

# *The history of science in Europe and scientific freedom*

**Simone Turchetti**

***CHSTM - University of  
Manchester***

MANCHESTER  
1824

The University of Manchester

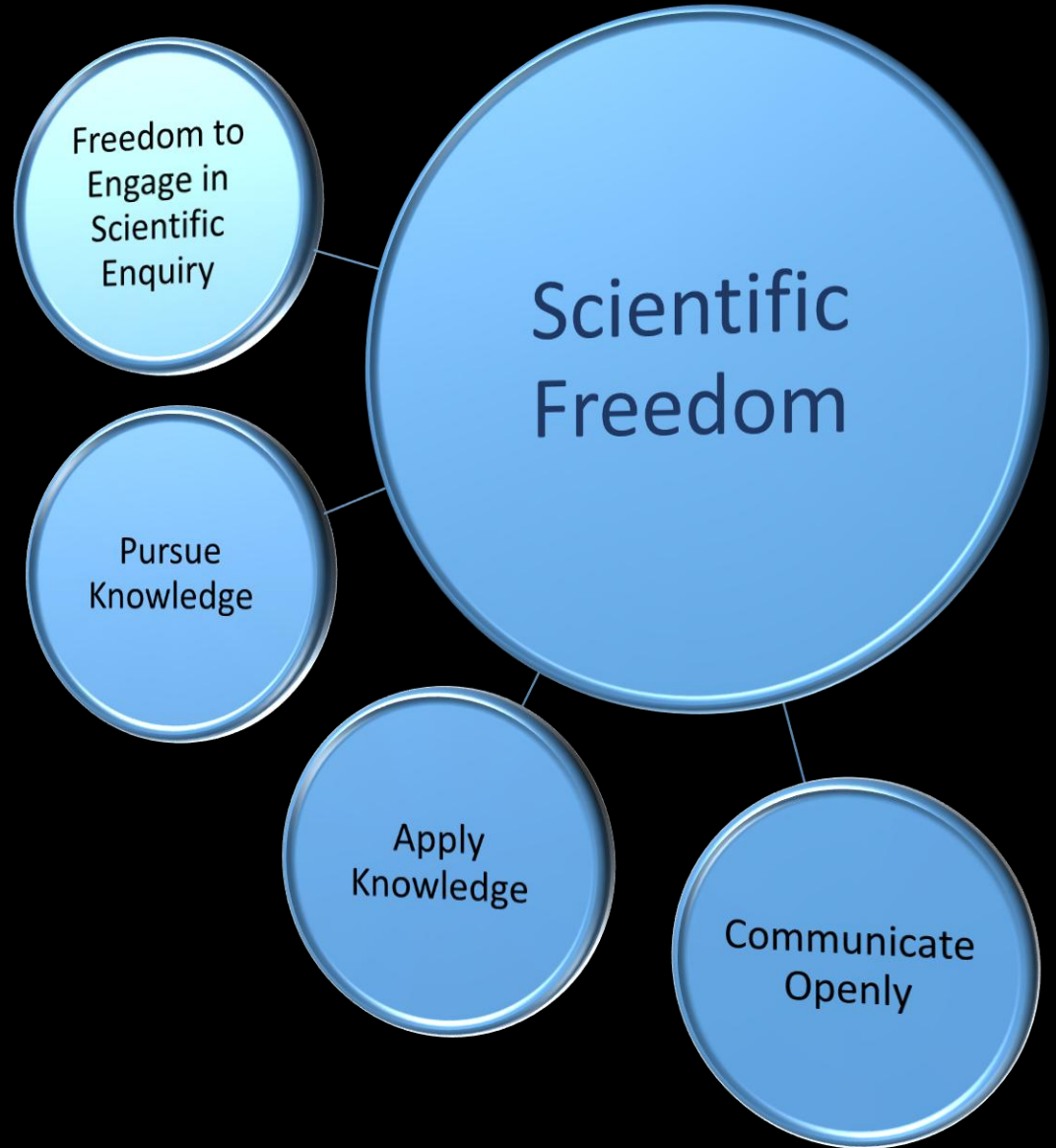
**CHSTM**

Centre for the History of Science,  
Technology and Medicine

ERC Project Newworld@a, 2022 -2026  
(<https://newworldata.org/>)



