Leiden University & Elsevier Symposium on Digital Sovereignty

29 November 2023

Universiteit Leiden
The Netherlands

ELSEVIER

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There is some degree of confusion regarding the exact signification of the term ‘digital sovereignty’. One possible definition is “Digital sovereignty implies that users of software systems and publications platforms are granted “a form of legitimate, controlling authority” over the publications, the data, the software and the services they contribute. It refers to the ability to decide autonomously on what happens to data and to the results of any analyses performed on these data. (Floridi, 2020). Or quite broadly: “Digital sovereignty refers to a country’s ability to exercise control over its digital infrastructure, data, and online activities within its borders. It encompasses the idea that a nation should have the authority to govern and regulate its digital space, including internet governance, data protection, cybersecurity, and the ability to shape its own digital policies and laws. Digital sovereignty is often seen as a response to concerns about foreign influence, data privacy, and the protection of national security in the digital age. It emphasizes the importance of a country’s independence and autonomy in the digital realm.”

In this slide-deck the presentation of seven speakers at the symposium on Digital Sovereignty are collected. The symposium provided a multi-perspective representation of the topic: from philosophical to legal, technological, and practical. The discussions illustrated how important and complex this relatively new concept of digital sovereignty is.

Kurt De Belder & Alenka Prinčič

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Keynote

Jamal Shahin, Free University Brussels/University of Amsterdam

Digital sovereignty: unpacking the policy, decoding the concept

Digital Sovereignty

Leiden Symposium on Digital Sovereignty

Jamal Shahin (VUB/UvA/UNU-CRIS), 29 November 2023

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The Matter, Forme and Power of a Commonwealth Ecclesiasticall and Civil

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Sovereignty

Non est potestas Super Terram quae Comparetur ei

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Sovereignty

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~~State~~ Sovereignty

Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you **of the past** to leave us alone. You are not welcome among us. **You have no sovereignty where we gather.**

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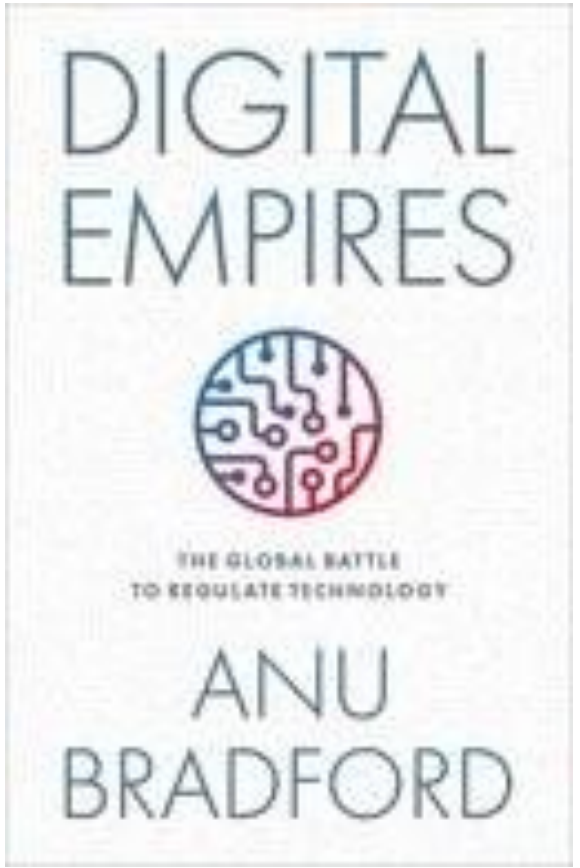

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Something Sovereignty

- As Territory is to State sovereignty,
- Networks are to Digital sovereignty.

- But where are the networks located?

- What and where are the spaces where digital sovereignty is developed and practised?

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Slashdot
HBO
Hotmail
The Economist
Drupal
Apple
iPhone
iTunes
Daring Fireball
AdSense
Newsvine
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MobileMe
Techmeme
Live Search
Office Live
MSN
Microsoft
Amazon
Amazon Store
Amazon S3
Internet Explorer
XBox LIVE
Bloomberg LP
News Corp.
IGN
Firefox
The Wall Street Journal
Design Observer
Opera
MySpace
vimeo
The Washington Post
CNet
Slate
The Pirate Bay
Adobe Flash
Adobe
Fotolog
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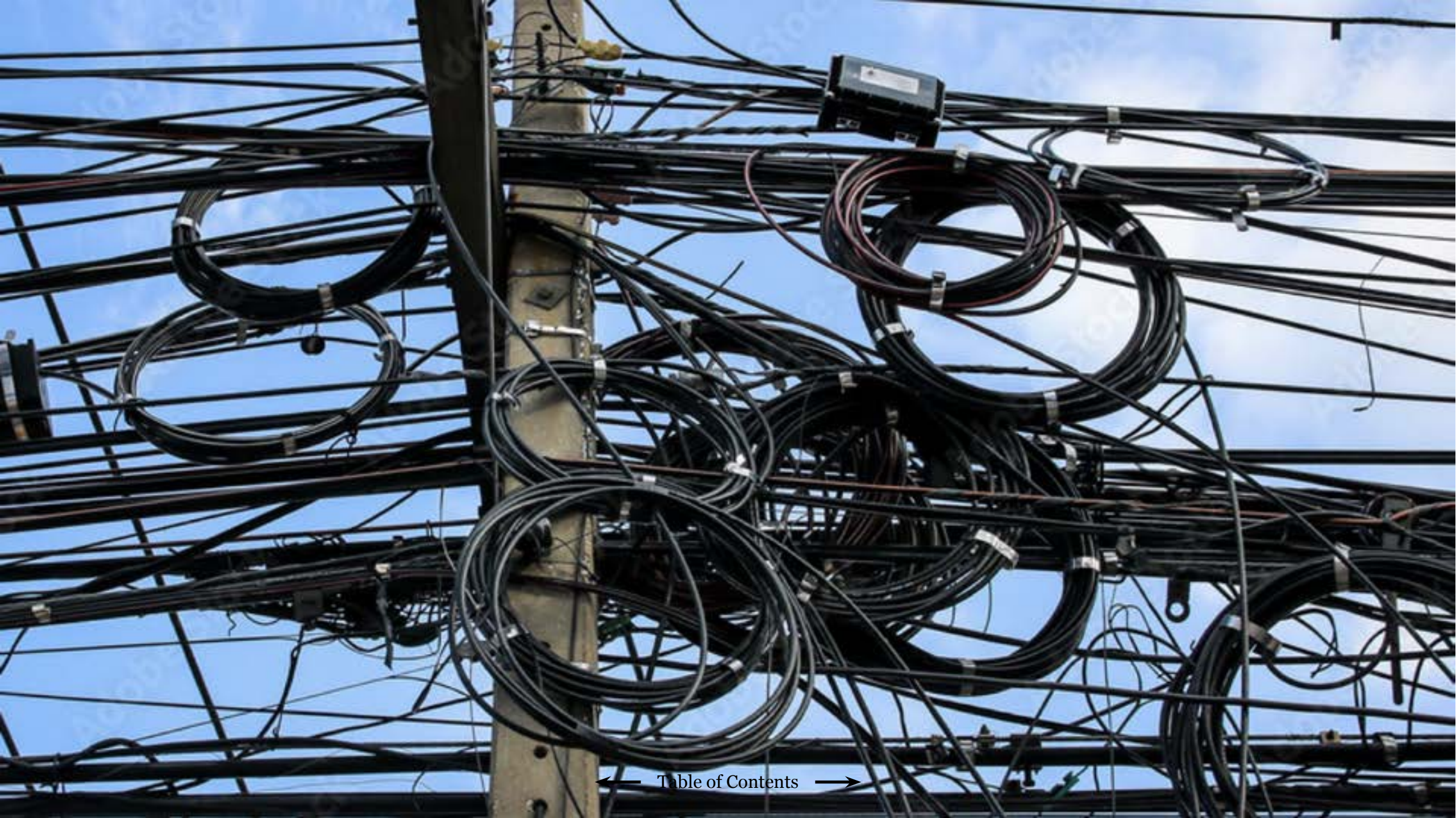

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Abundance of literature and discussions

Table 1. Frequency of use of the notion of "sovereignty" as related to the digital (using ProQuest Central).

	Data sovereignty		Technological sovereignty		Digital sovereignty	
	Academic	Other	Academic	Other	Academic	Other
Before 2011	0	23	12	81	0	6
2011–2014	18	794	6	101	2	49
2015–2018	89	2459	20	131	22	239

Source: Couture and Toupin 2019

Abundance of literature and discussions

- Couture, S., & Toupin, S. (2019). What does the notion of “sovereignty” mean when referring to the digital?
- Floridi, L. (2020). The Fight for Digital Sovereignty: What It Is, and Why It Matters, Especially for the EU.
- Pohle, J., & Thiel, T. (2020). Digital sovereignty.
- Roberts, H., *et al*. (2021). Safeguarding European values with digital sovereignty: An analysis of statements and policies
- Schmitz, L., & Seidl, T. (2022). Protecting, Transforming, and Projecting the Single Market. Open Strategic Autonomy and Digital Sovereignty in the EU’s Trade and Digital Policies
- Monsees, L., & Lambach, D. (2022). Digital sovereignty, geopolitical imaginaries, and the reproduction of European identity.
- Musiani, F. (2022). *Infrastructuring* digital sovereignty: A research agenda for an infrastructure-based sociology of digital self-determination practices.
- Glasze, G., *et al* (2023). Contested Spatialities of Digital Sovereignty.
- Heidebrecht, S. (2023). From Market Liberalism to Public Intervention: Digital Sovereignty and Changing European Union Digital Single Market Governance.
- Perarnaud, C., & Rossi, J. (2023). The EU and Internet standards – Beyond the spin, a strategic turn?

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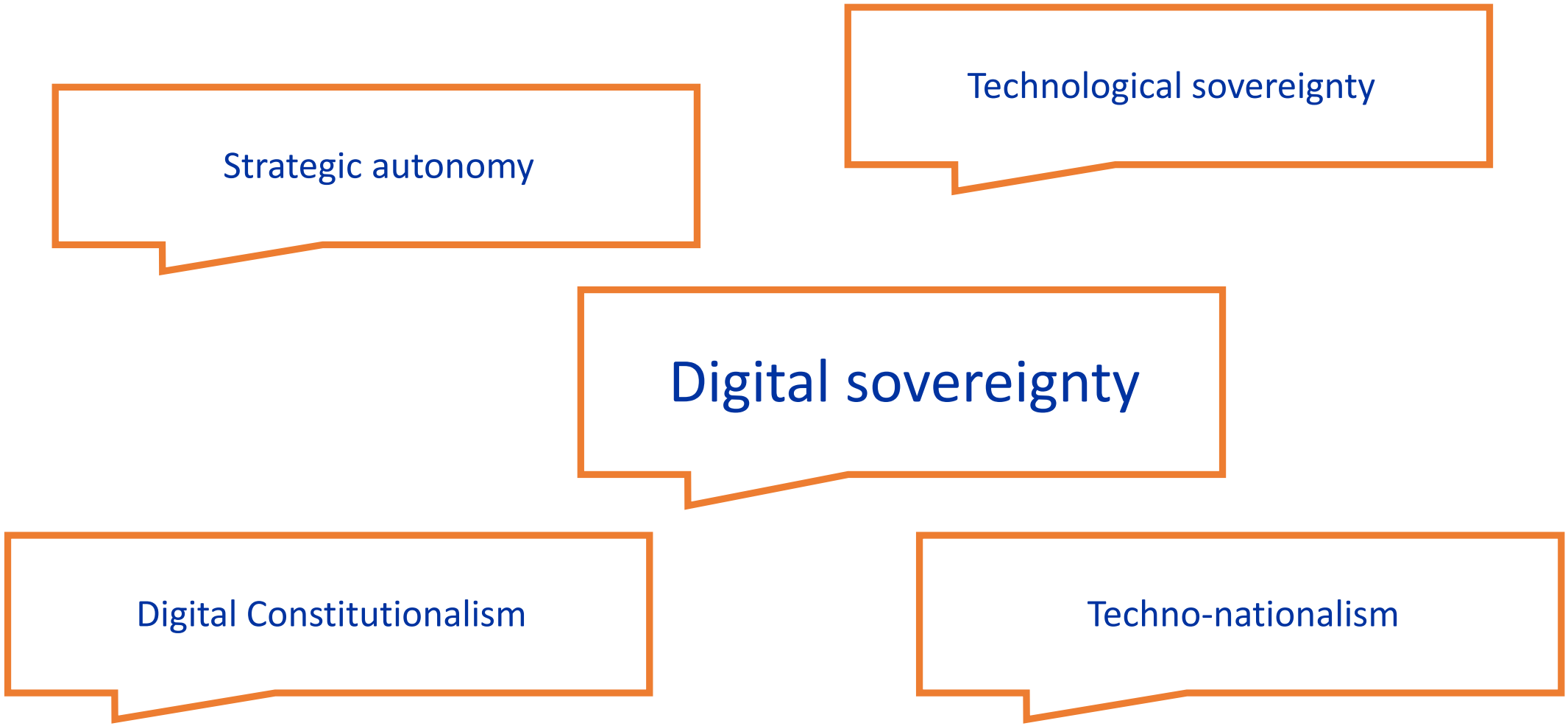

Strategic autonomy
Technological sovereignty
Digital sovereignty
Digital Constitutionalism
Techno-nationalism

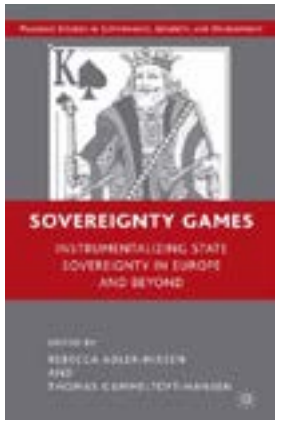
Virtual sovereignty

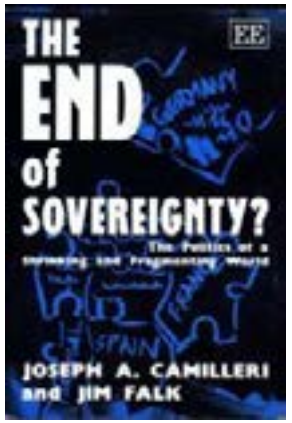
Virtual Sovereignty: Examining the Legal Status of Micronations in Cyberspace Through the Case of the Republic of Errant Menda Lerenda

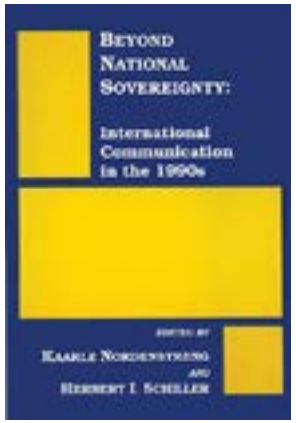
Safari Can’t Find the Server

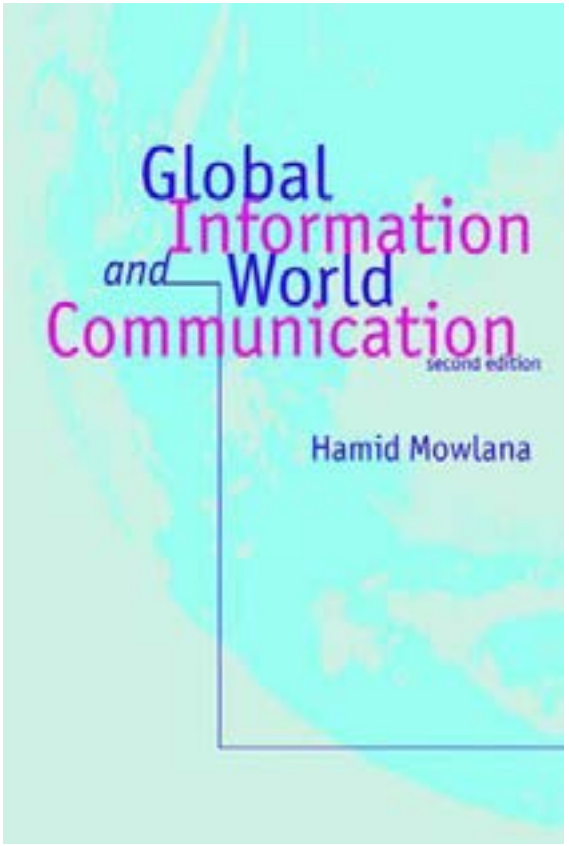
Safari can’t open the page “https://www.errantmendalerenda.com” because Safari can’t find the server “www.errantmendalerenda.com”.

