# Introduction to AAI

**Ueli Kienholz, <kienholz@switch.ch>**

# Without AAI

**University A**

| | | |
|---|---|---|
| | | **Student Admin** |
| | | **Web Mail** |
| | | **e-Learning** |

**Library B**

| | |
|---|---|
| | **e-Journals** |
| | **Literature DB** |

**University C**

| | |
|---|---|
| | **Research DB** |
| | **e-Learning** |
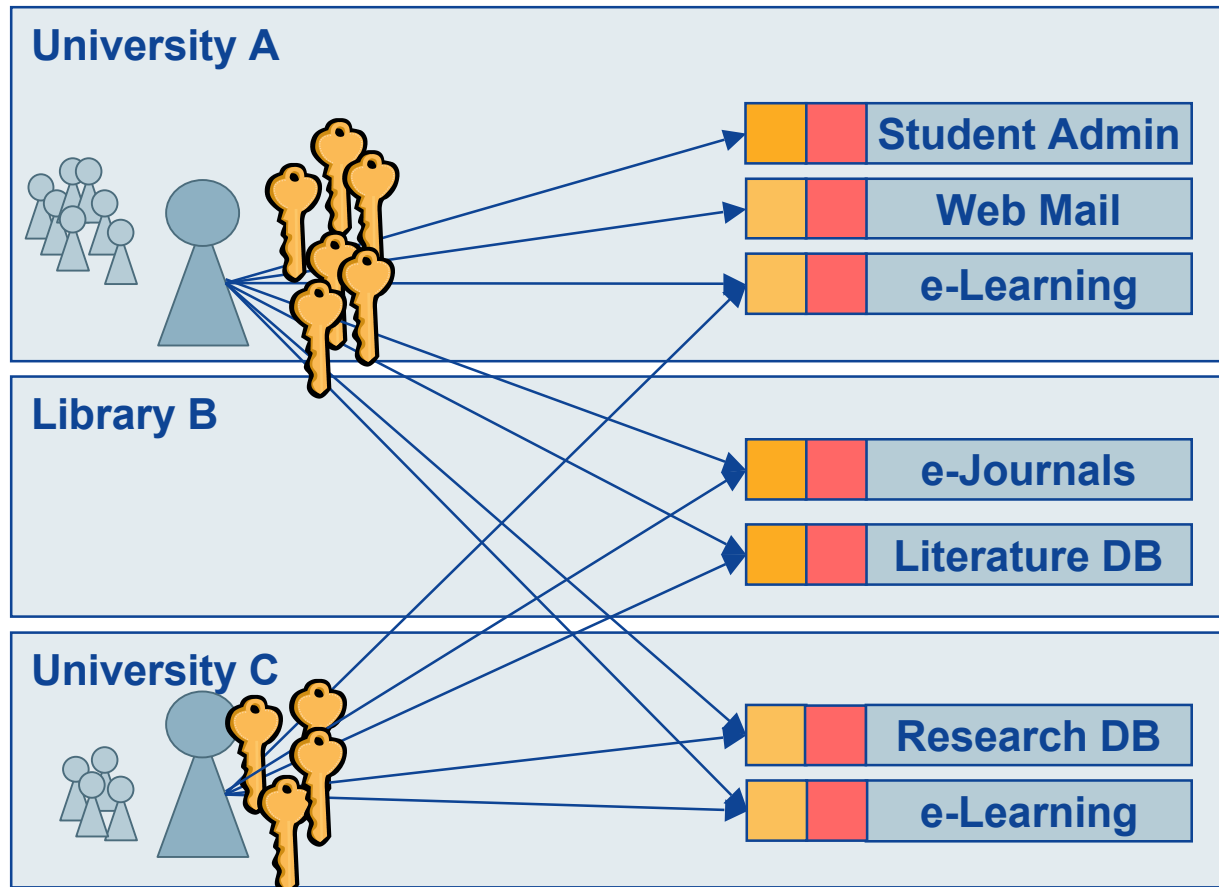
- Tedious user registration at all resources
- Unreliable and outdated user data at resources
- Different login processes
- Many different passwords
- Many resources not protected due to difficulties
- Often IP-based authorization
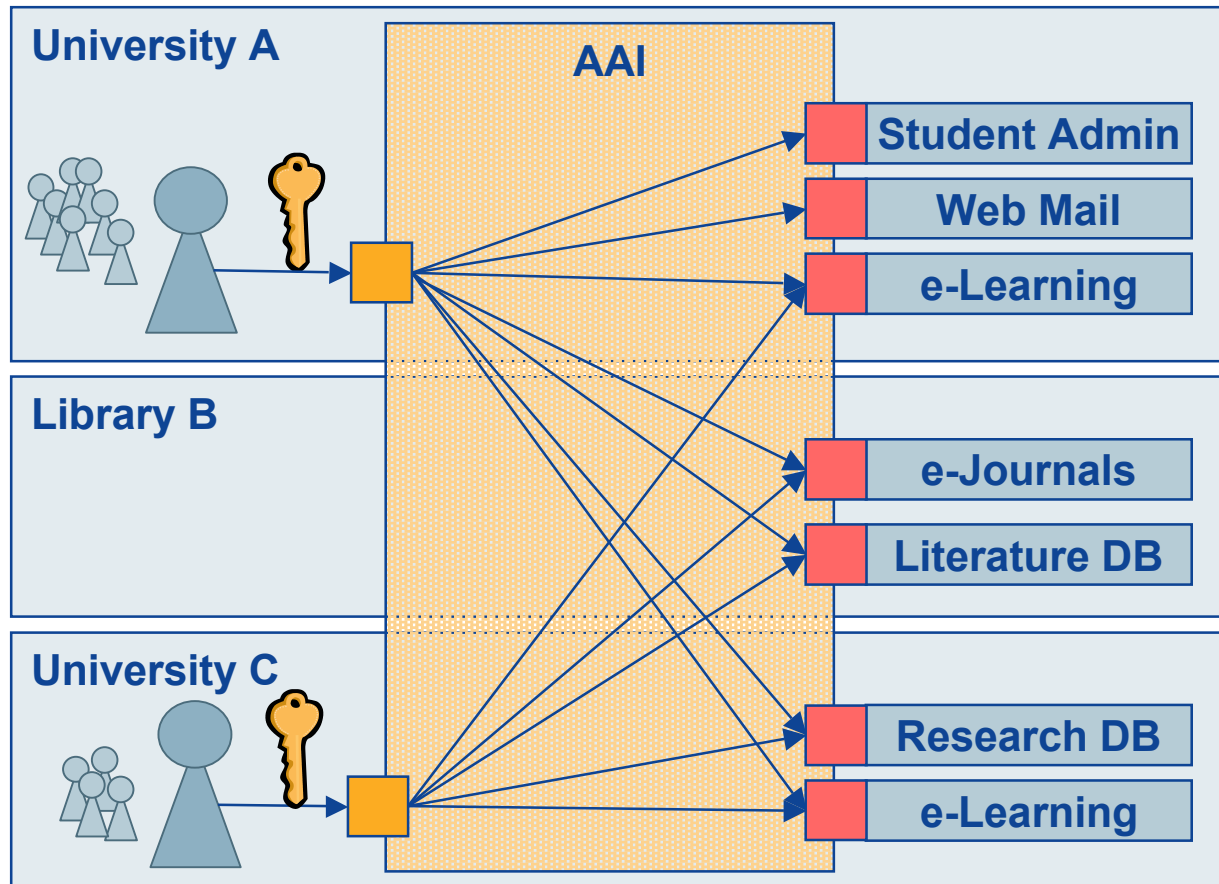- Costly implementation of inter-institutional access

