

Federal Council performance mandate for the ETH Domain for the period 2008-2011

Part 1: Objectives

The ETH Domain's core remit is described in Article 2 of the ETH Law, which defines the statutory purpose of the ETH Domain. The performance mandate sets priorities and objectives in teaching, research and services for the term of a mandate.

Objective 1

The ETH Domain will provide teaching which is top class and attractive to students in an international comparison.

- Sub-objective 1: The ETH Domain will make a contribution to training and developing young scientific and technical talent and will design its educational and training courses to serve the needs of Swiss society, the sustainable development of Switzerland and scientific progress at an international level.
- Sub-objective 2: The ETH Domain will recruit the best students and doctoral candidates and will develop methods which will guide its highly motivated and talented students to a successful conclusion of their course of study irrespective of their gender and origin.
- Sub-objective 3: The ETH Domain will promote new forms of teaching and learning which will provide students with research experience from an early stage in their studies, provide a sound specialist education and enable graduates to think in an interdisciplinary, systems-oriented and entrepreneurial way.
- Sub-objective 4: The ETH Domain will take account of quality of teaching in appointing, promoting and remunerating lecturers and will explicitly promote quality in the teaching programme.
- Sub-objective 5: The ETH Domain will encourage horizontal and vertical mobility of students; the transition from bachelor's to master's degree will act as a turning point for mobility in accordance with Swiss University Conference (CUS) guidelines.

Objective 2

The ETH Domain will strengthen its leading position in international research.

- Sub-objective 1: The ETH Domain will carry out basic research that allows sufficient latitude for high-risk and unconventional approaches.
- Sub-objective 2: The ETH Domain will carry out applied and topic-oriented research in the service of society. Such research will include, among other things, the investigation and early identification of natural hazards, the reliability and sustainability of materials and systems, the study, planning and further development of resource conservation, resource utilization, infrastructure and spatial planning.

Sub-objective 3: The ETH Domain will focus on existing strengths inter alia by more vigorous cooperation within the Domain and with Swiss institutions of higher education and by strategic alliances with selected research institutions, specifically CSEM, IDIAP, IRO and STI.

Objective 3

In order to foster Switzerland's innovative strengths, greater technological and commercial use will be made of the knowledge created in the ETH Domain and cooperation with industry will be strengthened.

Sub-objective 1: The ETH Domain will operate centres of excellence in future-oriented fields, promote the formation of networks and strengthen cooperation with industry.

Sub-objective 2: The ETH Domain will strengthen cooperation with national knowledge and technology transfer (KTT) offices.

Sub-objective 3: The ETH Domain will streamline and optimize its range of services with the objective of being able to provide top class services based on cutting-edge research in line with the current and future requirements of Swiss society.

Sub-objective 4: By involving entrepreneurs and risk capital providers, the ETH Domain will create an environment which encourages researchers to establish their own companies in order to convert research and development results generated in the ETH Domain into commercially exploitable products.

Sub-objective 5: The ETH Domain will professionalize existing activities in pre-seed funding and risk capital.

Objective 4

The ETH Domain will commit itself to bilateral international cooperation.

Sub-objective 1: ETH Zurich will assume the role of leading house in bilateral cooperation with China.

Sub-objective 2: EPF Lausanne will assume the role of leading house in bilateral cooperation with India.

Sub-objective 3: The Federal Institutes of Technology, ETH Zurich and EPF Lausanne, will actively commit themselves to bilateral cooperation with Russia and South Africa and will take part in highly promising cooperation projects.

Sub-objective 4: With the aim of internationalizing their activities, the Federal Institutes of Technology, ETH Zurich and EPF Lausanne, will strengthen cooperation in local teaching and research on invitation from selected countries.

Objective 5

The ETH Domain will create attractive and family-friendly working conditions, promote equality of opportunity and develop young scientific talent.

Sub-objective 1: The ETH Domain will increase the proportion of women in management and will endeavour to ensure that women occupy at least 25% of management posts and positions on decision-making committees.

- Sub-objective 2: The ETH Domain will increase by one quarter the proportion of women at all stages in the academic career path, in particular in natural sciences, engineering sciences and mathematics.
- Sub-objective 3: The ETH Domain will develop a strategy to achieve these quantitative goals.
- Sub-objective 4: The ETH Domain will promote flexible working patterns that make it possible to combine work and family at all levels and for both genders, it will provide targeted career development for all categories of staff and will ensure greater availability of scientifically attractive working and study conditions by substantially improving child care facilities in the form of day nurseries, day care for school-age children and nursery schooling.
- Sub-objective 5: The ETH Domain will actively develop young talent, inter alia by the Tenure Track scheme for assistant professorships, and in so doing will take account of gender-specific differences in career planning.

