



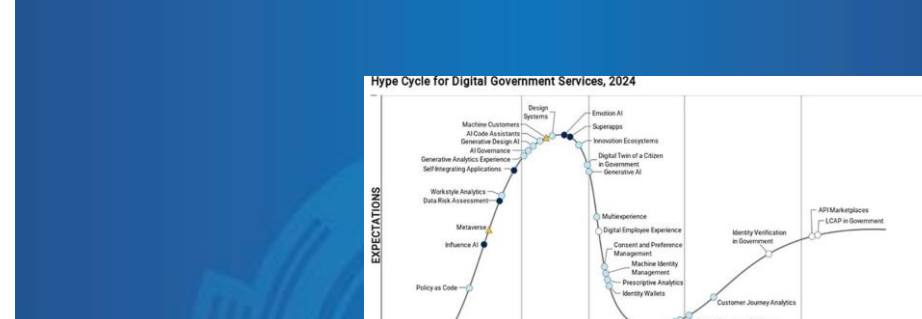
**RI
SE**

JOHAN LINÅKER, RISE/LUND UNIVERSITY

Growing the courage to change what “works”

Technology is accelerating

- The opportunities are immense for increasing efficiency and innovation
- As are the expectations and planned outcomes
- There is a major risk, however, that these opportunities remain just opportunities (or come to an inconceivable cost)



Digital public services have enormous potential.

24/7 accessibility
even during a pandemic



~50% less time spent
interacting with public administration



>50% lower costs
for companies when interacting with the public administration



~60% less case-handling effort
through automated processing



Source: German National Regulatory Control Council

McKinsey & Company



A Europe fit for the digital age

Empowering people with a new generation of technologies



We are digitally cuffed by dependencies

- Software solutions siloes people in our organizations rather than connecting them
- Vendors and big-bang platforms define the needs, not the end-users
- Complete trust is required into how our data is managed, and decisions and operations are performed. If we want access to it, we need to pay up.
- License fees we pay are defined by the vendor, not through competitive procurements

IT-snurren: Skolor tvingas betala för att ta del av egen data

Häromåret fick Malmö stad, efter förlikning, betala 13 750 000 kronor i skadestånd till ett IT-företag för att man tagit ut historiska uppgifter om elever, till exempel betyg, ur ett system för elevadministration som man enligt avtal inte längre hade rätt att utnyttja.



Amerikanske it-giganter dominerer danske myndigheder: »Der er nu en monopollignende tilstand«

Digitalisering · 27. oktober 2023 kl. 05:00 · 13 kommentarer

Det offentlige oplever enorme prisstigninger på it-licenser, der er så voldsomme, at det fik Region Hovedstaden til at fyre 150 medarbejdere i foråret. Kigger man på en af de største it-leverandører til kommunerne, er Region Nordjyllands udgifter til Microsoft de senere år steget med 44 procent.

Dependencies few but strong

- We are heavily dependent on a few but very strong actors.
- The call to and need for breaking free of these dependencies is not something new.
- A worry about digital sovereignty of Denmark, or rather the lack of it.

- **80%** total spending on cloud software and services for professional use in Europe went to' American companies, representing a volume of 265 billion'euros.



LA DÉPENDANCE TECHNOLOGIQUE
AUX SOFTWARES & CLOUD SERVICES
AMÉRICAINS : UNE ESTIMATION DES
CONSÉQUENCES ÉCONOMIQUES
EN EUROPE

Belle innovation
JAN 2020

ASTERÈS
CENTRE DE RECHERCHE ET D'INNOVATION

Høring i Udvalget for Digitalisering og It om Danmarks digitale suverænitet



<< Further reading [1]

Sovereignty is about control, not isolation

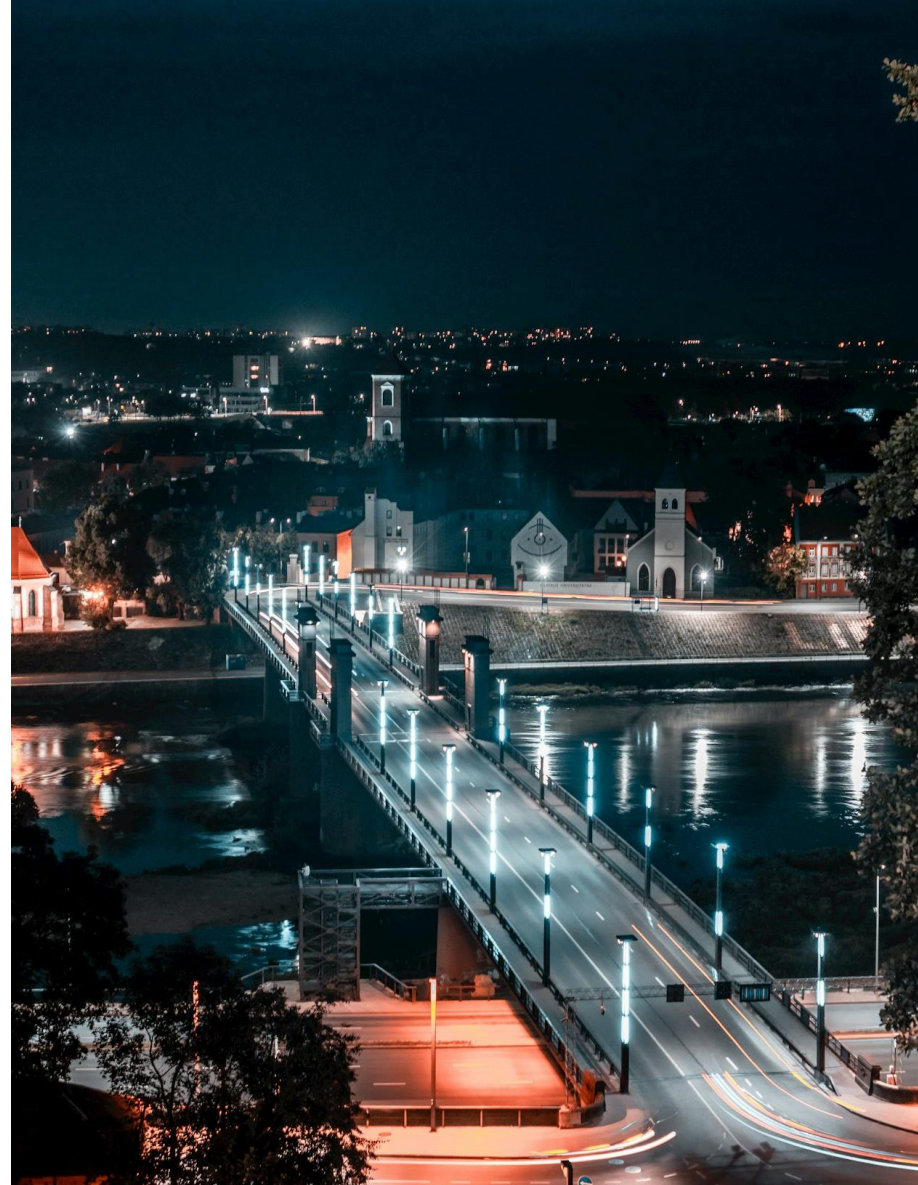
- It's about being able to maintain structural control of one's digital sphere, based on one's own values, norms and legislation
- Open strategic autonomy highlights how autonomy is gained by staying open to share and reuse, interoperability and collaboration
- Essentially nothing different from general vendor independence, but adding on a geopolitical dimension





All parts of the infrastructure are equally critical

- Digital infrastructure is intertwined with the physical
- The amount of Analog Physical infrastructure is decreasing rapidly on behalf of the Digital Physical infrastructure
- The digital parts needs to be as robust, safe and secure as the rest of the infrastructure
- Question:
 - How does control and maintenance differ between the physical and digital parts of the infrastructure?