| User Administration Authentication | Authorization | Resource | Credentials |
|---|---|---|---|

# With AAI

- No user registration and user data maintenance at resource needed

- Single login process for the users

- Many new resources available for the users

- Enlarged user communities for resources

- Authorization independent of location

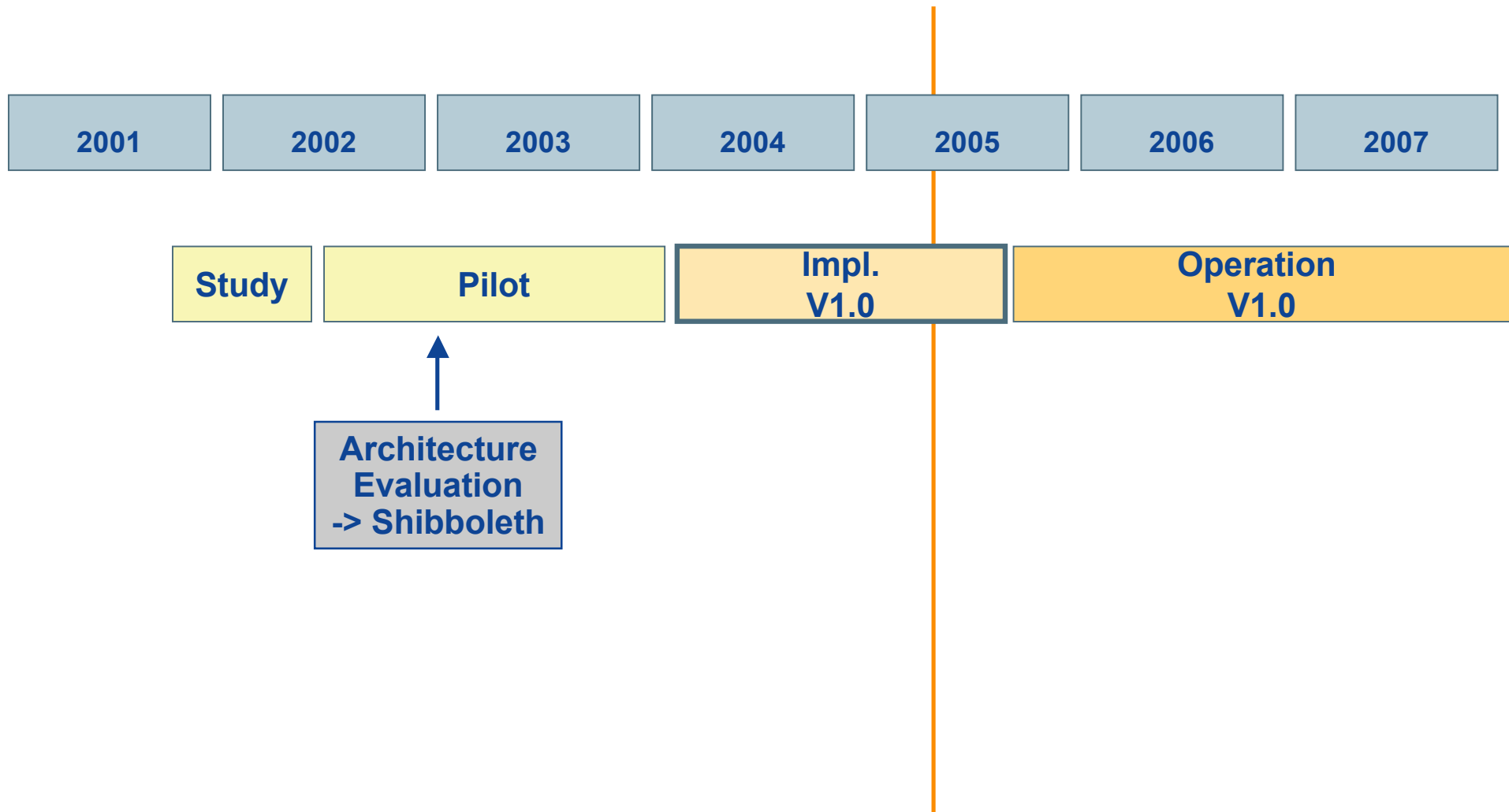- Efficient implementation of inter-institutional access

