



EGNOS, it's there. Use it.

EGNOS BULLETIN

Issue 16, Q3 2015

airBaltic
BOMBARDIER

PHOTO: AIR-BALTIC



European
Global Navigation
Satellite Systems
Agency



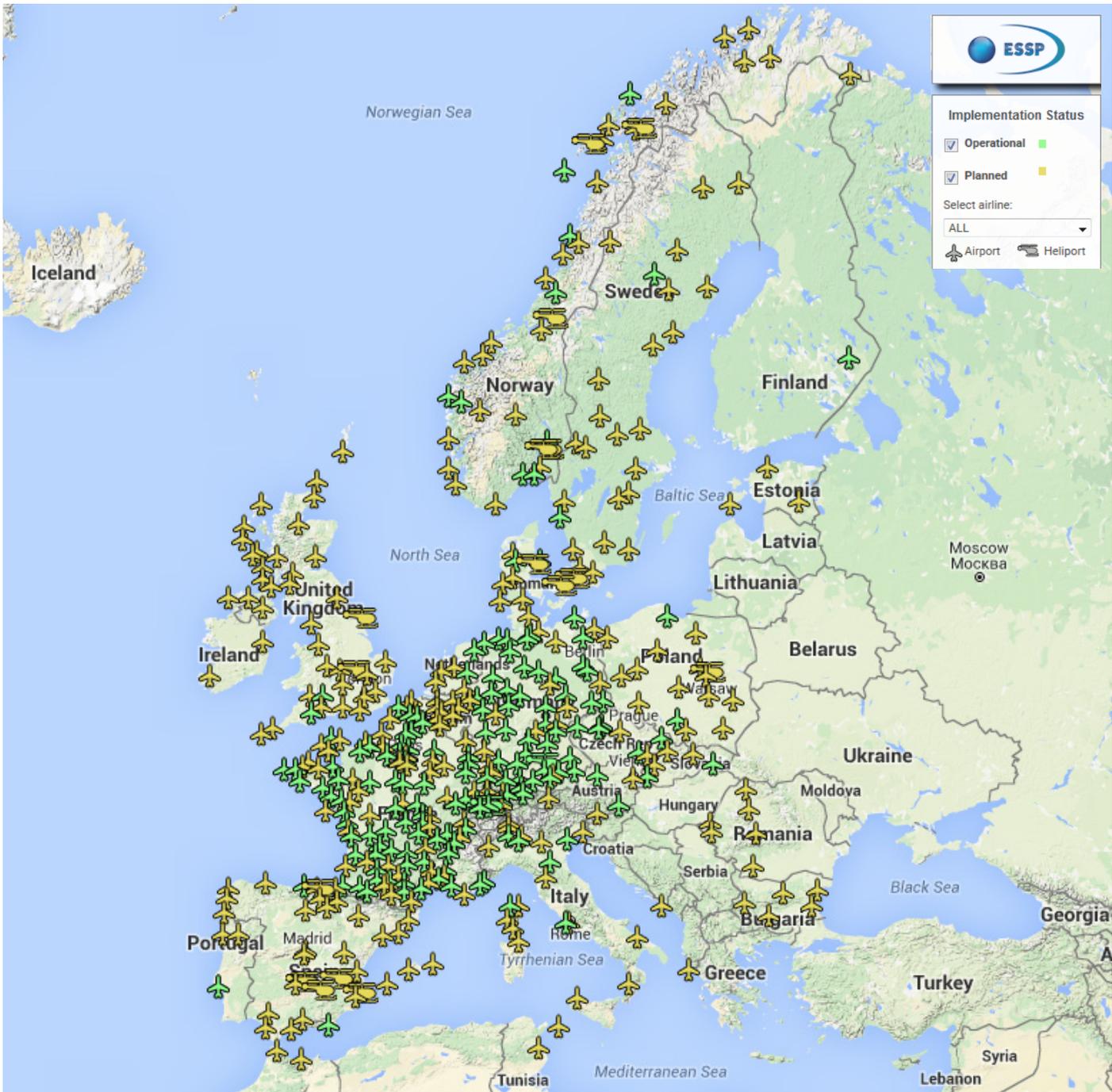
Precise navigation,
powered by Europe

<http://egnos-portal.gsa.europa.eu/>



We certify you're there.

