
SWITCH

The Swiss Education & Research Network

- **Purpose (1987):**

“ ... to create, promote and maintain the necessary fundamental means for efficient use of modern telecommunication methods for the benefit of education and research in Switzerland and to participate in such fundamental activities.... ”

- **Future Trends in University Environment:**

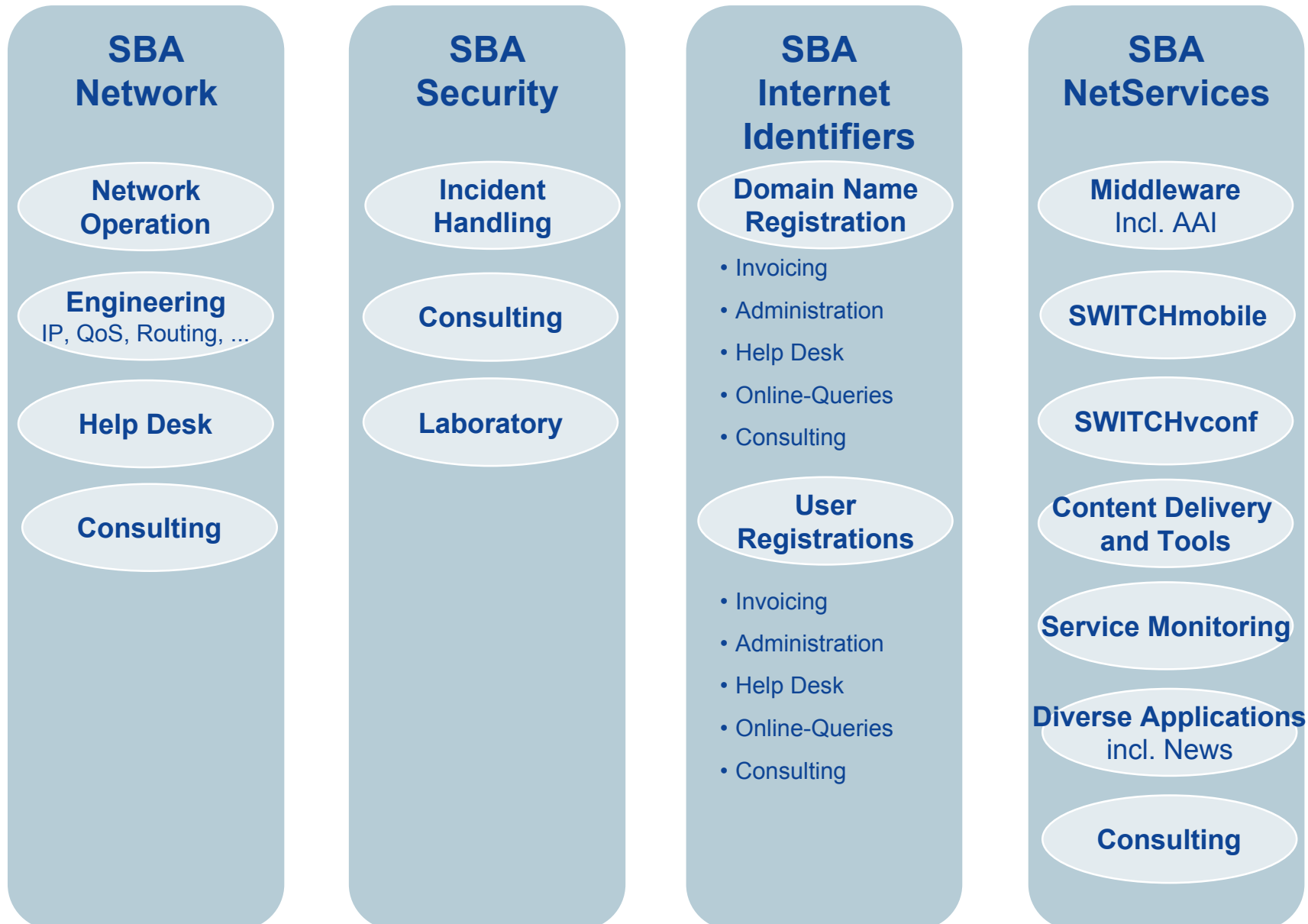
New research areas need higher network bandwidth