**ISC European Members, 8th Annual Meeting  
Academy of Sciences of Albania, Tirana**



See (e.g.) statement of the  
American Association for the  
Advancement of Science  
Statement @

<https://www.aaas.org/programs/scientific-responsibility-human-rights-law/aaas-statement-scientific-freedom>



Access to scientific resources and infrastructures

# The European Research Area



## EU launching the '5<sup>th</sup> Freedom':

- Establishing a European Research Area through the ERA Act by 2026
- Knowledge sharing for societal well-being
- 3% GDP for R&I
- **Ensure the free movement of research, innovation, and knowledge**




1. Scientific Freedom and Global Inequality

2. Europe's distinctive history (of science)

3. Europe and the 5<sup>th</sup> freedom

ERC Project 'Negotiating World Research Data – A Science Diplomacy Study' (Newworld@a, 2022 -2026)





# 1. Historical inequalities and scientific freedom in the world



SIMONE TURCHETTI

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## Mind the Gap! Global Inequality and the History of Science

▼ **ESHS CONTRIBUTION** Barcelona 2024 ESHS Presidential  
Lecture



Turchetti, Simone. 2024. "Data Rules: What the History of Scientific Data Can Tell Us about the Asymmetries of Global Governance in the Twentieth Century." *Global Perspectives* 5 (1). <https://doi.org/10.1525/gp.2024.121640>.

Politics, Governance, and the Law

## Data Rules: What the History of Scientific Data Can Tell Us about the Asymmetries of Global Governance in the Twentieth Century

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Keywords: International science, Science diplomacy, Global data infrastructure, CODATA, World Data System, International relations, International scientific collaboration, Cold War, Post-colonialism

<https://doi.org/10.1525/gp.2024.121640>

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Global Perspectives

Vol. 5, Issue 1, 2024

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[nature](#) > [nature reviews physics](#) > [comment](#) > [article](#)

Comment | Published: 25 March 2025

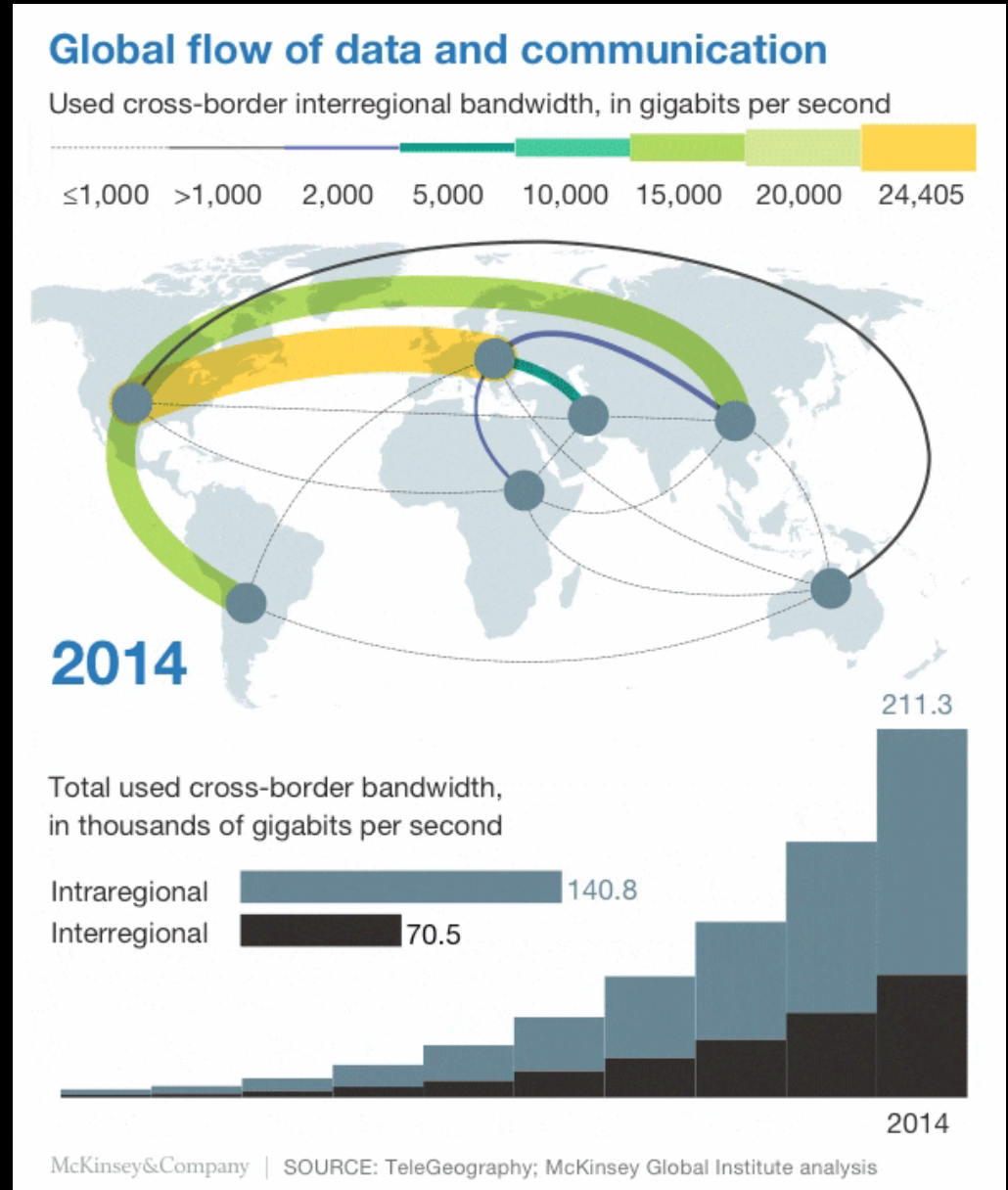
## Mapping inequalities in the global availability of physics data over time