<http://www.essp-sas.eu/>



EGNOS USER SATISFACTION SURVEY IS OPEN

Please, [click here](#) to complete it. Your feedback is very important!



EGNOS

User Satisfaction Survey



just 10 min to fill it in



A review on EGNOS Service Provision Workshop Copenhagen 2015

Two days about EGNOS

The **first day** was devoted to explain the latest updates in EGNOS services & program together with an overview of the status of the implementation of EGNOS. Eurocontrol and UK CAA provided a glimpse on the regulatory and standardisation perspective. The afternoon session started with an international flavor: both FAA and ASECNA presented respectively the status of WAAS and African progress within satellite navigation program. Aviation EGNOS success stories took major part of the afternoon: all the relevant stakeholders around PBN implementation were present: aircraft manufacturer (Airbus), avionics manufacturer (Universal); business operator (FlyingGroup), regional one (Air Baltic); Navigation service provider (Skyguide) and a flying school (Ljungbyhed flygklub).



The first day session was closed awarding four European ANSPs that have recently signed an EGNOS Working Agreement (EWA) with Hungarocontrol, Belgocontrol, Royal Netherland Airforce and Danish Netherland Airforce. Another ANSP was awarded (PANSAs, from Poland) for the publication of first EGNOS-based procedures at their local airports.



"More than 160 participants, two full days of presentations, the 2015 EGNOS Service Provision Workshop has been once again a success.

I'm pleased to introduce this issue in the EGNOS Bulletin devoted to highlight the main messages given by the different stakeholders who participated on the 29th and 30th September at Copenhagen. Aviation, agriculture, surveying, maritime and rail market segments were present: definitively EGNOS user community keeps on growing every year. Please, be an active user: talk about EGNOS, give your feedback and remember the lemma: EGNOS, is there, use it!"



The **second day** was dedicated to EGNOS in land and maritime applications. The EDAS service for added value applications was also a main theme of the day. The GSA and ESSP explained in deep the actual status of EGNOS markets, and the actions that taken for further EGNOS adoption in multimodal domains. There were presentations from Puertos del Estado, the General Lighthouse Authority of the UK & Ireland, Alberding, Ansaldo, Geograma and CLAAS.

Thierry Racaud
CEO at ESSP

EGNOS program

EXPLOITATION PROGRAM UPDATE

Mr Carlo des Dorides from GSA introduced the workshop with an overview of the EGNOS operational configuration, service provision highlights and the expected evolution of the system and services. To highlight: the plans for 72°N coverage extension by 2017, APV-I coverage of EU28 countries by 2020 and, regarding EGNOS V3, its expected entry in operations by 2022. The complete presentation can be found [here](#).

MARKET STRATEGY AND ACHIEVEMENTS

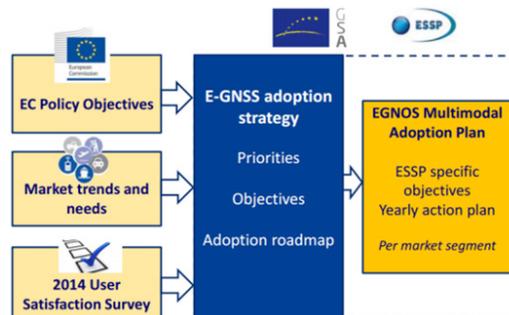
Gian-Gherardo Calini presented the market development activities being carried out by GSA. He introduced how a number of tools leverage the adoption of E-GNSS, such as: cooperation with receiver manufacturers, calls for proposals in the H2020 or 'Fundamental Elements' programs and the development of the activities in GSA's Multimodal Adoption Plan. A review of the hot topics in each transport domain followed. Full presentation [here](#).



