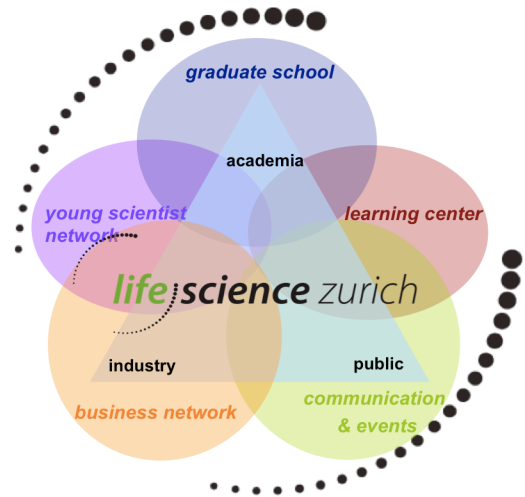




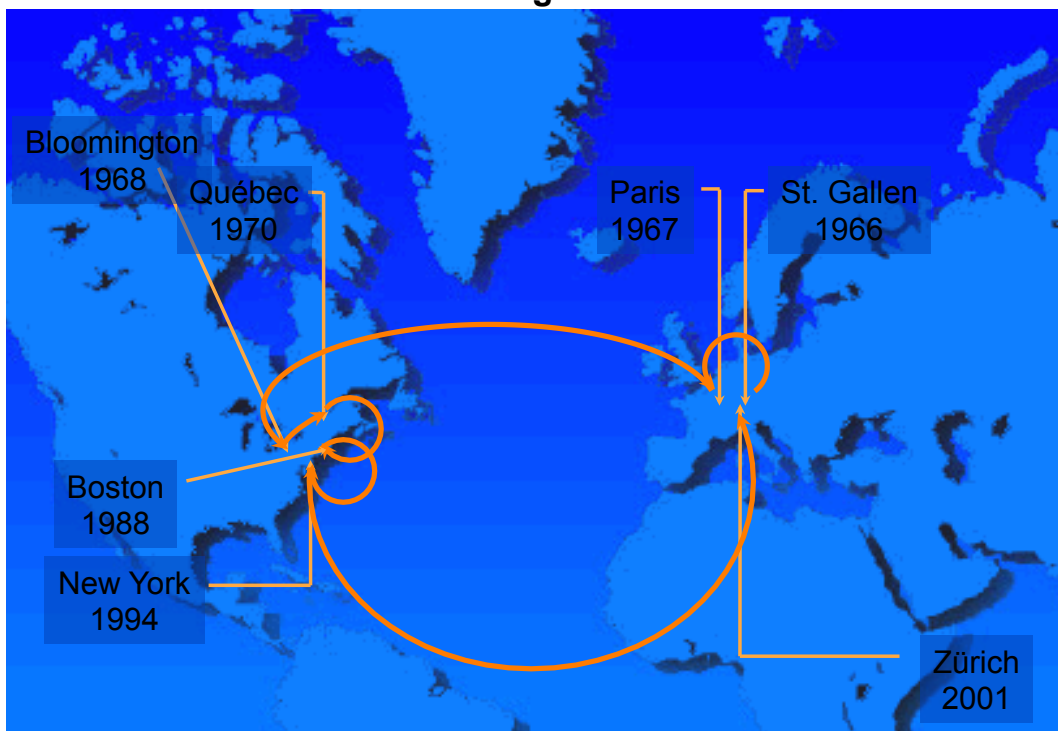
Life Science Zurich and other life science initiatives in Zurich

Michael Hengartner
Dean, Faculty of Science
University of Zurich

ETH Emeritenstamm
Hotel Wartmann, Winterthur
28. November 2011



Michael Hengartners Reisen





Trends in the life sciences

General trends in the life sciences

- Increased societal importance of life sciences / medicine
- Increasing interdisciplinarity of life sciences / medicine



Life sciences in Zurich

University of Zurich (UZH)

- > 75 institutes, clinics and divisions distributed over all seven faculties (science, medicine, veterinary medicine, philosophy, theology, economics, and law)

Swiss Federal Institute of Technology Zurich (ETHZ)

- > 20 institutes in the areas of agriculture and food sciences, applied biosciences, biology, chemistry, environmental sciences, and physics.