University A

AAI

Student Admin

Web Mail

e-Learning

Library B

e-Journals

Literature DB

University C

Research DB

e-Learning

User Administration Authentication

Authorization

Resource

Credentials

# SWITCHaai Project Planning

SWITCH

The Swiss Education & Research Network

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |

| Study | Pilot | Impl. V1.0 | Operation V1.0 |

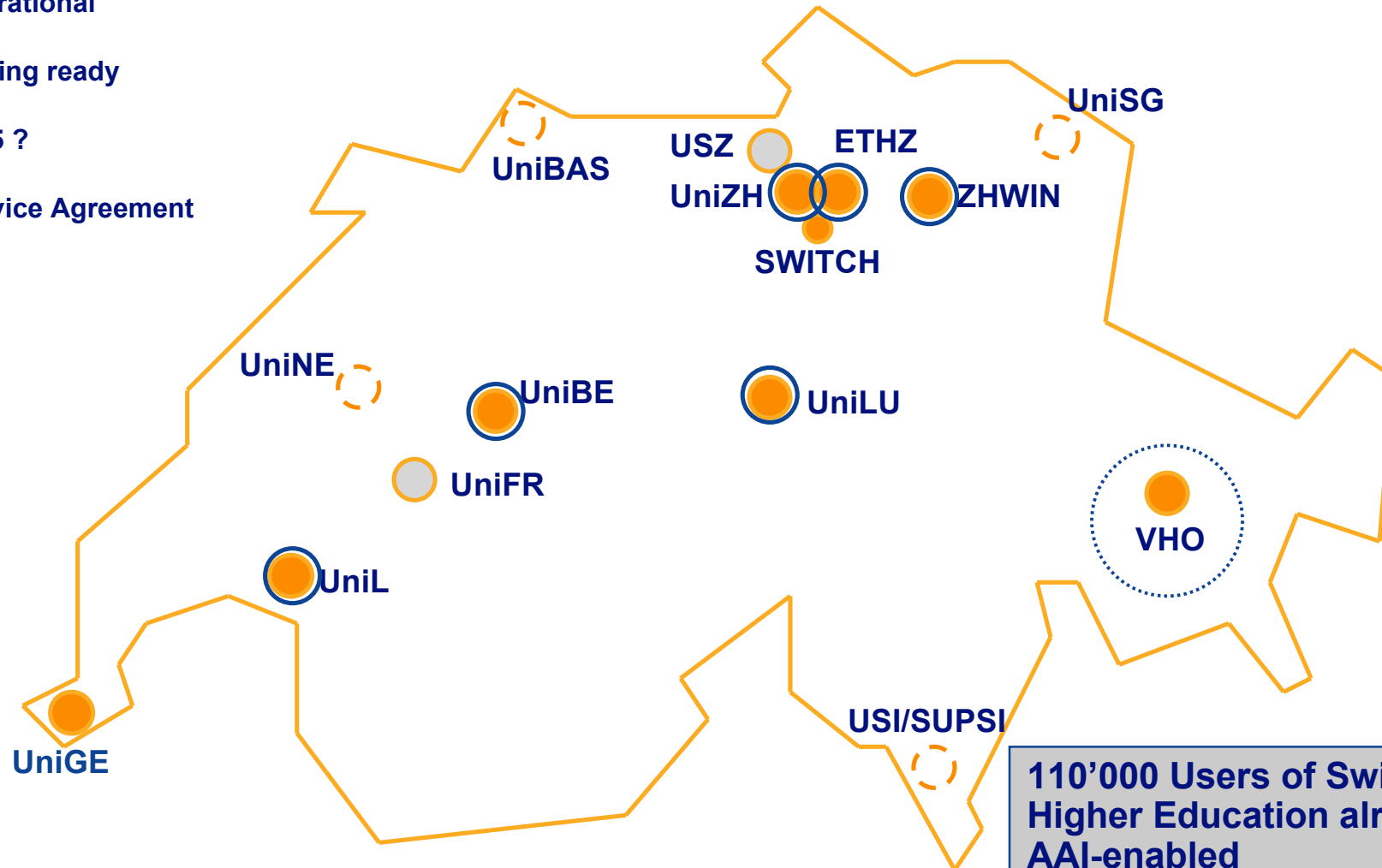Architecture Evaluation -> Shibboleth

# Shibboleth

- ❑ **Open Source**
- ❑ **Developed by Internet2**
- ❑ **Federated Approach**
- ❑ **Privacy**
- ❑ **National deployment projects in the US, UK and Finland, growing interest in other European countries**
- ❑ **For web resources only - as a first step**
- ❑ **Based on SAML**
- ❑ **Cooperations with Liberty Alliance**
- ❑ **Cooperations with Content Providers (e-journals)**

**http://shibboleth.internet2.edu/**

# AAI Home Organizations

- ● Operational
- ● Getting ready
- ○ 2005 ?
- ○ Service Agreement

UniSG

USZ  ETHZ

UniBAS

UniZH  ZHWIN

SWITCH

UniNE  UniBE  UniLU

UniFR

VHO

UniL

USI/SUPSI

UniGE

**110'000 Users of Swiss Higher Education already are AAI-enabled ( = 50% of all users)**

# SwissSign Root CA Certificate Import

**http://www.switch.ch/pki/import.html**

| Internet Explorer (Windows) | Safari (für OS 10.3 Panther) |
|---|---|
| ❑ Click on Certificate | ❑ Download Certificate |
| ❑ Open | ❑ Doubleclick on File |
| ❑ Install Certificate | ❑ X509 Anchors |
| ❑ Defaults OK | ❑ Keychain Password = Administrator Password |
| | ❑ Keychain Access -> Quit Keychain Access |

