

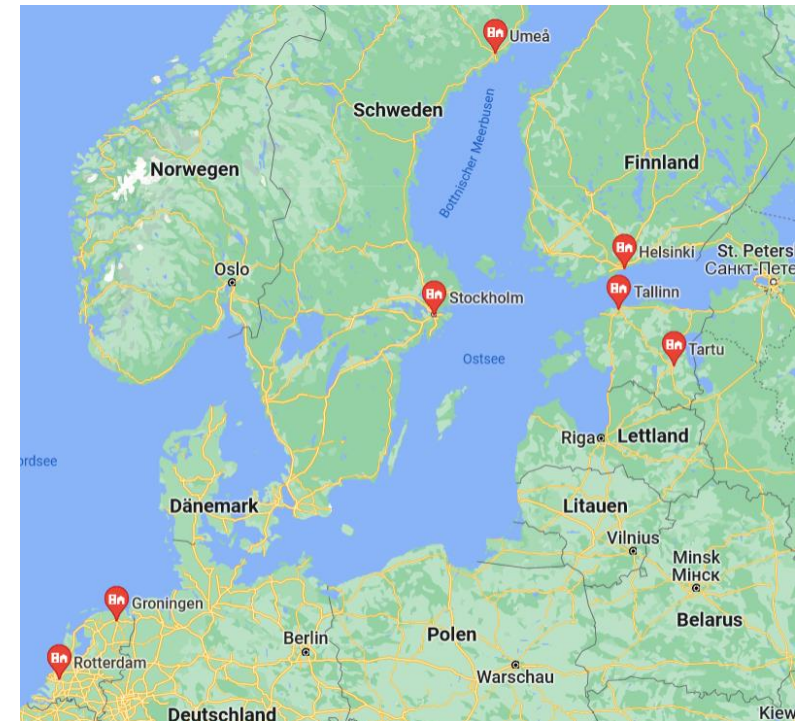
# eGovernment and Universities Lessons learnt

EUNIS Conference 2023, Vigo, 16.06.2023

Dr. Harald Gilch / Dr. Mathias Stein

# Background

- HIS-HE project "eGovernment in European comparison: how are universities embedded in national eGovernment and what are the challenges and opportunities for the digitisation of universities".
  - 07/08.06.2022: Estonia
    - Tallinn University of Technology
    - University of Tartu
  - 09/10.06.2022: Finland
    - University of Helsinki,
    - Metropolia University of Applied Sciences, Helsinki
    - DIGIVISION 2030, Helsinki
  - 13-15.06.2022: Sweden
    - University of Umeå
    - KTH Royal Institute of Technology, Stockholm
  - 22.09.2022, 25/26.10.2022: Netherlands
    - Erasmus University Rotterdam
    - DUO Groningen
    - University of Groningen



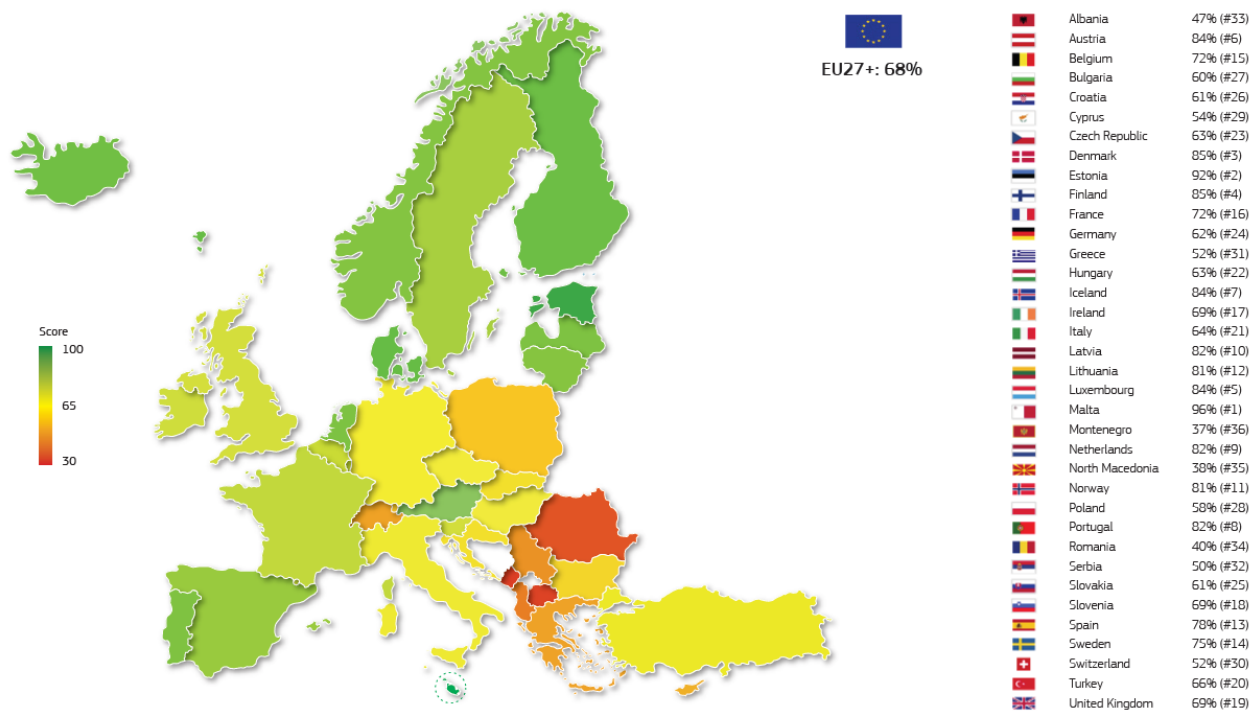
# Background

- Higher education is centrally organised in all countries visited. Studies are oriented towards the Bologna model and essentially divided into universities - "Fachhochschulen".

Country	Size	Universities	Degrees
Estonia	approx. 1.3 million inhabitants <i>comparable size:</i> <i>Mecklenburg-Western Pomerania</i>	6 state + 1 private universities 8 state + 5 private academies	BA, MA, Doctor
Finland	approx. 5.5 million inhabitants <i>comparable size:</i> <i>Hesse</i>	14 Universities 24 Universities of Applied Sciences	BA, MA, Licentiate, Doctorate
Sweden	approx. 10.5 million inhabitants <i>comparable size:</i> <i>Baden-Württemberg</i>	14 state + 4 "independent" universities 24 state + 10 "independent" universities of applied sciences	BA, MA, professional diploma, licentiate, doctorate
Netherlands	approx. 17.1 million inhabitants <i>comparable size:</i> <i>North Rhine-Westphalia</i>	13 state universities More than 50 universities of applied sciences various. Private universities	BA, MA, PhD

# Results

- E-government is more developed in all countries visited - especially in the areas of finance/taxation and health. Universities benefit from these framework conditions - digital workflows, digital signatures and digital authentication are generally made possible for public administration and thus also for universities.



