

Ordinance

dated 4th December 2023

on the Authorization of Space Activities and the Registration of Space Objects (Space Ordinance; WRV)

Based on Art. 4(4), Art. 5(3), Art. 6(2), Art. 8(4), Art. 13(6), Art. 15(1) lit. k, Art. 16(4), Art. 17(6), and Art. 27 of the Law on the Authorization of Space Activities and the Registration of Space Objects (Space Act; WRG), LGBl. 2023 No. 443, the Government decrees:

I. General Provisions

Art. 1

Subject Matter

In implementing the Act, this Ordinance governs the details of the authorization of space activities and the registration of space objects, in particular:

- a) the approval application and the notification obligation regarding the conduct of space activities;
- b) the exemption from insurance requirements or reduction of insurance coverage;
- c) the change of control of the operator;
- d) additional information to be entered into the register for space objects;
- e) the reporting to the supervisory authority;

f) the fees, costs, and supervisory charges.

Art. 2

Designations

All personal designations used in this Ordinance shall be understood as referring to all persons, regardless of gender, unless the designations explicitly refer to a specific gender.

II. Conduct of Space Activities

Approval Application

Art. 3

a) General

1) The operator must submit the application for approval in accordance with Art. 4 of the Act, including the information and documents required under Art. 4, to the supervisory authority. The documents should, wherever possible, be submitted in electronic form.

2) The operator must mark those documents that, in his opinion, contain trade or business secrets, and relevant passages accordingly.

3) If documents are missing in the approval application or if the information in the approval application is incomplete, the supervisory authority, even if this only becomes apparent during the process, shall instruct the operator to supplement the approval application within a deadline of at least 14 days.

4) The approval application is to be rejected at any stage of the process if it becomes apparent in the course of the procedure that the project contradicts certain approval requirements to an extent that these deficiencies cannot be remedied by imposing conditions or requirements.

5) If the submission of certain documents at the time of application is not possible, the operator must indicate and justify this circumstance in the application. The prospective launch provider must be specified no later than the decision on the approval application. The submission of documents is to be instructed to the operator through conditions or requirements and a deadline.

6) If the deadline set in para. 3 or 5 is not adhered to by the operator, the approval application may be rejected.

Art. 4

b) Information and Documents

1) The approval application must include the following information and documents:

a) to prove the identity of the operator:

1. the name, legal status, and legal form, registration number in a commercial register or similar register, value-added tax number (VAT No.) or company identification number (UID No.), and the registered office and mailing address of the operator;
2. the contact details of an authorized person or a representative authorized for service in the country;
3. a current extract from a commercial register or similar register;

b) to prove the necessary professional qualifications and personal integrity of the operator, as well as its governing bodies and key personnel under Art. 5(1) lit. a of the Act:

1. qualification certificates for education and training, as well as information on practical experience, highlighting management experience, suitability, and the knowledge and skills required for the intended activity;
2. a current criminal record extract and a written declaration about any pending criminal and administrative proceedings;

c) for a detailed description of space activity and proof of financial capability to conduct space activity under Art. 5(1) lit. b of the Act:

1. proof of financial capability, including a cost and financing plan for space activity, especially to demonstrate that the operator can fulfill its approval and licensing obligations and any other obligations;
2. essential contracts related to space activity, including launch contracts, contracts with launch brokers, delivery and operating contracts, as well as other supply contracts;
3. a detailed concept, including system descriptions, processes, mechanisms, and methods, to present the planned tasks, purposes, and goals of space activity; the operator must provide information in particular about:
 - aa) the conduct of the launch into orbit or beyond, including an assessment of associated risks, proof that the launch and operation of the space object will be conducted safely and sustainably, and proof that the launch does not pose an unacceptable danger to the public;
 - bb) the assessment of liability risk and details about approaches to other space objects, the likelihood of collision, resulting damage claims, and a description of measures taken against these risks;
 - cc) the safe conduct of activities in orbit or beyond, the deployment of the space object from the launch vehicle, as well as altitude control, steering, and orientation of the space object, especially its propulsion system for ascent, including information on meeting conditions and responsibilities for conducting corresponding "Command & Control" activities or command, control, and telemetry systems;
 - dd) maintenance of space objects or their replacement, in particular in the case of satellite constellations;
 - ee) an adequate quality management system for ongoing monitoring and implementation of activities;
 - ff) planned and unplanned termination, processes and mechanisms for disposal, as well as prevention of collisions and other damages;