# Demo

❑ **http://www.switch.ch/aai**

**-> Live Demo**

**-> demo resource**

**https://kohala.switch.ch/secure**

# Shibboleth Process: The Details
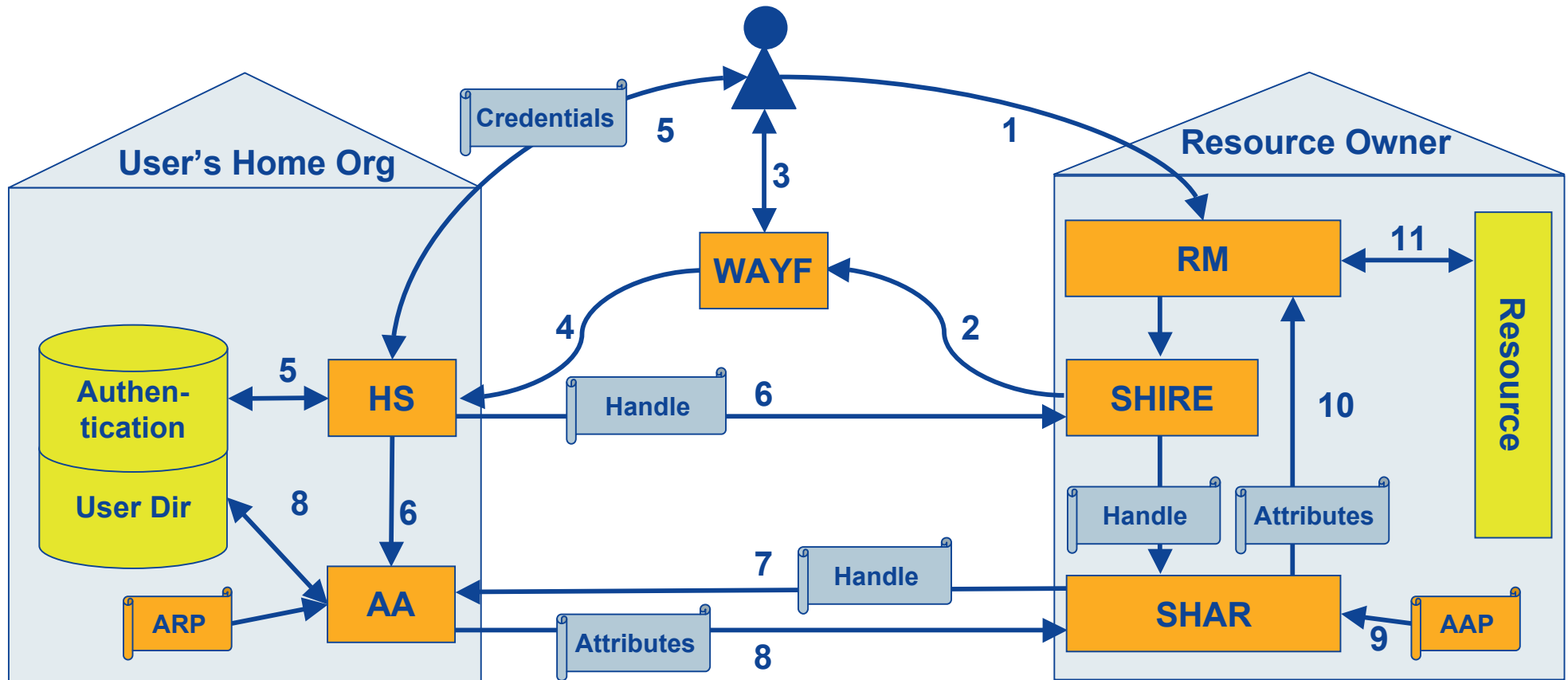
| | | |
|---|---|---|
| HS | Handle Server | |
| AA | Attribute Authority | |

WAYF    'Where Are You From'-Server

| | |
|---|---|
| RM | Resource Manager |
| SHIRE | Shibboleth Indexical Reference Establisher |
| SHAR | Shibboleth Attribute Requestor |