Dutch parliament calls for end to dependence on US software companies

By Toby Sterling

March 18, 2025 7:22 PM GMT+1 · Updated 11 hours ago



Digital Sovereignty, Security, and Digital Innovation in Germany

 Dirk Schrödter
Minister und Chef der Staatskanzlei des Landes Schleswig-Holstein

Digital sovereignty: less dependency, more European integration

The coalition partners are focusing strongly on digital sovereignty – an approach that could have far-reaching consequences for com

- **Building European integrated and resilient value chains:** “We are creating European integrated and resilient value chains for ke industries, from raw materials and chips to hardware and software.” This is intended to reduce dependence on non-European manufacturers – both from China and the USA.
- **Strengthening open interfaces and standards:** “We ensure our digital sovereignty: we define open interfaces and open standar across all levels and systematically promote open source [...]” This is a reaction to the increasing dependence on proprietary syste which are causing huge difficulties in the context of digital transformation and have had an enormous braking effect. With regard t source, two options are discussed in the document – either “define ambitious targets” or specifically “achieve an open source shar 50% by 2029” for the IT budget.
- **Exclusion of untrustworthy providers:** “We will exclude untrustworthy providers with legal certainty in future.” This refers prima critical infrastructures and is likely a reference to the debate surrounding providers in the 5G network.

Europe’s Digital Leaders Call for “Tech Sovereignty”

The anti-protectionist, pro-tech D9+ alliance switches sides as Europe debates targeting US digital services with tariffs and other measures.

European industry big win: Germany, France both support sovereign EU-based tech infrastructure

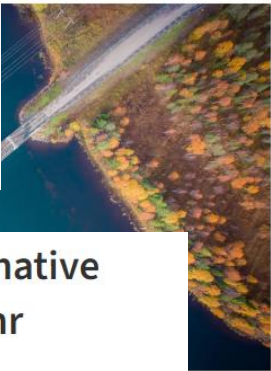
That was the easy part, now the real difficulties unfold.

ARGUMENT

An expert’s point of view on a current event.

Europe Must Avoid Becoming a Digital Colony

The EuroStack is the continent’s last chance for technological sovereignty in the era of AI.



Framework agreement: MS-365 alternative OpenDesk to conquer the Bundeswehr

The IT system house of the BWI has concluded a framework agreement with Zendis for "sovereign communication and collaboration solutions" such as OpenDesk.

It's a We-problem

- Achieving the change is not a question of technology, it's a question of people and culture
- It's a question of courage. It's a question of people's mindset and willingness to change.
- Courage to Act and Understanding the need for systemic change as key.
- But how do we grow the courage needed?



Høring i Udvalget for Digitalisering og It om Danmarks digitale suverænitet

4. Political leadership: courage to act

5. Understanding: sovereignty requires systemic changes and not just technical replacements

Instinct and reactions

- Denial is typically a first reaction, ignoring any kind of report or account of symptoms or issues.
- While accepting the mere existence of the issue, a next natural reaction is minimising the extent and impact of it.
- Rationalising and justifying one's own role and responsibility becomes natural
- Handing out blame, not to yourself of course, anyone else and preferably someone you oppose or compete with.

Digitalisering

Leverantören om Millennium: Kritiken felaktig

Sjukhusdirektören försvarar Millennium trots vårdpersonalens kritik

Cerner-vd: Både vi och regionerna har underskattat datalagstiftningen

NYHETER | INGÅR I: MILLENNIUM

VGR:s utvecklingsdirektör om Millennium: »Känner mig trygg«

NYHETER

Oracle skyller Millenniumhaveriet i Västra Götaland på negativ personal

Efter Millennium-stoppet – Oracle hävdar avtalsbrott

Nyheter
17 jan. 2025 • 1 min

MILLENNIUM

▶ **Avtal mellan regionen och Oracle – Millennium pausas på obestämd tid**



The Comfort factor

- The sense of enjoying the comfort of the known before the unknown
- Public organizations are essentially entrenched in comfort.
- Why change something that works?
- Why expose yourself to unknown risks, and the potential of feeling “discomfort”?
- If there’s a risk of discomfort, you just have to pick up the phone and get comforted by your sales contact, (and potentially golf buddy)



Change = Same procedure as last year

- Tender is defined based on the obvious needs, e.g., need to be able to manage DOCX formats
- A conservative procurement culture promotes incumbent vendors, platforms and solutions that provides trust and comfort.
- Perceived requirements on what characterizes such vendors, platforms and solutions are enforced accordingly.
- Cost and risks implied by a potential exit further enforces the status-quo



Many procurement projects express mandatory requirements with reference to specific implementations in software. For example, one project expressed a mandatory requirement which required 'PDF from Raindance' (based on the information provided by this procurement project it is unclear how, and which version of the PDF file format is used by this specific SaaS solution for creation of PDF files). Similarly, another project expressed that support for exporting data from the procured application 'to the Google docs format' in a mandatory requirement (without providing any the SaaS solution is actually specified and implemented). Further, several procurement projects express (in many cases rather vaguely formulated) mandatory requirements that request integration and compatibility with the file formats used by 'iWork', 'Office 365', and 'MS Office'.

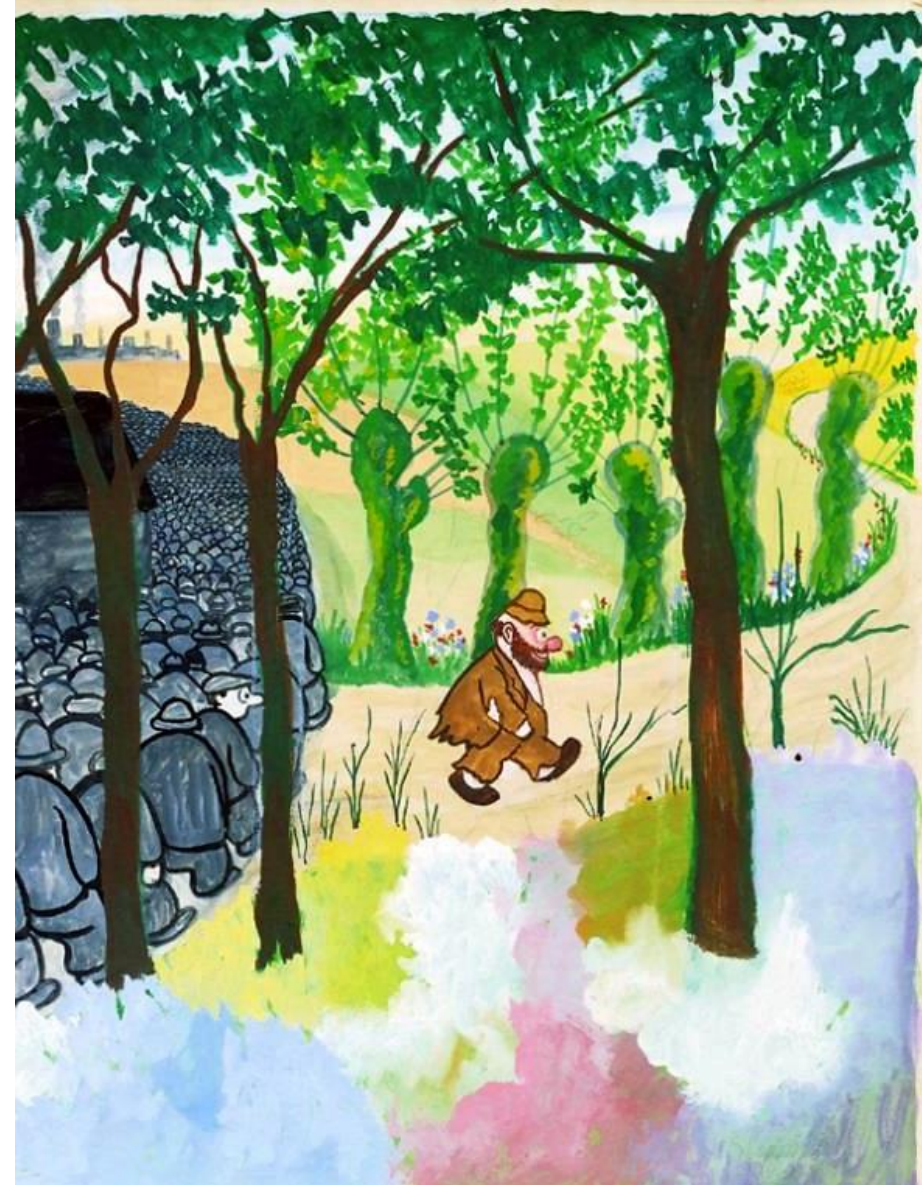
Real change = Same thing, different name

- When things can't be ignored any longer and we again listen to vendors which we know and trust
- Again, filtered out mentally and legally through the qualification requirements defined accordingly
- This is the point, after which you take sit in your comfortable seat and rest by the sense of comfort that the consultants will do their job
- The real change envisioned and championed for, now risk repeating history



◁Real change> = requires courage

- Courage of standing up and questioning the status quo, and comfort
- Not being afraid of the personal consequences of questioning, but of the consequences of remaining in status quo.
- Won't win you any popularity contests (at least not in the beginning)
- But how do we grow the courage needed?



