



The Data Tank

What's Next for Europe's Digital and Data Strategies

Policy brief

September 2025



Executive Summary: Rationale and Key Recommendations

Data has become one of the defining assets of the 21st century—on par with financial and human capital in shaping the prosperity and resilience of societies. It is both a resource and an enabler, powering innovation, informing policy, and unlocking new opportunities for sustainable growth. Yet, like any powerful asset, data has two faces. It can be used to empower individuals and communities, solve public challenges, and create economic value—but also to extract, surveil, and marginalise.

Despite its ambitions, the European Data Strategy has struggled to fully realise the transformative promise of data, while preventing possible harm. It has yet to achieve a dual imperative: protect people from extractive and opaque data practices, and unlock data in a way that systematically advances societal goals.

Part of the challenge is that the strategy has been predominantly supply-driven, emphasising technical infrastructure without matching this emphasis with robust human, organisational and governance infrastructure, and without adequately aligning supply assets with pressing societal needs or building the capacities required to turn data into insight and impact.

In addition, a data strategy and a solid digital industrial policy for the EU need to embed legitimacy, sustainability and integrity at its core and to tap into its thriving ecosystems by going beyond state-driven and top-down approaches.

In this brief, we respond to the European Commission's plan for a new strategy, the Data Union strategy, introduced in the new AI Continent Action Plan. We consider these plans alongside other announced and related initiatives such as the EU Cloud and AI Development Act and the EU Democracy Shield. Our proposed actions, which we further develop below, can be summed up under the following points:

Recommendation 1. Articulate open innovation as innovation that is purpose-driven and avoids monopolistic capture

Without a shared purpose, openness can still lead to extractive, inequitable outcomes—for example, when big players capture value from smaller contributors. Articulating open innovation as purpose-driven also entails rethinking governance frameworks and funding mechanisms so that cross-border knowledge and data flows allow innovators from all sorts of localities, sizes and languages to succeed in recombining state-of-the-art data and technologies for the public interest. The following recommendations refer to concrete ways of articulating this vision of openness.

Recommendation 2. Prioritise high-impact and tangible purposes

Focus data-related investments on urgent and tangible societal challenges—such as meeting the EU's net zero targets, preventive health, a resource-efficient and competitive economy, preparing the young generations through skills and education, information integrity and civic engagement, and sustainable urban and rural development—so that the Data Union serves visible, public-interest use cases that guide



innovation and collaboration. Advancing Europe's digital industrial strategy needs to go hand-in-hand with meeting its environmental and climate goals. The development of data centers, AI and the infrastructure for emerging technologies needs to be done within principles of sufficiency and equity.

Recommendation 3. Build the missing human infrastructure

Upskill people and organisations. Invest in data stewardship competences - skills and roles within organisations across sectors that understand the data governance and data sharing sector, can implement data reuse policies, and contribute to data reuse ecosystems such as data spaces or data intermediaries (data trusts, data cooperatives, etc). Embed these roles within the broader EU Union of Skills agenda and support them through policy, funding, and training.

Recommendation 4. Update data governance: beyond consent towards a public mandate and new licensing forms

(i) Evolve current frameworks by complementing consent-based approaches with more meaningful democratic governance and participatory processes for a legitimate social license or public mandate for data reuse.

(ii) Develop in collaborative ways the legal and institutional innovation required, including next-gen impact and responsible licensing –licensing that overcomes the current limitations of copyright in the context of generative AI, so that data governance is fit for cutting edge and emerging technologies.

Recommendation 5. Adopt polycentric and participatory governance

Enable the dynamic, decentralised governance of data labs and of data flows across data spaces—avoiding monopolistic capture and top-down control—by empowering local, regional, and cross-sectoral actors through participatory and plural models of governance. The Data Union strategy needs to come with a clear governance model for its implementation and for the governance of the planned infrastructure and data spaces.





Our proposal, in detail:

The Data Union Strategy sets the clear goal of facilitating access to ‘robust and high-quality data’ as well as strengthening AI skills and talents (European Commission, 2025). Past efforts, such as the European Data Strategy, the European Data Spaces or initiatives like Gaia-X are facing challenges to its implementation and sustainability. As The Data Tank has argued (Poblet, 2025), the development of the Data Union strategy is an opportunity to avoid mistakes from the past and provide the specifics on how its aims will be achieved. Its focus on industrial applications, alignment with the recent AI regulations and the emphasis on streamlining regulation indicate awareness of these past challenges. Below we outline the concrete areas of action that we think need to be pursued and developed.

