EU funded initiatives to support EGNOS adoption in Aviation:

Carmen Aguilera
ICAO PBN TF/ECTL RAISG 2
12-14 March 2014
Support to first LPV implementation
First LPV procedure pilot case in 7 countries

- Dublin
- Røst
- Gothenburg City
- Storumans
- Aarhus
- Karup
- Antwerp
- Dubrovnik
- Cluj
Two options were offered to interested aerodromes

1. Self managed pilot
   - Contractual engagement
   - All activities to be completed by the aerodrome/State
   - Self risk management

2. Assisted pilot
   - Tailored assistance:
     • Business case
     • Safety case
     • Procedure design
     • Tailored training
     • Procedure validation
     • Coordination with CAA
   - Reporting managed by third party
   - Ad-hoc contribution estimation

Major issues:
- Length of time required from start of project to complete sign-up of aerodromes (May 2013 – March 2014)
- Variations in expectations from flight validation – lack of clarity from CAAs
Selection of the Options evenly distributed

Option 1:
- Røst
- Gothenburg City
- Storumans
- Antwerp

Option 2:
- Dublin
- Aarhus
- Karup
- Dubrovnik
- Cluj
Different progress depending on ANSP-Airport-CAA and flight validation aspects

<table>
<thead>
<tr>
<th></th>
<th>Dublin</th>
<th>Røst</th>
<th>Gothenburg</th>
<th>Storuman</th>
<th>Aarhus</th>
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<th>Antwerp</th>
<th>Dubrovnik</th>
<th>Cluj-Napoca</th>
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<td>Contract signed</td>
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<tr>
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✓ = completed  ✓ = almost complete
GSA support to operational implementation
EGUS 2: Open support scheme for LPV implementation

How can GSA support you with EGUS 2?
- **Tailored assistance for LPV implementation**: Business case, Safety case, Procedure design, Tailored training, Procedure validation, Coordination with CAA...
- **Incentives**: LPV implementation, aircraft/avionics upgrade to LPV

Who can benefit from it?
- Air Navigation Service Providers
- Airports/heliports
- Operators/flight schools
- STC holders
PHASE 1: Analysis of ANSPs, airports and airlines interested in EGNOS implementation

Identification of potential candidates (airports and/or operators and/or STC developers) interested in LPV procedure implementation, aircraft upgrade and/or retrofit solutions at lower cost for similar aircraft type.

PHASE 2: Implementation activities

Activities for the publication of the corresponding LPV procedure and/or the aircraft upgrade and certification of the selected operators before Q1 2015.

Candidates selected could benefit from:

- Economic support
- Technical support: LPV procedure design, safety assessment, publication, A/C upgrade, certification, others...
Candidate airports and airlines identification

PHASE 1
(3 months)

PHASE 2
(9 months)

Candidate List

GSA selection

We are here

Operators

STC preparation

Installation

Re-certification and Operational Approval

Airports

LPV design

Safety Assessment

Approval and publication in AIP

Implementation projects
In case of interest, please contact any of these PoCs before 21/03/2014 for further information:

Mr. Antonio Aguila (antonio.aguila@ineco.com), INECO Senior Technical Manager;
Mr. Francisco Javier de Blas (francisco-javier.deblas@essp-sas.eu), ESSP Service and GNSS Projects Development Manager;
Mr. Javier Murcia (javier.murcia@essp-sas.eu), ESSP GSC Integration Expert;
Incentive scheme to facilitate EGNOS operational implementation
Call for proposals under preparation. Publication expected in Q2 2014

Stay tuned!
Outline

Horizon 2020:
- EU programme for R&D funding
- 40mln € budget for GNSS Applications

EGNOS

European GNSS Agency
Applications in Satellite Navigation - Galileo – 2014 Call
Topics and funding

1 - EGNSS applications (15-20 M€)
Indicative projects size: 1.5 - 4 M€

2 - SME based EGNSS applications (5-10 M€)
Indicative projects size: 0.5 - 1 M€

3 - Releasing the potential of EGNSS applications through international cooperation (5-8 M€)
Indicative projects size: 0.5 – 1.5 M€

4 - EGNSS awareness raising, capacity building and/or promotion activities in and outside of EU (5-10 m€)
Indicative projects size: 1 - 2 M€

E-GNSS Apps development

Innovation*: up to 70% funding
(exception: up to 100% for non-profit)

Promotion of E- GNSS use by using various means

Coordination and Support Actions (CSA)*: up to 100% funding

*+ for indirect cost: flat rate of 25% with some exceptions e.g. subcontracting
We are waiting for your proposals!

11 December 2013 call open!


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<thead>
<tr>
<th>Action</th>
<th>Tentative Deadline</th>
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<tr>
<td>Publication and Opening Call 2014</td>
<td>11 December 2013</td>
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<tr>
<td><strong>Closure Galileo Call 2014</strong></td>
<td>3 April 2014</td>
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<tr>
<td>Admissibility/eligibility checks</td>
<td>April 2014</td>
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<tr>
<td>Evaluation and ranking</td>
<td>~ End April – end June 2014</td>
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<tr>
<td>Information to participants</td>
<td>~September 2014</td>
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<tr>
<td>First projects starting</td>
<td>~ early 2015</td>
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Latest information at GSA website and social networks

http://www.gsa.europa.eu/r-d/h2020
https://www.facebook.com/EuropeanGnssAgency
https://twitter.com/EGNOSPortal
Thank you!

www.egnos-portal.eu

gsa.europa.eu

For further information contact:

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Carmen.aguilera@gsa.europa.eu
Tel.: +42 0 234 766 607
Scenario examples

- **Scenario 1:** One airport with 2 RWY ends. They cover certain costs such as survey update, flight validation (including FAS coding into FMS), publication and training. The ANSP is considered not to have an EWA in place, therefore they would need support to have the process on track.

- **Scenario 2:** Two airports with a total of 4 RWY ends. They only need support in the procedure design and safety assessment preparation. They also need funding for the flight validation.

- **Scenario 3:** One airport with 2 RWY ends. They cover safety assessment and training.

- **Scenario 4:** STC sponsorship for a BN Islander upgrade to GTN650. The operator will cover equipment and installation costs. There is a need to pay for re-certification of the first a/c (used for STC certification too).

- **Scenario 5:** One operator with 2 DA42 aircraft equipped with G1000. They need to update GIA63 to GIA63W.