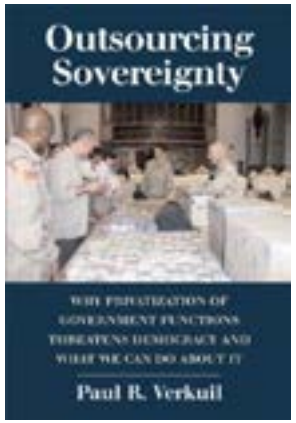
Some would say we told you so!

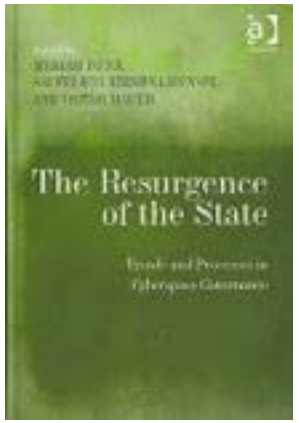












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to determine, to be determined, to show determination

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EU PLAYERS

Margrethe Vestager

Executive Vice-President

A Europe Fit for the Digital Age

Thierry Breton

Commissioner

Internal Market

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EU PLAYERS

Věra Jourová

Vice-President

A Europe Fit for the Digital Age

Thierry Breton

Commissioner

Internal Market

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Industrial power

- “in the face of growing tensions between the United States and China, Europe will not be a mere bystander, let alone a battleground. It is time to take our destiny into our own hands. This also means identifying and investing in the digital technologies that will underpin our sovereignty and our industrial future.”
  Breton, Hannover Messe Digital Days, 15 July 2020.
- “Europe must master the key technologies of tomorrow. If we build our technological sovereignty, we will also create new business opportunities for our companies.”
  von der Leyen, BusinessEurope Day, 5 March 2020.

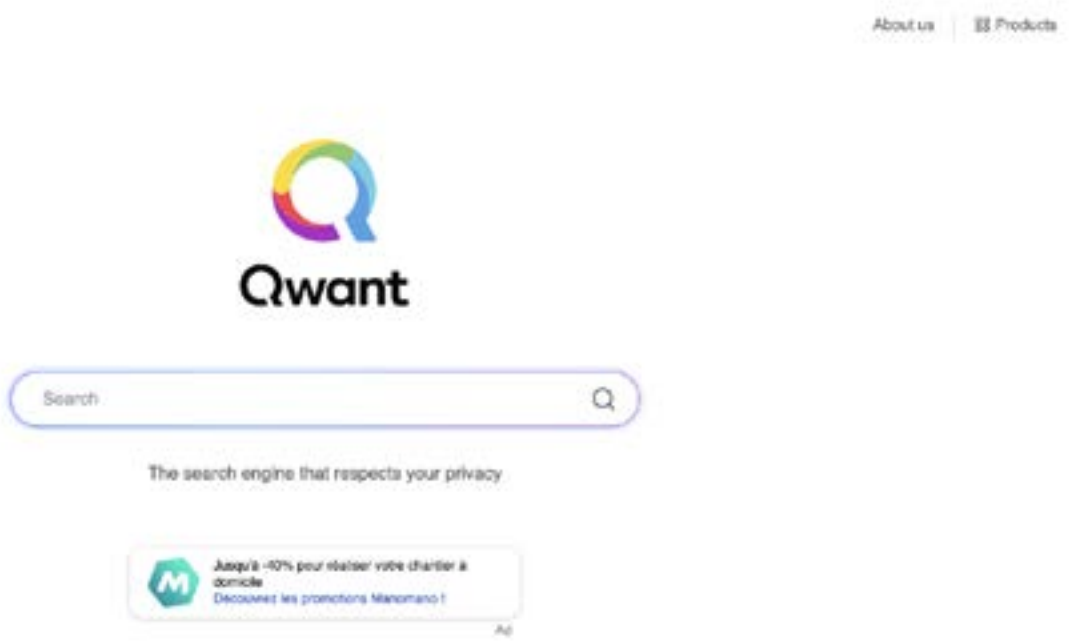
Security

- “…a European approach to 5G security. One that respects the open nature of our internal market. And one that protects our citizens and our technological sovereignty as we tackle the cybersecurity threats of 5G networks...” Vestager, Press Conference on 5G, 29 January 2020.

Values

- “Europe will have to work hard to increase its weight in the digital age. Long-term success is also a question of sovereignty. Technologically, we have to develop European solutions and standards […]. To protect the individual, […]. It will also be a matter of upholding the high standards of the rule of law and cultural openness that make Europe so attractive […]. If we meet these conditions, **Europe has a fair chance of shaping the digital world**.”
  von der Leyen, 10 November 2019.

The idea of digital sovereignty – case of managed interdependencies



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The idea of digital sovereignty

- Anyone heard of Quaero?

The performance of digital sovereignty

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The performance of digital sovereignty

Trade and Technology Councils

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The practice of digital sovereignty

What is Gaia-X?

Purpose of Gaia-X

With Gaia-X, representatives from business, science and politics on an international level create a proposal for the next generation of data infrastructure: an open, transparent and secure digital ecosystem, where data and services can be made available, collated and shared in an environment of trust.

Gaia-X is a project initiated by Europe for Europe and beyond. Representatives from business, politics, and science from Europe and around the globe are working together, hand in hand, to create a federated and secure data infrastructure. Companies and citizens will collate and share data – in such a way that they keep control over them. They should decide what happens to their data, where it is stored, and always retain data sovereignty.

The architecture of Gaia-X is based on the principle of decentralisation. Gaia-X is the result of a multitude of individual platforms that all follow a common standard – the Gaia-X standard. Together, we are developing a data infrastructure based on the values of openness, transparency, and trust. So, what emerges is not a cloud, but a networked system that links many cloud services providers together.

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How digital sovereignty is built in EU

GAIA-X

Cybersecurity Act

- Cyber Resilience

Chips Act

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How digital sovereignty is vocalised in the EU

The speeches of European Commission officials appear to treat digital sovereignty in multiple ways:

1. As traditional support to industry
2. To provide security
3. To reinforce values on global level

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Guiding principles

Karen Maex, University of Amsterdam
How to redesign and govern a digitized global society?

Giorgio Monti, University of Tilburg
The Dimensions and Limits of the EU's Digital Sovereignty Policy

Azar Koulibaly, Microsoft
Public Values in the Digital Age: Challenges and Opportunities for the Netherlands

The growth of the digital society and its impact on the public space

Karen Maex

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outline

1. Introduction
2. The public space since the French Revolution
3. The impact of the digitalisation on the public space
4. A philosophical analysis
5. How to design an govern a digital local and global society

The public space in perspective

- Descartes (1595-1650) => the freedom of the self
  - Je pense donc je suis (Cogito ergo sum)

- Spinoza (1632-1650 =>the role of the public space
  - Founder of rationalism,
  - Division between religion and state
  - One of the most influential phylosophers of Western thinking

- French Revolution (1789), Liberty, Egality and Fraternity

=> The implementation of a public space and recognition the freedom of the self

The impact of digitalisation on the public space

1. Impact on scientific methods and scientific results

   Causality and correlation

2. Privatisation of the public space

   Digital redesigns -> human interaction and communication,

   -> access to infirmation

   -> education and learning (cfr Shoshama Zuboff in "The Age of Survaillance Capitalism")

3. **Our** public space is in a metamorphosis

Phylopsophical analysis of a new societal fabric

- Wicked problems: correlation and causality
- Digitalised actions nor algorithms are ‘an sich’ conflicting with the public space
- But privatsation of the personal space: the digitalisation of the individual

- And privatising of the public space

Privatising of the personal space: digitalisation of the individual

I. Systematic reduction of the public space which is designed by the private space i.e the collection and sale of user data is a private market above rhe heads of citizens

II. The development of a new societal fabric with a large impact both for individuals and the make-up of the public space

The metamorphosis of Kafka by Latour

- A young men, Gregor, wakes up in the morning as an enormous bug

- The metamorphosis of the world in times of COVID lockdown
  - The termite mound (in Dutch: de termietheuvel)

“ With the digital contact there is no neighbourhood” (Latour)

The (re-)design the public space

- Who should redesing the public space?

 => the people and its public authority on all levels

- How can we achieve that?

 => there are similarities in complexity for digitalisation with climate change

=> there are intrisic differences in finding solutions

Public structure to adress complex problems

- Phylosophical analysis by Bruno Latour

- Where can we land? Political orientation on the new Climate Regime

  (Waar kunnen we landen? Politieke oriëntatie in het Nieuwe Klimaatregime)

- Who am I: Lock down lessons for Terrestials

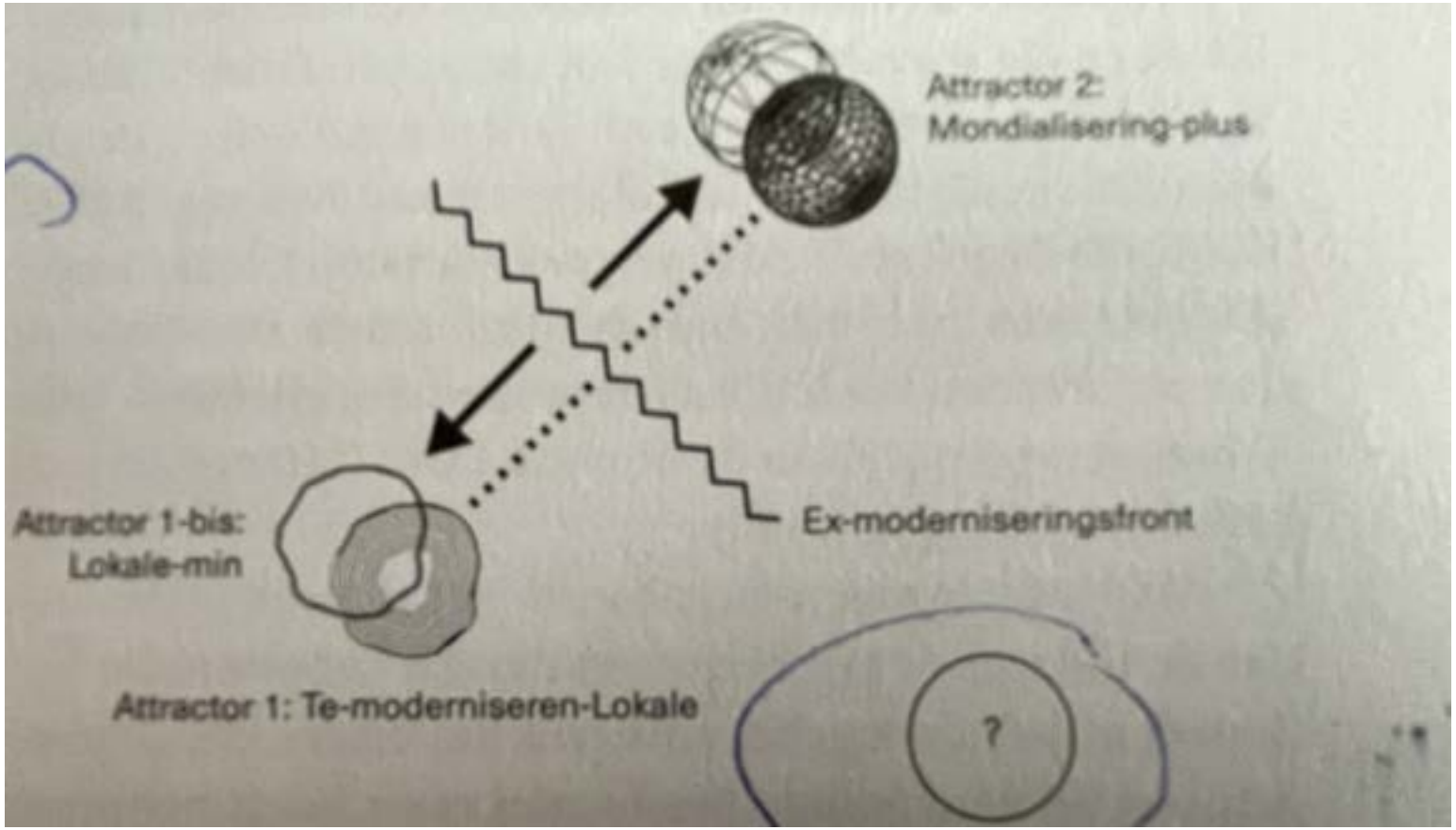
  (Waar ben ik? Lockdownlessen voor aardbewoners

Bruno Latour

"The most elementary human right is that people feel reassured and protected especially in times of indepth changes.

There lies the meaning of history."

Provisional desing for public power for digitalisation



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Climate change versus digitalisation

- Mitigation of consequences of climate change:

- problem is global
- political initiatives on all levels
- diversity of initiatives
- participation of public

- Mitigation of consequences of – digitalisation

- problem is generally spread
- private power is big
- impact on societal fabric is large
- no participation of public

Conclusion

- The political question is not whether we should continue the digitalisation, but how we implement it in society
- The right of “choice” is a fundamental human right in a democracy
- Our society is at a historical tipping point
- Digitalisation should no longer be framed an economic issue, but into a societal frame of fairness.

A reorganisation of the private digital economy needs a “rethinking process” taking into account the societal frame based on fairness and freedom of choice.

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Dimensions and Limits of the EU's Digital Sovereignty Policy

Giorgio Monti
Tilburg Institute for Law, Technology & Society (TILT)
Tilburg Law & Economics Center (TILEC)
Tilburg University

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Digital Sovereignty in EU Law and Policy

- Digital Sovereignty in the von der Leyen Commission (2019 – date)
- Digital Sovereignty as an element of the EU Strategy for Data (2020)?

How do these link to the *European Declaration on Digital Rights and Principles for the Digital Decade* (2022)?