[Sara Bassanelli](#), [Carrington Kinyanjui](#) & [Simone Turchetti](#) [Nature Reviews Physics](#) **7**, 168–170 (2025) | [Cite this article](#)**b** 1990–2010

# Flows shaping global asymmetries in the distribution of technologies and relevant knowledge

Available at:

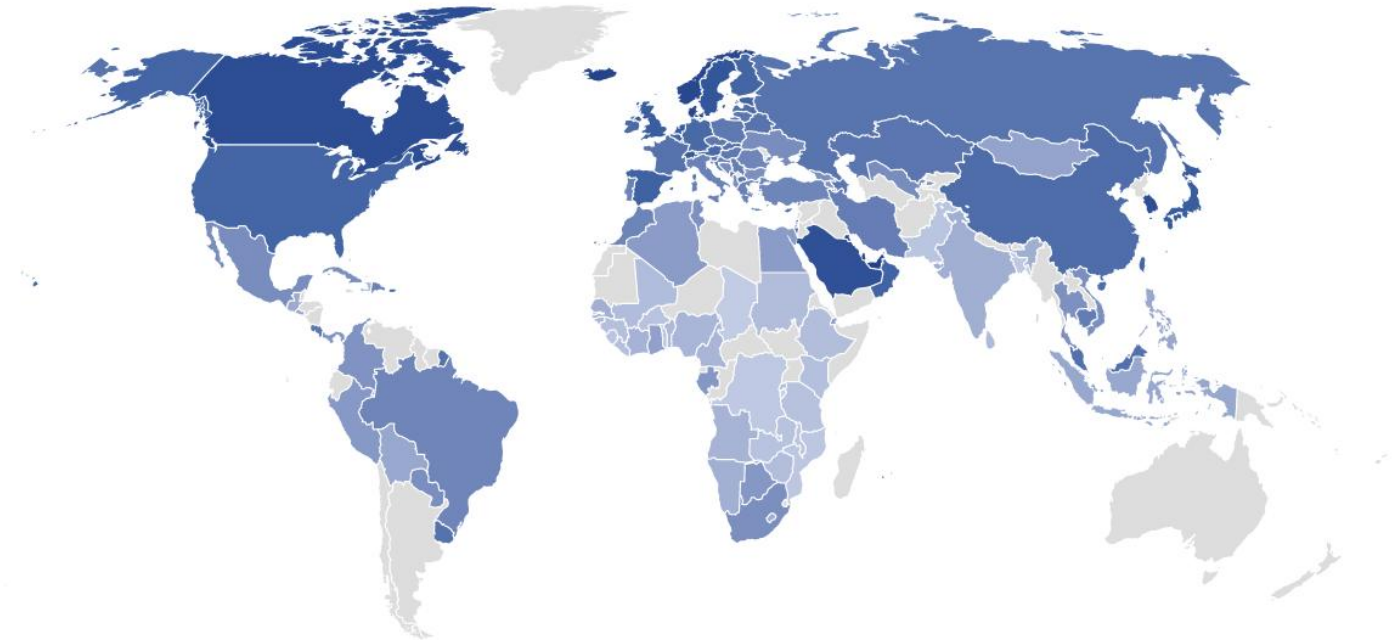
<https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/five-priorities-for-competing-in-an-era-of-digital-globalization>



