1 million views of GSA, UseGalileo.eu and GSC website
- Third edition of the User Consultation Platform,
- 2020 European Space Week with 3500 participants

## 2.3 Budgetary and financial management

The Agency's own executed budget in 2020 in terms of commitment appropriations was EUR 35 449 479,85, which represents a 100% budget execution, despite the COVID-19 pandemic situation. In addition to its core budget, the GSA continued to manage a large amount of delegated budget following the signature of the EGNOS and Galileo Delegation Agreement amendments. A total amount of EUR 2,94 billion is delegated under the Galileo Exploitation Delegation Agreement and a total of EUR 1,514 billion is delegated under the EGNOS Exploitation Delegation Agreement. Overall a total of 402 million EUR was committed under delegated budget in 2020 and 753 million EUR made in payments.

In terms of core budget breakdown, the total expenditure on staff costs was EUR 23 091 279,97, other administrative costs amounted to EUR 6 988 224,72 and expenditure on operational costs was EUR 5 369 975,16.

Furthermore, during 2020:

- Budget execution was 100% in commitment appropriations and 100% in 2020 payment appropriations. This takes into account the non-automatic carry-forward, which helps the Agency maintain its payment capacity on legal obligations still existing for commitments made in the prior year.
- The GSA Administrative Board approved two budget amendments. The GSA Administrative Board approved 2020 amending budget number 1 on 29 January 2020, reflecting the fact that GSA requested additional 23 Temporary Agent (TA) posts and, in the final 2020 budget, only additional 10 TA posts were granted. The amendment also included the revised European Free Trade Association (EFTA) contribution, reducing the 2020 initial budget by EUR 956 801,03 and bringing it to the final amount of EUR 35 449 479,85.
- In the second budget amendment the GSA Administrative Board approved the transfer of 800 000 EUR for both commitment and payment appropriations from the operational budget line 3100 to Staff expenditure budget line 1100.
- The Agency continued to manage a large amount of delegated budget, in particular under the EGNOS Exploitation, Galileo Exploitation, and Horizon 2020 Delegation Agreements as mentioned above. In addition, the Agency started during 2020 the management of the GOVSATCOM preparatory actions contribution agreement.



- In quantitative terms, the GSA carried out the following transactions during 2020: 927 commitments, de-commitments and modification of commitments, 2 482 payment requests, 312 mission orders, 53 recovery orders, 4 forecasts of revenue and 7 budget transfers. All in all, 3 785 financial transactions were processed by the GSA in 2020.
- Payment appropriations totalling EUR 3 351 653,69 were carried over on Title 2 (automatic carry-over) from 2019 to 2020, representing 58,26 % of the total 2019 Title 2 budget. Furthermore, EUR 4 177 213,85 was carried over from 2020 to 2021, representing 59.78 % of 2020 Title 2.
- Payment appropriations in the amount of EUR 1 160 542,09 were carried over on Title 3 (non-automatic carry over) from 2019 to 2020. Payment appropriations totalling EUR 870 792,31 were carried over on Title 3 (non-automatic carry over) from 2020 to 2021 to maintain the Agency's payment capacity on existing legal obligations.
- According to payment time statistics 98,7% of all payments were done within the applicable time limit of 30 days, 60 days or 90 days and with an average payment time of 14,26 days.
- The Agency paid EUR 13 602,75 in late interest to suppliers.
- The cancellation rate of payment appropriations carried over from 2019 to 2020 was 1,97% (EUR 99 575,90) of the amount carried over. The cancellations remain very low (cancellations in 2019 were EUR 87 476,45) which demonstrates an efficient financial management.
- Budget outturn resulted in EUR 44 554,77 in 2020.

For further details on the budget implementation for the reporting period, please see the [Report on Budgetary and Financial Management 2020](#) on the Agency's website. Statistical information is also available in Annex II of this document.

The entire Agency revenue for the reporting period comes from the EU budget and EFTA contribution. No other sources of funding were available.

## 2.4 Human Resources Management

The Agency deployed in the best efficient way all the available resources to fulfil its assigned areas of competence in order to achieve optimisation by relying on a pro-active, modern and forward looking,



efficient set of HR policies, planning & monitoring tools and related processes driven by balancing risk, and assuring compliance with its regulations.

The Agency continued its effort to attract and recruit highly competent staff through an integrated talent acquisition approach. This was supported through processes of strategic workforce planning including external and inter-agencies recruitment and internal staff deployment promoting career development. Recruitment continued to utilise extensive and targeted advertising of the vacancy notices through the Agency e-recruitment tool, specialised job boards as well as social media combined with initiatives to increase its visibility and employer branding. Video interviewing suite and online interviews further streamlined the selection procedures and contributed to the retention of the best qualified candidates.

The Agency concluded the year 2020 with full execution of its establishment plan (100%). It is worth remarking explicitly that the Agency achieved the fulfilment of the establishment plan despite the difficulties imposed by the Covid crisis restrictions. The Agency swiftly and smoothly moved to full online selection and recruiting modes which ensured continuity. To maintain the quality and effectiveness of its selection procedures, the Agency makes use of competency-based interviews, and assessment centres for managerial positions. The Agency also onboarded newcomers remotely whenever the situation did not allow for a physical presence on the site.

At the end of 2020, all 150 TA posts were occupied (including five offers). In addition, 65 posts were allocated to CA type of posts (including two offers). The Agency had 7 seconded national experts (SNE) in 2020, bringing the total number of staff to 222.

The Agency was allocated ten additional TA posts for its 2020 establishment plan in addition to the one post already foreseen in the EC communication to establish a programming of human and financial resources for decentralised agencies 2014-2020 (COM(2013)519 of 10 July 2013). The new posts were allocated to priority areas as identified in the Agency's request for additional 46 posts in 2017. In 2020, seven TAs left the Agency, resulting in a total of 18 vacant TA positions. To accommodate this in an efficient manner, the Agency further streamlined its recruitment procedures and designed vacancies with a broader scope to cover more posts with similar profiles, from one selection procedure. Consequently, the GSA managed to fill all vacancies, hence the execution of the 2020 establishment plan was 100%.

Overall, the Agency conducted 38 selection procedures, processed over 2000 applications and conducted around 300 interviews. The rate of resignations continued to decrease compared to previous years. The Agency employed 20 trainees for traineeships lasting up to one year (4 more compared to 2019).

The Agency successfully accommodated the growing number of staff via comprehensive induction trainings, and streamlined HR services, mainly remotely due to the Covid pandemic.

One new agreement with an international school was concluded, in Saint-Germain-en-Laye, France. The Accredited European School in Paris has become operational, and it has enabled priority access to the Agency's staff children.

During 2020, the Agency adopted and implemented seven additional implementing rules to the Staff Regulations/Conditions of Employment of Other Servants of the EU.

Significant effort was dedicated to further streamline and automate the human resources management processes to achieve efficiency gains. In this context, the Agency continued on the deployment of various Sysper modules.

Despite the Covid crisis restrictions, the Agency continued to provide learning and development support performed mainly online the average number of training days per staff member was 4.56.