EGNOS market status

MARKET OVERVIEW AND MMAP

[GSA provided](#) the overall view of the EGNSS market as well as the Multimodal Adoption Plan, which was presented as a key element in the Adoption strategy.



EGNOS ADOPTION ACTION PLAN STATUS

[ESSP explained](#) the different actions launched during 2015 in coordination with GSA with the aim of increasing EGNOS adoption in aviation, maritime, rail and agriculture & surveying. Major part of the tools developed to support aviation stakeholders in their EGNOS Adoption process are available at [EGNOS User Support Website](#).

Actions distribution per market segment

Aviation	Maritime	Rail	Surveying & Agriculture	Total
19	23	7	14	65

E-GNSS BENEFITS IN ENVIRONMENTAL DOMAIN



Mr Hans Dufourmont, from the European Environment Agency, [presented](#) the mission of the Agency and explored opportunities for the European navigation programmes to support their activities. He presented some of the tools for environment monitoring, such as litter watch or noise measurement (e.g. the 'Noisewatch' app). The conclusion was that there is a huge potential for extension of environmental measurements by increased use of geo-location services.

EGNOS services



PERFORMANCE OVER THE LAST 12 MONTHS

ESSP shared last year performance analysis for the different provided services. In general terms, operational Signal in Space has been available a 100% of the time and the commitments stated in the Service Definition Documents (SDD) have been met for EGNOS SoL Service, EGNOS Open Service and EDAS Service. Complete presentation and performance maps [here](#).

EGNOS EXTENSION PLANS BEYOND EU

Mr. Ugo Celestino, from EC (DG Growth) presented the drivers, alternatives, activities and constraints of the EGNOS extensions currently planned or going on. Details on the current programs at the East and South vicinity regions were introduced, as well as the issues arising from the need of a bilateral agreement. The presentation is available [here](#).



EGNOS SERVICES IMPLEMENTATION ROADMAP

ESSP presented an overview of EGNOS in terms of system status, services status and services implementation roadmaps. One of the main achievements of this year has been the new EGNOS system release (v2.4.1.M) which is operational since end of June 2015. The current system release is qualified for LPV-200 service level capability which is a key milestone for the EGNOS program. The last part of the presentation is devoted to EGNOS Services Implementation roadmaps (SIRs) which provide a high-level overview of EGNOS Services current status and EGNOS Services foreseen evolutions in a 3-year timeframe. More information [here](#).

ESR241 DEPLOYMENT & PRN 136

A new version of EGNOS system (namely 2.4.1M) was successfully deployed by ESSP; the Signal in Space started broadcast by Geostationary Satellite PRN-120 on 29th of June 2015.

Afterwards, as part of the continuous system evolution, ESSP introduced into the EGNOS Operational platform the ASTRA SES-5 GEO PRN 136, which started to broadcast the operational Signal in Space on 13th of August 2015. This GEO satellite replaced the INMARSAT 4F2 EMEA with PRN 126.

USER SATISFACTION SURVEYS 2014

[GSA and ESSP](#) jointly presented and explained the pillar's on which the user satisfaction process is based, namely, understand user needs, communicate, get feedback and engage & satisfy users. It was also presented the [results of the 2014 survey](#).



EGNOS services LPV-200 DECLARED



During the EGNOS Service Provision Workshop, a new EGNOS SoL service level, called LPV-200, was officially declared. On behalf of the European Commission, the European GNSS Agency (GSA) acting as the EGNOS programme Manager together with ESSP SAS, the EGNOS Services Provider, declared the onset of the LPV-200 service provision to users.

LPV-200 service level enables EGNOS-based operations in compliance with ICAO Annex 10 Category I precision approach signal-in-space performance requirements and supports RNP APCH PBN navigation specification down to LPV minima as low as 200 ft.

