

Sustainability by Design

ACOnet Presentation 9.6.2010



SWITCH

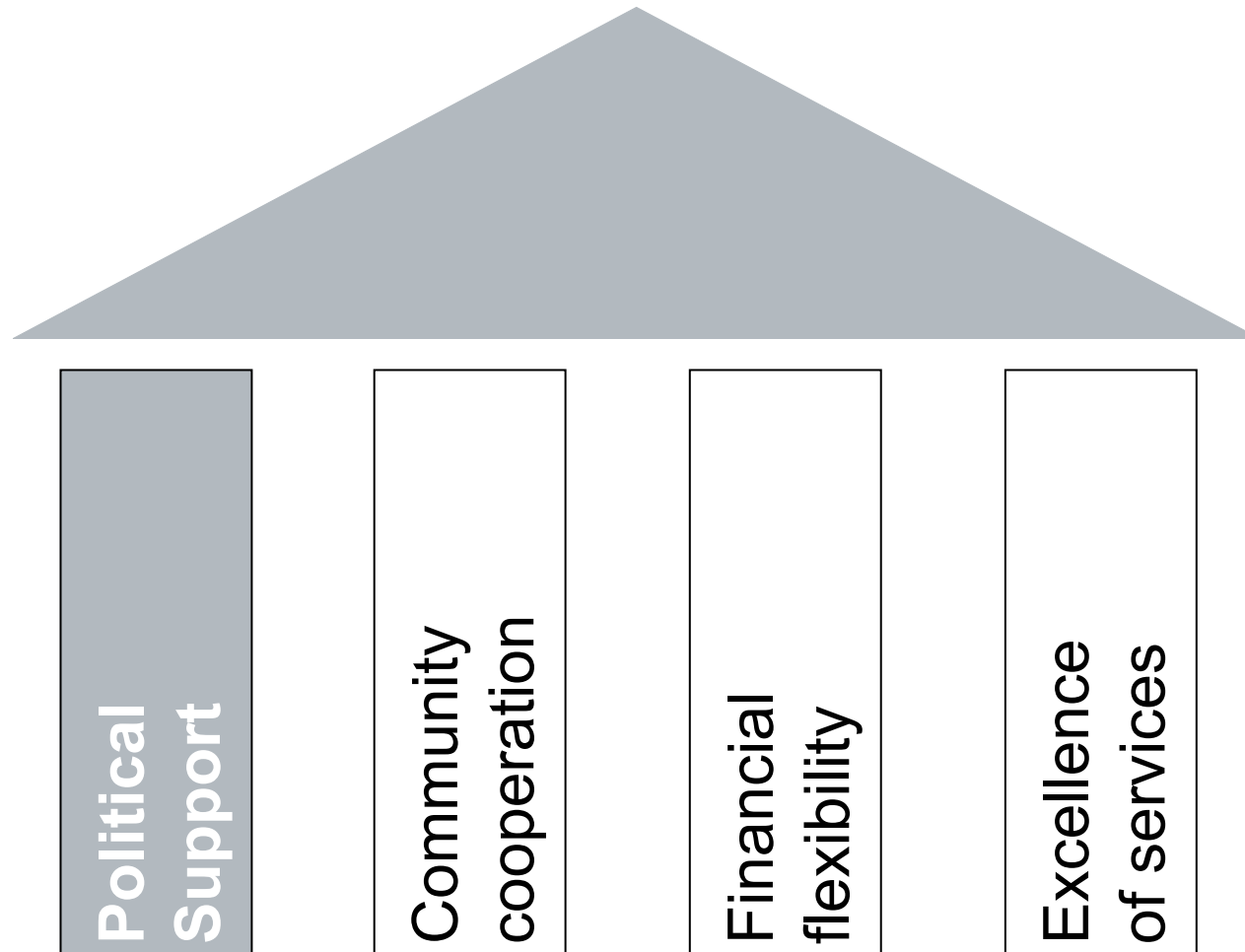
Serving Swiss Universities

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4-Pillar Sustainability Model



The Foundation SWITCH

Charter 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.

II. Purpose

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.