The Agency made a stronger use of the corporate Commission learning management system and channels which further strengthened the cost-efficient approach in relation to developmental activities.

The Agency reframed the approach to group training events as they could be organised only online. The Agency organised remote team events, language courses, awareness sessions targeting the promotion of a respectful workplace environment and protection of workforce dignity etc. In 2020 the Agency continued with its Cyber Security Awareness programme aiming to approach the cyber security cross-functionally. Four shorter briefing sessions helped to raise awareness about the importance of cyber security and one annual large scale event for all staff, with simulations of the cyber security challenges.

Particular attention was paid to the well-being of staff during the Covid pandemic. The Agency continuously and regularly communicated to all staff on the situation and local measures in all our locations. A particular effort was also dedicated to the mental aspects of the staff wellbeing, including initiatives for informal online gathering, tips & tricks on how to telework, health related support etc.

## 2.5 Assessment by Management

Article 30.2 of the GSA Financial Regulation 2019 defines Internal Control as a process applicable at all levels of management and designed to provide reasonable assurance of achieving the following objectives:

- Effectiveness, efficiency and economy of operations;

- Reliability of reporting;
- Safeguarding of assets and information;
- Prevention, detection, correction and follow-up of fraud and irregularities;
- Adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of the programmes, as well as the nature of the payments concerned.

The Agency's responsibilities have kept expanding due to the consolidation of its operational role, in particular Galileo. New preparatory activities have also started for GOVSATCOM, and with the planned transformation of the Agency into EUSPA, other new activities will start. Accordingly, the Agency is upgrading its internal controls, and will continue to be regularly audited by the Agency's Internal Audit Capability (IAC), the Commission's Internal Audit Service (IAS), DG DEFIS and the European Court of Auditors.

In 2020, the Agency defined new control standards under GSA Internal Control Framework which were planned to be approved by GSA Administrative Board in Q1 2021.

### **2.5.1 Register of Exceptions**

The Agency has a procedure in place for registering exceptions. Its overall objective is to establish appropriate arrangements to explain, register and report any exceptional circumstance of overriding controls or deviations from the established regulatory framework in accordance with the principle of transparency. Before any action is taken, an exception must be documented, justified and approved at the appropriate level.

There were 11 exceptions registered in 2020, none of which materially affected the overall sound financial management of the Agency. The Agency has shared the Register of Exceptions with external auditors and with the IAS.

### **2.5.2 Implementation of grants**

Subject to the following exceptions, the GSA complied with the time limits laid down in Article 194(2) of the Financial Regulation.

Concerning the grant GSA/GRANT/02/2019 *"Shipborne double frequency multi-constellation receiver (E1/E5)"*, with respect to the signature of the two grant agreements, the three months deadline was

exceeded of 20 days in one case and of 18 days in another one due to several iterations with the consortium members in order to collect the supporting documents to the declarations on honour and due to several clarifications raised by coordinators with regard to the content of the grant agreement and its annexes before signature. Such delay is also to be attributed to covid-19 pandemic.

Concerning the grant GSA/GRANT/04/2019 “Filling the gaps and emerging E-GNSS receivers technologies”, with respect to the signature of the grant agreements, the three months deadline was exceeded due to several iterations with the consortium members in order to collect supporting documents to the declarations on honour and the required mandate. Such delay is to be attributed mainly to covid-19 pandemic.

Concerning the grant GSA/GRANT/06/2019 “Receiver technologies for high-precision in mass-market”, with respect to the signature of the grant agreement, the three months deadline was exceeded of 20 days due to several iterations with the consortium members in order to collect supporting documents to the declarations on honour and the required mandate. Such delay is to be attributed mainly to covid-19 pandemic.

Concerning the grant GSA/GRANT/05/2019 “Receiver for localisation in train signalling”, with respect to the signature of the grant agreements, the three months deadline was exceeded due to the several iterations with the consortium members in order to collect supporting documents to the declarations on honour and due to the late submission from the coordinators of the IPR list to be annexed to the agreement. Such delays are to be attributed mainly to covid-19 pandemic.

Concerning the grant GSA/GRANT/07/2019 “Development of a drone-borne double frequency Galileo receiver” with respect to the evaluation process, the six months deadline was exceeded of 10 days due to the considerable amount of administrative documentation to be examined and numerous requests for clarifications. With respect to the signature of the grant agreements, the three months deadline was exceeded due to the multiple iterations with the consortium members in order to collect supporting documents to the declarations on honour. Such delay is to be attributed mainly to covid-19 pandemic.

## **2.6 Budget implementation tasks entrusted to other services and entities**

Not applicable.

## **2.7 Assessment of audit results during the reporting year**

### **2.7.1 Internal Audit Service (IAS) and the Agency's Internal Audit Capability (IAC)**

Overall, the reports by internal and external auditors provided a positive assessment and perception of the Agency and have provided valuable feedback on the areas to be improved. A brief overview of the Agency's new audit activity for the year is offered below.

GSA agreed with Internal Audit Service the extension of implementation of their 2019 audit on EGNOS Exploitation until 2021 considering uncertainty and upcoming changes under EUSPA.

In the summer of 2020, the Internal Audit Service (IAS) executed an audit on Galileo Exploitation. The audit report was not finalised in 2020.

The GSA Internal Audit Capability (IAC) activity in 2020 focused on two major activities: supporting ICC on the design of the GSA ICF and the audit of the ABAC access rights. The GSA Internal Audit Capability (IAC) and GSA Internal Control Coordinator (ICC) completed the first audit on GSA ABAC accounting system access rights in 2020, which identified the need for simplification and better documentation.

In 2020 GSA selected Ernst & Young to perform the three external audits on the 2019 and 2020 activity under three Delegation Agreements with DG GROW (now DEFIS), EGNOS, Galileo and H2020 grants. The execution of the audit did not take place in 2020.

### **2.7.2 European Court of Auditors (ECA)**

The European Court of Auditors (ECA) report 2020 (on 2019 activity) concluded that the accounts were free from material misstatement and that the transactions were legal and regular. It had two observations on internal control, the first being that the Court found that there is no comprehensive ex-ante or ex-post

strategy in place to confirm the accuracy of the incurred costs of ESA under the Working Arrangements. In its reply the Agency noted that for each ESA payment request an analysis of the amounts requested are performed against the respective payment plans and the Payment Milestone Achievement Certificates. It was also noted that the amount of pre-financing has been agreed under the Working Arrangements and constitutes an obligation of the GSA. The GSA intends to perform ex-post audits once self-consistent packages of industrial activities and associated deliverables are available per specific contract.

The second observation concerned delays in the implementation of the GSA's new Internal Control Framework and the approval of its Business Continuity Plan. In relation to the first one, GSA ICF was approved in January 2021 as explained earlier. The GSA BC framework was approved in 2020.

## 2.8 Follow up of recommendations and action plans for audits

The status of the observations made by the European Court of Auditors in previous years was considered to be ongoing or completed. Please find in the table below the updated status of observations from the European Court of Auditors.