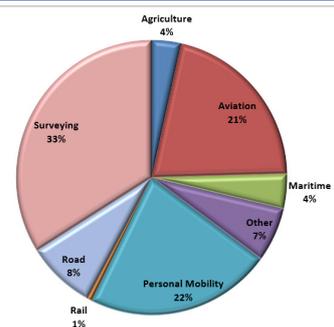
EDAS ADDED VALUE

EDAS (EGNOS Data Access Service) is a free of charge service that provides access to the data gathered by the EGNOS infrastructure through the Internet. Deep information with regard to EDAS service as well as access to the registration form can be found in the [EGNOS User Support website](#). After the presentation of the different EDAS services and their performance in terms of availability and latency, the attention was focused on DGNSS navigation using EDAS Ntrip Service. Results of performance analysis with multiple combinations of rover and reference station locations show that EDAS DGPS corrections improve GPS standalone solution up to 500 km baseline covering most of the EU land masses, with the exception of some regions of Eastern Europe.

Finally, it was highlighted EDAS potential to provide an added value for a wide area of applications:

asset tracking, GNSS performance monitoring, contribution to GNSS networks, high accuracy applications, etc. Complete presentation [here](#).

EDAS user distribution



EGNOS

in aviation.



EGNOS ADOPTION IN AVIATION

Market Development at GSA highlighted the main achievements of last year towards a larger EGNOS uptake by aviation stakeholders. These did not only cover the usual implementation of LPVs but also other applications enabled by EGNOS such as Helicopter PinS procedures, ADS-B out or Drones. The presentation stressed the main activities which have been funded or initiated by GSA in support of these applications and a wider penetration of EGNOS in the aviation market in general. The discourse concluded with a review of the main opportunities and challenges ahead. The presentation is available [here](#).

EGNOS BASED OPERATIONS: IMPLEMENTATION STATUS AND PLANS

ESSP gave an overview about the current implementation status of EGNOS operations in Europe. Today, more than 270 runway ends are served by LPV or EGNOS-enabled LNAV/VNAV operations, while the number is expected to continuously grow during next years given the trend observed so far. Such implementation is enabled, among others, by the signature of EGNOS Working Agreements (37 up to now) between ESSP, as EGNOS Service Provider, and the ANSPs providing ATS services in each aerodrome. Presentation available [here](#).

REGULATORY & STANDARDISATION ISSUES

RNP APCH and PBN specialists from Eurocontrol provided a summary on the European regulatory framework, from the highest-level references at ICAO to the on-going Rulemaking tasks at EASA. The deployment status against PCP IR objective was also highlighted together with the assessment conducted on European navigation fleet capabilities. Lessons learnt and implementation issues, as reported within RAISG group, were summarised for, finally, addressing the scope of the 7-year Framework Partnership Agreement recently signed between the GSA and Eurocontrol in support to the development of GNSS programmes.

The presentation is available [here](#).

CAA APPROACH TO LPV: VISUAL AERODROMES; AFIS & ANSP-LIKE

The UK CAA Safety & Airspace Regulation Group explained the process followed to evaluate applications for instrument approach procedures to aerodromes without an instrument runway and/or approach control. Two of the most important aspects of the process are the Risk-Based approach followed during the safety assessment and its corresponding Alternative Safety Arguments. Several operational issues identified from the first applications (separation in Class G airspace or against visual traffic, for example) were also listed as examples of situations when alternative mitigation measures have to be applied. Presentation available [here](#).



Successful EGNOS implementation stories in aviation.



SBAS DEMAND ON A-350 & STRATEGY



Airbus announced that the SLS (SBAS+GBAS) functionality offered to their brand new A350s is being ordered by the most of these aircraft customers. The feature has been requested by nine operators around the world so far and it is likely to be ordered by three more in the US soon. The popularity of this ILS-like functionality is making Airbus seriously consider the possibility to offer it also for the A320s/A330s families. The manufacturer confirmed that a feasibility assessment is currently being performed on this matter. The company is also engaged in other research activities like SBAS-based CAT I auto-land and, in a longer term, the development of Dual Frequency and Multi Constellation (DF/MC) standards. For the latter, 2025 was cited as the target date to achieve certification of a DF/MC capable receiver. The presentation is available [here](#).



