

Communiqué de Presse

ESA and Luxembourg extend space resources collaboration

Today, ESA and the Government of the Grand Duchy of Luxembourg signed an extension of their memorandum of cooperation concerning the field of space resources for another five years, underscoring both parties' commitment to advancing sustainable and peaceful exploration beyond Earth.

Key areas of convergence include developing the space resources sector to facilitate sustainable space exploration, while fostering the creation of new markets and business opportunities as well as using the technological innovations from this field to improve life on Earth.

The extension has been signed in the context of a visit of ESA's Space Research and Technology Centre (ESTEC) in Noordwijk by the Ministry of the Economy, Lex Delles. ESTEC is the European Space Agency's technical center. It is ESA's largest center where around 2,500 technicians, engineers and researchers, including Luxembourgish experts, work on space technology development and spacecraft design.

The center also includes extensive facilities for prelaunch testing of space crafts, which the Minister has been able to discover during the visit. The Juventas nano satellite – partly developed in Luxembourg by Gomspace is currently in testing phase to be part of the HERA mission programmed for October 2024. HERA's main objective is to help validate the kinetic impact method for deflecting a possible asteroid on a collision course with the Earth. Juventas is equipped with a radar instrument for measuring the internal structure of the asteroid.

The delegation had the chance to discover the Luxembourgish spacecraft during the visit, which also included a bilateral meeting with ESA Director General, Josef Achbacher, and an informal gathering with the Luxembourgish staff working in the ESA center.

“ Our collaboration with ESA is very successful, and I welcome the fruitful exchange here at ESTEC. ESA is a key technical partner for Luxembourg and the projects we are running together do not only make sense for the space industry, but have real impact on the national economy and on the day to day life of people. Hera is a very good practical example of a contribution from a Luxembourgish private company to an ESA mission.”, say Lex Delles, Minister of the Economy.

« Luxembourg 's investment in space is really impressive, the country is a world leader in the field of space resources and I am delighted we could sign this MoC today. ESA and Luxembourg collaborate very well. I hope to see this collaboration going further, project wise but also by being able to welcome more Luxembourgish talents as part of our staff in the future. » says ESA General Director, Josef Achbacher.

ESRIC, a continuation of the SpaceResources.lu initiative, or how to collaborate with impact.

Following the memorandum signed in 2019, an implementation agreement between ESA, the Luxembourg Space Agency (LSA) and the Luxembourg Institute of Science and Technology (LIST) was signed, concerning cooperation activities at the European Space Resources Innovation Centre (ESRIC).

The center comes as a strategic project continuing the SpaceResources initiative launched in 2016 by the Government. The domain of Space Resources, which has been one of the flagships of Luxembourg in its national strategy, gained a lot of visibility on the international stage, and around 12 companies are active in this field in Luxembourg in 2024.

ESRIC is positioning itself as Europe's centre of excellence for science, technology and business related to space resources, providing access to experts and specialised research facilities procured by ESA. Although space resources can refer to any resources potentially useful for space exploration, such as water or minerals, ESRIC is focused on advancing knowledge and technologies for extracting oxygen from lunar regolith, for example with its ALCHEMIST in-situ resource utilisation (ISRU) demonstrator, the first research facility delivered to the centre in 2023. Other facilities studying oxygen extraction are set to be delivered to ESRIC in the next years.

ESRIC's Start up Support Programme (SSP) is the only one focusing exclusively on space resources. It aims at developing early-stage ventures and start-ups designing novel technologies for space resources applications along the space resources value chain. 3 companies have already been selected to join the programme, and a 4th one should be selected this summer.

ESRIC also organizes the Space Resources Week, the largest annual gathering of the international space resources community in partnership with LSA and ESA, and collaborated with ESA to launch the first Space Resources Challenge, which encouraged the community to explore innovative technology solutions for prospecting resources on the Moon.

Moving forward, the cooperation between ESA and Luxembourg, through activities at ESRIC, will continue to prepare for future ISRU infrastructures on the Moon, paving the way for sustainable exploration beyond our planet.