Growing courage together

- More courageous people are needed if any substantial and sustainable change
- By acting together, voices become both stronger and smarter.
- Together, the status quo and institutional sense of comfort can be confronted



Collaboration is key

- We grow courage through collaboration, we establish change through collaboration.
- Still, triggering and growing collaboration and an open mind is as difficult for already said reasons.
- If others can grow the courage to achieve change, and to collaborate accordingly, so can you.



Open as a toolbox for enabling collaboration

- If we study the many examples, including the ones represented in this room, the tools and means for enabling and facilitating collaboration spells open.
- Open source software, open standards, open data, open knowledge, open science, open hardware, open collaboration, open innovation...
- These are all tools and means to driving change, and realizing the many opportunities technology brings.

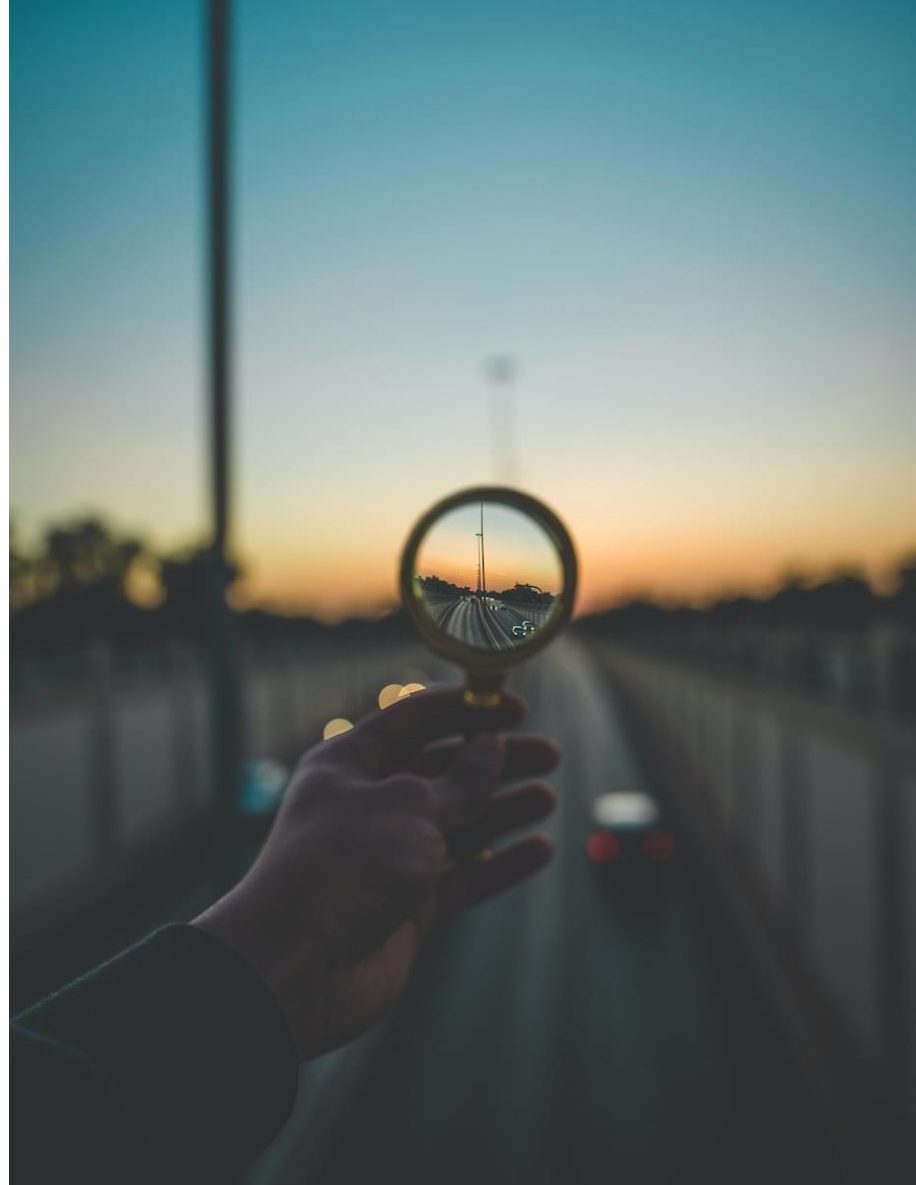




<< Further reading [3]

Defining the goals to achieve

- Competition and diversity, not necessarily in the number of solutions, but in the services required to use the solutions.
- Interoperability between solutions and public services, increasing efficiency and quality of life for end users.
- Transparency and control over where and how data is managed and reused.
- Economic growth, sharing development costs, and more value for tax money.
- Collectively defining the needs and requirements of the solutions and validating the quality them.





<< Further reading [3]

Designing policies for achieving the goals

- Policy focus:
 - Public sector vs. Industry
- Policy direction:
 - Inbound vs. Outbound
- Type of intervention:
 - High-level endorsement vs. Advisory vs. Prescriptive
- Form for definition
 - Legislative vs. Government instruction vs. Strategy documents
- Scope of policy
 - National gov. vs. Regional/Local gov. vs. Institution-specific





<< Further reading [3]

Support structures needed

- Planning and intent is not enough, knowledge and capabilities needed leverage the toolbox
- Need for creating joint support structures within and across organizations.
- The term Open Source Program Offices (OSPOs) are commonly used as a label of support centres
- Industry construct from 2000s but has today gained broad adoption in the public sector as well, with several examples across Europe.





National Government OSPOs

Hosting organisation

National administrations or ministries responsible for digital transformation and government (in general or for specific domains)

Primary goal

Build and scale capacity in national public sector in adopting and collaborating on OSS



Free Software Unit at the French Interministerial Digital Directorate
(*Direction interministérielle du numérique - DINUM*)



Developers Italia at the Department for Digital Transformation
(*Dipartimento per la Trasformazione Digitale*)



Centre for Digital Sovereignty
(*Zentrum Digitale Souveränität*)



Luxembourg House of Cybersecurity OSPO at the Ministry of the Economy
(*Ministère de l'Économie*)



Case study: Italy



Law mandating public administrations to consider using OSS when procuring software solutions



Developers Italia, founded in 2017 and jointly managed by the Department for Digital Transformation and the Agency for Digital Italy



Educates and supports **development and growth** of processes, knowledge, and culture



Guides, catalogues, and interactive **support** provided for users in terms of finding, choosing, and collaborating on open source



Developer **community** spanning public and private sectors, academia, and civil society supporting efforts



Institution-centric OSPOs

Hosting organisation

Internal departments responsible for IT service provisioning to the overarching institution

Primary goal

Build and scale capacity inside the institution in adopting and collaborating on OSS



European Commission OSPO at DG DIGIT
(*Directorate-General for Digital Services*)








IT Department at the French Public Employment Service
(*Pôle Emploi*)



Bureau Open Source Software at CTO's Office of Dutch Tax and Customs Administration
(*Belastingdienst*)



Case study: European Commission's OSPO

-  Resides within the **Directorate-General for Digital Services**
-  Executes on the **EC OSS strategy** and facilitates its renewal
-  **Liaison** between the EC's departments and external actors on OSS matters
-  External **outreach and collaboration** through European OSPO network
-  Promotes consumption and contribution through relaxed yet controlled processes for **compliance and security**



<< Further reading [4]

Local Government OSPOs

Hosting organisation

Departments responsible for IT service provisioning within local government (including municipalities, cities, and regions).