Year	Court's observations	Status
2014	There is no insurance coverage for fixed tangible assets	Completed. Contract signed in September 2020
2015	There is no business continuity plan in place for the Agency's headquarters in Prague, or for the Agency in its entirety	Completed (May 2020)
2017	E-procurement: by the end of 2019, the Agency was not using any of the e-procurement IT tools developed by the Commission	Completed. E-procurement will be implemented for procurements which: (1) Do not entail the exchange of security sensitive information or security profile; (2) Do not entail negotiations or dialogues (3) Do not entail re-opening of competition. The adoption and roll out will start with ICT framework.

2019	Delays in the implementation of the GSA's Internal control framework	Completed (May 2020)
2019	No comprehensive ex-ante or ex-post strategy in place to confirm the accuracy of costs reported by ESA	Ongoing, partially implemented. Ex-ante strategy further developed and discussed with the Court, ex-post audit of ESA costs planned for June 2021.

In relation to corporate Business Continuity Management (BCM), GSA completed and approved the major framework documentation (Strategy, Plan and Procedure) in 2020, in close coordination with those departments that will play a key role in the definition of the corporate Business Continuity solution for GSA like ICT, Security and Logistics.

In 2020, it was decided that the GSA Internal Audit Capability (IAC) would not execute a follow up audit on prior years's audit on "the Grant Award management" process. IAC pointed out that the four recommendations had been implemented.

The Action Plan for the IAS audit 2018 on "GSA ICT governance" was completed, as agreed with IAS, in 2020. The implementation of this major horizontal ICT/ICT security upgrade exercise, involving GSA operational and support departments, was finally completed by mid-2020 boosting current ICT standards and service delivery while improving GSA ICT security as the main priority.

With respect to the IAS audit in 2019 on "*Exploitation of EGNOS*", the Agency implemented half of the recommendations in 2020 and the rest are still being worked on until mid-2021 since the foreseeable transformation of GSA into EUSPA will certainly impact the outcome expected from the implementation of such pending recommendations.

The IAS recommendations on EGNOS that GSA is currently working on refer to the following issues: improving the timeliness of reporting on EGNOS Exploitation (Rec. #3.2); mapping EGNOS resources and formalising back-up arrangements (Rec. #4); updating the job descriptions of the EGNOS coordinators to ensure that functional coordinator tasks are included (Rec. #5.2); and creating a business case for a budget monitoring and reporting tool (Rec. #6).

## **2.9 Follow up of recommendations from the discharge authority**

The discharge authority granted discharge in 2018 in the first quarter of 2020. The discharge authority approved the closure of the GSA accounts for the financial year 2018 and made no important official remarks. Discharge for 2019 is still in progress, though no major issues were identified so far.

## **2.10 External Evaluations**

No external evaluations were carried out by the Agency on its own operations.



### 3. Assessment of the Effectiveness of the Internal Control Systems

#### 3.1 Risk management

In 2020 the Agency undertook risk assessment and monitoring activities at the corporate, operational and support department levels. The outcomes of operational risk assessments are shared with management and reported directly to the EC for information and/or further consolidation and reporting at the respective programme level.

In 2020, the top corporate risks at the GSA were:

Risk ID	Title
RSK4	Continuity of Initial Services
RSK6	Achievement of Full Services
RSK8	Distribution of PRS information implementing Article 14
RSK10	Reduced EGNSS Services Market Penetration
RSK11	Future UK relations
RSK14	Access to EUCI
RSK15	GSA readiness for EUSPA governance arrangements
RSK16	Robustness and resiliency in the GSA corporate ICT system
RSK17	COVID-19 disruption to continuity of business critical activities

Each risk has an identified and adopted mitigation action plan. Corporate Risk Management Boards take place on a quarterly basis. The above-mentioned risk management process was audited positively in 2016.

#### 3.2 Compliance and effectiveness of Internal Control Standards (ICS)

No formal assessment was executed in 2020, but the status of actions in 2020 is identified below:

- In relation to **ICS 2, Ethical and Organisational Values**, GSA is finalised its Ethics Guide. In 2020 the Agency prepared a rollout of the corresponding integrated ethics training for the first half of 2021.
- With regard to ICS 3, Staff Allocation and Mobility, the GSA's assessment is of full compliance.
- Regarding **ICS 7**, the Agency improved in relation to **Operational Structure** due to the complete and successful implementation of IAS and IAC 2018 recommendations clarifying IT governance and a suitable delegation of powers.

- We remain attentive to **ICS 8, Processes and Procedures**, that continues to be a GSA area of focus, reflecting on the signals provided by several recent 2018-20 audits about weakness detected on some processes in different operational and support areas that will require that existing documentation is complemented and/or updated.
- In relation to **ICS 10 Business Continuity**, the Agency continued to progress with the finalisation and approval of the framework documentation (Strategy, Process and Plan) in 2020. The Agency is focusing on the IT technical solutions to continue to assure continuity of operations at all classification levels.
- In respect of **ICS 11**, the adoption of the DMS continues to extend to the entire GSA as needed, with more information and training being made available throughout 2020 to GSA staff.

### 3.3 Cost and benefits of controls

Agency resources directly allocated to internal audit and control are one FTE as Internal Control Coordinator, reporting directly to the Executive Director, and 6 weeks per year for the Internal Audit Capability (IAC), a resource shared with the European Agency ECHA, under a Service Level Agreement (SLA).

Aside from IAC, the Agency is annually audited by European Court of Auditors (ECA), the EC Internal Audit Service (IAS), DG DEFIS internal auditors (on DA activity), and through external audits including on the accounts of the Agency and the use of delegated funds. Moreover the Agency is periodically subject to transversal audits on specific policy evaluation or EC processes affecting several EU services (agencies and/or EC) carried out by both ECA and IAS, for example the field work conducted by ECA in 2020 with the Agency concerning EU space assets. Globally the Agency's activities are heavily audited, but this also reflects the high level of budget managed by the Agency.

It is also noted that 2020 is a year of transition for the Agency, with planning undertaken intensively for the transformation into EUSPA, with the adoption of the new space regulation, which entails a significant expansion of operational responsibilities. Work has started on ensuring that control activities are also amended to reflect this significant change. As part of this, In 2020 GSA completed its Internal Control Framework (ICF), which was planned to be approved in January 2021. The implementation of the EUSPA ICF will take place in 2021-22 embracing EUSPA new responsibilities. Also in 2020, the Agency completed a comprehensive evaluation of the implementation of its Internal Control Framework 2015 and is improving coverage.

The Agency also approved in 2020 its corporate Business Continuity Framework. It was able to overcome the difficulties posed by COVID-19 with evolving and efficient ad-hoc business continuity arrangements. Moreover, already in 2020, ICT & FML initiated a intense effort to strengthen its technical resilience simultaneously planning on back-up off-site servers and “cloud” arrangements for corporate ICT services. Also in 2020, the Agency initiated activities to move its HQ to a new building, together with significant activities related to the GSMC France and GSMC Spain sites.

We expect that this challenging and evolving situation will be properly reflected in the upcoming IAS Risk Assessment, planned for 2021.

