

Digital Sovereignty & Autonomy



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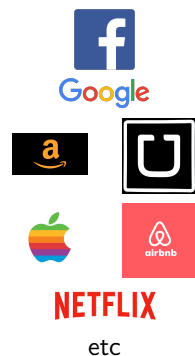
Digital Sovereignty & Autonomy

Global platforms

VS

Europe

China



etc



Who is this guy?

- ▶ Professor of computer security & privacy at Nijmegen, NL
 - Member of Royal Netherlands Academy of Arts and Sciences
 - Recipient of **Stevin premium** 2021, highest award in science in NL
- ▶ Formal (0.0) appointment at Philosophy
 - co-founder of **iHub**, together with Tamar Sharon
- ▶ Active in media, societal debates and parliamentary hearings
- ▶ Member of national Cyber Security Board; earlier memberships e.g.
 - intelligence law evaluation committee
 - advice committee on Covid apps
 - working group *Advies publieke waarden voor het onderwijs*, of VSNU/UNL, 2021
- ▶ Non-remunerated chair of Privacy by Design foundation — which runs the open source IRMA/Yivi app



EU / NL / Nijmegen / own perspective

- ▶ EU is **regulatory power**, but not a technology power
 - embedding EU values requires stronger digital autonomy
- ▶ **Open source** as a geopolitical instrument, to keep big-tech at bay
 - NL government is focusing stronger on “open, unless”
- ▶ **Public values** now at center stage in IT-debates in NL
 - pushed by junior minister for digitalisation (van Huffelen)
 - Dutch parliament wishes stronger EU-cloud, no transfer to US
- ▶ Nijmegen’s interdisciplinary **iHub** for digitalisation and society
 - with value-driven research agenda and own development/design lab
- ▶ Own team projects with strong “usable security” focus:
 - **IRMA/Yivi.app**, for attributed-based identity management
 - **PostGuard.eu**, for identity-based encrypted email & file transfer
 - **PubHubs.net**, for a new community network (still early work)



A question to think about

Would Dutch universities store their student / staff / teaching / research data in a Chinese cloud — say provided by Huawei?

- ▶ Let's assume a great offer, at low financial costs with good support
- ▶ and that Huawei has signed a Privacy Shield agreement with the EU

Would they?

I have little confidence that universities (or SURF) would not!

The Jitsi videocalling drama ...



Keuzehulp privacy videobellen

versie 3, augustus 2020

	Discord	FaceTime	Hangouts	Hangouts Meets	Houseparty	Jitsi*	Messenger	Signal	Skype	Talk	Teams	WhatsApp	WebEx	Zoom
Wat biedt de app?														
(groeps)chat (tekst)														
1-op-1 gesprekken (audio en/of video)														
groeps gesprekken (audio en/of video)														
zelf opzetten en beheren (self-hosted)														
deelname aan gesprek zonder account aan te maken														
gebruik in browser														
gebruik op verschillende platformen (cross-platform)														
Welke gegevens verzamelt de app?														
adresboek														
locatiegegevens														
gespreksgegevens														
gegevens over gesprekken (metadata)														
gegevens koppelen met gegevens uit andere producten of profielen														
Voor welke doelen verwerkt de app gegevens?														



What went wrong?

- ▶ SURF had a Jitsi server running, when Covid broke out
- ▶ Sudden need to scale-up; no coordination among universities
 - big commercial players promised they could deliver
 - universities choose individually what they saw as safest bet
 - operational goals prevailed, resulting in pragmatic choices
 - values ignored, big-tech as great winner
- ▶ SURF's attitude: you want junkfood, we give you junkfood!
 - vision / drive / innovative spirit (almost) disappeared
 - SURF has become too big & bureaucratic
 - no risk appetite anymore, self-preservation goals prevail
- ▶ When critical AP-evaluation (previous page) emerged, it was "too late"
 - no wish/drive to improve things, retroactively
 - (I worked on authenticated video "irma-meet"; no interest)

But ... there was the rectors' firm opinion from 2019

- ▶ Opinion article, by NL university rectors
 - *Digitalisering bedreigt onze universiteit. Het is tijd om een grens te trekken*, Volkskrant, 22/12/2019 — 3 months before Covid
- ▶ Stark contrast between **public tasks** & **private interest**:
 - (1) dependence on (US) company platforms, without influence
 - (2) they control universities' data, without transparency, oversight
 - (3) they analyse the data, for their own goals, learning, profit
 - (4) loss of autonomy of students & teaching staff
- ▶ Four solutions proposed, to "draw a line"
 - (1) sector should take responsibility for **public values**
 - (2) own efforts towards secure and responsible digital environment
 - (3) jointly negotiating, imposing our requirements/standards
 - (4) learn about platforms from other public sectors, like health

These "solutions" will be discussed one by one.