EGNOS COMPATIBLE AVIONICS



The US-based avionics manufacturer Universal Avionics Systems Corporation [introduced its family of SBAS-enabled](#) Flight Management Systems, which include not only LPV capabilities but also other mandated cutting-edge technologies like PRNAV, ADS-B Out or Datalink.



The main operational and economic benefits provided by the LPV capability implemented in these boxes were reviewed. However, one of the most valuable aspects of this presentation was the overview given to the list of EASA LPV STCs using UASC FMS boxes, with solutions currently available for ATR 42 and 72 series; BAE Aerospace ATP, 146 and Jetstream; or Saab 340 and 2000.

NEW EGNOS BASED OPERATIONS IN SWITZERLAND

A very interesting [presentation](#) from Skyguide gave the audience an insight of the latest EGNOS-based operational concepts implemented in the country. The benefits and flyability of the in-service LPV at Dübendorf, with RF legs in the initial and intermediate segments, were reviewed. But it was also an opportunity to know about the ongoing projects to implement one of the first LP (EGNOS NPA) approaches in Europe for Locarno, or the ambitious Swiss GNSS Low-Flight Network to be deployed all over the territory, and to be used by helicopters of the Air Force and of the national HEMS service operated by REGA.

FLYING GROUP: FIRST OPERATOR WITH LPV

Flying Group has been one of the first European Business Aviation operators achieving operational approval for the use of LPVs by their Civil Aviation Authority. Actually, they have been granted the approval by two different states, since part of their fleet is registered in Belgium and the rest in Luxembourg. They are now able to fly LPVs across Europe on their Falcon 900, 2000 and 7X fleet and are planning for the equipage, certification and approval of other aircraft models that they operate. The presentation is available [here](#).



AIRPORT AND FLYING SCHOOL INITIATIVE



Swedish Ljunbyheds Flygklubb explained how the organisation could equip one of their Diamond DA-40 aircraft to gain LPV capability within the GSA funded EGUS SC-2 project, where the airport has also implemented RNP APCH down to LPV minima for both runways ends. The presentation included valuable information regarding how they faced all the steps of the project, from receiver's selection, through installation to final CAA approval.

The final minutes were dedicated to present a 'wish list' for: a growing number of LPV approaches, the set up of easier certification processes and the request to permit flying LNAV/VNAV procedures using EGNOS vertical guidance.

The presentation is available [here](#).

AIRBALTIC: THE SUCCESS AND CHALLENGES OF PBN IMPLEMENTATION

The Latvian operator airBaltic has been recently granted with GSA funds to upgrade their fleet of twelve Bombardier Dash8 Q400 aircraft with SBAS capabilities. The carrier, which performs more than 40 thousand flights per year, is currently flying to 13 European destinations with an LPV in place and these could grow up to 30 by 2018 according to current ANSP plans. The company is also launch customer of the new Bombardier CS300 model which will be SBAS ready from factory. The new units will entry into operation by Q4 2016. The presentation is available [here](#).



in maritime.



EDAS AS AN ALTERNATIVE SOURCE FOR A DGPS SERVICE

Through this presentation, Alberding, a German GNSS software and hardware development company, introduced the Virtual Reference Station (VRS) concept. EGNOS-VRS corrections can be remotely generated for any location within the EGNOS coverage area. Hence, a physical reference station at or close to the transmission site would not be required for the delivery of DGPS corrections for maritime navigation. Where there is no nearby EGNOS RIMS station, EGNOS-VRS is a very promising solution. Complete information [here](#).



EGNOS ROLE FOR E-NAVIGATION AND RESILIENT PNT

The General Lighthouse Authorities of the United Kingdom and Ireland (GLA) presented their view on EGNOS as a potential component of resilient PNT and e-Navigation, based on collected data from two GLA monitoring stations. EGNOS OS and EDAS meet IMO accuracy, availability (and continuity) requirements for harbour operations at the extremes of GLA service area. As a conclusion, EGNOS will have a part to play in the mix of systems used to support Resilient PNT and e-Navigation services. Extended information [here](#).





in maritime.