Shibboleth AAI Components

# AAI Resources

**SWITCH**
The Swiss Education & Research Network

## e-Learning

**OLAT**          Vista@SVC

**WebCT@ETHZ**     **VITELS**

**DOIT**          ILIAS
          Moodle          BSCW

AD Learn & Co     Blackboard

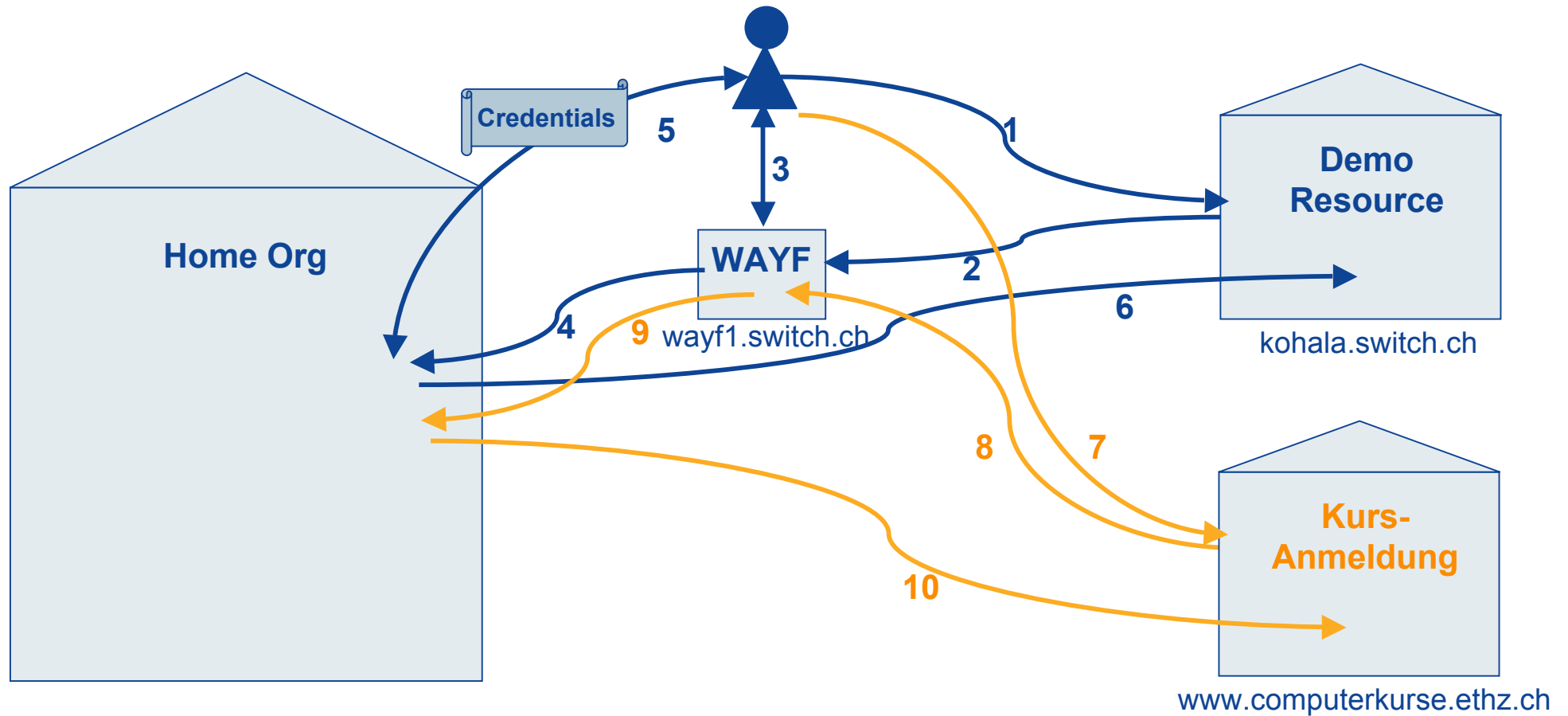## Bibliotheken

EZproxy

ScienceDirect

…

## Andere Web-Anwendungen

**CompiCampus**

                    TWiki
**Vconf**
          SMS-Gateway

          IS-Academia
Jobs@BWI

## Kommerzielle Inhalte

SwissLex

          eShops