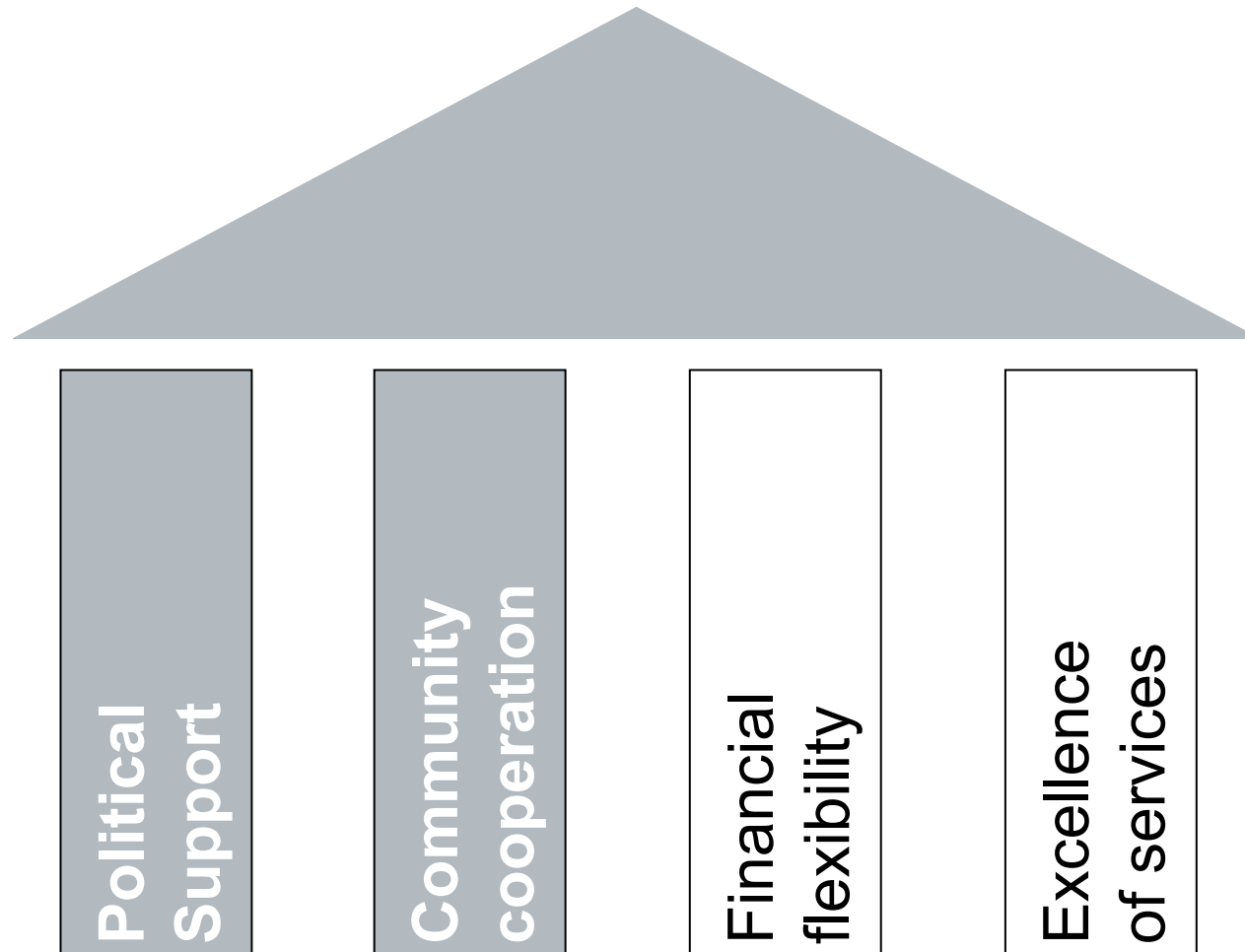
The foundation has no commercial targets, nor is it aligned with profit-making.

Founder:

Confederation

8 university Cantons

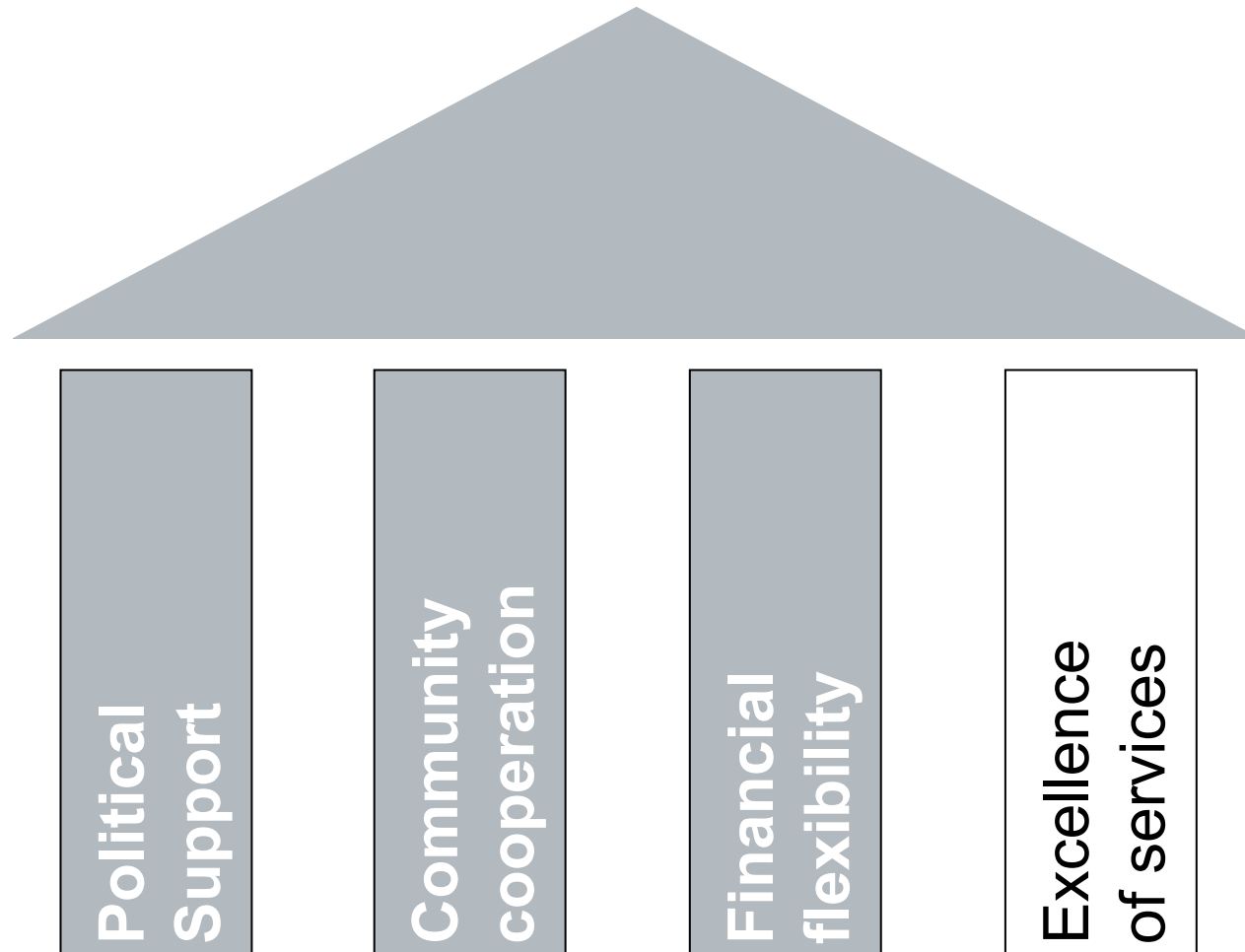
4-Pillar Sustainability Model



The Foundation's Rules of Conduct

- Basic principles
 - Subsidiarity and solidarity
- Operational policies:
 - Early detection and anticipation of new requirements
 - Focus on cutting edge technologies and services
 - Intensive cooperation with all Swiss universities
 - Long-term, sustainable investments
 - National and international coordination