4. technical details of space activity, in particular power supply, description of the intended payload, communication strategy, geographic location, technical details of ground stations, and technologies used at the subsystem level;
5. a risk-based concept, including detailed descriptions, processes, mechanisms, and methods to ensure the cybersecurity of space activity; the operator must pay particular attention to the following:
 - aa) measures to protect against unauthorized access to critical functions of space objects, especially command, control, and telemetry connections;
 - bb) physical protection measures aimed at reducing vulnerabilities of command, control, and telemetry receiving systems of space objects;
 - cc) measures to protect against communication disruptions and deceptions, in particular by monitoring signal strength, secure transmitters and receivers, authentication, or effective, validated, and tested encryption measures that can provide security against existing and expected threats throughout the duration of space activity;
 - dd) measures to protect ground systems, operating technology, and information systems through the application of proven cybersecurity practices, in particular logical or physical separation; regular patching; physical security; restrictions on the use of portable media; the use of antivirus software; promotion of awareness and training of personnel, including measures to mitigate internal threats;
 - ee) appropriate cybersecurity hygiene measures, physical security for automated information systems, and methods for detecting intruders for system elements such as information systems, antennas, terminals, receivers, routers, associated networks, and power supplies;
 - ff) measures to manage supply chain risks affecting the cybersecurity of space objects;
7. documents on the duration and termination of space activity;
8. proof that financing for the termination of space activity or the transfer of space activity to another operator is secured;

d) to prove that space activity is conducted according to the state of the art under Art. 5(1) lit. c of the Act and does not pose an immediate danger to public order, the safety of persons and property, and health:

1. evidence that procedures based on relevant scientific knowledge for testing the functionality of facilities, construction, or operating methods are adhered to, which are based on the standards of the European Space Agency. If compliance cannot be considered in a specific case or if it cannot be demonstrated, it must be shown that the space activity does not pose an immediate threat to public order, the safety of persons and property or to health;
2. the results of the tests used to check the safety and solidity of the space object in accordance with the state of the art;
3. contingency plans developed in the event of loss of communication or data links, loss of control of the space object, failure of essential power, attitude or trajectory control systems and similar extraordinary operational events;
4. information on the extent to which the space activity includes observation of the Earth and what data will be obtained. In particular, the objectives of any images of the Earth's surface and the degree of resolution as well as the planned transfer of data, in raw or processed form, must be disclosed. If data within the meaning of data protection legislation is to be processed in the course of the space activity, the authorizations required for the processing and transmission of this data must be submitted;

e) to prove that space activity is consistent with Liechtenstein's obligations under international law and foreign policy interests in accordance with Art. 5(1) lit. d of the Act and does not pose a threat to Liechtenstein's national security in accordance with Art. 5(1) lit. e of the Act:

1. documents that provide information on the planned use and the intended recipients of the collected data in accordance with lit. d number 4;
2. information on the payload of the space object;

f) to demonstrate that the space object, in accordance with Article 5(1) lit. f of the Act, does not contain dangerous or harmful substances that could lead to harmful contamination of outer space or detrimental changes to the environment, the appropriate documentation is required;

g) to demonstrate corresponding measures to prevent space debris in accordance with Article 5(1) lit. g of the Act:

1. A report on measures taken in accordance with the state of the art and considering internationally recognized guidelines, such as those of the Inter-Agency Debris Coordination Committee (IADC), especially:
 - aa) to prevent space debris and mission residues during normal operations;
 - bb) to prevent the disintegration of the space object in orbit;
 - cc) for the removal of the space object after the end of space activity, either through controlled re-entry or descent or by placing it in a sufficiently high orbit ("graveyard orbit"). For non-maneuverable space objects, the orbit should be chosen so that they are expected to remain in orbit for no longer than 25 years after the end of their operation;
2. An overview of measures taken to avoid collisions with other space objects in outer space;

h) to demonstrate that the frequencies and orbital positions required for the radio operation of the space object may lawfully be used in accordance with Article 5(1) lit. h of the Act:

1. national or international authorizations for frequency use;
2. documentation required for frequency coordination with the International Telecommunication Union (ITU), such as frequency filings (Advance Publication Information, API) or coordination requests (Coordination Request, CR); or
3. other documents related to frequency use;

i) to demonstrate compliance with the applicable legal provisions concerning export control in Liechtenstein due to the customs treaty, as stipulated in Article 5(1) lit. i of the Act, the corresponding approvals;

k) for proof of the conclusion of liability insurance in accordance with Article 5(1) lit. k and Article 8 of the Act, suitable documents, unless an exemption from the insurance requirement has been granted under Article 8(2) of the Act.

2) To demonstrate that the space activity, in accordance with Article 5(1) lit. d of the law, aligns with Liechtenstein's international legal obligations and foreign policy interests, and, in accordance with Article 5(1) lit. e of the Act, poses no threat to the national security of Liechtenstein, the documents specified in para. 1 lit. a to c are particularly considered for assessment.

3) The supervisory authority may request additional information and documents as necessary for evaluating the application; furthermore, it may issue supplementary guidelines regarding the information and documents to be submitted, as well as the evidence to be provided. Additionally, the supervisory authority provides further information, especially regarding applicable standards, on its website.

Art. 5

Notification Obligation

1) In the context of the notification obligation under Article 6(1) lit. a of the Act, the supervisory authority must be provided with the following information and documents:

- a) information as per Article 4(1) lit. a and b;
- b) proof of approval and supervision by another state;
- c) information regarding the planned duration and termination of the space activity.