### 3.4 Statements of the Managers in charge of risk management and internal control<sup>9</sup>

The responsibility for the completeness and reliability of management reporting and control is split at EUSPA, therefore separate declarations are made accordingly:

On behalf of the manager in charge of internal control, the EUSPA ICC states the following:

*'I declare that in accordance with the GSA's communication on the internal control framework<sup>10</sup>, I have reported my advice and recommendations on the overall state of internal control in the Agency to the Executive Director.*

*I hereby certify that the information provided in the corresponding Section of the present Annual Activity Report and in its annexes is, to the best of my knowledge, accurate, reliable and complete.'*

SIGNED

Fernando Navarro Torne,  
Internal Control Coordinator  
Prague, 17 June 2021

For the manager taking responsibility for risk management:

*'I hereby certify that the information provided in the corresponding Section of the present Annual Activity Report and in its annexes is, to the best of my knowledge, accurate, reliable and complete.'*

SIGNED

Ralitsa Bozhanova,  
Acting Head of Project Control and Quality Department  
Prague, 17 June 2021

---

<sup>9</sup> As defined in GSA Internal Control Framework, January 2021.

<sup>10</sup> Internal Control Framework of the Commission, Ref. Ares (2017) 3293999 – 30/06/2017, and GSA Internal Control Framework January 2021.

## **4. Management Assurance**

### **4.1 Review of the elements supporting assurance**

#### **4.1.1 Follow-up of reservations from previous years**

The declaration of assurance of the Authorising Officer in the Annual Activity Report 2020 did not contain any reservations.

### **4.2 Reservations**

There are no reservations regarding 2020.

### **4.3 Overall conclusions on assurance**

The Agency provided assurance in 2020 to DG DEFIS on the use of the budget delegated to it by the EC. This provided reasonable assurance concerning the legality and regularity of the financial operations and included the sound financial management of delegated funds. No critical shortfalls or weaknesses were identified.

The Agency continued to manage a large number of delegated appropriations by the EC during 2020. The GSA monitored the evolution of these operations, in close cooperation with the EC, and reported on all advances as required by the respective Delegation Agreements. Financial resources were properly managed and key financial indicators were shared and reported to the EC. Auditors made no major observations in this respect.

The degree of implementation and effectiveness of the ICF will be assessed. The Admin Board has adopted in January 2021 the GSA InternalControl Framework.

The Parliament granted the discharge to the Executive Director for 2018 accounts, and is pending for 2019.

## 5. Declaration of assurance<sup>11</sup>

I, the undersigned, Rodrigo da Costa

Executive Director of the European Union Agency for the Space Programme,

In my capacity as Authorising Officer,

- Declare that the information contained in this report gives a true and fair view.<sup>12</sup>
- State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.
- This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment, ex-post controls, the work of the Internal Audit Capability, the observations of the Internal Audit Service and the lessons learnt from the reports of the Court of Auditors for years prior to the year of this declaration.
- Confirm that I am not aware of anything not reported here which could harm the interests of the Agency.

**SIGNED**

Prague, 17 June 2021

---

<sup>11</sup> As defined in GSA Internal Control Framework, January 2021.

<sup>12</sup> True and fair in this context means a reliable, complete and correct view on the state of affairs in the service.

## **Annexes**

### **Annex I – Core business statistics**

The measurement of core business activities and the related KPIs are listed in section 1.

The Agency wishes to note that section 1.6 refers to tasks that are delegated by the EC. These tasks are clearly defined together with their KPIs in the relative delegation agreement.

## Annex II – Statistics on financial management

### II.1 - Rate and type of implementation of appropriations

Budget line	Heading	Commitment Appropriations Budgeted 2020	Commitment Appropriations			
			Executed in 2020	%	Uncommitted	%
Title 1 - Staff expenditure						
1100	Staff expenditure	19 787 711,33	19 787 711,33	100%	0	0%
1200	Recruitment costs	51 714	51 714	100%	0	0%
1210	Medical services	76 024,37	76 024,37	100%	0	0%
1300	Missions and travel	266 542,52	266 542,52	100%	0	0%
1400	Training expenditure	161 904,32	161 904,32	100%	0	0%
1500	Social measures	340 998,95	340 998,95	100%	0	0%
1600	Interims & Trainees	561 960	561 960	100%	0	0%
1700	Representation expenditure	98,83	98,83	100%	0	0%
1800	Tuition fees	1 844 325,65	1 844 325,65	100%	0	0%
	Total for title 1	23 091 279,97	23 091 279,97	100%	0	0%
Title 2 - Administrative expenditure						
2000	Rental of buildings	2 752 954,49	2 752 954,49	100%	0	0%
2100	Data processing	3 032 886,78	3 032 886,78	100%	0	0%
2200	Movable property	6 799,98	6 799,98	100%	0	0%



Budget line	Heading	Commitment Appropriations Budgeted 2020	Commitment Appropriations			
			Executed in 2020	%	Uncommitted	%
2300	Current administrative costs	1 021 433,09	1 021 433,09	100%	0	0%
2400	Postage and telecommunication costs	156 726,64	156 726,64	100%	0	0%
2500	Meetings	6 908,90	6 908,9	100%	0	0%
2600	SAB administrative expenditure	10 514,84	10 514,84	100%	0	0%
	Total for title 2	6 988 224,72	6 988 224,72	100%	0	0%
	Total for titles 1 and 2	30 079 504,69	30 079 504,69	100%	0	0%
<b>Title 3 - Operational expenditure</b>						
3100	Expenditure on studies	4 404 163,50	4 404 163,50	100%	0	0%
3300	SAB operational expenditure	965 811,66	965 811,66	100%	0	0%
	Total for title 3	5 369 975,16	5 369 975,16	100%	0	0%
	TOTAL Title 1+Title 2+Title 3	35 449 479,85	35 449 479,85	100%	0	0%

Budget line	Heading	Payment Appropriations Budgeted 2020	Payment Appropriations					
			Paid in 2020	%	Carried Forward	%	Total Executed	%
Title 1 - Staff expenditure								
1100	Staff expenditure	19 787 711,33	19 787 711,33	100%	0	0%	19 787 711,33	100%
1200	Recruitment costs	51 714	51 714	100%	0	0%	51 714,00	100%
1210	Medical services	76 024,37	27 868,08	37%	48 156,29	63%	76 024,37	100%
1300	Missions and travel	266 542,52	246 825,85	93%	19 716,67	7%	266 542,52	100%
1400	Training expenditure	161 904,32	41 295,78	26%	120 608,54	74%	161 904,32	100%

