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Position Paper on International Initiatives of ETH Domain Institutions



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Initial Position

Switzerland's international strategy for education, research and innovation (ERI) is based on the following vision¹:

Switzerland has established itself worldwide as an appealing and preferred location for education, research and innovation. It leverages its excellence in these areas to become actively involved in international education, research and innovation activities. This should enable Switzerland to remain one of the world's most innovative countries.

The above strategy, released in 2010, clearly states the following overall objective for Swiss higher education institutions: "Maintain the strong reputation of Swiss higher education institutions: Swiss higher education institutions are known worldwide for outstanding quality of research and teaching. They freely decide what international activities to pursue and help Switzerland to consolidate its international reputation as an ERI location."

The Swiss federally funded ERI institutions independently pursue international activities, guided by a set of documents: the performance mandate from the Federal Council to the ETH Domain 2013-2016², the ETH Board's strategic planning for the ETH Domain for the years 2012-2016³, the targets agreed between the ETH Board and each of the ETH Domain institutions, and institution-specific international strategies. These documents constitute the framework in which the six autonomous ETH Domain institutions actively support the implementation of Switzerland's international ERI strategy. By doing so, they are connecting Switzerland worldwide with academia, industry and the global society, providing Switzerland with intellectual resources, and enhancing its visibility abroad.

ETH Domain Institutions as Global Players

ETH Zurich and EPFL are among the most international universities worldwide⁴, and have been playing the role of global research universities ever since their establishment. As global universities, they, together with the other institutions of the ETH Domain, serve not only as hubs of education, research and innovation, but also as beacons for Switzerland. They help Switzerland to be seen as a world-class player. They think and act globally, and they deliver both locally and globally.

The ETH Domain institutions are engaged in, and lead, activities on campus, online, and abroad, across three interconnected levels:

- Europe, where most of our foreign students and faculty come from.
- Developing and emerging countries throughout the world.
- Alliances with peer institutions (world's top 200 universities) based on strategic intent, opportunities arising, and serendipity.

The international component primarily includes academically-driven education and research collaborations; faculty, student and staff mobility; the commitment of alumni networks; participation in various international large-scale facilities; and subsidiaries such as EPFL Middle East or the Singapore-ETH Centre for Global Environmental Sustainability (SEC). With these international activities the ETH Domain institutions expect to significantly increase their visibility in foreign countries, particularly for innovative companies in these countries.

Improved visibility of the ETH Domain institutions for innovative companies worldwide may in turn positively influence the development of the future Swiss Innovation Park, which is due to be launched in 2016. Within

¹ Switzerland's international strategy for education, research and innovation, June 30, 2010 (<http://www.sbfi.admin.ch/themen/01370/01390/index.html?lang=en>)

² "Leistungsauftrag des Bundesrates an den ETH-Bereich für die Jahre 2013-2016" (in German, French, Italian only): <http://www.sbfi.admin.ch/themen/hochschulen/01623/01630/index.html?lang=de>

³ http://www.ethrat.ch/sites/default/files/Strategic_Planning_2012_2016.pdf

⁴ According to the "international outlook" indicator from the *Times Higher Education* World University Rankings 2014-2015 (<http://www.timeshighereducation.co.uk/news/the-100-most-international-universities-in-the-world-2015/2018125.fullarticle>)



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Switzerland, the ETH Domain institutions will become important partners in the Swiss Innovation Park, leveraging their previous experience in technology transfer and innovation park development. The Swiss Innovation Park will help to secure Switzerland's leading role as an innovative country and hence also its competitiveness for the years and decades to come. To this end the Swiss Innovation Park aims to attract foreign and innovation-driven companies to Switzerland, create new high-end jobs in industry or services, and attract foreign direct investment to our country.

Current Challenges

The ETH Domain institutions have developed a proven track record in education and research activities (publications, international cooperation, etc.) as well as in technology transfer and the promotion of disruptive innovation. This success is clearly reflected in their world academic rankings. To retain this hard-won position, however, the ETH Domain must address the following challenges:

- Allowing institutions to grow further in scope and international presence in an increasingly competitive global academic environment, in order to support the federal government's ERI strategy and be able to continue attracting the best people and projects throughout the world. Switzerland needs to keep in mind that, in terms of total output, it is a small country (even in science and education) which benefits hugely from international talent.
- Keeping Swiss borders open. Here, access to the European market is crucial, for the ETH Domain as for the Swiss economy. Ever since the anti-immigration vote on February 9, 2014, Swiss science has been steadily losing credibility, attractiveness and influence. This cannot be counterbalanced by financial means alone. Swiss science must be accepted and be seen as a big player globally.
- Maintaining the support of the Swiss population and Swiss economy.
- Continuing the ETH Domain's development via increases in both public and private sector budgets.
- Increasing the ETH Domain institutions' support from and visibility among key international actors (e.g. European Research Council, major international foundations and organizations).

Key Considerations in Favour of International Initiatives

1. Strategic orientation of the ETH Domain in international scientific collaborations and global challenges to be addressed in such collaborations

- ETH Domain institutions are in the same situation as the Swiss export industry with regard to globalization.
- Since the ETH Domain institutions are already global players, a sharp distinction between national and international activities is not meaningful.

