P256 / Assessing AI Infrastructures: Sovereignty, Sociotechnical Choices, and Public Value(s)

Topic : Governance, Policy Networks and Coalition

Chair : Alberto Asquer (School of Oriental and African Studies, University of London)

Second Chair : Malcolm Campbell-Verduyn (University of Groningen)

Third Chair : Maria Maia (Institute for Technology Assessment and Systems Analysis (ITAS))

Fourth Chair : Carolina Aguerre (Universidad Católica del Uruguay)

GENERAL OBJECTIVES, RESEARCH QUESTIONS AND SCIENTIFIC RELEVANCE

AI consists of infrastructural dependencies including the semiconductors industry and supply chains, cloud platforms, data centres, energy systems, software ecosystems, data, and contractual and regulatory arrangements. The governance of AI infrastructure is increasingly recognized as posing issues for sovereignty, self-sufficiency, meaningful decision-making autonomy, and distribution of benefits and risks in and across countries and regions (Mügge, 2024; Tanner et al., 2026). These developments raise questions that extend beyond technological performance, competitiveness, and national self-sufficiency. How do infrastructure choices shape future technological trajectories and constrain the range of available alternatives? Who benefits from these arrangements, who bears their costs and risks, and whose values inform decisions about infrastructure development? How can competing claims concerning sovereignty, security, innovation, sustainability, and democratic accountability be assessed and reconciled? These questions call for approaches that examine AI infrastructure as a sociotechnical system and connect technological choices to their broader societal implications.

These governance issues are magnified due to the material and institutional unevenness of AI infrastructures. Semiconductor policies, which have progressively shifted from a competition-oriented towards securitised industrial policy, depend on market demand, skills, and supply chain positions rather than subsidies alone (Heldt and Meunier, 2026; Raj and Wuttke, 2026). Expansion of data centres has triggered pressures on national grids, as well as increased household energy costs (Meeks et al., 2026). The concentration of AI computing in a small number of countries and firms entails complicated commercial and geo-strategic tensions (Martens and Schenk, 2026). Cloud platforms, public procurement contracts, and technical standards may embed lock-in, opacity, and weak accountability (Grohmann et al, 2025). Options to reduce technological dependency, through the likes of open weight models, may not suffice to gain autonomy from other countries and firms, especially when considering computing power, ownership of data, and availability of skilled labour (Shonubi, 2026).

In this panel, we invite theoretical, empirical and policy-oriented contributions on, and not only:

1. Sovereignty and interdependence: concepts, factors, and consequences of geo-strategic dependency.

2. Geoeconomics and industrial policy: chips, cloud, compute, export controls and strategic indispensability.

3. Infrastructure, energy, and democratic participation: distributional effects of data centres, grid investment, environmental and societal impacts, and community consent.

4. Public procurement and legal governance: portability, exit rights, licensing, auditability, accountability, and vendor lock-in.

5. Regional and Global South strategies: shared compute, regional models, data governance, and collective capability-building.

6. Open ecosystems and state capacity: the sustainability and governance of open-source tools, model adaptation, standards, and public digital infrastructure.

Submissions may use historical, qualitative, quantitative, legal, or mixed-methods approaches, also in comparative perspective. We particularly welcome work connecting infrastructure decisions to public value(s), rights, equity, social and environmental justice, democratic participation and institutional capacity.

CALL FOR PAPERS

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