# A Strategic Agenda for Digital Commons

Advancing Public Digital Infrastructure in the next MFF







# About this report



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## **Executive Summary**

This Strategic Agenda outlines a vision for embedding support for Digital Commons and public digital infrastructure into the European Union's forthcoming Multiannual Financial Framework (2028–2034). It addresses Europe's digital dependencies and proposes an approach to achieving digital sovereignty through commons-based infrastructure that upholds democratic values and fundamental rights.

With growing geopolitical instability and digital infrastructure's increasingly strategic role, the upcoming Multiannual Financial Framework represents a critical opportunity for Europe to correct course. The agenda emphasizes that without decisive action to build democratic, rights-aligned digital infrastructures, Europe risks perpetuating the very dependencies it seeks to overcome. Success requires not just new investments, but bold political choices and concrete financial commitments that align the European Union's digital transformation with its foundational democratic values.

The Agenda identifies two fundamental policy shifts. First, it calls for the recognition of Digital Commons as legitimate providers of public digital infrastructure that deserve long-term public investment, policy support, and institutional integration. Second, it advocates for moving beyond purely market-correcting approaches to actively advance public value alongside innovation and competitiveness, acknowledging that corporate models often fail to deliver long-term societal benefits.

Building on these shifts, the strategy outlines five key policy interventions. It recommends aligning EU funding instruments with the realities of Digital Commons by supporting full project lifecycles, not just early-stage development. This includes establishing long-term funding for critical open source projects and creating European Data Commons governed as public goods. It proposes reducing Europe's dependency on foreign hyperscalers by developing open, interoperable cloud infrastructure designed to prevent vendor lock-in and support commons-based solutions. It also emphasizes leveraging the EU's public procurement power to prioritize open and interoperable alternatives, focusing on long-term digital resilience over short-term cost efficiency. Further, the Agenda calls for investment in decentralized, transparent platforms for public discourse that resist corporate capture and foster algorithmic pluralism, drawing on both Digital Commons and public service broadcasting models. Finally, it advocates using the Digital Commons European Digital Infrastructure Consortium (EDIC) as a governance and coordination mechanism to provide the institutional continuity necessary to scale promising experiments into durable, operational systems. For each proposed policy intervention, the Agenda outlines the relevant regulatory context and the budgetary channel under the European Commission's MFF proposal. Key funding mechanisms identified include the European Competitiveness Fund, which would consolidate several existing EU programs supporting digital infrastructure; the successor to Horizon Europe; the InvestEU program, which leverages private investment through guarantees and loans; as well as the AgoraEU and Global Europe programs. The Agenda also presents indicative funding envelopes, based on benchmarks from relevant EU programmes and initiatives with similar ambitions, as well as co-funding arrangements. These figures are offered as proposals to inform discussions during the MFF negotiations, providing order-of-magnitude cost estimates and illustrating how responsibilities could be shared among EU instruments, Member States, and other contributors, including the private sector and philanthropic actors. They should therefore be understood as estimates offered for consultation rather than definitive requests.

In conclusion, the Agenda highlights the urgent need for sustained political commitment and strategic investment to overcome structural dependencies and secure Europe's digital autonomy. It also points to the value of international cooperation in advancing a resilient, rights-aligned digital ecosystem—one grounded in democratic governance, openness, and shared stewardship.

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## 1. Note on the Approach

This Strategic Agenda builds on analytical and empirical work undertaken within the NGI Commons project, complemented by insights from external research, policy debates, and expert consultation. Drawing on this work, it outlines a policy-oriented vision for supporting European digital sovereignty through investment in Digital Commons and public digital infrastructure. Its aim is to inform and advance the integration of such support into the EU's next Multiannual Financial Framework (2028–2034). This version of the Agenda (Deliverable 3.2, September 2025) serves as a draft for expert consultation and stakeholder validation.

This Agenda draws on several core inputs produced within the project:

- <u>Digital Commons as Providers of Public Digital Infrastructure.</u> This research paper reviews international literature and policy debates on public infrastructure. It identifies core features of Digital Commons and assesses their capacity to serve as long-term, rights-aligned digital infrastructure that supports democratic governance and collective control.
- A <u>landscape mapping</u> of EU funding for digital infrastructure carried out to identify systemic gaps and opportunities for aligning investment with long-term public interest objectives.
- From Open Access to Collective Governance: Two Decades of Digital Commons Policies in the EU (D3.1). This report traces the evolution of EU digital policy from early emphasis on openness and transparency to more recent focus on governance, infrastructure, and strategic autonomy. It situates Digital Commons within this trajectory and identifies their increasing relevance to the EU's digital sovereignty agenda.
- A <u>compilation of policy proposals</u> that was developed to support strategic directionsetting. This document brought together ideas and interventions from across the policy ecosystem, clustered by relevance, feasibility, and alignment with EU instruments. It served as a working reference to guide the selection of priority areas and concrete interventions.
- Active Communities of Commoners and Relevant Commons (D1.1). This report mapped
  the Digital Commons landscape in Europe based on desk research and 23 interviews. It
  analysed governance models, sustainability strategies, and the role of public actors. It
  also documented the diverse ways in which these communities operate, fund
  themselves, and relate to broader political and institutional contexts.

The Strategic Agenda reflects lessons drawn from this body of work, along with insights gathered from other relevant sources. It forms part of a broader process within the NGI Commons project, which will continue over the remainder of the project.

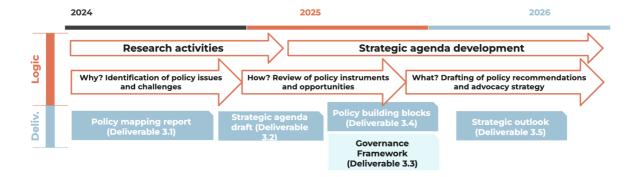


Figure 1: Sequence and Logic of Strategic Agenda Development in the NGI Commons Project (2024–2026)

The recommendations in this Strategic Agenda regarding budget channels and funding sources are primarily based on the European Commission's proposals for the next Multiannual Financial Framework (MFF), which were presented on 16 July 2025.<sup>1</sup>

In the Commission's proposal, the European Competitiveness Fund (ECF), with a total envelope of €409 billion, emerges as the centrepiece for competitiveness and sovereignty-related investments. The proposed ECF would be structured around four policy windows: (1) clean transition and decarbonisation; (2) resilience and security, defence industry and space; (3) digital leadership; and (4) health and bioeconomy. The ECF would consolidate multiple programmes that, under the current MFF, are the main sources of EU funding for digital infrastructure, including the Digital Europe Programme and the Connecting Europe Facility − Digital. Operating in close coordination with Horizon Europe (€175 billion), which would continue under the same name in the next MFF, the European Competitiveness Fund aspires to offer a "seamless investment journey from research to deployment."

The MFF restructuring remains unconfirmed pending negotiations, creating uncertainty about the actual availability and architecture of funding mechanisms referenced throughout this document. Nonetheless, within this new proposed framework, the most relevant budgetary instruments for digital commons interventions include:

- European Competitiveness Fund explicitly aims to build "world-class" and secure
  digital infrastructure with emphasis on remaining competitive, autonomous, and
  resilient. This focus can create opportunities to support commons-based alternatives
  to foreign big-tech and hyperscaler dependency. The fund's comprehensive toolkit
  and end-to-end approach, spanning research to deployment, can help enable
  governance models suited to digital commons.
- **Horizon Europe** provides foundational research capacity with "integrated work programmes" linking to ECF deployment, creating research-to-scale pathways essential for the development of digital commons.
- **InvestEU** is a cross-cutting financial instrument designed to attract private investment by providing EU guarantees to de-risk loans, equity, and venture financing. This

<sup>&</sup>lt;sup>1</sup> Available at: <a href="https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/eu-budget-2028-2034\_en">https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/eu-budget-2028-2034\_en</a>

instrument is particularly relevant for interventions such as sovereign cloud infrastructure, where public investment alone cannot meet demand and private participation must be leveraged.

- **AgoraEU** directly addresses "media pluralism and disinformation" while supporting "democracy, culture, media and civil society" relevant for democratic digital communication spaces and citizen participation in commons' governance.
- **Global Europe** could extend digital commons models internationally through partnerships.

While the Commission's MFF proposals emphasize the need for strategic autonomy, digital sovereignty, and greater resilience against unfair competition, information manipulation, and cyber threats, they do not explicitly recognize Digital Commons or open-source solutions as pathways to these objectives. Instead, the current framing focuses primarily on market-based approaches, leaving commons-based alternatives only implicitly included within broader infrastructure categories. This agenda demonstrates how Digital Commons, as providers of public digital infrastructure, support the Commission's stated goals. Explicitly recognizing Digital Commons within the MFF framework would strengthen their role in addressing technological dependencies and ensure they are regarded as key components of Europe's digital sovereignty.

The Strategic Agenda primarily identifies European-level instruments as the main channels for financing Digital Commons. However, their implementation cannot succeed without engagement from member states and regions, which remain among the largest public-sector IT spenders. Member states' own budgets, as well as the National and Regional Partnership Plans proposed by the Commission that are meant to combine 14 existing EU funds implemented by Member states and regions, would therefore play a decisive role, e.g. by directing procurement budgets towards open and interoperable solutions and by ensuring that investments address local needs. By embedding rule of law and fundamental rights conditionality across all funding streams, the Partnership Plans also set up a framework that aligns with the operational principles of digital commons—transparency, accountability, and participatory decision-making—helping to align financial architecture with democratic values.

### 2. Introduction

This document sets out a Strategic Agenda for integrating support for Digital Commons and public digital infrastructure into the European Union's next Multiannual Financial Framework (MFF), which will cover the years 2028–2034. It emphasizes the importance of ensuring that Europe's digital transformation is underpinned by infrastructure that upholds democratic values, ensuring economic resilience and strategic autonomy. This agenda will serve as a basis for further stakeholder consultation and validation aimed at refining and building consensus around a coherent and well-resourced strategic outlook.