2. Benefits of international cooperation

- Attract the best talents.
- Educate future talents abroad who will be working for Swiss companies and will be aware of Switzerland's excellence.
- Adopt new ways of conducting science throughout the world through scientific, innovative, and diplomatic collaboration. Extend the scope of our scientific activities, emphasizing disruptive fundamental research and innovation.
- Develop the excellence and scope of Swiss science in global issues such as health, energy, environment and city planning.
- Pave the way for Swiss expertise and export companies.
- Promote the Swiss dual education system (vocational and academic education) to create a diverse workforce that has made Switzerland a hotspot for innovation and disruptive technology development.



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3. Added value for the ETH Domain and for Switzerland

- Competitiveness of the ETH Domain and of the Swiss economy in a globalized world⁵.
- Be among the world's 10 best research universities in 30 years.
- Swiss presence through ETH institutions all over the world – and even out into space.
- Enhance the ETH Domain's appeal in Switzerland and abroad.

4. Compatibility of the cooperation with the partner country's culture and political system

- To date, the success of European (including Swiss) science is based on the fact that it is autonomous, open and global.
- Now that the world is “flat” and deeply interconnected, guaranteeing successful science and innovation for tomorrow relies on additional global collaboration and in-depth cultural exchange.
- This implies complying with the basic principles of the ETH Domain institutions: ethical academic standards, equal opportunities policies and intellectual property rights⁶.

5. Key considerations of ETH Domain institutions when planning to set up international subsidiaries

- Setting up a subsidiary is driven by the mission of the ETH Domain institutions (education, research, technology transfer) and of the ETH Domain institution's faculty.
- The subsidiary's scientific activities address local phenomena and impact on global science.
- Subsidiaries act as outposts of Swiss science. They foster interaction with top institutes worldwide as well with emerging universities, and involve academic excellence networks, international organizations and public-private cooperation in Europe, in emerging countries and all over the world.
- Subsidiaries promote scientific interaction with our partner countries.

International Subsidiaries of ETH Domain Institutions

Role and value added

Subsidiaries, together with related academic programs and activities of the ETH Domain institutions, strengthen the global visibility of Switzerland's higher education sector, its vocational education and training system and its research and innovation capacity, and underline Switzerland's status as one of the world's most competitive countries. The subsidiaries are aligned with and support many of the specific priorities and objectives listed in Switzerland's international ERI strategy.

International subsidiaries of ETH Domain institutions and their related academic programs and activities (education, research, innovation) effectively support the implementation of Switzerland's international ERI strategy and are clearly beneficial for Switzerland. Aside from the many benefits for the individual institution, their subsidiaries:

- provide the opportunity to attract the most talented students and academic staff to Swiss universities;
- educate people who will likely later work for Swiss companies and promote Swiss knowhow throughout the world;
- support the Swiss government's international political aims, for instance in developing countries;
- provide platforms for Swiss science policy and industry;
- create added value for the Swiss export industry, together with other ERI stakeholders (e.g. Swissnex, Switzerland Global Enterprise, CTI, etc.) as well as the private sector, by:
 - providing licensing opportunities for the institution's intellectual property (IP) in the respective region;
 - leveraging the institution's IP;
 - supporting Swiss start-ups wishing to expand to the respective region;

⁵ C.f. KOF Index on globalization (<http://globalization.kof.ethz.ch>)

⁶ E.g. according to the "Code of conduct for scientific cooperation of ETH Zurich" of August 20, 2014 (see also footnote 7).



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- providing access to the respective region's venture capital;
- providing a platform for events showcasing Swiss technologies;
- partnering with Swiss companies applying for proof-of-concept funds from local government that require a trusted university partner;
- providing services and advice for other Swiss academic institutions engaged in the respective region/country.

Characteristics

An international subsidiary of an ETH Domain institution:

- has a contractual agreement of five or more years (with the prospect of extension beyond that period) between the ETH Domain institution and the partner institution or partner country;
- uses the respective ETH Domain institution's name and brand;
- is an operationally independent unit with its own management.

The term "international subsidiary" does not apply to participation by ETH Domain institutions in international organizations of which Switzerland is an official member state, or for which the ETH Domain has been mandated by the federal government or by parliament.

Implications

In order to effectively fulfill their role as active members of the Swiss foreign network as well as global universities in a globalized world, the ETH Domain institutions that want to set up or run international subsidiaries should be allowed to use a modest proportion of their federal financial resources abroad as well as deploying human resources funded by federal means. In this way they will raise Switzerland's profile abroad and, more specifically, strengthen their international reputation in education, science and technology.

Implementation Guidelines

1. The ETH Domain institutions independently pursue their international cooperation within the autonomous framework accorded to them.
2. If institutions of the ETH Domain plan to set up and run a subsidiary in a foreign country, the ETH Board's prior approval is required, unless mandated by the Swiss government (see above: characteristics of "international subsidiaries"). Implementation lies within the institution's competence. The ETH Board exercises a supervisory function.
3. In order to guarantee the most effective use of public funds, subsidiaries of the ETH Domain institutions shall:
 - select research projects in areas of science that have a global impact and can be more effectively pursued through a partnership between the institution and its subsidiary abroad;
 - collaborate with strong academic or other relevant partners in the respective region or country who agree to collaborate on operational aspects of the project;
 - conform to the basic principles⁷ of the institution such as: academic and ethical standards, gender policies, and policies regarding intellectual property rights.

⁷ For scientific cooperation at subsidiaries, the same principles apply as for scientific cooperation in other settings. In the case of ETH Zurich such principles are defined in the [Code of conduct for scientific cooperation of ETH Zurich](#) of August 20, 2014. These principles, or similar principles developed at the individual institutions, shall be applied when cooperation involving subsidiaries is being considered.