Budget line	Heading	Payment Appropriations Budgeted 2020	Payment Appropriations					
			Paid in 2020	%	Carried Forward	%	Total Executed	%
1500	Social measures	340 998,95	165 949,59	49%	175 049,36	51%	340 998,95	100%
1600	Interims & Trainees	561 960	246 491,66	44%	315 468,34	56%	561 960,00	100%
1700	Representation expenditure	98,83	98,83	100%	0	0%	98,83	100%
1800	Tuition fees	1 844 325,65	1 679 359,98	91%	164 965,67	9%	1 844 325,65	100%
	<b>Total for title 1</b>	<b>23 091 279,97</b>	<b>22 247 315,10</b>	<b>96%</b>	<b>843 964,87</b>	<b>4%</b>	<b>23 091 279,97</b>	<b>100%</b>
<b>Title 2 - Administrative expenditure</b>								
2000	Rental of buildings	2 752 954,49	1 465 556,80	53%	1 287 397,69	47%	2 752 954,49	100%
2100	Data processing	3 032 886,78	809 693,79	27%	2 223 192,99	73%	3 032 886,78	100%
2200	Movable property	6 799,98	0	0%	6 799,98	100%	6 799,98	100%
2300	Current administrative costs	1 021 433,09	452 225,64	44%	569 207,45	56%	1 021 433,09	100%
2400	Postage and telecommunication costs	156 726,64	67 824,60	43%	88 902,04	57%	156 726,64	100%
2500	Meetings	6 908,90	6 908,90	100%	0	0%	6 908,90	100%
2600	SAB administrative expenditure	10 514,84	8 801,14	84%	1 713,70	16%	10 514,84	100%
	<b>Total for title 2</b>	<b>6 988 224,72</b>	<b>2 811 010,87</b>	<b>40%</b>	<b>4 177 213,85</b>	<b>60%</b>	<b>6 988 224,72</b>	<b>100%</b>
	<b>Total for titles 1 and 2</b>	<b>30 079 504,69</b>	<b>25 058 325,97</b>	<b>83%</b>	<b>5 021 178,72</b>	<b>17%</b>	<b>30 079 504,69</b>	<b>100%</b>
<b>Title 3 - Operational expenditure</b>								
3100	Expenditure on studies	4 641 762,70	3 770 970,39	81%	870 792,31	19%	4 641 762,70	100%
3300	SAB operational expenditure	728 212,46	728 212,46	100%	0	0%	728 212,46	100%
	<b>Total for title 3</b>	<b>5 369 975,16</b>	<b>4 499 182,85</b>	<b>84%</b>	<b>870 792,31</b>	<b>16%</b>	<b>5 369 975,16</b>	<b>100%</b>

Budget line	Heading	Payment Appropriations Budgeted 2020	Payment Appropriations					
			Paid in 2020	%	Carried Forward	%	Total Executed	%
	<b>TOTAL Title 1+Title 2+Title 3</b>	35 449 479,85	29 557 508,82	83%	5 891 971,03	17%	35 449 479,85	100%

## **II.2 – Information on transfers and amended budgets**

The GSA draft budget 2020 was approved by the Administrative board on 31 January 2019 for a total amount of EUR 36 406 280,88 and became the initial 2020 budget upon adoption of 2020 EU budget by the Council and European Parliament. The GSA Administrative Board approved 2020 amending budget number 1 on 29<sup>th</sup> January 2020, reflecting the fact that GSA requested additional 23 Temporary Agent (TA) posts and, in the final 2020 budget, only additional 10 TA posts were granted. The amendment also included the revised European Free Trade Association (EFTA) contribution, reducing the 2020 initial budget by EUR 956 801,03 and bringing it to the final amount of EUR 35 449 479,85.

In the second budget amendment the GSA Administrative Board approved the transfer of EUR 800 000 for both commitment and payment appropriations from the operational budget line 3100 to Staff expenditure budget line 1100.

Seven internal transfers were processed in 2020, all of them authorised by the Executive Director as they concerned transfers of amounts either within Titles or below 10% between Titles.

## **II.3 – Information on interest charged through late payments**

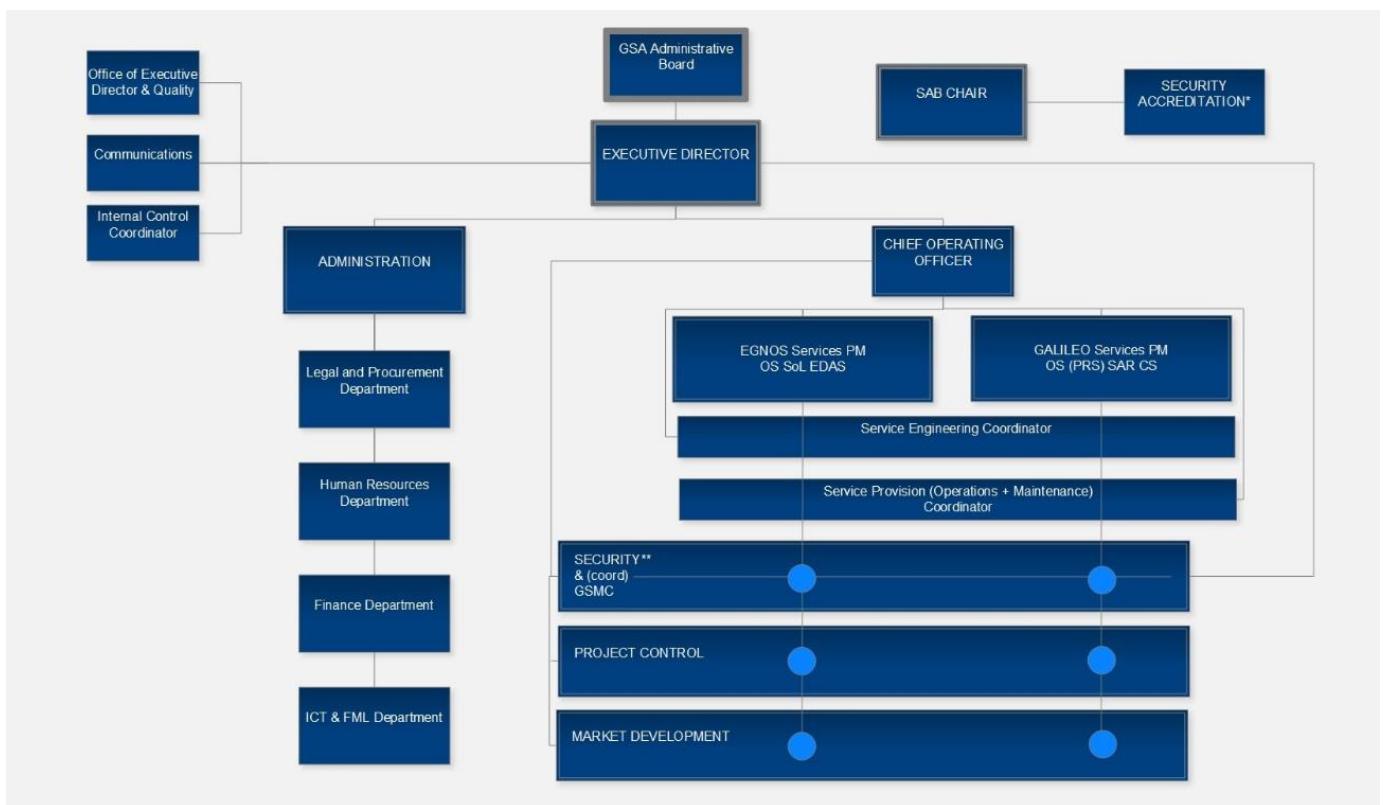
Interest on late payment totalling EUR 13 602,75 was paid in 2020 (EUR 751,22 in 2019).