Objective 6

The ETH Domain will actively commit itself to the creation of the Swiss Higher Education Area.

- Sub-objective 1: The ETH Domain will cooperate in teaching and research with Swiss institutions of higher education.
- Sub-objective 2: The ETH Domain will make an active contribution to the streamlining of portfolios among the institutions of higher education.
- Sub-objective 3: The ETH Domain will work towards ensuring ease of movement between the various kinds of institutions of higher education.
- Sub-objective 4: The ETH Domain will undergo quality assurance testing in accordance with OAQ guidelines, which apply to the entire higher education sector.

Objective 7

The ETH Board will allocate funds to the institutions on a performance basis.

- Sub-objective 1: The ETH Board will develop a transparent model, which will be agreed with the institutions. In so doing, the ETH Board will take both the core remit (teaching, research, services) and strategic priorities into account.
- Sub-objective 2: The ETH Board's annual report will contain an assessment of implementation.

Objective 8

The ETH Domain will strengthen its national and international profile by exploiting the dynamism of its autonomous institutions and so increasing its presence in society and the scientific community.

- Sub-objective 1: The ETH Domain will maintain and foster an atmosphere encouraging the independent and responsible exercise of entrepreneurial freedom by its autonomous institutions for the benefit of science and society.

Sub-objective 2: The ETH Domain will foster an inward and outward sense of community among its institutions by developing shared values and strengthening the basis of mutual trust. The ETH Domain will promote *corporate identity*.

Objective 9

The ETH Domain will strengthen the role played by its institutions in society.

Sub-objective 1: The ETH Domain will foster dialogue with society and in particular communicate the value of (basic) research.

Sub-objective 2: The ETH Domain will contribute to enhancing the image of engineers in society.

Sub-objective 3: The ETH Domain will maintain an open door culture with many and varied activities which enable a dialogue between science and society.

Sub-objective 4: The ETH Domain will offer a wide, socially acceptable range of continuing education with the aim of life-long learning (LLL).

Part 2: Specific strategic missions

The ETH Board is responsible for carrying out the following specific missions:

- Active participation of its institutions in nationally significant joint projects of Swiss institutions of higher education, in particular in CUS projects (equality of opportunity, doctoral programs, e-library, AAI, Nano-Tera.CH, SystemsX.ch);
- Transfer of Neuchâtel University's *Institut de microtechnique* (IMT Uni-NE) to the ETH Domain and further development of the institute at Neuchâtel, provided that the academic and financial frameworks are in place;
- Promotion of the PSI-XFEL project;
- Incorporation of ISREC into EPF Lausanne;
- Settling the terms of long-term cooperation between ETH Zurich and the Oechsli Library;
- Promoting internationally trend-setting, competitive architectural research, supporting the establishment of priority research topics and cooperation with other Swiss institutions of higher education in this field;
- Establishing a Swiss research and service centre for ecotoxicology;

- Incorporating SCSC Manno into a stable organizational structure as part of a national strategy in the field of high-performance computing. The following principles apply: SCSC Manno/Lugano is the national supercomputing centre; Switzerland's present supercomputer, which also has to provide general services, is located at the SCSC; it is operated by ETH Zurich; the ETH Board coordinates national strategy;
- Participation of its institutions in the *ITER project/Broader Approach*.

Part 3: Real estate management

The ETH Board coordinates real estate management and is responsible for maintaining its value and functionality.

Management criteria

In order to ensure the efficient and economic use of funds on individual buildings, the ETH Board coordinates actual requirements, guided by the following criteria:

- functionality;
- reasonable quality and availability;
- economic viability.

Criteria for maintaining value and functionality

Value and functionality are maintained in accordance with the objectives stated in SIA standard "Maintenance of structures":

- ensuring adequate safety (structural/operational safety);
- maintaining the cultural value of a structure;
- maintaining the economic value of a structure taking account of operating and maintenance costs;
- ensuring the serviceability of a structure;
- assuming legal responsibility on behalf of the proprietor.

The ETH Board, being the buildings and premises board as defined in Federal real estate management and logistics regulations, is in charge of portfolio management:

- establishing a balance between stocks and requirements;
- providing an overall concept and reporting with regard to use and occupancy, maintenance and renovation.

The funds used and planned for this purpose and their source are stated in the annual report, the capital investment plan and the real estate report.

