



Unique National Capabilities

- Based in Luxembourg, the European Space Resources Innovation Centre (**ESRIC**) is the world's first **innovation centre** entirely dedicated to space resources.
- Launched in 2020, ESRIC is an initiative of the Luxembourg Space Agency (**LSA**) and the Luxembourg Institute of Science and Technology (**LIST**) in strategic partnership with the European Space Agency (**ESA**).
- It is hosting and jointly operating a Dusty Thermal Vacuum Chamber (**DTVC**) from ESA, the largest of its kind in Europe, to develop lunar surface technologies.
- It conducts research and develops technologies to use space resources, e.g. producing **oxygen and metal from lunar regolith**.

Areas of Strategic Interest

- Through the **SpaceResources.lu** initiative, an initiative launched by the Luxembourg government in 2016, Luxembourg aims to contribute to the peaceful exploration and sustainable utilization of space resources for the benefit of humankind.
- In this initiative Luxembourg is addressing legal, regulatory, technical, scientific and funding aspects, to enable **commercial players** to use space resources, providing the foundation of a future in space economy.

Areas of Strategic Interest

Through LuxIMPULSE, its national space programme, as well as programmes at the European Space Agency, Luxembourg is **supporting industry** to develop technologies and services enabling a sustainable and responsible lunar exploration. This includes :

- Orbital **prospecting of lunar resources** and generation of high-resolution lunar resources maps.
- Lunar **surface mobility for in-situ** measurements of lunar resources.
- Storage of thermal energy providing **thermal and electric energy**, for lunar night survival.
- **Storage and transfer of cryogenics** in space and on the lunar surface .