## **II.4 – Summary information on budgetary operations**

Budget execution for the year was 100% in commitment appropriations and 100% in 2020 payment appropriations when taking into account the non-automatic carry-forward needed to maintain the Agency's payment capacity on existing legal obligations.

Average payment time was 14,26 days, well below the 30 day EC benchmark and 20 day target (14,95 days in 2019). It should be noted that, due to the nature of the Agency's activities, many of the Agency's contracts and grants have payment deadlines of 60 and 90 days and that the average payment time also includes these payments. The Agency processed 3 785 financial transactions (6 765 transactions in 2019). The decrease in comparison to 2019 is attributable to much lower number of mission orders and related payments due to COVID-19, all other transactions either remained at the same level or increased in 2020.

## Annex III – Organisation Chart



## Annex IV – Establishment Plan

The Agency's Establishment Plan for 2020 was as follows:

Category and grade	Establishment plan in EU Budget 2020		Modifications in 2020 in application of flexibility rule <sup>13</sup>	
	Officials	TA	Officials	TA
<b>Administrator (AD) 16</b>				
<b>AD 15</b>				
<b>AD 14</b>		1		
<b>AD 13</b>		3		
<b>AD 12</b>		8		
<b>AD 11</b>		9		
<b>AD 10</b>		16		
<b>AD 9</b>		27		
<b>AD 8</b>		46		
<b>AD 7</b>		27		
<b>AD 6</b>		4		
<b>AD 5</b>		6		+4
<b>Total AD</b>		<b>147</b>		
<b>Assistant (AST) 11</b>				
<b>AST 10</b>				
<b>AST 9</b>				
<b>AST 8</b>				
<b>AST 7</b>				
<b>AST 6</b>		1		
<b>AST 5</b>		2		
<b>AST 4</b>				
<b>AST 3</b>				
<b>AST 2</b>				
<b>AST 1</b>				

<sup>13</sup> In line with Article 38 (1) of the Commission Delegated Regulation 2019/715, the management board may modify, under certain conditions, the establishment plan by in principle up to 10% of posts authorised, unless the financial rules of the body concerned allows for a different percentage rate.

Category and grade	Establishment plan in EU Budget 2020		Modifications in 2020 in application of flexibility rule <sup>13</sup>	
	Officials	TA	Officials	TA
Total AST		3		
AST/SC 6				
AST/SC5				
AST/SC4				
AST/SC3				
AST/SC2				
AST/SC1				
Total AST/SC				
TOTAL				
Total AST		3		
AST/SC 6				
AST/SC5				
AST/SC4				
AST/SC3				
AST/SC2				
AST/SC1				
Total AST/SC				
TOTAL		150		

### Information on entry level grades for posts

The established recruitment grades for all selection procedures (external, inter-agency and/or internal) for the key functions of temporary agents are listed in the table below, which is based on the GSA decision of 28 June 2019 on types of post and post titles in the European GNSS Agency GSA-AB-56-19-06-06:

Type of post	Function group / Grade	Post title

<b>Head of Unit or equivalent</b>	AD 9 – AD 11 (exceptionally AD 12)	Head of Unit Head of Department Head of Task Force
<b>Administrator</b>	AD 5 – AD 8	Post titles established in the Agency to perform administrator functions: e.g. Engineer, Senior Engineer, Officer
<b>Assistant</b>	AST 1 – AST 4	Assistant, Project Assistant
<b>Secretary/Clerk (not foreseen at the moment)</b>	SC 1 – SC 6	Secretary/Clerk

The below chart shows the grading information for contract agents:

Type of Post	Minimum Entry Recruitment Grade	Highest grade possible	Post Title
Administrator, Advisor and equivalent Technical Officer	CA FG IV/16	CA FG IV/18	Senior Technical Officer* Senior Administrator Senior Project Officer Team Leader
Administrator, Advisor and equivalent Technical Officer	CA FG IV/14	CA FG IV/18	Technical Officer* Administrator Project Officer Team Leader
Administrator, Advisor and equivalent Technical Officer	CA FG IV/13	CA FG IV/18	Junior Technical Officer* Junior Administrator*
Executive and Technical Support	CA FG III/8	CA FG III/12	Executive Assistant Project Support Officer Technical Expert
Clerical and Secretarial Support	CA FG II/4	CA FG II/7	Secretary / Clerk
Basic Support	CA FG I/1	CA FG I/3	Manual and Administrative Support Service Clerk



## Annex V – Human and financial resources by activity

The 2020 distribution of staff was as follows, split by areas of activity:

		Allocated on 31 Dec 2020 <sup>14</sup>	
		TA	CA, SNE
Core tasks	Security accreditation	11	2
	Security and PRS tasks	3	1
	GSMC operations	24	21
	Promotion and marketing of the services	7	4
	Agency management	20	21
Delegated tasks	EGNOS Exploitation	18	4
	Galileo Exploitation	63	14
	Research & Development (H2020)	4	5
Total		150	72

The financial resources, split by area of activity are:

		Commitments in 2020 (EUR)
Core tasks	Security accreditation	965 811,66
	Security and PRS tasks	-
	GSMC operations	1 500 682,00
	Promotion and marketing of the services	2 903 481,50
	General Administration and Agency Management	30 079 504,69
Delegated tasks	EGNOS Exploitation	29 739 153,83
	Galileo Exploitation	350 567 071,56
	Research & Development (H2020)	21 439 876,05
	GOVSATCOM	349 763,00
Total		437 545 344,29

<sup>14</sup> Including 5 accepted offers for TA positions and 2 accepted offers for CA positions.

## Annex VI –

## Contribution, grant

### and service level agreements. Financial Framework Partnership Agreements

*Actual state of play of implementation*

	General information					Financial and HR impact				
	Date of signature	Total amount	Duration	Counterpart	Short description		2019		2020	
Grant agreements										
1. GOVSATCOM ENTRUSTED	21/08/2020	2 999 940€	30 months	GSA as coordinator of the consortium	Creation of a coordination relationship scheme between potential governmental secure SatCom users	Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA
							0	0	2 999 940	2 109 330
						Number of CA				
						Number of SNEs				
Total grant agreements: 2 999 940€						Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA
							0	0	2 999 940	2 109 330.00
						Number of CA				