Primary goal

Enable adopting and collaborating on OSS in the digital transformation of the local government



IT Department at City of Paris, France






Department for Digital Services and Innovation at City of Bratislava, Slovakia



Digital Centre at City of Ventspils, Latvia



Case study: City of Bratislava

-  Part of the **Department for Digital Services and Innovation**, headed by the City's Chief Innovation Officer since 2019
-  OSS highlighted through Digital Innovation **policy** and Bratislava 2030 policy
-  OSS **preferred** within the Department, but strong business case needed for other parts
-  Develops, maintains, and provides **OSS-based services**, including the City's e-service platform
-  Works actively with **stakeholders** and uses **metrics** to improve and guide development



Association-based OSPOs

Hosting organisation

Associations with PSOs as members or owners

Primary goal

Enable members to initiate and collaborate on OSS projects addressing common needs



OS2 – Public Digitalisation Network, Denmark
(OS2 – *Offentligt digitaliseringsfællesskab*)



Dutch Association of Municipalities, The Netherlands
(VNG - *Vereniging van Nederlandse Gemeenten*)



Open Cities, Czech Republic
(*Otevřená města*)



Case study: Open Cities



A Czech non-profit gathering **20+ cities** in the Czech republic to support their digitalisation



Receives and hosts OSS projects initiated by public entities. **Facilitates** joint requirements engineering and planning, and performs the main development of the projects



Currently **hosts six projects**, including Cityvizor - an open source tool for transparent municipal management



Collaborates with civic tech and hacker communities



Actively **engaged** and driving efforts in creating a Czech national OSPO, and driving the European transformation through the Brno declaration



<< Further reading [4]

Enables implementation of policy and strategy

- The OSPO constitutes a change agent and policy enabler
- They constitute a champion for breaking the status quo, and ridding of institutional comfortness
- Helps enable execute but also design the policy and strategy to help you achieve your defined goals
- "Open Source" regards the full toolbox of open technologies in society at large





<< Further reading [3]

Promotion critical for enabling reuse

- Critical need to show that successful and realistic options are available, and where to find them.
- Several nation catalogues available, e.g., Offentligkod.se in Sweden
- Corresponding available in Italy, France, Germany, Netherlands
- Currently being compiled through an EU federated catalogue using the meta data standard Publiccode.yml



OpenDesk

- German initiative for creating a complete desktop solution for the general civil servant
- Packages existing open source solutions, and developing the glue in-between
- Enables solution to be run as SaaS or on prem
- Close dialogues conducted with vendors behind the solutions, e.g., Nextcloud, Element och Jitsi
- Today has 40 000+ users and growing

Flexible Teamwork for the Public Sector

openDesk is the customisable office and collaboration suite designed specifically for your needs in public administration.

Stay informed



Launched in autumn 2024.



Project management

Plan and manage projects efficiently with kanban boards, Gantt charts, and more.



Task management

Track your tasks with ease and stay on top of milestones.



Contacts

Manage your personal contact details or create shareable address books.



Document management

Create and edit text, spreadsheets and presentations — on your own or collaboratively with others.



Chat

Communicate with colleagues and workgroups in real time.



Calendar

Organise your appointments or share calendars across teams.



Wiki

Capture, collect, organise and share your expertise, insights and processes in one central, searchable system.



Email

Enjoy modern email functionality with additional support for group mailboxes.



File storage

Securely store and share files in the cloud.



Video conferencing

Hold stakeholder meetings in high-quality resolution, right from your browser.

OpenCode

- Open Source collaboration platform for the German Public sector
- Builds on GitLab and provided by ZenDIS
- Studied and copied by other EU countries
- “Community Edition for Europe”
- Has about 5 400 users, and 2300 repositories

The platform for Digital Sovereignty

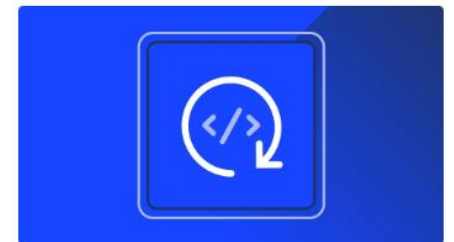
openCode brings open source to the German public sector. Together, we develop and share software that shapes our digital future in a self-determined way.

About Open Source

Software Index

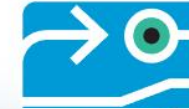


How would you like to use openCode?



Gesundheitsamt-Lotse

- Health care system developed by and for the German Region of Hessen
- Developed through agile collaboration between Regional government and teams of externally procured suppliers
- New features developed iteratively
- Starting to see interest and contributions from other regions as well
- <https://gitlab.opencode.de/ga-lotse/ga-lotse-code>
- (Anecdotal reference to Millenium?)



Das Digitalisierungspaket
der Zukunft

Hård kritik efter Millennium-granskningen: "Haveri som inte går att rädda"

UPPDATERAD IDAG 05:21 PUBLICERAD IGÅR 17:01

Den externa granskningen av miljardprojektet Millennium riktar skarp kritik mot Västra Götalandsregionen. Utredningen visar att verksamheten inte var tillräckligt förberedd för införandet av journalprogrammet och att styrningen brast.
– Min bedömning är att tilliten inte bara är skadad – den är förlorad, säger Liberalernas regionråd Pär Lundqvist.

Vision und Umsetzung

„GA-Lotse – Das Digitalisierungspaket der Zukunft“ für den Einsatz in Gesundheitsämtern folgt der Idee durch eine gemeinsame, einheitliche Software die Abläufe in den Fachabteilungen für die Mitarbeitenden zu optimieren.

Mit der Softwareentwicklung GA-Lotse entsteht eine hochgeschützte und effektive Datenverarbeitung. Sie wird die Gesundheitsämter in ganz Deutschland befähigen, für die Veränderungen in der Arbeitswelt und den

La Suite

- A series of tools for promoting digital communication, collaboration, and productivity
- Functionality including instant messaging, email, desktop, video meeting...
- Building on extant solutions like OpenDesk
- Collaboration ongoing between France and Germany (recently also the Netherlands)



France and Germany unveil Docs, a homegrown alternative to Google Docs

In a push for digital independence, Europe debuts its own collaboration tool

By Alfonso Maruccia March 20, 2025 at 1:33 PM | 23 comments

Create. Organize. Collaborate. An open source environment, designed for the public sector and open to the commons.





<< Further reading [5]

Public Sector Open Source - same but different

- Public sector, policy and OSPOs, as well as vendors need to consider the differences in how public sector OSS is developed
- Same practices from industry and community cannot be copied straight off





Type of sponsorship

- Centralized sponsorship
 - Development is carried out or sponsored by, and in extension dependent on, one or a few resourceful PSOs.
 - OSS typically originates main PSOs, and are of business critical character, warranting sponsorship
- Decentralized sponsorship
 - Multiple PSOs collaborate through pooled resources, using external service providers