Digital commons are digital resources that are defined by distributed and communal production, ownership, and governance. The governance includes access and sharing rules to ensure the development and sustainability of the resource and the community against exclusive use, exclusive profit, or value extraction.<sup>2</sup> Currently, support for Digital Commons in EU funding programmes is concentrated under the Next Generation Internet (NGI) initiative. Although the NGI has fostered innovation and experimentation, the scope and scale of this initiative—and therefore its impact—remain limited. To realize the full potential of Digital Commons in reinforcing Europe's strategic autonomy and democratic values, the approach spearheaded in the NGI programme, characterized by support for openness, decentralization, and a commitment to building a rights-preserving digital ecosystem, should be adopted more widely across a broader range of digital policies and funding instruments.

This agenda is aimed at EU institutions and member states involved in shaping investment priorities and governance models for Europe's digital infrastructure. It is structured around two core elements: policy shifts and policy interventions.

**Policy shifts** refer to the strategic adjustments needed to strengthen the resilience, democratic character, and sovereignty of Europe's digital ecosystem. These shifts aim to enhance the EU's digital transformation by more fully recognizing the role of Digital Commons in providing trustworthy and open digital infrastructure. They also call for broadening the focus of public investment, moving beyond a purely market-correcting approach to one that actively advances the public interest alongside innovation and competitiveness.

Policy interventions translate these shifts into action. They focus on practical implementation mechanisms, such as aligning research and innovation funding with the realities of Digital Commons, leveraging public spending to drive adoption of open and interoperable solutions, establishing the Digital Commons EDIC as a long-term governance and coordination mechanism, supporting democratic control over digital communication through public-interest digital infrastructure, and building sovereign cloud infrastructure. For each proposed policy intervention, the Agenda identifies the relevant EU laws, budget channels under the Commission's MFF proposal, indicative funding envelopes, and cofunding structures.

<sup>&</sup>lt;sup>2</sup> This definition of the Digital Commons was developed during the establishment of the European Digital Infrastructure Consortium (EDIC) for Digital Commons, and has since been adopted by the NGI Commons consortium.

This agenda responds to the urgent need not only to build and strengthen the Digital Commons ecosystem, but also to secure its long-term viability as a structural foundation of Europe's digital economy. Recognizing the current moment as pivotal for transforming how digital infrastructure is constructed, managed and financed in the EU, it aims to integrate public values, democratic oversight and institutional safeguards into its core. The agenda positions Digital Commons and public digital infrastructure as central components of a renewed European industrial policy that treats digital infrastructure as a strategic domain essential to sovereignty. It thereby bridges two key imperatives: ensuring Europe's capacity to act autonomously in critical technological domains, and realizing the values and principles set out in the EU Treaty and the Declaration on Digital Rights and Principles.<sup>3</sup>

This agenda takes the Next Generation Internet initiative as a point of departure and seeks to articulate a longer-term strategy that builds on its strengths. It extends the NGI's foundational work by connecting it to broader policy debates around digital sovereignty and the need for a distinctly European technology stack. In doing so, it complements and deepens current efforts to develop an open, interoperable internet infrastructure, while advancing a more integrated and ambitious vision of Europe's digital future. The proposals outlined here aim to demonstrate how these existing initiatives—such as NGI—can be scaled up and anchored within the EU's core infrastructure strategies, turning them into central building blocks of a European technology stack that reinforces democratic governance and strategic autonomy.

<sup>&</sup>lt;sup>3</sup> See: <a href="https://digital-strategy.ec.europa.eu/en/library/european-declaration-digital-rights-and-principles">https://digital-strategy.ec.europa.eu/en/library/european-declaration-digital-rights-and-principles</a>

# 3. Policy Shifts

This section outlines the changes needed to align the EU's digital transformation with a fuller vision of digital sovereignty, one that includes not only political and economic autonomy, but also individual control, democratic governance, and fundamental rights. It argues that achieving this goal requires embracing Digital Commons as providers of public digital infrastructure, and recognising that traditional market-based approaches may fall short in delivering sufficient public value on their own.

## 3.1 Correcting the course of the EU's digital transformation

Digital sovereignty—understood as the "independent and self-determined use and design of digital technologies and systems by the state, private organizations and individuals"<sup>4</sup>—is not merely a technological aspiration. It is the foundation of the European Union's ability to govern itself, safeguard democracy, foster prosperity, and lead the transition to a decarbonised economy.<sup>5</sup> Without sufficient control over its digital infrastructure, the EU is sidelined in critical decisions about its future.

At present, key digital infrastructures underpinning Europe's economy and society are concentrated in the hands of a few foreign technology firms, a concern explicitly acknowledged in recent EU-level assessments such as the Draghi report<sup>6</sup> and the ITRE Report on Technological Sovereignty and Digital Infrastructure.<sup>7</sup> This dependency, and the resulting lack of technical resilience, shifts wealth and decision-making power away from the EU and its residents. It has also left Europe increasingly vulnerable to external pressures: from U.S. extraterritorial measures, such as export controls and corporate sanctions, to growing cyber and hybrid threats.

To strengthen its ability to shape its digital future, the EU must launch a coordinated effort involving its institutions, member states, industry, civil society, and academia. It requires not only regulatory tools but sustained public investment and strong institutional leadership. To turn the ambition of digital sovereignty into reality, the European Commission and member states must make bold political choices and concrete financial commitments. They must translate the political vision of digital sovereignty into targeted, long-term investment. The upcoming Multiannual Financial Framework offers an opportunity for the EU to correct the course of its digital transformation. To do so, it must allocate substantial and sustained resources to build and maintain core digital capabilities that reduce strategic dependencies, strengthen technological autonomy, and enable Europe to shape its digital future on its own terms.

<sup>&</sup>lt;sup>4</sup> This definition draws on recent interpretations, including those from the <u>Sovereign Tech Fund Feasibility Study</u> and the <u>European Parliamentary Research Service</u>, which emphasise autonomy, resilience, and democratic oversight as key pillars of digital sovereignty.

<sup>5</sup> See IPCC's Climate Change 2022: Mitigation of Climate Change (Working Group III) Summary for Policymakers, p.11: "Digitalisation can enable emission reductions, but can have adverse side effects unless appropriately governed."

<sup>&</sup>lt;sup>6</sup> See: <a href="https://commission.europa.eu/topics/eu-competitiveness/draghi-report\_en">https://commission.europa.eu/topics/eu-competitiveness/draghi-report\_en</a>

<sup>&</sup>lt;sup>7</sup> See: https://www.europarl.europa.eu/doceo/document/A-10-2025-0107\_EN.html

But digital sovereignty is not only about the state's ability to act independently; it also requires that individuals and communities have meaningful control over the technologies that shape their lives. Achieving digital sovereignty, therefore, depends not only on technical and economic autonomy, but on a clear commitment to the EU's foundational values: respect for human dignity, freedom, democracy, equality, the rule of law, and human rights, as set out in Article 2 of the Treaty on European Union.8 These principles are further affirmed in the European Declaration on Digital Rights and Principles, which underscores their relevance in guiding Europe's digital transformation. In order to reclaim and strengthen digital sovereignty. the EU must go beyond rhetorical commitments to "European values" and embed respect for human dignity, freedom, democracy, equality, the rule of law, and human rights into the way it allocates funding, prioritizes investment, and designs digital infrastructure. These values are not abstract ideals, nor can they be sidelined in the name of short-term competitiveness or geopolitical urgency. A digital transformation that neglects them risks creating systems vulnerable to capture, surveillance, and abuse, and undermining democratic institutions rather than protecting them. For this reason, the EU should also reject models of digital sovereignty that originate in regimes with poor human rights records and weak democratic oversight. Emulating such systems may appear expedient, but ultimately weakens the Union's credibility and its potential for normative leadership.

# 3.1.1 Recognizing Digital Commons as Providers of Public Digital Infrastructure

Digital Commons are central to the vision of digital transformation that serves the public interest, enables democratic control, and respects fundamental rights. By fostering shared ownership and democratic governance, Digital Commons empower individuals and communities with greater control over the digital environments on which they rely. This model of stewardship is essential to realizing digital sovereignty at both collective and individual levels, ensuring that people have agency over their digital lives.

Already underpinning critical layers of the digital stack, Digital Commons have the capacity to scale and deliver public value.<sup>9</sup> Commons-based infrastructure projects such as Decidim (Barcelona's participatory democracy platform), DHIS2 (used by dozens of governments for public health data management), and the European Open Science Cloud show that digital commons can scale effectively and serve as resilient, adaptable infrastructure. Core components such as open-source operating systems (e.g., Linux), web servers (e.g., Apache, Nginx), and programming libraries and protocols (e.g., OpenSSL, PostgreSQL) form the backbone of many internet services and platforms, including those operated by governments and large private firms. Commons-based resources like Wikipedia or OpenStreetMap also

<sup>8</sup> See: <a href="https://eur-lex.europa.eu/eli/treaty/teu\_2012/art\_2/oj/eng">https://eur-lex.europa.eu/eli/treaty/teu\_2012/art\_2/oj/eng</a>

<sup>&</sup>lt;sup>9</sup> The report "Digital Commons as Providers of Public Digital Infrastructure" explores how digital commons are increasingly recognised as a viable and valuable mechanism for providing digital infrastructure. This approach maximises public value by combining public attributes, such as unrestricted access enabled by openness and interoperability, with public functions that empower and support people and institutions, and public ownership through government or civic participation in the production, funding, and stewardship of the infrastructure. This model of providing digital infrastructure reinforces fundamental rights by ensuring greater transparency and democratic oversight in the design and operation of digital systems. See: <a href="https://commons.ngi.eu/2024/11/14/digital-commons-as-providers-of-public-digital-infrastructures/">https://commons.ngi.eu/2024/11/14/digital-commons-as-providers-of-public-digital-infrastructures/</a>

illustrate the viability of collaborative models at scale. These examples demonstrate that Digital Commons are not theoretical alternatives but proven infrastructure solutions

Digital Commons represent a distinct approach to building and maintaining digital infrastructure that differs from both centralized state control and profit-maximizing corporate structures. Rather than replacing public institutions, they operate through transparent, participatory governance that can scale sustainably when supported by long-term public investment or institutional partnerships. As documented by the NGI Commons consortium, they frequently operate in hybrid formations, such as semi-commons or shared public infrastructures, that complement existing institutional frameworks, particularly where state capacity is limited or where collaborative governance proves more effective than traditional hierarchical models. Their open architectures enable external scrutiny, reduce surveillance and manipulation risks, and invite broader participation in development and oversight. This makes them particularly well-suited for the immaterial layers of infrastructure—protocols, libraries, standards, and knowledge systems—that rely more on sustained human contribution and collaborative maintenance than heavy capital investment. Their capacity to deliver public value extends beyond code reuse and cost savings to enabling autonomy, interoperability, and civic participation.

