

LEONSEGS

LARGE EARTH OBSERVATION
NEW SPACE ECOSYSTEM
GROUND SEGMENT

REVOLUTIONISING THE EUROPEAN NEW SPACE GROUND SEGMENT

LEONSEGS, co-funded by the European Commission under the Horizon Europe programme, stands for the **Large Earth Observation New Space Ecosystem Ground Segment**.

The project's fundamental mission is to **solve the crippling fragmentation within the Earth Observation industry and unlock the full potential of multi-mission data**.

LEONSEGS: The Blueprint for Tomorrow's Earth Observation

The rapid expansion of the space sector has created a wealth of data; however, fragmented access and integration hurdles continue to prevent users from unlocking its full strategic value.

LEONSEGS serves as a European proof-of-concept, defining the next generation of space services to resolve this fragmentation.

Rather than simply building a system, the project aims to establish a **functional, scalable model and a technical standard for a unified, automated European Ground Segment**.

The Challenge: Fragmentation

The Earth Observation industry is fragmented. Different satellite operators use different systems and archives, forcing users to stitch together a fragmented picture. This creates technical barriers, slows down innovation, and limits the value of the data.

The LEONSEGS Solution: A Unified, Federated Model

LEONSEGS is defining a federated environment that acts as the single connector for this complex market. The platform aims to manage technical complexity through automation, ensuring future users can access diverse data sources without navigating the traditional operational hurdles.



The Platform & Its Benefits

LEONSEGS platform will act as an intelligent "Universal Hub," allowing users to interact with multiple satellite missions through a single, automated interface.

Key Benefits

- **For Operators:** Drastically reduces the "Time to Market" for new constellations by providing a ready-to-use, scalable ground infrastructure.
- **For Users:** Enables semantic retrieval, allowing users to filter data based on real-world meaning (e.g., "Active Wildfires") rather than just geographic coordinates.
- **For Europe:** Enhances strategic autonomy by building a non-dependent, sovereign European ground segment capability.
- **Multi-Sensor Fusion:** Simplifies the complex task of combining SAR, optical, and thermal data into cohesive intelligence products.

Technical Excellence & Target Maturity

LEONSEGS is not just a theoretical exercise; it is a bridge to operational reality.

- **Target Maturity:** The project is driving the evolution of federated technologies toward the final achievement of TRL 6 (Technology demonstrated in a relevant environment). This ensures that the platform is tested against realistic operational scenarios.
- **Automated Workflow Orchestration:** Centralised logic that manages satellite tasking, data downlink, and cloud-based processing without manual intervention.
- **Interoperability by Design:** Built on standardised interfaces to ensure the platform can easily integrate new European satellite missions as the New Space ecosystem grows.



Summary of the LEONSEGS Advantage

LEONSEGS solves the "Data Fragmentation" problem. By centralising the orchestration of heterogeneous missions, it transforms a complex landscape of individual satellites into a single, high-performance service for the benefit of European citizens, researchers, and industries.

A Strategic Partnership

The consortium combines industrial excellence, New Space agility, and academic research to deliver a robust, interoperable ecosystem.

- **GMV (Spain):** Project Coordinator and leader in ground segment engineering and mission orchestration.
- **University of Salzburg – PLUS (Austria):** Experts in automated Earth Observation processing chains, semantic analysis, and data cube technology.
- **AISTECH (Spain):** Providing the New Space perspective and a real-world constellation for platform validation.
- **F6S Network (Ireland/UK):** Specialists in global stakeholder engagement and community dissemination.

PARTNERS



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