## The tech divide

The global south is still offline

Individuals using the internet as percentage of total population (2019)



Available at:

<https://ecfr.eu/special/power-atlas/technology/>

Source: ITU-D ICT Statistics (2021) International Telecommunication Union  
ECFR · ecfr.eu

*Number of  
links between  
world  
research data  
centres and  
research  
organizations  
located in  
individual  
countries  
(1950-2000)*

*(data graphics  
and elaboration  
by Carrington  
Kinyanjui/New  
orldata/Data  
from Re3Data)*





# SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD

**1** NO POVERTY

**2** ZERO HUNGER

**3** GOOD HEALTH AND WELL-BEING

**4** QUALITY EDUCATION

**5** GENDER EQUALITY

**6** CLEAN WATER AND SANITATION

**7** AFFORDABLE AND CLEAN ENERGY

**8** DECENT WORK AND ECONOMIC GROWTH

**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE

**10** REDUCED INEQUALITIES

**11** SUSTAINABLE CITIES AND COMMUNITIES

**12** RESPONSIBLE CONSUMPTION AND PRODUCTION

**13** CLIMATE ACTION

**14** LIFE BELOW WATER

**15** LIFE ON LAND

**16** PEACE, JUSTICE AND STRONG INSTITUTIONS

**17** PARTNERSHIPS FOR THE GOALS

**SUSTAINABLE DEVELOPMENT GOALS**

[...] dismantle ‘negative pathways and paradigms’ in the sciences and, more to the point, ‘increase support to research in the Global South’ [...]

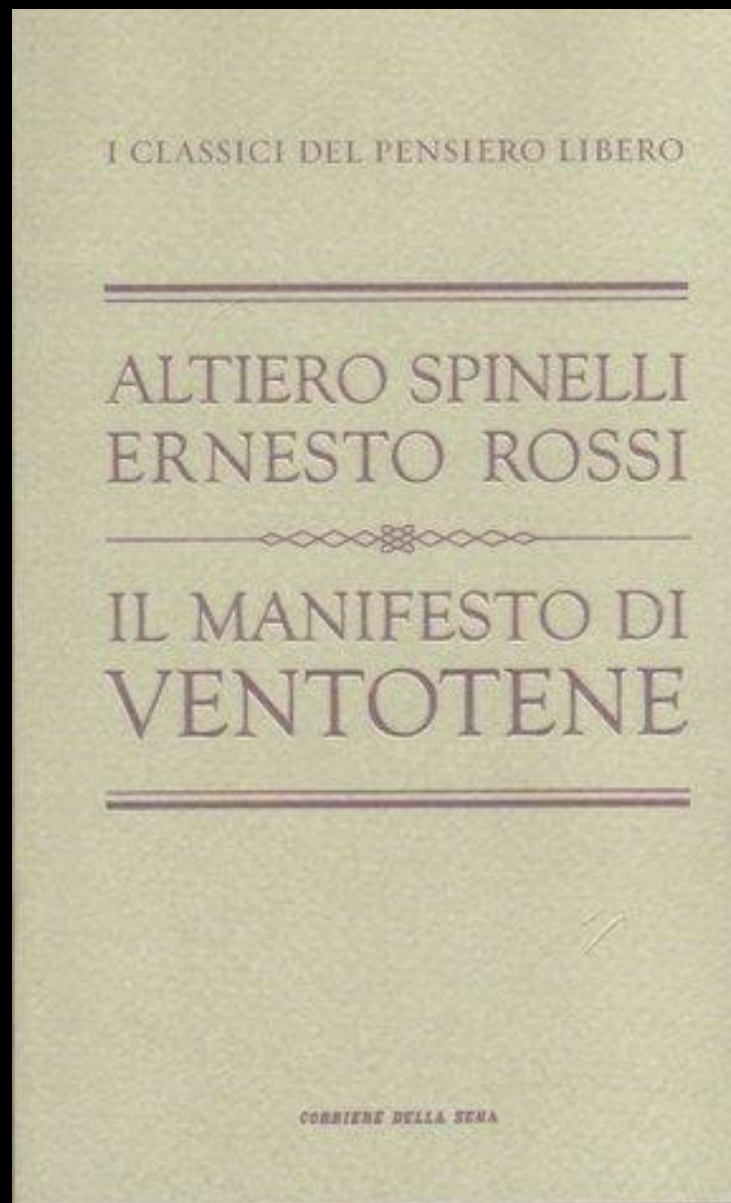
“Science-driven transformation pivotal to SDGs acceleration, say scientists in new UN report,” 12/9/2023,  
<https://www.un.org/sustainabledevelopment/blog/2023/09/press-release-science-driven-transformation-pivotal-to-sdgs-acceleration-say-scientists-in-new-un-report/>