Their collaborative structure also makes Digital Commons well-suited to address challenges that individual countries or private actors cannot solve alone. By enabling open standards, community-driven innovation, and collective governance, Digital Commons provide a model for developing public digital infrastructure at scale. They support interoperability across borders, allow for cost sharing among governments, and enable national adaptation without sacrificing coordination. In this way, Digital Commons are not just technical tools. They serve as a foundation for cross-border cooperation and a more inclusive, resilient digital ecosystem. Their ability to bridge public and private sectors, while aligning with public interest goals, makes them a key instrument for advancing Europe's digital sovereignty - but only with appropriate policy support.

Achieving this vision requires that Digital Commons be recognised as a key element of an EU strategy to build such resilient, rights-based, and democratic digital infrastructures that are sovereign and immune to capture. To achieve this, Digital Commons must be treated and supported as critical infrastructure, receiving sustained public investment, policy backing, and institutional support at the EU level to ensure their long-term viability, scalability, and impact.

Beyond recognition, realising the full potential of digital commons requires a paradigm shift in how public investment is conceived and deployed. While some digital commons may sustain themselves economically by provisioning services, some commons, given their open and foundational nature, may be unable to develop income streams from their activity and require direct, long-term funding. Public funding should enable the development, maintenance, and democratic governance of such shared digital resources, over their entire lifecycle, recognizing that digital commons can provide foundational infrastructure, in the same way public utilities have served industrial and social development in the past. Public investment is distinctly positioned to support infrastructures that do not fully conform to market logic, enabling long-term, inclusive, and rights-based solutions.

In order to function effectively as public digital infrastructure, digital commons require several enabling conditions, including a clearly identified public need, often a certain level of formalisation (e.g., legal association, partnership with a university, or integration with a public research institute) and predictable, long-term funding for not only innovation, but also critical ongoing maintenance and participatory governance. Political will and policy frameworks must evolve to provide actors contributing to the commons with the recognition, reliability, and institutional support required to create a more widespread impact. This also implies addressing potential issues, such as the risk of 'state-isation' of the commons, and meeting public infrastructure obligations regarding reliability, accessibility, and security. Anticipating and addressing these challenges is crucial to sustaining the vitality and autonomy of commons-based models.

## 3.2 Balancing Market Logic with Public Purpose

The EU's deepening dependencies across the entire digital technology stack and their farreaching impact call for a strategic partnership between market innovation and coordinated public investment. Commercial models, grounded in the pursuit of profit, shareholder value, and competitive advantage, are powerful drivers of innovation in some contexts. They can contribute to public goals when supported by well-designed regulation and effective implementation. However, profit-driven solutions often fail to deliver long-term value as they are not structurally aligned to deliver on public goals such as the maintenance of critical infrastructure or ensuring democratic accountability, environmental sustainability, or human rights. 10 Public investment, therefore, should be guided not only by the need to correct market failures or strengthen Europe's economic competitiveness, but also by a commitment to creating public value, that is the shared societal benefits that markets are not structured to deliver. A European approach to digital sovereignty must encompass more than narrow metrics of national or regional competitiveness. It must support governance and ownership models, such as digital commons, that decentralize control, safeguard fundamental rights, and respond to collective needs that commercial actors often overlook or deprioritize. These principles become particularly urgent when examining Europe's current digital dependencies.

While strategic vulnerabilities are present at nearly every layer of the digital stack,<sup>11</sup> some of the most pressing risks to European democracies stem from the EU's reliance on foreign and proprietary service providers whose business models are based on data extraction and attention capture. The platforms they operate may ostensibly be free to use, but profit from market concentration, large-scale surveillance, algorithmic amplification, and behavioral manipulation. These dynamics are not accidental but rather structural features of the

<sup>&</sup>lt;sup>10</sup> See for example: Mariana Mazzucato, The Entrepreneurial State: Debunking Public vs. Private Sector Myths (London: Anthem Press, 2013).

<sup>&</sup>lt;sup>11</sup> Mario Draghi, "The Future of European Competitiveness," European Commission, September 2024, <a href="https://commission.europa.eu/topics/eu-competitiveness/draghi-report\_en">https://commission.europa.eu/topics/eu-competitiveness/draghi-report\_en</a>. These dynamics are explored in detail in recent analyses of Europe's digital dependencies and platform risks. See: Bertelsmann Stiftung, ed., EuroStack: A European Alternative for Digital Sovereignty, by Francesca Bria, Paul Timmers, and Fausto Gernone (February 13, 2025).

dominant digital business model.<sup>12</sup> As a result, they contribute to social polarization, information disorder, labour rights violations, and a degraded digital public space. Even when regulated, commercial platforms treat non-financial goals, such as maintaining the integrity of public life or the protection of fundamental rights, as secondary considerations and impacts outside the scope of their commercial responsibility.

This extractive model persists because of fundamental structural characteristics of digital markets. Economies of scale, network effects, and user lock-in make monopolization the default outcome. While antitrust laws are an important tool for addressing anti-competitive behavior, their reactive nature and traditional frameworks often struggle to keep pace with the rapid innovation cycles and complex dynamics characteristic of digital ecosystems. Moreover, antitrust interventions tend to address symptoms rather than the underlying systemic issues that encourage consolidation and dependency. Therefore, beyond the enforcement of competition law, there is a clear political responsibility to foster infrastructural diversity and reduce systemic dependency. Without a deliberate and forward-looking intervention, and relying solely on existing measures such as antitrust law, there is a significant risk that market forces alone will continue to drive consolidation and deepen systemic dependency. Recognizing these structural realities points toward a different approach to European digital policy.

Addressing the vulnerabilities requires more than simply replacing non-European providers with European ones while maintaining the same underlying business models and market dynamics. Public funding and other policy interventions should not be used to replicate extractive business models under a "made in Europe" label. Instead, it should be directed toward building democratic, rights-aligned digital infrastructures that resist monopolisation and promote openness, transparency, and public accountability. Such infrastructures must be designed, governed, and funded according to priorities like pluralism, interoperability, and participation - creating space for institutions governed by public interest mandates. In short, if we want infrastructure that serves the public, it must be built in accordance with public values, with sustained public investment, appropriate governance, and clear alignment with long-term societal goals.

The EU must update its digital sovereignty strategy to address power concentration in commercial entities beyond democratic control. This requires investing in models that counterbalance market concentration and deliver public value. Digital Commons should be recognized as strategic assets, not fringe alternatives, in Europe's digital agenda. Integrating them into funding and governance mechanisms is essential for a digital environment aligned with democratic values and public needs.

<sup>&</sup>lt;sup>12</sup> See for example Shoshana Zuboff, The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power (New York: PublicAffairs, 2019). Zuboff defines surveillance capitalism as a new economic order that claims human experience as free raw material for hidden commercial practices of extraction, prediction, and sales.

<sup>&</sup>lt;sup>13</sup> Lina M. Khan, "Amazon's Antitrust Paradox," Yale Law Journal 126, no. 3 (2017): 710-805; Cristina Caffarra, "Of Hope, Reality, and the EU Digital Markets Act," TechPolicy.Press, May 6, 2024, <a href="https://www.techpolicy.press/of-hope-reality-and-the-eu-digital-markets-act/">https://www.techpolicy.press/of-hope-reality-and-the-eu-digital-markets-act/</a>. Khan demonstrates how digital platforms leverage structural market advantages to achieve dominance, while Caffarra provides critical analysis of the limitations of current EU regulatory approaches like the Digital Markets Act in addressing these fundamental structural dynamics.

# 4. Policy Interventions

Based on this broader rethinking of how the EU builds, sustains, and governs its digital foundations, this agenda identifies several policy interventions to advance digital sovereignty and integrate support for Digital Commons, as well as public digital infrastructure, into the European Union's long-term budget. It advocates for aligning research and innovation funding with infrastructural needs, a shift that encompasses stable support for open source ecosystems. The strategy also recognizes that public institutions hold significant power to stimulate the adoption of alternatives and shape markets through procurement instruments. To be effective, a comprehensive strategy for sovereignty must contend with the EU's layered digital dependencies, confronting both the risks of hyperscaler concentration in cloud infrastructure and the erosion of democratic discourse in digital public spaces. Such efforts require durable, cross-border institutional frameworks that can anchor coordination and commitment over time.

For each proposed policy intervention, the Agenda specifies the relevant regulatory context, budget channel under the Commission's MFF proposal, indicative funding envelope, and cofunding arrangements. These figures are presented as proposals to guide discussions on the next MFF, with order-of-magnitude cost estimates and suggested allocation of responsibilities between EU-level instruments, member states, and other sources such as private or philanthropic contributions.

# 4.1 Aligning Research and Innovation Funding with the Realities of Digital Commons

Digital commons and public digital infrastructure have the potential to deliver long-term societal benefits, enhance resilience, and reduce dependence on extractive, proprietary business models that prioritize data extraction and vendor lock-in over user control and interoperability. The Next Generation Internet (NGI) initiative under Horizon Europe<sup>14</sup> offers a positive example of how public funding can support a more pluralistic and rights-based internet. NGI has invested in a wide range of open-source, privacy-enhancing, and decentralised technologies across different layers of the digital stack. Importantly, it has also pioneered participatory grantmaking and bottom-up experimentation through mechanisms like NGI Zero. However, NGI remains relatively small in scale and isolated within the broader funding ecosystem. Its impact would be significantly amplified if similar principles—such as openness, interoperability, and civic participation—were mainstreamed across the EU's digital funding landscape.