Total:

4'600 staff members

8'800 students



Life sciences initiatives in Zurich

General trends in the life sciences

- Increased societal importance of life sciences / medicine
- Increasing interdisciplinarity of life sciences / medicine

Initiatives in Zurich / Switzerland

- Life Science Zurich
- SystemsX.ch and systems biology
- D-HEST at ETHZ

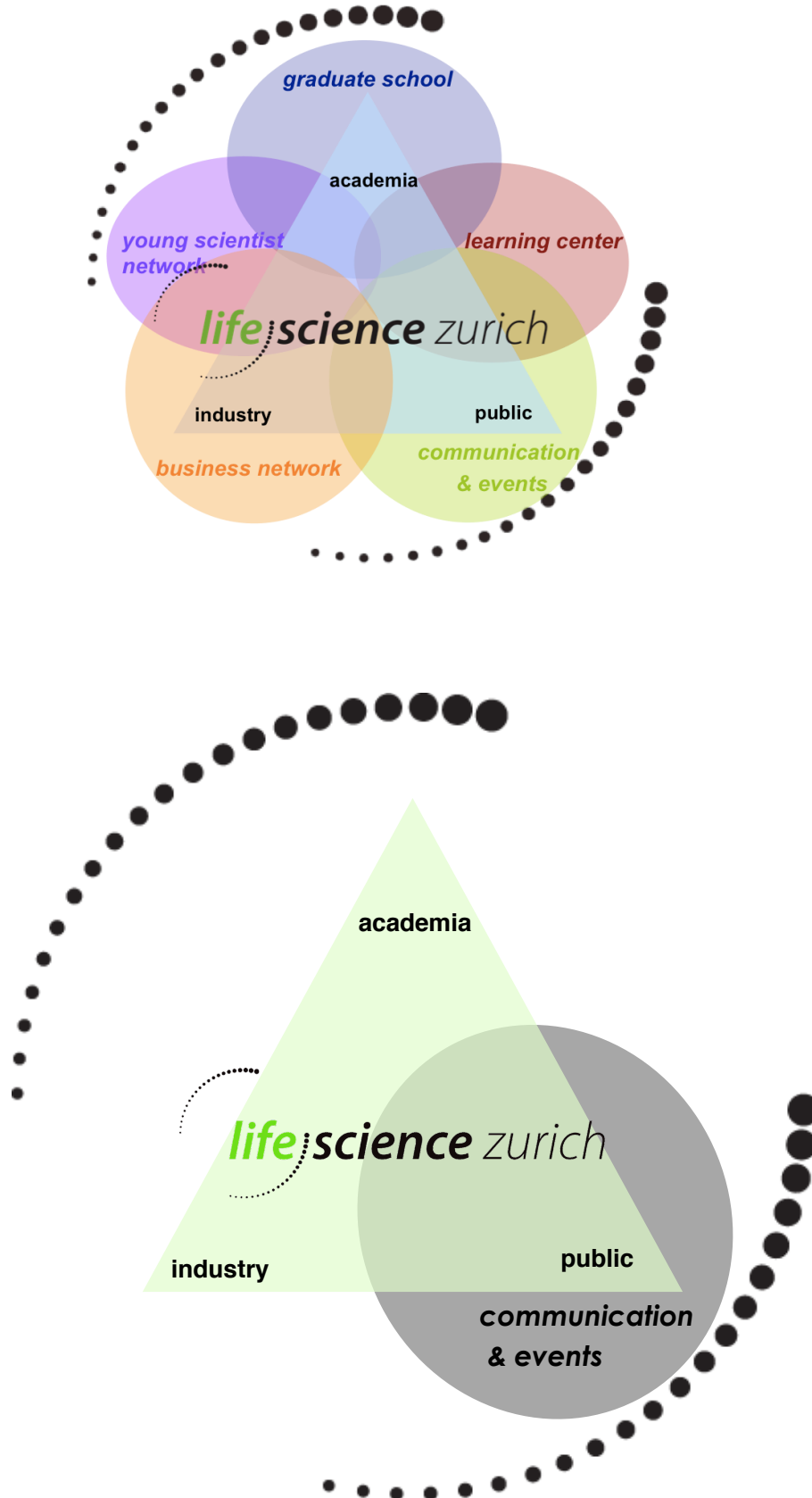


Aims of Life Science Zurich

- Strengthen Zurich as an international hub for the life sciences:
 - Encourage synergies between UZH and ETHZ in research, teaching, technology transfer, public education and communication.