1. Articulating what open innovation means

We welcome an ‘open innovation’ approach which, as stated in the AI Continent Action Plan, facilitates the ‘linking to high-quality data spaces and enabling broad participation’ in model development (European Commission, 2025). The Data Labs envisioned in this strategy are meant to offer data pooling services and cross-border and cross-sector data reuse. However, the strategy will need to take measures to ensure openness and collaboration and to avoid the capture of these spaces by big players alone. A new strategy also needs to ensure that high quality data that comes from and is useful to a diversity of contexts, languages and stakeholders, across borders and within regions and localities.

First of all, there needs to be a clear definition of what ‘openness’ means in this context. In line

with some of the arguments made in this report by the Open Knowledge Foundation (2025), and as The Data Tank has argued in previous articles (Poblet and Colom, 2025), open innovation requires concrete measures in relation to its political and power dimensions. These entail decisions on the type of governance frameworks that are developed and the extent to which decision-making processes are democratic, decentralised, transparent and plural. Open innovation also entails decisions in relation to the purpose and public interest value of the AI application and use of data, including who is able to contribute, access and benefit from innovation and data. Clarity on what open innovation means also impacts deciding on the infrastructure in place (both technical infrastructure and type of licensing). Finally, articulating openness demands clarity on geopolitical openness. The Data Tank proposes that Europe remains open to the world and prepared for cross-border knowledge and data flows that will allow European innovators to succeed in recombining state-of-the-art data and technologies, wherever they emerge.

In other words, adopting an open innovation paradigm requires clarity on the purpose of innovation and taking an outcome-driven approach, which can avoid reinforcing existing power imbalances. It also demands that both the EU and its member states relinquish a significant degree of control over the open innovation process because its core principles —leveraging external ideas, expertise, and resources— are fundamentally at odds with traditional, top-down command-and-control approaches. Whoever embraces open innovation also has to accept transitioning from being the primary driver of innovation to becoming a facilitator or enabler. Adopting this paradigm implies opening up



government-funded research, engaging with diverse stakeholders (academia, industry, civil society, citizens/residents), and allowing more fluid, less predictable pathways for ideas to emerge and combine.

2. A strategic and tangible thematic focus

We think a resilient data strategy requires a strategic and tangible thematic focus. A transformational digital and data pathway needs to be responsive to the biggest challenges facing Europe and the planet –such as the climate emergency and the ongoing risk of pandemics–, sensitive to the priorities of all stakeholders, and to bridge the data and digital literacy gap. The Data Union strategy needs to be public interest and purpose driven, and therefore prioritise uses that demonstrate to European residents what data means in concrete terms and why it is important to each of us and our communities. This will entail:

i. Develop governance and business models to build and steward efficient and legitimate shared data assets as non-rival public goods. This can help prevent monopolistic capture but also ensure that data reuse prioritises critical areas and applications such as:

- Environmental protection and climate preparedness
- Resource-efficient and competitive economy
- Preventive health care
- Civic agency and literacy
- Sustainable urban and rural development
- Democracy and knowledge integrity

ii. Ensure that the data labs and data centres planned as part of the Data Union strategy and the Cloud and AI Development Act are built and operate with the license of the public through participatory decision-making processes.

iii. Ensure that these planned data labs and data centres operate within our planetary boundaries and within the limits to water and energy that are feasible when prioritising the wellbeing and thriving of communities in rural areas and cities. As stated in our feedback to the EU Cloud and AI Act, signed by a collective of organisations under the Green Screen Coalition: *‘The EU has a unique opportunity to chart a distinct, values-driven course in AI and cloud investment; one that does not replicate the extractive models of other global powers but rather centers social wellbeing, fostering democracy, fundamental rights, and fair competition.’* (Green Web Foundation, 2025).

iv. All these processes could be mandated via procurement and conditional funding clauses to member states and national governments and via alignment to other essential policies such as net zero commitments and sustainability goals. In addition, EU funding could target cities, rural areas and regions beyond the limits of the state governance level to catalyse bottom-up innovation and diverse engagement.

