

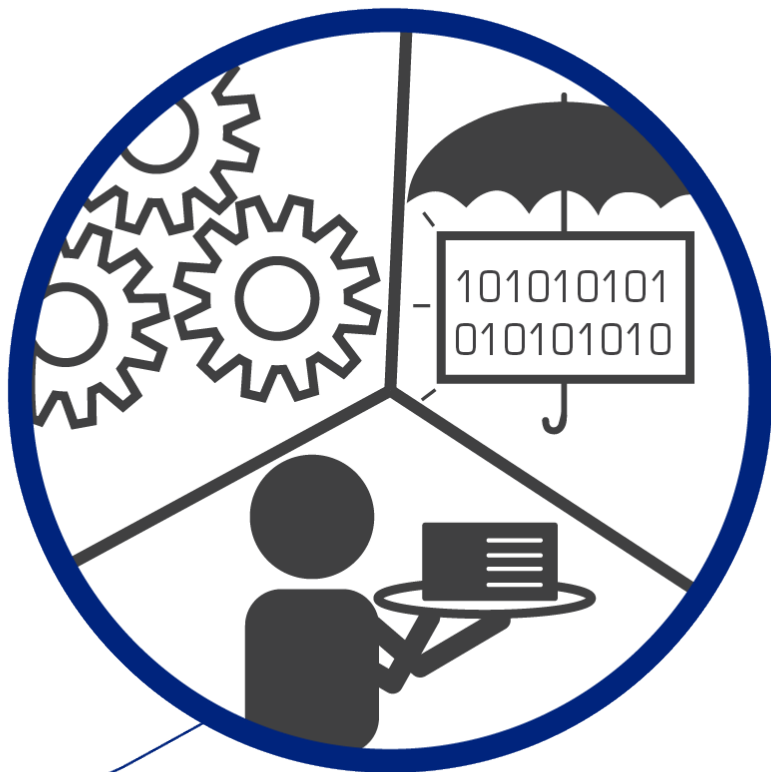


# (Jointly?) Managing Cloud Images

SWITCH

Simon Leinen <[simon.leinen@switch.ch](mailto:simon.leinen@switch.ch)>

# Our core beliefs



Together for **greater capability, convenience and security** in the digital world.

# Mission



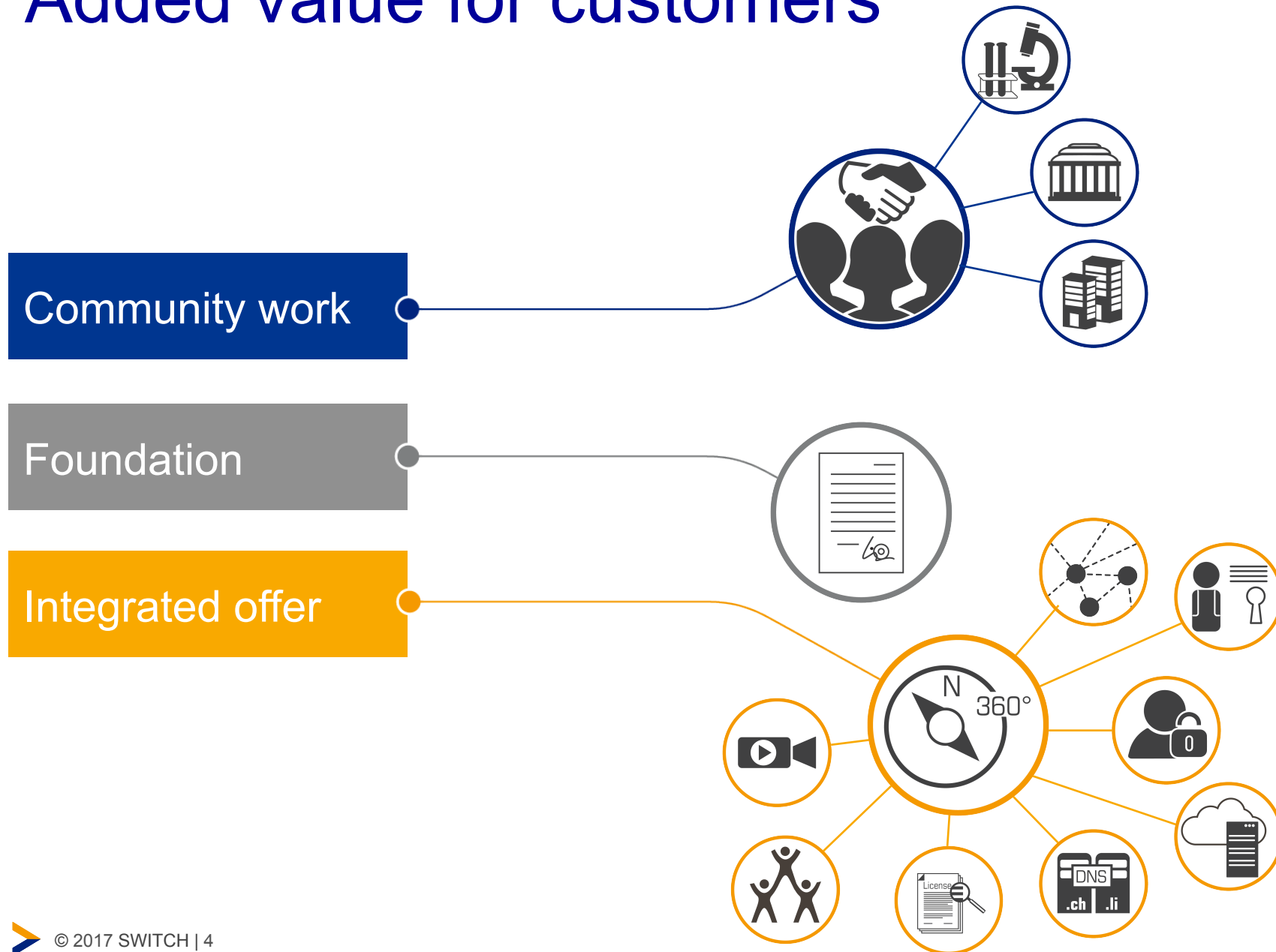
SWITCH is an **integral part of the Swiss academic community.**