2) In the context of the notification obligation under Article 6(1) lit. b of the Act, the supervisory authority must be provided with the following information and documents:

- a) information as per Article 4(1) lit. a and b;

- b) a detailed description of the space activity, including precise details about the payload, the launch service provider, and the operator conducting the space activity;
- c) information regarding the planned duration and termination of the space activity.

3) The supervisory authority may request additional information and documents as far as these are necessary for the assessment of the space activity under Article 6(1) of the Act.

Art. 6

Exemption from Insurance Obligation or Reduction of Insurance Coverage

- 1) The application for exemption from the insurance obligation or reduction of the insurance coverage under Article 8(2) of the Act must be accompanied by documents indicating:
- a) the extent to which the space activity serves the public interest;
 - b) the risk posed by the space activity for personal and property damage and the reason why this justifies an exemption from the insurance obligation or reduction of the insurance coverage; or
 - c) the extent to which the operator is capable of meeting liability for personal or property damage through the guarantee of a bank or other equivalent financial securities.

Art. 7

Change of Operator Control

In the context of the notification obligation regarding the change of operator control under Article 13 of the Act, the supervisory authority must be provided with the following information and documents:

- a) Information and evidence according to Article 4(1) lit. a and b from the prospective acquirer;
- b) Information and evidence according to Article 4(1) lit. c number 1 regarding financial capability, including a cost and financing plan, of the intended acquisition;
- c) additional information requested by the supervisory authority that is necessary for the completion of the assessment.

III. Registration of Space Objects

Art. 8

Information Submission

1) The operator shall promptly but no later than 14 days after the launch of the space object or the completion of the space activity, after a change of operator, or after any other changes to this information, electronically submit the information required by Article 15 of the Act, as well as the information listed in para. 2 and 3, in both German and English.

2) In addition to the information required by Article 15 of the Act, the operator must provide the following information for registration:

- a) the Committee on Space Research (COSPAR) designation, if available;
- b) the date and Coordinated Universal Time (UTC) as the launch time;
- c) the expected date and Coordinated Universal Time (UTC) of the re-entry of the space object;
- d) the date and Coordinated Universal Time (UTC) of placing the space object into a disposal orbit;
- e) any additional information about the space object, such as its web link;
- f) the launch vehicle used to launch the space object;
- g) the celestial body that the space object is orbiting;
- h) the completed Registration Information Submission Form of the United Nations Office for Outer Space Affairs (UNOOSA) in its current form.

3) In the case of a change of operator, the original operator must submit the following information:

- a) the date and Coordinated Universal Time (UTC) of the change of operator;
- b) the identity of the new operator;
- c) in the case of a change in orbit, the parameters of the original and new orbit;
- d) any new function of the space object.

Art. 9

Certification and Access

1) A certification must be issued to the operator regarding the entry under Article 15 of the Act.

2) Access to the register for space objects under Article 14 of the Act is open to the public, provided a legitimate interest is demonstrated.

IV. Supervision

Art. 10

Reporting

1) The operator must submit a report to the supervisory authority no later than 15 months after the launch of the space object, containing, in particular, the following information:

- a) The current parameters of the orbit of the space object according to Article 15(1) lit. d of the Act;
- b) the functionality and any technical impairments or malfunctions of the space object and its payload in the first twelve months after launch;
- c) changes to the information provided as part of the approval;
- d) the business activities and financial results achieved by the operator through the space activity;
- e) the estimated remaining operational life of the space object and the continuation of the space activity, with special consideration given to any changes to the originally planned duration of the space activity.

2) The report is to be submitted regularly, at least annually, until the actual end of the space activity to the supervisory authority. Any changes under Article 10 of the Act that occur must be promptly communicated to the supervisory authority.

3) The supervisory authority may impose additional reporting obligations on the operator.

V. Fees, Costs, and Supervisory Charges

Art. 11

Assessment

1) Administrative fees are charged for the expenses and costs incurred by the supervisory authority in connection with the performance of the tasks assigned to it.

2) Unless expressly stated otherwise, expense-dependent administrative fees are collected. For the calculation of expenses, the hourly rate is 250 Swiss Francs. For official acts of exceptionally large scope, special difficulty, or urgency, a surcharge of up to 50% of the ordinary fees may be imposed, which must be separately specified and justified.

3) The annual supervisory charge for maintaining the register under Article 14(1) of the Act is 500 Swiss Francs per year.

4) A fee of 250 Swiss Francs is charged for issuing a certificate of entry in the register.

5) Administrative costs are separately calculated based on the actual costs incurred but are collected together with the fees. Fee payers bear the costs for:

- a) involving suitable persons or entities;
- b) expert opinions, investigations, and analyses; and
- c) cash expenses.

VI. Final Provision

Art. 12

Effective Date

This Ordinance comes into effect on January 1, 2024.

Princely Government:

signed Dr. Daniel Risch

Princely Head of Government