

European capabilities in the global space economy

Fondazione Astrid: Space Economy e il caso Starlink

18 February 2025

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ESA in a Nutshell



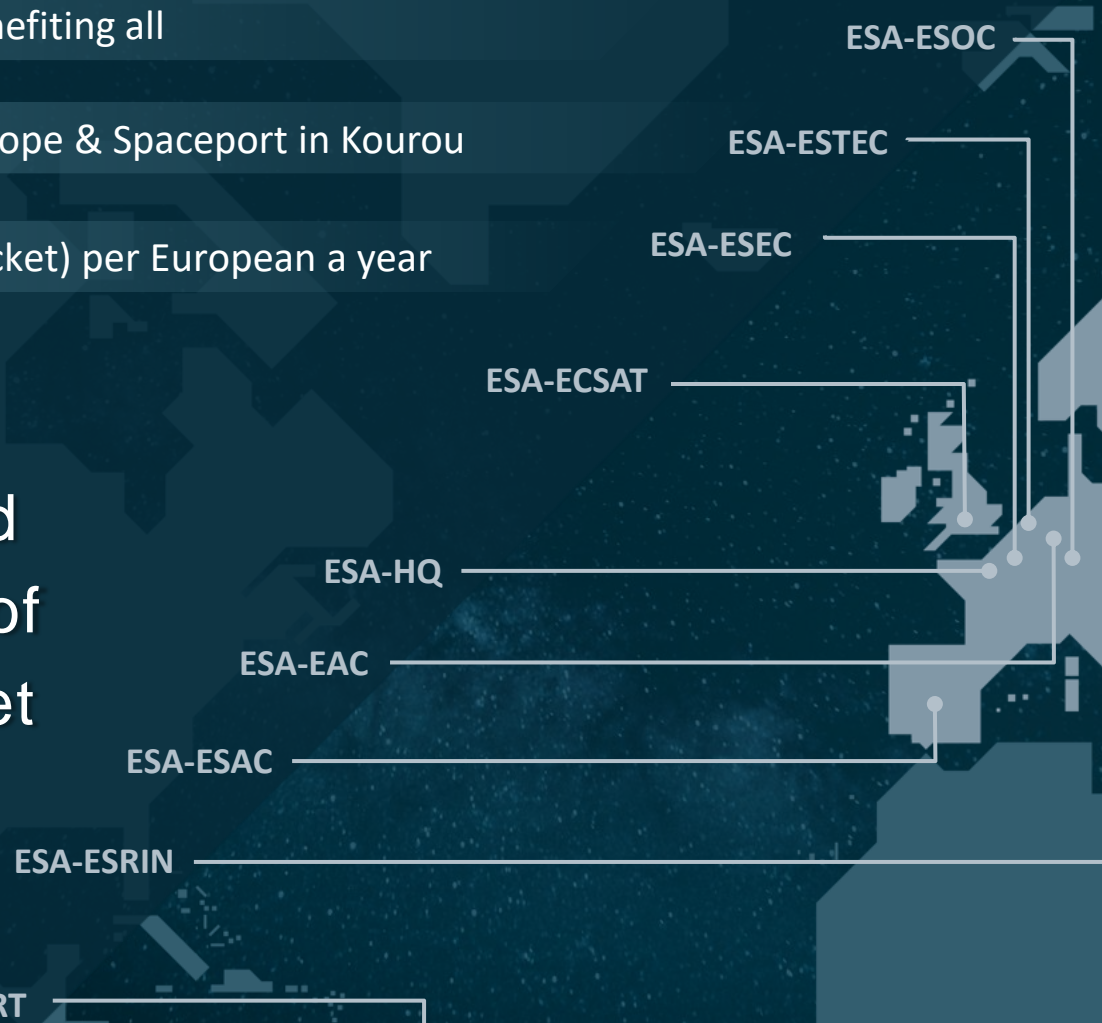
WHO 22* Member States, 2500+ staff members and total workforce of 6000+