2. Europe, its  
Union, and  
their  
distinctive  
history (of  
science too!)





Old Map of Europe - Henricus Hondius, Europam sive Celticam Veterem, sic describere conabar Abrahamus Ortelius, 1618



## The 1941 Ventotene Manifesto: “diluting” sovereignty into multilateral cooperation

‘The absolute sovereignty of national states has given each the desire to dominate, since each one feels threatened by the strength of the others...

[...]

A free and united Europe is the necessary premise to the strengthening of modern civilization, for which the totalitarian era represented a standstill’

## The 1950 Schuman Declaration:

multilateral cooperations  
pragmatically intertwined  
with national goals

“Europe will not be made all at once, or according to a single plan. It will be built through concrete achievements which first create a **de facto solidarity**. [...]

The coming together of the nations of Europe requires the elimination of the age-old opposition of France and Germany.”

Photo: EU Archives



KIRAN KLAUS PATEL

# PROJECT EUROPE

A HISTORY

Embracing ‘technocratic internationalism’, i.e.:

‘international cooperation that relied on non-state transnational expert bodies and international organisations’ and ‘prioritised rational planning, efficiency and belief in progress’

(Patel, *Project Europe*, p. 130)



Rome Treaty Signature, 1957

## Prioritizing the Transatlantic Alliance:

‘Calibrated technological collaboration [with the US] was a multivalent strategy that served many purposes, catalyzing [...] and then consolidating the process of European integration [...],’

J. Krige, *Sharing Knowledge, Shaping Europe*, p. 151

[nature](#) > [nature reviews physics](#) > [comment](#) > [article](#)

