

Space sector in Latvia

Published: 27.01.2021.

Updated: 03.03.2021.

The European Union (EU), along with the rest of the world, is witnessing a steady and remarkable development of the space sector as a driver for the creation of new products, services and technologies addressing today's challenges; a booster of business and research; and a promoter of the demand for new professions and highly skilled and well-paid specialists. The European space sector is based on the EU Space Programme, the European Space Agency's activities, several international institutions involved in space and on national and local space initiatives. Moreover, the space sector is being actively commercialised worldwide, increasingly welcoming new players into the so-called *NewSpace* – the private spaceflight industry.

Space sector activities in Latvia and the institution level priorities for the direction of their development are detailed in the [Space Strategy of Latvia for 2021-2027](#), which is an operational document that was jointly developed by the Ministry of Education and Science and the Ministry of Economics.

The contribution of the space sector to economic development

Firstly, current and future space technologies can be transferred to non-space sectors and used in day-to-day life. For instance, powerful, energy efficient and resilient solutions that enable spaceships to sustainably and reliably function in the hostile space environment can be used on Earth as innovative technological solutions for varied sectors of the economy, including medicine, agriculture, shipping and maritime transport, energy, safety, security and many others. Furthermore, technologies that were originally developed to be used on Earth can be also adapted for the space sector, which represents an excellent potential for the stimulation of the Latvian economy, science and exports.

Secondly, applications of space data derived from satellites also drive economic development. Earth Observation data help us see the Earth from a distance and can deliver information that is not visible to a human eye – a capacity enabled by radars and optical sensors onboard satellites. In turn, satellite navigation data allows us to precisely coordinate our actions and fosters our safety and security remotely. Satellite navigation and Earth Observation are complementary technologies and can mutually reinforce such digital technologies as the Internet of Things (IoT), Big Data analytics, the fifth-generation (5G) mobile electronic communications networks, Artificial Intelligence (AI), High Performance Computing (HPC), Digital Twins, etc. These space-borne data are being actively used not only by professionals, but also by the general public without niche specialisation or narrow areas of education in the space sector. The information delivered by satellites can be used for the analysis, monitoring or informed decision-making in such matters as:

- air quality and chemical composition of the atmosphere;
- forest and marine environment;
- state of the forests and ice-coverage;
- climate change;
- energy and energy efficiency;
- smart agriculture and farming;
- land movement and evaluation of its hazards;
- emergency response and disaster risk management;
- road, maritime and air transport;
- smart logistics;

smart cities;
safety, security and defence;
etc.

Together with researchers, companies within various industries use space data and technologies to innovate and respond to global challenges as well as to invent solutions and improve our conventional approaches in all economic spheres for efficiency, productivity and quality.

Certain Latvian organisations and researchers are already intensively involved in the space sector by inventing and creating scientific instruments, electronic components, innovative materials as well as navigation and Earth Observation solutions. This cooperation and the successful projects was a strong foundation for Latvia's next step towards its active participation in the space sector – on 27 July 2020, Latvia joined the European Space Agency (ESA) as an Associate Member State". For Latvia, this means access to the European space knowledge base, broader participation in the European and global space industry network and supply chains, and a possibility to advance technological development in the country. It will also create opportunities to support the economic development in Latvia by opening up and winning new markets, increasing the number of highly qualified specialists, motivating innovation and encouraging the creation and growth of start-ups and SMEs. Furthermore, a closer involvement in the space sector will foster digitalisation, productivity, green innovation, international cooperation and even creativity.

In addition, as an EU Member State, Latvia participates in the EU's Earth Observation programme [Copernicus](#) and global navigation satellite system [Galileo](#), which together enable Latvia's entrepreneurs, engineers, researchers, students and the society in general to access and use these space programmes' data and information on a free and open basis to create new commercial and scientific applications.

Alongside with European space successes and opportunities, Latvia is creating its own solid basis for further development of the national space sector. The Space Strategy, [which is accessible here](#), contributes to the achievement of the objectives, priorities and actions defined in the Latvian National Development Plan 2021-2027, the National Industrial Policy Guidelines 2021-2027 and the Science, Technological Development and Innovation Guidelines 2021-2027.

We invite you to follow the news on the space sector opportunities on the website of the Ministry for Education and Science at: <https://www.izm.gov.lv/lv/aktualie-konkursi>

For more information on the European Union Space Programme and business support:

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