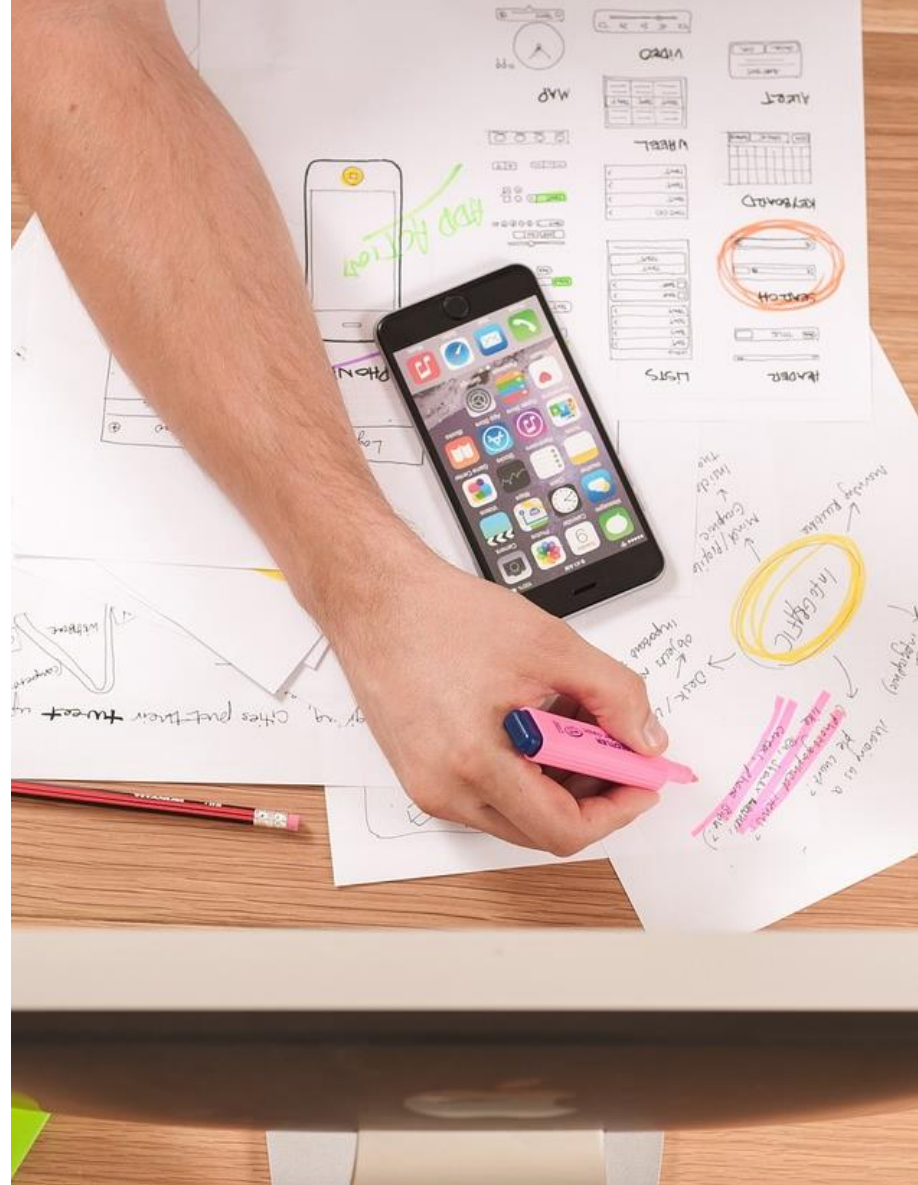




<< Further reading [5]

Development practices

- Development often centred to a core teams of 15 or less, who produce > 80 percent of the code base
- Open development and release using GitHub
- Formal and agile processes, with structured quality assurance processes
- Development typically performed within the bounds of one organization, generally using procured resources
- Planning and coordination performed top-down from the PSOs funding the development





Community

- User community rather than developer communities (PSOs mainly), limited in size and contributions.
- Contributions typically in forms on
 - Funding,
 - Subject-matter expertise,
 - Requirements engineering,
 - Quality assurance
- While communities are limited in size, the number of end-users is much higher





<< Further reading [5]

Sustainability

- Centralized sponsorship
 - Dependence of main PSO(s)
- Decentralized sponsorship
 - Dependence of collective funding
 - Dependence of supplier interest and presence





<< Further reading [6]

What is does a healthy project look like?

- **Productivity**

There is an active development of the project.

- **Robustness**

The development is open and spread out on several (independent) individuals.

- **Openness**

Users of the project can influence and contribute to the development of the project.



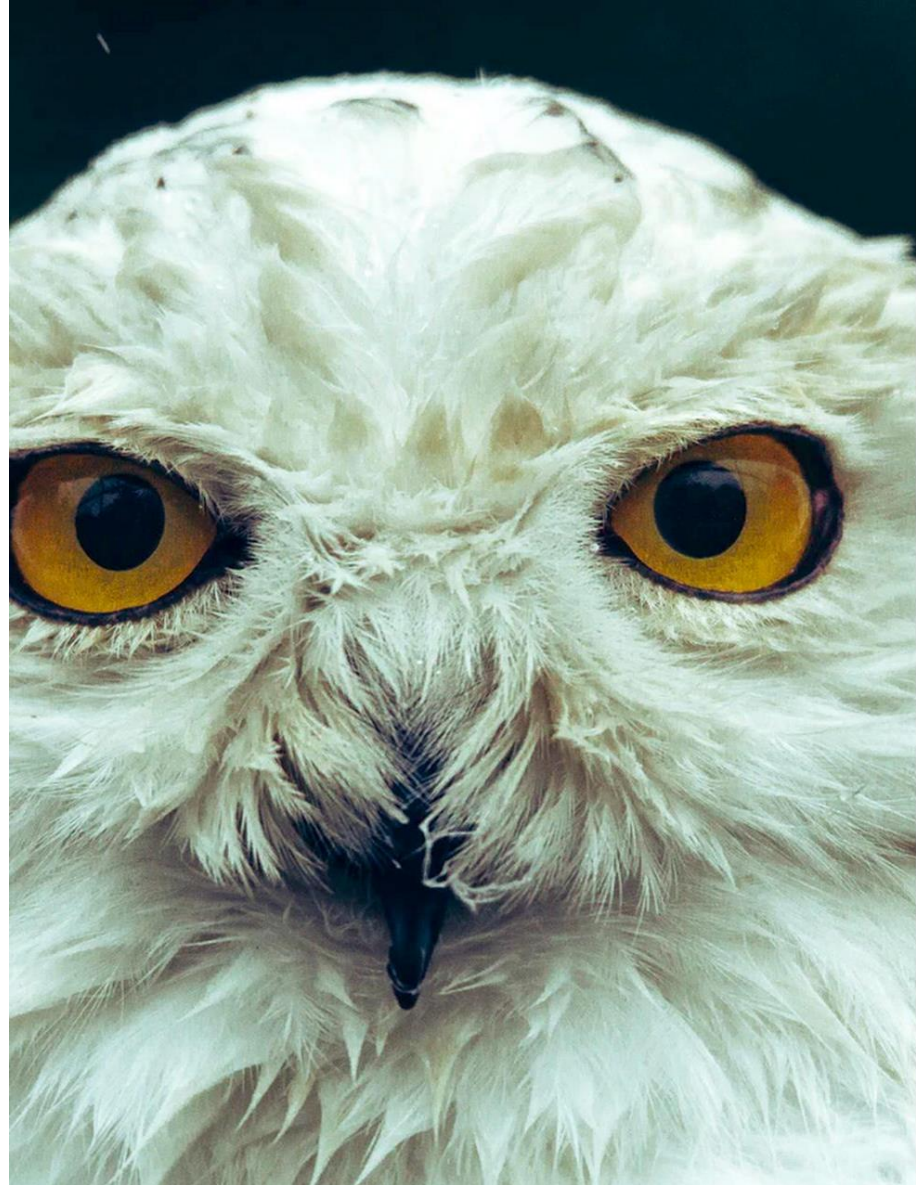


<< Further reading [6]

Linus' law

"Given enough eyeballs, all bugs are shallow"

- Requires that enough eyeballs actually reaches the codebase
- Free-riding, for both good and bad