4-Pillar Sustainability Model



Stages of Development

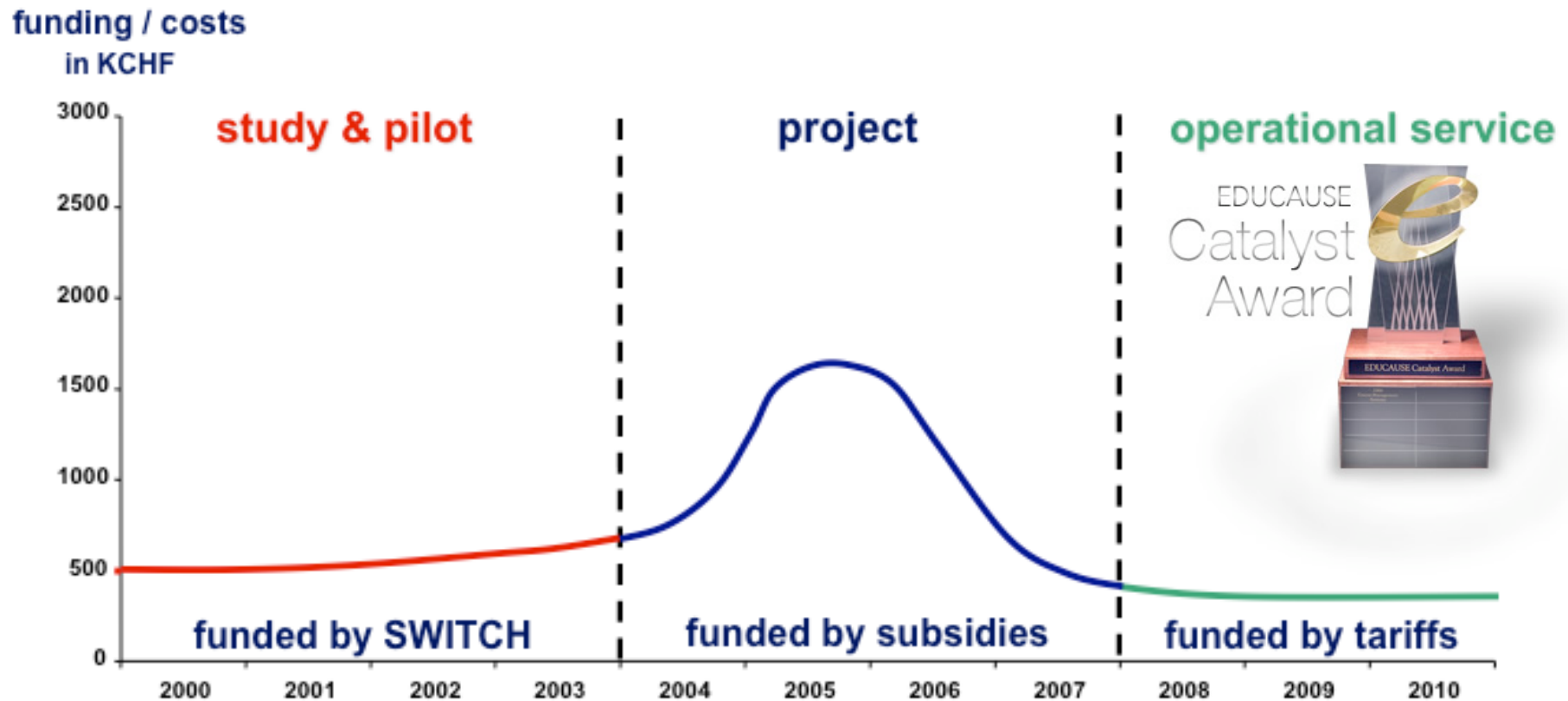
- Founding years
 - 1985 Political decision: 15 Mio CHF seed money
 - 1986 Start of operational services
 - 1987 Foundation established
 - 1989 All 10 universities connected to network
- Pioneering years
 - 1990 Internet connection, registry for .ch
 - 1991 ISP for private customers
 - 1994 Offering multimedia services
 - 1995 SWITCH-Backbone operated at 4 Mbps