Bologna Declaration -> increased student mobility

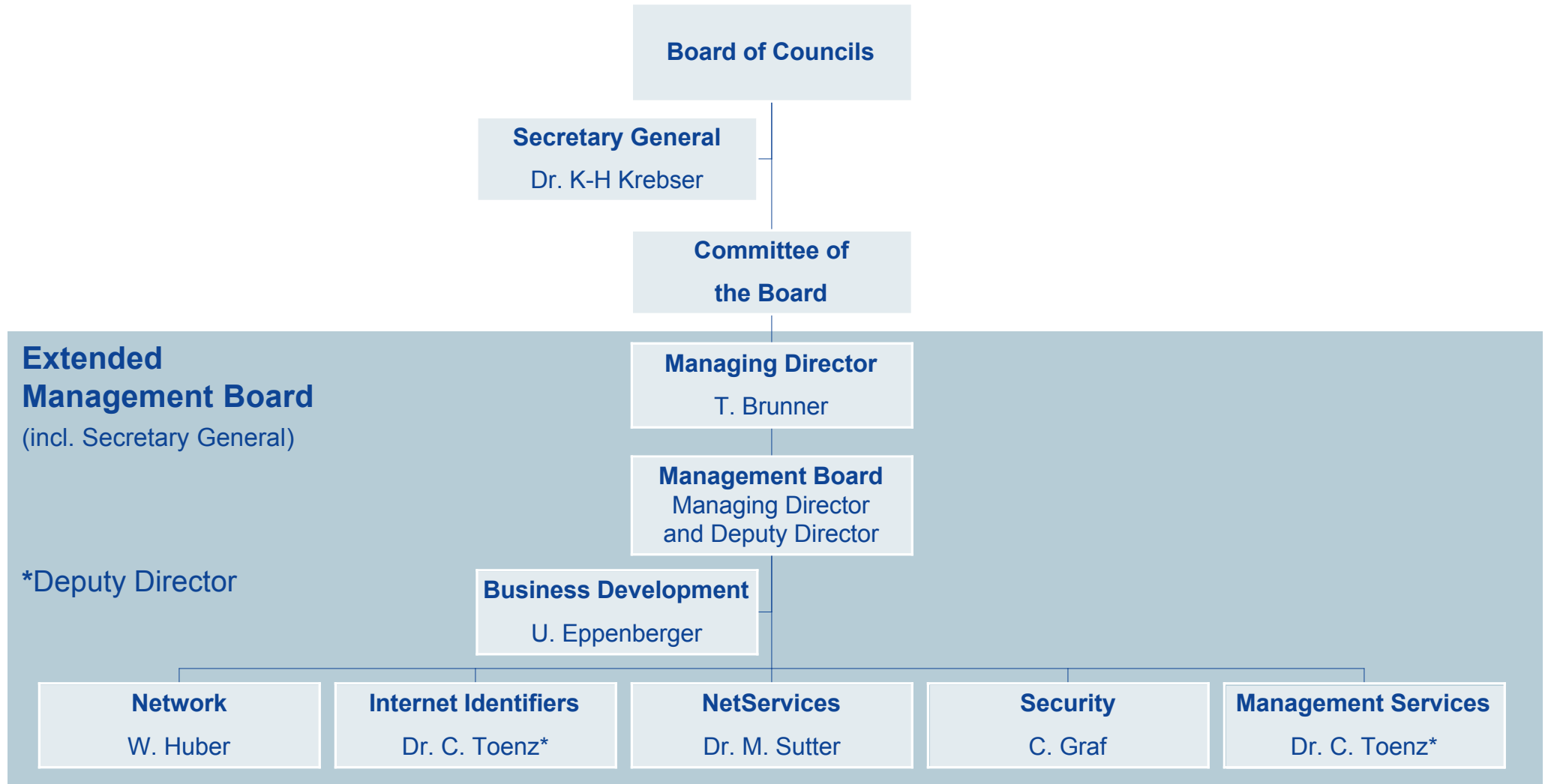
Synergies: Swiss Virtual Campus - SWITCH