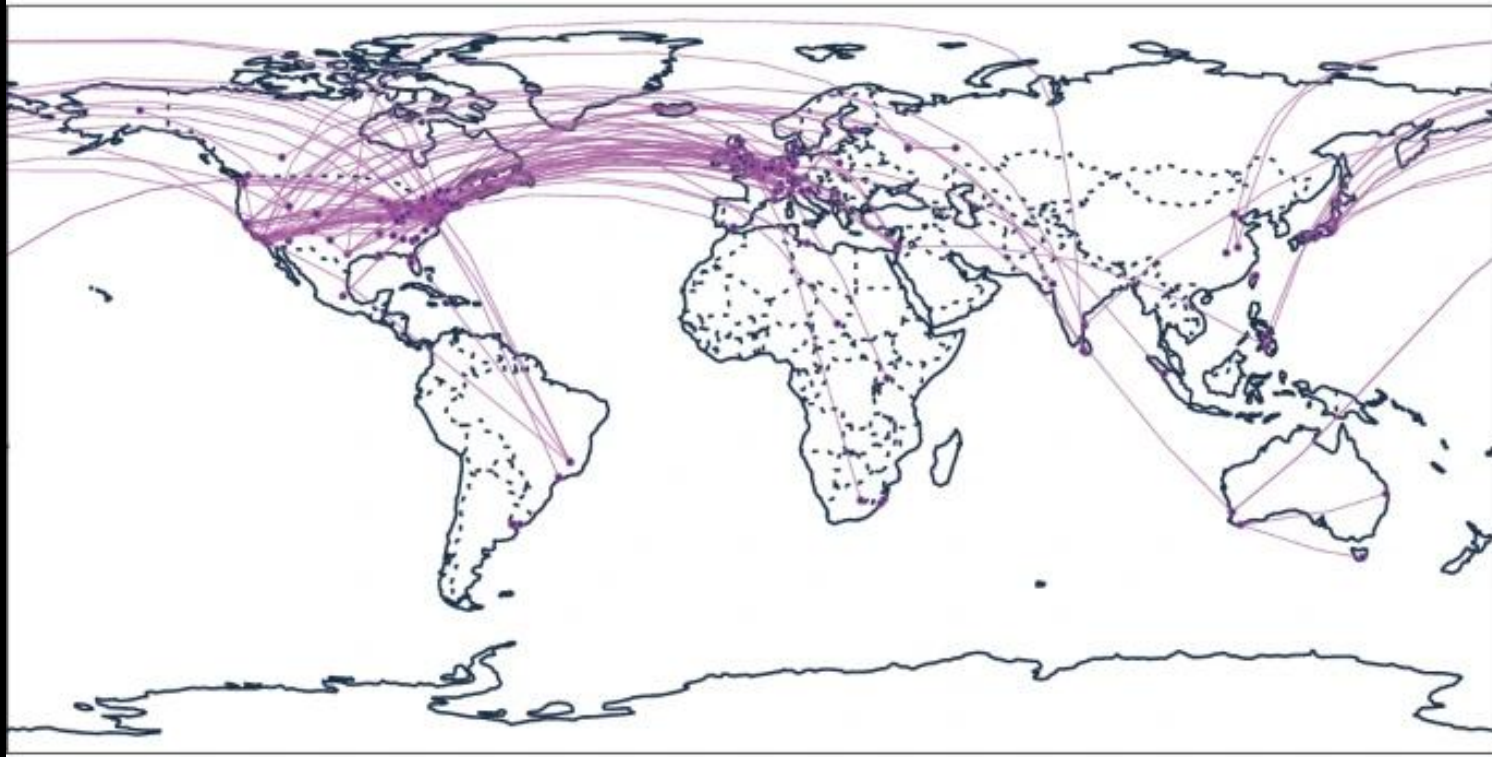
Comment | Published: 25 March 2025

## Mapping inequalities in the global availability of physics data over time

[Sara Bassanelli](#), [Carringtone Kinyanjui](#) & [Simone Turchetti](#) 

*Nature Reviews Physics* **7**, 168–170 (2025) | [Cite this article](#)

**a** 1970–1990





## Beyond the Transatlantic Tech Alliance?

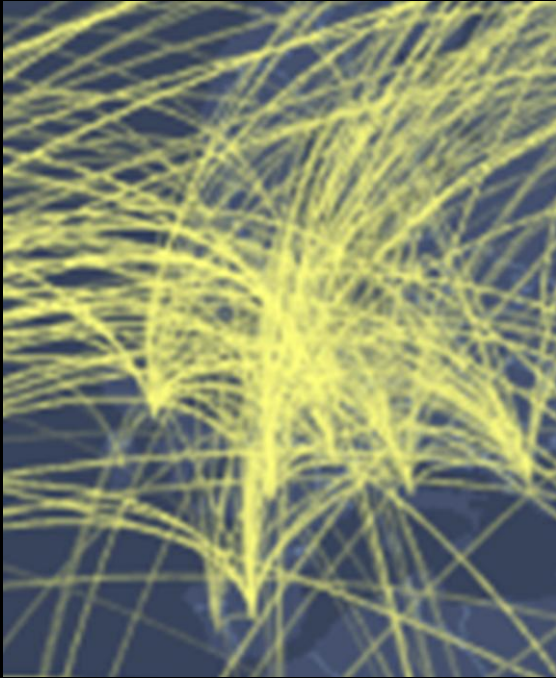
EU Enlargement and its technology facets