Stages of Development

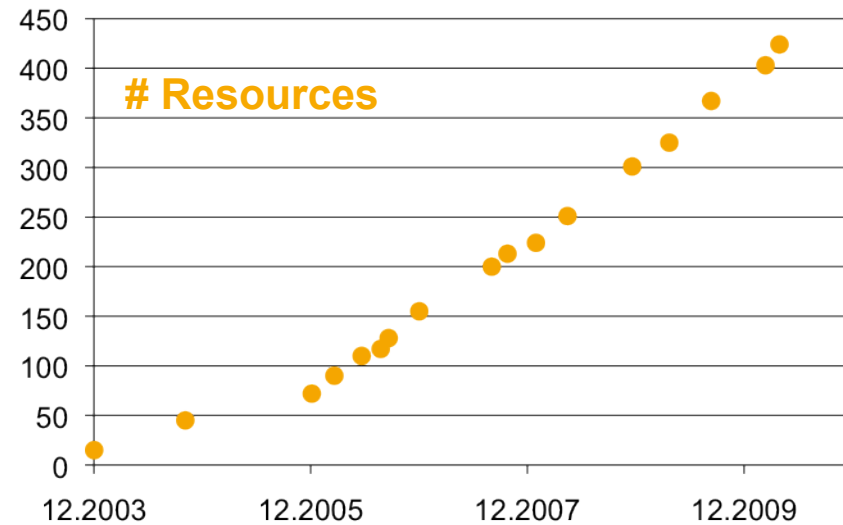
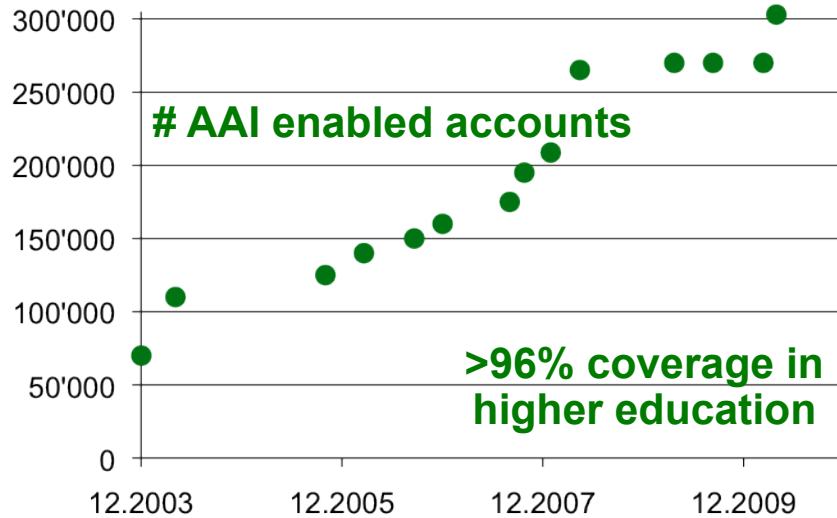
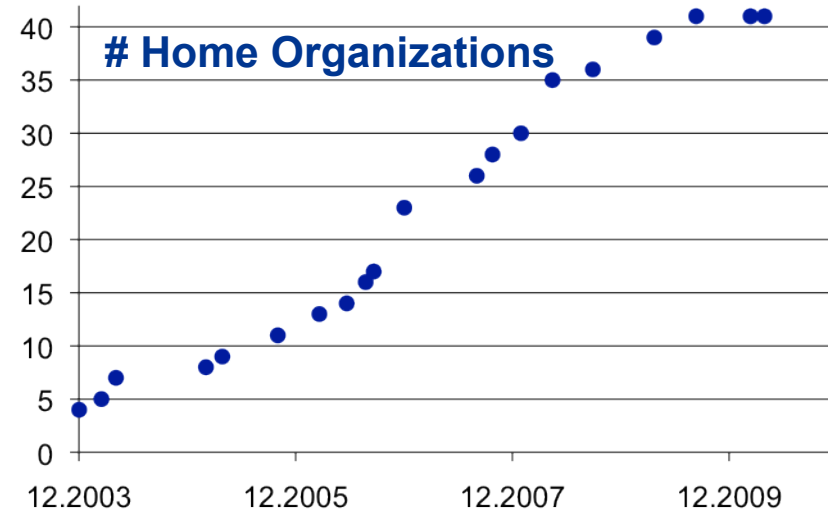
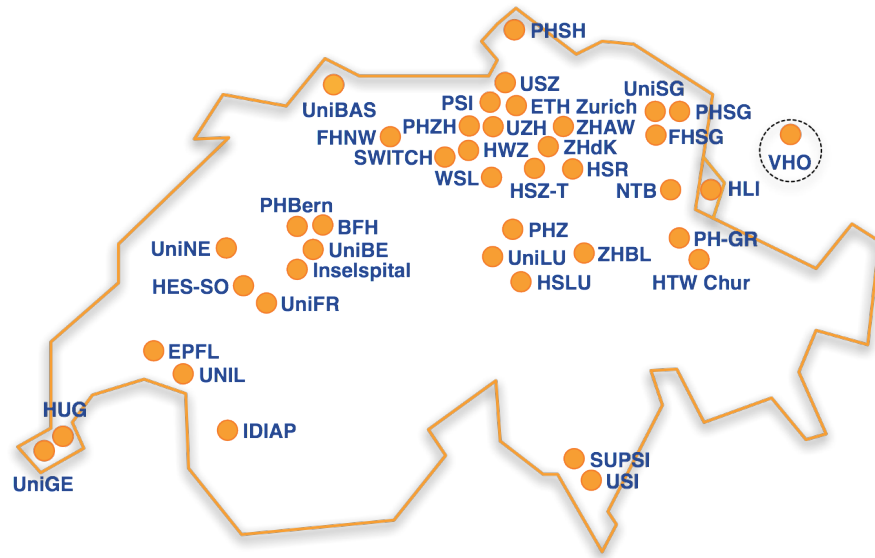
- Consolidation years
 - 1996 ISP activity sold off
 - 1997 Domain names become subject to charges
 - 1998 Integration of universities of applied sciences
 - 1999 Securing of federal project subsidies
- Spreading the fibre ... and beyond
 - 1999 Start of the AAI project
 - 2001 First optical fibre purchased
 - 2002 500'000 Domain names
 - 2004 Fiber backbone fully operational
 - 2005 AAI federation operational