 - Capitalize on the strength of Zurich in the life sciences and in engineering to create an environment that supports a thriving life sciences and medtech industry.



Structure of Life Science Zurich: “Holding” of five overlapping but distinct initiatives





LSZ Communication & Events

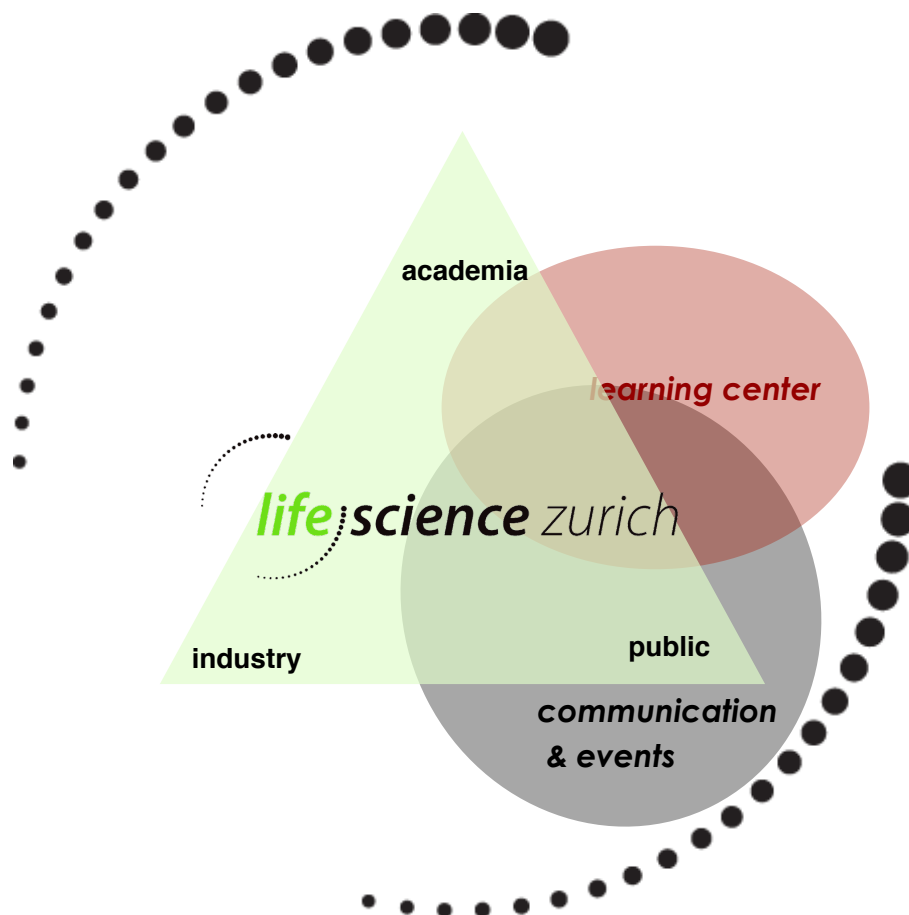
- Organize large events that bring life scientists together, or bring life science to the public:
 - 2004 Exhibition «Der gespiegelte Mensch»
 - 2006 Life Science Week on ageing
 - 2008 «Life Science Art» Exhibition
 - 2009 Darwin Year «Tree of Life»
 - 2010 Biodiversity photo competition and symposium
 - 2011 Mummy Exhibition
 - 2012 Famelab competition