From The Economist @ <https://www.economist.com/europe/2023/09/28/the-eu-is-finally-rebooting-the-enlargement-machine>



# 3. Europe's unique position today





**Technology-sharing aspirations in the multilateral cooperation experiment**





**Technology-sharing capacity (infrastructures, resources, data)**



EU role globally,  
esp. regarding  
global challenges  
(UN SDG) / global  
governance

## Knowledge power Europe

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<sup>b</sup>CERAPS, Université de Lille, Lille, France

### ABSTRACT

In the longstanding debate over how to characterize the EU as a global actor, knowledge is conspicuously missing. We introduce the term Knowledge Power Europe to emphasize the importance of knowledge for the EU's foreign policy efforts, particularly as they relate to addressing the urgent and complex global challenges that have become central to the EU's global strategy. Conceptually, we show how considering the EU as a knowledge power can help overcome the limitations of other EU power concepts, and empirically, we justify our characterization by providing evidence of the use and role of knowledge in terms of what the EU is, says, and does. We conclude by discussing how a knowledge power approach can help advance an understanding of the EU's capacity for global leadership and power in global governance efforts.

### KEYWORDS

EU external policy; Europe as a power; knowledge policies; global leadership; global challenges



**ComputerWeekly.com**

NEWS

### EU Data Act prompts Google to scrap data transfer fees for UK multicloud users

With the EU Data Act coming into effect, Google has confirmed that users of its cloud services across the UK and Europe will no longer pay to transfer data between its platform and competitors' clouds

By  **Caroline Donnelly**, Senior Editor, UK

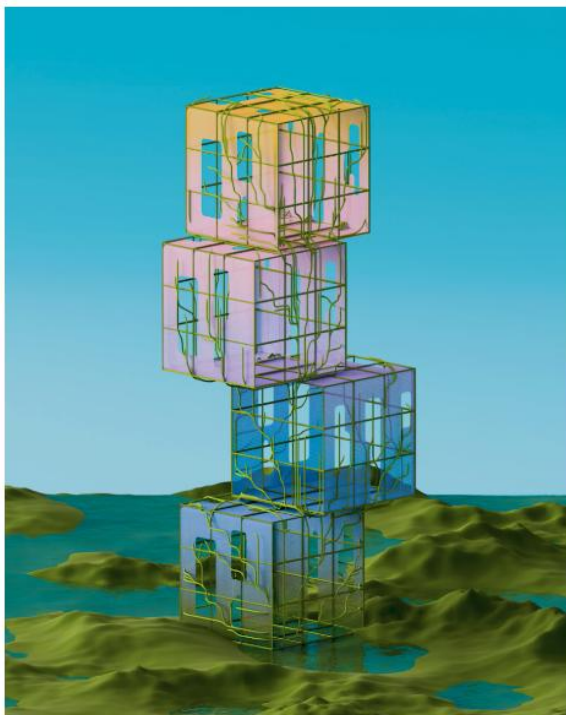
Published: 10 Sep 2025 11:20

## The Data Challenge

- EU Data Act 2025 – share data independently from the rest of the world in the digital domain / curb the market power of major tech giants
- Also AI Act, Digital Markets Act and Digital Services Act (CHIPS Act also coming)

# Reclaiming Europe's Digital Sovereignty

Europe can accept permanent technological dependency, or it can build democratic digital systems rooted in climate commitments, labor protections and social diversity.



Dhritika Khimani for Noema Magazine

ESSAY DIGITAL SOCIETY

BY FRANCESCA BRIA

OCTOBER 2, 2025

**“Infrastructure is where power is encoded and political choices become technical constraints. Sovereignty means aligning technology with Europe’s social model, climate goals and democratic values. Without this, ‘diffusion’ is nothing more than the efficient distribution of dependency”.**

# Thank You!

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