Service Innovation: From Idea to Service

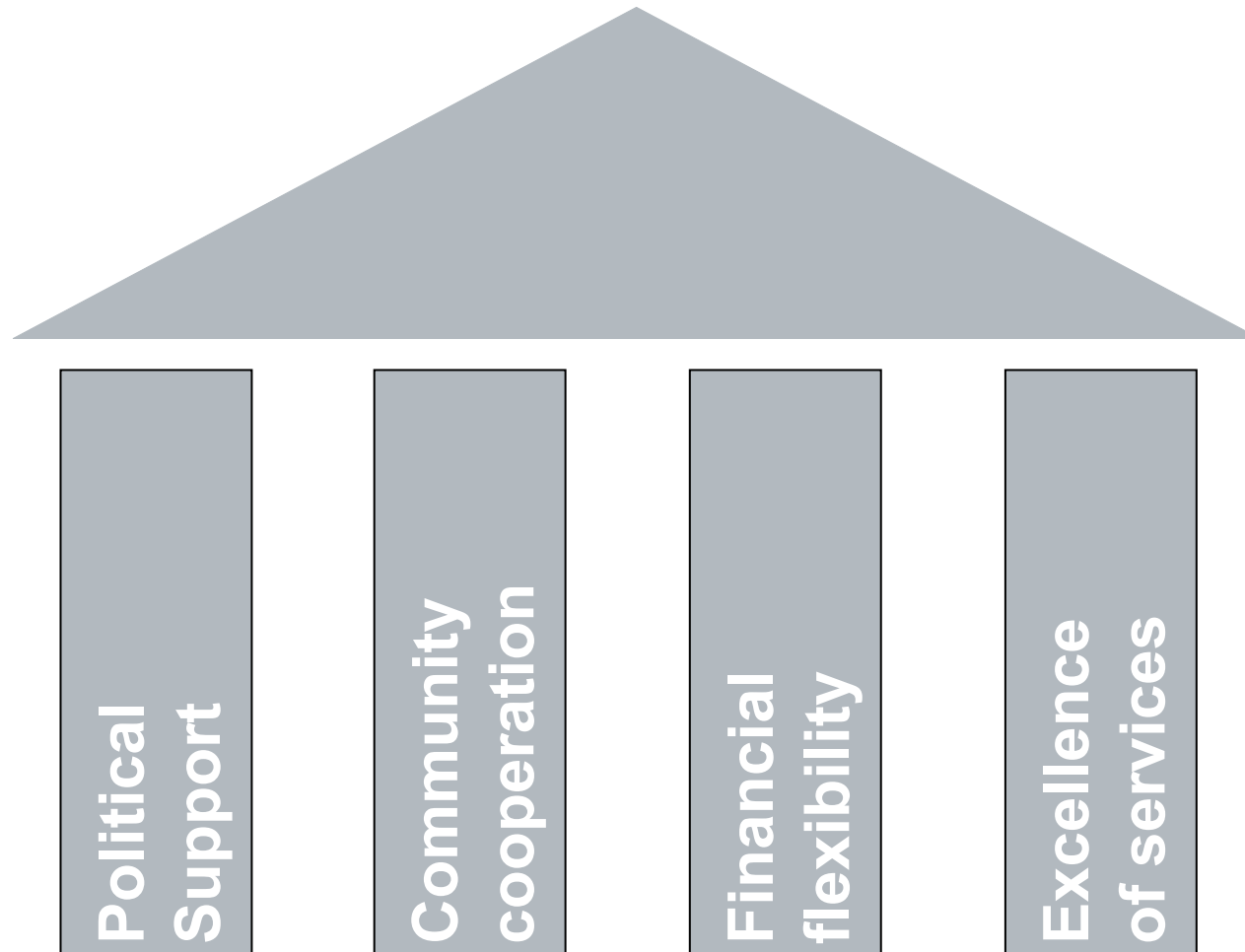
(e.g. funding of SWITCHaai)



SWITCHhai Federation in Spring 2010



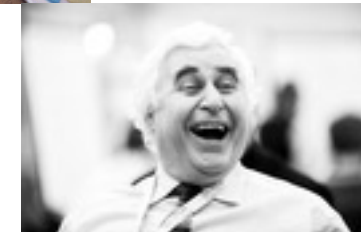
4-Pillar Sustainability Model



“SWITCH - The future on”



“SWITCH - The future on”



Longterm Developmental Process

In order to create long term strategic objectives SWITCH has initiated a three-phase process in cooperation with its stakeholders:

1. Creation of visions and scenarios of the future of universities and tertiary education as well as research institutes: National and international experts focussed on the question of the influence of ICT on teaching and research.
2. Consolidation of the scenarios/visions into one or few consistent scenarios of the future: A broad scope of stakeholders of SWITCH participated in this phase.
3. Development of strategic goals through the statutory entities of the SWITCH foundation

Strategic Fields of Action

- For the whole community
 - Academic network (incl. middleware)
 - Support of collaboration
 - E-Identity for learners
 - Coordination and cross-sectional tasks
- Addressing focus groups of the community
 - E-Learning
 - E-Science
- Synergy gains via
 - Domain names and related internet services
 - Services for third parties

Key trends

- Globalization continues: Asia rising, inversion of financing from east to west, stronger individualization of society, project economy and lifelong learning.
- Network infrastructure again more performing and reliable. High-end demands drive development. Certain amount of commoditisation of fiber (FTTH in urban areas).
- Increasing demands on storage and data structuring, always on wireless access, virtualization via cloud computing and virtual organizations.
- Work from everywhere, digital natives bring their tools and mindsets to life and work, ageing up and increasing importance of (preventive) healthcare.
- Thematic world-wide clustering in education and research, growth of tertiary education, cost- and energy efficiency.