Financing

The ETH Board prepares a four year capital investment plan on a rolling annual basis for real estate management in the ETH Domain. Guarantee credits are taken out for capital investments in real estate. The means of payment (payment authorizations) required for real estate management are included in the budget appropriation (capital investment and expenditure), but rental costs are not. With the introduction of the New Federal Accounting Model (NRM), funds for capital investment in real estate are set at the Federal Office for Construction and Logistics (BBL) and provided by the latter to the ETH Domain for direct settlement of payment transactions.

Real estate reporting

The ETH Board submits an annual report to the Federal Department of Home Affairs (EDI) and the Federal Department of Finance (EFD) for the attention of Parliament. The following key figures and indicators are provided:

- building figures: area of land, net internal areas, balance sheet value of premises, operating costs;
- source of funds and use of funds by building activities;
- long-term planning, capital expenditure.

Recording of value

The institutions of the ETH Domain and the ETH Board record the values of the real estate they use in sets of accounts kept on behalf of the BBL. In accordance with the principles of the NRM, records of value-maintaining and appreciating capital investments and depreciation are kept and periodically reported to the BBL in summary form. The BBL is responsible for preparing a balance sheet at Federal level.

Part 4: Reporting, evaluation and monitoring

Reporting

Reporting is in three parts:

- The annual report is a critical self-evaluation of the ETH Domain by the ETH Board, associated with a statement of account regarding the use to which annual Federal funding has been put. The self-evaluation is geared towards the objectives stated in the performance mandate. The achievement of targets is recorded quantitatively with the relevant indicators, in particular the monitoring table, and is evaluated qualitatively in the form of statements. The annual report also contains information regarding real estate management.
- Halfway through the term of a performance mandate, the ETH Board draws up a self-evaluation report which provides an overview of the extent to which the objectives of the performance mandate have been achieved. This report serves as the basis for the external evaluation (peer review) commissioned by the Federal Department of Home Affairs (State Secretariat for Education and Research).
- The final report falls due at the end of the period. This is a final, comprehensive report on the achievement of the performance mandate, and may include participation by external experts. The final report must be approved by the Swiss Federal Councils.

Evaluation by the Federal Department of Home Affairs

The Federal Department of Home Affairs checks the extent to which the performance mandate has been achieved and, in the case of noncompliance, requests that the Federal Council take appropriate action. In mid 2010, the Federal Department of Home Affairs will, together with external experts, carry out an evaluation of the performance of the ETH Domain and its institutions. The ETH Board will comment on the evaluation report. The evaluation report and the ETH Board's comments constitute the interim report which is forwarded to Parliament together with the application for the next period (Article 34a ETH Law).

Performance monitoring of the ETH Domain (monitoring table)

Indicators	Reference values*		Monitoring				
	2000	2004	2005	2008	2009	2010	2011
Number of students	16,554	18,881	18,959				
<i>Percentage women</i>	24	27	27				
<i>Percentage foreigners</i>	24	28	29				
Diploma program	12,473	5,800	3494				
Bachelor's program	-	6,293	8388				
<i>Percentage of student numbers</i>		33.3	44.2				
Master's program	-	1,607	1,865				
Postgraduate program	604	623	490				
Student/teacher ratio* *	33.9	33.8	33.5				
Degrees (diploma/Bachelor's, Master's)	1,701	1,721	1804				
<i>Percentage women</i>	20.4	23.0	24.3				
<i>Percentage foreigners</i>	15.2	15.1	14.9				
Teaching by research institutes* **	N.A.	10,145	13,894				
Doctoral candidates	2,929	3,982	4,088				
<i>Percentage women</i>	23	25	26				
<i>Percentage foreigners</i>	51	58	39				
Doctorates	721	716	792				
<i>Percentage women</i>	23	28	22				
<i>Percentage foreigners</i>	47	55	54				
Professors	487	563	565				
<i>Percentage women</i>	6.5	6.7	7.9				
<i>Percentage foreigners</i>	49.3	57.0	57.8				

Indicators	Reference values*			Monitoring			
	2000	2004	2005	2008	2009	2010	2011
Third-party funding in CHF million	218	245	295				
<i>Percentage financial contribution</i>	16.6	16.3	14.7				
<i>of which SNSF, CTI, EU</i>	99.1	156.6	157.3				
<i>of which private research funding</i>							
Number of publications (ISI)*****	13,916						
Number of publications (non-ISI)*****	N.A.	863	868				
Patents	206	186	181				
Licenses	87	247	154				
Spin-offs	36	25	19				

* Source: SFSO, ETH Domain annual reports
** Students per professorship
*** Number of hours per year, partially based on estimates
**** Source: CWTS 2005; all numbers are the sum of 4 years (2000 = 1997-2000, 2003 = 2000-2003)
***** Research institutes only; source: self declaration