**ca. 50 Shibbolized Hosts,
ca. 10'000 Users**

# Single Sign On

**Credentials**

**Home Org**

**WAYF**
wayf1.switch.ch

**Demo Resource**
kohala.switch.ch

**Kurs-Anmeldung**
www.computerkurse.ethz.ch

1  2  3  4  5  6  7  8  9  10

**http://www.computerkurse.ethz.ch/**

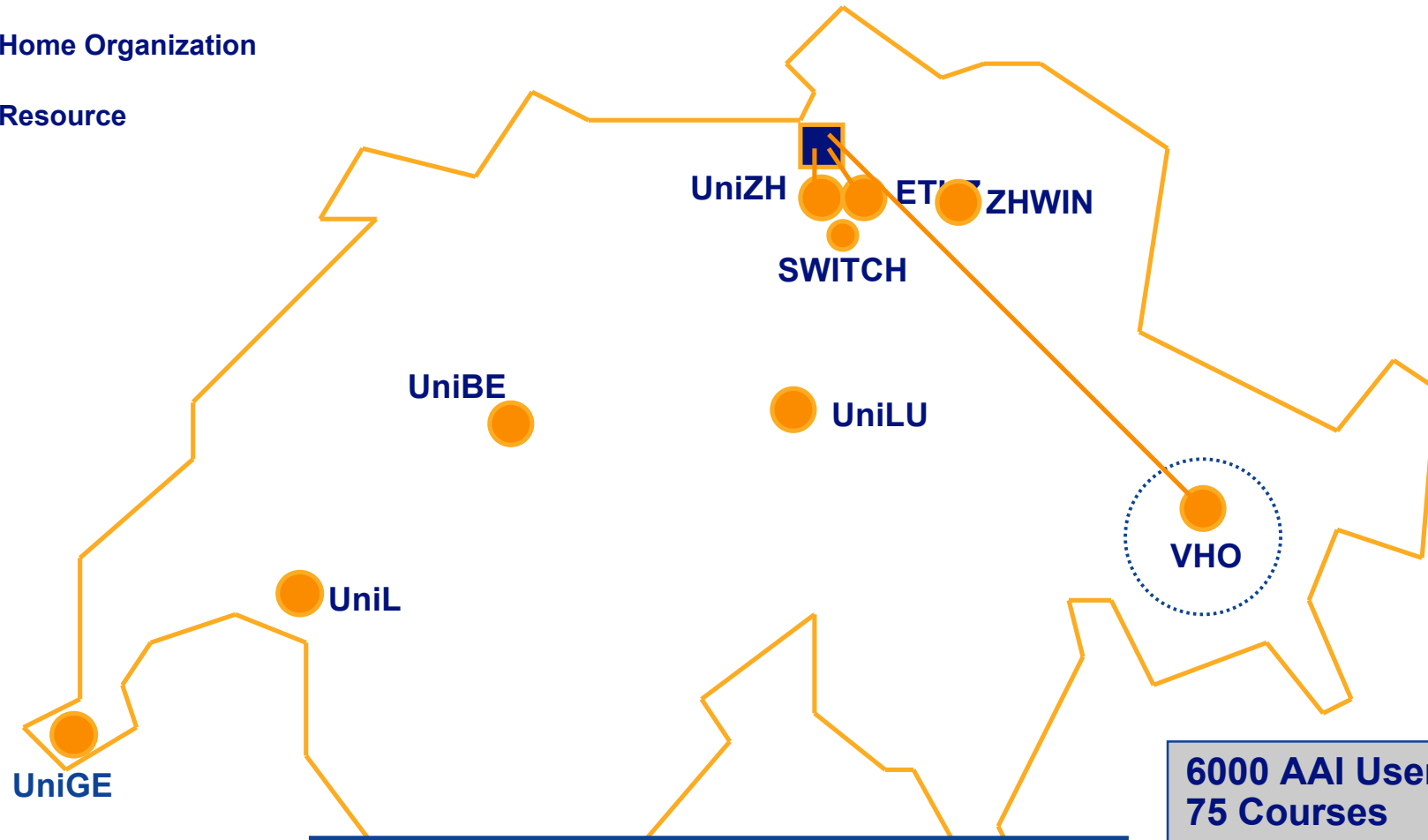# Showcase: OLAT

**SWITCH**
The Swiss Education & Research Network

**OLAT: Online Learning an Training (open source e-learning platform of the University of Zurich)**
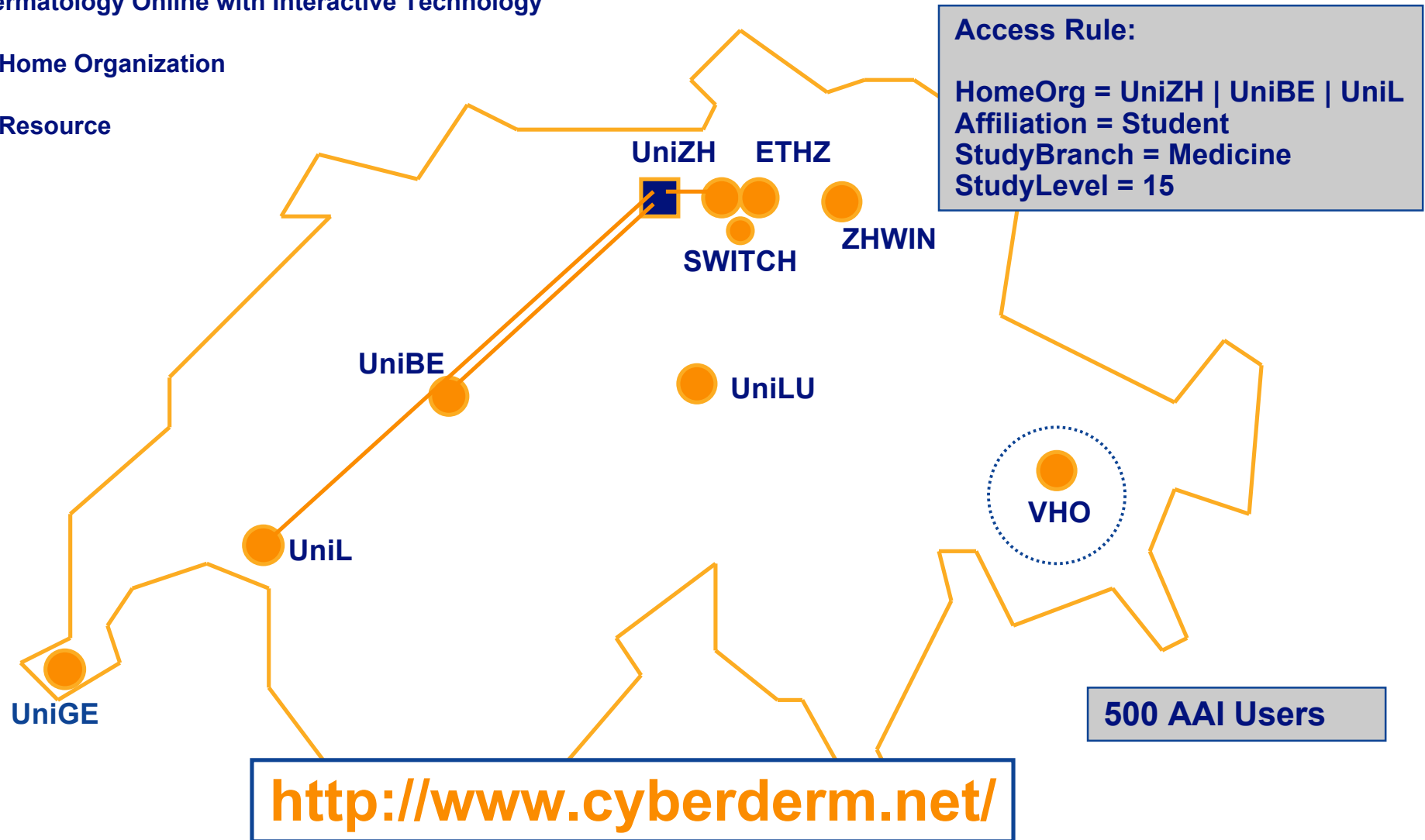
- 🟠 AAI Home Organization
- 🟦 AAI Resource

