



PROGRAMME OF THE
EUROPEAN UNION

LEONSEGS

LARGE EARTH OBSERVATION
NEW SPACE ECOSYSTEM
GROUND SEGMENT

In a nutshell

LEONSEGS is a federated environment (called Multi-mission Earth Observation Ground Segment Service Platform) of Earth Observation (EO) data providers that collaborate all together through harmonized interfaces and that are managed by a central automated multi-mission service, able to coordinate and produce for the end-user complex EO products.

The proposed multi-mission ground segment shall be able to:

- Federate European New Space players through its Ground Segment as a Service (GSaaS) paradigm, widening their access to a larger market whose complex requests could not be served in an isolated manner
- Offer optimized and sophisticated EO-based products and services to end-users, on the basis of intelligent search and best combination of heterogeneous datasets, from different federated and external providers and archives.

Objectives

- Prototype an automated, scalable and flexible multi-mission ground segment able to federate any New Space player, EO data platforms, EO missions' operators
- Prototype EO end-to-end automatic mechanisms to manage complex end-user requests and deliver innovative advanced EO products
- Federated mission management for improved operational coordination
- Reliable, real-time information to support timely and informed decisions
- Resource optimization driving overall cost-effectiveness
- Modular growth through flexible and scalable architecture
- Plan for a sustainable EU collaborative New Space ecosystem



Accomplishments

One of the most exciting milestones for LEONSEGS in 2025 is the validation of external EO provider tasking, enabling to test how LEONSEGS can request new acquisitions from external satellite operators, which is crucial for enabling multi-provider EO services. The project is also advancing in mission planning and scheduling functionalities, improving coordination between satellite tasking, data acquisition, and product generation. Another key development is the expansion of satellite tasking via GSaaS. Major developments also include the enhancement of data search and retrieval mechanisms, with a focus on integrating semantic search capabilities, improving how users discover and access EO products.



Learn more