MARITIME MARKET SEGMENT UPDATE

GSA gave an overview of key possible applications and target users in the maritime domain. EGNOS improves accuracy and may provide integrity data for all segments of users.

Some market data and key trends for regulated and recreational segments are introduced, as well as the main issues which determine the overall E-GNSS adoption: Regulation, standards, ratio price/new functions and legacy systems.

With regard to the market development strategy; its objectives and the recommended way to achieve them for the regulated and non-regulated sectors are debriefed.

Complete presentation [here](#).



EGNOS FOR MARITIME NAVIGATION IN SPAIN

Puertos del Estado, a government agency in charge of the coordination and efficiency control of the Spanish port system, presented their view on the strategy for EGNOS use in marine aids to navigation and its potential use in ports and other maritime operations.

First part was focused on current status with a description of the Spanish IALA DGPS network in terms of infrastructure and commitments. Technical assets and service are running properly, but the equipment is close to technical obsolescence: EGNOS is presented as a potential alternative to recapitalize current architecture.

Besides, preliminary results of a data gathering campaign show that most ships use positioning augmentation services and most of the AIS positions are reported using these services, therefore it can be concluded that its use is much wider than the users perception.

More information [here](#).

Puertos del Estado



in land.

RAIL MARKET SEGMENT UPDATE

[GSA provided](#) the overall view of the EGNSS market in Rail, Road, Agriculture and Surveying. Showing which are the most relevant applications foreseen for them.



EGNOS FOR RAIL APPLICATIONS

Mr Francesco Rispoli, from Ansaldo STS, presented the challenges ahead for the introduction of E-GNSS in rail control and signalling applications. He introduced the ERSAT project, a H2020 project aimed at developing an E-GNSS application compatible with ERTMS, to be deployed in a real scenario in Sardinia. Full presentation [here](#).



EGNOS FOR AGRICULTURE

Josef Meier, from CLAAS Agrosystems, [presented](#) the importance of GNSS technologies for Precision Agriculture; and finished his speech with interesting questions in relation with EGNOS evolution and expected accuracy.

EGNOS FOR ROAD MILESTONES INVENTORY

Geogramma, presented the use made of EGNOS for performing the inventory of more than 100000 Km of roads in Spain. The different reasons that led them to choose EGNOS as the perfect solution for this project. Full presentation, [here](#).



CLAAS

AGRICULTURE

SBAS in the world

AFRICA AND SAFIR

The programme for introduction of EGNOS based satellite navigation in Africa is part of the joint Africa-EU strategic partnership adopted by Heads of State and Government from Africa and Europe at the Lisbon Summit in December 2007 to enhance safety in air transport. The SAFIR (Satellite navigation services for African Region) project is part of this Africa-EU long term strategic partnership whose global objective is to build capacity within African ACP countries for the future deployment of GNSS/EGNOS in the region. One of the main outcomes of the project is the set-up of a SBAS services implementation roadmap in Africa based on EGNOS to support African states in the introduction of harmonized, safe and cost effective EGNOS services. Please visit [SAFIR webpage](#) for more information.

ASECNA

Julien Lapie, ASECNA Technical Advisor, [presented](#) the background strategy & vision as well as the needs for the member states of ASECNA agency. In relation with SBAS- Roadmap towards the early services declaration were given as well as the plans for the extension of the EGNOS operational services across the Africa region,



WAAS

Deane Bunce, WAAS Program Manager at FAA, [provided an overview](#) of different programmatic, organizational and engineering aspects of the American SBAS system which currently serves 4,100 LPV/LP procedures at nearly 2,000 airports. Since the declaration of the WAAS LPV200 service in March 2006, historical data have shown that the system performances are well within its expected bounds when compared to ILS metrics. The satisfaction with the SBAS system is such that, in 2011, FAA announced that future requirements for CAT I instrument operations would be covered with WAAS LPVs from then onwards, in detriment to new ILSs installations. FAA has recently gone a step further and committed to make

a decision on CAT I ILS rationalization by 2016. As it happens to Europe, the system has engaged users from other domains such as maritime (e.g. harbours and channels navigation), mapping (e.g. precise location) and farming (e.g. sub-meter accuracy for spreading, seeding and harvesting).

