

Space



Did you know...

Luxembourg is the first European country to provide legal certainty as to the ownership of resources identified on asteroids or other celestial bodies.

Space

New frontiers

The creation of SES in 1985 was the starting point of the space sector in Luxembourg. This **audacious move**, both politically and technically, has led to **tremendous commercial success** and the development of the **entire space industry** in Luxembourg. Our space sector covers a large range of activities: technology development, microsatellite design and integration, ground infrastructure development and support services.

Pioneer in broadcasting and connectivity

Since SES was founded, the company has consistently moved beyond frontiers. Initially pioneering in TV broadcasting throughout Europe – through ASTRA – the company today is a global leader in connectivity. SES satellites serve 7,742 channels, standard TV, HDTV and the world's first Ultra HD channels, to more than **1 billion people** in 325 million homes worldwide. The company invests and expands significantly in emerging markets and grows its portfolio and capabilities far beyond video, in the fix and mobile data segments, as well as in defence and security solutions.

SES is the only satellite operator in the world offering connectivity from two different orbits, the Geostationary and the Medium Earth Orbit. Thanks to the unique combination of these two fleets, SES network solutions and extensive ground infrastructure can reach the most remote areas on Earth.

Maritime surveillance from space

LuxSpace, a specialist in microsatellite products and niche services, was the first company to demonstrate the commercial potential of utilising ship radio transmissions using low Earth orbit

satellites and exploiting the data collected to map the entire route of every large ship in near real-time. At the end of 2016, LuxSpace and its partner, ORBCOMM, were awarded a four-year satellite Automatic Identification System (AIS) data service framework contract with the European Maritime Safety Agency (EMSA). EMSA is one of the largest consolidators of AIS data and is responsible for maritime safety, pollution-by-ship monitoring and ship security for the European Union and its Member States.

Space Resources

In 2016, Luxembourg announced groundbreaking plans – known as the “Spaceresources.lu Initiative” – to develop the utilisation of space resources, such as the mining of asteroids or other celestial bodies. As part of this, the Grand Duchy is the first European country to provide a formal legal framework, which ensures that private operators working in space can be confident about their rights to the resources they extract.

Luxembourg has entered into partnerships with two leading American companies, Planetary Resources and Deep Space Industries with the objective of establishing Luxembourg as the future EU hub for exploration and utilization of space resources.

Space fund

Luxembourg is launching a fund offering financial support for the space resources industry. The fund will consider early stage investments in innovative start-ups as well as in more mature companies, with a focus both on Luxembourg-based enterprises in the space resources industry, and companies developing substantial space resources related technologies in the Grand Duchy.

LuGovSat – a joint venture between the Luxembourg government and SES – has been created with the objectives of procuring, launching and operating a satellite to support governmental and military innovative communication services.

European Space Agency

Luxembourg has invested strategically in the development of the space sector and became a **member of the European Space Agency in 2005**. Luxembourg is among the top five contributors per capita to ESA.

Luxembourg and ESA have also signed a joint statement on future activities concerning missions to asteroids, related technologies and space resources exploration and utilisation.

99%

With a fleet of more than 55 GEO and 12 MEO satellites, SES has the capacity to reach 99% of the world's population.

Space mining is not only about bringing resources back to Earth. It is about being able to use the resources and materials in space. Mining asteroids and other celestial bodies can provide a fuel source 1,000 times more efficient than 'the-bring-everything-with-you-from-Earth' approach.