



Building the digital infrastructure for Fab Cities, Regions and Nations



D2.4c Publication on Open Educational Resources on digital sovereignty

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Intro

In recent years, "digital sovereignty" has become prominent at national and international levels, feeding into political agendas, cybersecurity strategies and industrial-policy decisions.

Before making a list of open educational resources about such a complex and ambiguous topic, the first challenge is to provide a better definition of its subject.

Sovereignty is often associated with territoriality, jurisdiction, population, autonomy, and authority with internal and external recognition. But before stepping into the macro-level of policy, I deem it best to define the concept from the people's point of view and our right to a bottom-up approach to the laws that govern us.

The term sovereignty can be well related to the historical debate for "food sovereignty": defined by associations of rural smallholders in Latin America as "the right of each population to maintain and develop its capacity to produce its basic foods while respecting cultural and productive diversity". The artificial limits on the distribution and reproduction of seeds, the uniquely profit-driven choices made on seasonal crop production that does not satisfy local needs, and the dynamics of a globalised patent-based food market: are all causes for the loss of sovereignty that activists of Via Campesina warn us about. Lack of sovereignty forces participants to be mere consumers and promotes a reductionist system of knowledge which ignores the complex socio-political relationships lying beyond the mere adoption of a technological solution.

I will then define "sovereignty" concerning the digital dimension as the control participants have over the design of systems critical for their cultural, economic and sustainable development.

Digital sovereignty means control over one's own digital data and self-determination in the use and design of digital systems and processes. From this initial conceptual explanation, it becomes clear that "digital sovereignty" is a multidimensional concept. The ambition of "digital self-determination" and "sovereignty" applies to the state and economy but is also relevant to society and individuals. This diversity of interpretations makes a conclusive and generally valid single definition of "digital



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sovereignty” problematic, as it raises different questions and demands depending on the scope. For example, on the one hand, “digital sovereignty” for citizens and civil society means mainly data security and control over their data; on the other hand, for businesses, it also implies freedom of choice between providers of digital systems or technological components. Therefore, the terms “technological sovereignty” and “data sovereignty” are sometimes used interchangeably in place of “digital sovereignty”. Yet these terms cannot be used synonymously; each represents an aspect of the broader “digital sovereignty” concept, which also entails regulatory and political elements.

I will proceed in this paper with a categorisation of topics, including a brief description for each and then a list of open-access educational resources that are complementary in content and focus on the European interpretation and application of “digital sovereignty” concepts.

The philosophical and economic underpinning for all debates about sovereignty in the digital dimension should be the concept of “commons” by their canonical interpretation shared by Elinor Ostrom, with an update due to their knowledge-based nature in the age of infinite reproducibility.

I will then move towards the specific topic of Algorithmic Sovereignty, inscribed in the context of human and citizen rights to participate in the decision-making processes governing algorithms.

The data sovereignty section focuses on a topic of interest for juridical analysis. It provides a brief outlook on materials explicitly targeting the use of private and personal data within digital infrastructure, their jurisdiction depending on several factors well beyond geographical positioning.

The technological sovereignty section provides an overview of top-down interpretations from the point of view of policymakers. In this section are recommendations at the state level that aim to steer the drafting and interpretation of laws at a broader scope in Europe.



Knowledge Commons

- [EconStor: Digital commons](#)
- [Theoretical Framework on future knowledge-based economy](#)
- [Managing the commons in the knowledge economy \(hal.science\)](#)

Algorithmic Sovereignty

- [The Black Box Society — Frank Pasquale | Harvard University Press](#)
- [Algorithmic sovereignty \(plymouth.ac.uk\)](#)
- [AlgoSov - Observatory on Algorithmic Sovereignty.](#)
- [The emergence of algorithmic solidarity: unveiling mutual aid practices and resistance among Chinese delivery workers - Zizheng Yu, Emiliano Treré, Tiziano Bonini, 2022 \(sagepub.com\)](#)
- [The Santa Clara Principles on Transparency and Accountability in Content Moderation](#)
- [Tracking Exposed](#)
- [Personalisation algorithms and elections: breaking free of the filter bubble | Internet Policy Review](#)
- [Experiments in algorithmic governance | 8 | A history and ethnography \(taylorfrancis.com\)](#)



Data Sovereignty

- [Cloud Act Memo | Publicatie | Nationaal Cyber Security Centrum \(ncsc.nl\)](#)
- [Europe's Quest for Digital Sovereignty: GAIA-X as a Case Study | IAI Istituto Affari Internazionali](#)
- [DATACTIVE – The Politics of Data According to Civil Society \(data-activism.net\)](#)

Technological sovereignty

- [Importance of digital sovereignty | TNO](#)
- [Europe's Quest for Technology Sovereignty: Opportunities and Pitfalls | ecipe.org](#)
- [Strengthening Europe's digital and technological sovereignty - EU2020 - EN](#)
- [Moerel, Timmers \(2.0\) - Preadvies Staatsrechtconferentie 2020.pdf \(uu.nl\)](#)
- [Technological Sovereignty as Ability, Not Autarky | Publications | CESifo](#)
- [The Consilience Project | How Big Tech is Reshaping Governance - The Consilience Project](#)