



# IRIS<sup>2</sup>: 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.

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**INNOVATIVE MULTI-ORBITAL SPACE-BASED  
connectivity system**

**RELIABLE, SECURE AND COST-EFFECTIVE  
communications services**

**SPACE ENABLER FOR A DIGITAL AND RESILIENT Europe**

## IRIS<sup>2</sup> 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)

## IRIS<sup>2</sup> 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

# CAPABILITY

— **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.

## IRIS<sup>2</sup> IMPLEMENTATION SCHEDULE



The constellation is based on more than **290** satellites located in both low- and medium- Earth orbit, set to enter into service in **2030**

## 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**.