Placements in the eGovernment benchmark:

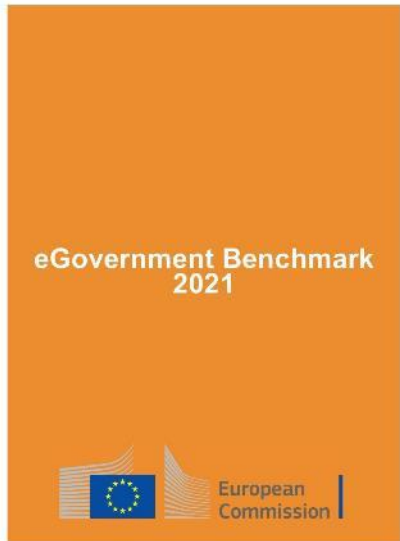
- 1) Malta (96%)
- 2) **Estonia (92%)**
- 3) Denmark (85%)
- 4) **Finland (85%)**
- [...]
- 9) **Netherlands (82%)**
- [...]
- 14) **Sweden (75%)**
- [...]
- 24) Germany (64%)

Source: European Commission, eGovernment Benchmark 2021. Entering a New Digital Government Era, Brussels, 2021, p. 7.

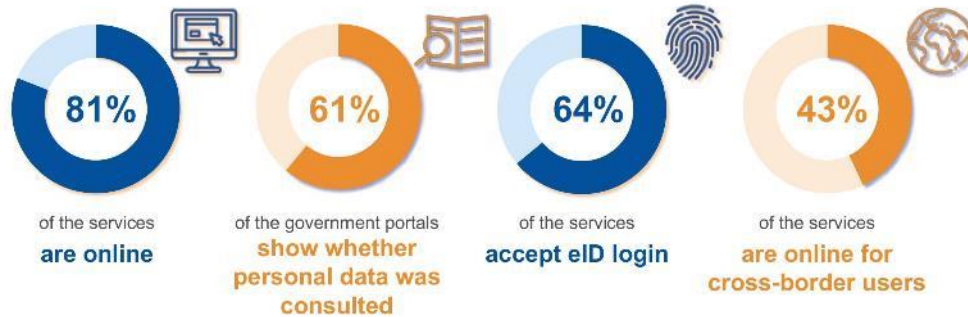
Figure 2 : Country overall eGovernment maturity (EU27+ biennial average)

# Results

- E-government is more developed in Estonia, Finland and Sweden - especially in the areas of finance/taxation and health. Higher education institutions benefit from these framework conditions - digital workflows, digital signatures and digital authentication are thus generally made possible for public administration and thus also for higher education institutions.



## Key Figures for the EU27+ Countries



EU27+ overall performance: 68%

Placements in the eGovernment benchmark:

- 1) Malta (96%)
- 2) **Estonia (92%)**
- 3) Denmark (85%)
- 4) **Finland (85%)**
- [...]
- 9) **Netherlands (82%)**
- [...]
- 14) **Sweden (75%)**
- [...]
- 24) Germany (64%)

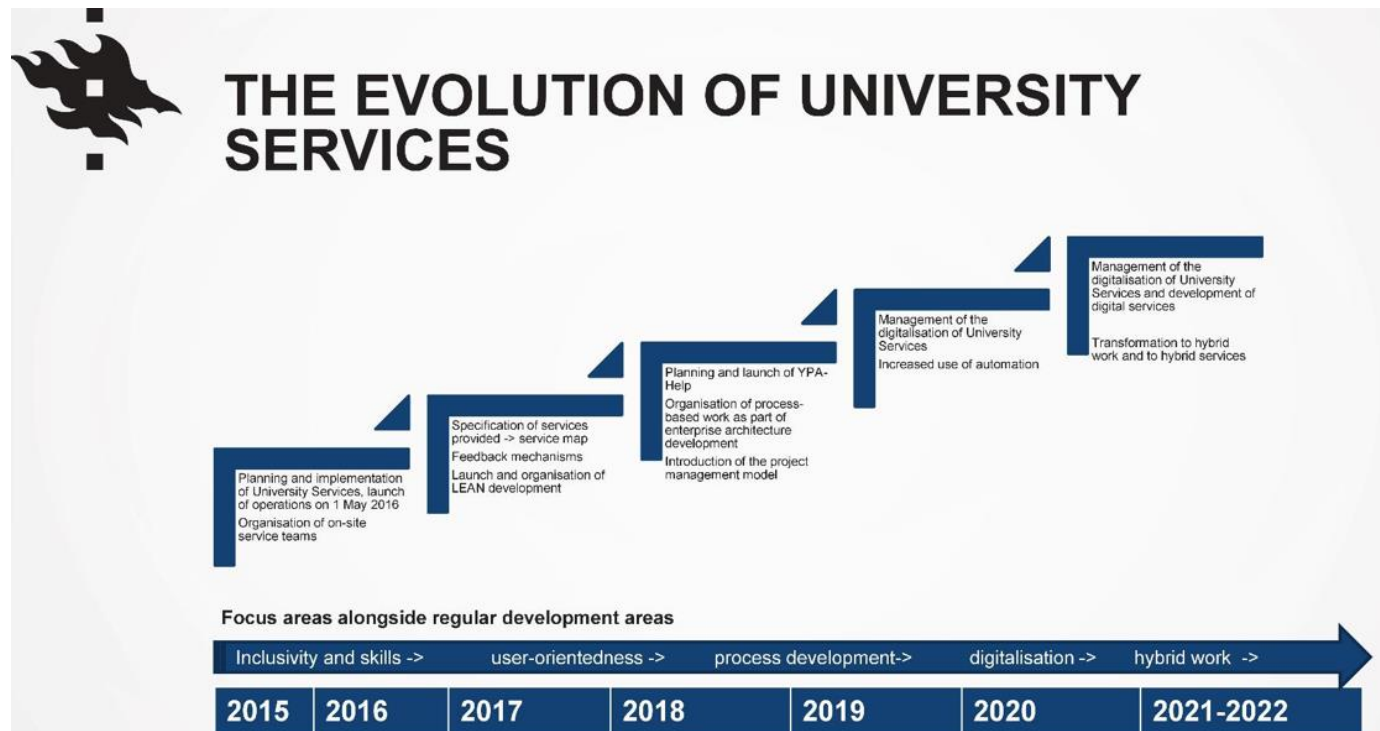
Source: European Commission, eGovernment Benchmark 2021. Entering a New Digital Government Era, Brussels, 2021, p. 7.

- Higher education institutions in Estonia, Finland, Sweden and the Netherlands can be seen less as one of the pioneers in digitisation in public administration than in Germany. Due to their high heterogeneity and complex processes, they are rather considered "laggards". Pioneers, on the other hand, are e.g. the healthcare sector or the tax administration.

In some of the universities and projects visited, project and management staff have been poached from digitalisation projects in the health sector, among others. In addition, authentication systems from the banking sector are also used or discussed for application and enrolment in Finland and Sweden, as these are very widespread.

