

# e-IRG Welcome

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# SWITCH

Serving Swiss Universities

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# Introduction



SWITCH

Serving Swiss Universities

# Mission

- Deed of foundation

22 October 1987

## II. ZWECK

Die Stiftung bezweckt, die nötigen Grundlagen für den wirksamen Gebrauch moderner Methoden der Teleinformatik im Dienste der Lehre und Forschung in der Schweiz zu schaffen, zu fördern, anzubieten, sich an solchen zu beteiligen, und sie zu erhalten.  
Die Stiftung verfolgt weder kommerzielle Zwecke noch ist sie auf die Realisierung eines Gewinnes ausgerichtet.

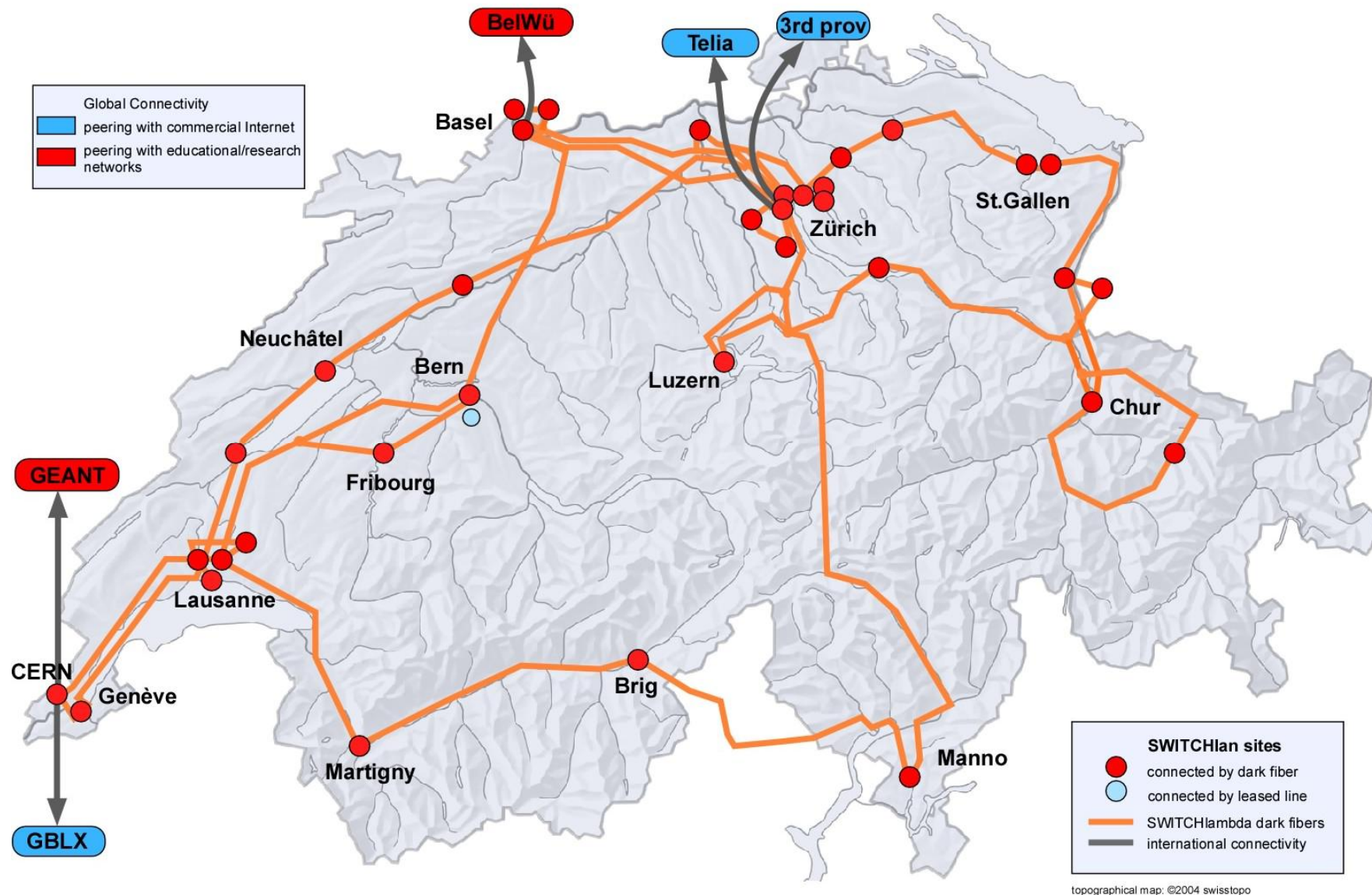
‘The foundation’s purpose is to establish, to foster, to offer, to participate in and to maintain the basis for an effective use of up-to-date methods of **teleinformatics in research and education in Switzerland**. The foundation has no commercial targets, nor is it aligned with profit-making.’