WHY For the peaceful use of space, benefiting all

WHERE HQ in Paris, seven sites across Europe & Spaceport in Kourou

BUDGET €7.7 billion = €15 (one cinema ticket) per European a year

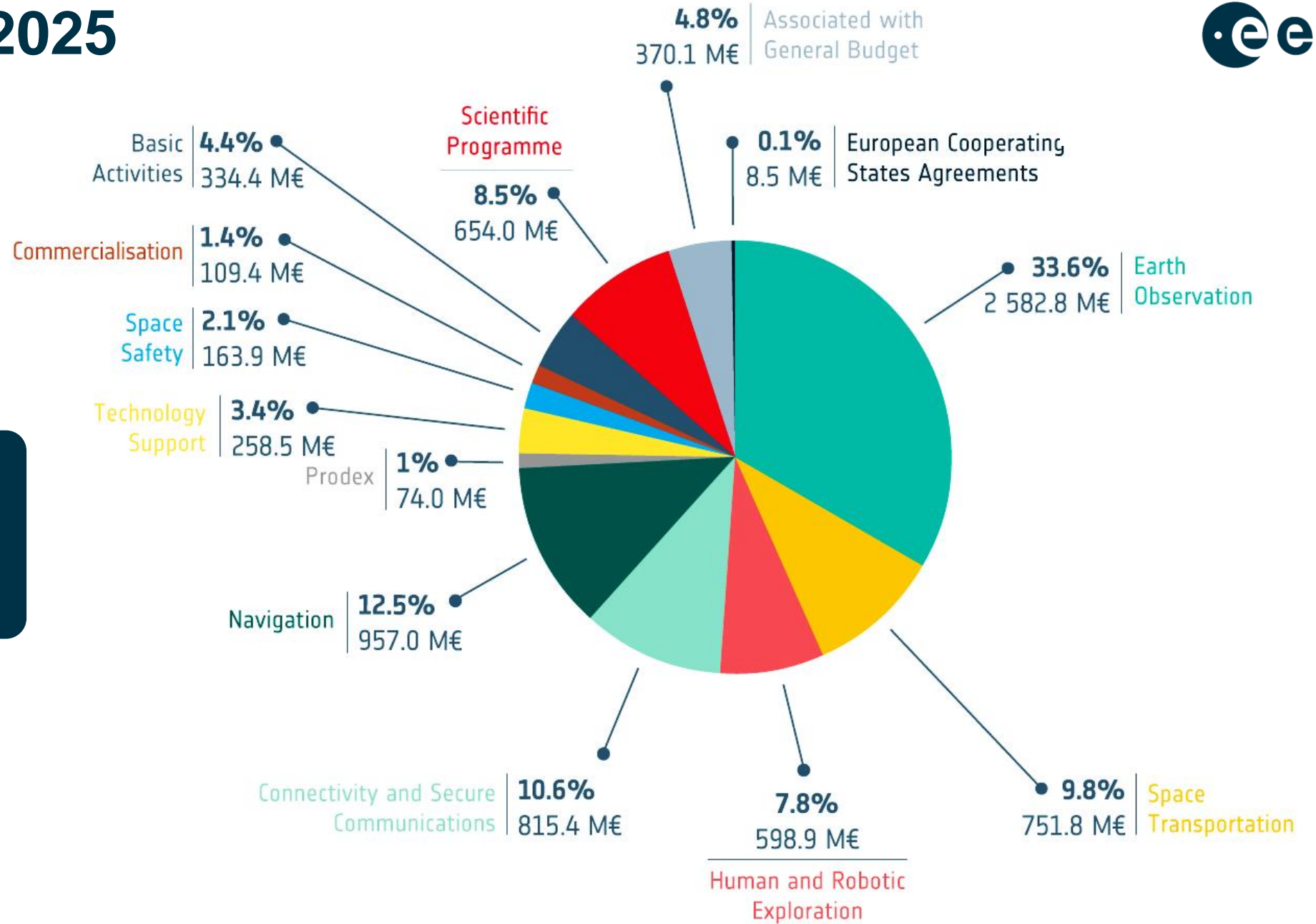
ESA is committed to the peaceful exploration and use of space for the benefit of people society and our planet



