



European
Commission

JRC PORTFOLIO 19

GALILEO NEXT GENERATION AND SECURE CONNECTIVITY



Space is an increasingly competitive global commons that can improve terrestrial connectivity and positioning services. Modern telecommunications networks and global navigation satellite systems, such as 5G and Galileo, enable services for every sector of the European Union (EU) economy, thus promoting the digital transformation. These systems are essential for increasing the EU's resilience and security. Modern societies and their economies have rapidly become crucially dependent on telecommunications networks and Positioning, Navigation and Timing services (PNT). Overall, space-terrestrial connectivity and PNT infrastructures can generate considerable growth in many downstream sectors of the EU economy.

The portfolio aims to:

Contribute to the evolution of the EU Space Programme through independent, evidence-based scientific and technical support

Provide scientific analysis on cutting-edge technologies and policy aspects related to space infrastructure development with a focus on secure connectivity, positioning, navigation and timing

Support the implementation of the EU-related programmes and actions, like the EU Space Programme, the EU radio spectrum policy programme and the action plan on synergies on civil, space and defence industries

Joint
Research
Centre

Delivering on anticipation, integration and impact of EU policies

- ▶ anticipating future policy needs and regulation in space and terrestrial telecommunications (e.g., frequency management of novel communications services (e.g., IRIS²) and 6G networks),
- ▶ developing technical capacity in the context of the EU's new IRIS² initiative,
- ▶ ensuring deeper integration of Galileo, the European Geostationary Navigation Overlay Service (EGNOS) and GovSatCom (European Union Governmental Satellite Communications programme) with terrestrial communications networks (e.g., 4G and 5G) to provide alternative positioning, navigation, and timing mechanisms, as well as new communications services,
- ▶ carrying out scientific and technical studies (including experimental work) on the use of emerging technologies such as 6G and quantum in space.

Time frame

This portfolio has a **medium- and long-term perspective** and will support a number of EU policies throughout the 2023-2027 Multi-annual Financial Framework and beyond, such as the EU Space Programme, the new EU Radio Spectrum Policy Programme, and the new EU Strategy on Standardisation.

Main partners

Partner DGs

CNECT, COMP, DEFIS, ECHO, EEAS, GROW, HOME, MARE, MOVE

Selected stakeholders

CEN/CENELEC, CEPT, ESA, ETSI, EUROCAE, EUSPA, , EU-US Working Group on Galileo/ GPS Cooperation, ICAO, International Committee on GNSS, IEC, ITU

Space

Secure connectivity

Global satellite navigation systems

Terrestrial-space connectivity systems

PNT infrastructures

Telecommunications networks

Emerging technologies

EU space programme

Communications technologies

Galileo

IRIS²

European standards

European Microwave Signature Laboratory

Radio Spectrum Laboratory

Digital Connectivity Living Lab

Find out more



GALILEO NEXT GENERATION AND SECURE CONNECTIVITY

<https://joint-research-centre.ec.europa.eu/jrc-research-portfolios/global-satellite-navigation-galileo>

Science for policy

Joint Research Centre

joint-research-centre.ec.europa.eu

The Joint Research Centre provides independent, evidence-based knowledge and science, supporting EU policies to positively impact society.

@EU_ScienceHub

@EU_ScienceHub

@EU_Science

EU Science, Research and Innovation

EU Science Hub - Joint Research Centre

PRINT
PDF

ISBN 978-92-76-99501-2
ISBN 978-92-76-99500-5

doi:10.2760/636652
doi:10.2760/05482

KJ-04-23-219-EN-C
KJ-04-23-219-EN-N