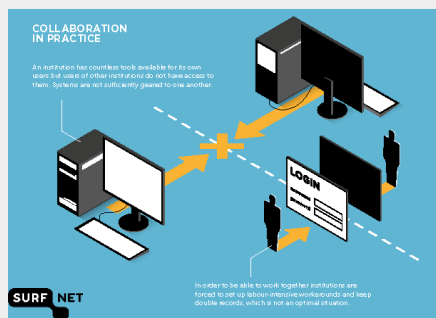


# VIRTUAL CAMPUS HUB

Part of Explore Energy

## Cross-border collaboration

Four universities in Europe have formed a network in order to share applications for teaching and collaboration in renewable energy. eduGAIN facilitates secure and efficient connections.



*The challenge: every university has many in-house applications but they are not sufficiently geared to collaboration with other institutions.*

## Virtual Campus Hub

The Virtual Campus Hub consortium (2011-13) consists of:

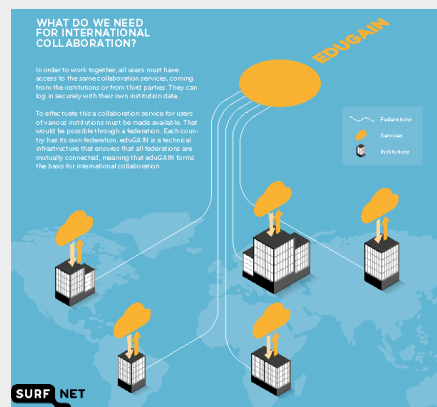
- Technical University of Denmark (DTU)
- Royal Institute of Technology (KTH), Sweden
- Eindhoven University of Technology (TU/e), the Netherlands
- Politecnico di Torino (Polito), Italy.

The vision of a virtual university campus embraces education, research and innovation just like a real campus environment would do.

## A proof of concept

The Virtual Campus Hub simulates a situation where students and teachers from four universities need to access virtual applications from the other partners with the user name and password from their local university. The applications include:

- E-learning courses
- Online examination tools
- Remote laboratories
- A common MS SharePoint site
- A virtual incubator.

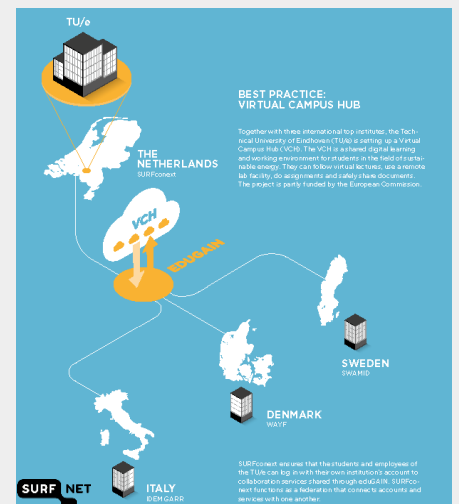


*The E-infrastructure behind: institutions are connected to a national federation and federations are interconnected via eduGAIN.*

## Lessons learned - technical

- Scalability of adding IdPs and SPs to a VO is important
- Scaling up VOs must be kept manageable (cross border group management, account linking)
- Towards FIM as a utility service (plug-and-play)

- Unified communications across borders should be addressed



*Setting up the environment: involved federations from Denmark (WAYF), Sweden (Swamid), the Netherlands (Surfnet), and Italy (IDEM-GARR).*

## Lessons learned - organizational

- Federations should act like knowledge brokers rather than being just operators
- Federations focus mainly on supporting IdPs and less on SPs. This poses a serious barrier to further adoption of FIM.
- Access for industry IdPs and other kinds of IdPs is desired
- It is important to better explain AAI to user organizations

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