Based on our **core competencies**

- Network
- Security
- Identity Management

SWITCH offers collaboratively developed ICT solutions that empower users in and beyond the academic world to achieve leading edge results in a globally competitive environment.

# Added value for customers



# Foundation purpose

## Excerpt from the deed of foundation

Berne, 22 October 1987



"The foundation has as its objective to create, promote and offer the necessary basis for the effective use of modern methods of telecomputing in teaching and research in Switzerland, to be involved in and to support such methods.

It is a non-profit foundation that does not pursue commercial targets."

# Our customers



## SWITCH community

- Swiss universities on tertiary level (academic sector) and their research institutions



## Extended community

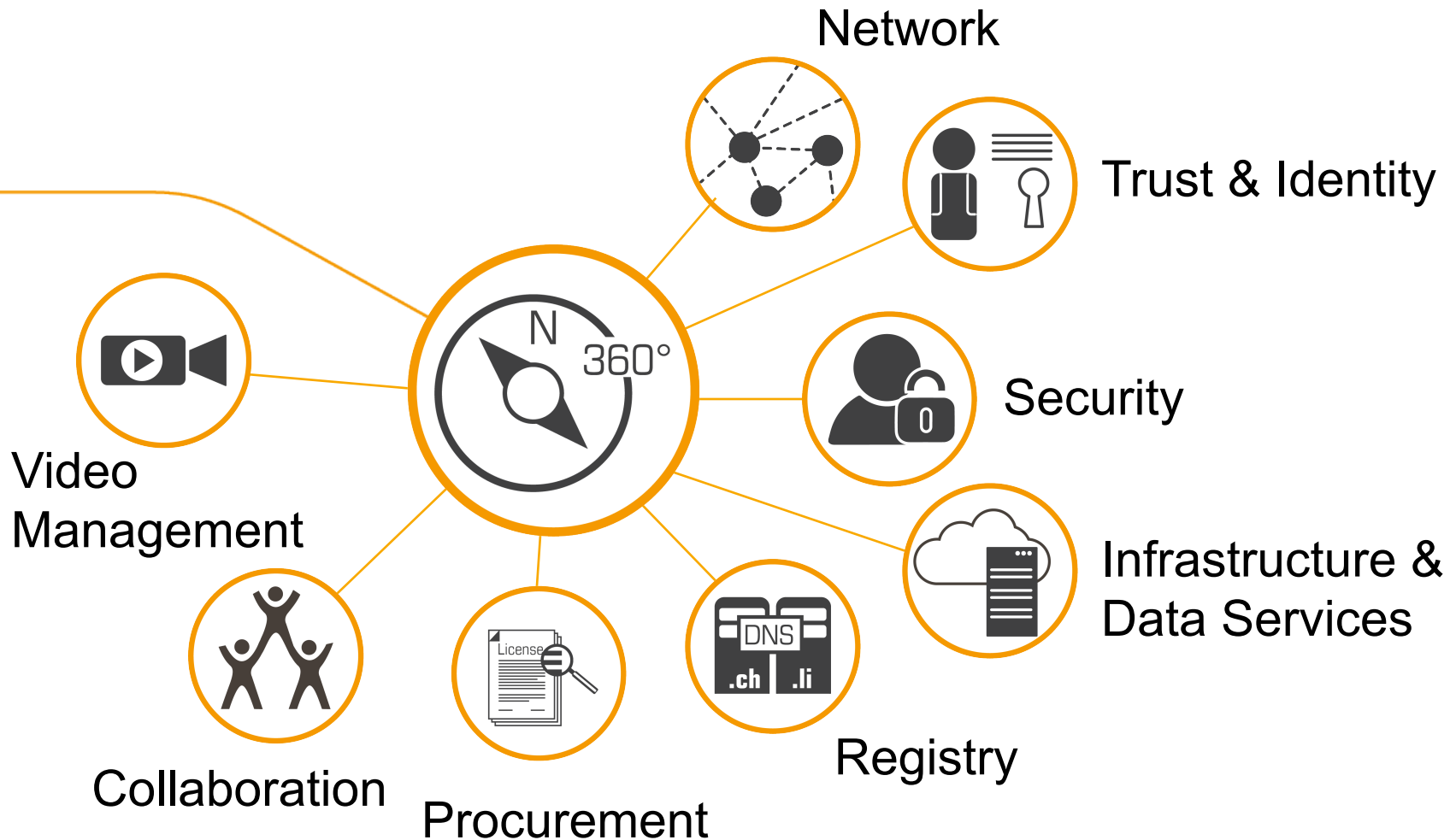
- Other organizations involved in research or education