3. Building the missing human infrastructure

Current roadmaps and analyses of Europe’s digital industrial strategy focus largely on technical infrastructure but overlook the need for human infrastructure –people and skills– that can operate under changing data governance



ecosystems, manage and execute data collaboratives and pave the new necessary ways for sustainable and legitimate data reuse. The EU needs to establish robust human infrastructure through Data Stewardship roles and competences, supported by legislation, the inclusion of Data Stewardship training (Behluli and Mejía-Pardo, 2024) alongside the Union of Skills strategy and in the context of AI-readiness (Verhulst, 2025), together with the necessary incentives for companies and organisations. Europe's emphasis on technological infrastructure, while important, must now be matched by an equivalent investment in *human infrastructure*. Data stewards, community intermediaries, and public-interest technologists are needed to bridge the gap between data supply and public demand.

4. Update Data Governance: beyond consent towards a public mandate and new licensing forms

In addition to the technological, human and institutional infrastructure, there is a need to embed legitimacy and integrity in how data is governed and used, and in how stakeholders and the public meaningfully engage in these processes and decisions. Static and binary opt-in or opt-out consent processes are not fit for the relational and dynamic nature of today's data types, data flows and recent technologies. Therefore, there is a need to:

(i) Advance data governance models that go beyond static consent toward more adequate participation and democratic legitimacy. This entails promoting democratic governance and engagement frameworks that center public mandates for and a social license in data reuse.

(ii) Develop clear guidelines for how to balance openness with the protection of privacy, security and fundamental rights. In this regard, and as we have shared through the consultations for its Code of Practice (European Commission, 2025), the EU AI Act and governance frameworks for data spaces and data labs need to be aligned and ensure that there is an emphasis on data governance in the context of AI model development, AI applications and emerging technologies.

(iii) Improve literacy, awareness and a dialogic approach to knowledge and collective intelligence. This should help to enable a more effective take on a public interest and purpose-driven approach to innovation as well as ensure that there is ongoing and dynamic social license or public mandate for how technology is deployed, data reused, and AI systems developed and applied.

(iv) Collaboratively develop legal innovation for data governance, including next-gen impact and responsible data licenses (Poblet, 2025; Keller, 2025) so that data governance is fit for frontier and emerging technologies; shaping policies for equitable data access in the age of AI and digital enclosures; and embedding safeguards to uphold data provenance, equity, and the integrity of knowledge, research and data (epistemic integrity). The Data Tank is exploring new licensing pathways with the Impact Licensing Initiative and through our work with partners developing governance models for data reuse ecosystems (Impact Licensing Initiative, 2025).



5. Dynamic, polycentric and participatory data and AI governance

Finally, the centralised implementation of the current Europe's data strategy often contradicts its principle of subsidiarity. The future of the Data Union should be polycentric—supporting agile, decentralised, and participatory models of data governance. These models are better suited to reflect Europe's diversity, enable contextual innovation, and build trust across sectors and regions.

The Data Union strategy needs to propose concrete actions in relation to the governance of its implementation, including the governance of the planned Data Labs and the flows between them and with the data spaces. We think that top-down and state-reliant policies and approaches to governance will not enable the Data Union to achieve its aims. For example, as we have stated in this [article](#) the limited membership of initiatives like ALT-EDIC (currently 17 member states) raises concerns about inclusivity and the true scope of the Data Union Strategy's impact (Poblet, 2025). By potentially missing the full linguistic diversity and specific data needs of non-participating countries, the very goal of 'cultural preservation' risks being compromised.

A top-down approach to the Data Union governance could also inadvertently favour the creation of broad sectoral federations at the expense of localised innovation and niche but valuable use cases. For instance, the development of regional language models, crucial for linguistic diversity and inclusion, might be sidelined if the focus remains solely on pan-European data spaces. This inherent

prioritisation could stifle the very grassroots innovation the Data Labs aim to impulse.

As The Data Tank has argued (Poblet and Colom, 2025; Colom and Poblet, 2025), the Data Union needs to be framed under a dynamic, polycentric and participatory approach to data governance.

Institutional diversity, more than centralised arrangements, is what best incentivises technology and data innovation. Beyond fully market driven approaches and rigid centralised public models, our approach proposes to deepen and decentralise democratic infrastructure and practices to enable bottom-up dynamic innovation and knowledge exchange from local and regional hubs and across sectors (ie. public, private, civil society and academia).