						Number of SNEs					
<b>Delegation/Contribution agreements</b>											
1. 7th framework programme - 1st and 2nd call	21/12/2007	77 008 957 €	72 months	European Commission	Implementation of the FP7 sub-theme Galileo by GSA - 1st and 2nd call	Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA	
							296 527,01	141 786,10	0	0	
						Number of CA					
						Number of SNEs					
2. 7th framework programme - 3rd call	01/04/2011	31 200 000 €	84 months	European Commission	Implementation of the FP7, sub-theme Galileo by GSA – 3 <sup>rd</sup> call	Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA	
							1 753 834,16	334 803,98	1 419 030,18	0	
						Number of CA					
						Number of SNEs					
3. PRS	09/09/2011	11 600 000 €	Until 31/12/2021 (originally 60 months)	European Commission	Delegation Agreement between the European Union and the European GNSS Agency on the development of a standalone first generation PRS receiver within the frame of the PRS pilot project and the	Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA	
							3 132 188,88	3 027 701,50	3 132 188,88	3 027 701,5	
						Number of CA					
						Number of SNEs					

					implementation of the preparatory activities related to the setting up of the Galileo Security Monitoring Centre					
4. EGNOS	16/04/2014	1 514 000 000 €	Until 31/12/2021	European Commission	Delegation Agreement between the European Union and the European GNSS Agency on the exploitation of the EGNOS Programme	Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA
							964 262 318,98	361 156 534,46	837 246 416,36	412 825 281,84
						Number of CA				
						Number of SNEs				
5. GALILEO	02/10/2014	2 940 000 000 €	Until 31/12/2021	European Commission	Delegation Agreement between the European Union and the European GNSS Agency on the exploitation of the Galileo Programme	Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA
							1 686 487 506,24	765 237 528,54	1 317 922 948,84	1 099 967 548,14
						Number of CA				
						Number of SNEs				
6. H2020	11/04/2014					Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA
							63 437 064,30	38 952 911,28	51 713 128,34	24 151 337,27

		173 250 000 €	120 months	European Commissi on	The implementation of calls of Horizon 2020 - framework programme for research and innovation	Number of CA				
						Number of SNEs				
7. Contribution agreement on GOVSATCOM preparatory action	07/04/2020	4 500 000 €	33 months	European Commissi on	Actions for the preparation of GOVSATCOM	Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA
						0	0	4 500 000	1 200 000	
						Number of CA				
						Number of SNEs				
Total delegation/contribution agreements						Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA
						2 719 369 439,57	1 168 851 265,86	2 215 933 712,60	1 541 171 868,75	
						Number of CA				
						Number of SNEs				
TOTAL						Amount	Cumulative CA	Cumulative PA	Cumulative CA	Cumulative PA
						2 719 369 439,57	1 168 851 265,86	2 218 933 652,60	1 543 281 198,75	
						Number of CA				
						Number of SNEs				

## **Annex VII – Environment management**

The Agency received, from DG DEFIS, a request to collect the information necessary to evaluate the environmental impact of the Programmes and to be able to set a baseline footprint. The Agency collected and forwarded information related to majority of sites as follows:

- Annual electricity power consumption (in kWh for primary and final energy consumption);
- Annual fuel consumption and type of fuel;
- Annual consumption for heating purposes and source of energy used;
- Heating and cooling degree days per year;
- The surface of the sites (indoor and total in m<sup>2</sup>) and the staff (FTE) per site;
- Energy mix if known;
- CO<sub>2</sub> emission related to energy consumption (electricity, fuel, gas) if known;

The Agency is now in contact with several subjects within interinstitutional EMAS exchange. Internally, the Agency is aware of the importance of the topic and the beginning of the initial discussions about the organisation and responsibilities is imminent. The EMAS certification might not be achieved until 2022, due to several relocations planned for the Agency sites in the coming three years. Nevertheless, the Agency will at least aim to adopt the environmental policy and processes.

In the meantime, the Agency continues in its environmental approach (paperless administration when possible, videoconferencing, full recycling, reduction of plastic waste, etc.). Also, for new buildings, both in planning and construction, the Agency requested an upper scale environmental grading.

## **Annex VIII - Draft Annual Accounts and Financial Reports**

The Provisional Annual Accounts for the reporting period were prepared and sent to the EC and the discharge authorities in accordance with the provisions of the Financial Regulation.

In Q1 2021, the Court of Auditors will audit these Accounts. After their final remarks, the Agency will submit the 2020 Final Annual Accounts to its Administrative Board for adoption. Once approved by the Administrative Board, the Agency will annex these to this report for reference.

## Annex IX – Specific Annexes related to part 2

### IX.1 GSA Legal Framework (as of 31 December 2019)

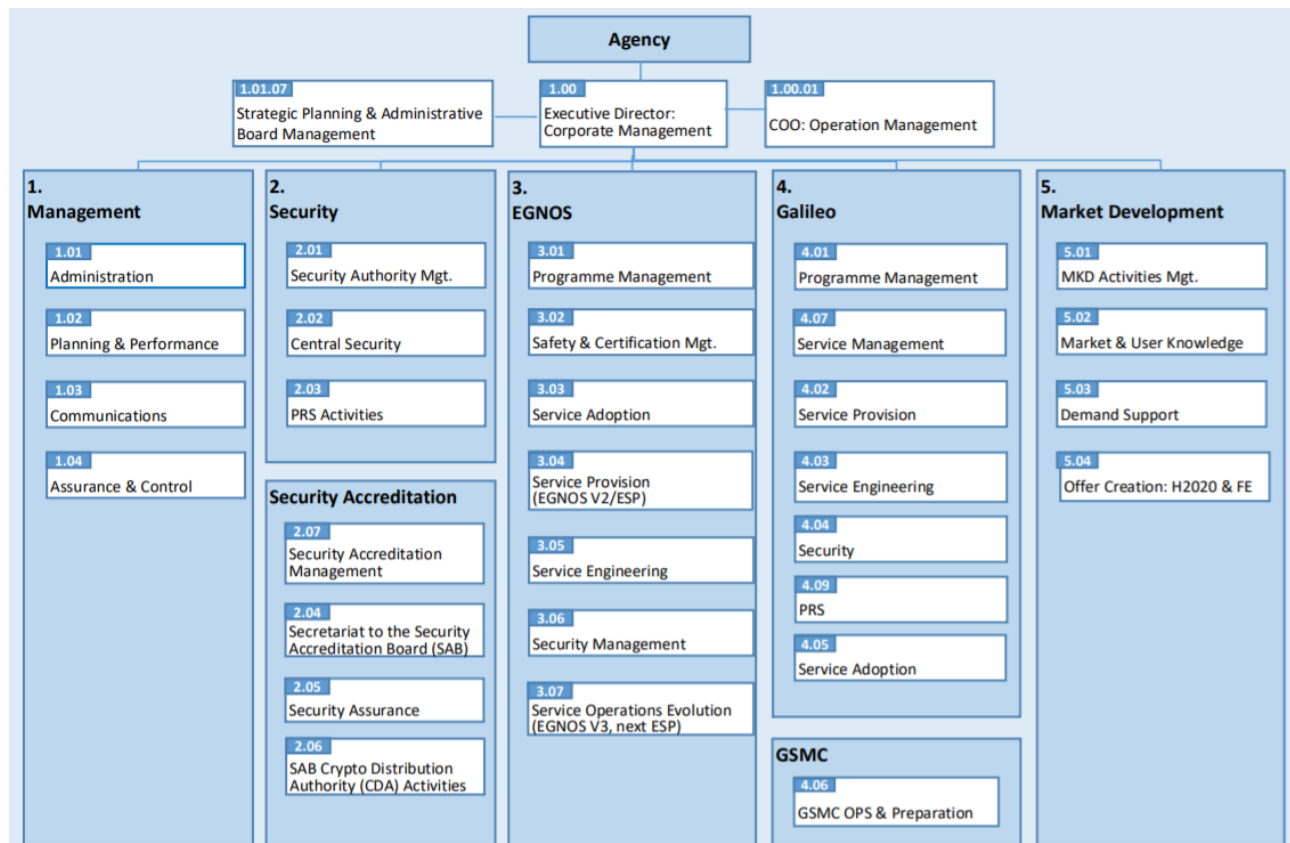
Document	Ref.	Issue - Date
Council Decision 2014/496/CFSP of 22 July 2014 on aspects of the deployment, operation and use of the European Global Navigation Satellite System affecting the security of the European Union and repealing Joint Action 2004/552/CFSP	2014/496	22 July 2014
Regulation (EC) No 1285/2013 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	1285/2013	11 December 2013
Regulation (EU) 912/2010 of the European Parliament and of the Council of 22 September 2010 setting up the European GNSS Agency, repealing Council Regulation (EC) No 1321/2004 on the establishment of structures for the management of the European satellite radio-navigation programmes and amending Regulation (EC) No 683/2008 of the European Parliament and of the Council, as amended by Regulation 512/2014 of the European Parliament and of the Council of 16 April 2014	912/2010, 512/2014	22 Sep 2010, 16 Apr 2014
Commission Decision (EU, Euratom) 2015/444 of 13 March 2015 on the security rules for protecting EU classified information	2015/444	13 March 2015
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	1104/2011 (enforced on 5/11/2011)	25 Oct 2011
Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union, amending Regulations (EU) No 1296/2013, (EU) No 1301/2013, (EU) No 1303/2013, (EU) No 1304/2013, (EU) No 1309/2013, (EU) No 1316/2013, (EU) No 223/2014, (EU) No 283/2014, and Decision No 541/2014/EU and repealing Regulation (EU, Euratom) No 966/2012	2018/1046	18 July 2018
Decision of the Administrative Board adopting the GSA Financial Regulation	WP 69	16 August 2019
Regulation No 31 (EEC), 11 (EAEC), laying down the Staff Regulations of Officials and the Conditions of Employment of Other Servants of the European Economic Community and the European Atomic Energy Community as subsequently amended	Staff Regulations	14 June 1962