# Results


- With the digitalisation of processes, the tasks and job profiles of employees change (these tend to become broader because digital support is available). The extent to which this can also save human resources depends largely on how far digitisation is embedded in a general change management (e.g. in the context of centralisation and the focus on "services").



Excerpt from a presentation by the University of Helsinki:

- Restructuring process of the administration with a focus on centralisation, service orientation and digitalisation
- No administrative staff in the faculties, but good and also tailor-made services from the central administration

- IT services are - with few exceptions - centralised. IT services and digital services require additional and increasing resources (money and staff). In order to limit the increase, it is necessary to limit the diversity of the systems managed. However, due to the heterogeneity of users and applications, it must still be possible to use virtually everything at a university.



## FOCUSING TO SAP SYSTEMS (FICO AND HR)

Systems amount			
	FICO	HR	Common
2018	SAP + 11	SAP + 4	SAP + 3
2021	SAP + 2	SAP + 1	SAP + 2

HELSINGIN YLIOPISTO  
HELSINGFORS UNIVERSITET  
UNIVERSITY OF HELSINKI

Excerpt from a presentation by the University of Helsinki:

- Reduction of IT systems managed in finance and human resources within 4 years



# Results

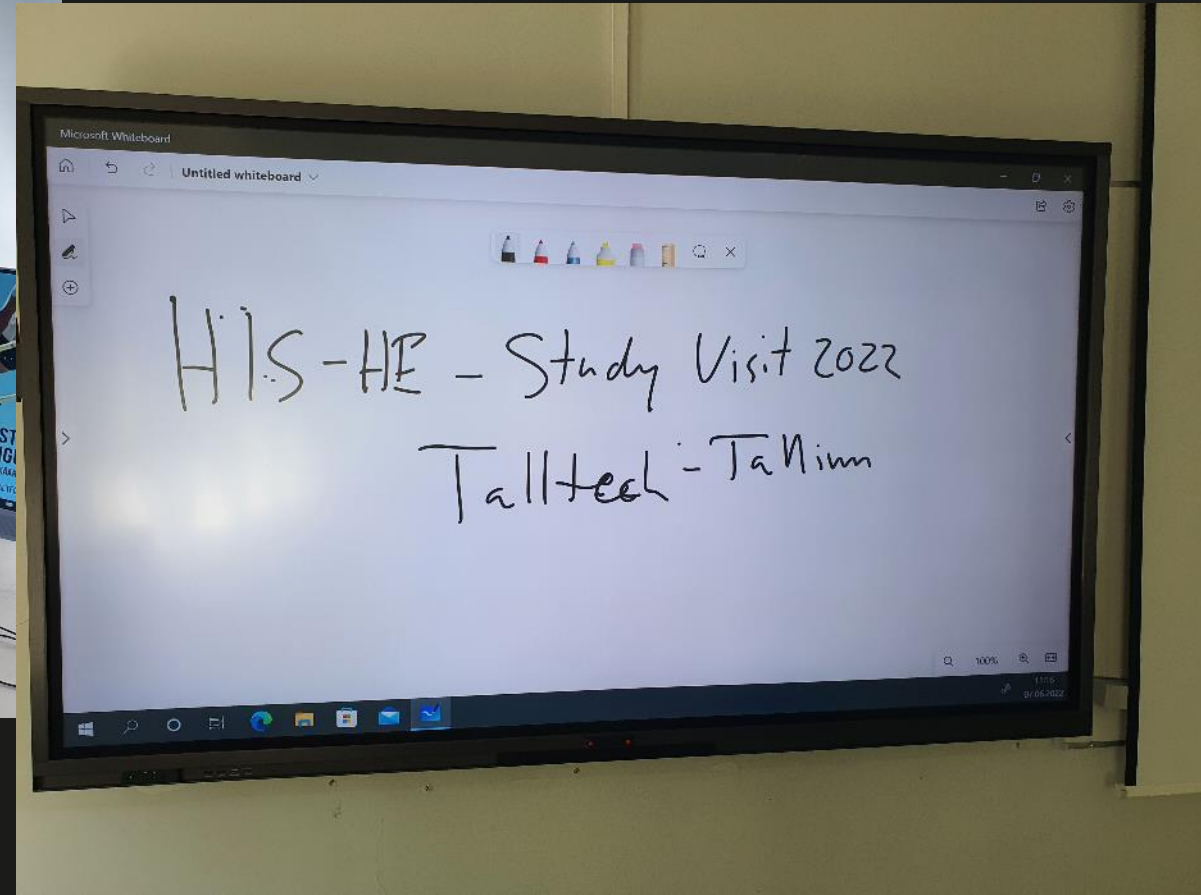
- Hybrid forms of teaching and learning are core elements of future-oriented higher education teaching. All the universities visited have hybrid teaching and learning spaces on a large scale or are experimenting with them. Important: as simple and uniform operation as possible

At the University of Umeå, for example, the Learning Lab Hybrid project is a cooperation between the Centre for Educational Development and Akademiska Hus. The aim is to develop standards for hybrid teaching and learning spaces with scientific support, which can be implemented nationwide via Akademiska Hus.



Learning Lab Hybrid (Zoom room) with current seating as well as wall panelling and carpeting for testing purposes.

# Tallinn University of Technology



TalTech - Seminar room for hybrid teaching with room microphones, speakers, camera and Microsoft Whiteboard