Solution 1: taking responsibility for public values

- ▶ A VSNU/UNL report appeared, two years later
 - a standard bureaucratic delay/postponement technique
 - report's impact is hardly visible
- ▶ SURF has a **public values** programme
 - surf.nl/publieke-waarden
 - it published a [Waardenwijzer](#) document
 - at the same time, SURF gives Microsoft a podium to claim that they do public values too — at *onderwijsdagen'22*, see YouTube
- ▶ Public values are now articulated indeed, but they do not get translated into “**daw the line**” decisions
 - at least, I don't see them; I'm happy to be corrected



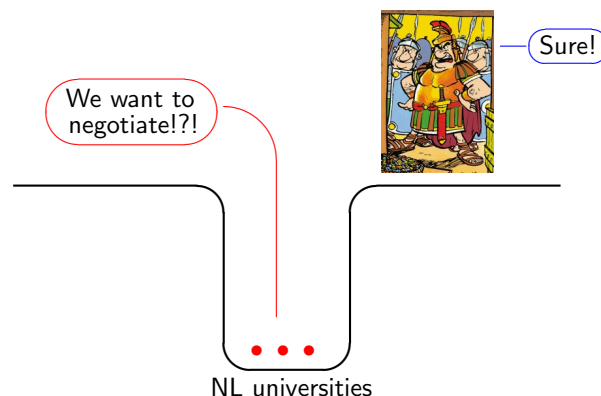
Solution 2: own environment effort

- ▶ ??? — very little activity
- ▶ Move into the cloud / cloud-based solutions has only intensified
 - big-IT forces universities into this direction
 - with tightly integrated “services”, like Teams, Authenticator, ...
- ▶ Also at the application level no visible movement, e.g.
 - Jitsi drama
 - Moodle is not adopted — open source learning environment
 - Adobe is becoming excessively expensive, but still used
 - “SPSS versus R” discussion still ongoing
- ▶ New concern: **protection** of own, non-big-tech infrastructure!
 - **SURFconext** as next target, since digital identity is strategic
 - Running our own **VPNs** — without risk of backdoors
- ▶ Half of French & German universities run their own **NextCloud**
 - what works there is called impossible in NL
 - In Fr & Ger they do take digital autonomy & sovereignty serious!



Solution 3: negotiate jointly

- ▶ Hailed as great success — in the slip-stream of NL government
- ▶ Really? Negotiate from a trapped position?



Solution 4: learn from other (public) sectors

- ▶ Similar lock-ins, e.g.
 - local government: Pink or Centric
 - hospitals: Chipsoft or EpicIt's unclear what has been (or can be) learned there
- ▶ learning from France/Germany looks more relevant
 - a visit to Berlin did happen recently, with **NextCloud** contact
 - follow-up? serious experiments?



Why care about privacy / autonomy?

- ▶ In essence, **privacy** is about **keeping data context**
 - what you tell your doctor should not end up in the supermarket
- ▶ For learning it is essential that pupils can make mistakes without consequences
 - this requires a safe & secure environment
 - data must not leave the learning context!
 - this directly contradicts “cloud” i.e. data under external control (underlying question: is Big-Tech part of the safe learning context?)
- ▶ Big-Tech ideology is about **personalisation**, undermining **institutional protection**, using false **empowerment** repertoire
 - they can handle and manipulate the individual
 - they fear self-conscious institutions that protect their values
- ▶ E.g. is **personalisation** such a great thing in learning?
 - isn't learning very much social?
 - should we let (US of CN) Big-Tech decide about these matters?

Somber conclusions

- ▶ I see no will to protect values in NL — in contrast to Fr, Ger
 - in NL only financially driven pragmatism
 - trans-atlantic, not European, orientation
 - PM Rutten: for vision, go to an optometrist!
 - *labbekakkerigheid*
- ▶ At the same time, broad sentiment: **how did we get here?**
 - and: how to make the trap less deep, or get out of there?
 - negotiations happen on “their” territory, about what is already lost
- ▶ European judges & Committee most active
 - there is a will there to protect EU citizens, values, interests
 - NL government is slowly, slowly following
- ▶ No optimistic signs in NL-academic IT-sector yet 😞
 - one personal appeal: invest in **open source software ecosystem!**
 - maybe the NL autonomy revival starts here in Groningen...