- Founders:
  - Swiss Confederation
  - 8 university cantons

# SWITCH's Strategy

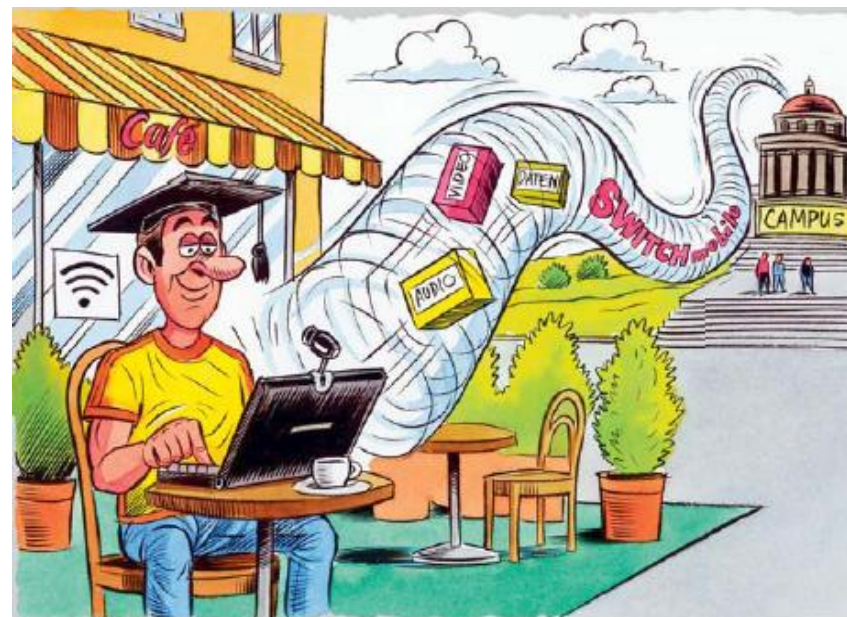
- Long-term **investment** in a private **fibre optic network** for a sustainable network infrastructure on behalf of the Swiss universities
- Development and provisioning of **innovative applications and services** for the support of **cooperative work in education and research**
- Security services for the **protection of critical information infrastructure**
- Technical and financial **synergies** with the **domain name registration** activities

# SWITCHlan Topology

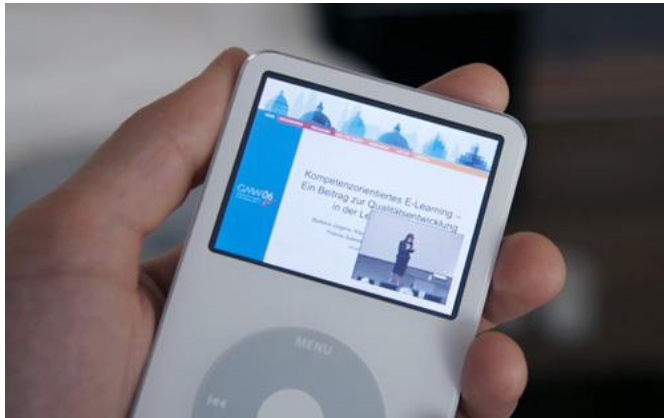


# SWITCHconnect

- Physical mobility for members of HE institutions
- Access to one's home organization, and thus access to the Internet from anywhere
  - over the WLAN of any Swiss university
  - over public WLAN hotspots
  - Europe-wide within the academic world
- Tasks of SWITCH
  - national and international coordination
  - joint appearance towards private providers