Digital Sovereignty and Current EU Policy

An aspect of industrial policy:

> "achieving technological independence from foreign suppliers and the ability to assert control over data and digital assets"

Sovereignty <u>of the EU</u> as a polity

DRIVERS

- Microchip technology and raw materials are outside the EU
- Cloud storage is largely outside the EU
- Digital services are provided mostly by US corporations (Google, Microsoft, Facebook, Amazon, Apple)

Industrial Policy tools

Selection

(Approx 100 secondary laws in the digital sector)

- Critical Raw Materials Act – mitigate risks of supply dependency
- State Aid policy: Important Projects of Common European Interest
  - Example: R&D in chips, integrated circuits, and sensor (EUR 1.9 bn state aid plus expected EUR 5.2 bn of private investment) – NB State money, authorized the EU
- Digital Markets Act – regulate gatekeepers to allow entry of new providers
  - New search engines to displace Google?
  - New App stores which are more beneficial to suppliers and consumers
- Competition Law – challenge firms whose conduct reduces consumer welfare
  - Monopoly power challenges: e.g. Google's relations with press publishers in France
  - Merger control:
    - Prevent acquisitions of nascent competitors
    - Stop mergers that reduce innovation

Limits of the EU's digital sovereignty discourse for universities

- Trickle-down: more competitive digital markets benefit research(ers)
- Limits of direct intervention by the EU
  - Absence of competences:
    - "the Union shall **contribute** to the development of quality education by encouraging cooperation between Member States and, if necessary, by **supporting and supplementing** their action…" Art 165 TFEU
    - "the Union shall**… encourage** undertakings, including small and medium-sized undertakings, research centres and universities in their research and technological development activities of high quality…" Art 179(2) TFEU
- Instrumentalize existing EU policies?
  - All EU policies should contribute to all EU goals, which include "a high level of education & training"

The EU Strategy for Data: Janus faced

Data as an economic resource

European Data Spaces

- Open Data Directive
- Data Governance Act

Rights *of data access*

Responsibilities *for research institutions*

Digital Sovereignty as industrial policy: economic value of data-reuse = EUR 11 billion by 2028

Data subject rights

- In personal data (privacy)
- In "their" data (use data elsewhere)
  - Data portability

(Digital Sovereignty) of the individual: priceless rights

(National) Data strategies and research

Data sovereignty clauses – eg Barcelona

- Firms providing services to the city must make the data gathered/generated available to the city and citizens
  - Outcome: city can use data to develop public services / citizen-based innovation?

- And EU Law?
  - Might challenge such approaches if they risk disincentivizing entry into foreign markets (e.g. a foreign firm might not wish to provide services in Barcelona if it has to surrender data)

(EU) Data Strategies and research

- European Data Spaces
- Data intermediaries – sponsoring platforms to facilitate data exchange between holders and would-be users (technological sovereignty)
- European Open Science Cloud (repository for data)
- EU Law facilitates access for data provided by the public
  - University → private sector/citizens
  - Data altruism of individuals
  - Not reciprocated generally → private sector keeps its data private via IPR
    - Cf. Data Act – access for a fee to open IoT markets

European Declaration on Digital Rights and Principles for the Digital Decade

The EU way for the digital transformation of our societies and economy encompasses in particular *digital sovereignty in an open manner*… It should contribute to a dynamic, resource efficient, and fair economy and society in the EU. [Rec 6]

Everyone should be able to effectively and freely choose which online services to use, based on objective, transparent, easily accessible and reliable information. [principle 10] – ***open competitive markets benefit users***

right to privacy and to the protection of their personal data. The latter right includes the control by individuals on how their personal data are used and with whom they are shared. [principle 17] – ***well-established aspect of EU policy***

Digital Sovereignty & EU Policy

- Digital sovereignty: EU technological independence
- EU Regulation limited to internal market rationale
  - A question of legislative competence
  - A question of limited legitimacy for wider-ranging initiatives

  KEY ROLE: make markets work better: remove monopolies, stimulate new entry

- EU market regulation and data rights
  - Data rights limit industrial policy expansion
  - Data rights as a source for innovation? (data sovereignty)

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Microsoft

Public Values in the Digital Age: Challenges and Opportunities for the Netherlands

Azar Koulibaly, Associate General Counsel,
Microsoft Corporation

11/29/2023

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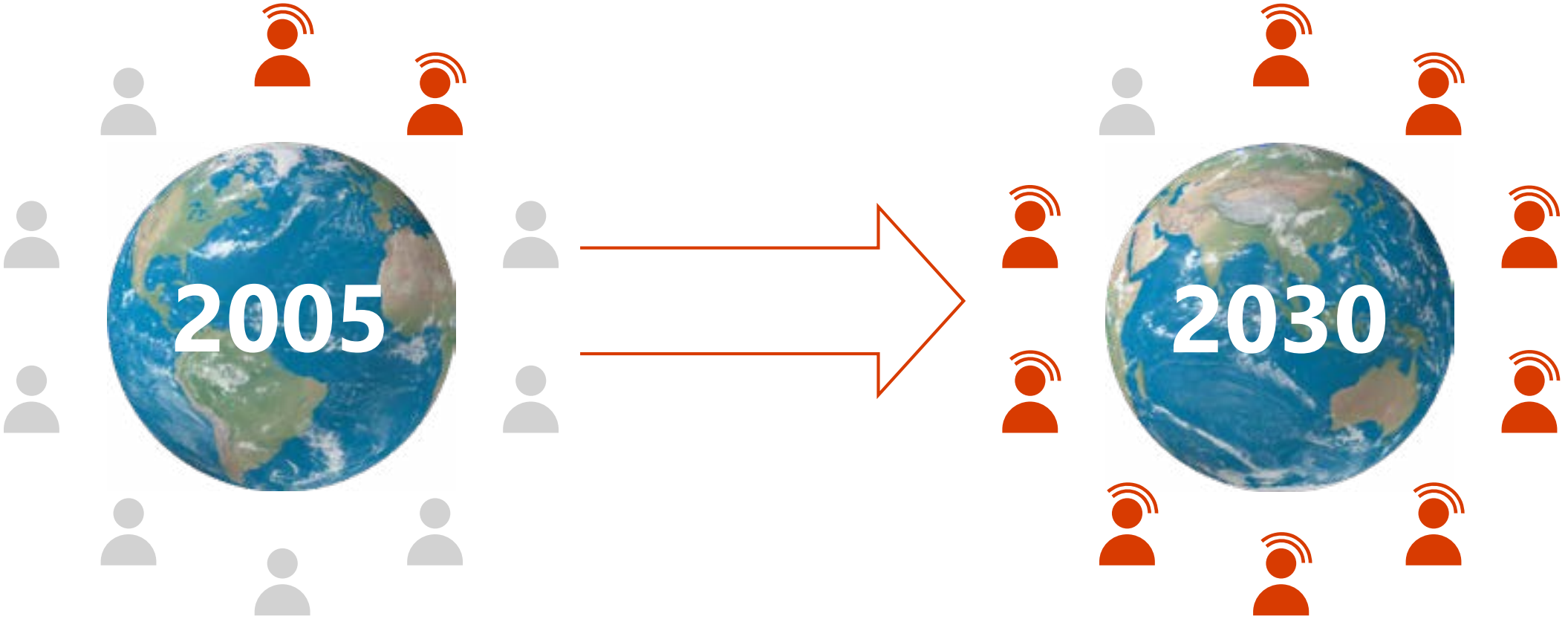
By 2030 nearly 90% of humanity will be on the Internet

According to UBS, by the end of this decade, nearly every nation's economy will depend on the capabilities of the global cloud.



Source: UBS

Opportunity: Digital technology is driving the economic growth of nations

International trade in 2022 valued at nearly $31 trillion; with the Netherlands accounting for well over $1 trillion in combined imports and exports in 2021
—World Trade Organization & NL CBS

Between 2020 and 2030, new digital technologies will add €2.2 trillion to the European economy
—European Commission

By 2030, AI will add $13 trillion to the global economy
—McKinsey Global Institute

What is Digital Sovereignty?

Digital sovereignty is the right and ability of every nation to control its own data to serve its economic and societal interests.

"It is imperative for every nation that its data serve its own industry and its own economy."

—Brad Smith
President, Microsoft

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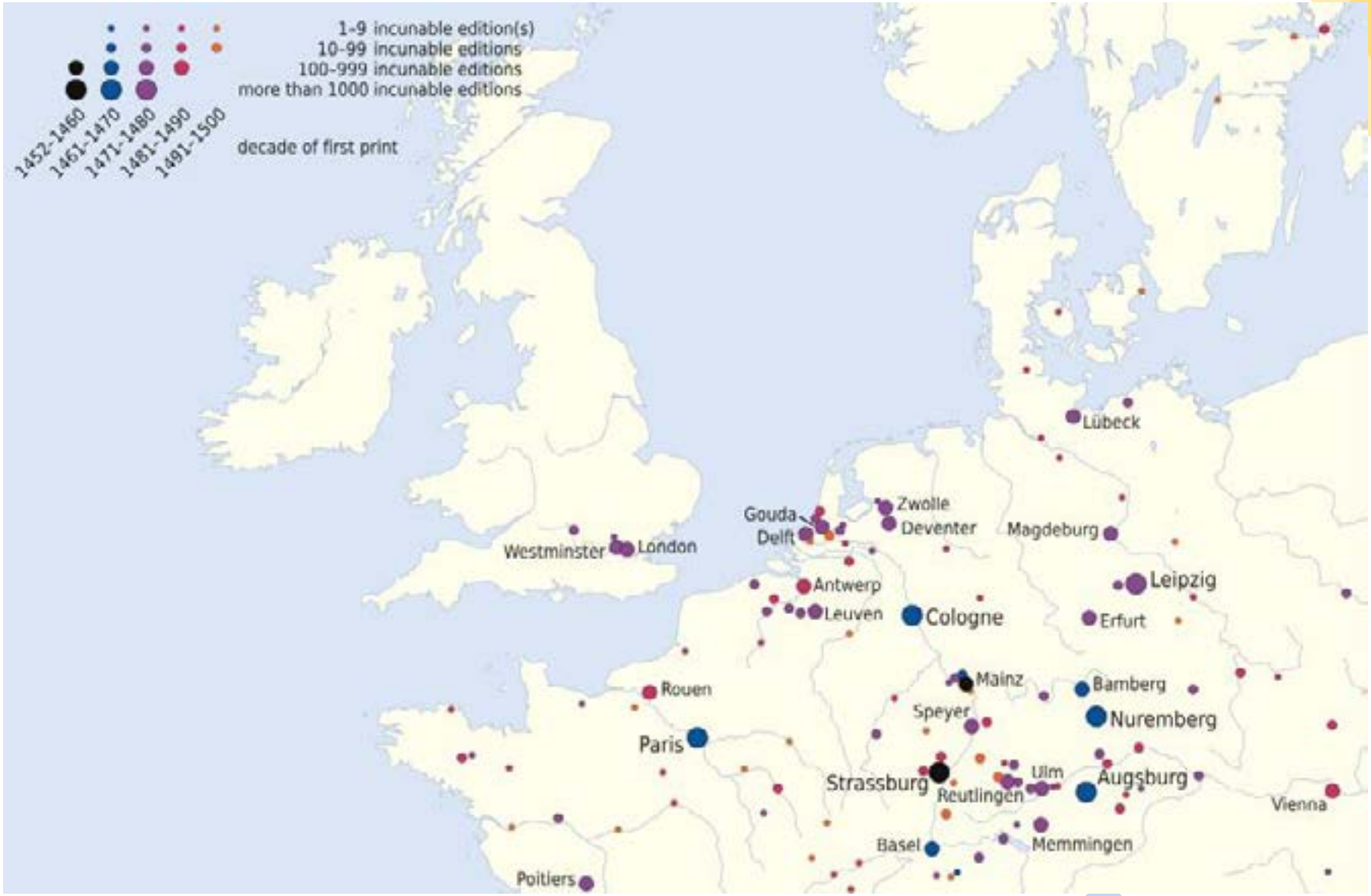

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Which Interests Should be Served by Dutch Digital Sovereignty?

- Allow Dutch citizens, institutions, and companies to thrive in the global economy.
- Protect Fundamental rights (e.g., right to privacy and security of critical infrastructure).
- Leverage and foster innovation to drive economic development and solve societal problems.

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Challenge: Dutch Digital Sovereignty requires state of the art technology that has a global scale

In order for the Netherlands to achieve digital sovereignty that aligns with its values and furthers its interests it will need to foster the responsible creation and adoption of innovative technologies that can scale to the ambitions of its people and companies.

Microsoft's values and business model are aligned with Dutch Digital Sovereignty

- We rely on your trust; and only succeed when our customers succeed
- At Microsoft we believe Privacy is a fundamental human right
- Our Global Cloud is also a Local Cloud
- We use our technology to increase Cyber Resilience and Cyber Security around the world

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Global technology helps nations achieve digital sovereignty

At Microsoft, we see incredible opportunities to harness the power of digital technology to address some of the Netherlands' and the world's most pressing problems and improve people's lives

Our commitment is to be an ethical and responsible partner to governments, businesses, and organizations around the world as we continue to provide digital capabilities that will drive innovation and growth.

Microsoft

Thank You!

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Examples of Implementation

Ron Augustus, SURF
SURF's roadmap to open science

Jan Wöpking, Berlin University/German U-15
Current approaches to digital sovereignty in German academia