# University of Tartu

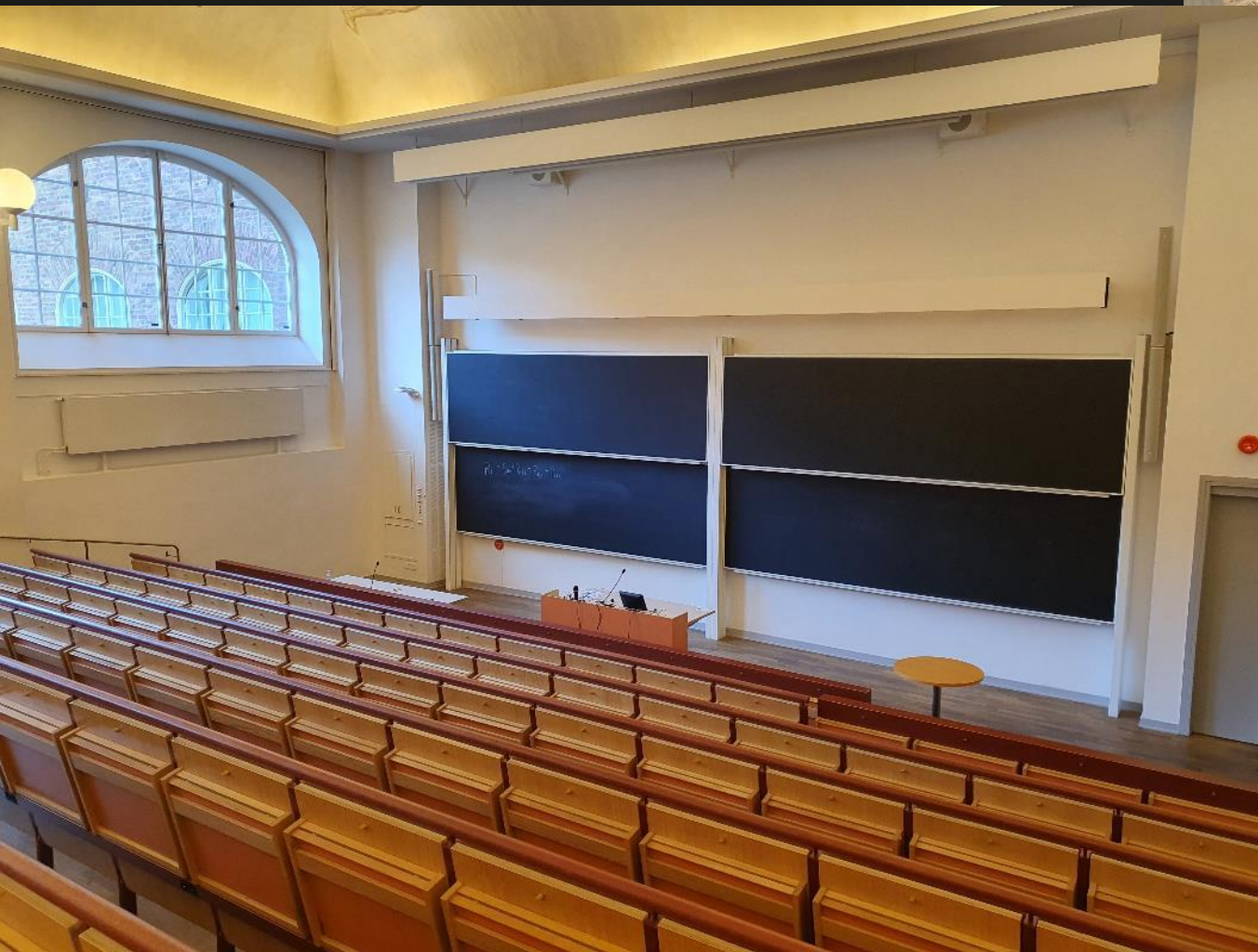


University of Tartu - Seminar/Project Room

University of Tartu - Control panel for media technology



# KTH Stockholm



KTH Stockholm - auditorium with technology and tradition

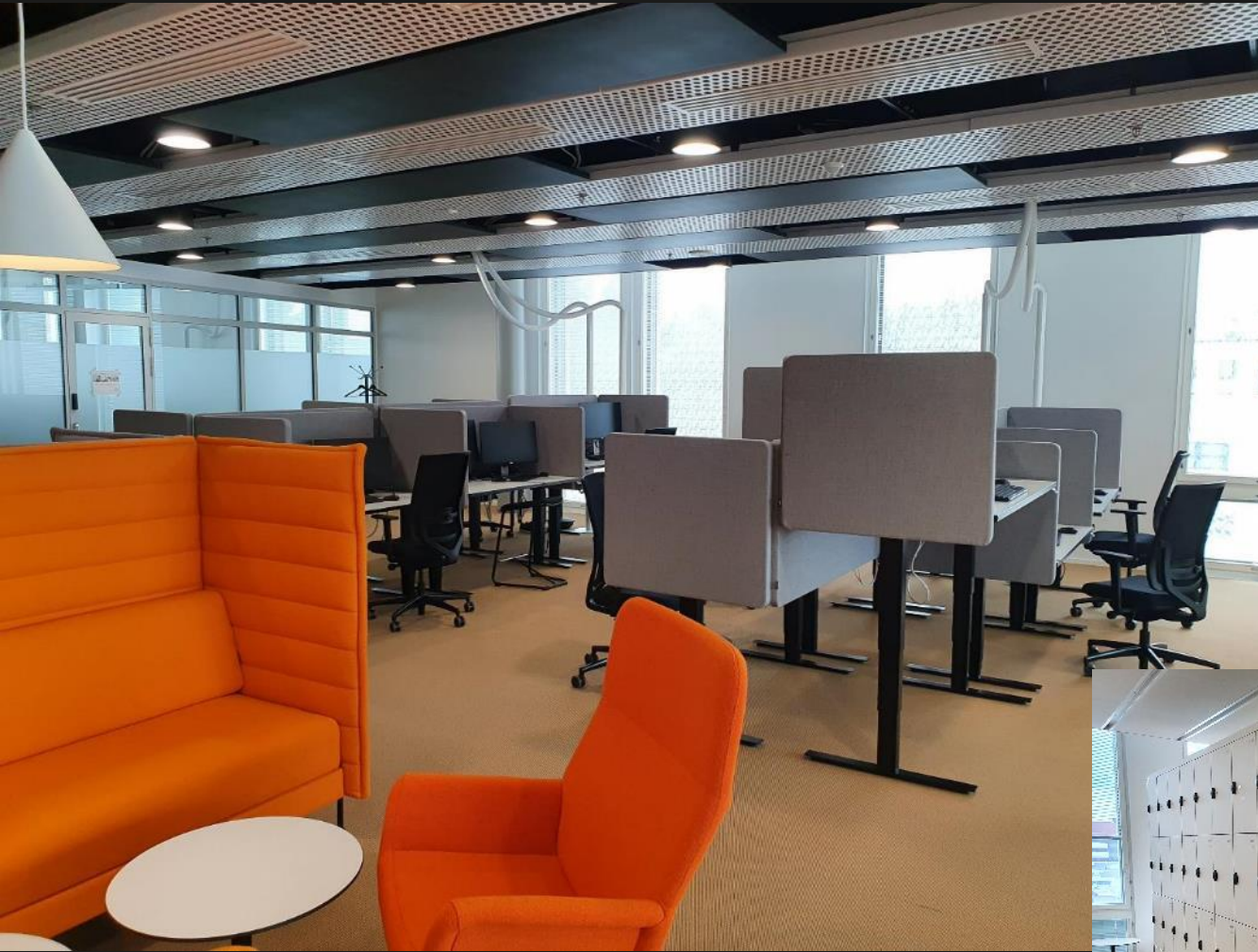
# Results

- Digitisation enables new work and space models in the departments and administration as well. Mobile working helps to move away from individual offices towards group offices with meeting rooms and individual workstations for special uses.



Metropolia UAS: Open-plan office for administrative and research/teaching staff.  
Only employees in the areas of finance, human resources and IT have their own fixed workplaces.