Satellite-based Approach Procedures			
	Procedures (Part 139 Airports)	Procedures (Non-Part 139 Airports)	Total Number of Procedures
RNAV (GPS) Approach LNAV Line of Minima	1,767	4,217	5,984
RNAV (GPS) Approach LNAV/VNAV Line of Minima	1,374	2,068	3,492
RNAV (GPS) Approach LPV Line of Minima	1,380	2,187	3,567
<i>Non-ILS runway</i>	53	1,610	1,663
<i>ILS runway</i>	1,327	577	1,904
RNAV (GPS) Approach LPVs w/200' HAT			930
RNAV (GPS) Approach LP Line of Minima	82	511	592
GPS Approach GPS Stand-Alone Procedures	11	93	104
GLS Approach	11	0	11

(Data as of September 17, 2015)

Courtesy of the FAA WAAS Team
More info [click here](#)

What's new?

Since last bulletin...

EGNOS WORKING AGREEMENTS SIGNED

The following EWAs have been signed in the last quarter:



London Biggin Hill Airport Ltd
United Kingdom



The Royal Danish Air Force
Denmark



HungaroControl
Hungary

LPV & APV BARO PROCEDURES PUBLISHED PER COUNTRY (including last AIRAC cycle #10 – 17/09/2015)

Next table shows, for each country:

- the number of airports with LPV procedures, as well as the total number of LPV procedures;
- the number of airports with APV Baro procedures authorised to be flown with EGNOS vertical guidance as well as the total number of APV Baro procedures.

Country	Airports – LPV procedures	# LPV Procedures	Airports – APV baro Procedures	# APV baro Procedures
Austria	2	2	0	0
Czech Republic	4	8	1	4
Denmark	2	4	0	0
Finland	1	2	0	0
France	73	108	3	3
Germany	20	31	24	63
Guernsey	1	2	0	0
Italy	5	12	0	0
Netherlands	2	3	0	0
Norway	9	18	0	0
Poland	2	4	0	0
Portugal	1	2	0	0
Slovak Republic	2	4	0	0
Spain	2	3	0	0
Sweden	2	3	0	0
Switzerland	8	8	0	0
United Kingdom	2	4	0	0
Total	138	218	28	70

29-30 Sept 2015
Copenhagen

The EGNOS Service Provision workshop



Satisfaction Survey Results

The Workshop was held in Copenhagen last 29-30 September. **163** participants attended the Workshop, of which **73** responded the Satisfaction Survey (45%).

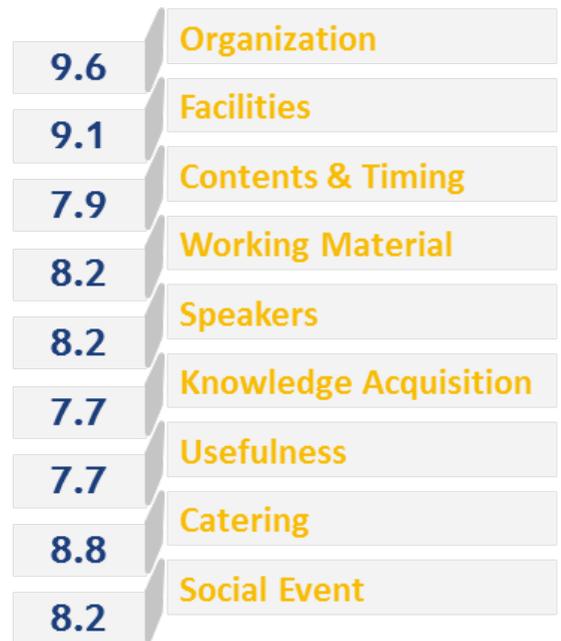


8.5

OVERALL SATISFACTION

(Escale from 0 to 10)

Probability of Returning



(Escale from 0 to 10)

7.9 **RECOMMENDATION**
The workshop to a colleague.