Charon Duermeijer, Elsevier
Governance to underline collaboration principles

SURF

Digital Sovereignty

Ron Augustus

Chief Innovation Officer SURF

November 29th 2023

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SURF cooperative

Universities of Applied Science

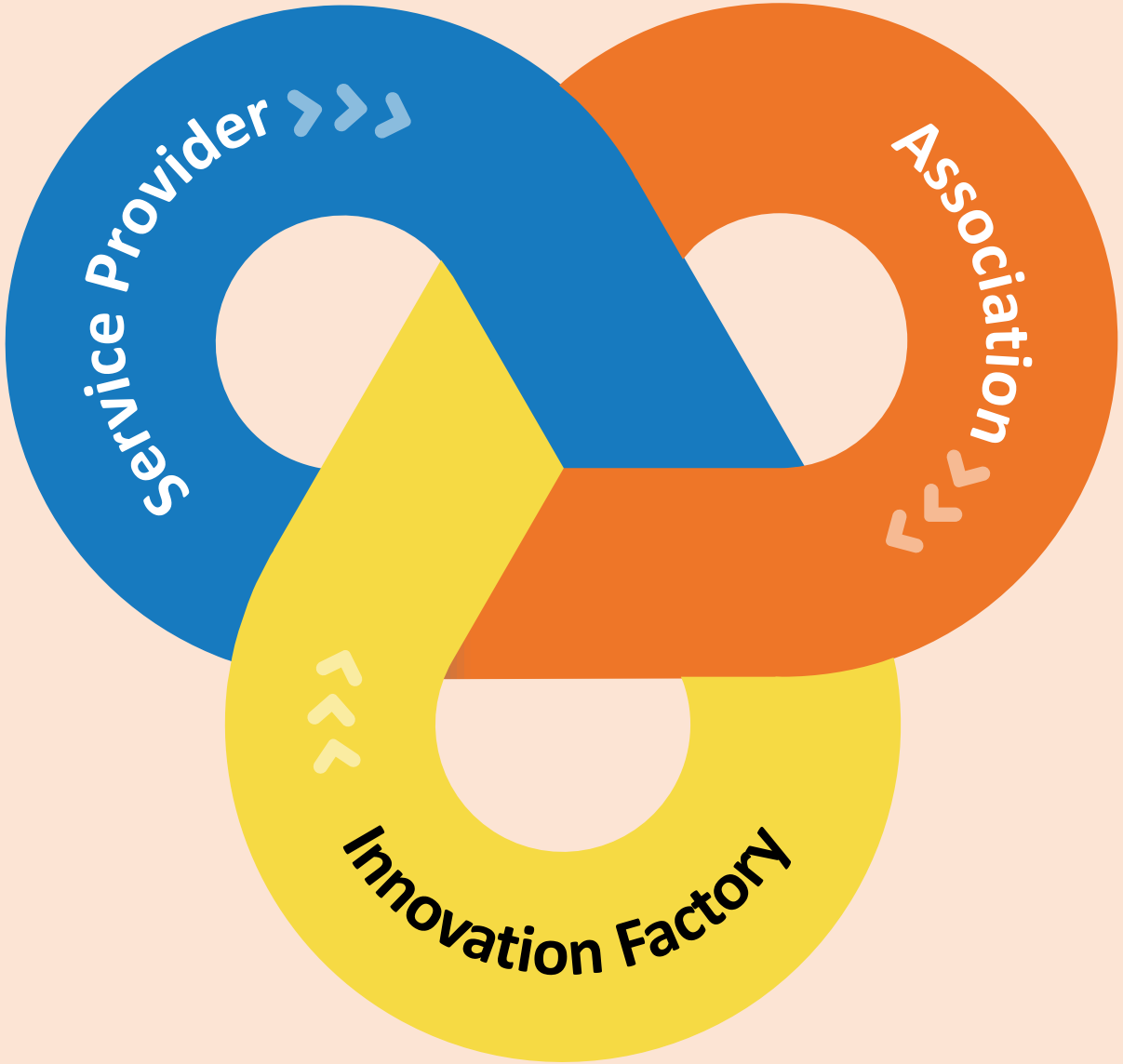
Universities

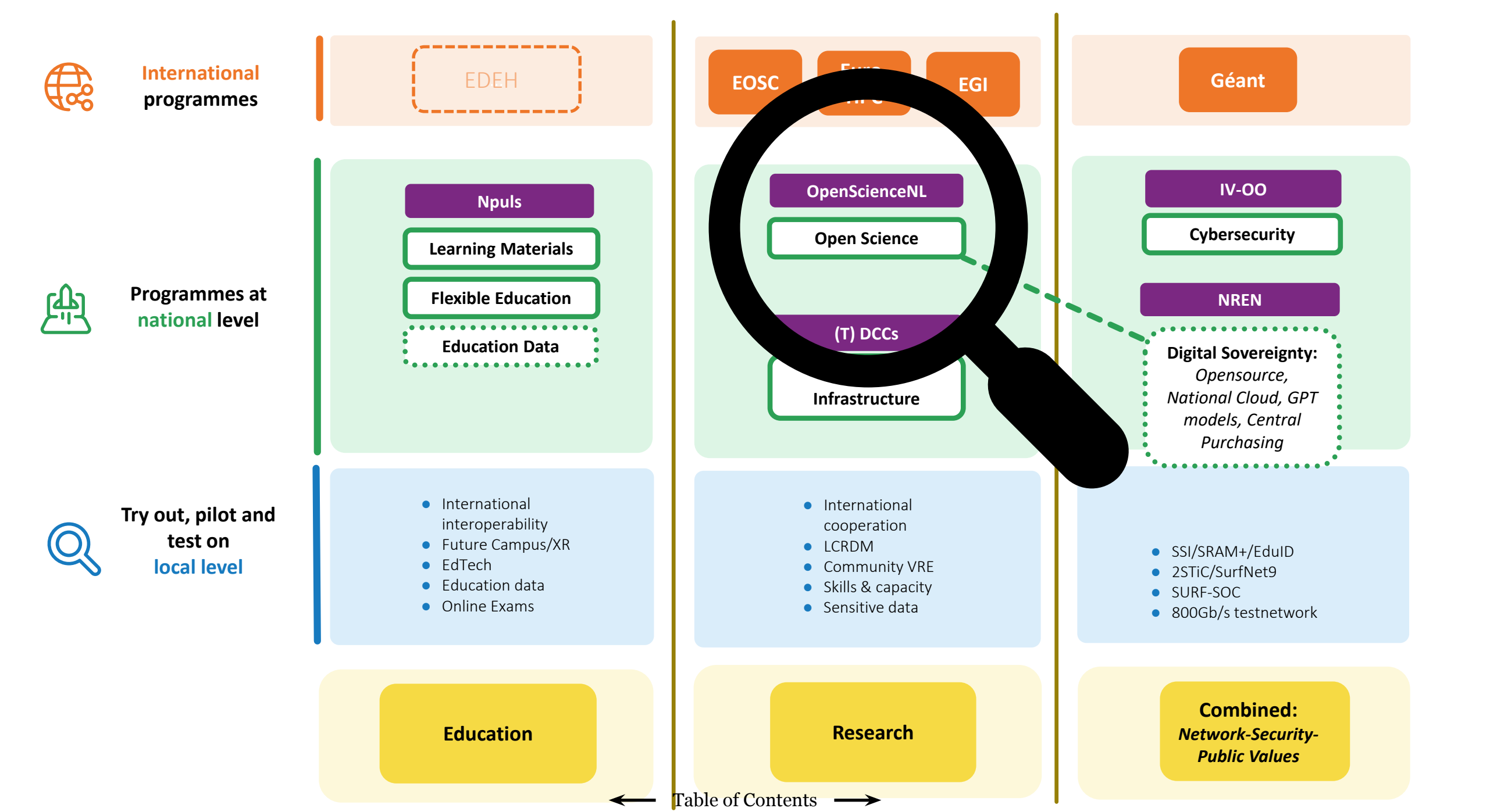
University Medical Centers

Vocational Institutions

Research institutions

Three roles of SURF for education and research





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Changing research environment

Digitization	Exponential growth of data
New methods and techniques	AI, LLM, Data science, VR
Reproducibility crisis	Scientific integrity
Open Science	Making science more transparant, inclusive and democratic
From ‘Public Values’ to ‘Digital Sovereignty’	Control/Agency over own data

Need for Digital Sovereignty and Open Science

UNESCO Recommendation on Open Science

Letter to Parlement on 'Digital Commons'

Towards Open Science as the new Normal

How can we strengthen digital sovereignty?


Make our own honey
Act as one
SURF
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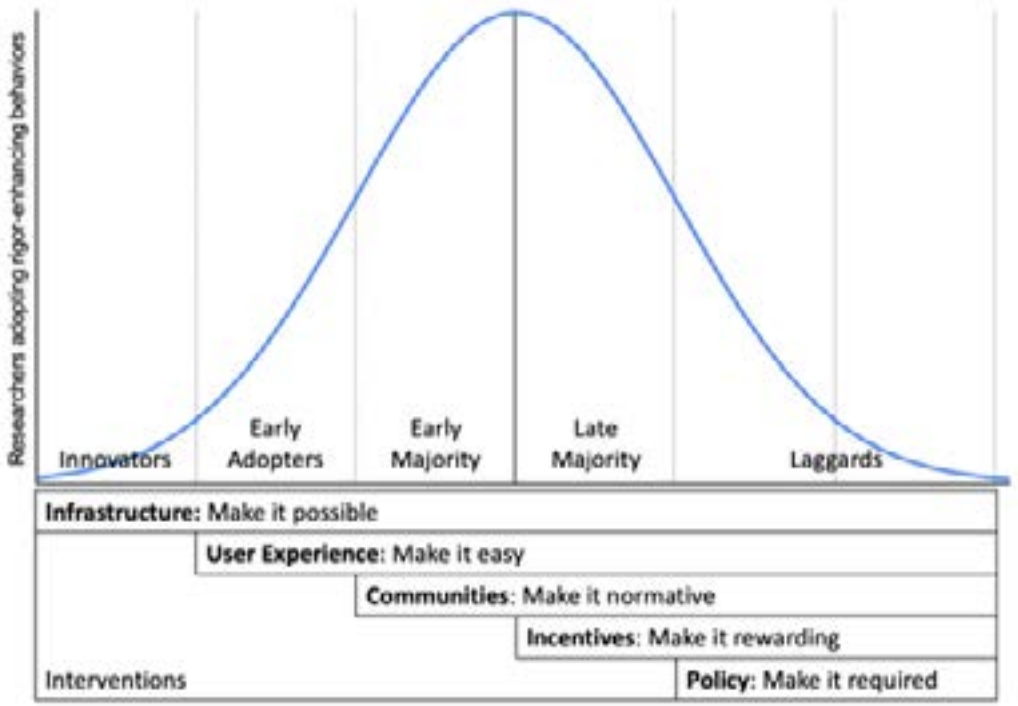
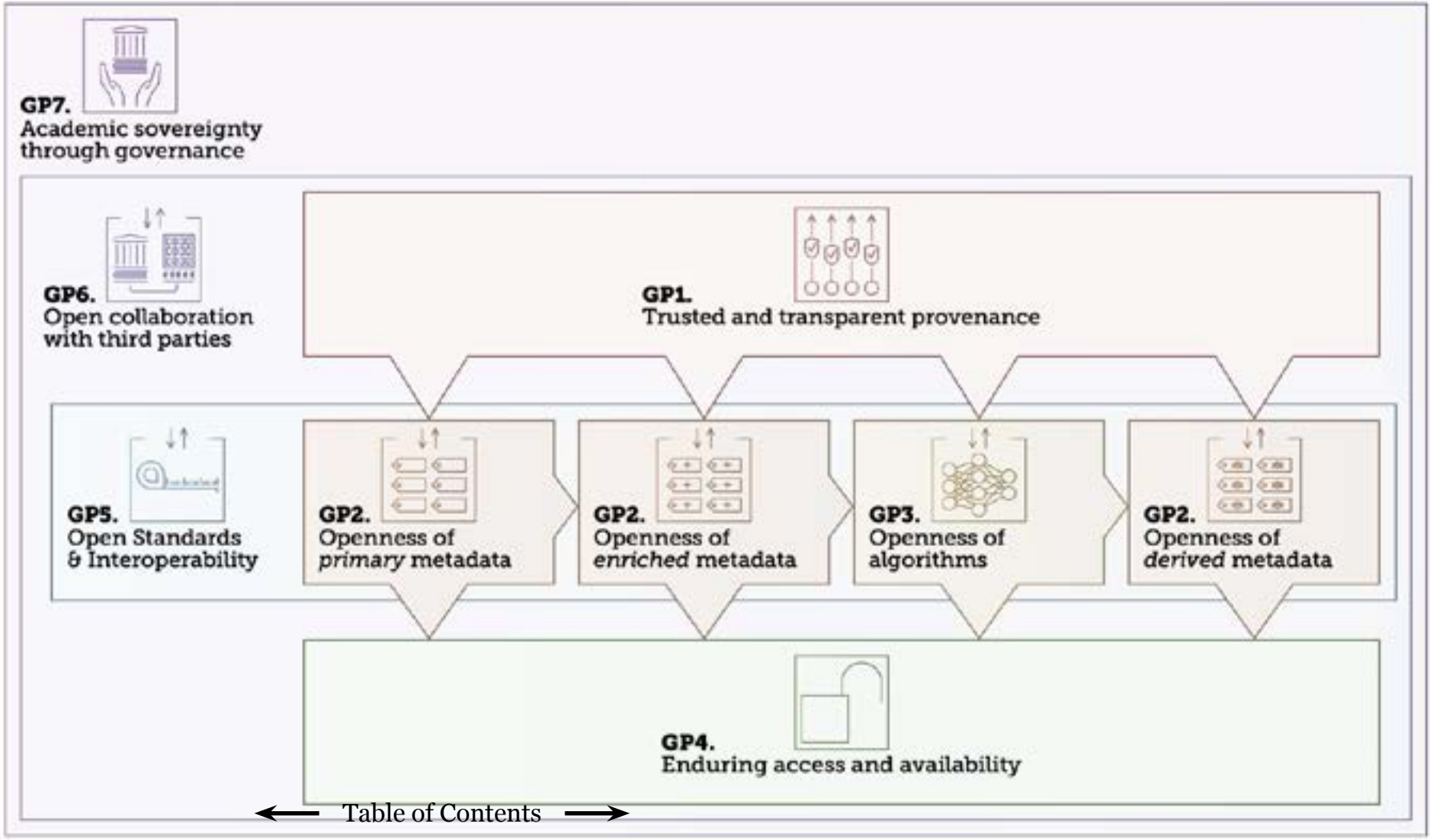
What is needed to make open science the norm



- Development of better research infrastructures to enable effective open knowledge sharing
- Development of better skills in research communities
- Investment in communities that develop and share best practices
- Transformation of the reward- and recognition system
- Development of policy and regulations

Seven guiding principles of research information

Dutch Taskforce on Responsible Management of Research Information and Data, 2020



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National agenda Open Science

strategic goals

Close collaboration between knowledge institutions, government, industry, and citizens to strengthen science and optimise the processes of creating, sharing, and communicating knowledge for the benefit of society

Inclusive, efficient, and transparent processes of scientific (co-)creation, evaluation, quality assurance and communication

Removal of barriers to reading and reusing all scientific output, so everyone can access scientific knowledge in a sustainable way and benefit from it

Products of and for knowledge creation, like data and software, being findable, accessible, interoperable, and reusable (FAIR), and open in as far regulations allow

rolling agenda

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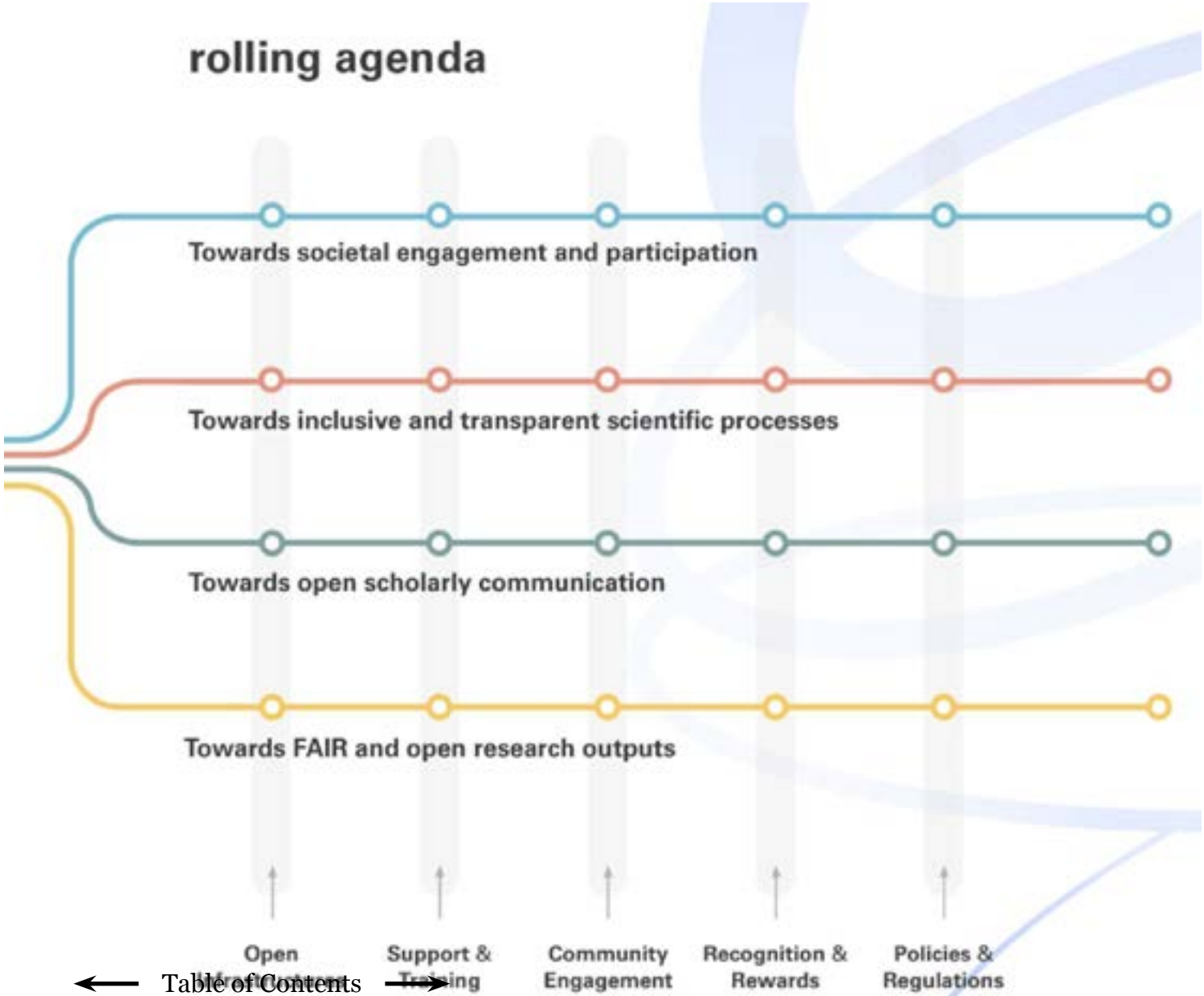
Open Science NL