# Metropolia UAS



Metropolia - open-plan offices for staff (administration and research/teaching)



Metropolia - segregated "cells" allow for phone calls, team meetings and confidential conversations



Metropolia -  
Lockers for the  
employees:inside

# University of Groningen



U Groningen - Student Information and Administration (SIA)  
Single offices



U Groningen - Student Information and Administration (SIA)  
Open plan office "Office Gardens"

- Even in digitised processes and procedures, there must always remain possibilities to carry out the process non-digitally. The variety of possible variations and users is so great that it will never be possible to achieve a complete and 100% digitised solution (e.g. invoices from foreign suppliers, foreign students without credit card or digital ID).

According to the universities in Estonia, about 95% of the processes are digitalised. Invoices must be issued digitally. Non-digital processes are still required, especially in processes with foreign students, researchers or suppliers.

In Finland and Sweden it also became clear that - partly due to legal requirements - processes such as application processes must also be offered non-digitally. In terms of barrier-free access, people who do not have digital possibilities must not be excluded from access.

**But:** tendency to digitise as many processes as possible. In Sweden, for example, invoices can be submitted to universities in paper form. However, these are collected and digitised centrally throughout the country by the Agency for Digital Government (DIGG) (<https://www.digg.se/en>).



# University of Tartu

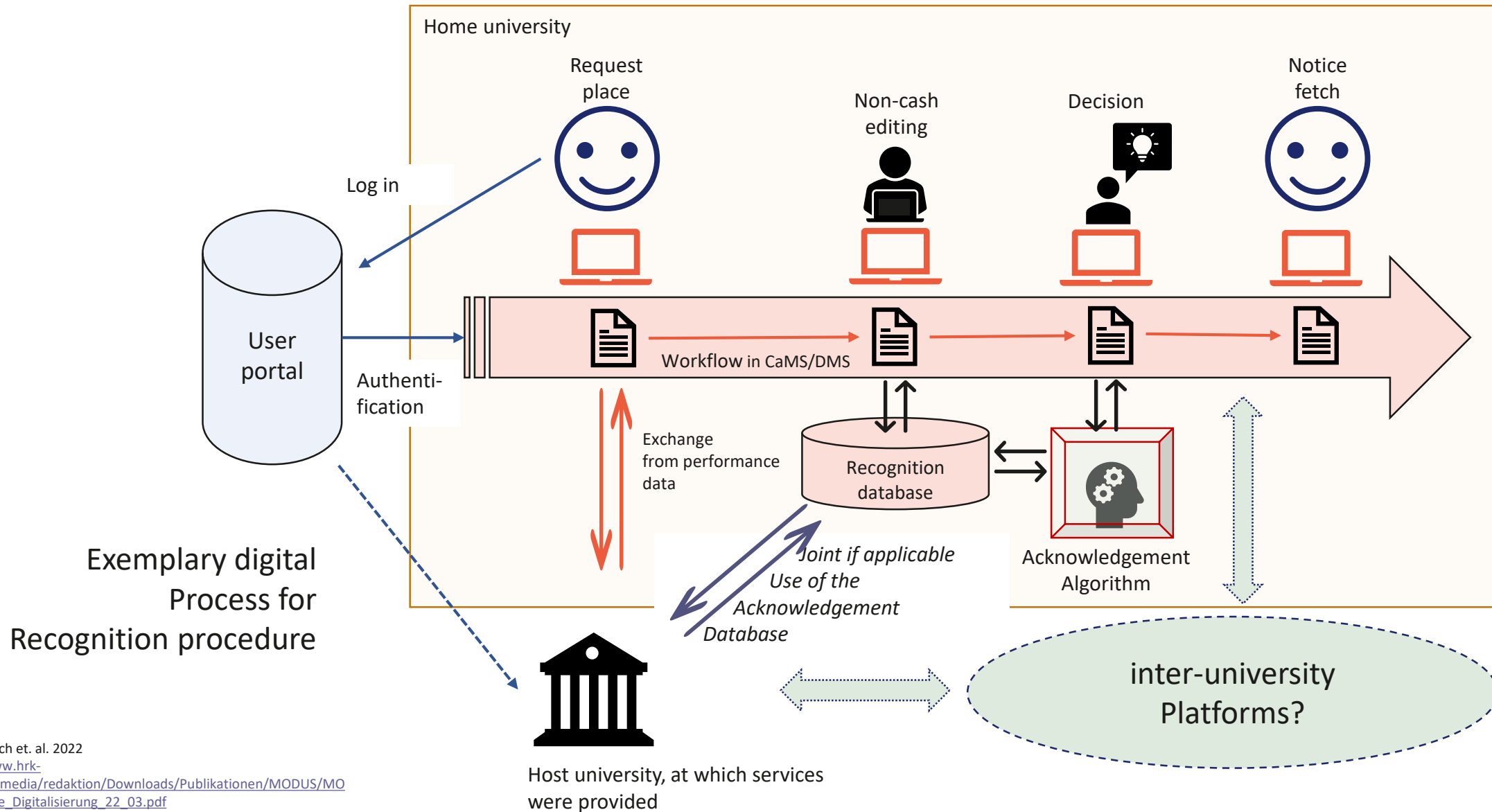


University of Tartu - Filing cabinet in the Financial Office

University of Tartu - Cash desk in the Financial Office



# Digital recognition procedures as a European "construction site"



Source: Gilch et. al. 2022  
[https://www.hrk-modus.de/media/redaktion/Downloads/Publikationen/MODUS/MODUS\\_Studie\\_Digitalisierung\\_22\\_03.pdf](https://www.hrk-modus.de/media/redaktion/Downloads/Publikationen/MODUS/MODUS_Studie_Digitalisierung_22_03.pdf)

# Digital recognition procedures as a European "construction site"

- Estonia: the universities each have their own CaMS, which do not yet have interfaces. Competition is fierce, so digital recognition processes are currently not established either between universities in Estonia or in the European context.
- Finland: There are two overarching CaMS solutions (for unis and for UAS), but they are not used for the exchange of individual study achievements. Digital authentication and digital certificates have been realised, but the high diversity of individual achievements still leads to downloads and uploads. Within the framework of DIGIVISIO 2030, however, a common digital higher education landscape is to be developed, which will then enable students to "free float" between universities.
- Sweden: There is a common CaMS for all higher education institutions. Nevertheless, digital recognition processes between Swedish higher education institutions have not yet been realised.
- The Netherlands: While digital certificates and digital enrolment have been realised, the digitisation of study achievements is only in development. DUO is in the process of creating a corresponding offer. At least Erasmus University is working on revising its degree programmes with a view to greater permeability.

- Openness in the use of data (open data) is very widespread in Scandinavia and data protection does not seem to be a criterion for exclusion - the decisive factor is rather that someone (chancellor / rector) takes responsibility.

Use of study-related data using the example of U Helsinki for:

- studyinfo.fi (central application portal incl. overview of the application process and previous school results),
- KOTA database (higher education statistics),
- National Data Warehouse (Virta) - contains **all** examination and study results (since 2014),
- Virta contains a parallel publication information service,
- Virta is linked to Social Insurance Institution (KELA), National Supervisory Official for Welfare and Health (Valvira) and Finish Student Health Service (YTHS / FSHS), among others.

