



---

# Instructions for applicants filing a PRO-DEX application

Version 4.0, replaces all previous versions  
(Original: German)

---

## Legal foundation

- Organisation Ordinance for the Federal Department of Economic Affairs, Education and Research (OrgO-EAER)<sup>11</sup>

## 1 Purpose of the PRODEX programme

PRODEX (*PROgramme de Développement d'Experiences Scientifiques*), a programme of the the European Space Agency (ESA), facilitates the development of scientific instruments and experiments earmarked by the ESA for one of its programmes in various areas of space research (astronomy, exploration of the solar system, fundamental physics, microgravity, earth observation). PRODEX also supports projects for the development of space experiment projects that are not carried out within an ESA framework.

The projects are proposed by researchers and conducted in cooperation with industry. This cooperation fosters knowledge and technology transfer, which should take place in both directions.

---

<sup>1</sup> SR 172.216.1

## 2 Framework conditions

### 2.1 Participation

Projects for the development of experiments proposed by a scientist<sup>2</sup> working at a Swiss research institute<sup>3</sup> and selected or confirmed by the ESA, provided they fully meet the conditions set out in Sections 2.2 to 2.6, are eligible for PRODEX support.

### 2.2 Conformity with ESA's selection criteria

Within the framework of PRODEX, the (co-)financing of projects for the development of space experiments is limited to projects carried out within the framework of the ESA or with its agreement. Projects selected according to one of the following procedures under the ESA rules may receive support:

- One-step selection procedure in the context of a call for experiments.
- Multi-level selection procedure with a gradual reduction in the number of missions/experiments. In such a case, projects can be supported by PRODEX as long as there is a prospect of a definite selection.
- Positive assessment of an unsolicited proposal by the competent ESA body.

PRODEX support may also be considered for the development of space experiments conducted as part of a science mission or a space project outside ESA, for example by an ESA member state or other countries that have a cooperation agreement with ESA. This is subject to confirmation by the ESA committee responsible for the topic that the intended objectives of the experiment and the associated mission are compatible with the interests of ESA.

### 2.3 Activities that may be supported via PRODEX

The following activities may be (co-)financed through the PRODEX programme:

- Hardware development projects:** experimental material such as test setups, prototypes, flight and replacement models, project-specific ground support equipment and software required for its use.
- Software development projects:** development of software for carrying out an experiment, for the collection of data, raw processing and pre-processing of data carried out in ESA centres to a product as offered by ESA to users, provided that the experiment meets the conditions set out in point 2.2.
- Projects for scientific data generation, processing and evaluation, and for the development of dedicated software:** temporary staff for specific projects (maximum duration: 1 person employed full-time for one year) and facilities for experiments directly related to projects for the generation, processing and evaluation of scientific data collected from experiments and exploratory campaigns that meet the conditions set out in point 2.2.

---

<sup>2</sup> Footnote not relevant to EN version.

<sup>3</sup> The term 'Swiss research institute' includes:

- any research institute of a higher education body under the Federal Act on the Promotion of Research and Innovation of 14 December 2012 (RIPA) Art. 4 let. c;
- other research institutes, whether legally independent or associated with a higher education institution, provided they are publicly supported (i.e. by the Confederation or the cantons).

Private research institutes located in Switzerland are entitled to apply, provided they fulfil the conditions of RIPA, Art. 5:

- the institute is a non-profit organisation.
- the scientific independence of the persons conducting the research is guaranteed.
- the research serves the education and training of young researchers.
- the results will be made available to the scientific public.

For hardware and software development projects, the following costs may also be financed through PRODEX:

- Additional temporary staff for specific projects that are employed by the institute. Staff duties and the budget must be defined in the PRODEX application.
- Attendance at project-specific meetings at which the institute must be represented. These travel expenses must be accounted for and may not exceed 10% of the institute's annual share of the project.

## **2.4 Participation of industry**

To promote the sharing of knowledge and technology, Swiss PRODEX projects should aim for a contribution from industry (in relation to the budgeted costs, over the entire project duration) of 50% or more. If this is not possible, an explanation must be provided when submitting the project.

Contracts are generally awarded through open competition according to ESA procurement rules. The process is handled by the ESA PRODEX Office (including quotations and contract negotiations).

## **2.5 Co-financing and third party funds**

The financing of project costs which are explicitly not borne by PRODEX must be covered by other sources for the duration of the relevant project phase. Therefore, the management of the research institute should certify that at least for the duration of the relevant project phase, sufficient co-financing from own or third-party funds is guaranteed, or that the guarantee of such financing is imminent. A declaration of intent and a financing plan must be submitted for further project phases, in particular for the exploitation phase.

## **2.6 Exchange rate**

Financial information in PRODEX applications must be in Euros, quoting the exchange rate used. The exchange rate to be used is the rate applied by the Confederation within the framework of the current budget estimate; it is published on the SERI website under the tab Research & Innovation, then under the headings: Space; Information for Experts.

Exchange rate fluctuations and the related financial risk may not be taken into account in project financial information.

# **3 Submitting an application**

Applications must be submitted electronically to the Swiss ESA Delegation. The relevant application form and the deadlines to be taken into account are available on the SERI website (under the headings: Space; Information for Experts). The form must be duly completed and signed by the applicant and the school or institute management. Details of the project and the mission or other relevant information can be attached to the application. Please contact the Delegation with any questions relating to the PRODEX applications.