At the same time, Europe must also ensure that its funding architecture is capable of supporting digital commons initiatives not just at the innovation stage but throughout their entire lifecycle. As with other essential infrastructure, the digital systems underpinning social

<sup>&</sup>lt;sup>14</sup> See: <a href="https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe\_en">https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe\_en</a>

and economic life require sustained, predictable investment beyond initial development.<sup>15</sup> This demands a broader redesign of how research and innovation funding is structured and deployed across the EU's digital agenda.

EU funding for digital research and innovation is currently divided between several major programmes, most notably Horizon Europe and Digital Europe. While these programs support a wide range of projects, their short-term, project-based funding model —typically 2-4 years with no guaranteed follow-up—does not meet the long-term needs of maintaining and scaling digital infrastructures. For example, successful pilot projects for decentralized social networks or privacy-preserving tools often struggle to find operational funding after the initial development phases. Consequently, public investment often stops at the point where early-stage technologies must mature, stabilize, and integrate into broader ecosystems.

Moreover, much of the EU's research and innovation strategy remains guided by the narrative of technological disruption.<sup>17</sup> This has led to a disproportionate emphasis on speculative or "frontier" technologies at the expense of maintaining and improving the digital infrastructure that underpins Europe's economy, public services, and digital public spaces. While disruptive technologies may offer transformative potential, they rely on the stability, interoperability, and accessibility of core infrastructure layers to be viable.

Addressing these structural limitations requires fundamental reform of the EU funding architecture. The mismatch between funding design and infrastructure realities raises serious concerns about Europe's ability to build and sustain digital resilience. Promising alternatives to dominant platform models receive initial development support but lack followup funding for adoption, scaling, or long-term governance. This systemic gap not only undermines promising initiatives but also prevents the establishment of sustainable economic models for Digital Commons. Effective digital sovereignty requires not merely funded research projects, but robust professional pathways and economic frameworks that enable skilled practitioners to sustain careers while maintaining and scaling commons-based infrastructure. Without viable economic models for the human capital essential to this work, Digital Commons remain dependent on precarious grant cycles rather than becoming selfsustaining components of Europe's digital economy. Consequently, this structural deficit can compel promising initiatives toward extractive monetisation models, such as data extraction, which replicates the very dynamics they seek to challenge. Successful alternatives like cooperative ownership models, public utility approaches, or community-governed platforms require sustained institutional support that current funding mechanisms don't provide. To support a sovereign digital ecosystem, funding must go beyond technical development and also include the often-overlooked work of maintenance and governance that sustains Digital Commons over time. Funding instruments that support the entire lifecycle of Digital

<sup>&</sup>lt;sup>15</sup> See also: Mariana Mazzucato, Mission Economy: A Moonshot Guide to Changing Capitalism (London: Allen Lane, 2021). Mazzucato emphasizes the importance of budgeting that focuses on clearly defining desired goals and identifying the necessary resources to achieve them, instead of restricting funding to short-term project cycles.

<sup>16</sup> https://digital-strategy.ec.europa.eu/en/activities/digital-programme

<sup>&</sup>lt;sup>17</sup> Warso, Zuzanna, and Meret Baumgartner. 'Putting Money Where Your Mouth Is? Insights into EU R&I Funding for Digital Technologies'. Amsterdam: critical infrastructure lab, 22 April 2025. <a href="https://doi.org/10.5281/zenodo.15263223">https://doi.org/10.5281/zenodo.15263223</a>.

Commons, from initial development to long-term sustainability and democratic stewardship, are critical.

To meet the EU's goals of digital sovereignty and competitiveness, research and innovation funding must move beyond speculative technology trends and be guided by technology assessment and societal needs. This means that funding should prioritize technological openness, interoperability, and democratic governance rather than pursuing specific technological outcomes or hypothetical network architectures. Only by aligning funding mechanisms with the long-term requirements of digital infrastructure can Europe build the resilient, rights-based digital ecosystem that its sovereignty strategy demands.

The European Competitiveness Fund's promise of a "seamless investment journey from research to deployment" addresses this structural gap in current EU funding mechanisms. The ECF's integrated approach recognises that digital infrastructure of critical importance requires long-term investment that extends past prototyping and into deployment, maintenance, and scale-up. This responds to the central challenge of sustaining digital commons within Europe's broader digital sovereignty strategy.

While the reality of achieving "seamless" coordination remains to be tested, the Commission's acknowledgment that secure, "world-class" digital infrastructure is now essential for competitiveness and strategic autonomy opens the door for funding not only the development of new technologies, but also the ongoing maintenance, governance and scaling of digital commons, areas that have historically fallen between research funding and commercial deployment models.

The ECF's comprehensive financing toolkit—including grants, loans, guarantees, and procurement—can be adapted to support the diverse economic models underpinning digital commons, from cooperative structures to public utility approaches. The main challenge is aligning the ECF's results-oriented framework with metrics that go beyond traditional competitiveness measures, incorporating commons-specific indicators such as the robustness of community governance, compliance with interoperability standards, and the delivery of tangible public benefits.

#### 4.1.1 Establishing Long-Term Funding for Critical Open Source Projects

The open-source (OS) ecosystem underpins much of today's digital infrastructure and services, offering alternatives to proprietary models not only at the infrastructural level (e.g., operating systems, protocols, libraries) but also through end-user applications and platforms. Open source technologies span many sectors, with several types of actors and diverse governance approaches. This ecosystem enables companies, governments, and regions to build on existing resources rather than duplicating investments. However, despite its scale and importance, many critical components of open-source infrastructure are maintained by a small number of volunteers. A lack of funding for the maintenance and security of critical

<sup>&</sup>lt;sup>18</sup> See also: Sheila Jasanoff, *The Ethics of Invention: Technology and the Human Future* (Cambridge, MA: Harvard University Press, 2016). Jasanoff argues that democratic societies must move beyond technocratic approaches to innovation and instead assess societal needs and democratic values before technological deployment.

open-source infrastructure leaves the users exposed to systemic risks, such as the Log4j vulnerability that affected millions of systems globally.<sup>19</sup>

Recognizing this vulnerability, the EU should ensure sustained, long-term support for widely used open source projects and libraries of critical importance, rather than reactive responses to crises. Sustained investment in open source requires the creation of an EU-level instrument, drawing from and scaling national models such as the German Sovereign Tech Agency, which has successfully funded critical open source infrastructure projects.

By treating open source as a strategic asset and managing critical open source projects as Digital Commons that require stewardship, the EU can safeguard technological sovereignty and accelerate innovation. Without such a commitment, foundational technologies risk fragmentation, vulnerabilities, and increased dependence on private actors.

Building on the need for sustained support, such an instrument should help scale existing efforts to track and mitigate critical dependencies in open technologies and ensure sustainable funding for their maintenance. This requires tracking and identifying dependencies across critical infrastructure and public services within the EU; evaluating potential vulnerabilities related to underfunding or under-maintenance, and strategically investing in their development and support. Funding should have low barriers to access and flexible models for distribution, particularly for small-scale maintainers and contributors, while remaining scalable and proportionate for larger infrastructures. Governance should be participatory, transparent, and aligned with broader policy objectives like digital sovereignty and the protection of democratic values. This instrument must prioritize funding for the development and maintenance of a foundational open source ecosystem. This includes targeted investments in the development of core open source libraries, including open source components for encrypted communications, secure web infrastructure, anonymization technologies, and privacy-enhancing protocols. A coordinated strategy is essential to sustainably manage and secure open source ecosystems and to integrate them systematically into public infrastructure. This strategy must be grounded in direct engagement with open source communities and public institutions to accurately assess and address needs at the grassroots level.

#### **Regulatory Context**

Network and Information Systems Directive 2 (Directive (EU) 2022/2555)

The NIS2 Directive imposes cybersecurity risk-management and incident-reporting obligations on "essential" and "important" entities, including explicit requirements to address supply chain and third-party risks. While OSS communities are not directly regulated under NIS2, the compliance burden on regulated entities may imply heightened expectations for transparency, patch management, and governance in OSS projects.

• Cyber Resilience Act (Regulation (EU) 2024/2847)

Obligations under the CRA fall primarily on manufacturers and other economic operators that make such products available commercially. Open source software developed and supplied

<sup>&</sup>lt;sup>19</sup> Knut Blind, Mirko Böhm, Paula Grzegorzewska, Andrew Katz, Sachiko Muto, Sivan Pätsch, and Torben Schubert, *The Impact of Open Source Software and Hardware on Technological Independence, Competitiveness and Innovation in the EU Economy: Final Study Report* (Luxembourg: Publications Office of the European Union, 2021), <a href="https://data.europa.eu/doi/10.2759/430161">https://data.europa.eu/doi/10.2759/430161</a>. The report recommends that the EU establish institutional capacity and funding mechanisms to support open source as a strategic asset.

outside the course of a commercial activity is expressly excluded from the scope. However, entities placing products on the market that incorporate open source components must ensure transparency with respect to those dependencies. This creates an indirect demand for greater assurance from open source projects related to vulnerability handling processes and documentation.

#### **Budget channel**

Core funding for critical open source projects should be provided through the proposed European Competitiveness Fund, specifically through the Digital Leadership and Resilience and Security policy windows, which are the successors of the Digital Europe Programme and the Connecting Europe Facility – Digital. This should be coordinated and complemented by applied OS R&I in Horizon Europe. The proposed Global Europe funding programme provides scope for OS cooperation with partner countries.

#### Indicative envelope and co-funding arrangements

Taking the recent proposal for a Sovereign Tech Fund with a baseline of €350 million as a benchmark, this Agenda recommends €350–500 million over 2028–2034 for long-term OS sustainability, maintenance, and governance.

#### **Co-funding structure:**

EU contribution: 60-70%

Member State contribution: 30-40%

Public funding should be augmented by private and philanthropic investment; however, open source projects of critical importance should not be dependent on it.

**Justification**: OS constitutes a European public good with cross-border benefits. A high EU share reflects this, while member states can co-fund where national integration is needed. Private contributions add value but cannot replace public responsibility.