REGIEORGAAN
OPEN
SCIENCE
NL



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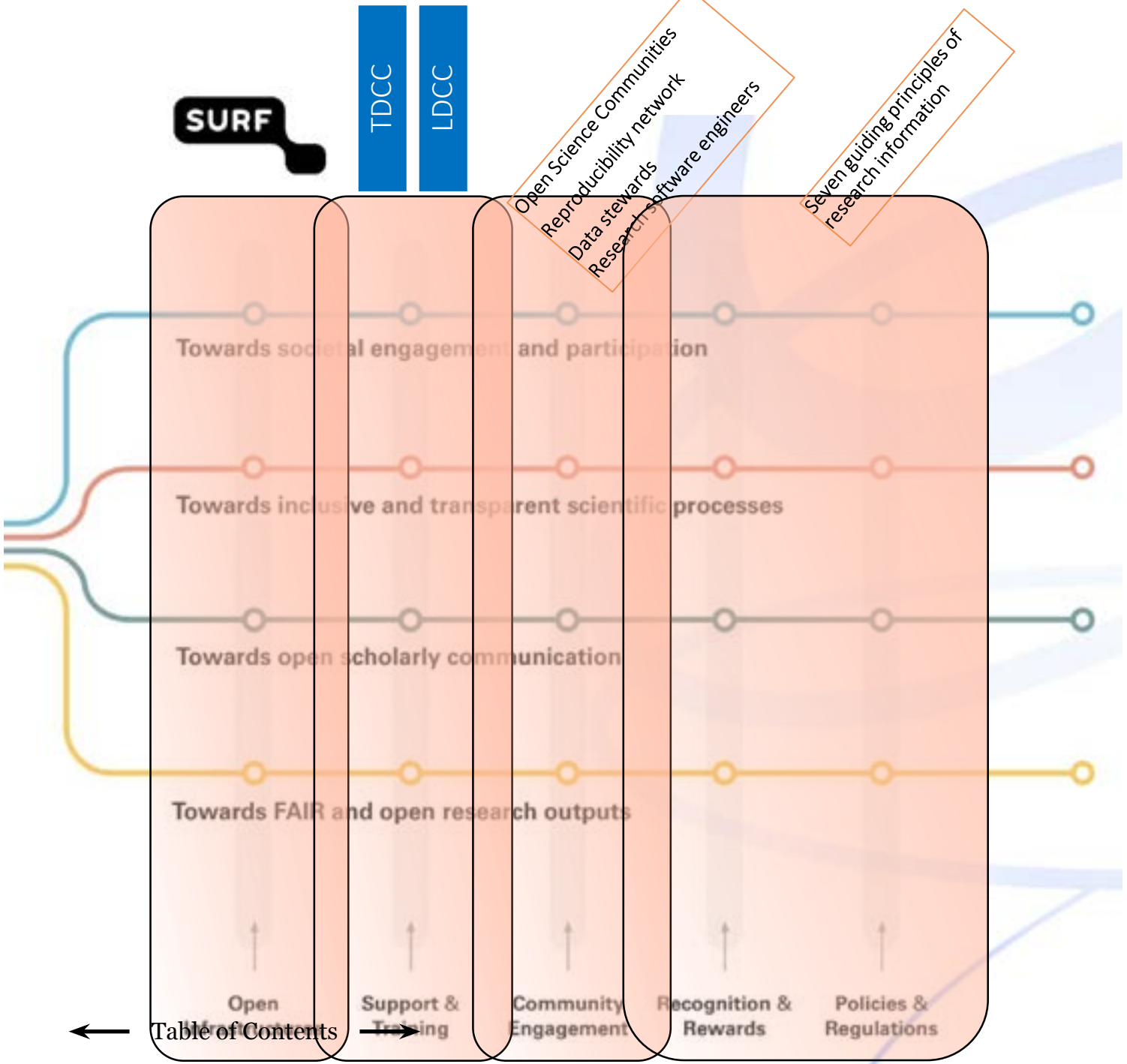
Open Science NL

REGIEORGAAN OPEN SCIENCE NL



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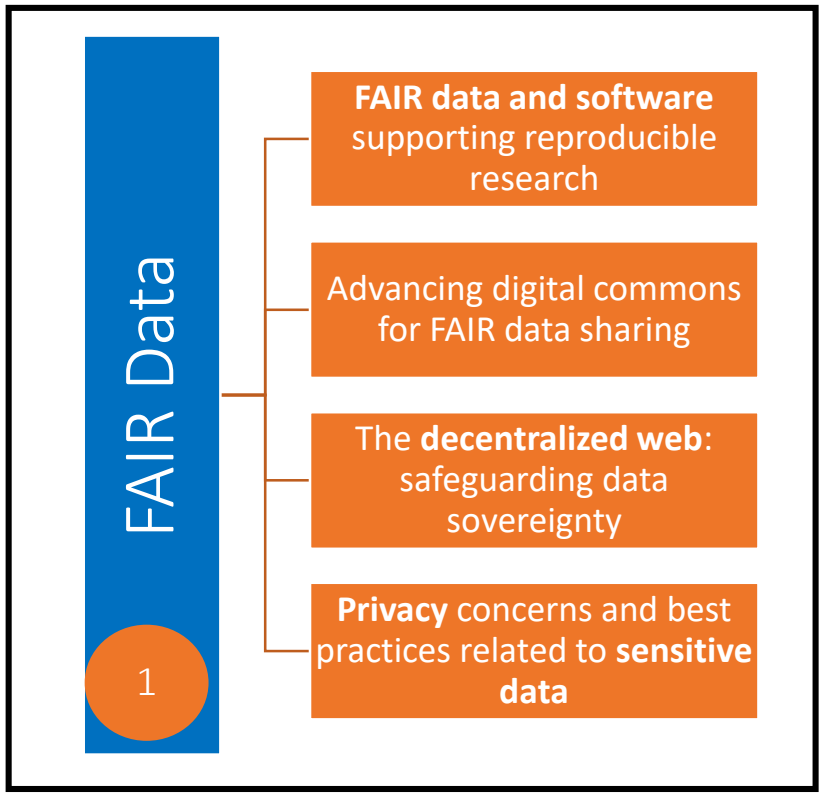
SURF: Three roadmaps to facilitate Open Infrastructures

Role SURF:

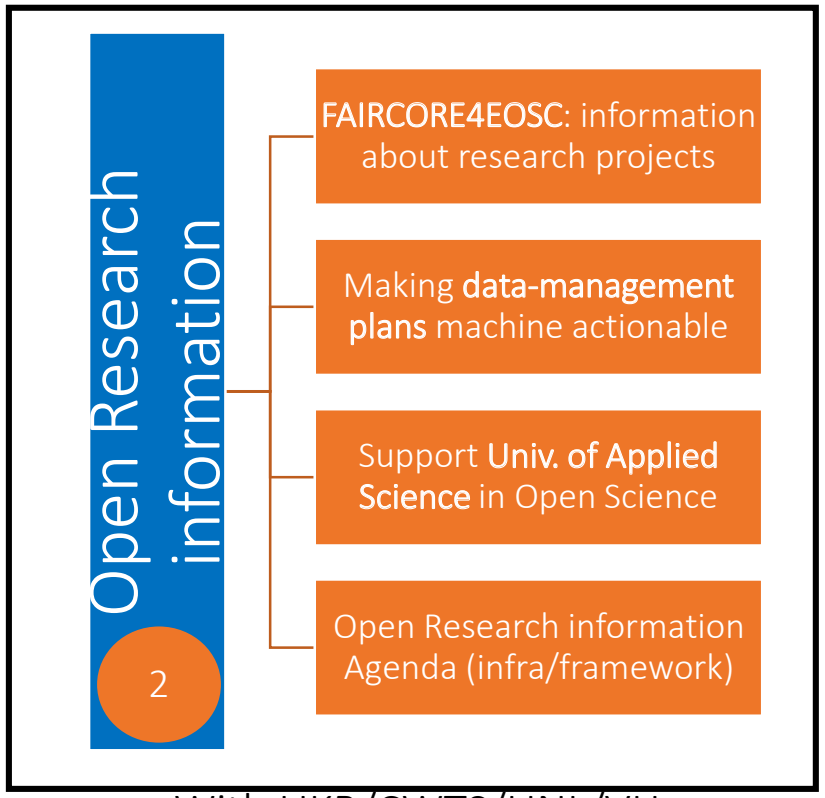
- explorative
- future oriented

- coordinating
- continuing existing activities
- bundling

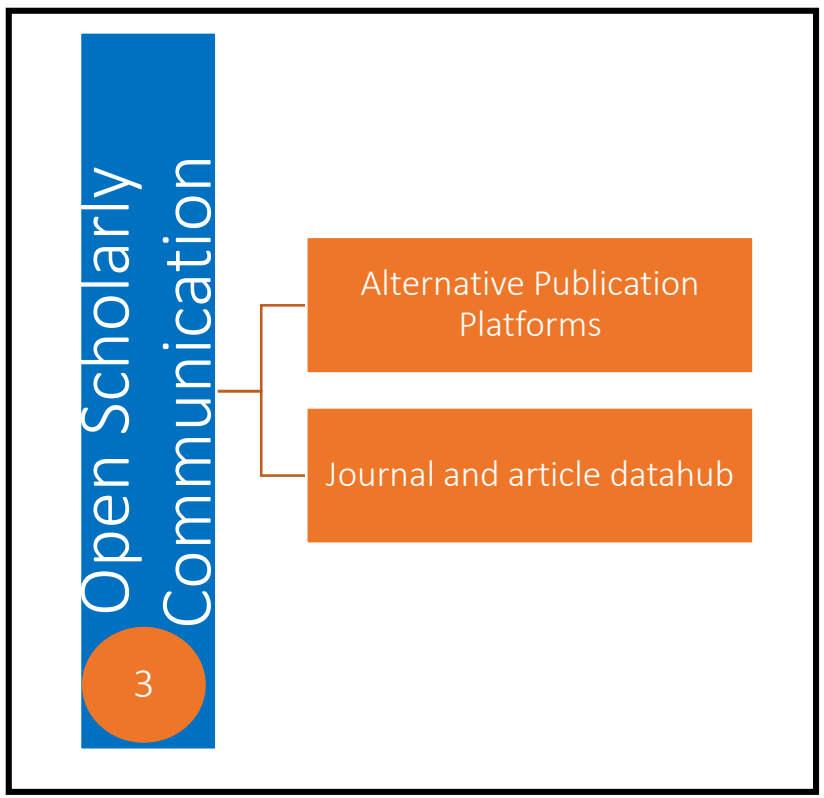
- explorative
- facilitating communities



With LDCC's, TDCC's, RDNL, eScience Center, DANS,…



With UKB/CWTS/UNL/VH,…



With UKB, SHB, …

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Stakeholder value versus Shareholder value

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Global Data Analytics Companies

- **The market is failing** without a level playing field for new market entrants and a strong dependency from research institutions.
- Digital sovereignty is about **being in control of our own data**, and having the freedom of vendor choice when needed.
- **Transparency** (eg on margins or user information) and complying with community **standards** (eg ORCID or IAM) is essential in building trust in a mutual ecosystem.
- Data analytics companies can help to build a public **digital commons** (not owning the digital commons), including rules of participation and access, interoperability & standards, sustainability and governance structures.
- With AI/Foundation model development, the perceived power balance of data analytics companies can increase even further. Now is the **time** to take a mutual step forward.

Examples of Implementation

Ron Augustus, SURF
SURF's roadmap to open science

Jan Wöpking, Berlin University/German U-15
Current approaches to digital sovereignty in German academia

Charon Duermeijer, Elsevier
Governance to underline collaboration principles

GERMAN U15

DR. JAN WÖPKING, GERMAN U15:
CURRENT APPROACHES TO DIGITAL SOVEREIGNTY IN GERMAN ACADEMIA

LEIDEN UNIVERSITY & ELSEVIER SYMPOSIUM ON DIGITAL SOVEREIGNTY
29 NOVEMBER 2023

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German U15

Freie Universität Berlin
Humboldt-Universität zu Berlin
Rheinische Friedrich-Wilhelms-Universität Bonn
Goethe-Universität Frankfurt
Albert-Ludwigs-Universität Freiburg
Georg-August-Universität Göttingen
Universität Hamburg
Ruprecht-Karls-Universität Heidelberg
Universität zu Köln
Universität Leipzig
Johannes Gutenberg-Universität Mainz
Ludwig-Maximilians-Universität München
Westfälische Wilhelms-Universität Münster
Eberhard Karls Universität Tübingen
Julius-Maximilians-Universität Würzburg

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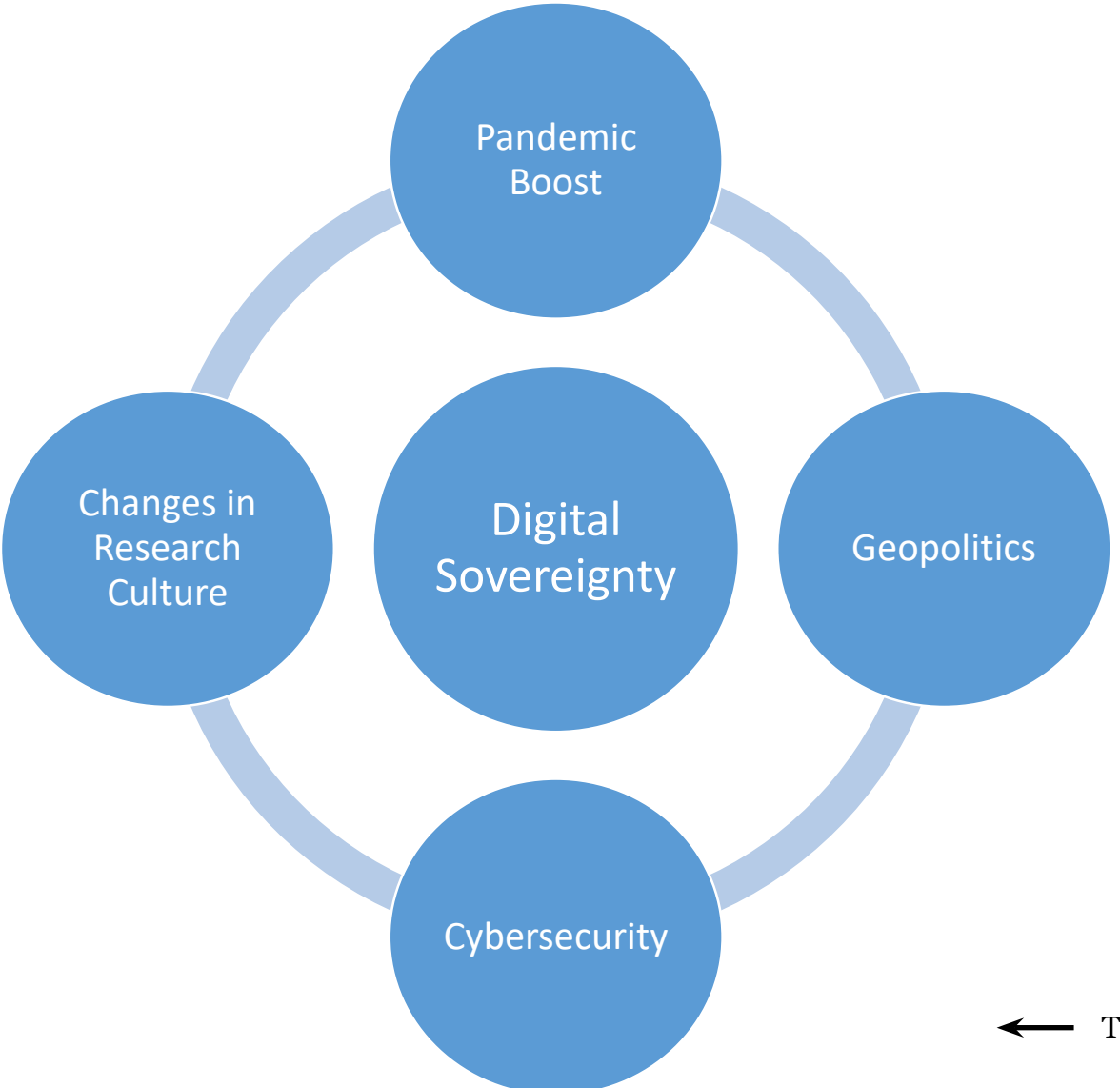
INTRODUCTORY REMARKS