The Swiss ESA Delegation supports development phases for project types i) and ii) from phase 0<sup>4</sup> until the end of phase D (completion and commissioning of the instrument, i.e. the time at which the instrument is ready for scientific use). Thus, the operating costs for the conduct of the scientific measurement and the scientific evaluation are excluded from PRODEX support

---

<sup>4</sup> Project phases in accordance with the European Cooperation for Space Standardisation (ECSS)

(Exceptions are Type iii applications).

In principle, a distinction is made between two financing phases; an application must be submitted for each one:

**Planning applications** generally include the following project phases: 0 ('Mission analysis'), A ('Feasibility') and parts of phase B ('Preliminary definition') and normally involve to 5 to 10% of the total costs. In order to minimise risk, it is essential to involve industry in the design in the early project phases. In the case of complex projects, applicants are required to launch parallel feasibility studies by industry. Any decision not to do so must be approved ahead of time by the ESA Delegation and justified in the application.

**Implementation applications** generally include parts of the project phase B, as well as project phases C ('Detailed definition') and D (Qualification and production') and involve the remaining project costs.

In principle, an application covers the entire duration of the project. If possible, applicants should coordinate the two financing phases to coincide with the project's important milestones (e.g. 'Mission adoption review'). A clear distinction needs to be made between the project phases in terms of content and funding. In particular, the use of reserves and provisions for any planning uncertainties must be presented in detail for the various project phases. In this regard, a risk evaluation is required for the entire project process. In addition, strategies and declarations of intent relating to the funding of the operational phase and the scientific exploitation also need to be included in the application. Here again, applicants need to provide information on content and financial developments.

Cost overruns should be avoided. Any additional costs must be reported immediately to the PRODEX Office.

In principle, additional costs are not covered. Justified additional costs may in exceptional cases be financed by the Swiss ESA Delegation. The Delegation may require the submission of a new formal PRODEX application and the co-financing of the additional costs by the institute concerned.

## 4 Full-scale evaluation and implementation

PRODEX applications are evaluated according to the criteria listed in the annex. The full-scale evaluation is carried out by the Swiss ESA Delegation. The Delegation bases its evaluation on an evaluation and recommendation of the ESA's PRODEX Office. If necessary, the Delegation may consult other experts or specialised bodies to assess the scientific relevance and excellence.

After the evaluation is completed, applicants are informed of the results by the Swiss ESA Delegation. In the event of a positive decision, the Delegation sends a letter of endorsement to the ESA PRODEX Office. The Delegation oversees the project through regular coordination with the ESA PRODEX Office. Any decision to terminate a project will be taken by the Delegation in consultation with the parties involved in the project and the PRODEX Office.

## **5 Reporting**

A brief report must be prepared annually for the Swiss ESA Delegation. The report must in particular cover any relevant financial and procurement aspects. The Delegation will accordingly provide applicants with a questionnaire.

## Annex: List of criteria for the evaluation of PRODEX applications

1. Scientific value of the proposed development project in the area of space research.
2. Importance of the experiment for Swiss space research and for Switzerland as a location for research and manufacturing.
3. Relevance of the expected data and its use by the scientific community in Switzerland. Competence and capacity to scientifically assess the data:
  - at the applicant institute;
  - at other institutions in Switzerland.
4. Applicant's role in the instrument consortium in the case of international cooperation between several institutes. Description of the division of scientific responsibility between the various partners.
5. Importance of the project as part of Switzerland's space policy.
6. Appropriateness of responsibilities and management structures (work packages, work breakdown structure, division between the institute and industry).
7. Sufficiently detailed description of the expected staff costs (person/years for scientific, technical and other staff), specifications for temporary staff.
8. The applicant's experience and track record in the corresponding research area and in the development of the proposed experiment/instrument.
9. The applicant institute's experience in the carrying out of projects of comparable scope, in particular when involving comparable project management.
10. Integration of the project into the strategy of the applicant institute.
11. Knowledge and technology transfer between the institute and industry in Switzerland. The institute and industry must have common and complementary technological skills to make it easier to define the technical specifications for cooperation. This enables the institute to provide competent support for industrial development.
12. The applicant's intended level of funding for the implementation of the development project. The data below are estimates for each mission. They include all costs (from the first studies to the completion of phase C/D) for all Swiss actors involved in instrument development.

a) ESA L-mission:	EUR 15,000,000
b) ESA M-mission:	EUR 10,000,000
c) ESA S-mission:	EUR 5,000,000
d) Other ESA missions:	EUR 3,000,000
e) Non-ESA missions:	50% of the standard value for a comparable ESA mission
13. Quality of the applicant's estimate of industrial costs.

This estimate is to be based on an enquiry sent to potential suppliers/service providers in Switzerland.
14. Internal activities compared with external activities (outsourcing, goods and services to be purchased, mainly abroad).
15. Structured breakdown of project financing in
  - a) Contributions requested via PRODEX,
  - b) Own resources, and
  - c) Third party contributions and supplementary services (SNSF, university, public contributions, etc.)
16. External project risks (environment of the intended mission, stability of the instrument /experiment consortium, position of the applicant, risks for the project in relation to the associated mission, stability of a roadmap, external project risks in international cooperation at a higher level, etc.).
17. Project-specific risks (costs, achievement of objective, timetable).

\* \* \*