#### 4.1.2 Developing and Managing European Data Commons

What is now broadly labeled as *data*, including shared and collectively managed knowledge, cultural resources, creative works, and scientific datasets, represents a key component of the Digital Commons. These resources embody public value that should not be captured or managed through purely commercial models. Control and governance of this data are essential not only for driving innovation and competitive advantage but also for safeguarding rights. Together, these factors strengthen Europe's digital sovereignty both economically and socially.

Current EU data strategies often emphasise the sheer volume of data collected rather than the broader ecosystem needed to make data genuinely useful, ensure its fair and ethical use, and align it with specific societal goals. This ecosystem encompasses governance and management frameworks that determine how data is stored and shared, as well as the technical infrastructure required for processing and exchanging data. Equally important is

building the necessary human and institutional capacity. Crucially, data collection and use must be guided by clear, publicly beneficial objectives and purpose-driven use cases. Without considering these interconnected factors, resources can be used inefficiently and rights violated.

While Europe has a long-standing tradition of supporting open data frameworks, particularly in scientific research, public sector information, and cultural heritage, these efforts often lack the governance mechanisms and community involvement needed to ensure sustainable and equitable reuse.

To address these challenges and build on existing initiatives, the EU should invest in establishing a European Data Commons, curating and managing high-quality datasets as public goods under a system of commons-based governance. This approach would complement open data initiatives by embedding them within governance structures that promote long-term stewardship, collective agency, and responsible reuse. By prioritising targeted, well-managed data initiatives, Europe could reduce its reliance on external actors and support a digital ecosystem that reflects its values and regulatory frameworks. This approach would enhance collective control over essential data resources, ensure transparency and accountability in data use, protect privacy and other fundamental rights, and promote fair working conditions for those involved in data processing and management.

#### **Regulatory Context**

Data Governance Act (Regulation (EU) 2022/868)

The Data Governance Act lays down conditions for the re-use of certain categories of protected public sector data, establishes a framework for the provision of data intermediation services, and introduces mechanisms for the registration and supervision of data altruism organisations. These provisions regulate conditions for the establishment of data sharing infrastructures, such as data commons and data spaces.

Data Act (Regulation (EU) 2023/2854)

The Data Act (Regulation (EU) 2023/2854) establishes rules related to fair access to and use of data generated by connected products and related services. It obliges manufacturers and service providers to ensure that data can be accessed by users and also shared with third parties under fair, reasonable, and non-discriminatory terms.

Open Data Directive (Directive (EU) 2019/1024)

The Open Data Directive (Directive (EU) 2019/1024) sets minimum requirements for the reuse of public sector information and high-value datasets. It mandates public sector bodies and certain public undertakings to make such data available in machine-readable formats, and where relevant, through standardised APIs.

#### **Budget channels**

The development and maintenance of European Data Commons should be financed via the Digital Leadership policy window under the ECF alongside investment from Horizon Europe,

including the proposal to fund "data sovereignty moonshot". Under National and Regional Partnership Plans, Member States could dedicate portions of their allocations to building national data infrastructure that feeds into European Data Commons. Single Market Programme, which funds standardization, governance, and enforcement of EU law could be leveraged for developing data governance standards and regulations that enable cross-border data sharing while protecting privacy, while Global Europe offers a channel for international data commons partnerships.

#### Indicative envelope and co-funding arrangements

Using the data spaces initiative as a benchmark, the Strategic Agenda proposes an investment of €350 million over 2028–2034 to establish a European Data Commons. This funding would support high-quality data collections embedded within governance structures that ensure long-term sustainability, collective agency, and use aligned with societal objectives.

#### **Co-funding structure:**

- EU contribution: 60–80%, supporting core infrastructure.
- Member state contribution: 20–40%, ensuring national data integration and participation in governance.
- Public funding should be complemented by private sector investment where a business case exists, without substituting public responsibility.

**Justification:** Substantial EU funding is warranted as data commons constitute cross-border digital infrastructure serving collective European interests that no single member state can effectively establish. Member state contributions ensure integration with national data ecosystems and provide co-governance capacity in commons stewardship structures.

# 4.2 The importance of the cloud as an enabler of the Digital Commons

The dominance of a handful of global cloud<sup>20</sup> providers—Amazon Web Services, Microsoft Azure, and Google Cloud—represents one of the most fundamental bottlenecks in Europe's digital infrastructure.<sup>21</sup> These platforms control the underlying computational resources that power everything from government services to startup innovations, creating a chokepoint that extends their influence far beyond their direct services. Control over the cloud layer means outsized control over the entire stack of digital services. When European institutions

<sup>&</sup>lt;sup>20</sup> The term "cloud" refers to a layered architecture, from infrastructure (laaS) to platform (PaaS) and software (SaaS) services, each with different implications for control and sovereignty. A core challenge is the fact that providers increasingly bundle infrastructure, platform, and software services into vertically integrated offerings, making it harder for users to maintain control or switch between layers independently. See also: Bert Hubert, "The (European) Cloud Ladder: From Virtual Server to MS 365," March 14, 2025, <a href="https://berthub.eu/articles/posts/cloud-ladder/">https://berthub.eu/articles/posts/cloud-ladder/</a>

<sup>&</sup>lt;sup>21</sup> Open Markets Institute. Engineering the Cloud Commons: A Blueprint for Resilient, Secure, and Open Digital Infrastructure, 2025, <a href="https://static1.squarespace.com/static/5e449c8c3ef68d752f3e70dc/t/6821f7382ff99f2baf2e8212/1747056440491/Engineering+the+Cloud+Commons+FINAL+2.pdf">https://static1.squarespace.com/static/5e449c8c3ef68d752f3e70dc/t/6821f7382ff99f2baf2e8212/1747056440491/Engineering+the+Cloud+Commons+FINAL+2.pdf</a>

rely on these providers, they do not just risk dependency. They also help entrench the power of platforms that can dictate terms or restrict access for users. Cloud infrastructure is therefore not a neutral utility but the foundation of digital sovereignty, and currently, it is controlled elsewhere.

This cloud infrastructure is crucial for maintaining the Digital Commons and public digital infrastructures and for providing the digital foundations that enable essential applications and services underpinning society and the economy. Paradoxically, Digital Commons, which are key to digital sovereignty, depend on infrastructure that may itself be shaped by closed, proprietary systems. Ensuring the sustainability and autonomy of the Digital Commons, therefore, requires cloud infrastructure that aligns with commons-based principles: openness, interoperability, and freedom from vendor lock-in.

To secure Europe's digital sovereignty, it is therefore necessary to address the limited scale and competitiveness of European cloud providers. This requires targeted interventions on both supply and demand sides, with a focus on fostering alternatives that are not geared towards locking customers into proprietary systems.

Initiatives such as the Important Project of Common European Interest on Next Generation Cloud Infrastructure and Services (IPCEI-CIS)<sup>22</sup> represent an important step toward strengthening the EU's position in cloud technologies. These efforts aim to support the development of competitive, interoperable, and energy-efficient cloud and edge solutions. To truly serve the public interest, such initiatives must go beyond a narrow focus on industrial competitiveness and scaling of European providers, towards serving as the foundation for public digital infrastructure and Digital Commons.

The European Union must develop a clear strategy aimed at reducing reliance on hyperscalers while fostering strong sovereign and interoperable alternatives. This strategy should recognize the market need for solutions that provide enhanced control over data and mitigate the risks associated with dependence on a few dominant providers. It must accelerate the development of sovereign, reliable cloud services that adhere to EU rules and standards, providing secure and autonomous infrastructure to support public services, democratic governance, and the needs of people and businesses. Building on frameworks like the Data Act, cloud users must have the ability to switch providers easily by removing contractual and technical barriers. Enforcing interoperability and data portability requirements, along with developing technical standards for them, remains critical to preventing vendor lock-in.

Creating a stable market for sovereign cloud solutions is essential. The Commission should use public procurement rules to require that public sector services and projects funded by public money prioritize European cloud providers that meet these criteria. Strategic procurement at both the EU and Member State levels should be leveraged to stimulate demand and drive investment into trusted sovereign solutions. This approach would generate the demand necessary to scale sovereign offerings and compete with global hyperscalers.

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<sup>22</sup> https://www.8ra.com/

Efforts to develop sovereign cloud infrastructure must align with the Commission's commitment to make data centers climate-neutral and energy efficient by 2030. Building cloud infrastructure that is both sovereign and sustainable will support Europe's technological independence while meeting environmental objectives.

In terms of operationalizing this policy intervention, users should be able to switch cloud providers, combine services across vendors, and retain control over data and operations. This requires enforceable interoperability standards and structural separation between service layers.

#### **Mandatory Interoperability Standards**

To safeguard sovereignty and avoid vendor lock-in, cloud services should support interoperability and portability. This entails offering systems with open application programming interfaces (APIs), standardized data formats, and transparent protocols, enabling workloads and datasets to move across providers without prohibitive costs or disruption. The focus is on ensuring that users retain control over their data and applications, and that technical independence from dominant providers is structurally ensured.

#### **Structural Separation Requirements**

To prevent vendor lock-in through bundled offerings, cloud providers should offer infrastructure, platform, and software services as separate, independently operable layers. Users should be able to:

- Use infrastructure services (compute, storage, networking) from one provider while selecting platform services (databases, middleware, analytics) or software applications (office tools, collaboration apps) from different vendors.
- Access each layer through independent APIs, billing systems, and support channels, so switching or combining services does not affect unrelated layers.
- Ensure technical independence, meaning the separation is enforced in the system architecture, not only in contractual terms.

These measures would guarantee that users can mix and match services, switch providers without disruption, and avoid lock-in, while retaining full control over each layer of their cloud environment.

#### **Regulatory context**

Digital Markets Act

The Digital Markets Act (Regulation (EU) 2022/1925) establishes obligations and prohibitions on "gatekeepers" to prevent the abuse of market power. Cloud providers are currently not within the scope of such obligations, but the upcoming review of the DMA has renewed calls to clarify or extend the DMA's scope to include them.