- Digital sovereignty is rising topic in German Academia, lots of activities

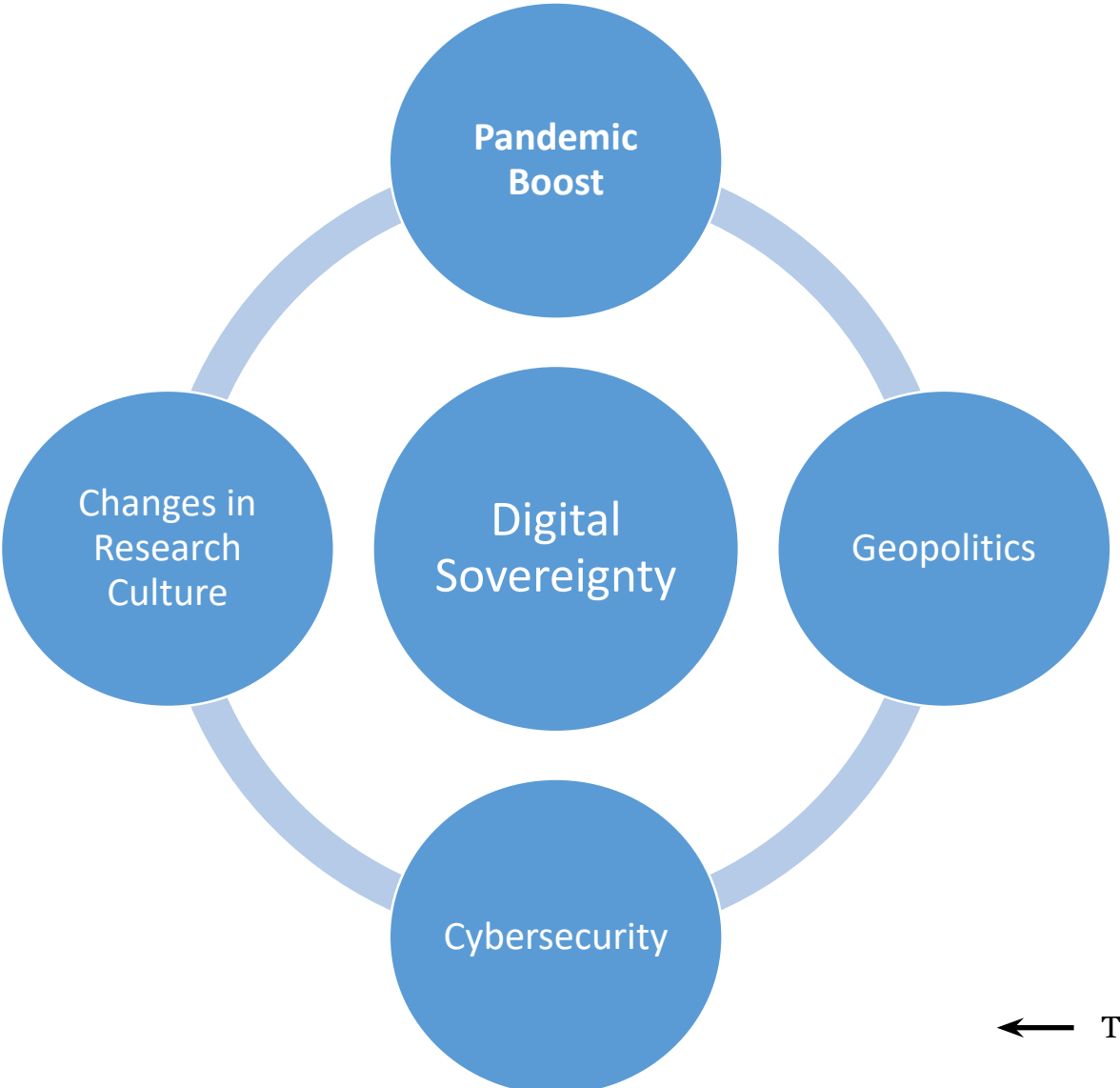
- Part of general discourse in Germany on necessity to become (way) more digital

- In October 2023 the *Scientific Council of the German Federal Government* (“Wissenschaftsrat”) issued recommendations regarding sovereignty and security of science in the digital space

WHY RISING TOPIC?



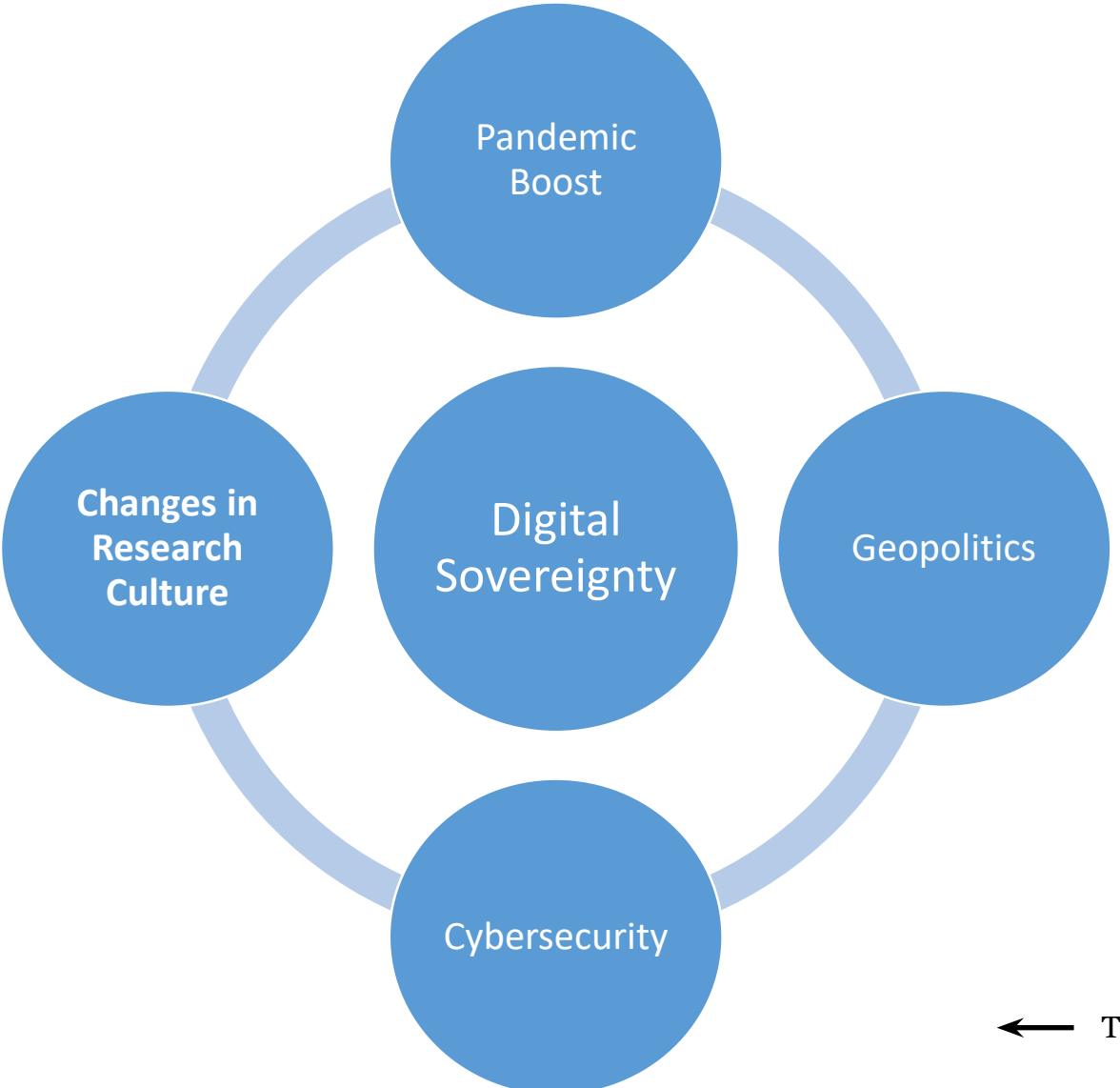
WHY RISING TOPIC?



Pandemic induced immense boost in digitization in all areas of German society

- Ubiquity of video conference systems
- Establishment of home office culture
- Led to **new concept of digital infrastructure** (more than computers, also products, platforms, cloud services
- Showed value of data sharing for research and economic productivity (BioNTech)
- Also made dependence on Big Tech solutions felt

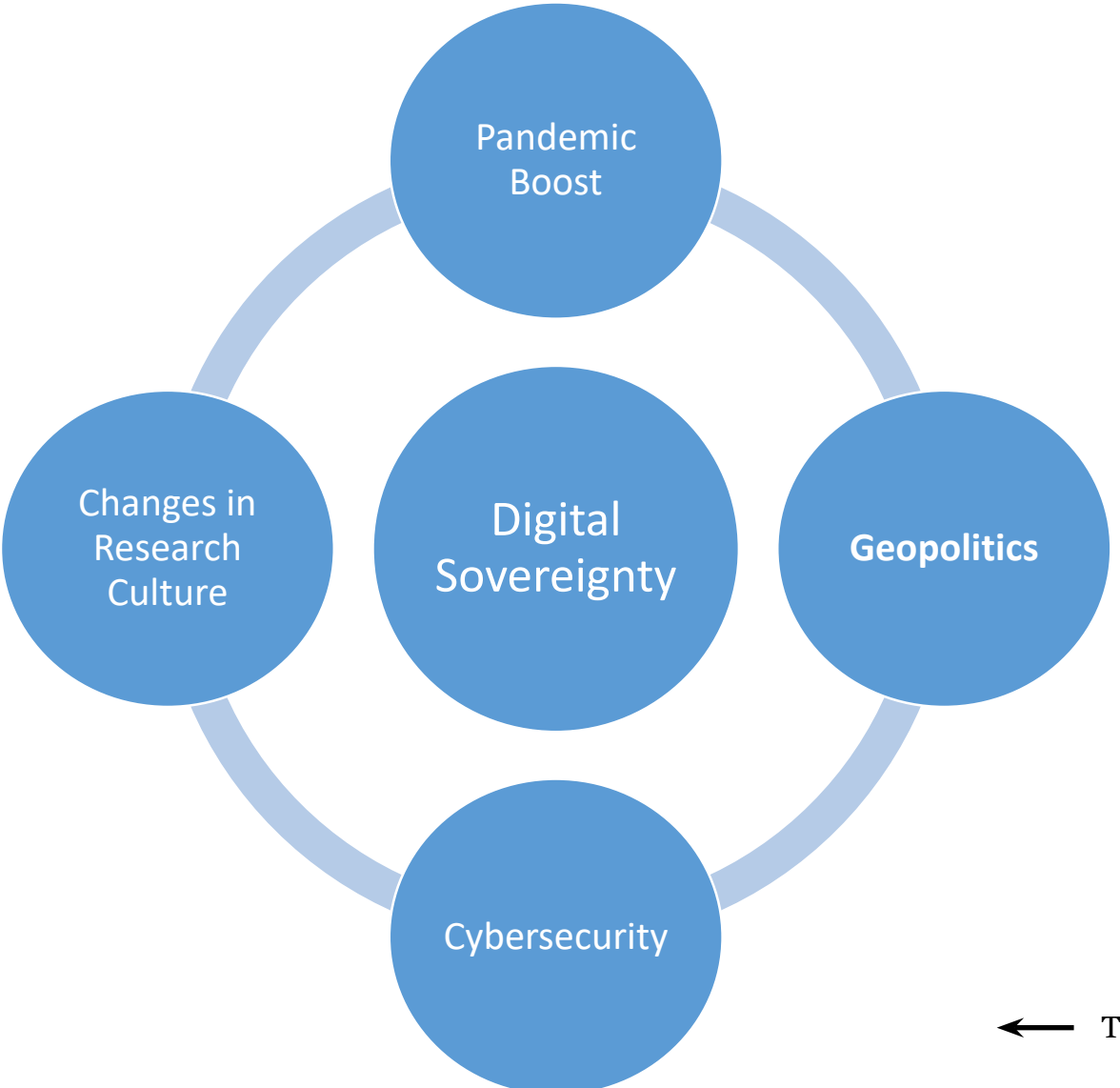
WHY RISING TOPIC?



Changes in Research and Teaching Culture

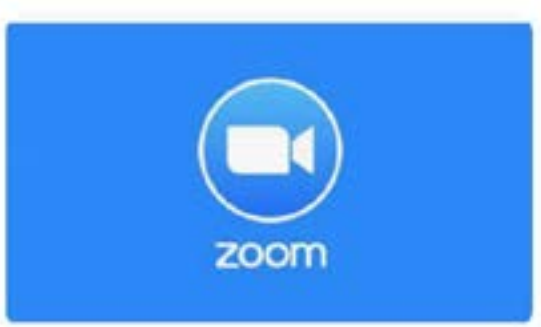
- Rise of data driven research culture in all areas
- Focus on Open Data, Open Access, and Open Science
- Teaching also increasingly based on data → sensitive data

WHY RISING TOPIC?