Brain-time is a depletable resource

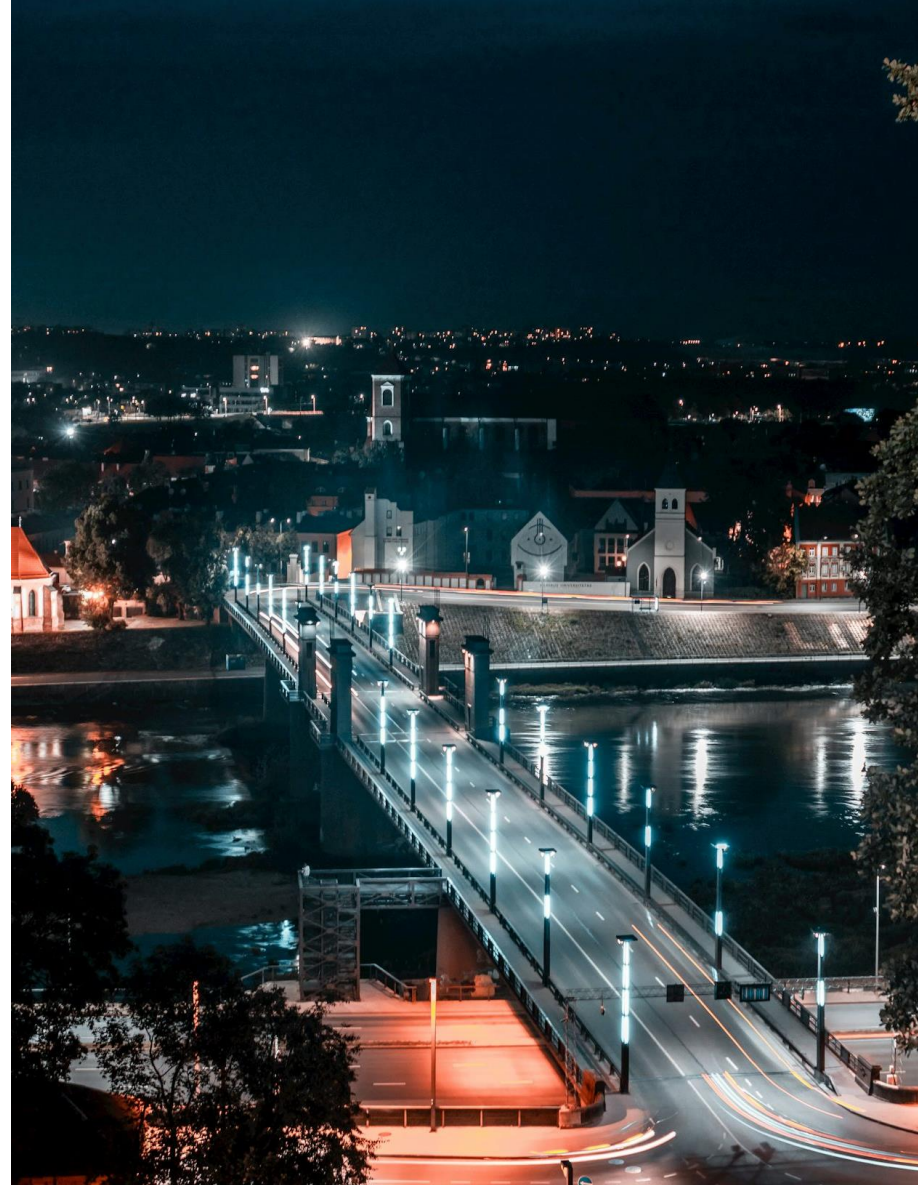
- “Brain-time” and maintenance effort is subtractable, meaning depletable
- Maintainers are humans, not robots
 - Burnout, changed family or working conditions
- Companies must adapt to stay competitive
 - Refactorization, new products, changed business model





<< Further reading [1]

How does control and maintenance differ between the physical and digital parts of the infrastructure?

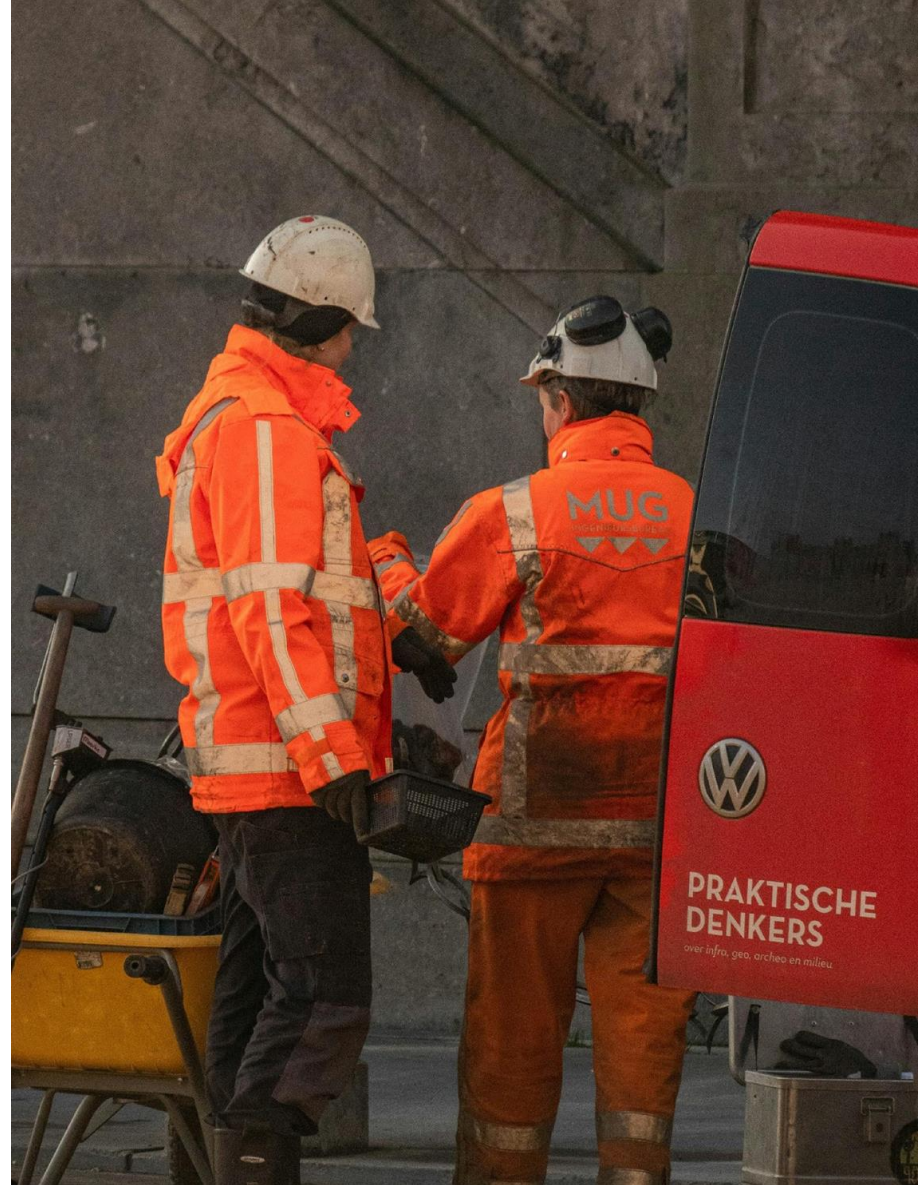




<< Further reading [7]

Sustainability = Collective responsibility of society

- Companies can and should contribute to the sustainability, also governments
- Funding one part of the solution
- Sovereign Tech Agency in Germany funds infrastructure considered critical for Germany
- AlphaOmega funds projects of commercial interests for its (BigTech) funders
- Maintenance and upstream contributions should be a requirement in all public procurements
- A mix of initiatives needed focusing on different parts of the infrastructure, balancing maintenance and innovation



Sustainable vendors = Sustainable software

- Including vendors in the collaboration and maintenance
- Considering business friendly licenses while avoiding lock-in
- Using procurement as a tool for enabling sustainable business models, and by extension a sustainable maintenance
- EuroStack – an initiative of 200+ SMEs and Large companies pushing for w new European industry policy

A complete digital ecosystem
made and supplied in Europe.

European industry big win: Germany, France both support sovereign EU-based tech infrastructure

That was the easy part, now the real difficulties unfold.