The Cloud and Al Development Act (forthcoming)

The Cloud and AI Development Act presents an opportunity to define a clear framework for "sovereign" cloud providers, while promoting open standards and interoperability. This should be supported through the establishment of public procurement requirements and guidelines that support domestic industry and strengthen the autonomy of public institutions. The Cloud and AI Development Act presents an opportunity to define a clear framework for "sovereign" cloud providers, while promoting open standards and interoperability. It is also an opportunity to foreground commitments related to sustainability.

 Data Act (Regulation (EU) 2023/2854)—Chapter VI on switching between data processing services

Chapter VI lays down rules to ensure effective switching between providers of data processing services. The aim is to limit vendor lock-in, and remove commercial and technical barriers to migration between cloud providers.

• NIS2 Directive (Directive (EU) 2022/2555)—provisions on cyber resilience

The NIS2 Directive designated cloud computing services as essential entities. Such entities are subject to mandatory measures such as cybersecurity risk-management and incident reporting obligations.

Important Projects of Common European Interest State Aid Guidelines

The IPCEI framework enables member states to jointly support projects of common European interest that address market failures and contribute to the Union's strategic objectives. In particular, the IPCEI on Next Generation Cloud Infrastructure and Services (IPCEI-CIS) established a framework for allocating state aid to strategic cross-border projects in cloud and edge technologies with the objective of shaping the development of the cloud services market.

#### **Budget channel**

Investment should be channelled through the proposed ECF as a successor of the Digital Europe Programme and the Connecting Europe Facility - Digital, which is meant to support public-private partnerships including Important Projects of Common European Interest, with additional support provided through Horizon Europe. The Digital Leadership policy window should provide core funding for developing European cloud alternatives, while the Resilience and Security, Defence Industry, and Space window should fund security-focused cloud infrastructure and cybersecurity components. The InvestEU instrument within the ECF should be used for leveraging private investment in cloud infrastructure through loans, guarantees, and equity. While EU-level funding provides a foundation, member state contributions are essential to ensure alignment with national priorities and to complement EU support.

#### Indicative envelope and co-funding arrangements

Estimating the exact annual expenditure of the European public sector on cloud services is challenging due to the diversity of services and the lack of centralized reporting. Nevertheless, available data provides some guidance. In 2023, the European cloud computing market was valued at over €110 billion and is projected to reach €129 billion by

2024. While precise figures for public sector spending are not available, a significant portion of this market is likely attributable to government contracts, reflecting the growing adoption of cloud services across public administration. One estimate places annual EU public sector IT spending on cloud services between €5−10 billion (low estimate) and €8−16 billion (high estimate). The IPCEI Next Generation Cloud Infrastructure and Services (IPCEI-CIS) initiative represents a promising step toward enhancing Europe's digital sovereignty in the cloud sector. With up to €1.2 billion in public funding, IPCEI-CIS is expected to mobilize an additional €1.4 billion in private investment, supporting the development of interoperable, energy-efficient, and secure EU-based cloud technologies.

To promote market diversity and reduce dependence on non-EU providers, public sector cloud spending should target 50% allocation to EU-based companies by the end of the forthcoming MFF period, with interim milestones of 20%, 30%, and 40% along the way. Creating demand is indispensable to strengthening the European cloud ecosystem, scaling sovereign offerings, and enhancing resilience, directly advancing digital sovereignty objectives. Such an approach aligns with the draft EU Competitiveness Fund (ECF) Article 10 on EU Preference, which allows award procedures to favor Union entities and apply restrictions on transfers, supply sourcing, and control to safeguard the Union's strategic and economic interests.

#### **Co-funding structure:**

- EU contribution: 30–35% of total investment, focusing on cross-border infrastructure, interoperability, and security-critical components.
- Member state contribution: 20–25%, ensuring integration with national public administrations and sector-specific systems.
- Other funding (private sector): 40-50%, reflecting the commercial viability of cloud services and the ability to crowd in private investment through loans, guarantees, and equity.

**Justification:** Sovereign cloud infrastructure combines the characteristics of a public good with a commercially viable market. A substantial EU contribution is necessary to guarantee alignment with digital sovereignty and security goals, while member states ensure national uptake and integration. The largest share is expected from the private sector, whose investment can be mobilized through public de-risking instruments such as InvestEU guarantees and loans. This balance ensures that the infrastructure remains strategically European without crowding out private capital.

# 4.3 Leveraging Public Spending to Drive Adoption of Sovereign Solutions

To secure the long-term viability of sovereign digital assets, the EU and its member states should adopt a comprehensive and coordinated approach that addresses both the development of new technologies (the supply) and the creation of sustainable markets for their adoption (the demand). While investing in innovation is essential, it is equally important to ensure that these technologies find pathways into practical, real-world use. Public

procurement plays a crucial role in this effort.<sup>23</sup> As a key demand-side lever, public procurement can help to scale up digital assets, enhance their competitiveness, and attract greater investment from the private sector.

Public procurement has the potential to be a powerful driver of digital sovereignty, but this demands a shift in approach. Current practices that prioritise short-term cost savings would have to be replaced with strategies that emphasise long-term resilience and digital autonomy. This would require rethinking procurement rules so that they promote broader public objectives, including the strengthening of Europe's digital sovereignty. With the EU's Procurement Directives in the process of revision, along with the upcoming Cloud and AI Development Act, the strategic deployment of public funds can be a key lever. Aligning procurement policies with digital sovereignty objectives could transform public spending into a powerful means of supporting sustainable, secure, and independent digital infrastructure.

In addition, approaches such as pre-commercial procurement<sup>24</sup> allow public institutions to leverage their spending power to more actively shape the development of technology alternatives. They can invest in the research and development of solutions before they become commercially available. Multiple suppliers can be funded through phased processes, including design, prototyping, and testing. The model allows distributed investment in early-stage innovation, which also remains directed at addressing specific needs. Pre-commercial procurement enables public institutions to move beyond isolated 'research and innovation' activities towards a more integrated approach that links early-stage innovation funding to the actual adoption of new technologies into public infrastructure.

Sovereignty entails more than the mere presence of a company's name or physical servers within Europe. It necessitates the integration of genuine control within the design, governance, and ownership structures. A procurement policy aligned with digital sovereignty should, therefore, prioritise open source, which promotes transparency, adaptability, and collaborative development of technological solutions, and open interoperability standards, which ensure the possibility of integration across diverse systems and prevent vendor lockin. These procurement conditions are vital to prevent public investments from reinforcing monopolistic or extractive business models. Instead, they can help cultivate an open, interoperable, and sovereign digital ecosystem in Europe.

The emphasis on diversity and openness is especially critical in the context of cloud infrastructure. Sovereignty at this level is essential to mitigating risks associated with concentrated control, including single points of failure, systemic vulnerabilities, and unauthorized access. The entire digital ecosystem depends on this foundational layer (see previous section), making control over cloud infrastructure a cornerstone of digital resilience and autonomy. For these reasons, European public authorities should adopt procurement criteria that intentionally steer demand toward sovereign cloud infrastructure. Mechanisms

<sup>&</sup>lt;sup>23</sup> With approximately €2 trillion spent annually (around 13.6% of EU GDP) it represents one of the EU's most powerful tools for steering the economy. European Commission, Public Procurement Data Space (PPDS), <a href="https://single-market-economy.ec.europa.eu/single-market/public-procurement/digital-procurement/public-procurement-data-space-ppds\_en">https://single-market-economy.ec.europa.eu/single-market/public-procurement/digital-procurement/public-procurement-data-space-ppds\_en</a>

<sup>&</sup>lt;sup>24</sup> See: <a href="https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/shaping-euresearch-and-innovation-policy/new-european-innovation-agenda/innovation-procurement/precommercial-procurement\_en">https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/shaping-euresearch-and-innovation-policy/new-european-innovation-agenda/innovation-procurement/precommercial-procurement\_en">https://research-and-innovation-policy/new-european-innovation-agenda/innovation-procurement/precommercial-procurement\_en</a>

such as multi-sourcing requirements or quotas, ensuring that at least one primary provider in any system is EU-based, can help diversify the cloud landscape and reduce overreliance on a handful of dominant foreign providers. Procurement rules should ensure that cloud service providers are only eligible when they maintain a structural separation between infrastructure, platform, and software services.

Procurement rules should also embed conditionalities that align market outcomes with broader societal goals, using public spending as a strategic tool to generate positive spillovers and ensure public value. As part of its climate commitments, the Commission has set a target for data centres to be climate-neutral by 2030. To support this objective, cloud providers should be required to report sufficiently granular data on resource consumption, energy usage, and emissions, and to demonstrate compliance with recognised sustainability standards. These criteria are essential to ensure that the development of sovereign cloud infrastructure does not undermine Europe's climate ambitions.

When designed with intent, public procurement can be a powerful tool for shaping markets and technology in accordance with democratic values. By incorporating principles of sovereignty, openness, interoperability, and sustainability, the EU can transform procurement into a foundation of its digital and societal resilience. This approach ensures that public expenditure provides strategic public value across the entire digital landscape, not just services.

Building on the principles outlined above, public procurement is one of the strongest levers available to shape cloud infrastructure markets in Europe. Even in the absence of broader regulation, by embedding interoperability and portability requirements into procurement contracts, the public sector can reduce its own exposure to vendor lock-in while also creating incentives for the private market to adopt more open standards. The following sections outline how these principles can be operationalized through procurement practices.

#### **No-Lock-In Procurement Clauses**

Cloud service contracts supported by public funding should include standardized exit provisions with measurable, enforceable requirements. These clauses must ensure that institutions can migrate to alternative providers in a timely and cost-effective way, without being locked into a single vendor. Key areas of consideration include:

- Data export: Providers should allow full export of customer data in open, standardized formats within agreed timelines.
- Downtime during migration: Contracts should define acceptable downtime thresholds depending on service criticality, with strict limits for mission-critical workloads.
- Migration support: Vendors should provide tools, documentation, and test environments free of charge, with professional services available at transparent and capped rates.
- Proof of portability: Before contract award, providers should demonstrate the ability to export representative workloads and migrate them to a competing platform under the agreed parameters.

