

# European GNSS Evolution Programme

---

**4<sup>th</sup> Meeting of the International Committee on Global Navigation Satellite  
Systems (ICG)**

Saint Petersburg, Russian Federation  
14-18 September

# Background

- ESA Optional Programme fully funded by ESA Member States.
- Objectives:
  - Maintaining technical European know how, competences and infrastructures at par internationally.
  - Sustaining competitiveness and innovation capabilities.
  - Enabling technical readiness for upgrades and evolution caused by mission evolution and technology obsolescence.
- The activities cover system development activities and the related technology R&D.
- Implementation of the programme results in the operational systems (EGNOS, Galileo) is outside the scope of the Programme, since this is a task of the EC.

# Programme Status

- Activities were already initiated in 2007 with a set of architecture studies, test-bed and technology development preparatory activities.
- Participating states:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Canada, Czech Republic, United Kingdom

# Activities

- Preparation and demonstration of the technology for EGNOS V3 and future GNSS augmentation services:
  - L1/L5
  - Support to Multi-Constellation
  - High Precision Services,
  - ....
- Advancement of the technology for future Galileo payloads:
  - Clocks
  - C-band
  - On-board integrity
  - Inter satellite links
  - ....
- Fostering scientific utilization of Galileo and GNSS in general.

# Ionospheric Monitoring

- The ionosphere is one of the major sources of GNSS errors and malfunctions.
- Solar activity is expected to increase from 2010 onwards.
- ESA plans to undertake a ionospheric measurement campaign during this period. Other organizations will be planning similar campaigns.
- A task of the ICG could be to act as focal point to gather information on the different initiatives and support coordination of efforts.