10% more students -> some need to work @home

National Research Priorities and National Competence Centres
foster co-operation between Swiss universities



Organisation Structure



- **Expansion of SWITCHlambda fibre network**
 - Co-operation with physical transmission media
 - Know-How and technologies available
 - Quick availability of connections for projects
 - Lower future operating costs
- **More network connections for research but not for high schools**
- **Early adopters to new network technologies (IPv6, IPsec,...)**
- **Quality control of services down to end user**
 - SWITCH is a trusted partner
 - Appropriate diagnoses tools are being developed
 - SWITCH offers support and engineering to optimise throughput, delay and jitter

SBA Network

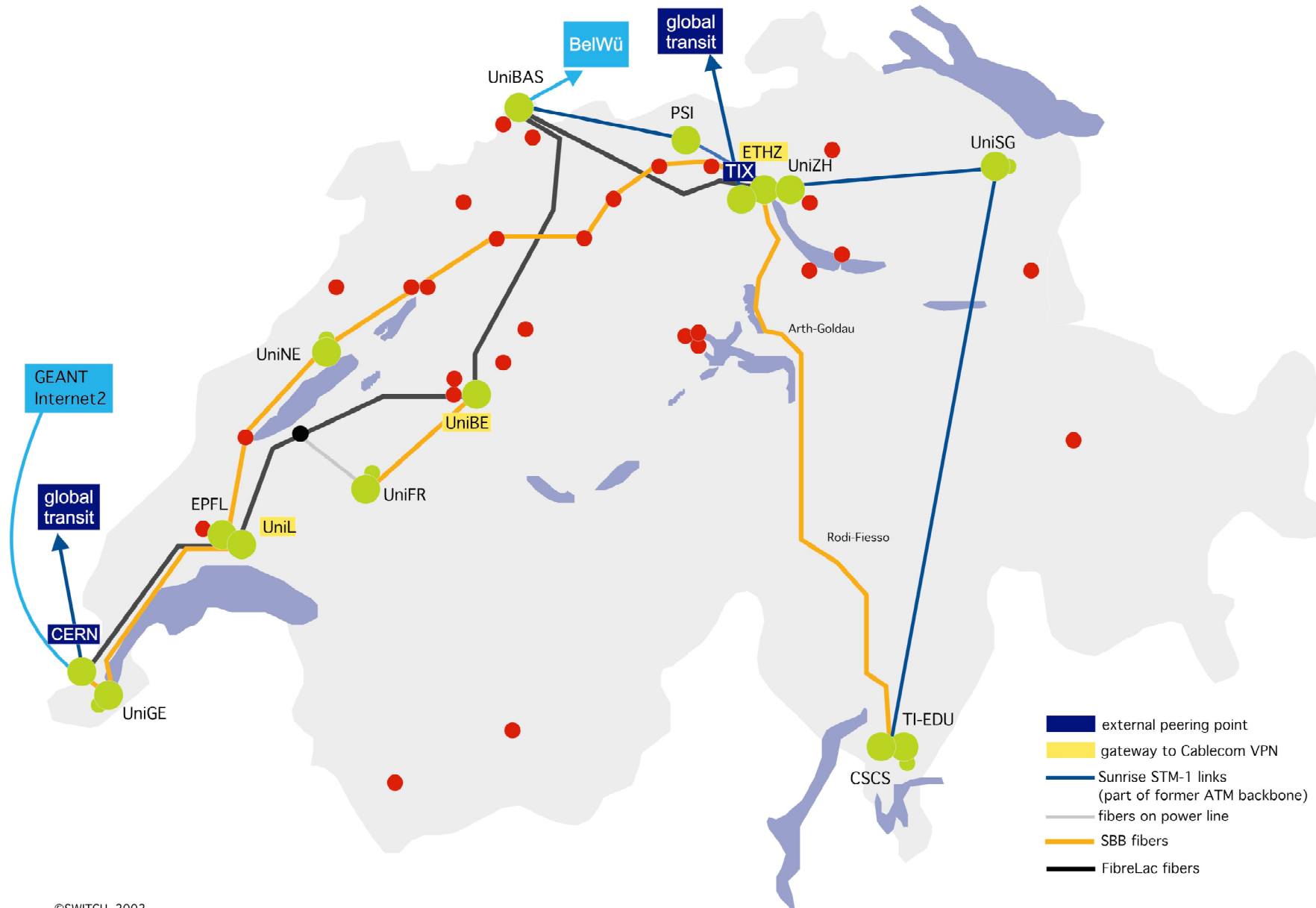
Network Operation

Engineering
IP, QoS, Routing, ...

Help Desk

Consulting

SWITCHlan topology beginning 2003



©SWITCH, 2002

SBA Network

Network Operation

Engineering
IP, CoS, Routing, ...