Example KTH Stockholm: Zoom and MS 365 are central services for all university members, the NORDUNET Zoom installation is operated by the Swedish SUNET and is considered secure in terms of data protection.

[Home](#) / [About us](#) / Data protection

## DATA PROTECTION

At the University of Helsinki, we value your privacy and your right to protect your personal data. Everyone has the right to know what data concerning them are being kept and how those data are processed. On this website, we collect data protection statements pertaining to the processing of personal data at the University of Helsinki.

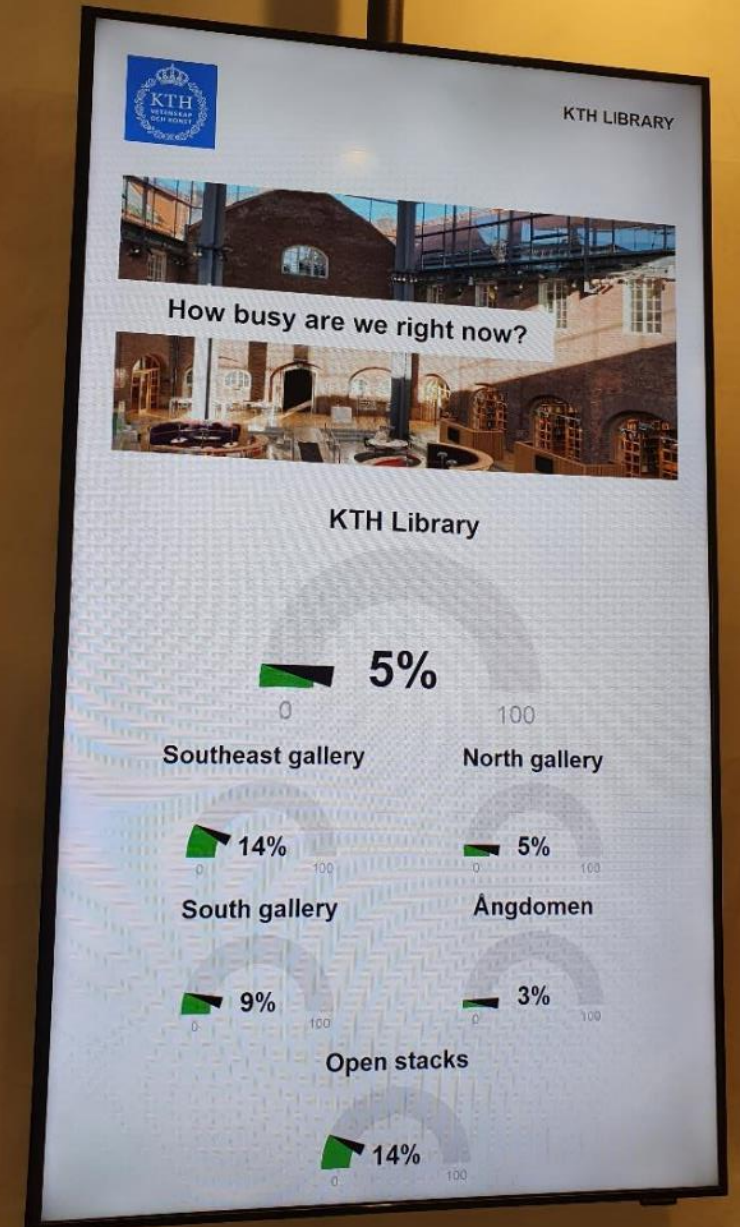
Q: University of Helsinki; <https://www.helsinki.fi/en/about-us/data-protection>

# KTH Stockholm

KTH Stockholm - Monitoring occupancy rates in the library



KTH Stockholm - Library



# Erasmus University Rotterdam



Workstation in the library reading room

**1 Reserve your study session online**

After booking you will receive a confirmation email. Keep it at hand when you enter the Library.

Haven't reserved yet? 

**2 At your study spot:**

Upon arriving check in via the QR-code with your unique 3-digit code (sent to you by email upon booking).

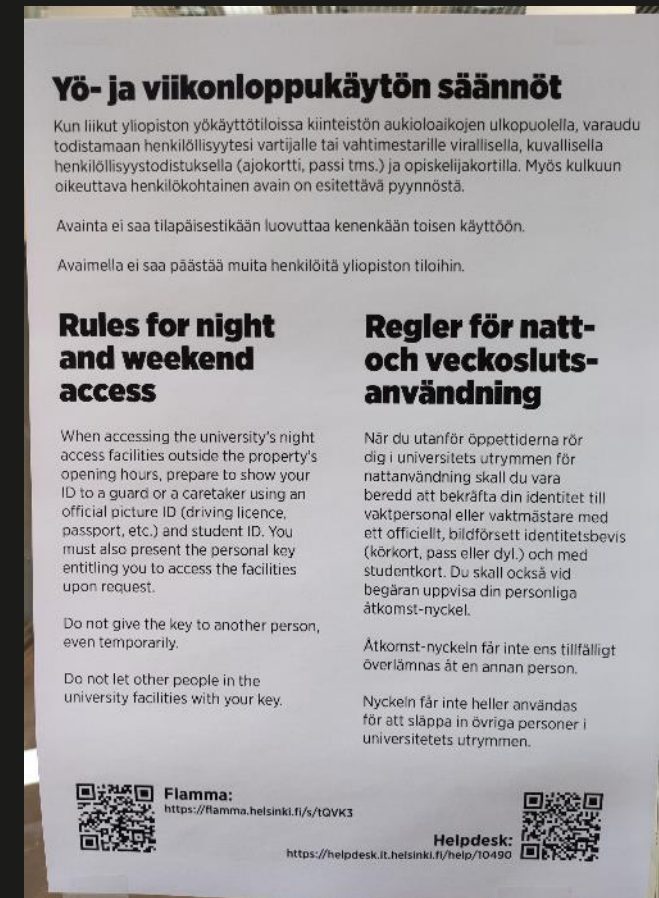
Be aware to check in within the first 30 minutes of your session otherwise it will be cancelled automatically!

**3 Finished?**

Always check out by scanning the QR-code and enter your 3-digit code again to claim the remainder of study time you might have. It will be refunded to your weekly amount of Library study time.