## Commercial customers

- Registrars of .ch- and .li-Domain-Names, Swiss financial institutions, research-related industry and government

# Integrated offer



# Infrastructure & Data Services



# SWITCH



# Infrastructure & Data Services



# Your added value

## SWITCH made – Swiss made



- Swiss law and data location
- Scalable storage and computing power on demand with immediate availability in accordance to the need of – and controlled by – the institutions
- Flexible usage and charging model, no up-front investment
- Simple administration; integrated into the academic network of SWITCH; security and identity services included
- Support for academic use cases
- Created together with you

# Our customers



## Higher education

- Cantonal universities
- ETH domain with research institutions
- Universities of applied sciences
- Universities of teacher education

## University-related organizations

- Spin-Offs
- Research institutions
- eLearning Center
- University hospitals

# Our offer



- SWITCHengines
- Virtual Private Cloud (VPC)
- SCALE-UP (Project)\*

\* For developing academic services with 9 universities, as part of the „Scientific Information“ projects mandated by swissuniversities.

# SWITCHengines



Customer tailored computing and storage performance for universities, research and teaching –further developed in the SCALE-UP project mandated by swissuniversities.

## Customers

- Universities
- Research institutions
- eLearning Center
- University hospitals
- Spin-Offs

## Services

- SWITCHengines (IaaS)
- Virtual Private Cloud (VPC)
- SCALE-UP (academic project)

## Your benefits

- Your data in Switzerland
- Integrated network and security
- Support for academic use cases
- Simple administration and billing
- Created together with you

# SWITCHengines Images

- We provide [“official” images](#) of current versions of Ubuntu, Debian, CentOS, Fedora, NixOS(!) and Windows Server
- Other than these “bare OS” images, we also have a few “appliances”, e.g. R Studio, Spark Zeppelin (GPU-enabled Ubuntu in the near future)
- All images should be “secure enough”:
  - Auto-updating for security fixes
  - No default passwords—access over SSH w/public-key auth.
  - No particular services
- We try to [keep those images fresh](#)
  - Current method: The intern regenerates them every 1<sup>st</sup> of the month
  - There is some basic testing (manual )-:

# “Lifecycle Management”

When we publish new images, we

- Rename the previously-current images (“CentOS 7 (SWITCHengines) 2017-09-25”)
- Publish the new image with the canonical name (“CentOS 7 (SWITCHengines)”)
- “Unpublish” the previous image by removing the “public” flag

Consequences:

- Instances from old images continue working
- Users won’t be able to *rebuild* them ☹️
- Many old images are in our Ceph/RBD cluster
- Who knows whether/how much they are still used?

# Possible Areas of Joint Work

- Agree on principles for OS images
- Share the load building, testing, and supporting(?) them
- Contribute to OpenStack improvements
  - Image life-cycle (hot topic in Glance right now)
  - Presentation of (many) images in Horizon dashboard
  - Enable user-to-user sharing of images
- Discuss!



30 Years

SWITCH – an integral part of the Swiss academic community since 1987.

[www.switch.ch/30years](http://www.switch.ch/30years)