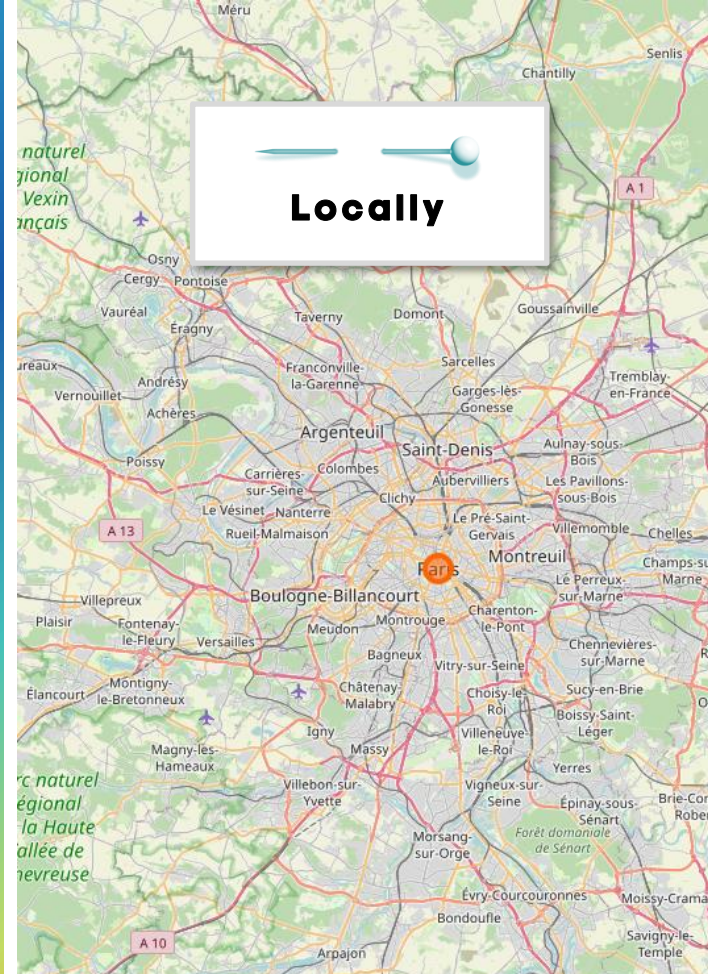
Rival report to Knafo's on EU tech sovereignty: more content, more cautious

The recommendations in the working document are currently too cautious and will be made more ambitious, a source close to the matter told Euractiv.

Von der Leyen expresses timid support for Eurostack tech sovereignty project

German MEP Tiemo Wölken called von der Leyen's comments an important signal, but not everyone is convinced.

SKILLS, COMPETENCES, CERTIFICA



Need for building joint ecosystems and capabilities for real change to happen

What next?

- Sovereignty, Change, Capabilities, Courage
 - Won't happen over night
 - But we need to start somewhere
- How should the short-, medium- and long-term plan look?
- How do we move forward (without constantly backing up)?

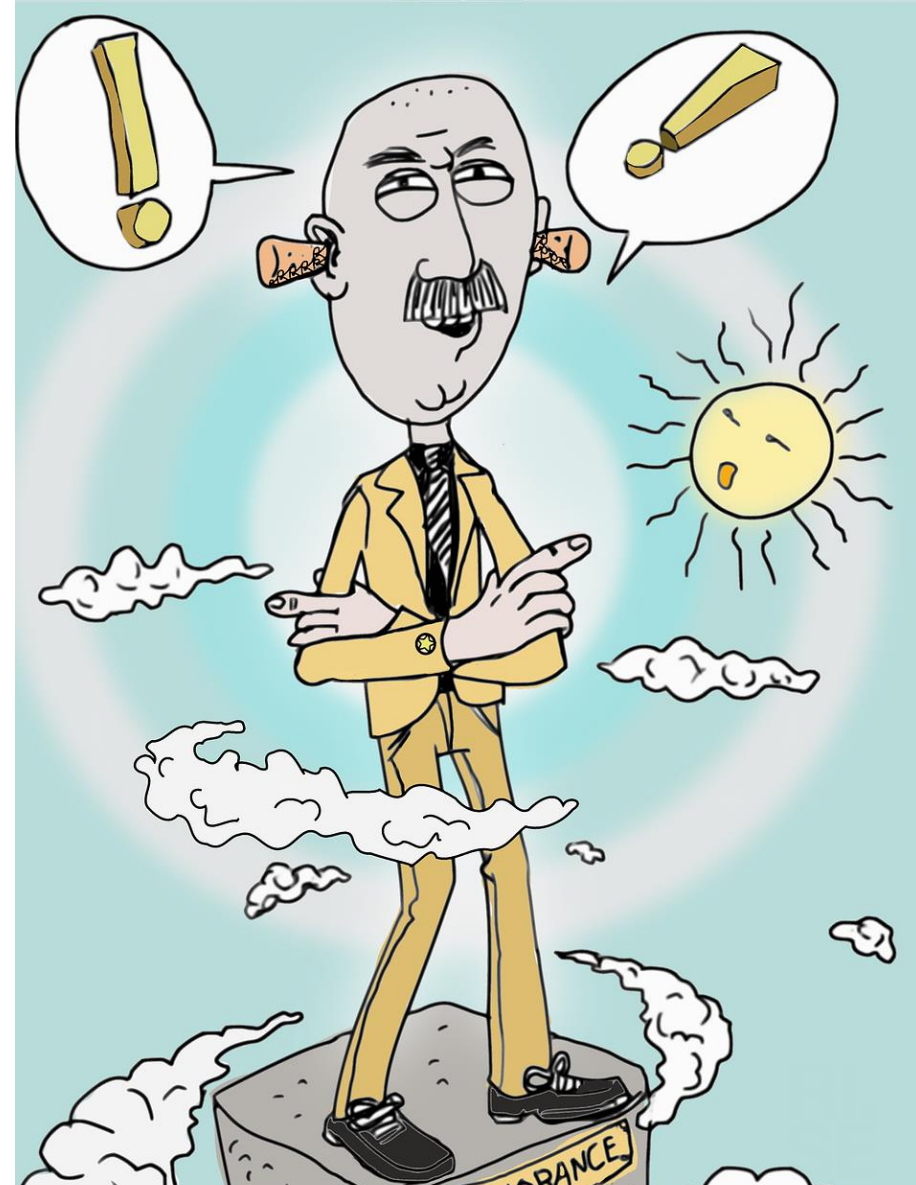




Start Questioning the Status Quo, and the never-ending need for Comfort

Start Growing the courage to change what “works”

**(and accepting that the world
looks different from when that
was the case)**



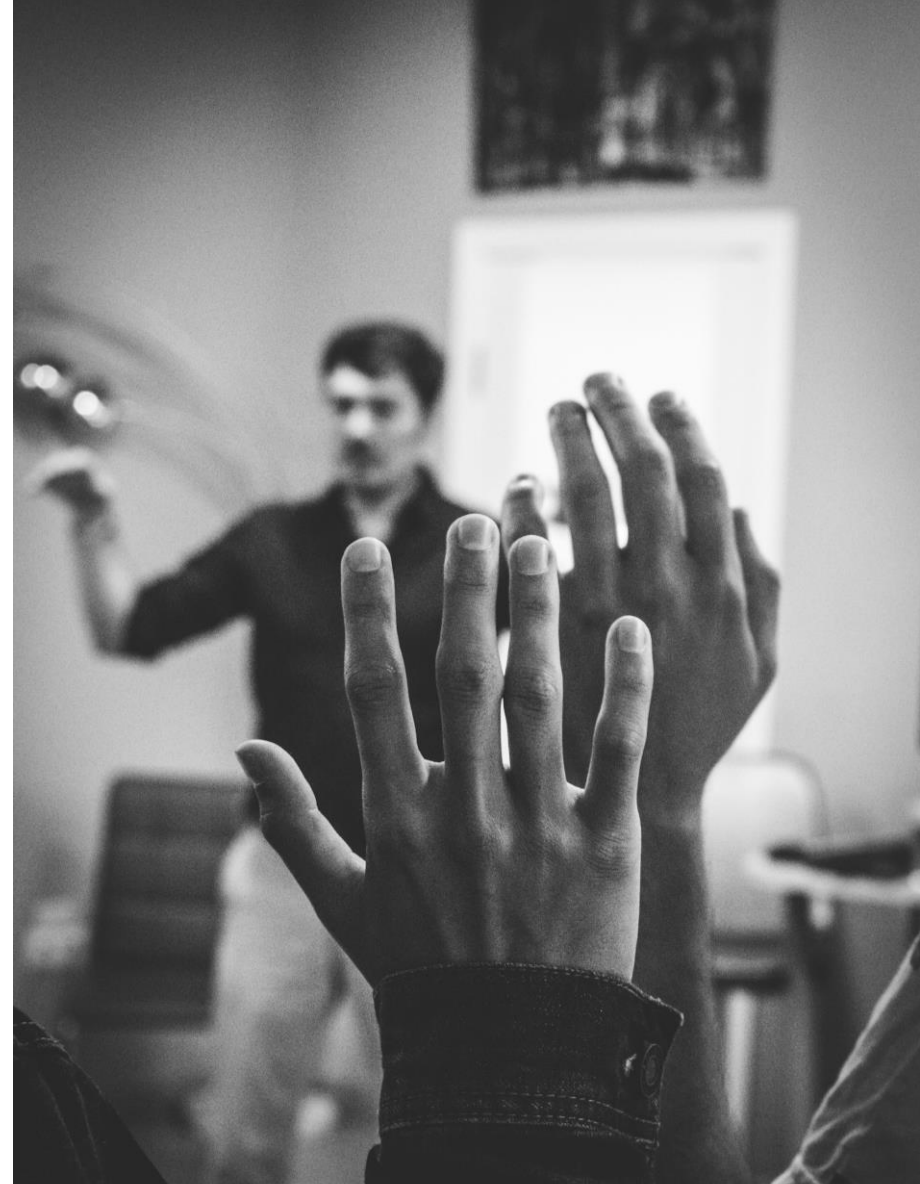
Start mythbusting

- Address any questions and debate proactively
 - What concerns come up? What are the risks or reasons blocking the change?
- Typically, there are a lot of myths, both on the positive and negative ends
- Address the any reason for staying stuck in the comfort zone, openly and pragmatically