# Services for End Users



Video Management System



Videoconferencing



e-Learning Management System



Collaboration Tools

# SWITCH-CERT and Middleware

## CERT

Supports the customer's security staff in its daily efforts

- Networking monitoring & custom information, consulting, incident handling

## AAI

Platform for the advancement of cooperation in education and research

- Access to many web-based services of all Swiss universities by means of a single user account
- Complies with the highest Internet security requirements

## PKI

Certification for high security needs in education and research

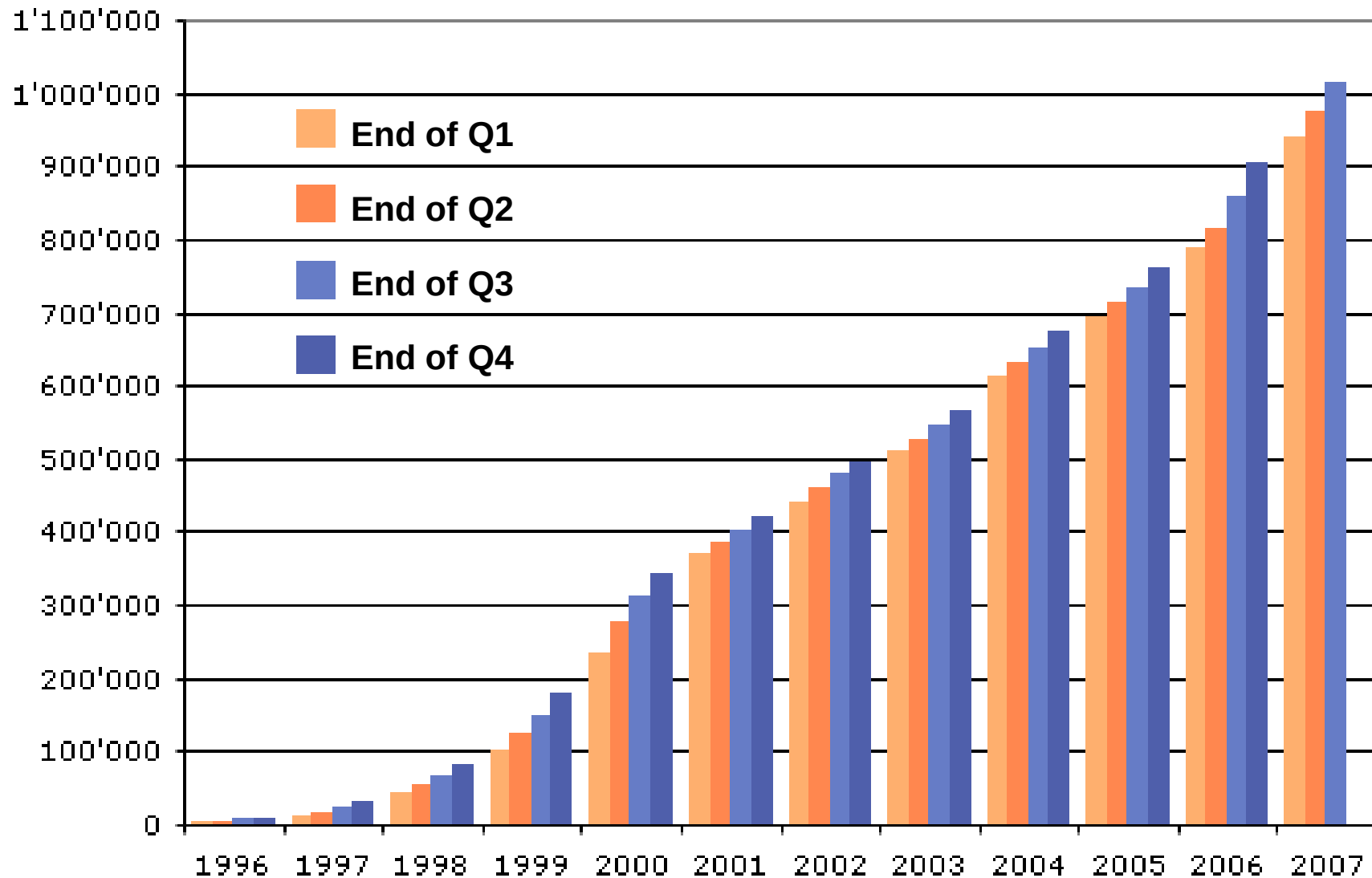
- X.509 public key infrastructure for the Swiss universities