Help Desk

Consulting

SBA Security

Incident Handling

Consulting

Laboratory

SBA Internet Identifiers

Domain Name Registration

- Invoicing
- Administration
- Help Desk
- Online-Queries
- Consulting

User Registrations

- Invoicing
- Administration
- Help Desk
- Online-Queries
- Consulting

SBA NetServices

Middleware
Incl. AAI

SWITCHmobile

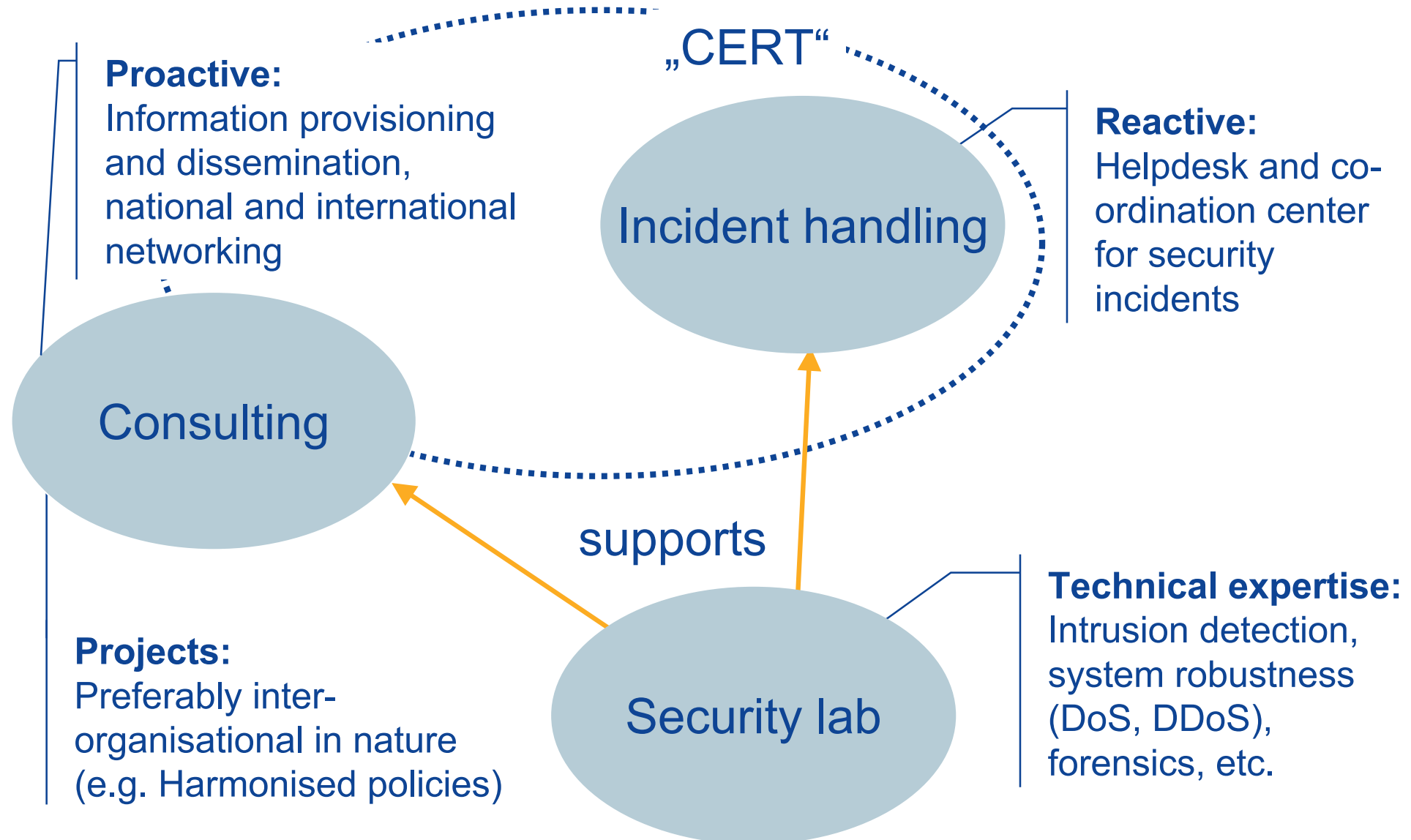
SWITCHvconf

Content Delivery
and Tools

Service Monitoring

Diverse Applications
incl. News

Consulting



• SWITCH to remain Domain Registry

- Know-How, expertise and customer trust well established
- Increase of registrations via partners
- Take advantage of emotional component of this service
- Influence legal framework
- Federal Office of Communications (OFCOM)
- Follow technical innovations (expanded set of characters,...)

• Identify new services

- In the field of user registration
- Bulk business is a strength of SWITCH

SBA Internet Identifiers

