European GNSS Agency

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European GNSS Agency

The European Satellite Systems and Programs

Overview of:

- The European GNSS Agency (GSA)
- Galileo and Public Regulated Services
- EGNOS

The European GNSS Agency (GSA) today:

- Staff: **80**
- Nationalities: **16**
- Headquarter: **Prague**
- Main tasks:

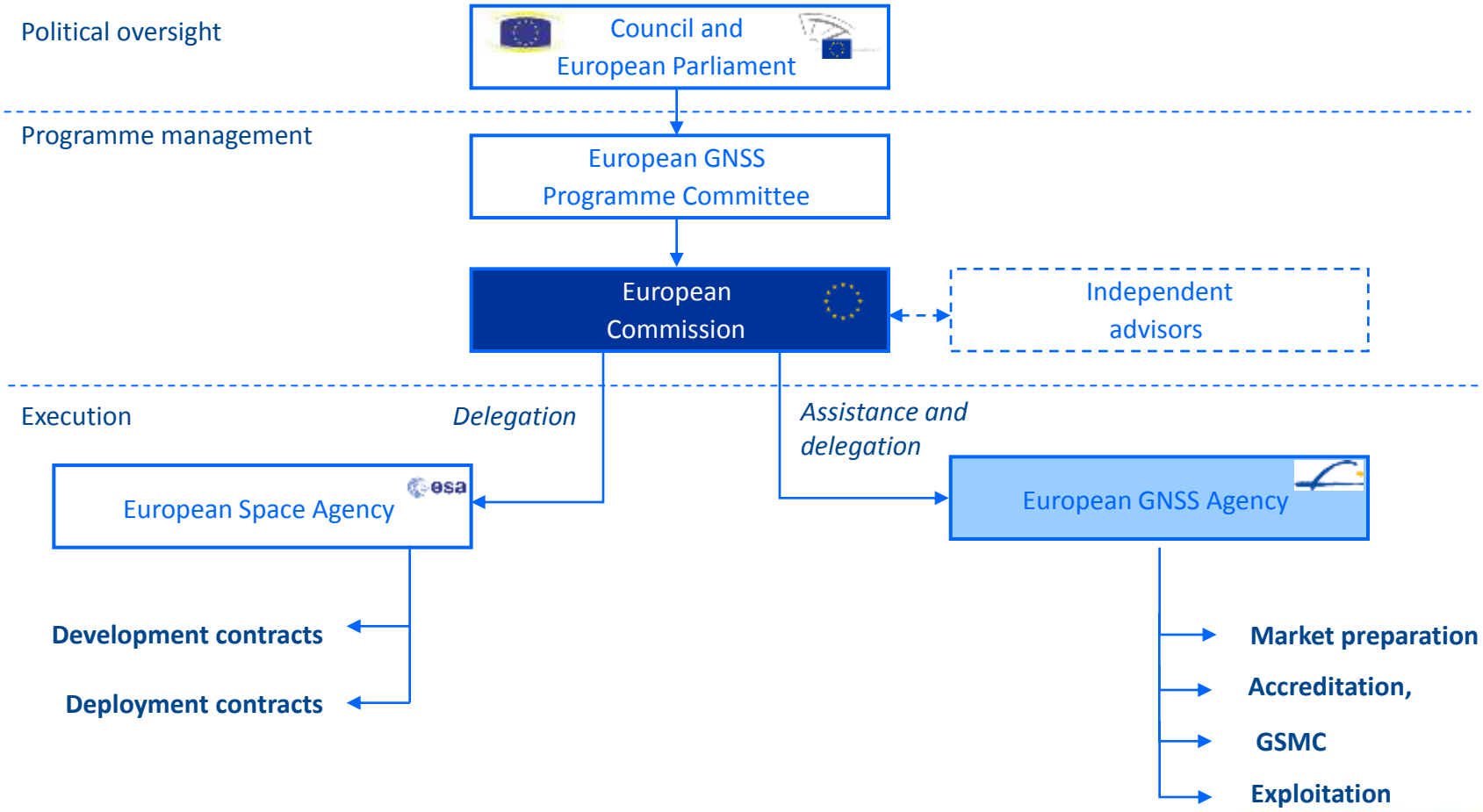
  - Market Development: supporting the use of EGNOS and Galileo
  - Ensuring the Security of the European GNSS Programmes

The European GNSS Agency (GSA) tomorrow:

Main Locations

- Prague (Headquarters)
- Saint-Germain-en-Laye (GSMC)
- Swanwick (GSMC)

The GSA



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Galileo and EGNOS

Galileo

- Worldwide navigation system “made in EU”
- Fully compatible with GPS*
- Early services starting from end 2014
- Open service free of charge and delivering multiple frequencies (better performances)

EGNOS

- Augmentation system of GPS (and Galileo when available)
- Improves GPS performance
- European coverage (but under extension in other regions, e.g. North Africa)
- Available NOW, free of charge and widely available in automotive receivers

‘It’s there, use it’

*GPS: Global Positioning System (US)

Galileo has already taken-off

- 4 **operational satellites** have been launched, as of 12 October 2012 (in addition to the 2 test satellites launched in 2005/2008)

- All **industrial contracts** necessary have been signed to ensure up to **26 satellites**:
  - ✓ Early Galileo services in 2014/15
  - ✓ 18 satellites are expected in 2015/16

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Galileo has already taken-off

- First Airborne Tracking achieved on 12 November 2013;
- This milestone took place on a Fairchild Metro-II above Gilze-Rijen Air Force Base in the Netherlands at 12:38 GMT;
- Testing covered both Galileo's publicly available Open Service and the more precise, encrypted Public Regulated Service;
- Flights covered all major phases: take off, straight and level flight with constant speed, orbit, straight and level flight with alternating speeds, turns with a maximum bank angle of 60º, pull-ups and push-overs, approaches and landings;

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Galileo Public Regulated Services (PRS)

Main Features

- The PRS is an encrypted navigation service designed to be more resistant to 'jamming', involuntary interference and 'spoofing';
- Ensures continuity of service to authorised users when access to other navigation services is denied;
- In cases of malicious interference, the PRS increases the likelihood of continuous availability of the Signal-in-Space

Galileo Public Regulated Services (PRS)

Main Features

- Primarily intended for use by EU Member State government agencies, including emergency services and police.
- Access to the PRS will be controlled through an encryption key system approved by Member States' governments.
- PRS will be accessible to clearly identified categories of users authorised by the EU and participating States.

EGNOS

Main System Components

- 3 Geostationary Satellites;
- 34 Ranging and Integrity Monitoring Stations (RIMS)
- 6 Navigation Land Earth Stations (NLES)

Services Provided:

- Open Service (since 2009)
- Commercial Data Distribution Service
- Safety of Life (SoL) Service (since 2-3-2011)

EGNOS

'It's there, use it'

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Thank you for your attention