## Grid

Services for a stable, secure grid infrastructure in Switzerland

- Software infrastructure for efficient exploitation of existing resources
- Transparent access to resources for the user

# Domain Names Registered for .ch / .li

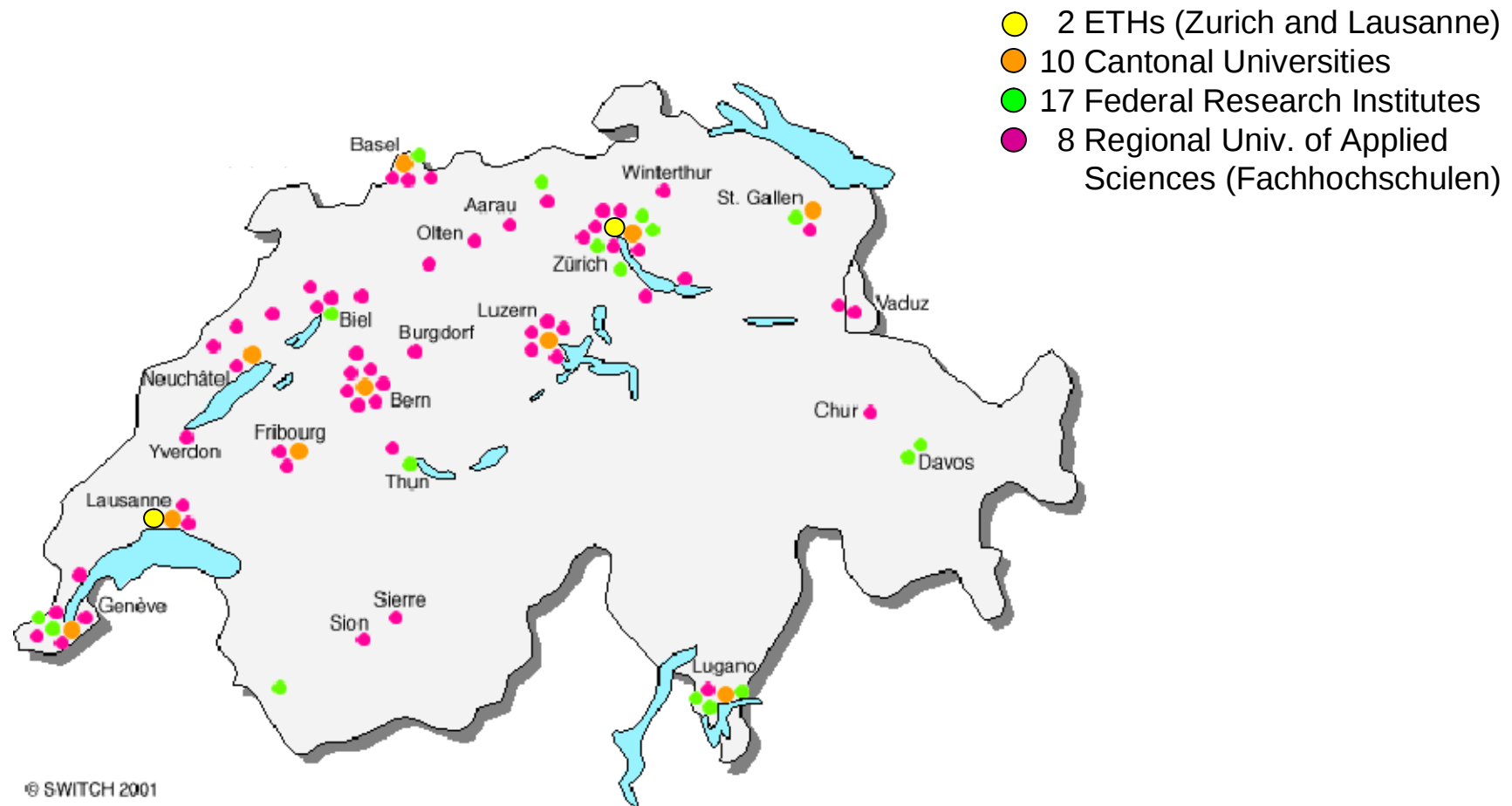


# ETH Zurich – an overview

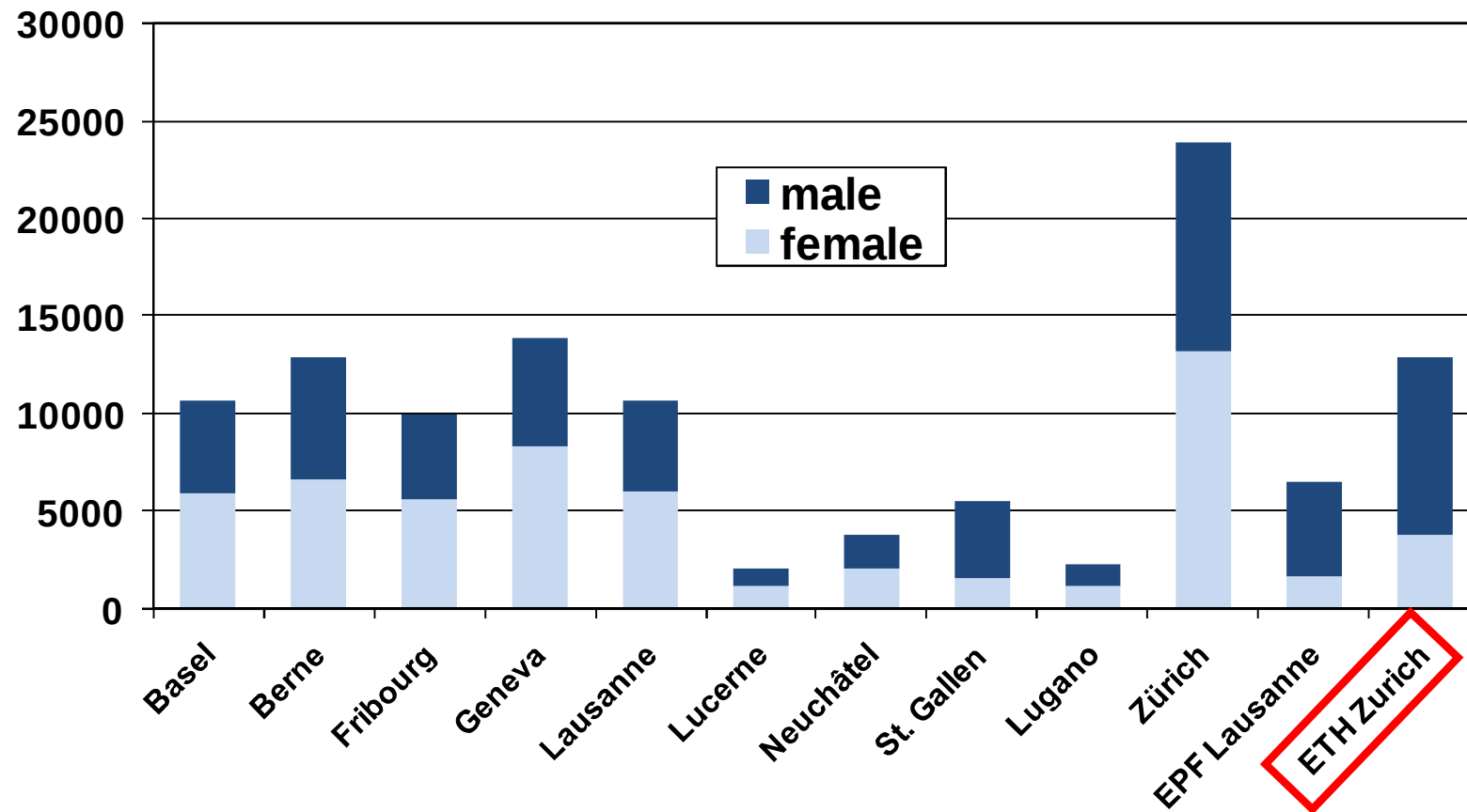
Dr. A. Dudler: Director IT Services



# Higher Education in Switzerland



# Swiss Universities Students 2006/2007



# ETH Zurich: The Outstanding Swiss University

- Top ranking university in continental Europe
  - Shanghai Jiao Tong University:  
Academic Ranking of World Universities
  - Times Higher Education Supplements:  
World University Ranking



## Key Figures (2006)

|                                                                                                                                 |                                     |
|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>Bachelor students</b><br>international                                                                                       | <b>6320</b><br>615 (10%)            |
| <b>Master/Diploma students</b><br>international                                                                                 | <b>3903</b><br>512 (13%)            |
| <b>Doctoral students</b><br>international                                                                                       | <b>2794</b><br>1500 (54%)           |