LSZ Communication & Events

- Organize regular smaller events for the public or the scientific community:
 - “Science Bar”
 - Brainfair
 - Tage der Genforschung
- Scientific meetings:
 - Prion Diseases 2007
 - Latsis Symposium 2009
 - USGEB meeting 2011





Life Science Zurich Learning Center: Linking gymnasias and universities



Activities at the Life Science Learning Center

1. Praktika und Kurse

Praktika für Schulklassen der Gymnasial- und Volksschulstufen

Kurse & Praktika für Schülerinnen und Schüler

Kurse & Praktika für die interessierte Öffentlichkeit

2. Ausbildung

Modul „Fachwissenschaftliche Vertiefung mit pädagogischem Fokus“
als Bestandteil des Studiengangs zur Lehrtätigkeit auf der Sekundarstufe II an ETH und Uni

3. Weiterbildung

Lehrpersonen der Gymnasialstufe (Sekundarstufe II)

Spezifische Berufsgruppen (z.B. Medienfachleute und weitere)

4. Science Education Research

Ph.D. Studium in Science Education, Programm Evaluation

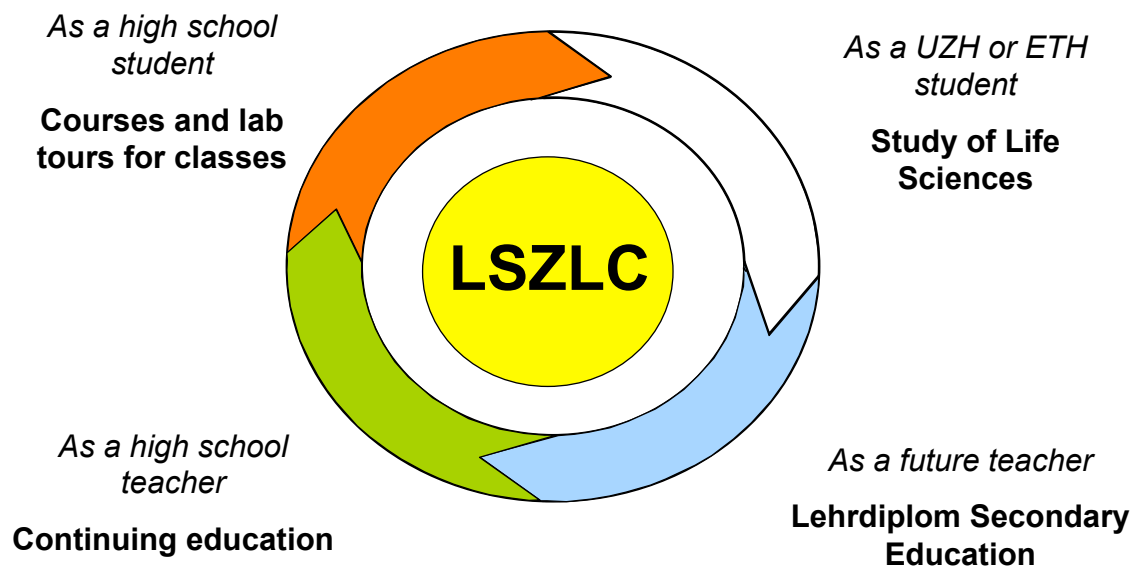


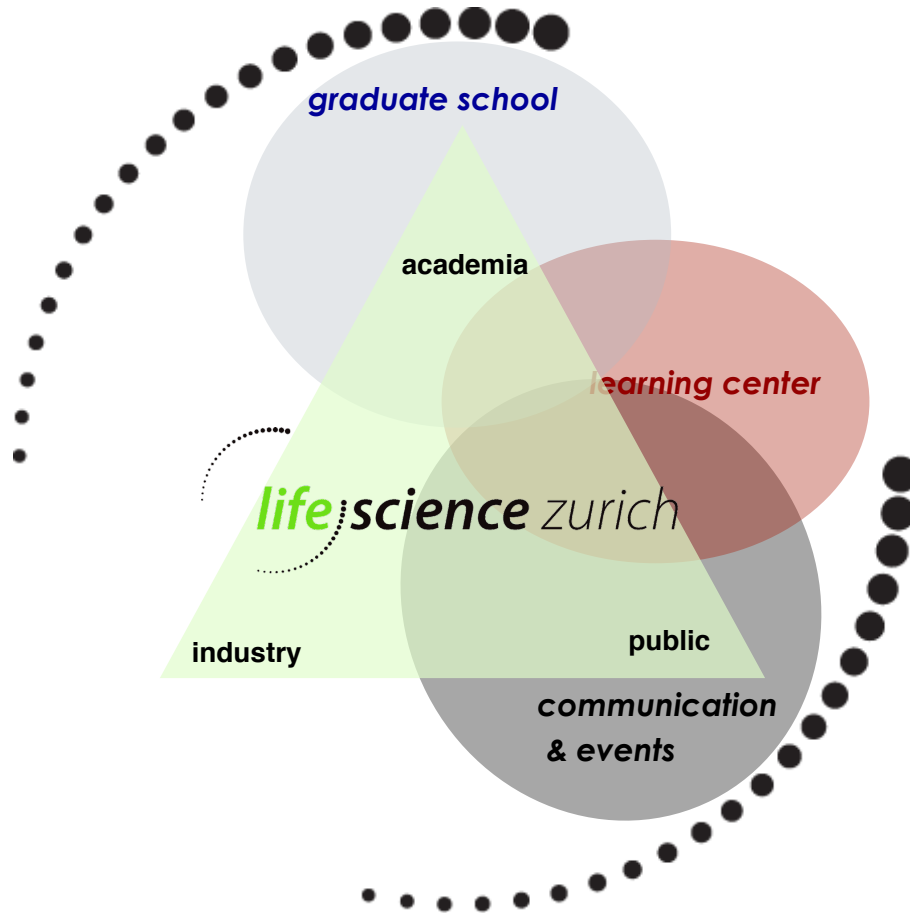
University of Zurich
UZH

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

life:science zurich

LSZ Learning Center: The virtuous cycle





University of
Zurich^{UZH}

ETH

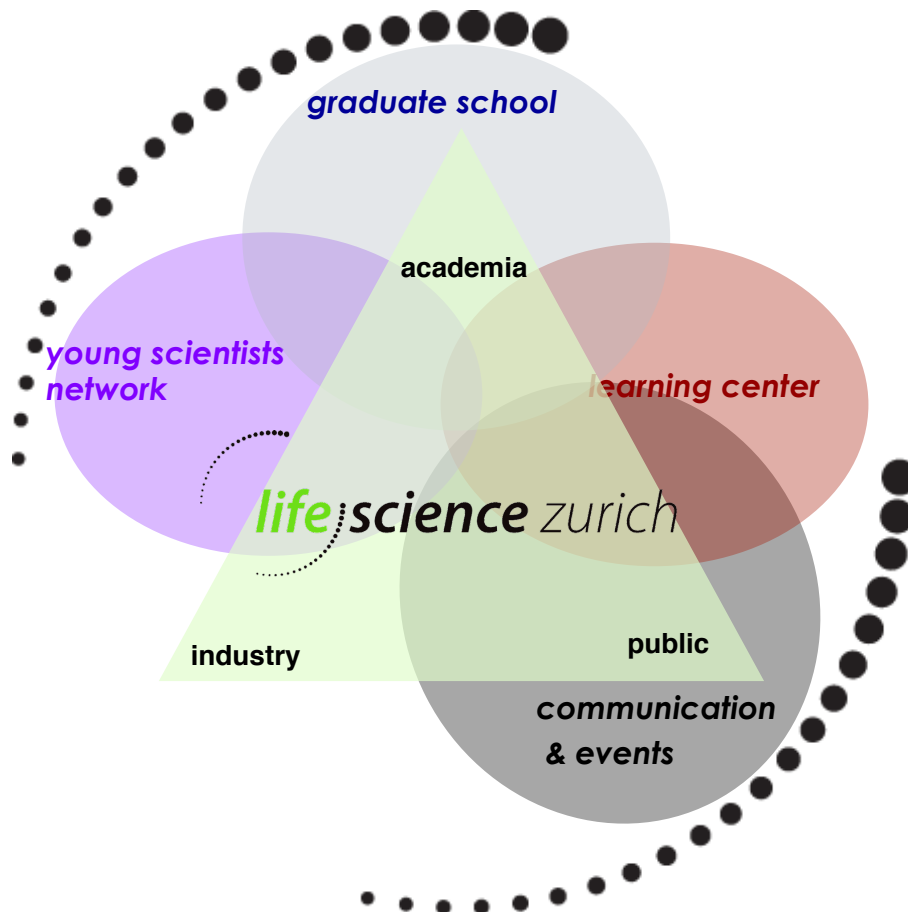
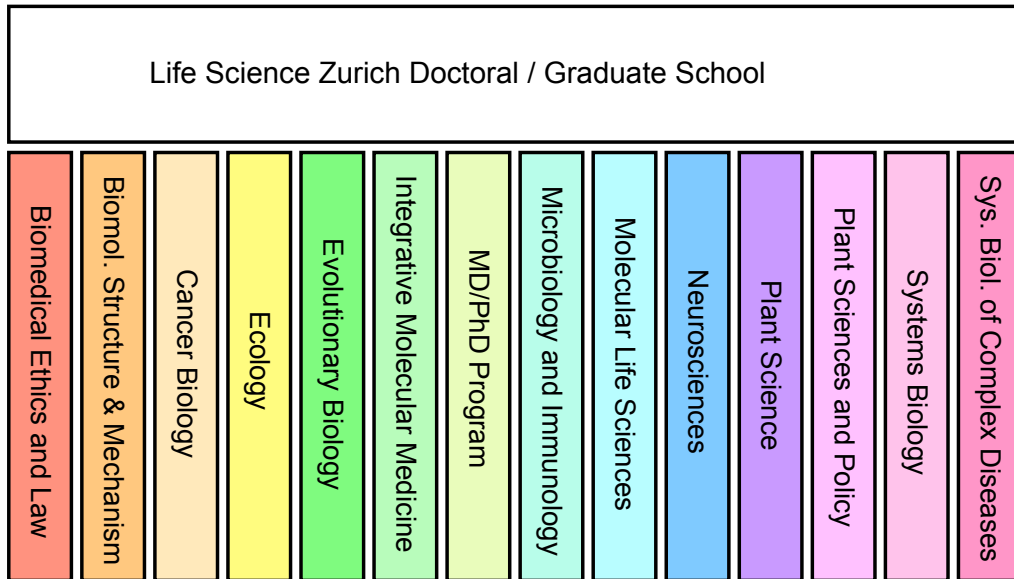
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LSZ Graduate School: 14 PhD programs, one common graduate school

- To maximize opportunities in graduate education, all Ph.D. programs in the life sciences in Zurich joined together and formed the “Life Science Zurich Graduate School”, which is carried jointly by the ETH and the UZH.
- Joint marketing
- Joint recruitment
- Joint teaching of transferable skill courses
- > 300 research groups
- > 1000 PhD students





So you wanna be a professor?

The challenge, from a mathematical point of view:

Faculty of Science, University of Zurich (annual report 2008)

- 195 PhDs awarded
- 125 Professors

→ Each professor generates one average ~ 1 PhD per year

Average professional “lifetime” of a professor: ~ 30 years

Assuming a steady-state system:

→ 1 in 30 PhD students will become a professor

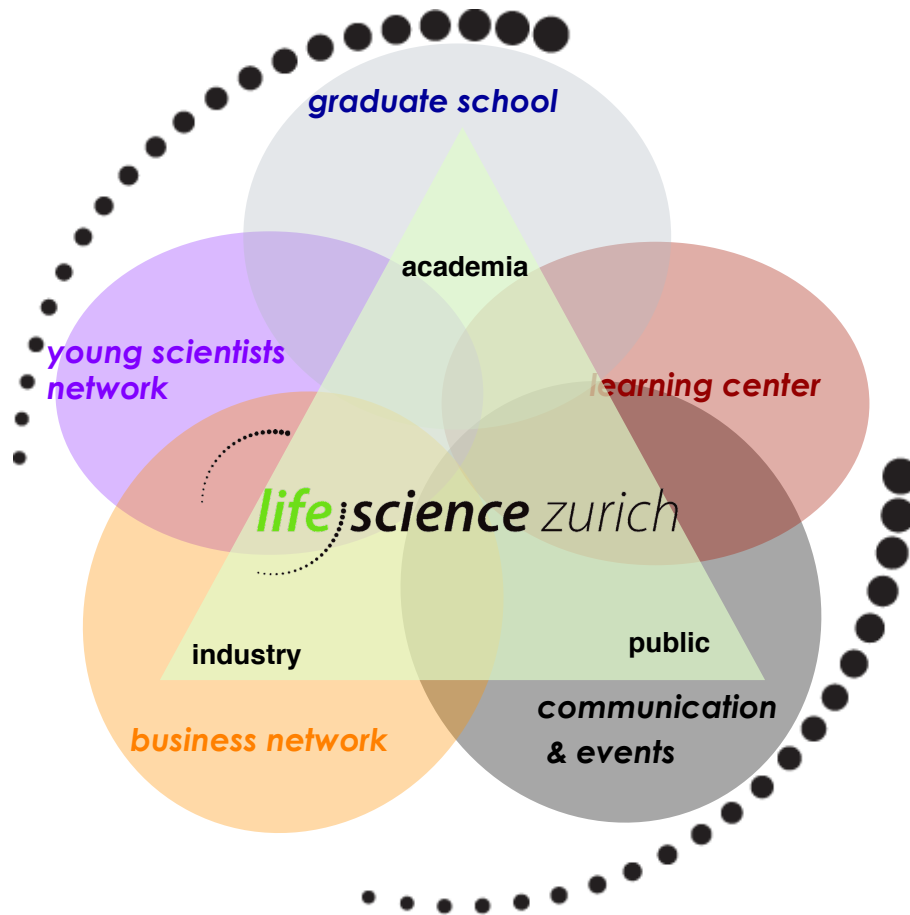
→ **“Success” rate at steady state: ~ 3 %**



LSZ Young Scientist Network

Bridge the existing gap between academia and other life science-related professional sectors, by:

- Building sustainable relationships with companies in the biotech, healthcare, and investment sectors
- Providing a comprehensive palette of career resources
- Promoting networking between LSZ YSN members and companies
- Stimulating entrepreneurship among its members, by creating opportunities to link science and business



University of Zurich
UZH

ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich



life science zurich

Life Science Zurich Business Network - Goals

Bring together all major stakeholders in the life science sector in the Greater Zurich Area:

- Academia – UZH, ETH, ZHAW
- Industry – biotech, medtech companies and associations
- Government – city and surrounding municipalities, Kanton

Generate a single point of contact for external interested parties

Create synergies through coordinated branding and cooperation strategies



Other Life Sciences Initiatives in Zurich



Other joint life science activities of UZH and ETHZ

National Centers of Competence in Research (NCCRs):

- NCCR Neural Plasticity and Repair
- NCCR Structural Biology

Medicine-oriented networks (often jointly with the university hospitals)

- Neuroscience Center Zurich
- Cancer Network Zurich
- Competence Center Systems Physiology of Metabolic Diseases
- Initiative Hochschulmedizin Zürich

Technology Platform

- Functional Genomics Center Zurich



SystemsX.ch: The Swiss Initiative in Systems Biology

Goal: Put Switzerland at the leading edge in systems biology.

Method: Combine Switzerland's strengths in genomics and biomedical research with its flourishing chemistry, mathematics, physics and engineering.

Finances: 25 MCHF / year 2008-2012, likely to be extended until 2016.

Led to the founding of the ETHZ D-BSSE in Basel.



D-HEST (Department of Health Sciences and Technology)

New Department at ETH Zurich

Goal:

Better bridge the gap between basic science, engineering, and medicine

Research foci:

- Sport sciences
- Food Sciences and Nutrition
- Medical Technology
- Neurosciences



Thank you for your attention!

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