Such provisions make portability a practical reality rather than a theoretical option, reducing systemic dependency and strengthening digital sovereignty.

#### **Multi-Sourcing Requirements**

To enhance resilience, procurement frameworks should encourage or require the use of more than one cloud provider for critical systems. For larger contracts (e.g., above €1 million), at least one provider should be EU-based and structurally independent from non-EU hyperscalers. Procurement criteria can reward bidders that facilitate switching between providers and support hybrid or multi-cloud architectures.

#### **Switching Performance Tests**:

Procurement procedures may also incorporate "escape tests," in which vendors demonstrate live migration of representative workloads to a competing platform within specified timeframes. This approach offers a practical check on contractual commitments and ensures that switching remains a realistic option, not just a theoretical clause. Vendors unable to pass such tests or imposing excessive switching costs could be deemed unsuitable for public contracts.

#### **Supporting Digital Commons and Open Source - Further Measures**

This agenda emphasizes that public procurement should actively support the development and adoption of digital commons. By embedding open standards and open-source requirements into tendering processes and funded projects, the EU can create strong incentives for Digital Commons. Key considerations include:

- Tender evaluation criteria should reward solutions that comply with open standards and provide bonus points for solutions incorporating open-source components.
   Public tenders should avoid proprietary-specific requirements that implicitly exclude open-source vendors. This would create gradual market pressure toward open source adoption while maintaining flexibility in the short term.
- Successful adoption of open-source solutions depends on informed decision-making. Procurement officers should receive training on evaluating open-source technologies to ensure consistent, high-quality assessments.
- Publicly funded development, such as projects carried out through pre-commercial procurement, should by default produce open-source components with exceptions allowed only in clearly justified, specialized cases. Vendors should contribute reusable components to shared EU repositories, provide comprehensive documentation, and transfer knowledge and skills to public sector teams.

#### **Regulatory context**

Public Procurement Directive (Directive 2014/24/EU)

The Public Procurement Directives are currently under revision, with a proposed emphasis on digital technologies, sovereignty, and open source, particularly in critical sectors. The revised

rules should articulate a clear framework for identifying EU-based and open source providers of technology products.

Cloud and AI Development Act (forthcoming)

The Cloud and Al Development Act should incorporate rules and guidance on the public procurement of cloud services, providing an opportunity to embed requirements on interoperability and sustainability, particularly when public funds are deployed. Procurement can serve as a mechanism to support the domestic industry and reinforce the autonomy of public institutions.

#### **Budget channel**

The European Competitiveness Fund offers procurement as part of its integrated financing toolbox. This would enable the development and scaling of procurement-ready open source solutions, while the InvestEU instrument within the ECF could provide loans, guarantees, and equity to leverage private capital and de-risk the uptake of innovative alternatives. The Single Market Programme adds a complementary role by strengthening procurement frameworks and standards that prioritise interoperability and open solutions, backed by its mandate on standardisation and enforcement of single market legislation. At the national level, the Partnership Plans will be key to ensuring that procurement reforms are implemented consistently across Europe. By aligning national procurement practices with the Union's digital sovereignty objectives, these plans should operationalize reforms that prioritize open and interoperable solutions across public administrations.

# 4.4 Supporting Democratic Control over Digital Communication Spaces

An essential dimension of digital sovereignty is who governs the digital communication spaces that structure public life in Europe. Unlike public squares or public service broadcasters, today's digital platforms lack democratic governance. Content moderation, data governance, and algorithmic transparency remain internal corporate functions rather than matters of public deliberation. So far, Europe's focus has been on mitigating the negative impacts of private platforms rather than establishing structural alternatives. Regulatory pressure can reduce harm, but it cannot substitute for public ownership and governance of core communication infrastructure.

Given the continuous information warfare, polarization and falling trust in institutions, the EU must see sovereign digital communication spaces as critically important digital infrastructures. It must commit to developing and maintaining publicly governed infrastructure, covering protocols and algorithms, that fosters democratic discourse, civic participation, and knowledge sharing. The infrastructure supporting social media services must be designed to prevent capture by corporations, individuals, or states. These systems should be built on open standards and ensure interoperability, empowering users and institutions to make independent choices without being locked into dominant platforms. Decentralization is a critical safeguard for democracies, mitigating risks posed by monopolies and their unilateral control over information access. Transparency is vital -algorithms and content moderation policies must be publicly auditable with source code

available for inspection and regular algorithmic impact assessments published to guarantee accountability.

Achieving this requires dedicated and sustained funding focused on creating and deploying decentralized, open-standard infrastructures that prioritize transparency and interoperability and are governed as commons. Strategic investment is necessary to build resilient systems that counter monopolistic influence and protect democratic access to information. EU institutions should adopt federated, open source communication platforms and engage with citizens through these digital public spaces, reinforcing public trust and setting a standard for transparent, democratic communication.

Protecting the integrity of these systems is no longer a matter of consumer choice or digital regulation but a matter of societal resilience. Just as media pluralism is essential for democracy, algorithmic pluralism is becoming essential for the infrastructure of search, recommendation, and social feeds.<sup>25</sup> Current recommendation algorithms optimized for engagement often amplify divisive content, while users have no meaningful choice over how their feeds are curated. Users must be able to understand, choose, and switch between the systems that shape what they see and how they interact online, similar to how they can choose between different news sources or television channels.

To operationalize this vision and put it into practice, the EU can draw on and support two complementary models. The first is the Digital Commons approach, in which infrastructures are collectively stewarded and maintained as public goods. In this case, decentralized governance models encourage user control, community governance, and resilience—as demonstrated by federated platforms like Mastodon or Matrix. The commons approach is particularly well-suited for enabling open, participatory social spaces where users help shape the norms and architecture of interaction. The second approach is based on a public service broadcasting model.<sup>26</sup> In this case, institutions receive public funding but operate independently from both state control and market pressure. This model is suited for curated content environments, such as news feeds, where editorial standards, public accountability, and professional integrity are of essence.

#### **Regulatory context**

• Digital Services Act (Regulation (EU) 2022/2065)

<sup>&</sup>lt;sup>25</sup> Christian Fuchs and Klaus Unterberger, eds., The Public Service Media and Public Service Internet Manifesto (2021), <a href="https://doi.org/10.16997/book60">https://doi.org/10.16997/book60</a> This collection proposes adapting the institutional logic of public service media (public funding, editorial independence, and accountability) to the digital sphere, offering a normative framework for developing non-commercial, democratic alternatives to dominant platform infrastructures.

While public service broadcasting models vary significantly across Europe—including in their degree of independence, reliance on advertising, or vulnerability to political influence—they nonetheless share a foundational principle: the provision of publicly mandated services, insulated from both commercial and state pressures, with a commitment to public value. It is this principle, not any specific national implementation, that can inform the development of publicly funded and independently governed digital communication infrastructure. See also: Ethan Zuckerman, The Case for Digital Public Infrastructure (New York: Knight First Amendment Institute, January 17, 2020) <a href="https://knightcolumbia.org/content/the-case-for-digital-public-infrastructure">https://knightcolumbia.org/content/the-case-for-digital-public-infrastructure</a>

The DSA establishes transparency, accountability, and oversight obligations for online platforms, especially very large online platforms. However, its scope is limited to regulating private actors rather than enabling public interest alternatives. The Strategic Agenda frames publicly governed digital communication spaces as a structural complement to the DSA: moving from merely mitigating harms on private platforms to proactively creating infrastructures that are transparent by design.

#### DMA

The proposed review of the DMA specifically requires the European Commission to assess whether greater interoperability requirements should extend to providers of social media services. This can open up the possibility for users to have access to third-party feed curation and moderation tools, as well as alternative recommender systems.

Both the DSA and DMA confirm at the legal level that the EU considers the governance of digital communication infrastructure a matter of public interest, not only consumer protection. This creates space to position sovereign digital communication spaces as the next logical step: from regulating monopolistic platforms to building European-owned and governed alternatives.

#### **Budget channels**

The development of digital public space should be supported primarily through the European Competitiveness Fund's Digital Leadership window, which can provide technical investment for decentralised, non-proprietary platforms. Complementing this, AgoraEU offers a dedicated channel for fostering democratic discourse online, supporting platforms that resist corporate capture and advance media pluralism, while also providing resources to counter misinformation and promote algorithmic diversity. To ensure scalability and international reach, the Global Europe instrument can be mobilized to link these efforts with Europe's external action, allowing democratic digital infrastructure to become part of broader technology diplomacy and international cooperation strategies.

#### Indicative envelope and co-funding arrangements

Building on a proposed benchmark for infrastructure serving "tens of millions of users," reflecting a broader effort to expand democratic digital communication spaces, the Strategic Agenda recommends a scaled investment of €100−150 million over seven years to support European initiatives in this area. This higher figure reflects the ambition to serve a population of more than 450 million citizens across multiple languages, while also integrating civil society and public media partnerships at a continental scale.

#### **Co-funding structure:**

• EU contribution: 60-70%

Member state contribution: 20–30%

Other funding (business, philanthropy, media partnerships): 10−15%

**Justification:** Digital communication spaces are inherently cross-border, aligning with EU digital governance (DSA, DMA). A strong EU share ensures democratic resilience at scale, member states bring cultural adaptation and domestic integration, while external funding provides innovation without undermining independence.

## 4.5 Harnessing the Potential of the Digital Commons European Digital Infrastructure Consortium

While the EU's research and innovation funding has helped seed promising initiatives, existing instruments have struggled to support the maintenance and deployment of the digital tools and services that have been funded. Without stable, durable frameworks for cooperation and stewardship of digital assets, Europe risks undermining its own investments and repeating a cycle of funding without lasting impact or uptake.

European Digital Infrastructure Consortia (EDICs),<sup>27</sup> introduced under the Digital Decade Policy Programme 2030, offer a promising new mechanism to address these structural shortcomings. EDICs provide a legal and operational framework for member states to codevelop, govern, and sustain digital infrastructure jointly. They enable cost-sharing and policy alignment across borders, while still allowing flexibility for national implementation.