Academic Network

- SWITCH operates a technologically advanced network, which fulfils the needs of the Swiss universities (tertiary education) with regard to world-wide ICT connectivity.
- This includes internet access for tertiary education and project cooperation with education and research partners on a case by case basis (inter-campus, intra-campus).
- Connecting the SWITCH Community in Switzerland and enabling a full integration into the European NREN networks as well as world-wide research destinations.
- SWITCHlan additionally supports the needs of new mobile forms of life and work and the integration of peripheral locations.
- Additional services like further developments in the area of authentication, security and performance support create a differentiation and added value with regard to commercial network service providers.

Support of collaboration

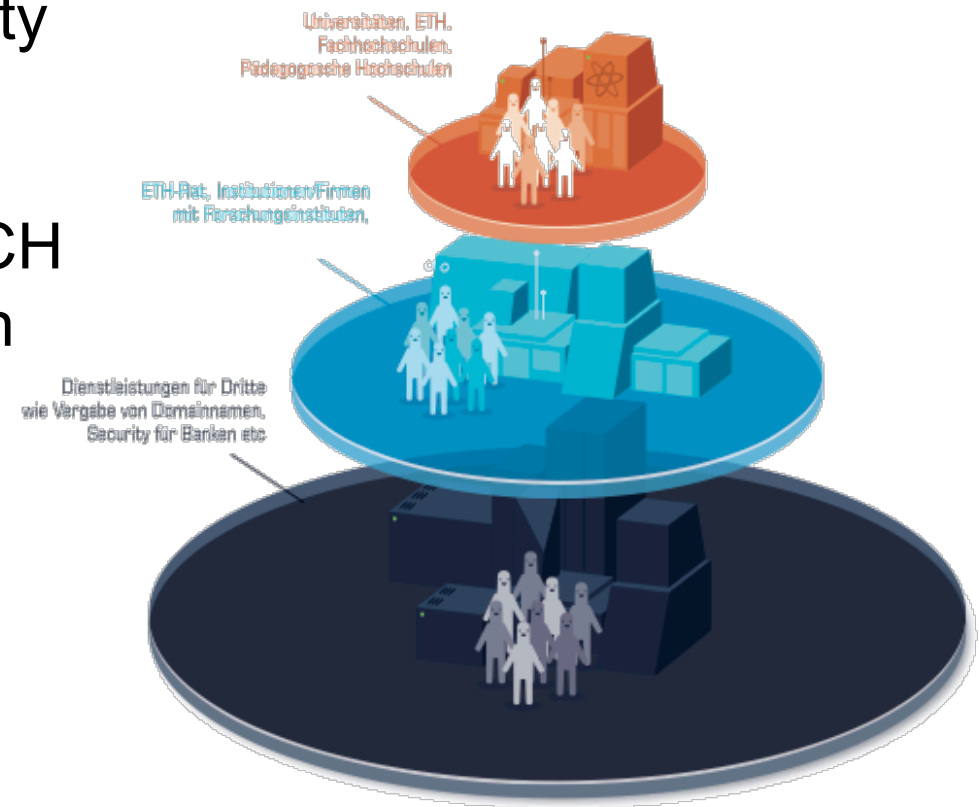
- SWITCH supports individual time- and location-independent ICT-based collaboration and enables cooperation with relevant working and research partners in the national and international context.
- The possibility to work in dynamic teams across organizations (as a virtual organization) will be added to the standardized current videoconferencing and collaboration tools.
- This kind of collaboration has a mostly ad hoc character and – in contrast to B1 and B2 – covers the general requirements of the community.
- Tools of the „digital way of life“ (like Skype, social networks like XING, interactive Blogging etc.) shall be integrated in a value-adding way for the special needs of teaching and research.