UniZH ETHZ ZHWIN

SWITCH

UniBE

UniLU

VHO

UniL

UniGE

**6000 AAI Users, 75 Courses**

# http://www.olat.unizh.ch/

# Showcase: DOIT

**DOIT: Dermatology Online with Interactive Technology**

🟠 **AAI Home Organization**

🟦 **AAI Resource**

**Access Rule:**

HomeOrg = UniZH | UniBE | UniL
Affiliation = Student
StudyBranch = Medicine
StudyLevel = 15

UniZH    ETHZ

SWITCH    ZHWIN

UniBE    UniLU

VHO

UniL
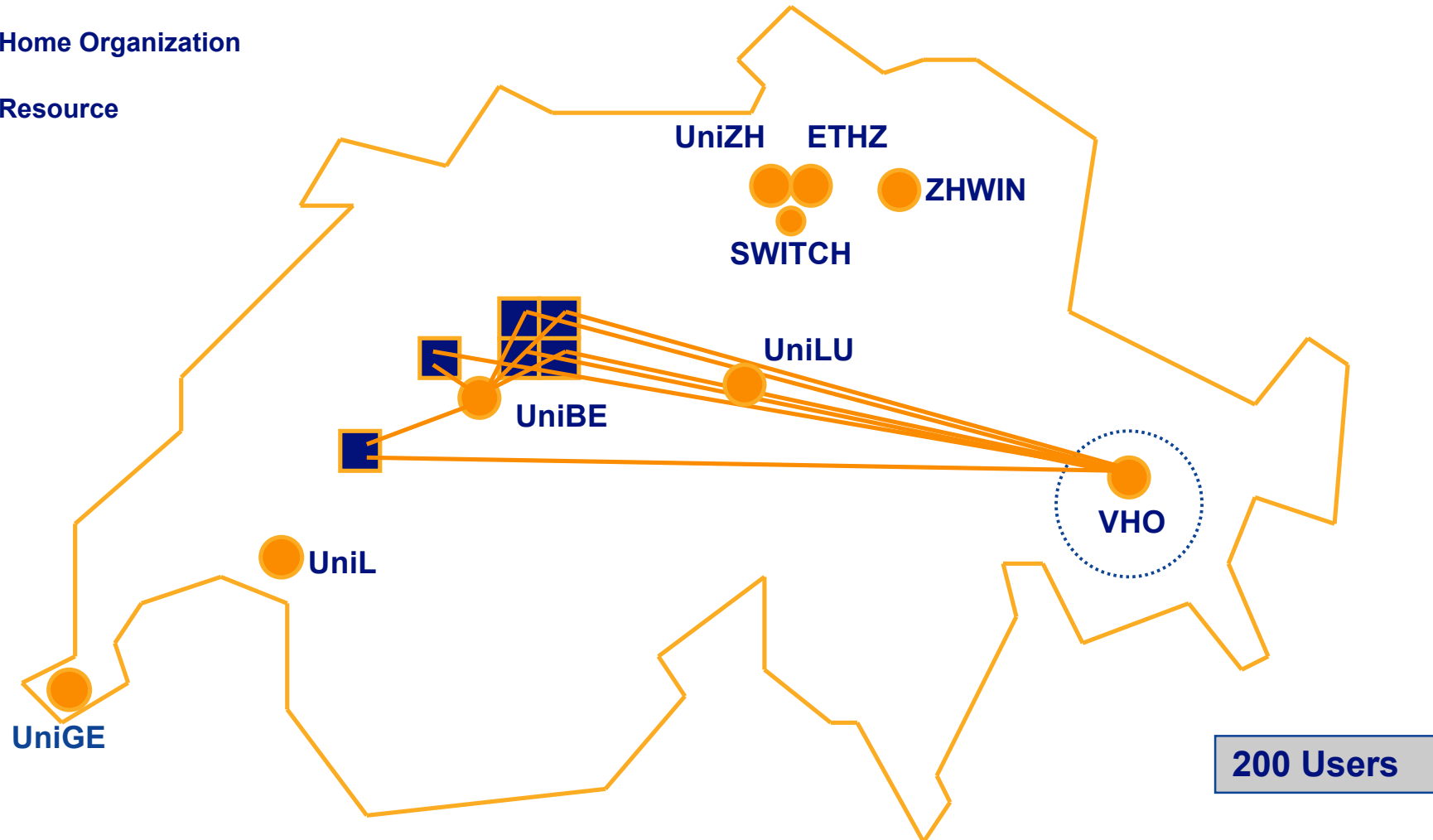
UniGE

**500 AAI Users**

## http://www.cyberderm.net/

# Showcase VITELS

**VITELS: Virtual Internet and Telecommunications Laboratory of Switzerland**

● AAI Home Organization

■ AAI Resource

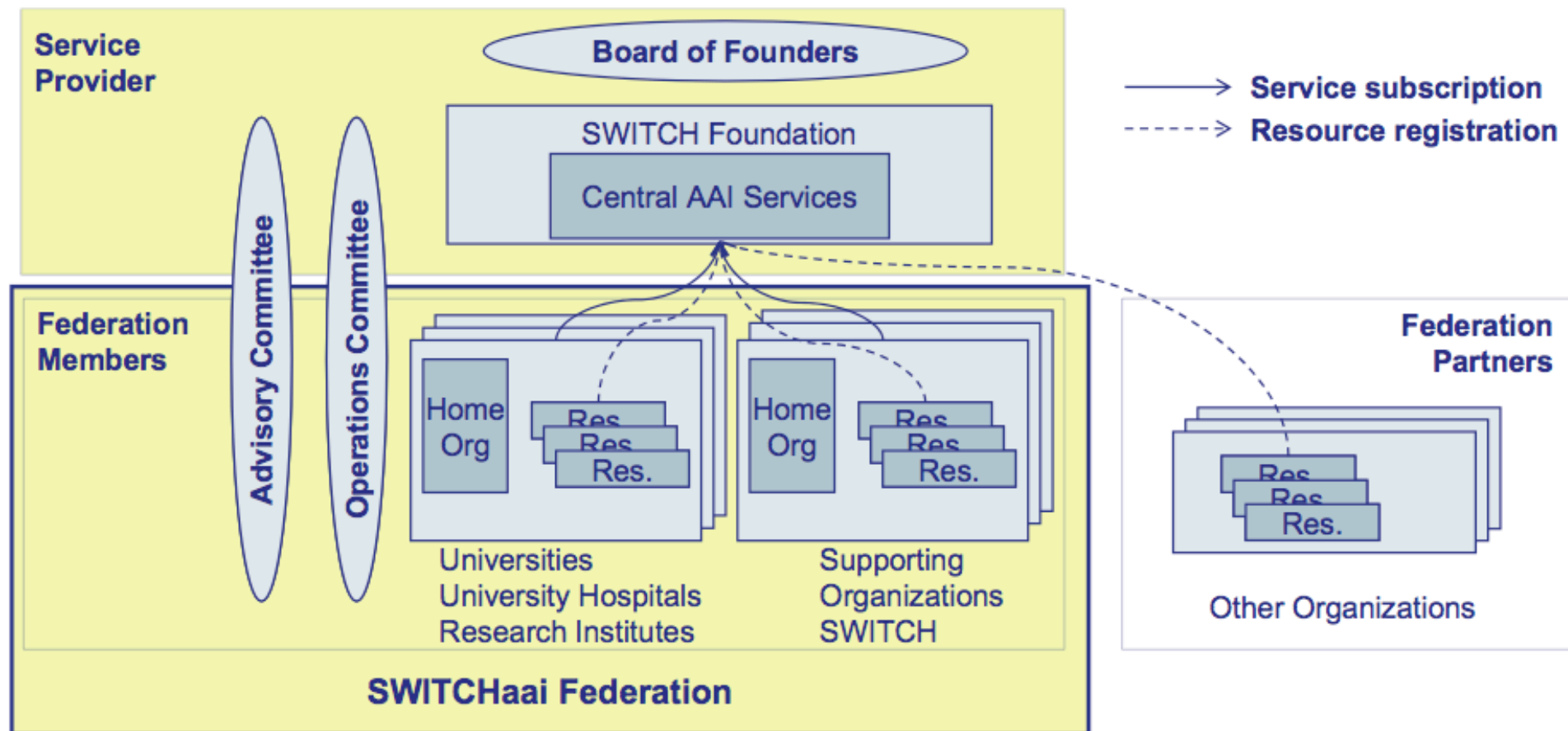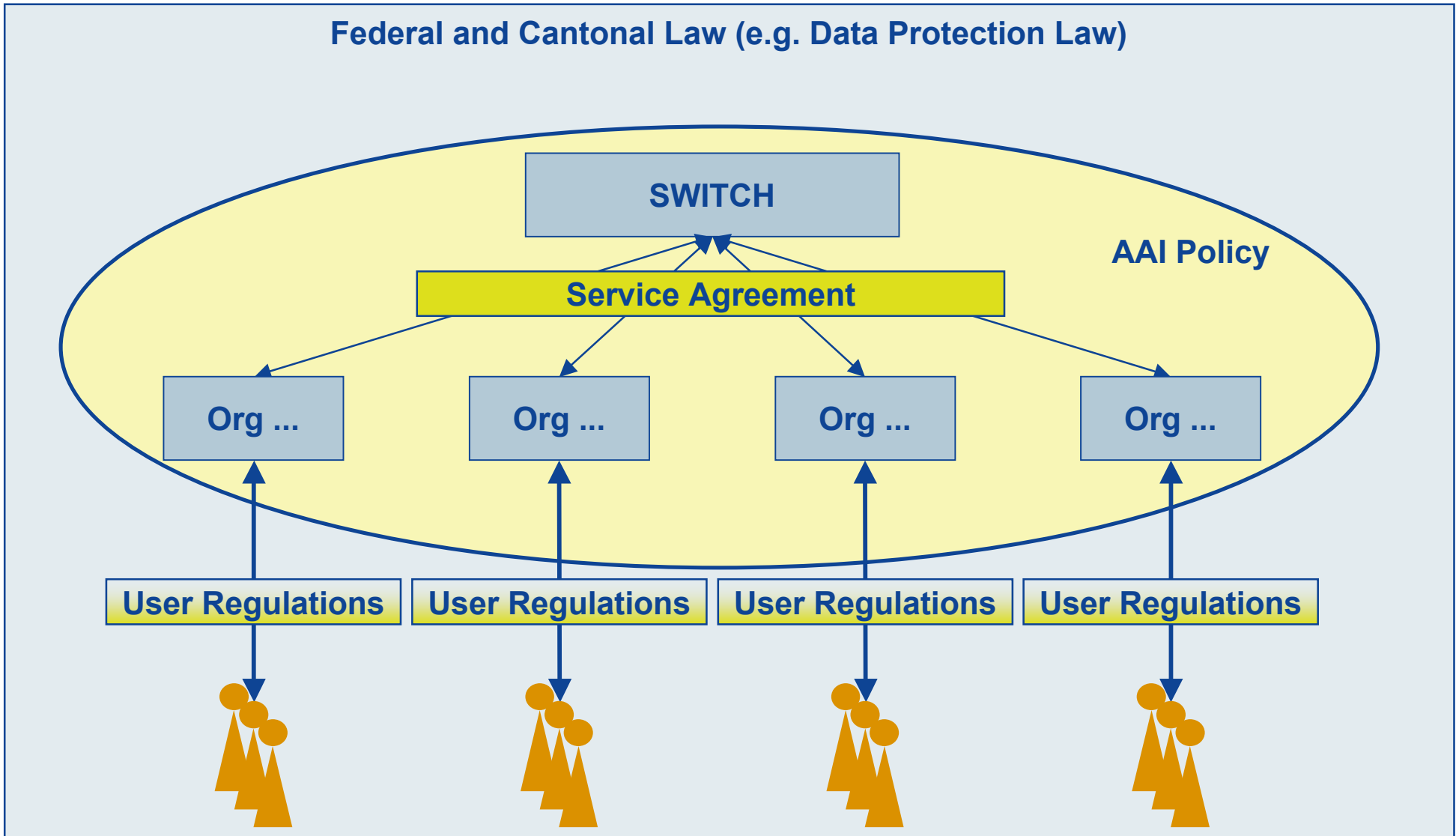UniZH    ETHZ    ZHWIN

