



novatlantis

Sustainability at the ETH Domain – Promotion of Transdisciplinary Science

Scope of project

Novatlantis seeks to facilitate the real-world application of the latest findings drawn from research conducted at the various institutes within the ETH domain so as to secure sustainable development for large urban areas. Interdisciplinary projects are initiated in consultation with ETH researchers and scientists and case studies are used to demonstrate models of a sustainable future. Novatlantis was founded in 2001 as a joint program of ETH domain research institutes. Today it is an established network of partners in research and the world of practical application. Novatlantis and its three urban partner regions Basel, Zurich and Geneva are focused on a long-term vision of the 2000-watt society. Novatlantis merged with the CCEM effective January 1, 2008. The resulting organizational structure has simplified the process of creating links among research projects and implementing project results. The ETH Board currently finances the Novatlantis office and provides auxiliary financial support for ongoing projects that are financed predominantly via third-party funding.

Strategy

Novatlantis acts as a platform where research in the ETH Domain gets involved with problems of the public domain. Information exchange, dissemination of knowledge and implementation of technologies are undertaken jointly with public agency partners, policy makers and the private sector. Novatlantis dedicates special attention to the sustainable use of energy with the 2000-Watt society as the guiding vision for its efforts.

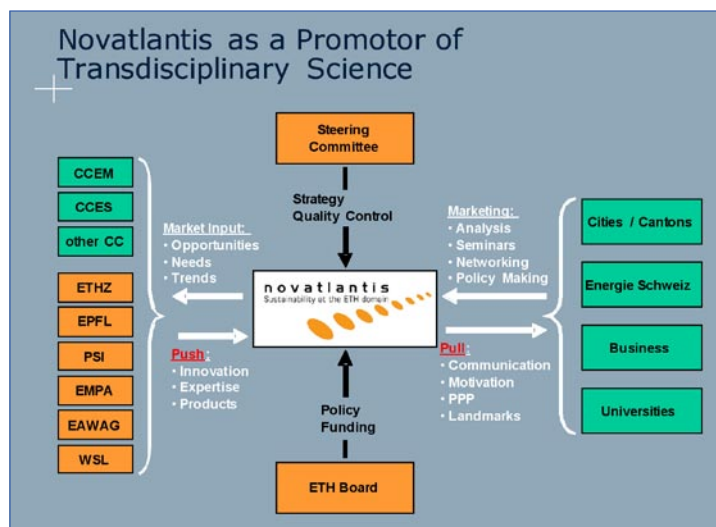


Figure 1: Push/pull projects.

The interaction works as a push and pull process.

«Push» actions: As laboratories and institutes within the ETH Domain develop new knowledge and technologies which could be transferred to the public sector in Switzerland, Novatlantis is well positioned to bring these capabilities to the attention of key players in the public domain, such as political leaders, heads of public agencies and corporations as well as NGOs and the private sector.

«Pull» actions: Novatlantis has developed a broad and deep understanding of the requirements of the public sector with respect to sustainable development. As a result, Novatlantis is well positioned to analyze and elaborate these needs for the six institutions of the ETH Domain. Building on its knowledge of the institutions within the ETH Domain, Novatlantis brings the various R&D opportunities it has identified to the attention of the relevant laboratories and institutes.

Managing Director
Roland J. Stulz, c/o PSI

Project Partners
ETH Zurich
EPF Lausanne
PSI
Empa
Eawag
WSL
Pilot Region Basel
Partner Region Zurich
Partner Region Geneva

Pilot Region Basel – activities until 2008

The «2000-Watt society – Basel Pilot Region» program is a collaboration which began in 2001 between Novatlantis and the Governing Council of canton Basel-City with the involvement of the University of Applied Sciences Northwestern Switzerland and the University of Basel. It operates as an applications laboratory for sustainable urban development through knowledge transfer from research to practice. The parliament of canton Basel-City has approved several programs funded with over two million Swiss francs.

In 2008, the «2000-Watt society – Basel Pilot Region» program was added to the city's political agenda for 2009–2012 along with a series of important energy efficiency programs.

Sustainable mobility: experimental space *Mobility*

The «experimental space *Mobility*» project aims to establish in the community innovations within the field of sustainable mobility while making them directly tangible. In 2008, the focus of the project was on the fuels natural gas, biogas and, for the long term, hydrogen. Along with the demonstration of innovative technologies from the ETH Domain, Novatlantis and its project partners are currently primarily involved in investigating applications involving private and public fleet operators as well as taxi and bus companies.