Promoters: respondents who have assessed 9 or 10.
Detractors: respondents who have assessed from 0 to 6.

How did you know about the EGNOS Service Provision Workshop?
invitation (30 mentions), contacts (22 mentions), e-mail (19 mentions), website (17 mentions), events (5 mentions) and newsletter (4 mentions).

Upcoming Events

10-14
Nov



EGNOS will be present at Agritechnica (November 10-14, 2015), the world's largest exhibition for agricultural machinery and equipment in Hannover, Germany. Innovation in agricultural machinery and equipment and the latest solutions and concepts for the future of plant production will be present in this event.

EGNOS will be present at hall 15, stand 15k36b

Agritechnica

17-19
Nov



METS is the world's largest trade exhibition of equipment, materials and systems for the international marine leisure industry. It provides everything there is to know about building and equipping a boat. METS provides the perfect platform to network, exchange ideas and do business.

EGNOS will be present at Hall 1, Stand 01.601

METS

17-19
Nov



BCN rail is a unique forum where the most innovative projects launched by private corporations, public administration, research institutes can be found. This conference is a "must-have" meeting to interchange ideas and evaluate trends in relation with mobility.

BCN RAIL

GARDEN & CARE User Forum

GARDEN & CARE User Forum will be held at La Cité de l'Espace in Toulouse, on the 5th of November 2015. These two Clean-Sky projects propose innovative solutions for rotorcraft to reach isolated platforms or busy airports, while minimising noise impact using steep slope & curved flight profiles.



**5
Nov**

EASA 9th Rotorcraft Symposium

EGNOS will be present at this European forum for the rotary wing community where Authorities, Industry, Operators and Pilots present and discuss on the recent achievements in the field and share their future vision of a common strategy for rotorcraft airworthiness and operations, for the promotion of Aviation Safety.



**2-3
Dec**

The ninth edition of this annual Symposium will be held at the Hilton Hotel in Cologne, Germany, on 2 and 3 December 2015.

Editorial Note:

EGNOS Bulletin has evolved in its appearance. Comments and suggestions to keep on improving it are welcomed, please contact egnos-helpdesk@essp-sas.eu



EGNOS, it's there. Use it.

<http://egnos-user-support.essp-sas.eu>

Information on historical and real-time EGNOS performance. EGNOS Signal in Space (SIS) status. Forecast on SIS availability and EGNOS performance. EDAS information and registration. EGNOS adoption material and tools.

<http://egnos-portal.gsa.europa.eu>

EGNOS applications. Developers platform. Business support.

For questions & information

EGNOS HELPDESK

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egnos-helpdesk@essp-sas.eu

Disclaimer: EGNOS is a complex technical system and the users have certain obligations to exercise due care in using the EGNOS services. Before any use of the EGNOS services, all users should review the EGNOS Sol. Service Definition Document ("SDD") and/or EGNOS Open Service SDD (both available on the ESSP SAS website <http://www.essp-sas.eu/>) in order to understand if and how they can use these EGNOS services, as well as to familiarise themselves with their respective performance level and other aspects the services may offer. Use of an EGNOS service implies acceptance of its corresponding SDD specific terms and conditions of use, including liability. In case of doubt the users and other parties should contact the ESSP SAS helpdesk at egnos-helpdesk@essp-sas.eu. Aviation Users may also contact their National Supervisory Authority. Data and information (the "Data") provided in this document are for information purpose only. ESSP SAS disclaims all warranties of any kind (whether express or implied) to any party and/or for any use of the Data including, but not limited to, their accuracy, integrity, reliability and fitness for a particular purpose or user requirements. Text and pictures that are part of the Data may be protected by property rights. Any use shall require the prior written agreement of ESSP SAS.



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