Geopolitics

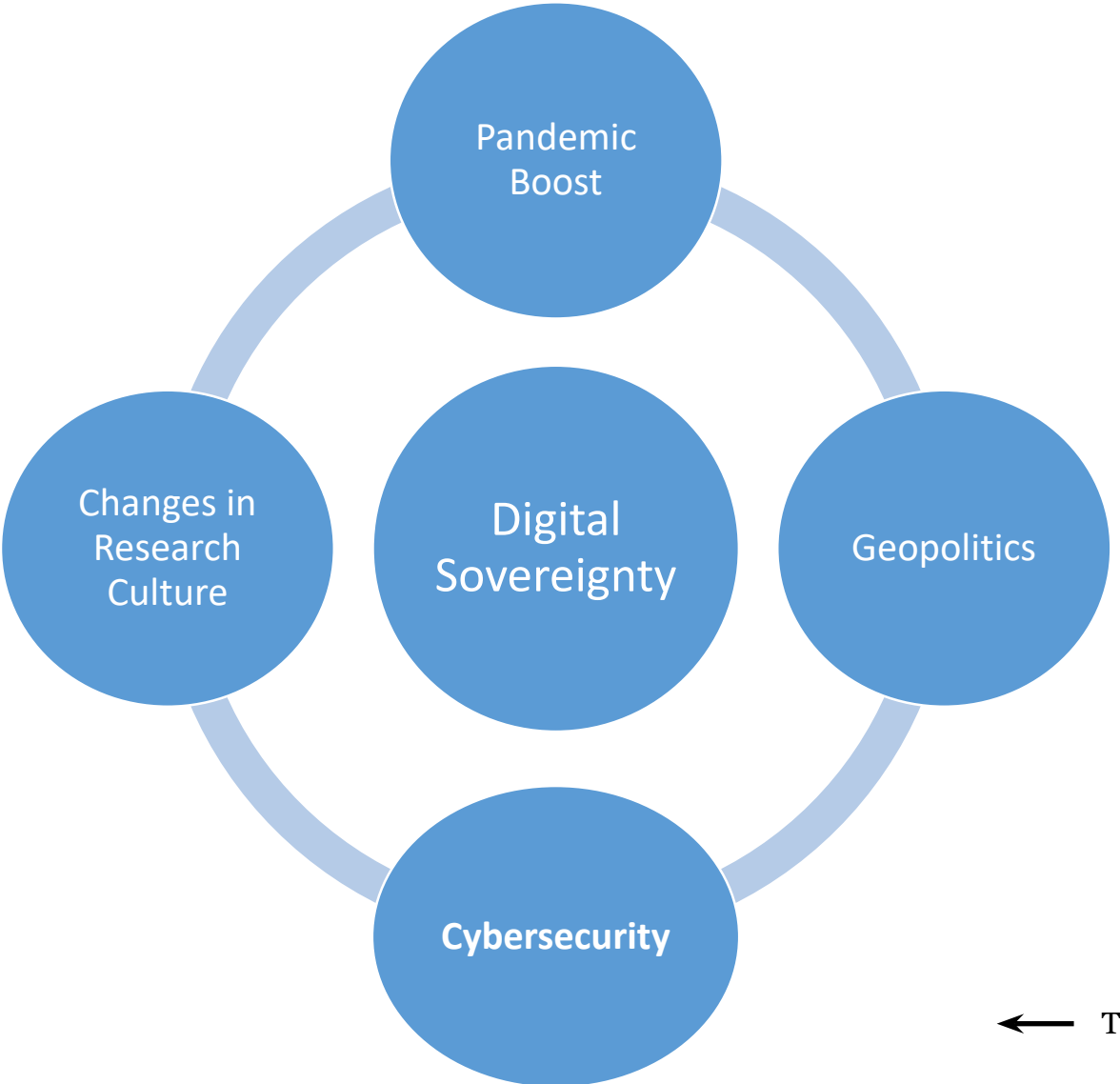
- Rising awareness of dependence on US / Big Tech



vs.

- Digitization and AI seen as key driver for economic growth and security

WHY RISING TOPIC?



Cybersecurity

- Quantitity and intensity of cyber attacks on universities and research institutions has increased significantly over the last years
- Germany is notorious for its strong focus on data privacy and data protection (GDPR regulation).

CURRENT ACTIVITIES IN GERMANY (EXAMPLES)

Strategy	Software	Data	Competencies	Cyber Security
• Create position of CIO and CISO • Make digitization key strategic concern	• Funding of research software (DFG) • Sovereign Tech Fund • Approaches to joint development and procurement of IT (~SURF)	• National Research Data Infrastructure • Medical Informatics Initiative • Find solutions for dealing with GDPR • Creation of federal Research Data Act	• Attract and keep highly qualified IT personel • Strengthen digital literacy	• Raise awareness • Raise cyber security levels • Learn to think geopolitically

A DIGITAL RESEARCH SPACE FOR THE BUA

Berlin University Alliance (BUA) is cooperation platform for Freie Universität Berlin, Humboldt University, Technical University Berlin and Charité

- Germany's largest research hub
- Funded by excellence strategy
- Dedicated to testing new research culture approaches

Berlin University Alliance

A DIGITAL RESEARCH SPACE FOR THE BUA

The Berlin University Alliance has a high scientific output in the form of publications and research data. So far, these heterogeneous digital resources have been partially made available through isolated data repositories located at the institutions, thus, scattering the resources over several data silos. The research project "A Digital Research Space for the BUA" aims to develop an open-source platform to explore and analyze these digital resources, improving the accessibility and discoverability of the data.

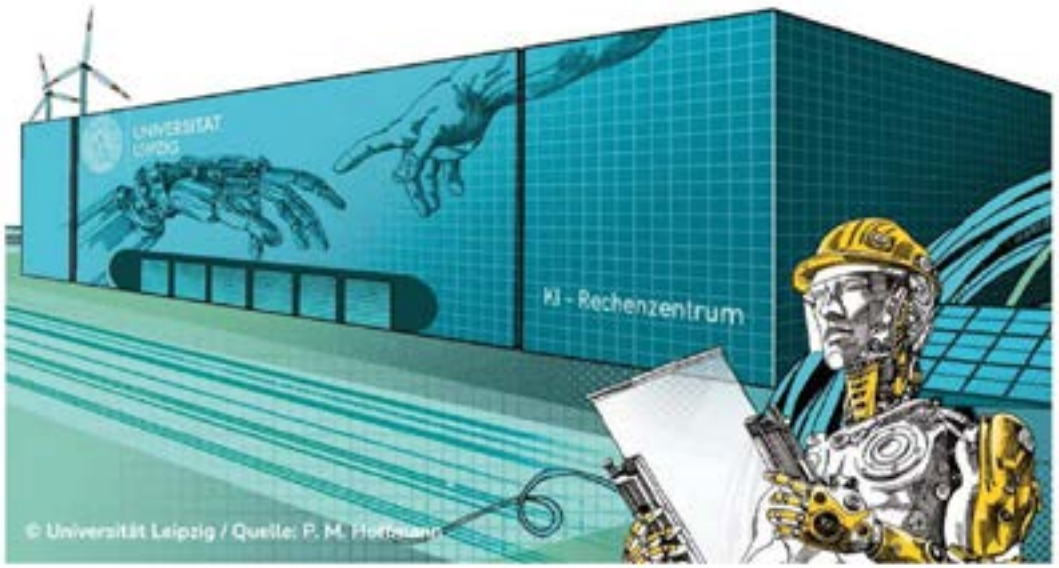
https://www.berlin-university-alliance.de/en/commitments/sharing-resources/digital-research-space/index.html

Berlin University Alliance

KIRZL LEIPZIG

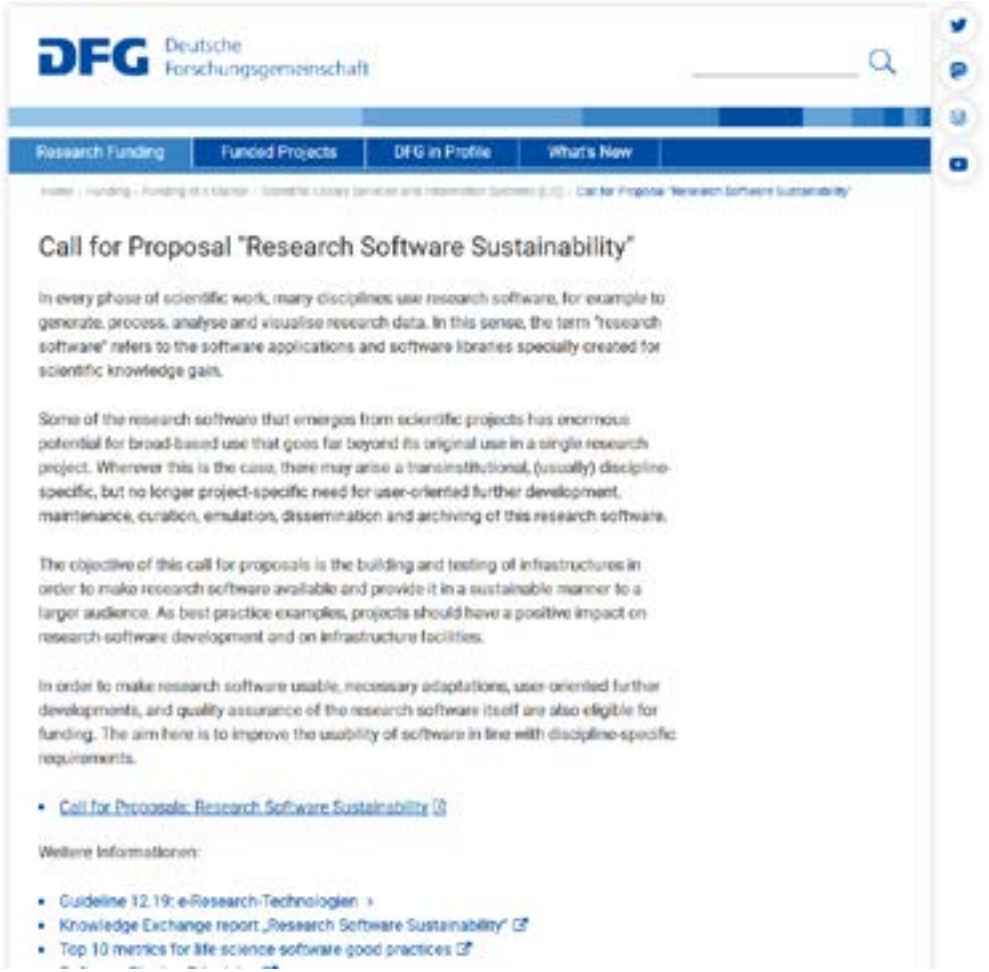
KI-Rechenzentrum Leipzig (KIRZL)

- joint initiative of Leipzig University with non-university research institutions and cooperation partners from industry and public administration.
- aims at creating infrastructure for cutting-edge research, economic application and training/education
- One of 5 AI competence centers in Germany



FUNDING FOR RESEARCH SOFTWARE

- German Research Foundation (Deutsche Forschungsgemeinschaft, *DFG*) funds the building of *prototypes* and *demonstrators* for sustainable research software.



NFDI

German National Research Data Infrastructure

- Funded by *Bund and Länder*
- aims to create permanent digital repository of knowledge according to FAIR principles (Findable, Accessible, Interoperable and Reusable).
- **Key of NFDI are consortia, associations of various institutions within a research field, work together in an interdisciplinary manner to implement the goal**
- Also linked to European Open Science Cloud (EOSC).

FEDERAL RESEARCH DATA ACT

Research Data Act (*Forschungsdatengesetz*)

- key piece of research agenda of current Government
- purpose is to massively improve access to data for scientific research purposed
- could create a uniform framework for access, dissemination, storage and safeguarding of research data
- potential game changer for research in Germany
- currently awaiting details

ALPHAFOLD

- Predicts protein structures with speed and accuracy previously thought to be decades away.
- Built on vast amounts of openly available protein data to train its models.
- **DeepMind partnered with EMBL, Heidelberg**

ALPHAFOLD

Edith Heard, Director General of EMBL and Patrick Cramer, President of the Max Planck Society at the award ceremony in Berlin. Credit: Philip Nürnberger

German AI prize 2023 by WELT for “outstanding services to the research and development as well as the application and commercialisation of artificial intelligence (AI)”.

SOME CONCLUDING REMARKS

- many activities re digital sovereignty in academia
- huge demand for researcher controlled / led data storage and usage
- proliferation of local, decentralized initiatives
- Upside: lots of potential for innovative solutions
- Downside: funding and sustainability challenges
- Ultraorthodox interpretation of data protection regulations constitutes immense burden

Examples of Implementation

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Charon Duermeijer, Elsevier
Governance to underline collaboration principles

Governance to underline collaboration principles

Leiden University & Elsevier Symposium on Digital Sovereignty

29 November 2023

https://epdos.nl/

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Overview of the VSNU/NFU/NWO-Elsevier OS Collaboration

1. **Publishing as a Service:**
   Unlimited publishing in eligible Elsevier titles over the life of the agreement

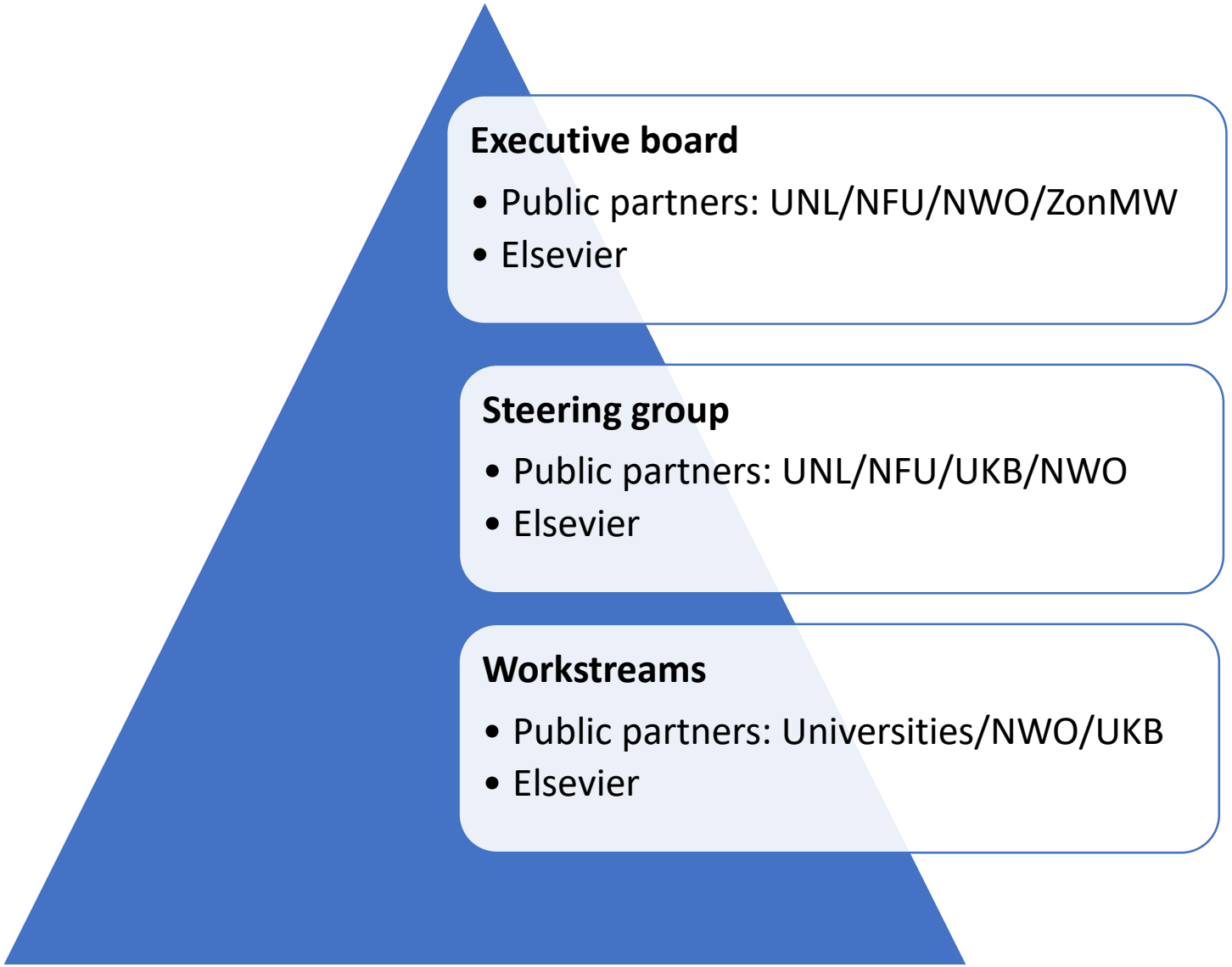
2. **Reading as a Service:**
   a) Expansion of access to subscription articles published by Elsevier for all member Universities
   b) UNL, KNAW, NWO, NFU institutes also have access to Scopus to support discoverability and other use cases

3. **Open Science Services (pilots):**
   Making research outputs available to institutions for:
   - Reporting on output/outcomes of teams and funding programmes
   - Individual evaluation: Fair Recognition & Rewards
   - Showcasing wide array of outputs in portals

This agreement runs from 2020 to 2024.