The establishment of the Digital Commons EDIC marks a significant step forward in operationalizing this vision.<sup>28</sup> It is based on the idea of supporting digital commons as essential, publicly governed infrastructure for a democratic digital future. The Digital Commons EDIC has been designed to ensure the long-term sustainability, institutionalization, and deployment of these commons-based infrastructures. Moving forward, to meet Europe's long-term digital needs, the Digital Commons EDIC should serve as a governance vehicle for Digital Commons and public digital infrastructures projects. Such a consortium of member states can take on coordination roles, facilitating multi-country collaboration, supporting cross-border digital services, and anchoring open-source initiatives within democratically accountable institutions.

The Digital Commons EDIC must also be seen as the instrument through which sustainable, long-term support for critical infrastructure is organised. It can offer a structural solution to the sustainability gap: the recurring challenge in which promising infrastructure projects are piloted through EU programmes but lack a long-term institutional home or financing model. It should serve as a vehicle between research and implementation, aligning R&I funding with necessary deployment and sustainability mechanisms. Beyond channeling financial support, the EDIC should coordinate and centralize non-financial forms of support for Digital Commons. These initiatives must often navigate complex legal, financial, administrative and tax-related questions, and would benefit from coordinated access to essential professional services and organizational guidance.

By hosting and maintaining shared digital tools, such as sovereign workplaces, identity frameworks, public sector cloud platforms, secure communication tools, or civic

<sup>&</sup>lt;sup>27</sup> See: <a href="https://digital-strategy.ec.europa.eu/en/policies/edic">https://digital-strategy.ec.europa.eu/en/policies/edic</a>

<sup>28</sup> https://www.euractiv.com/section/tech/news/quartet-of-eu-countries-to-cooperate-on-building-sovereign-digital-infrastructure/

engagement platforms, a Digital Commons EDIC can provide the continuity and scale needed to transform experimentation into durable, operational systems.

To unlock the potential of the Digital Commons EDIC, the EU must create stronger financial and political incentives to encourage public administrations and new member states to participate in this effort. This means significantly increasing EU funding earmarked for EDIC-led initiatives and using that support to launch ambitious, multi-country projects, such as a sovereign digital workplace for European governments, built on open and interoperable components.

#### **Regulatory context**

Decision (EU) 2022/2481

The Decision establishing the Digital Decade Policy Programme 2030 provides the legal basis for the creation of European digital infrastructure consortia (EDICs)

 Article 39 of the Proposal for a Regulation Establishing the European Competitiveness Fund

This article explicitly authorizes ECF funding for "secure and interoperable digital public infrastructure" and "advanced digital infrastructures." It states that such actions may be provided under the framework of Multi-Country Projects, including those implemented through the European Digital Infrastructure Consortia. The article's emphasis on infrastructure that serves as a key enabler of the digital transformation and in support of societal resilience and preparedness aligns precisely with digital commons objectives of public benefit and collective stewardship.

#### **Budget channel**

Under the next MFF, the long-term operation of Digital Commons EDICs should be financed primarily through the European Competitiveness Fund, as a successor of the Digital Europe Programme, which currently funds this EDIC. ECF is designed to support pan-European infrastructure and governance mechanisms under its Digital Leadership and Resilience windows. This provides the institutional backbone for EDICs to function as durable, cross-border vehicles for managing Digital Commons. Horizon Europe should play a complementary role by funding the research, experimentation, and coordination activities that underpin EDIC pilots and by connecting them with Europe's broader R&I ecosystem. To ensure that EDICs can operate across jurisdictions, the Single Market Programme will be important in developing harmonized regulatory and governance frameworks, providing the legal scaffolding needed for multi-country cooperation. Finally, member state Partnership Plans must secure co-funding.

#### Indicative envelope and co-funding arrangements

The Digital Commons European Digital Infrastructure Consortium is emerging as a coordination mechanism designed to strengthen Europe's digital autonomy. On 8 July, France, Germany, Italy, and the Netherlands formally submitted their application to the European Commission to establish the EDIC Digital Commons.\_Based on current proposals,

the EDIC is expected to operate with a budget of around €5.3 million over its initial phase, with approximately €2.5 million from the EU and €2.8 million from participating member states. For the 2028–2034 period, this Strategic Agenda recommends maintaining an annual envelope of at least €4 million (approx. €28 million total). This budget would be intended to cover coordination, governance, and standards development across the substantive intervention areas. The budget for the DC EDIC will depend on the number of member states that join as participants.

#### **Co-funding structure for the DC EDIC:**

- EU contribution: expected to cover around 40–60% of the DC EDIC budget. This ensures that the EDIC can perform its cross-border coordination role as a European public-good mechanism.
- Member state contribution: mandatory for membership and voting rights, with France, Germany, Italy, and the Netherlands already leading as founding members.
   Contributions—financial or in-kind—should amount to 40–60% in aggregate, ensuring national political ownership and alignment with domestic digitalization strategies.
- Other funding: limited scope for private or philanthropic participation (up to 10−15%), directed toward targeted projects or stakeholder engagement.

# 5. Ways Forward: Overview of Strategic Policy Interventions

This document presents the first version of the strategic agenda to integrate support for Digital Commons and public digital infrastructure into the next Multiannual Financial Framework.

This draft agenda asserts that the European Union should acknowledge Digital Commons as valid and integral elements of public digital infrastructure and abandon a market-fixing approach in areas crucial to public discourse, access to information, and civic life. Without such policy shifts, even the most well-intentioned interventions risk perpetuating the very dependencies they aim to dismantle. These strategic shifts are not optional: they are the necessary preconditions for meaningful and lasting reform. Translating them into action requires a coherent, well-resourced agenda that prioritizes structural transformation and institutional continuity. This agenda entails several interventions.

A key priority is to align research and innovation funding with the realities of Digital Commons. Public funding must, where necessary, support the entire lifecycle of Digital Commons, from initial development to democratic stewardship and institutional sustainability, recognizing their function as foundational infrastructure akin to public utilities. This requires targeted, sustained investment in the open-source ecosystem and managing EU data commons.

Another priority is supporting sovereign cloud infrastructure and embedding democratic governance and ownership into its architecture. Without these foundational measures, efforts to build a resilient and democratic digital ecosystem will remain incomplete.

To ensure that sovereign and rights-aligned solutions find viable paths to adoption, **leveraging public spending becomes essential**. Public procurement, representing a significant share of the EU economy, must be deployed strategically, and it must favour open and interoperable alternatives to the big tech solutions.

Another crucial intervention concerns **ensuring democratic control over digital communication spaces**. As key infrastructures of public discourse and social cohesion, these platforms require investment in decentralized, transparent, and standards-based alternatives that ensure public accountability.

Finally, addressing the structural sustainability gap also requires new institutional vehicles. Harnessing the potential of the Digital Commons European Digital Infrastructure Consortium provides a concrete path forward. As a legal and operational mechanism, EDICs enable cross-border collaboration among member states to jointly govern and sustain digital infrastructure.

Each proposed intervention is considered in light of existing or forthcoming EU legislation. Linking funding proposals to their regulatory context helps ensure that financing mechanisms support compliance and build on Europe's legal commitments. This approach strengthens the consistency between regulation and investment. The indicative envelopes set out for each intervention are not designed as rigid figures but as order-of-magnitude

estimates that clarify the scale of investment required. They also make explicit the distribution of responsibility: EU programs provide the backbone, member states secure national integration and ownership, and private or philanthropic partners translate public-purpose infrastructures into viable market applications, contributing to uptake at scale.

While sovereignty is generally understood in terms of independence and autonomy, there remains a strategic opportunity for global cooperation. The open internet is a shared, global infrastructure, and many countries have an interest in preserving its openness, integrity, and long-term sustainability. Democratic governments worldwide face similar challenges from dependencies on foreign and proprietary infrastructures, which can limit their capacity to uphold democratic norms and effectively govern within a globally interconnected digital environment. Open source ecosystems and digital commons offer a critical foundation for coordinating investment and mutualizing benefits. Building on the EU's International Digital Strategy, which identifies key frameworks for cooperation, the EU and its member states should leverage their convening power to foster meaningful alliances and collaborative responses to shared challenges.

The urgency of these interventions is further underscored by growing geopolitical instability and the increasingly strategic role that digital infrastructure plays in economic resilience, democratic security, and global power dynamics. As questions of technological sovereignty move to the center of Europe's political agenda, the EU should act decisively to ensure that its digital foundations are governed in the public interest and aligned with democratic values. This requires not only new investments, but also the consolidation and expansion of institutional lessons already learned, particularly through the Next Generation Internet initiative.

The NGI initiative has contributed to validating key hypotheses about the viability of digital commons, the power of open source, <sup>29</sup> and the potential of participatory governance. These insights now need to be carried forward and integrated with broader industrial policy objectives, especially the development of sovereign European cloud infrastructure. Without this alignment, Europe's digital ecosystem risks remaining fragmented and overly reliant on extractive, non-European solutions. A more cohesive strategy should link support for open digital infrastructure with mission-driven investment in critical layers of Europe's technological stack.

Achieving this within the next Multiannual Financial Framework requires strategic resource mobilization beyond the NGI initiative and the current Open Internet Stack scope. While the Open Internet Stack's emphasis on openness, interoperability, and public interest is correct, its impact will remain limited without a broader scope. Rather than supporting a specific network architecture, it should be redefined as a foundational enabler of diverse digital services. This allows the Open Internet Stack to become a strategic component of Europe's sovereign digital infrastructure, supporting a pluralistic, rights-aligned digital ecosystem that reflects European values.

<sup>&</sup>lt;sup>29</sup> Deliverables from the NGI Commons Consortium, (D1.1) Active Communities of Commoners and Relevant Commons, and (D1.3) The impact of NGI funding on Digital Commons/Internet Commons (forthcoming) explore this in further detail.

## **Abbreviations**

**DC** Digital Commons

**EDIC** European Digital Commons Consortium

MFF Multiannual Financial Framework

**NGI** Next Generation Internet

**ECF** European Competitiveness Fund