

Telespazio Benelux to build the ground infrastructure for ESA's lunar ice-hunting mission

- Telespazio Benelux will lead a European consortium, with EarthLab Luxembourg and Astro42, to deliver and operate the control centre for PROSPECT, ESA's mission to drill for water ice and other volatile chemicals at the lunar south pole, with a drill developed and built by Leonardo.
- Telespazio Benelux is responsible for overall project and systems-engineering management, the design of the operations control room at ESTEC, the secure external interfaces that connect the centre to Intuitive Machines, the integration of mission-specific hardware, and the preparation of operations.

Noordwijk, Netherlands, 09/10/2026 Telespazio Benelux, a subsidiary of Telespazio, a Leonardo (67%) and Thales company (33%), has been selected by the European Space Agency (ESA) to design, build and deliver the ground infrastructure for PROSPECT, a mission that will drill into the lunar south pole in search of water ice and various volatiles, with a drill developed and built by Leonardo.

Telespazio Benelux will act as prime contractor, leading a consortium that brings together EarthLab Luxembourg (Luxembourg) and Astro42 (Hungary).

PROSPECT will travel to the Moon in 2027 aboard an Intuitive Machines Nova-C lander, as part of NASA's Commercial Lunar Payload Services programme. Once on the surface, an ESA-led drill and miniature laboratory will extract and analyse samples from up to about one metre below ground, looking for water ice and other volatiles.

The mission will be planned, commanded and monitored from the PROSPECT Operations Centre (POC) at ESA's technical heart in Noordwijk, the Netherlands (ESTEC), and it is this operations centre that the Telespazio Benelux consortium will deliver.

PROSPECT will operate for only about ten Earth days on the lunar surface, with no opportunity for repair and very little margin for error. The ground infrastructure must therefore monitor the mission second by second, support rapid re-planning, and remain available throughout the critical operations window.

As prime contractor, Telespazio Benelux is responsible for overall project and systems-engineering management, the design of the operations control room at ESTEC, the secure external interfaces that connect the centre to Intuitive Machines, the integration of mission-specific hardware, and the preparation of operations.

Astro42 leads the backend of the platform: the cloud-native compute, storage and network infrastructure built on Kubernetes, together with the "multi-mission" design that allows the same centre to serve future missions. Astro42 is also delivering "POC-in-a-Box," compact portable units that replicate the centre's core services on a single workstation as an operational fallback.

EarthLab Luxembourg is responsible for deploying and integrating the mission's ground-segment software onto the platform, and for the continuous monitoring and maintenance that keep it healthy.

“Bringing a European payload to the surface of the Moon demands a ground segment that performs flawlessly in a mission window measured in days,” said Justas Tamosiunas, project manager at Telespazio Benelux. “We are proud that ESA has entrusted us with delivering that infrastructure, and we have assembled a consortium that pairs our heritage in operational ground systems with some of Europe’s strongest cloud-native engineering.”

“A mission this short leaves no time to react to surprises, so visibility into the platform is everything,” said Mohamed Boukhebouze, project manager at EarthLab Luxembourg. “Our role is to deploy the mission software and keep the whole system under continuous watch, applying the same monitoring and service discipline we run every day for European space programmes.”

“We are building the digital backbone that the mission runs on: a cloud-native platform designed to stay rock-solid under pressure, and to outlast a single mission,” said Balazs Slezak, CEO of Astro42. “For a Hungarian engineering team, contributing that to a Moon mission alongside Telespazio Belgium is a real milestone.”

About Telespazio Benelux

Telespazio Benelux, a subsidiary of Telespazio SpA a Leonardo (67%) and Thales company (33%), is a space company headquartered in Bastogne, Belgium, with more than 40 years of experience working alongside space agencies and satellite operators. It has additional premises in Transinne (Belgium), Noordwijk (Netherlands), Toulouse (France) and Prague (Czech Republic). Its expertise spans GNSS ground-systems operations, systems engineering and consulting, secure radio-frequency infrastructure, downstream satellite-data applications, embedded systems, and space-systems security, with a long track record of supporting ESA.

About EarthLab Luxembourg

EarthLab Luxembourg S.A. (ELL) is a Luxembourg-based technology company working at the intersection of space-data infrastructure, cloud engineering and artificial intelligence. Founded in 2015 with the support of the Luxembourg Space Agency and the Ministry of the Economy, and part of the Telespazio Group ecosystem, ELL designs, deploys and operates scalable cloud-native data-processing platforms for European space and Earth-observation programmes.

About Astro42

Astro42 (Wozify Engineering Group Kft) is a custom software engineering company specialising in the space sector, with a particular focus on ground operations, applied AI and machine learning. The company works as a full-stack technology partner for space software startups, as an R&D partner at the intersection of AI and space on ESA and other publicly funded projects, and as an outsourced software and AI team for organisations whose core value lies in their science or hardware rather than their code. Its capabilities span Earth observation, flight dynamics, space weather, satellite mission planning, ground segment operations, thermal engineering for spacecraft and 3D simulation of physical environments. The company's founder is one of the most active space industry mentors and advisors in Europe. The company has offices in Hungary and the United Kingdom. It is a member of the Hungarian Space Cluster and UKSpace and is an experienced ESA contributor.

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