Important subprojects are:

- Demonstration of innovative vehicle technology
- CLEVER: The goal of the project is to develop a hybrid powertrain, fueled by natural gas / biogas and electricity.
- The «Hundert Umweltaxis für die Region Basel – HUT» (hundred environmentally friendly taxis) project is a significant contribution to popularizing environmentally friendly vehicle technologies and a possible prototype for similar projects in other regions of Switzerland.
- Experimental space *Mobility* H₂: The canton Basel-City and the ETH Domain are working together to demonstrate the future of hydrogen mobility in the «2000-Watt society – Basel Pilot Region» program.

- Dialog and information: Topics related to all aspects of mobility are covered and the latest findings from ETH Domain's research are presented.

Sustainable building

Several projects concerning sustainable building are realized:

- Building renovation program for the canton of Basel City.
- Renovation competition.
- Pilot and demonstration buildings (Minergie-P rating): CosyPlace apartment buildings, «Two Catcher» office building, SPIRIT pavilion, IWB office building in Steinenvorstadt, Hofmann duplex (innovative thin photovoltaic installations integrated in the roof), Wenk (single-family home, received the 2008 Solar Prize), Seevogelpark (first Swiss high rise apartment building with a MINERGIE-P rating).
- Development of quarters plan Kunstfreilager (including new residential and academic buildings that meet the Minergie-P standard or other comparable standards).
- Water management (treatment of urine to regain the nutrients in the waste water to be used as agricultural fertilizer).
- Novatlantis construction forum (investors and other decision makers meet twice a year to be informed of new research findings with the objective of initiating PPP landmark projects).

Partner Region Zurich – activities until 2008

Initiated by Novatlantis in 2006, the city of Zurich has selected «Legislative priority 4: Sustainable Zurich on the Path to the 2000-Watt society» («Legislature Schwerpunkt 4 [LSP4]: Nachhaltiges Zürich auf dem Weg zur 2000-Watt-Gesellschaft») as one of five legislative priorities for the years 2008–2011 and beyond.



Figure 2: «Landmark project» Triemli hospital – ward block of the Triemli city hospital.

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Over 20 «landmark projects» in the LSP4 topic fields («Themenfelder») are already being planned or realized:

- Preparation of an environmentally sound, low-impact energy supply.
- Implementation of the «Energy Vision 2020» in the direction of the 2000-Watt society.
- Setting standards with landmark projects, energy-efficient renovation and building technology as well as sustainable portfolio strategy and resource policies.
- Environmentally effective traffic control and promotion of public transportation, non-motorized traffic and vehicles which are efficient with respect to energy and the environment.
- Reduction of environmental and health impacts through increasing the awareness of such issues in action.
- Collaboration with internal and external partners.

Partner Region Geneva – activities until 2008

In 2007 representatives of the canton, the city, EPFL, the University of Applied Sciences of Western Switzerland (HES-SO), the university, SIG (Industrial Services), professional associations and businesses founded the «Association Genève Ville 2000 Watt» upon the initiative of Novatlantis. 2008 Geneva started several Public Private Partnership (PPP) projects with EPFL and others, similar to Basel and Zurich. The activities will focus initially on sustainable district development where an urgent demand for housing gives it priority.

International Sustainable Campus Network

The International Sustainable Campus Network (ISCN) got off to a good start after the kick-off conference in April 2007 with participation of over 70 executive representatives from 35 universities worldwide, including Harvard, Yale, Berkeley, Stanford, Tokyo, Singapore, etc. The international network is designed to initiate worldwide landmark projects for sustainable campus development, adapted to specific local needs.

On April 23–25, 2008 the second annual ISCN conference once again brought executives in charge of campus development from universities around the world to ETH Hönggerberg.

Public relations

Novatlantis uses the following means for public relations:

- two web sites:
www.novatlantis.ch
www.international-sustainable-campus-network.org,
- a periodic newsletter on current topics and events,
- an annual news update as a review of the past year,
- particular events (construction forums, the ISCN conference, the sustainable district development forum, mobility breakfasts and exchanges of experience with partner regions),
- publications, advice, interviews and presentations on the 2000-Watt society.

The target audience for Novatlantis in these efforts are decision makers from business, public administration and the scientific community, not the public at large. Communications of the partner regions are aimed at the general public. Novatlantis gives them assistance for this purpose.

Outlook

In 2009, Novatlantis intends to concentrate on its current topics as well as ongoing activities. An important part of this is the sustainable district development project on behalf of the Swiss Federal Office of Energy. Moreover, efforts are planned for closer collaboration with the European Energy Award.

Info web page

www.novatlantis.ch

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