Specifically, and as we have expressed in our consultation feedback to the EC's Democracy Shield and to the EU Cloud and AI Development Act, we propose the following steps to deepen democratic practice:

- Involvement of subnational associations, communities, citizens/residents in decision-making bodies (offices, steering committees, boards, etc). The involvement of technical experts and representatives of member states or political parties is not enough for policies to serve the public interest and be fully aligned with the needs of a community and society.
- Funding for extensive intermediation by nongovernmental actors, subnational support, thriving associational and professionalised local initiatives, and both EU and national funding and schemes to



support thriving locally-led ecosystems.

- Protecting epistemic and information integrity by enabling knowledge and data commons. Commons can resist both dependence from dominant actors as well as the vulnerability that can come with openness without boundaries and without collective decision-making. Europe can further support these ecosystems by supporting high quality information providers like academia, civil society initiatives or start-ups and media organisations in leveraging their power vis-a-vis large GPAI providers (Verhulst, 2025). As mentioned earlier, it can also promote the infrastructure for innovative licensing and copyright, such as public interest or impact-driven licenses that data and knowledge commons can use as leveraging power.
- Investing in two-way spaces for literacy, knowledge and dialogue. Data and digital literacy must be a key area of investment by Europe, tapping into existing education, information ecosystems and decision-making forums, across scales, sectors and ages. However, once more, it would be wrong to assume that this needs to be a top-down exercise. Communities and people from all walks of life and European corners need better information on data, AI, and emerging technologies but they also have lived experience and knowledge that is missing from the oversight and advisory boards and committees recommended in recent roadmaps and policies. In addition to integrating lived, local-level experience in

these boards and advisory and scientific panels (such as including a citizens oversight jury in the AI Office board for example), spaces for representative, inclusive and informed deliberation in relation to Europe's digital infrastructure and its governance need to be enabled and sustained. The Conference for the Future of Europe -an EU-wide citizens' assembly- and the EU-wide representative deliberative panels that have followed on specific topics, the permanent citizens assembly in the Paris City Council or in Ostbelgien, and the many other similar deliberative forums that have taken place at different scales in the last few decades, are examples of spaces and practices that need to be taken seriously as democratic infrastructure in a digital policy roadmap.

Ultimately, a people-centric and polycentric strategy needs to build the spaces for critical and active citizenship, understood in its broadest terms, that is, a practice that all residents in Europe from all backgrounds can enact as key stakeholders of any strategic decisions on data and digital policy that Europe will undertake.

- Updating procurement processes so that they respond to the input and needs of the public, service users and frontline workers. Procurement processes need to place the agency on publics and the knowledge of local and sectorial ecosystems and be aligned with urgent environmental and climate policies and goals.

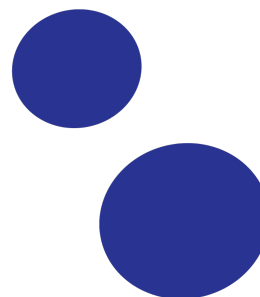


Conclusions

The actions we have proposed respond to the need to make a data strategy and a digital industrial policy for Europe that is relevant, sustainable and legitimate, ensuring that data governance and the integrity of data flows and data ecosystems is at the core of it.

To sum up, we propose:

- 1- Articulate open innovation as innovation that is purpose-driven and avoids monopolistic capture.**
- 2- Prioritise high-impact and tangible purposes, aligned with social and environmental principles of equity and sufficiency**
- 3- Build the missing human infrastructure by investing in data stewardship skills and competences across organisations.**
- 4- Update data governance moving beyond consent towards a public mandate and new licensing forms for democratic and legitimate decision-making.**
- 5- Adopt dynamic, polycentric and participatory data and AI governance. This brief has proposed specific steps to deepen democratic practice and plural models of governance in this context.**





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Authorship:

This policy brief has been written by Anna Colom, Marta Poblet and Stefaan Verhulst, with valuable comments from members of The Data Tank's [Board and Steering Committee](#). The collective feedback led by the Green Screen Coalition that The Data Tank was part of, and submitted to the EU Cloud and AI Development Act consultation, has also been reflected in the relevant sections of this brief.

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