The SWITCH Community

1st Circle: SWITCH community
(tertiary education)

- 2nd Circle: Extended SWITCH community (organizations in proximity of tertiary education)

- 3rd Circle: Third parties



Possibilities of market segmentation

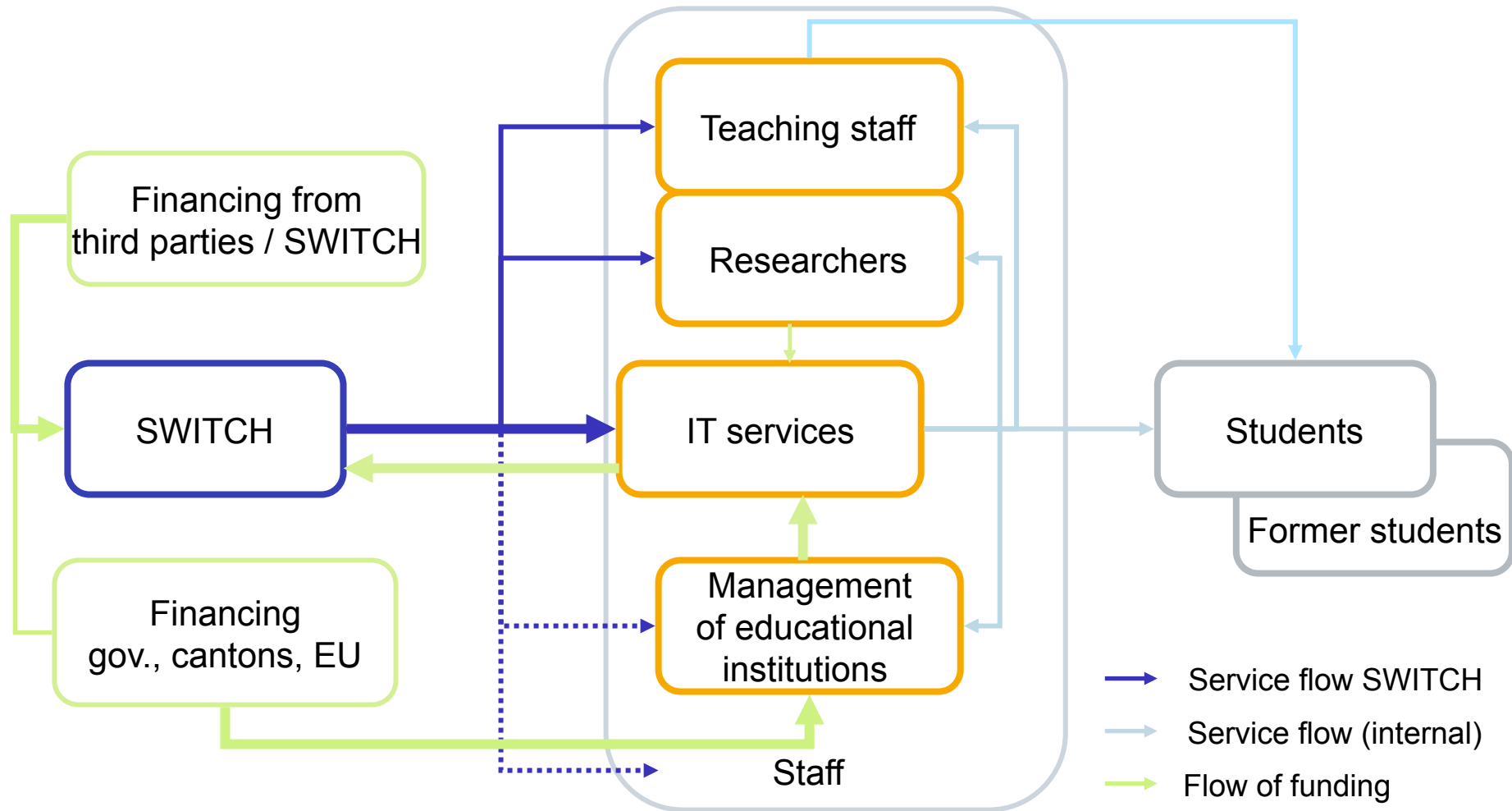
	Suitability for SWITCH
Socio-demografic (sex, age, domicile etc.)	Rather NO
Psychographic (progressive, conservative, extrovert, introvert)	Rather NO
Private persons vs. organizations	Rather NO
Types of organizations (universities, "FHs", "PHs")	Rather YES
<ul style="list-style-type: none"> • Since a segmentation by types of organizations mainly showed the usage of more services over time, it was decided that a segmentation by groups of users would offer the most potential. 	Rather YES

SWITCH market segmentation

Segmenting by groups of users / roles:

- Students (incl. continuing education)
- Former students
- Teaching staff
- Researchers
- IT departments
- Management of educational institutions
- Staff

Current Community Action Model



A group of users is equivalent to a specific role and can be divided into further target groups.

Preserving strategic flexibility

- Under certain circumstances SWITCH will consider new strategic options:
 - Crystallisation of a user community and a clear mandate
 - Overall potential for synergy
 - Will for collaboration between the institutions
 - Acceptance of standards
- These options in conjunction with the following methodology will allow SWITCH to adapt to the changing needs of its community:
 - Technology and innovation watch
 - Stage gate processes
 - Innovation management
 - Involvement of stakeholders in value creation
 - New community action models

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