SWITCH

UniLU

UniBE

VHO

UniL

UniGE

**200 Users**

# SWITCHaai Federation

SWITCH acts as federation service provider

Federation membership based on signed service agreements

# Legal Framework

**Federal and Cantonal Law (e.g. Data Protection Law)**

**AAI Policy**

**SWITCH**

**Service Agreement**

Org ...    Org ...    Org ...    Org ...

**User Regulations**   **User Regulations**   **User Regulations**   **User Regulations**

# Central AAI-Services

❑ **Strategy & Marketing**

❑ **International Contacts**

❑ **Support, Consulting, Training**

❑ **Providing Federation-specific Files and Configuration Guides**

❑ **Operating WAYF (Where Are You From Server)**

❑ **Test-HomeOrg and Test-Resource**

❑ **Tools (AAIportal, AAIproxy)**

❑ **Virtual Home Organization**

❑ **Jump Start Service**

# Funding

**funding / costs**
**in KCHF**



**pilot project**

**project**

**operational service**

**funded by SWITCH**

**funded by subsidies**

**funded by tariffs**

*y-axis:* 3000, 2500, 2000, 1500, 1000, 500, 0

*x-axis:* 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010

# Further Information

**SWITCH**
*The Swiss Education & Research Network*

❑ **SWITCHaai Website:**

**http://www.switch.ch/aai**

❑ **Shibboleth:**
**http://shibboleth.internet2.edu/**
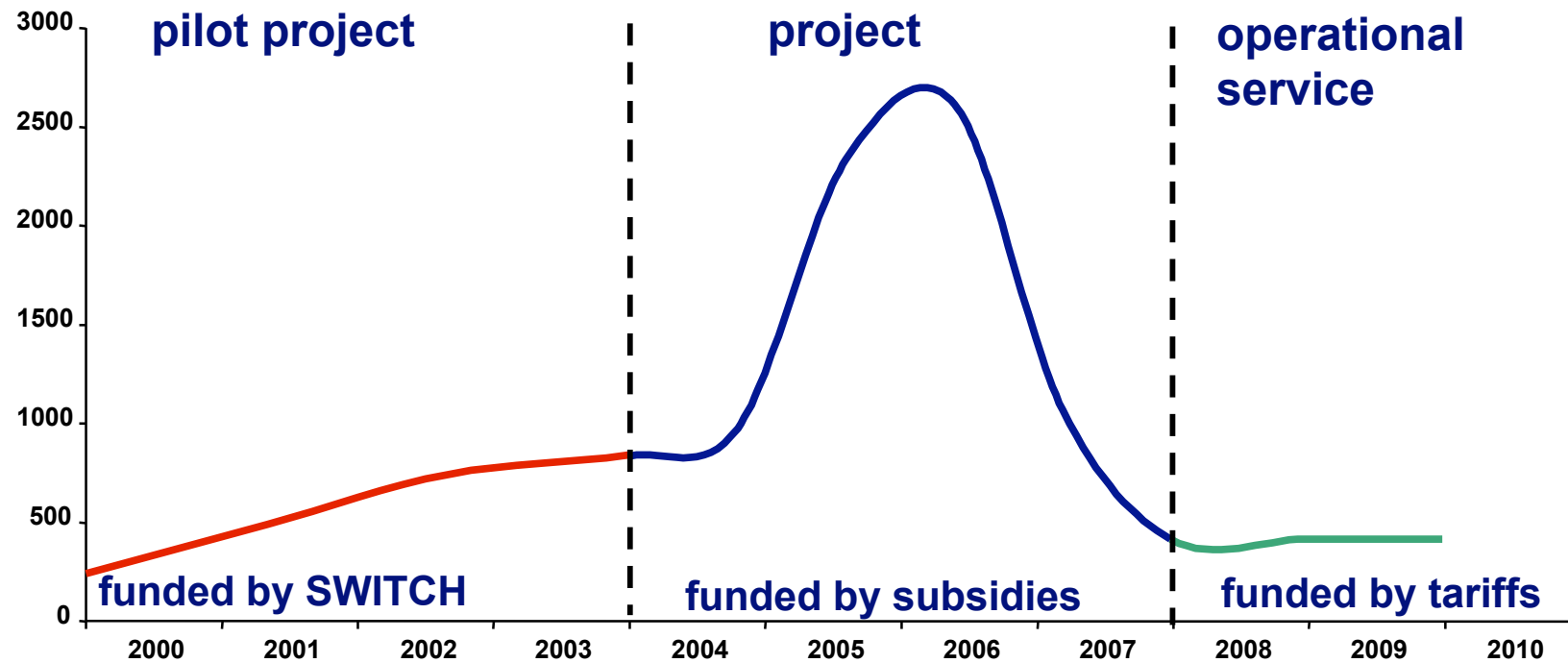
❑ **Shibboleth Demo:**

**http://www.switch.ch/aai/demo**

❑ **Attribute Specification:**

**http://www.switch.ch/aai/docs/AAI_Attr_Specs.pdf**

# Questions ?

# Q & A

**http://www.switch.ch/aai**

**aai@switch.ch**