

IRIS²: INFRASTRUCTURE FOR RESILIENCE, INTERCONNECTIVITY AND SECURITY BY SATELLITE

The need for a secure and resilient global connectivity increases with the digitisation of the economy and society, and the increasing geopolitical and cybersecurity threats.



INNOVATIVE MULTI-ORBITAL SPACE-BASED connectivity system

RELIABLE, SECURE AND COST-EFFECTIVE communications services

SPACE ENABLER FOR A DIGITAL AND RESILIENT Europe

IRIS² KEY OBJECTIVES

Ensure worldwide access to secure governmental satellite communication services for the protection of critical infrastructures, surveillance, external actions and crisis management.

Enable the provision of commercial services by the private sector, by allowing the availability of high-speed broadband and seamless connectivity throughout Europe, removing dead zones.

MAIN FEATURES

- Multi-orbital, benefiting and using assets in Europe
- Integrating military needs
- Improving and expanding the capabilities and services of EU Space Programme components
- Capacity to host additional non-communication payloads (public/private)
- Governance and eligibility conditions to avoid any dependencies on third parties
- Expertise of EU industries, including NEW SPACE
- Allow connectivity over geographic areas of strategic interest (Africa, Arctic)

IRIS² MISSIONS & USE CASES

A RELIABLE, SECURE AND COST EFFECTIVE GOVERNMENTAL COMMUNICATION SERVICE



Connecting key infrastructures

- Command and control of smart grids (energy, finance, health, data centres...)
- Management of Infrastructures (air, rail, road, traffic management)
- Galileo (signal augmentation), Copernicus (data relayer)
- Institutional communications (Embassies, EUROPOL,...)
- Telemedicine



Crisis Management and external actions

- Civil protection
- Common Foreign & Security Policy - Common Security & Defence Policy
- Humanitarian aid
- Maritime emergencies (search and rescue)



Surveillance

- Border and remote areas surveillance
- Remote Piloted Aircraft systems
- Maritime surveillance
- Arctic region coverage
- Complement to military missions

SECURE CONNECTIVITY INITIATIVE: MULTI-ORBITAL SPACE-BASED STATE-OF-THE-ART CONNECTIVITY SYSTEM



Allow Mass-market service

- Mobile Broadband
- Fixed Broadband
- Satellite Trunking for B2B services
- Satellite access for transportation – for ships, airplanes, drones, connected cars
- Reinforcement of terrestrial networks (resilience) – as an alternative in cases of disruptive events
- Cloud based services



EUROQCI

Encryption capability

- Government and institutional users
- Data centres
- Satellite communication networks
- Terrestrial communication networks
- Banking industry
- Other industries

SPECIAL CHARACTERISTICS

SECURITY

— **increased cyber resilience** by defending against cyber threats; and integration of the European Quantum Communication Infrastructure (EuroQCI) to enable secure transmission of cryptographic keys.

— development of innovative and **disruptive technologies** and leveraging of the New Space ecosystem.

INNOVATION

— **enhanced capability** stemming from multi-orbital services; and complementarity with existing connectivity assets offering redundancy. Also, enhancing the capabilities and services of other Union Space Programme components.

CAPABILITY

IRIS² IMPLEMENTATION SCHEDULE

2022

2023

2024

2025

2026

2027

2028

2029

DEVELOPMENT

INITIAL SERVICE

FULL SERVICE

PUBLIC-PRIVATE PARTNERSHIP



- **GOVERNMENTAL INFRASTRUCTURE**
- **SHARED ELEMENTS**
- **COMMERCIAL INFRASTRUCTURE**

- **EU BUDGET** from various EU programmes relevant for Secure Connectivity.
- **MEMBER STATES** either through financial and/or in-kind contributions.
- **ESA CONTRIBUTION** through optional ESA programmes.

PRIVATE SECTOR to leverage the mass-market component.

The blending of the above funds will be in the form of a **Public-Private Partnership**.

