OPEN _FUTURE

INVESTING IN PUBLIC DIGITAL INFRASTRUCTURE

FOUR RECOMMENDATIONS FOR REBALANCING POWER IN THE STACK

23 SEPTEMBER 2024

On 18 July 2024, European Commission President Ursula von der Leyen presented her [Political Guidelines](#) for her second mandate to the European Parliament. Highlighting the need for new investments and infrastructures to boost European competitiveness, the guidelines align with Mario Draghi's [call for a coordinated industrial strategy on technology](#). Recently, the European Commission also reaffirmed its commitment to the [Digital Decade 2030 targets](#) and the [Declaration of Digital Rights and Principles](#). These should guide EU policy, especially the work of the newly appointed Executive Vice President for Tech Sovereignty, Security and Democracy, Henna Virkkunen.

However, [many of the rights established in the Declaration cannot be fully realized on privately controlled infrastructure](#). To protect Europeans' digital rights, they need access to a Digital Public Space built on Public Digital Infrastructure. This policy brief describes four policy measures for European societies to reclaim governance over the digital stack, foster innovation in line with public values, and reduce reliance on the extractive models of current private infrastructure.

RECOMMENDATION #1: SAFEGUARDING INTERNET OPENNESS BY ENFORCING LAYER SEPARATION

Today's digital landscape is dominated by a few Big Tech platforms that exploit network effects, user lock-in, and data extraction to expand their reach across economies and societies. These platforms now [control not only digital services but also critical physical infrastructure like cloud computing or content delivery networks, and increasingly invest in cables and satellites](#). High-value digital services tied to data extraction and advertising generate large profits, while control over capital-intensive infrastructure strengthens their dominance. This vertical integration is especially concerning in emerging fields like AI, where, as [noted by France's competition regulator](#), major tech companies benefit from exclusive access to crucial resources.

Historically, antitrust policies in the US, such as those against IBM, were decisive in fostering the development of a software industry that could build on the personal computer. The internet's success in allowing interconnection and competition underscores the importance of keeping infrastructure separate from services. Central to this success is net neutrality, which European governments should continue to uphold. High levels of competition in the field of telecommunications in Europe have also contributed to better investment in network infrastructures, higher quality, and more affordable internet access for European citizens. The current [blurring of boundaries between electronic communications networks and services, which are integrated into customized solutions for end users](#), creates new challenges for competition. The European Commission must ensure that regulation is continuously updated to **create a clear separation between infrastructure and application layers** to curb tech monopolies and encourage fair competition, transparency, and the use of open protocols.

RECOMMENDATION #2: BUILDING A SOVEREIGN CLOUD ALTERNATIVE FOR EUROPEAN PUBLIC INSTITUTIONS

Big Tech's growing dominance threatens both European economies and the self-determined use of technology by states and societies. It means not just a transfer of wealth to a handful of commercial actors, but also various dependencies on their proprietary services and products. The concentration of private control over digital infrastructure raises concerns about digital sovereignty[1], including risks like surveillance and technological weaponization. While the European Commission is considering replicating Big Tech's model by consolidating the EU telecom sector, this approach risks reinforcing the same extractive dynamics. Instead, **the EU should prioritize decentralized, federated solutions involving public, civic, and for-profit actors**.

Mario Draghi's report on European competitiveness highlights the challenge that EU companies face in competing with foreign hyperscalers, which recently pledged billions in cloud and AI infrastructure in Europe. Much of the growth of hyperscalers stems from externalization strategies for information technologies that were historically adopted by both governments and major organizations. To build a viable alternative, Europe must therefore pool the resources of both public and private actors. Such an effort should focus on **developing sovereign cloud solutions for public institutions and critical industries**, with an emphasis on security and encryption. To support these investments, Draghi advocates for an EU Cloud and AI Development Act, EU-wide cloud and data security policies, as well as mandatory public procurement standards. The success of public investments in computing for AI through the European High Performance Computing Joint Undertaking should be further expanded and built upon.

RECOMMENDATION #3: ESTABLISH A PUBLIC DIGITAL INFRASTRUCTURE FUND TO FINANCE A STACK OF OPEN TECHNOLOGIES

Governments have played a major role in building the digital infrastructure and technologies we currently rely on, from microprocessors to the internet or GPS systems. Since the 1980s, privatization policies have shifted control to profit-driven companies. Some governments, like India, are trying to reverse this trend by investing in Digital Public Infrastructure (DPI) to create open, inclusive, and interoperable systems. These efforts aim to replace private digital solutions

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[1] Similarly to the German Sovereign Tech Fund, we understand digital sovereignty as the self-determined use of digital technologies and systems by individuals, industry, and governments.

with publicly governed, non-exploitative ones. Digital Commons[2], built on open-source software and collectively managed, are [seen as a solution to counter the growing control of private platforms and protect digital spaces in line with EU values](#).

The EU should [establish a Public Digital Infrastructure Fund](#) that supports the development, deployment and maintenance of open technologies addressing broader social needs for a secure, sovereign, and non-extractive digital environment, among which :

1. Applications that constitute the Open Internet stack (including maintenance of key open source components),

2. Critical layers for access to the Digital Public Space (interoperable, standards-based communications and networking services),

3. Common components of government solutions for public service delivery (such as digital identity systems), and

4. Platforms and services that are critical in specific sectors for industry or intermediation between producers and consumers.

RECOMMENDATION #4: MOBILIZING NEW SOURCES OF FUNDING FOR JOINT EUROPEAN INVESTMENTS

Governments should invest in Public Digital Infrastructure just as they do in physical infrastructure. Countries that have [historically prioritized public media and democratic values](#) cannot continue to depend on private monopolies. Instead, they need to develop true public digital spaces. Nobel Prize winner Paul Romer suggested funding such development by [taxing business models based on surveillant advertising](#). European governments should **explore diverse funding options to meet the urgent need for public investment** in this area. A tax on surveillance capitalism, using a polluter-pays approach, would hold Big Tech companies accountable for the social damage of their models. Additionally, the EU should consider [redirecting funds from sanctions imposed under new regulations](#) to support alternative solutions. Mario Draghi's proposal of creating common debt to invest in Europe's technological future should also be pursued to address sovereignty concerns.

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[2] The concept of Digital Commons encompasses diverse digital systems and solutions developed and maintained by groups rather than individuals or single entities. These groups coordinate through peer collaboration instead of pricing or subordination. Digital Commons often start as small community projects but can scale into infrastructures, attracting large contributor bases and enabling global applications. Early 21st-century examples like Wikipedia, the online encyclopedia, and Apache, an open-source software that supports over 20% of the million busiest websites globally, exemplify the profound impact of Digital Commons.

ABOUT OPEN FUTURE

Open Future is a European think tank that develops new approaches to an open internet that maximize societal benefits of shared data, knowledge, and culture.

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