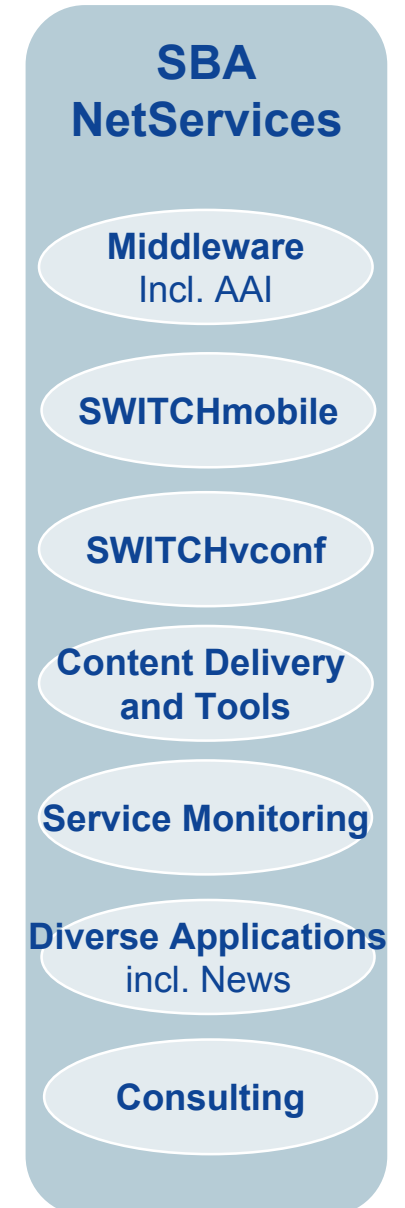
Domain Name Registration

- Invoicing
- Administration
- Help Desk
- Online-Queries
- Consulting

User Registrations

- Invoicing
- Administration
- Help Desk
- Online-Queries
- Consulting

- **AAI to be dealt with priority**
 - Contacts and know-how established
 - Important basis for further services to universities and to SWITCH
 - Data protection to be dealt with special care
- **Study GRID-technologies and clarify requirements**
- **Support mobile users**
 - coordinated infrastructure for network access and AAI
- **Increase usage and benefits of SWITCHvconf**
 - Get target groups to know existing services better
 - Important component of new complex Collaboration-Tools
 - Secure scalability and international networking



Video Conferencing

- Improves the Quality of Remote Collaboration
- From every desk (only TCP/IP is needed)
- Conferences with 12 Participants (TCP/IP, ISDN, Phone)
- International Numbering Schema