# University of Helsinki

Room booking systems: Tutkijatila Library -  
Booking for staff and researchers  
via office365 calendar



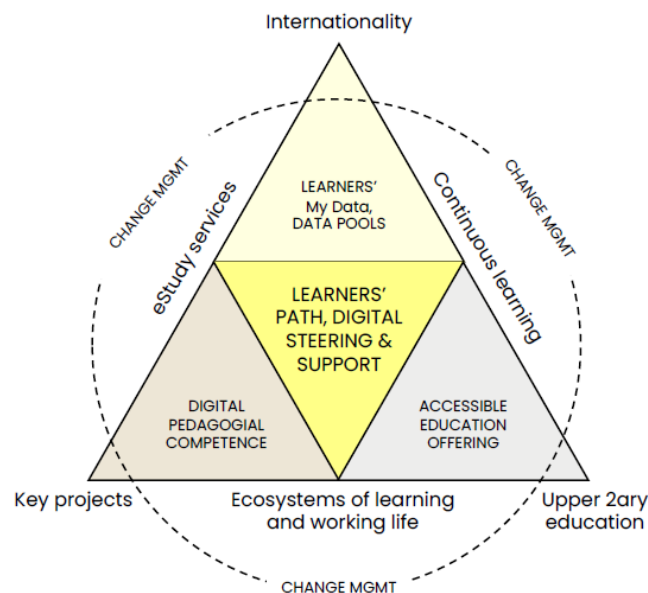
- The academic areas of the universities in particular are very individual and have high demands on their academic freedoms. This makes it difficult to introduce standardised processes in the area of programme administration, so that although application-admission-enrolment is carried out digitally with digital certificates and eID (but the mutual recognition of academic achievements is not yet fully digitised).

In all countries, tendency to cooperate only in selected areas or due to legal requirements. The higher education institutions attach great importance to maintaining autonomy and special features. For example, due to different systems in student administration, there is only limited exchange at the level of credits between the universities in Estonia and Finland. And in Sweden, too, there is still potential for optimisation with the common system LADOK.



# Results

- Higher education institutions will continue to develop in such a way that students will seek out their achievements from various offers from different higher education institutions and combine them into a degree. This applies both to traditional studies and - even more so - to lifelong learning. Corresponding digital standards and processes with which students can combine their achievements are also currently being developed in Scandinavia - especially Finland. Cooperation at European level is necessary.

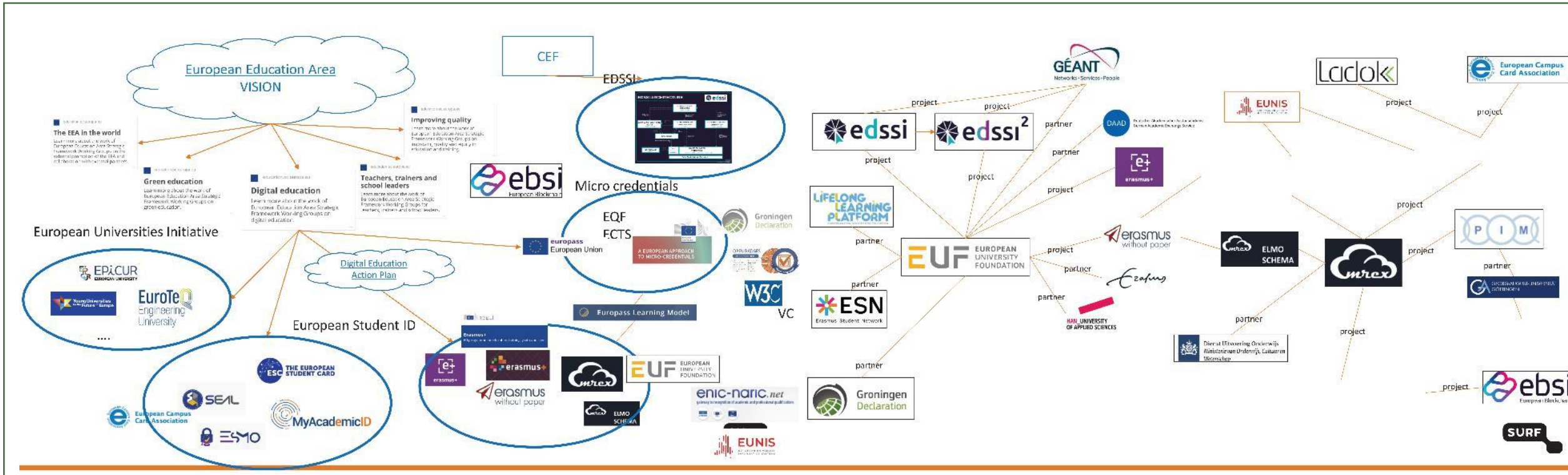


Example Finland: DIGIVISIO 2030 as a project of all Finnish higher education institutions with the goal "to create a future for learning that benefits higher education institutions, learners and our society as a whole" - among other things by establishing a national digital service platform and supporting higher education institutions in change management.

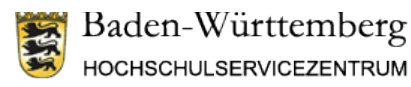
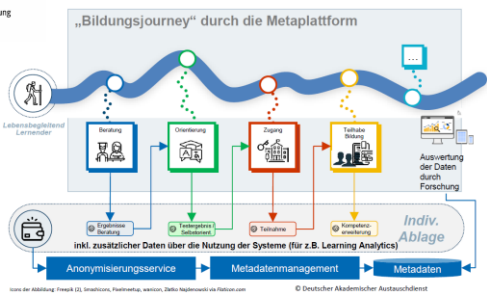
<https://digivisio2030.fi/en>

The challenge is to completely redesign university financing, for example, in addition to the joint academic processes.