*Governed by a joint **governance structure** & agreed **collaboration principles***
***A unique collaboration** – for STM industry, NL and Elsevier!*

Collaboration overseen & managed through 3-tier governance structure



Executive board

- Public partners: UNL/NFU/NWO/ZonMW
- Elsevier

Steering group

- Public partners: UNL/NFU/UKB/NWO
- Elsevier

Workstreams

- Public partners: Universities/NWO/UKB
- Elsevier

The Executive Board oversees the overall objectives of the agreement.

The Steering Group reviews and approves suggestions for new pilot ideas, ensures compliance with the collaboration principles, evaluates the pilots following the pilot phase and when successful “promotes” the pilot to a Service.

Collaboration principles* for the co-creation of OS services

Interoperability and Vendor Neutrality

Transparency, inclusion and collaboration

Access to research data

Data Portability

* Taken from the agreement text and the FAQ for the agreement, see the agreement text for the complete description of the collaboration principles.

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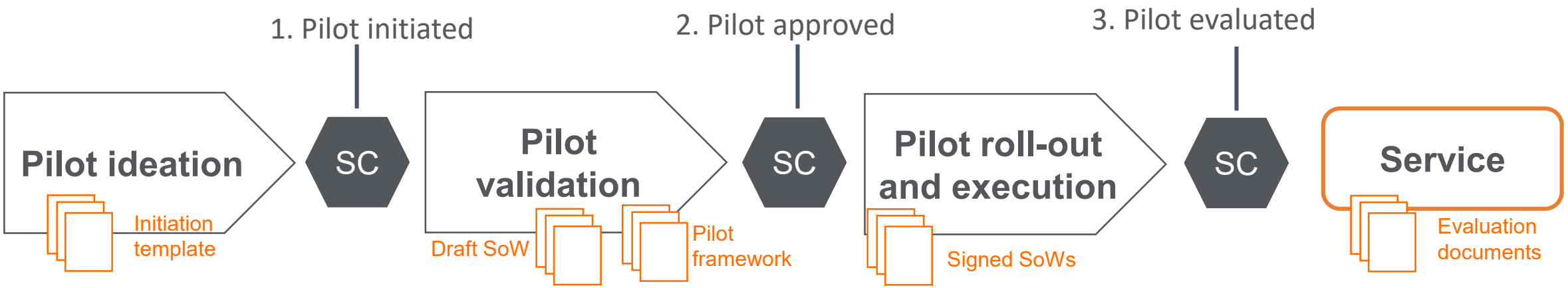
Pilot ideation, validation, roll-out and evaluation process



- Incoming ideas from:
  - Community
  - Steering Committee
  - Elsevier
- Identification of interested parties
- "Initiation template" filled-in and sent to the Steering Committee

- Fine-tuning of the project
  - Interest for the community
  - Deliverables
- "Pilot framework" completed and shared with the Steering Committee
- Preparation of a draft SoW

- Signature of the Statement of Work
- Setting up access and user rights
  - Account set-up
  - Potential API set-up
- Training (if relevant)
- Progress reviews with participating institutions

- The steering group reviews the outcomes of the pilot
- If positively evaluated, the pilot continues as a service, open to all institutions.

All approval documents are publicly shared via the joint program website

Collaboration overseen & managed through 3-tier governance structure incl. executive board (uni leadership representation)

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How does this work in practice (for each pilot)?

1. Pilot initiated
2. Pilot approved
3. Pilot evaluated

Pilot ideation → SC → **Pilot validation** → SC → **Pilot roll-out and execution** → SC → **Service**

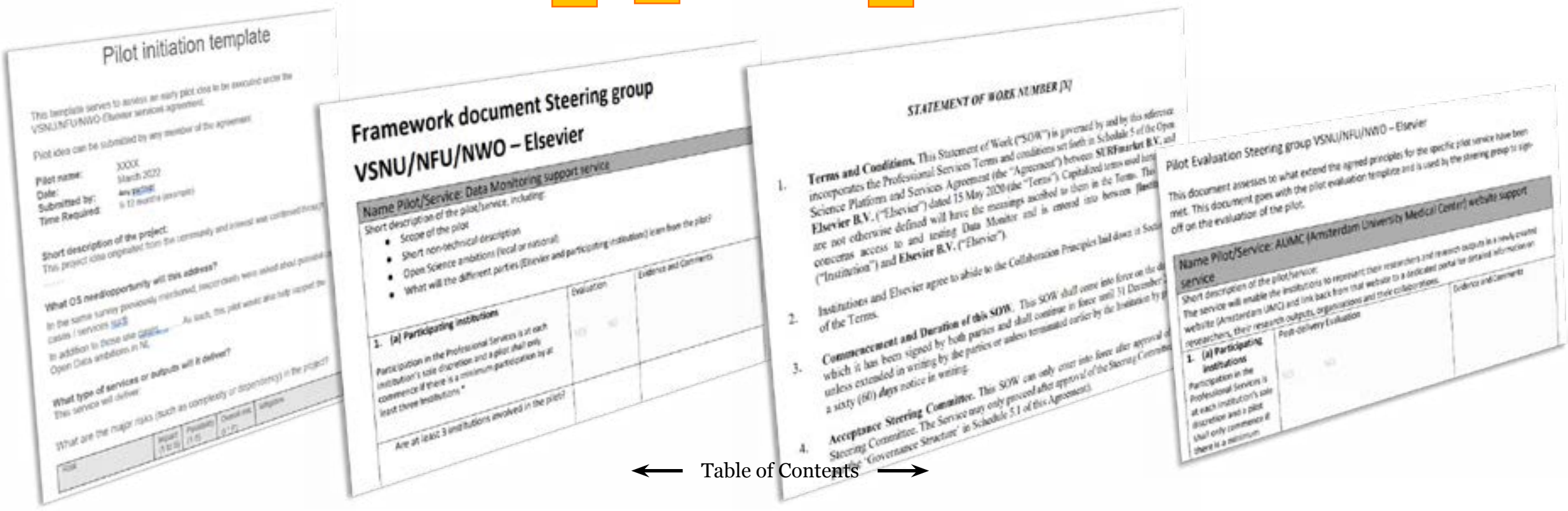
Initiation template

Draft SoW

Pilot framework

Signed SoWs

Evaluation documents



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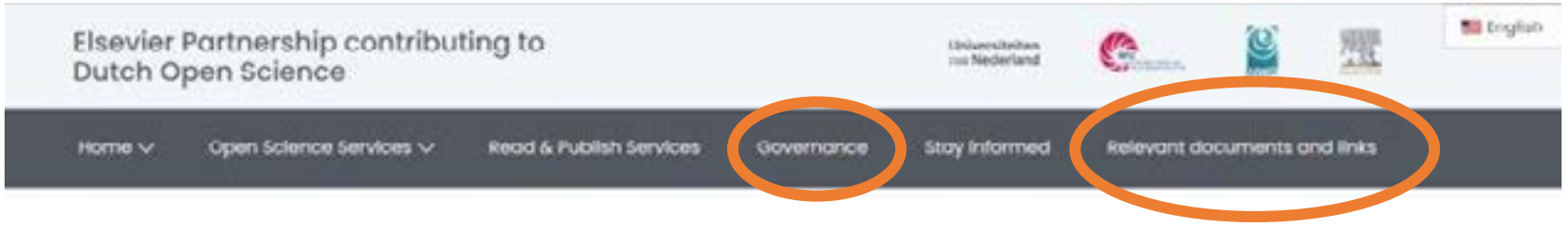
Joined website EPDOS

Vision: Support our NL stakeholders to make research more open, transparent, and reproducible, whilst avoiding extra work for researchers and the research support functions and contributing to a national Open Science Infrastructure



Inspired by the open science movement, research is becoming increasingly more open. To facilitate this, the Dutch research community (UNL, NFU, VH, NWO, and KNAW) and Elsevier started a collaboration. Together they are developing new open science and open access services to contribute to Dutch open science. Ideas for new services are tested via pilot projects. These pilots are undertaken by researchers, librarians, research managers, research intelligence consultants and other staff from the participating institutions – the people who will also end up using these services.

In the agreement, which runs until December 2024, the development of these new services are included next to open access publishing and reading services.

Developing new Open Science services

Here you will find information about how to contribute to the development of new services. You can read how to give suggestions for new services, how this idea turns into a pilot and how this could evolve into a regular service.

We will update you about the work that is done within the collaboration and we will continue to improve the relevance of the services for the research community. Links [illegible] here, as well as the

https://epdos.nl/

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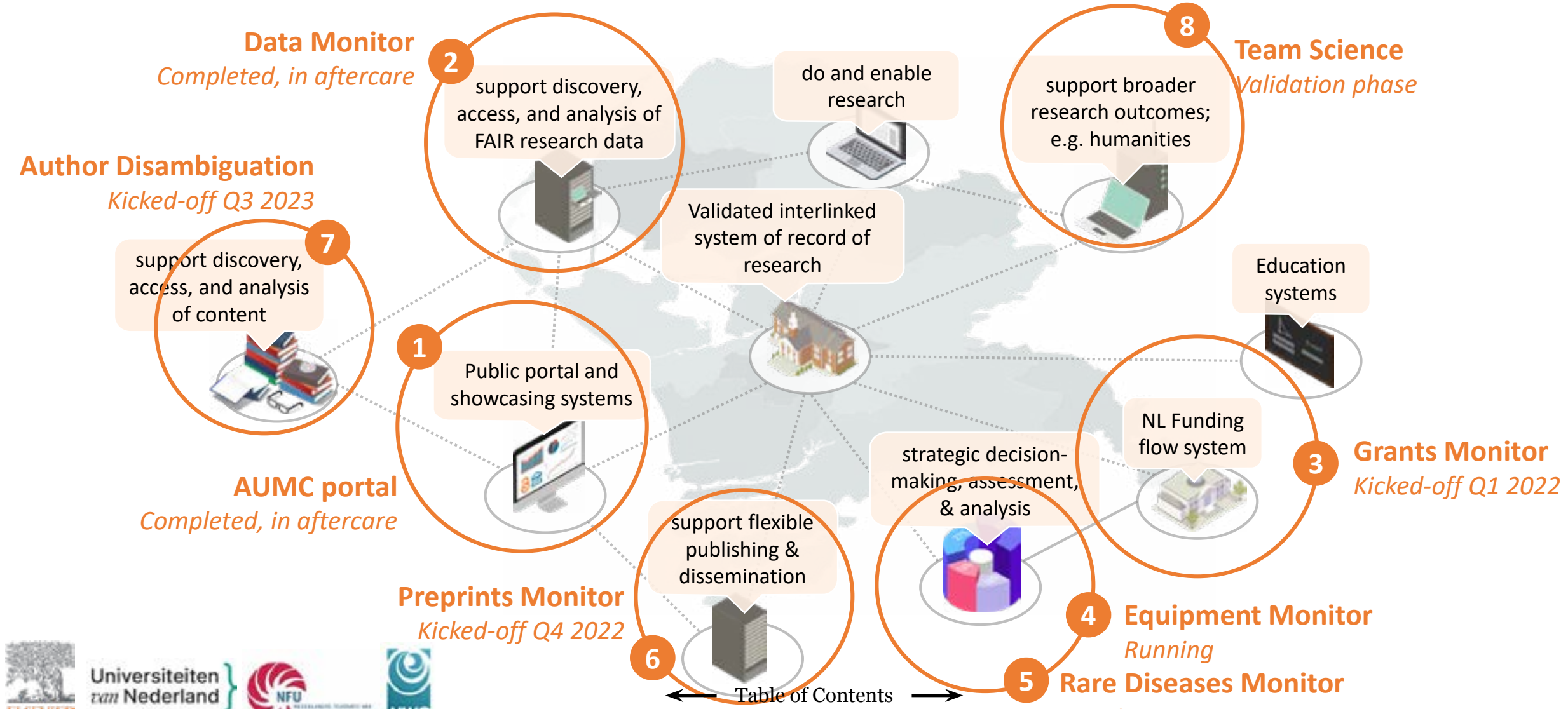
Approved pilots



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Pilots currently running and their impact on Open Science

Portal Service

Data Monitor

Grants Monitor

Equipment Monitor (Telescope)

Rare Diseases Monitor

Preprints Monitor

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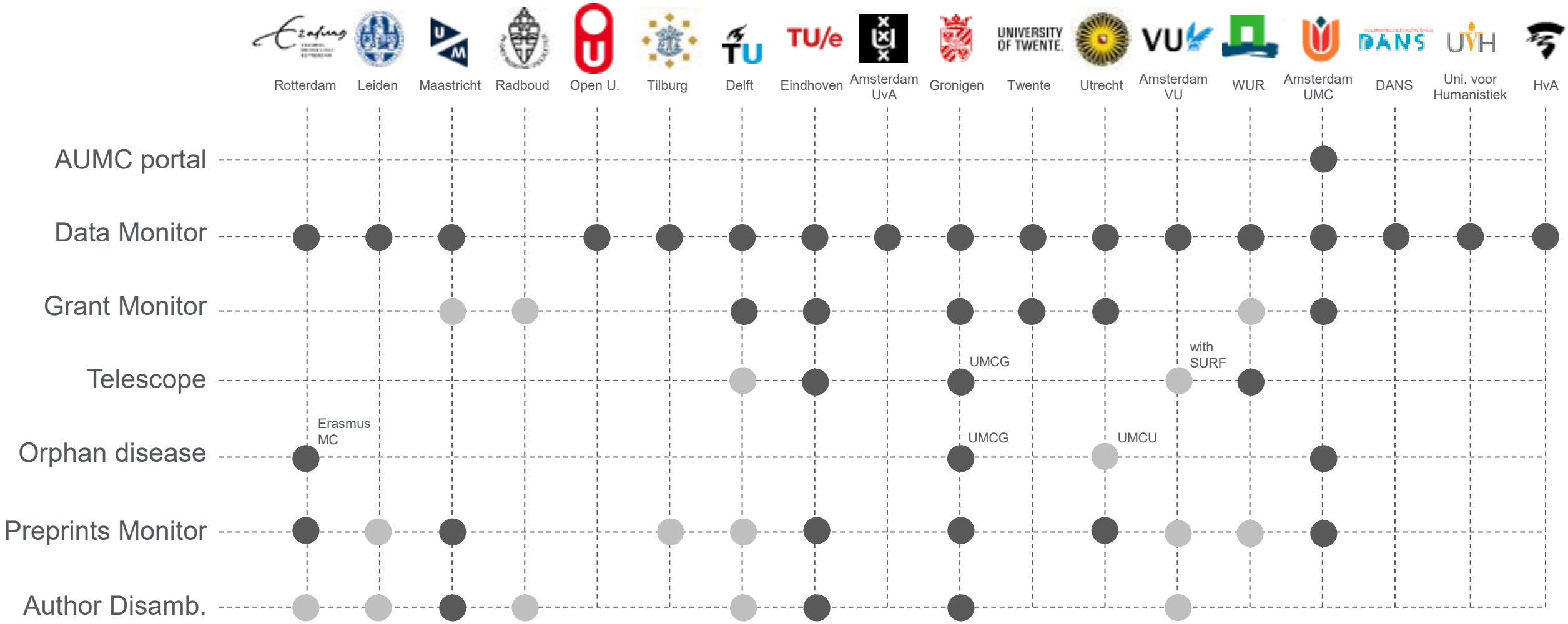
Participating institutions per pilot



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Thank you

Charon Duermeijer| c.duermeijer@elsevier.com

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Wrap-up