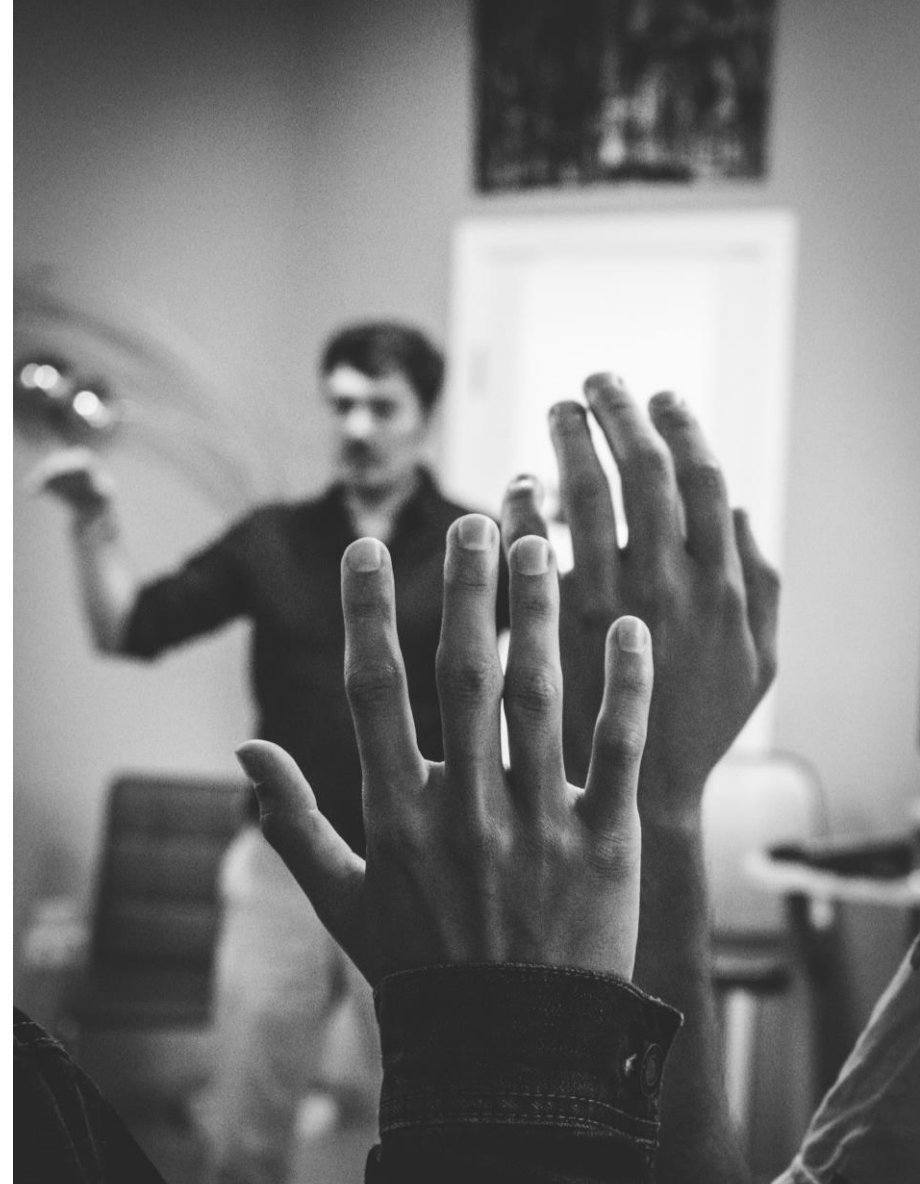
Start doing while talking

- Start having weekly 30-minute calls with colleagues and peers. Talk to each other, share questions, plans, and concerns.
- As part and in connection:
 - Map your dependencies and what risks they come with. Define a plan for how to manage them.
 - Define your vision for your digital future, and the goals you aim to achieve.
 - Plan for how goals can be achieved with open source toolbox
 - Identify needs for support and help in using the tools accordingly



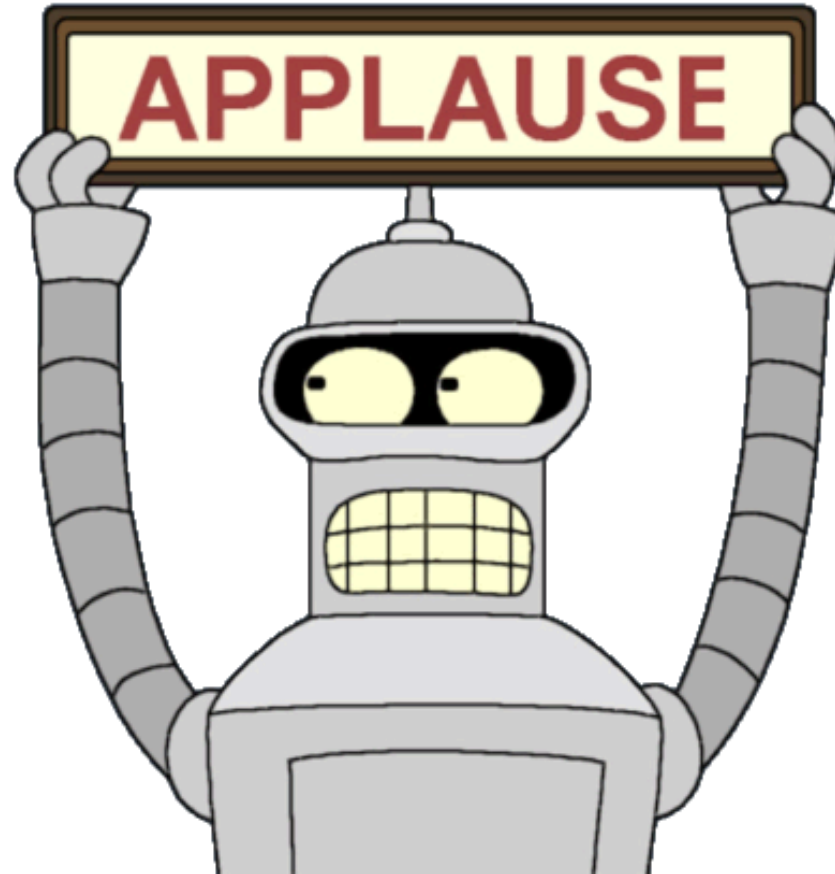
Questions for policy

- How can we achieve a collaborative approach to digital transformation, and achieving the opportunities that reside?
- What dependencies are of national concern? Where do we need to regain control?
- What policies and complementary support structures (e.g., OSPOs) are required accordingly?
- How can we sustain and balance both maintenance and innovation for a robust, safe and secure infrastructure?
- How should we collaborate internationally in achieving our goals and needs?





Kom nu ind i kampen...



Further reading

- [1] <https://www.linaker.se/blog/building-sovereignty-the-open-way/>
- [2] <https://arxiv.org/pdf/2409.01118>
- [3] <https://www.linaker.se/blog/report-software-reuse-through-open-source-software-in-public-sector/>
- [4] <https://www.linaker.se/blog/public-sector-open-source-program-offices/>
- [5] <https://www.linaker.se/blog/public-sector-open-source-software-projects-how-is-development-organized/>
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