# Results



Q: Christien Bok, SURF, Netherlands: Presentation at EUNIS 2022 in Göttingen



„Big Picture“

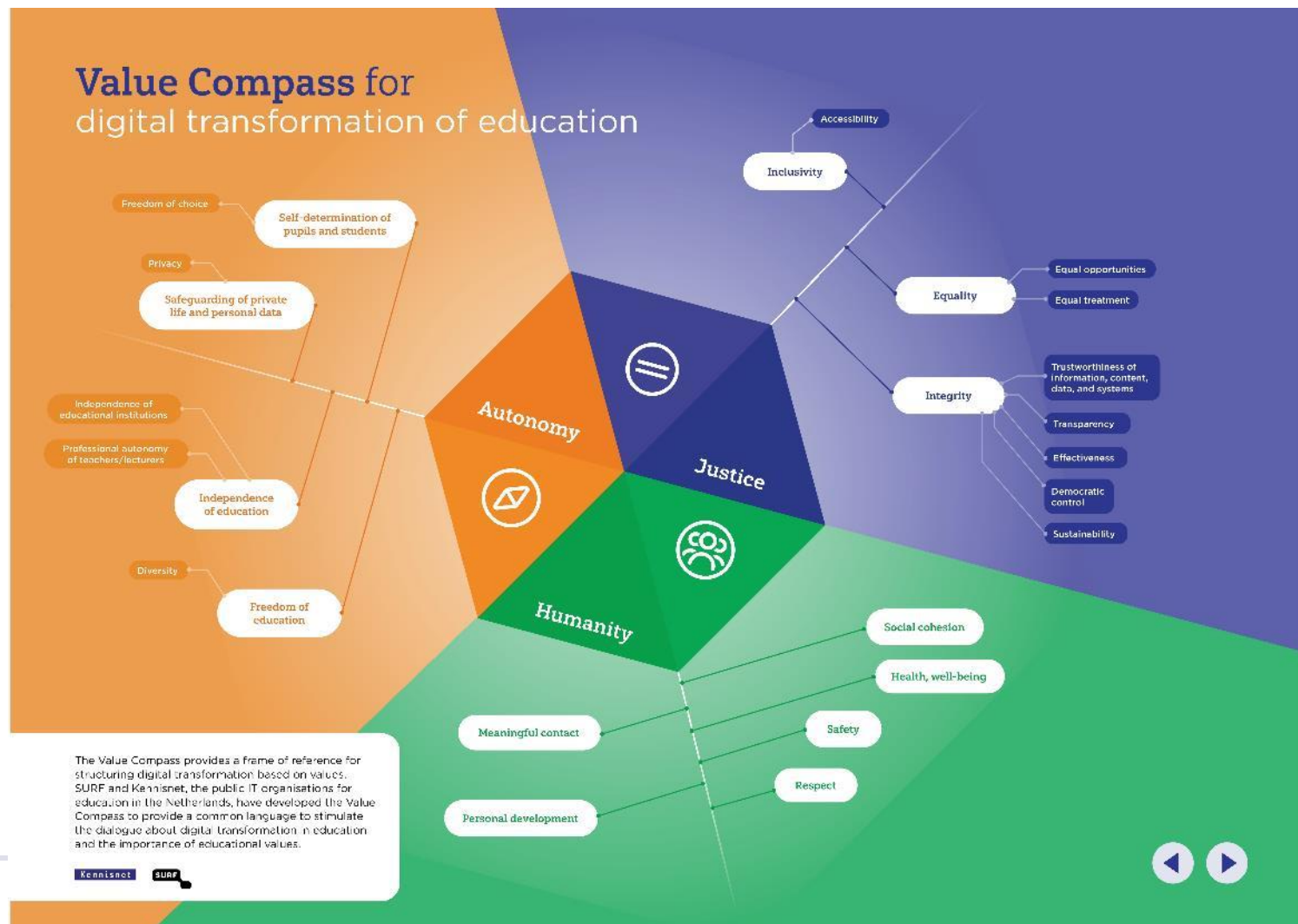


Die Koordinierungsstelle für die Datenverarbeitung in der Hochschulverwaltung an den staatlichen Fachhochschulen in Bayern (KDV)



# Results

- Data protection and IT security is the central challenge alongside the increasing demands on financing.

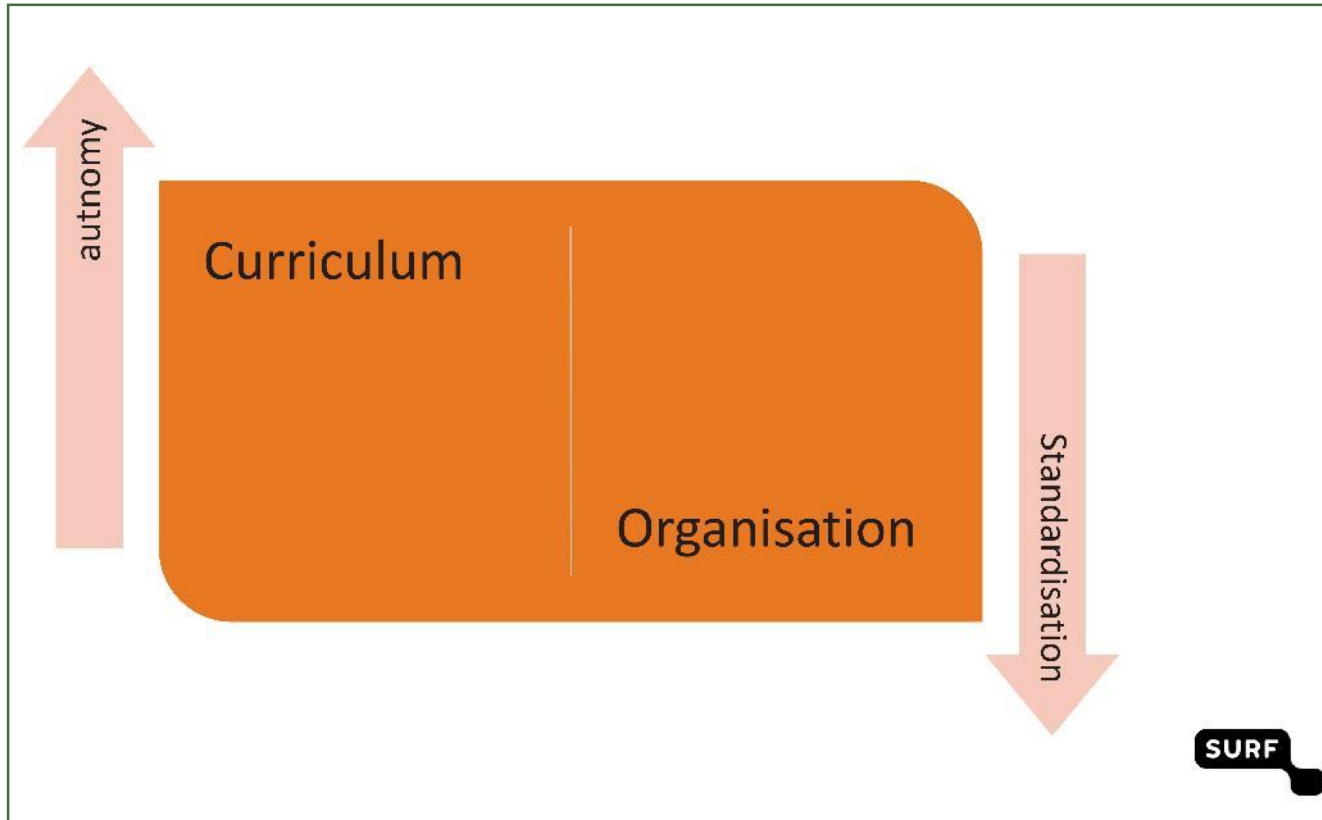


Source: SURF  
<https://www.surf.nl/files/2022-01/surf-value-compass-english.pdf>

# Results

- For digitisation processes, people must be taken along and involved. Barriers to digitisation are always individuals who, for a variety of individual and personal reasons, value manual and/or paper-based processes.





Q: Christien Bok, SURF, Netherlands: Presentation at EUNIS 2022 in Göttingen

## Recommendations

- proceed strategically
- cooperate and network
- Learning from each other
- Keeping an eye on national and international developments
- Keeping an eye on the values of research and teaching
- Ensure data sovereignty
- Prioritise IT security
- act proactively

Thank you for your attention.

Please do not hesitate to contact us if you have any questions!

**Dr Harald Gilch**

HIS Institute for Higher Education Development e. V.  
Goseriede 13a | D-30159 Hannover | [www.his-he.de](http://www.his-he.de)  
[gilch@his-he.de](mailto:gilch@his-he.de)  
Phone: +49 511 169929-32 | +49 174 8816073