ESA Budget 2025 by domain



**TOTAL
7.68 B€**



* Includes activities implemented for other institutional partners



ESA EO actions relevant for security community

ESA EO Directorate has been working on civil developments of relevance to security for ~20 years:

- Maritime/Border security (precursor to Copernicus Security Services)
- Prototype Rapid Environment Assessment Capabilities (inputs to NATO AML Initiative)
- Development of EO applications for law enforcement (environmental crime, crimes against humanity, terrorism & organized crime, proliferation etc)

New civilian systems open up additional possibilities:

- Improved revisit/persistence/tasking
- New information layers (video, HyperSpectral etc)
- Data integration and AI based feature extraction/correlation/inference

ESA cooperates with a wide range of security stakeholders to stimulate:

- wider uptake of civilian European EO capabilities by security actors
- innovative developments by European industry addressing new security requirements

ESA is an R&D agency and does not provide operational services



Entities we have worked with

Europe boosting its secure connectivity capabilities through a new Flagship: IRIS2



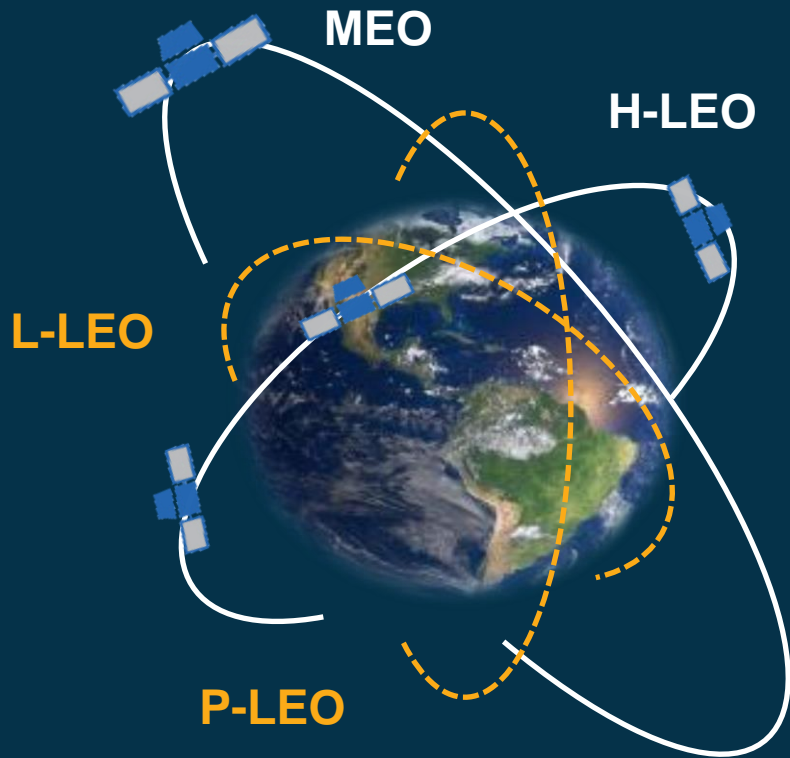
The IRIS² infrastructure is an incremental and scalable **system of systems** to provide **Secured Governmental and Commercial Services**

What is IRIS²?

- Ensuring **EU autonomy and sovereignty**
- **Secure and resilient by design**
- Strong involvement of wider European supply chain
- A state-of-the-art architecture and technology with innovative business model
- Delivering **global coverage** and HardGov (HG) and LightGov (LG)/Commercial capacitive services
- Designed to enable user terminals product lines to best leverage IRIS²
- Optimizing infrastructure, operations and maintenance costs
- Aligned with applicable sustainability regulations



IRIS² Performances to be confirmed end 2025



Constellation :

- 264 S/C in H-LEO (first launch Contract +57m)
- 18 S/C in MEO (first launch Contract +59m)
- Completed constellation Contract +71m

Performances :

- 2.8 Tbps total capacity
- 360 Gbps Hard-Gov capacity
- 441 Gbps Hard-Gov capacity boosted mode
- Crisis mode – full preemption

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