| <b>Professors</b> (in full-time equivalents)<br>of which associate professors<br>of which assistant professors<br>international | <b>359</b><br>31<br>50<br>219 (61%) |
| <b>Research Staff</b> (incl. doctoral students) (FTEs)                                                                          | <b>4969</b>                         |
| <b>Administrative and Infrastructure staff</b>                                                                                  | <b>969</b>                          |
| <b>Budget</b>                                                                                                                   | <b>1172 million CHF</b>             |

| Construction and Geomatics                    | Engineering Sciences                              | Natural Sciences and Mathematics   | Earth, Environment & Natural Resources | Management and Social Sciences            |
|-----------------------------------------------|---------------------------------------------------|------------------------------------|----------------------------------------|-------------------------------------------|
| Architecture                                  | Mechanical and Process Engineering                | Mathematics                        | Earth Sciences                         | Management, Technology, and Economics     |
| Civil, Environmental and Geomatic Engineering | Information Technology and Electrical Engineering | Physics                            | Environmental Sciences                 | Humanities, Social and Political Sciences |
|                                               | Computer Science                                  | Chemistry and Applied Biosciences  | Agricultural and Food Sciences         |                                           |
|                                               | Materials Science                                 | Biology                            |                                        |                                           |
|                                               |                                                   | Biosystems Science and Engineering |                                        |                                           |

**16 Departments**

**22 Bachelor courses, 40 Master courses**

## 150 years on the move

- Founded in 1855
- Focused on Railways and Civil Engineering
- The famous Gottfried Semper was Dean of the School for Architecture
- The driving force in industrialization

# Welcome tomorrow...

- Thinking of tomorrows challenges today
  - Sustainable Mobility
  - Systemsbiology
  - Technologies for tomorrows cities (Building, Planning, public transport,...)
  - Connecting Elements (Materials, Electronics, Information Technologies, ...)
- Interaction with society

## 21 Nobel Laureates

- Examples:
  - Chemistry 1939: Leopold Ruzicka
  - Physics 1945: Wolfgang Pauli
  - Chemistry 1975: Vladimir Prelog
  - Chemistry 1991: Richard Ernst
  - Chemistry 2002: Kurt Wüthrich



Leopold Ruzicka



Wolfgang Pauli



Vladimir Prelog



Richard Ernst



Kurt Wüthrich

**We wish you a nice stay  
here in Zurich**