## Annex X – Specific annexes related to part 3

There are no annexes to part 3 for the reporting period, as key information is summarised in the corresponding section of this report.

## Annex XI – The work breakdown structure

The WBS used as a reference for the Single Programming 2019-2021 and therefore the Consolidated Annual Activity Report 2020 is shown below. The structure was updated in the course of the year to take into account its further development and changes in the Agency's activities that will be reflected in the following programming documents.





## Annex XII - List of acronyms

Abbreviation	Definition
AD	Administrator
ANSP	Air Navigation Service Providers
APV	Approach Procedure with Vertical Guidance
ARB	Anomaly Review Board
AST	Assistant
ATO	pre-Approval To Operate
BC	Business Continuity
CA	Contract Agent
CCB	Change Control Board
CDA	Crypto-Distribution Authority
CFSP	Common Foreign and Security Policy
CLGE	Council of European Geodetic Surveyors
CMS	Common Minimum Standards
COMSEC	Communication Security
CPA	Competent PRS Authority
CS	Commercial Service
DG DEFIS	Directorate-General for Defence, Industry and Space
DG GROW	Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs
EASA	European Aviation Safety Agency
EC	European Commission
ECA	European Court of Auditors
ECM	Enterprise Content Management
EEAS	European External Action Service
EFTA	European Free Trade Association
EGNOS	European Geostationary Navigation Overlay Service
EGNSS	European Global Navigation Satellite System
ELT	Emergency Location Transmitter
EMC	Enhanced Minimum Configuration
ESA	European Space Agency
ESTEC	European Space Research and Technology Centre
EU	European Union

Abbreviation	Definition
EUCI	EU Classified Information
EUPOS	European Position Determination System
EURATOM	The European Atomic Energy Community
EUSPA	European Union Agency for the Space Programme
FFPA	Financial Framework Partnership Agreement
FKC	Flight Key Cell
FLAG	Five Lives Advisory Group
FOC	Full Operational Capability
GAL	Galileo
GCC	Galileo Control Centre
GCC-D	Galileo Control Centre - Germany
GCC-I	Galileo Control Centre - Italy
GCS	Galileo Control Segment
GDDN	Galileo Data Dissemination Network
GEO	Global Earth Observation
GMS	Ground Mission Segment
GNSS	Global Navigation Satellite System
GPS	Global Positioning System (USA)
GRC	Galileo Reference Centre
GRON	Galileo Robust Operational Network
GRUE	GSA EU Restricted Network
GSA	European GNSS Agency
GSAP	GNSS Security Accreditation Panel
GSC	GNSS Service Centre
GSF	Galileo Security Facility
GSMC	Galileo Security Monitoring Centre
GSMC-ES	Galileo Security Monitoring Centre - Spain
GSMC-FR	Galileo Security Monitoring Centre - France
GSOp	Galileo Service Operator
GSS	Galileo Sensor Station
H2020	Horizon 2020
HAS	High Accuracy Service
HR	Human Resources

Abbreviation	Definition
IAC	Internal Audit Capability
IALA	International Association of Lighthouses Authorities
IAS	Internal Audit Service
IATO	Approval to Operate
ICS	Internal Control Standards
ICT	Information and Communications Technology
JRC	Joint Research Centre
IMS	Integrated Management System
ISO	International Standards Organisation
IT	Information Technology
ITS	Intelligent Transport Systems
KMP	Key Management Plan
KPI	Key Performance Indicator
LBS	Location-Based Services
LEOP	Launch and Early Operation Phase
L-SMC	LEOP Security Monitoring Cell
LPV	Localiser Performance with Vertical Guidance
M2M	Machine-to-machine
MGF/ULS	Message Generation Facility / Uplink Station
OS	Open Service
OS-NMA	Open Service Message Authentication
PA	Product Assurance
PLB	Personal Locator Beacon
PRS	Public Regulated Service
P3RS-2	PRS Pilot Project 2
QA	Quality Assurance
RIMS	Ranging and Integrity Monitoring Station
RLS	Return Link Service
RLSP	Return Link Service Provider
RAMS	Reliability, Availability, Maintainability and Safety
R-UE / UE-R	EU Restricted
SECMON	Security Monitoring
SecOps	Security Operating Procedures

Abbreviation	Definition
SAA	Security Accreditation Authority
SAB	Security Accreditation Board
SAR	Search And Rescue
SATO	Site Approval To Operate
SB	System Build
SBAS	Satellite Based Augmentation System
SIH	Security Incident Handler
SINA	Secure Inter-Network Architecture
SLA	Service Level Agreement
SNE	Seconded National Expert
SOIF	Security Operational and Intelligence Facility
SPD	Single Programming Document
TA	Temporary Agent
TF	Task Force
UCP	User Consultation Platform
WBS	Work Breakdown Structure
WG	Working Group
WP	Work Package

